

**GENERAL NOTES:**

1. STORM PANEL SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2010 EDITION OF THE FLORIDA BUILDING CODE. THIS STORM PANEL 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 2010 FBC AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 2, 7, 9 THRU 17.

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 COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 2, 7, 9 THRU 17.

IN 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 1609.1.2 OF THE ABOVE MENTIONED CODE AS PER AMERICAN TEST LAB REPORTS # 0321.01-05, # 0812.01-05 AND # 0119.01-06, PER ASTM E 1886-02, E 1996-02 AND ASTM E-330 STANDARDS, QUALIFIED FOR WIND ZONES 1, 2 AND 3; MISSILE TYPE D (BASIC PROTECTION ONLY) AND FOR INSTALLATION AT NON ESSENTIAL FACILITIES AS DEFINED BY SECTIONS 6.2.1.1 AND 6.2.1.2 OF ASTM E 1996-02.

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. STORM PANEL COMPONENTS (4) STUDDED PLATE AND (5) SNAP 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)

- 1/4"Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W./BUILDEX.
- 1/4"Ø S.G. TAPCONS AS MANUFACTURED BY ITW/ BUILDEX.
- 1/4"Ø PANEL MATES ANCHORS MALE OR TVAS AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.
- 1/4"Ø X 3/4" SOLID SET ANCHORS, AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.

**NOTES:**

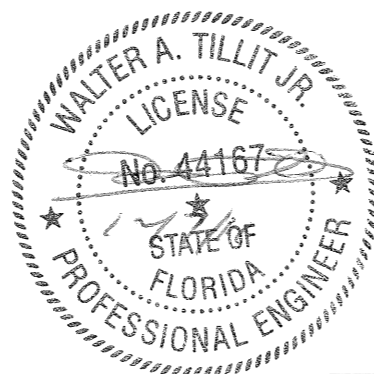
- A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHORS AND S.G. TAPCONS IS 1 3/4"; FOR ELCO PANELMATE AND ELCO TVAS IS 2".
- A.2) 3/4"Ø SOLID SET ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED.  
-1/4"Ø -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- A.3) 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.
- 1/4"Ø S.G. TAPCONS AS MANUFACTURED BY ITW/ BUILDEX.
- 1/4"Ø PANEL MATES ANCHORS MALE OR TVAS AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.
- 1/4"Ø x 3/4" SOLID SET ANCHORS, AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.

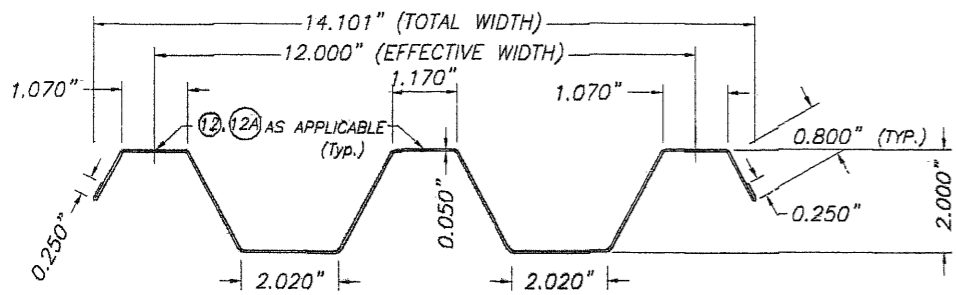
**NOTES:**

- B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS, S.G. TAPCONS, ELCO PANELMATE, ELCO TVAS. INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".
- B.2) -3/4"Ø SOLID SET 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) 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) & B.2) ABOVE.
- (C) TO EXISTING WOOD FRAME BUILDINGS, SEE SPECIFICATIONS ON SHEETS 12, 13, 14 & 15. ANCHORAGE SHALL BE PERFORMED BEYOND ANY FINISH MATERIAL AT WALL LIKE BRICK VENEER, STUCCO OR ANY OTHER FINISH.
- (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 13 (SHEET 4 THRU 8) EXCEPT THAT HEADERS 2, 3, 3A & 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: (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 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.
- 11. SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT STORM PANEL IN ACCORDANCE WITH SECTION 1715.8.3 OF FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1715.8.2 OF THE FLORIDA BUILDING CODE.

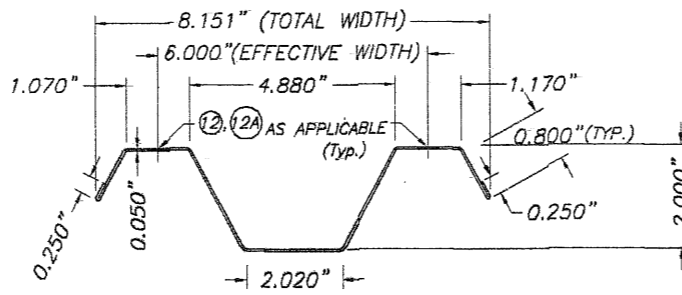


**FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)**

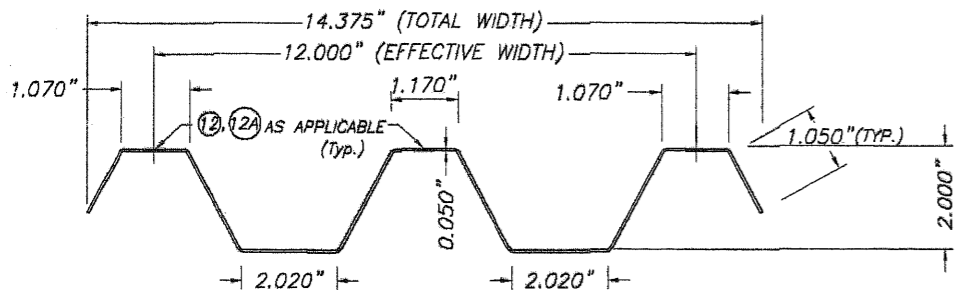
© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G. DRAWN BY:	
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33186 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. 44167		<b>EASTERN METAL SUPPLY, INC</b> 4288 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716		12/06/11 DATE:	
				11-221 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		
				SHEET 1 OF 17	



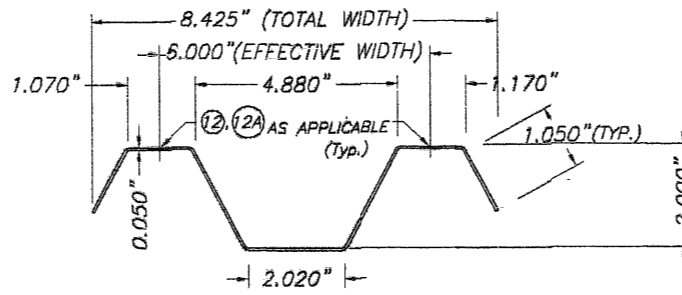
FULL PANEL W/ HEMMED EDGES



HALF PANEL W/ HEMMED EDGES

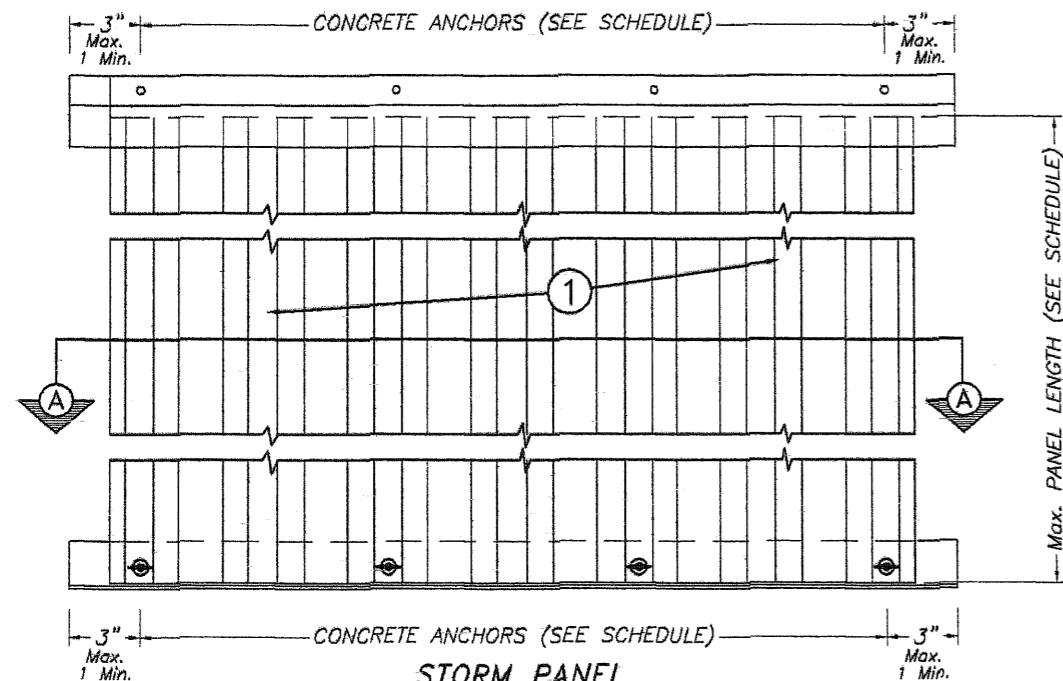


OPTIONAL FULL PANEL W/O HEMMED EDGES



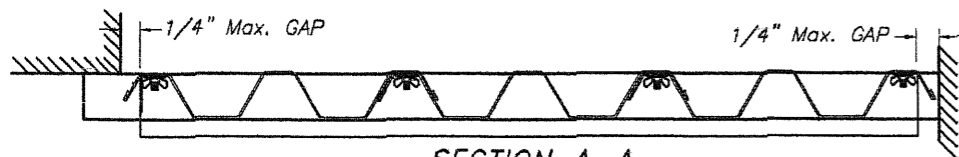
OPTIONAL HALF PANEL W/O HEMMED EDGES

① STORM PANEL  
SCALE: 1/4" = 1"



STORM PANEL  
TYPICAL ELEVATION

N. T. S.



SECTION A-A

N. T. S.

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

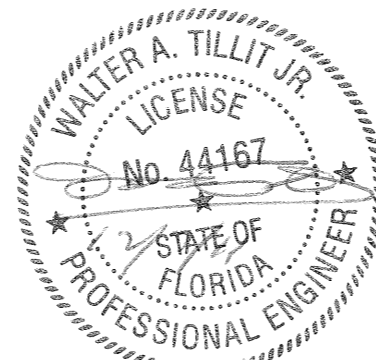
**PANELS RETAINED AT BOTH  
ENDS WITH TRACKS  
⑤⑥⑦⑧⑨⑩⑪⑭  
OR DIRECT MOUNTED \***

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	Max. PANEL LENGTH L (ft.)
+30.0, -30.0	13'-0"
+35.0, -35.0	12'-8"
+40.0, -40.0	12'-4"
+45.0, -45.0	12'-0"
+50.0, -50.0	11'-0"
+55.0, -55.0	10'-0"
+60.0, -60.0	9'-4"
+70.0, -70.0	8'-0"
+80.0, -80.0	7'-0"
+90.0, -90.0	6'-3"
+90.0, -100.0	5'-7"
+90.0, -110.0	5'-1"
+90.0, -120.0	4'-8"
+90.0, -130.0	4'-0"

**PANELS RETAINED AT LEAST  
IN ONE OF THEIR ENDS  
WITH TRACKS  
②③④ OR ④\***

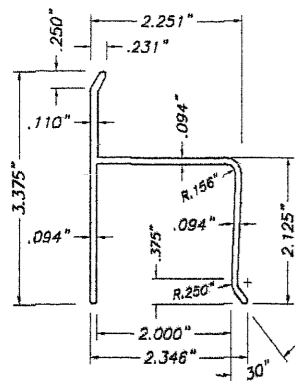
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	Max. PANEL LENGTH L (ft.)
+30.0, -30.0	13'-0"
+35.0, -35.0	12'-0"
+40.0, -40.0	11'-3"
+45.0, -45.0	10'-0"
+50.0, -50.0	9'-0"
+55.0, -55.0	8'-2"
+60.0, -60.0	7'-6"
+70.0, -70.0	6'-5"
+80.0, -80.0	5'-8"
+90.0, -90.0	5'-0"
+90.0, -100.0	5'-0"
+90.0, -110.0	5'-0"
+90.0, -120.0	4'-9"
+90.0, -130.0	4'-4 1/2"

**\* NOTE:**  
MAX. A.S.D. DESIGN PRESSURE RATING & MAXIMUM PANEL LENGTH FOR INTERNALLY REMOVABLE PANELS AS PER MOUNTING INSTALLATIONS ON SHEET 7 OF 17 IS + 50.0, - 50.0 p.s.f. W/ 88" MAX. PANEL LENGTH.  
  
MAX. A.S.D. DESIGN PRESSURE RATING & MAXIMUM PANEL LENGTH FOR MOUNTING AS PER ALTERNATIVE #11 AND 14 ON SHEET 14A AND 15 OF 17, RESPECTIVELY, ARE +50.0, -60.0 p.s.f. FOR 78" MAX. PANEL LENGTH, AND +50.0, -50.0 p.s.f. FOR UP TO 108" PANEL LENGTH.

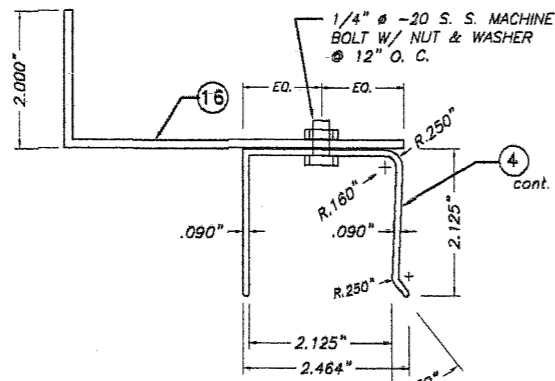


FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

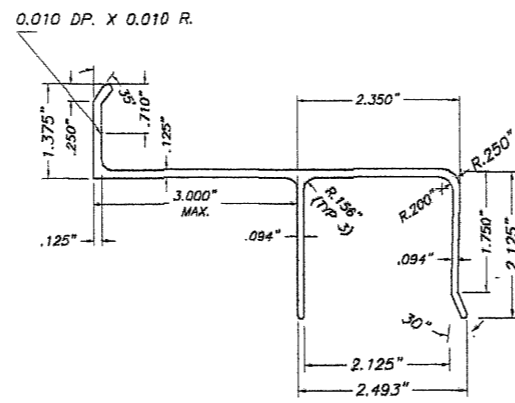
© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.R. DRAWN BY:	
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				11-221 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		



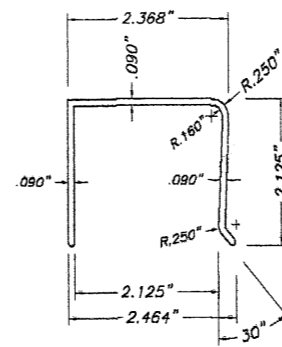
② **"h" HEADER**  
SCALE: 3/8" = 1"



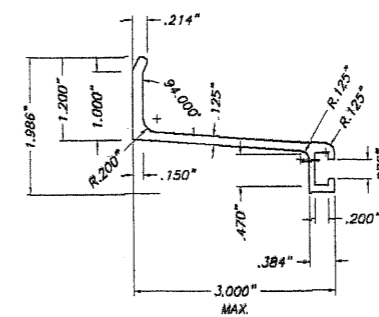
③ **3" Max. "U" BUILD OUT**  
SCALE: 3/8" = 1"



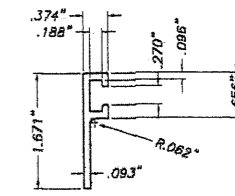
③A **OPTIONAL 3" Max. "U" BUILD OUT HEADER**  
SCALE: 3/8" = 1"



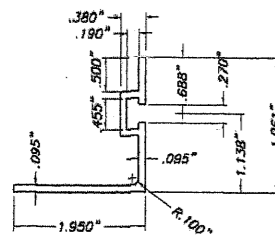
④ **"U" HEADER**  
SCALE: 3/8" = 1"



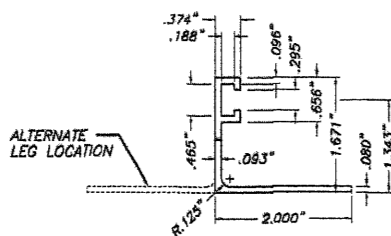
⑤ **3" MAX. ANGLE BUILD OUT BRACKET**  
SCALE: 3/8" = 1"



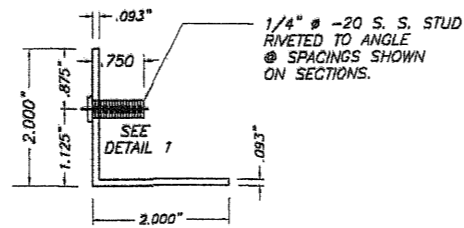
⑥ **"F" TRACK**  
SCALE: 3/8" = 1"



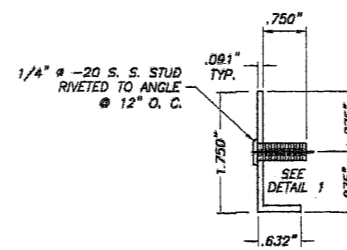
⑦ **REVERSED "F" ANGLE TRACK**  
SCALE: 3/8" = 1"



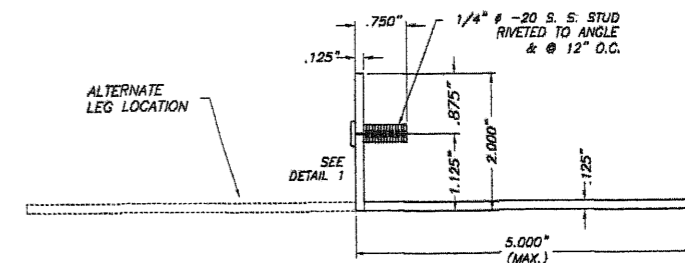
⑧ **"F" TRACK ANGLE**  
SCALE: 3/8" = 1"



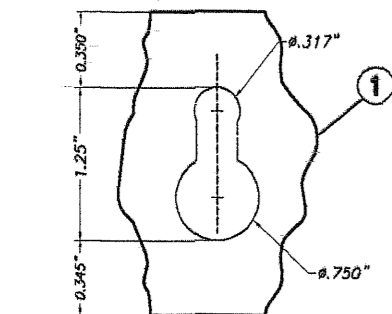
⑨ **STUDED ANGLE**  
6063-T5 Alum. ALLOY  
SCALE: 3/8" = 1"



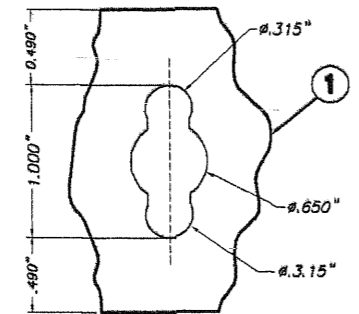
⑩ **MINI WALL 1.75"x0.632" ANGLE WITH STUD**  
SCALE: 1/2" = 1"



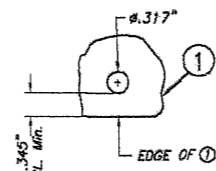
⑪ **2"x5" (MAX.) x 1/8" ANGLE WITH STUD**  
SCALE: 3/8" = 1"



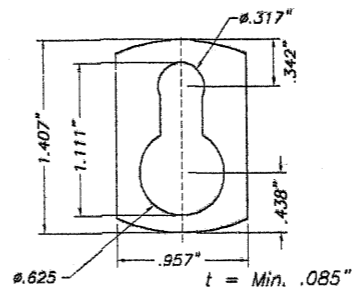
**LARGE KEY HOLE (OPTION 1)**  
SCALE: 3/8" = 1"



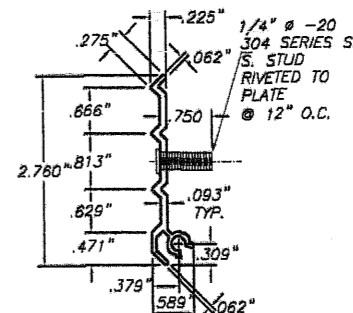
**SMALL KEY HOLE (OPTION 2)**  
SCALE: 3/8" = 1"



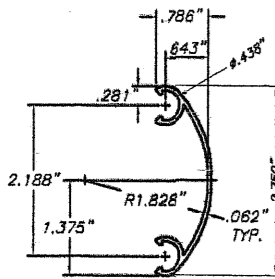
⑫A **ROUND HOLE AT PANEL**



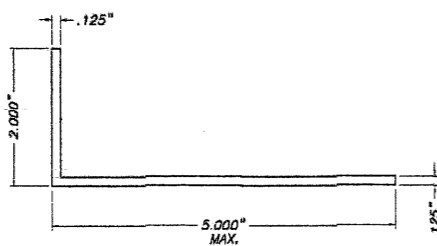
⑬ **KEY HOLE WASHER**  
3105-H154 Alum. ALLOY  
SCALE: 3/4" = 1"



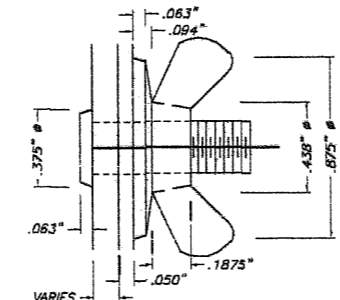
⑭ **STUDED PLATE**  
6063-T6 ALLOY  
SCALE: 3/8" = 1"



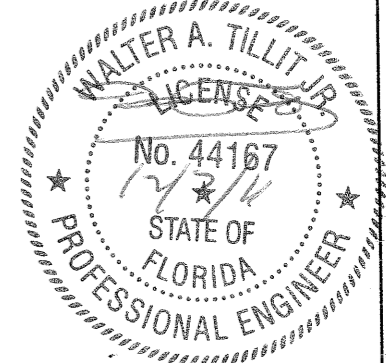
⑮ **SNAP CAP**  
6063-T6 ALLOY  
SCALE: 3/8" = 1"



⑯ **B.O. ANGLE**  
SCALE: 3/4" = 1"



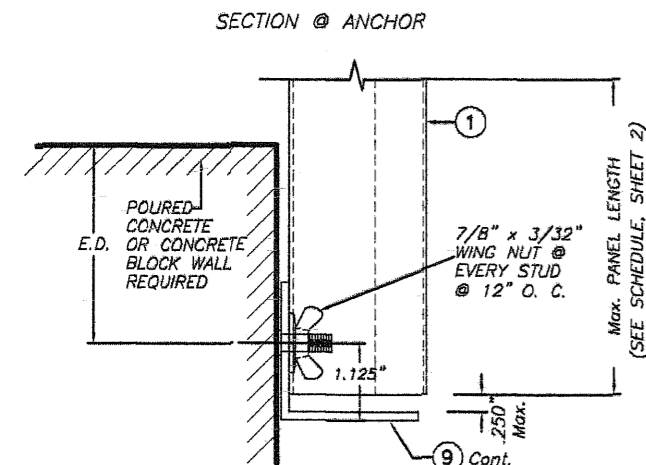
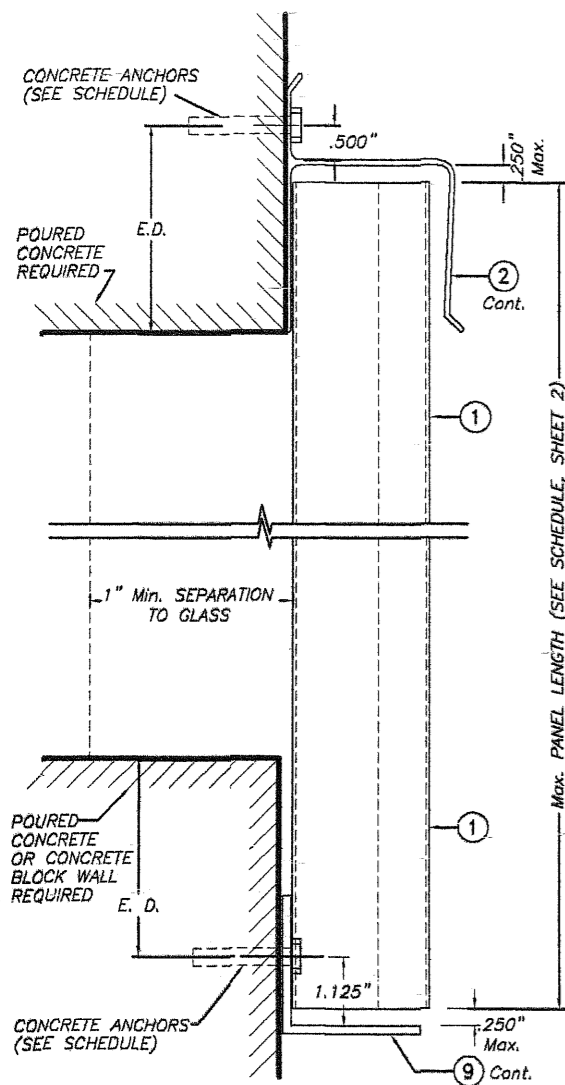
DETAIL 1: STUD W/ WING NUT



**COMPONENTS**

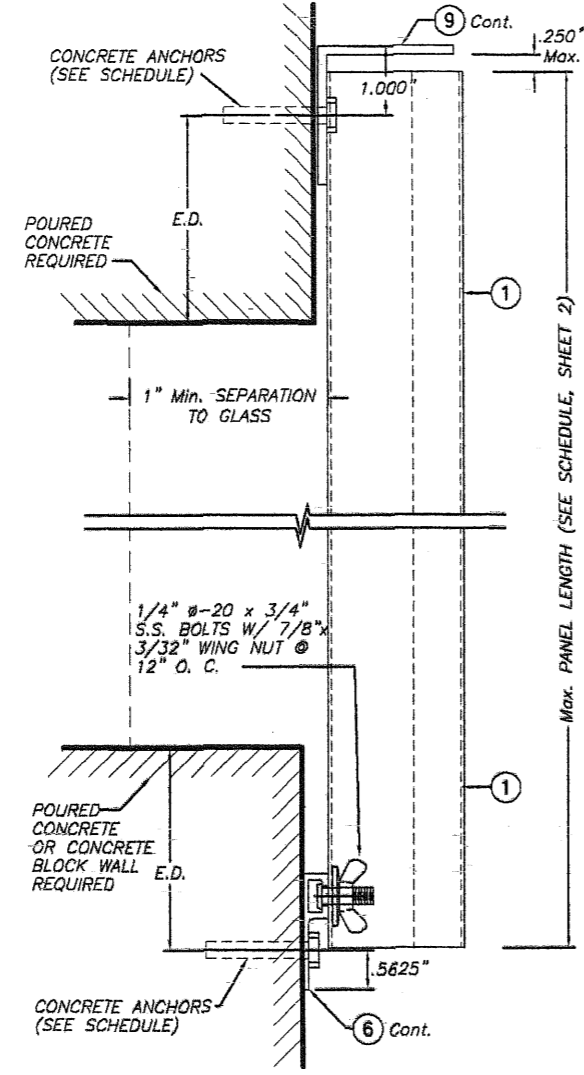
FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G. DRAWN-BY:	
		<b>EASTERN METAL SUPPLY, INC</b> 4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1718		12/06/11 DATE:	
				11-221 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		



**WALL MOUNTING INSTALLATION SECTION 1**  
SCALE: 1/2" = 1"

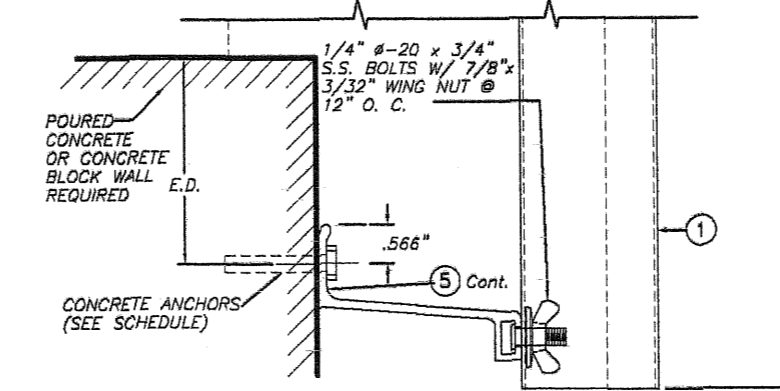
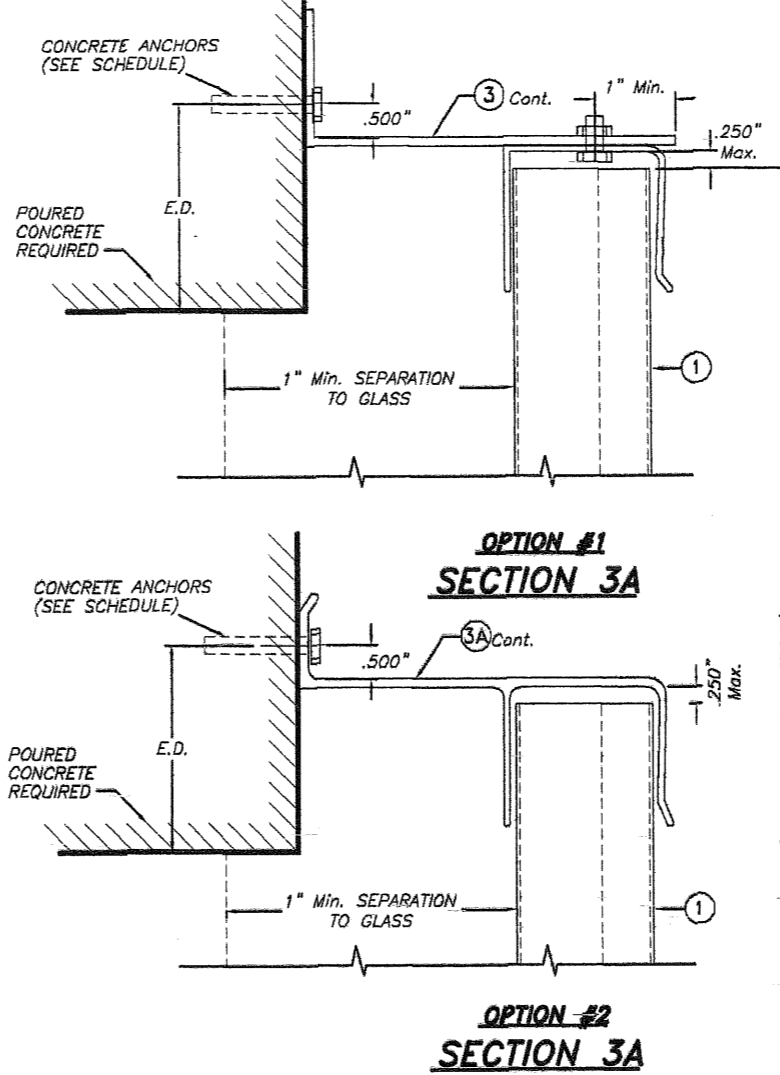
NOTE: DETAIL OF SECTION @ STUD VALID ALSO FOR WALL MOUNTING INSTALLATION - SECTION 2 (TOP)



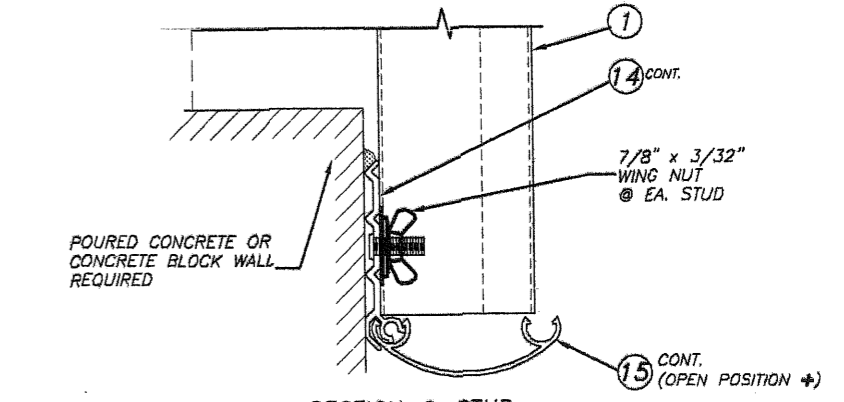
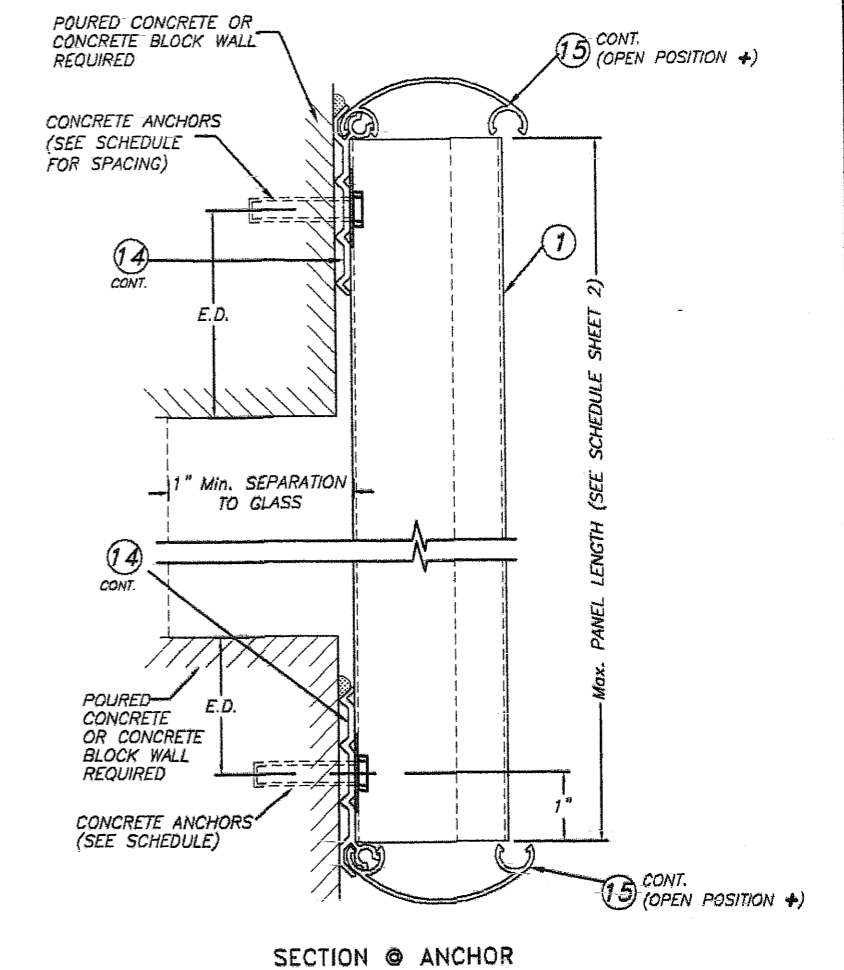
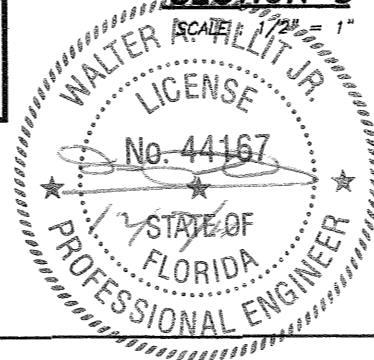
**WALL MOUNTING INSTALLATION SECTION 2**  
SCALE: 1/2" = 1"

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEETS 9 & 10 & 11)

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



**BUILD OUT INSTALLATION SECTION 3**  
SCALE: 1/2" = 1"



**WALL MOUNTING INSTALLATION SECTION 4**  
SCALE: 1/2" = 1"

+ NOTE: SNAP CAP (15) TO REMAIN CLOSED AT NON HURRICANE CONDITIONS.

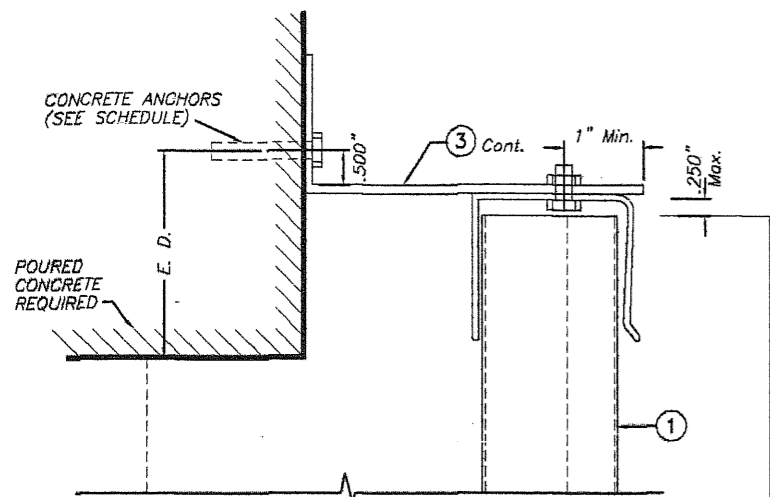
FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

©2011 TILTECO, INC.  
**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone: (305)871-1530, Fax: (305)871-1531  
EB-0006719  
WALTER A. TILLIT JR., P.E.  
FLORIDA Lic. 44167

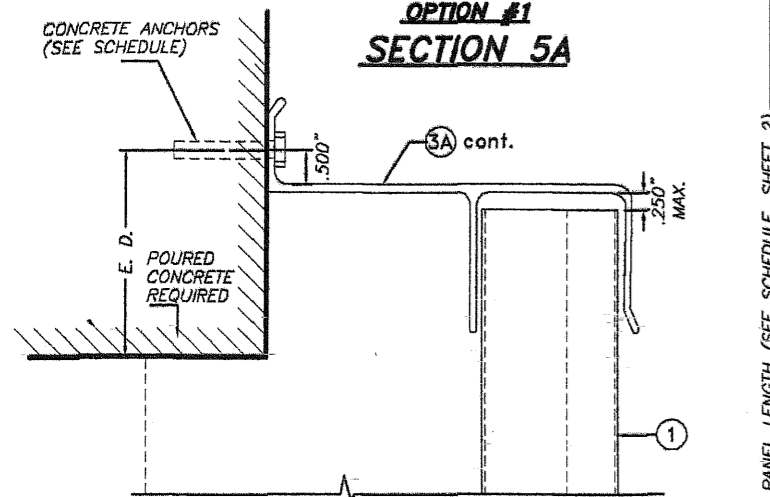
0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)  
**EASTERN METAL SUPPLY, INC**  
4268 WEST ROADS DRIVE  
WEST PALM BEACH, FL 33407  
PHONE: (561)209-8263, FAX: (561)841-1716

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-148	12/06/11	3		
3			4		

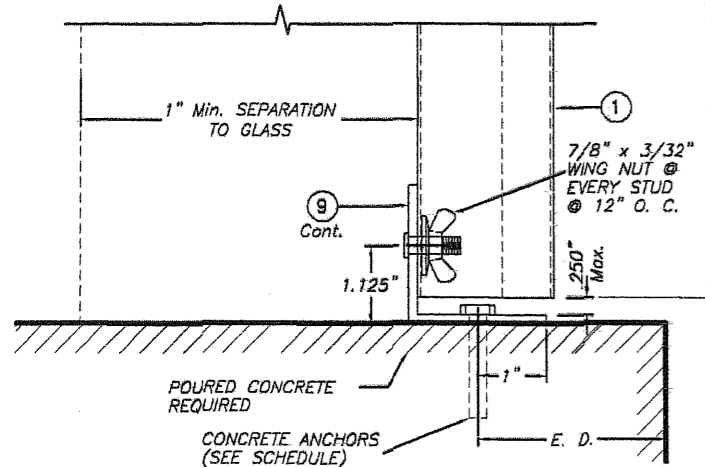
M.C.V./R.E./A.G.  
DRAWN BY:  
12/06/11  
DATE:  
11-221  
DRAWING No  
SHEET 4 OF 17



**OPTION #1  
SECTION 5A**

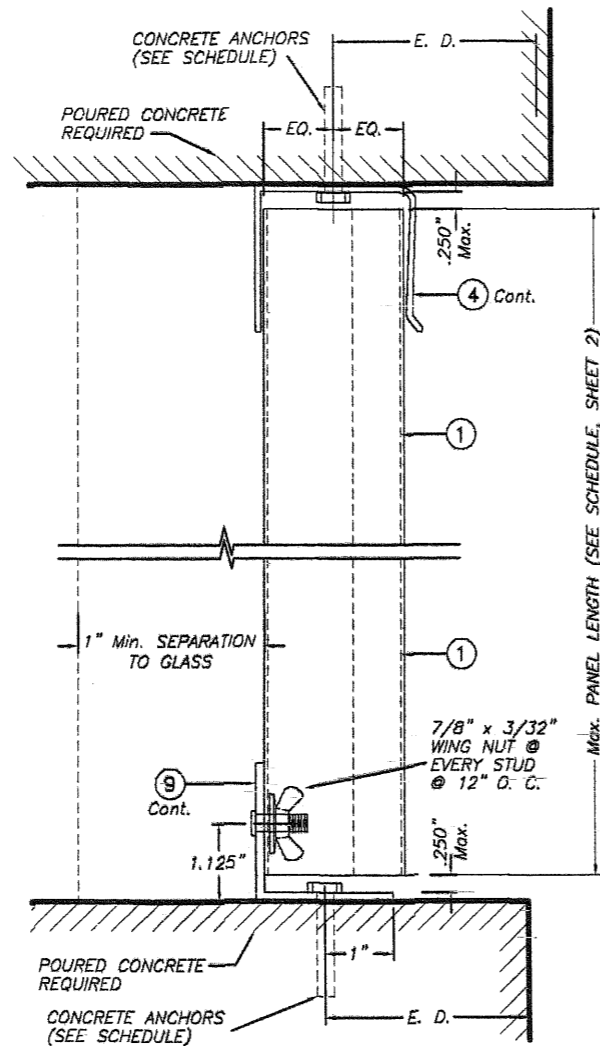


**OPTION #2  
SECTION 5A**



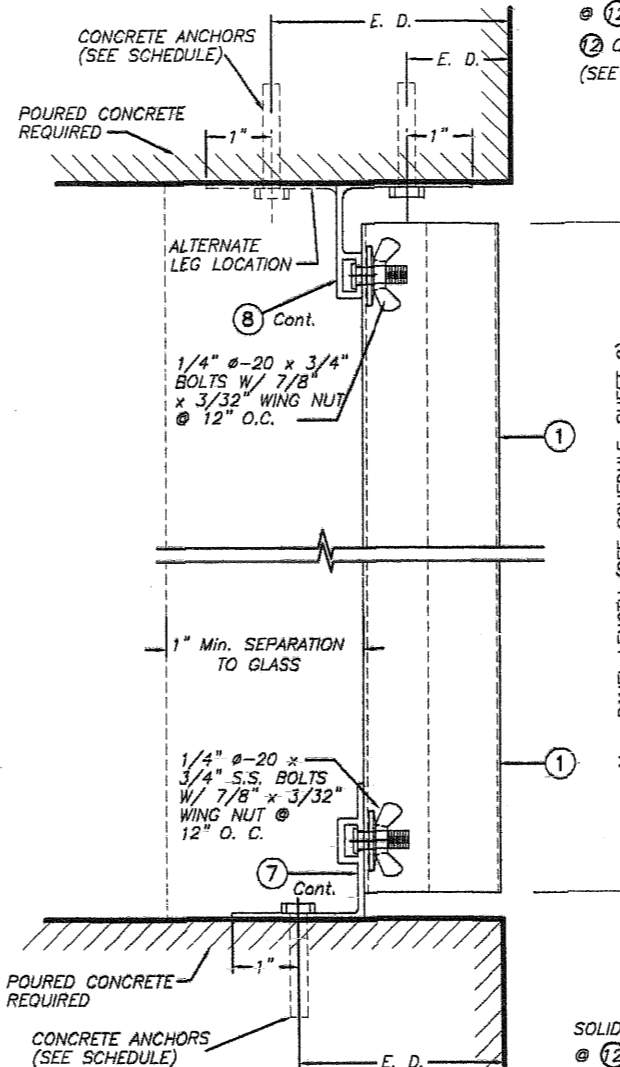
**BUILD-OUT & FLOOR MOUNTING  
INSTALLATION - SECTION 5**

SCALE : 1/2" = 1"



**CEILING & FLOOR MOUNTING  
INSTALLATION - SECTION 6**

SCALE : 1/2" = 1"

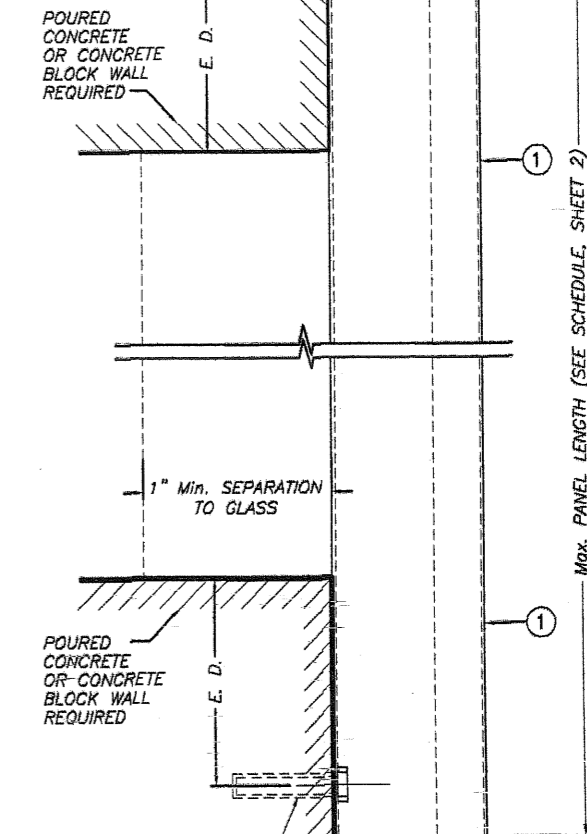


**CEILING & FLOOR MOUNTING  
INSTALLATION - SECTION 7**

SCALE : 1/2" = 1"

SOLID SET OR ELCO male PANELMATE OR S.G. TAPCONS @ (12) OR (12A) W/1/4"-20 SIDEWALK BOLT OR @ (12) OR (12A) W/ (13) W/1/4"-20 TRUSSHEAD BOLT + + (SEE SCHEDULE FOR SPACING)

SOLID SET OR ELCO male PANELMATE OR S.G. TAPCONS @ (12) OR (12A) W/1/4"-20 SIDEWALK BOLT OR @ (12) OR (12A) W/ (13) W/1/4"-20 TRUSSHEAD BOLT + + (SEE SCHEDULE FOR SPACING)

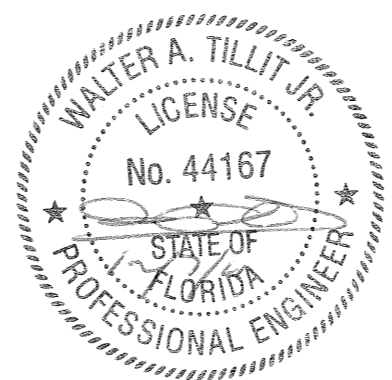


**DIRECT WALL MOUNTING INSTALLATION (D. M.)  
- SECTION 8**

SCALE : 1/2" = 1"

E. D. = EDGE DISTANCE  
(SEE SCHEDULE ON SHEETS 9 & 10 & 11)

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



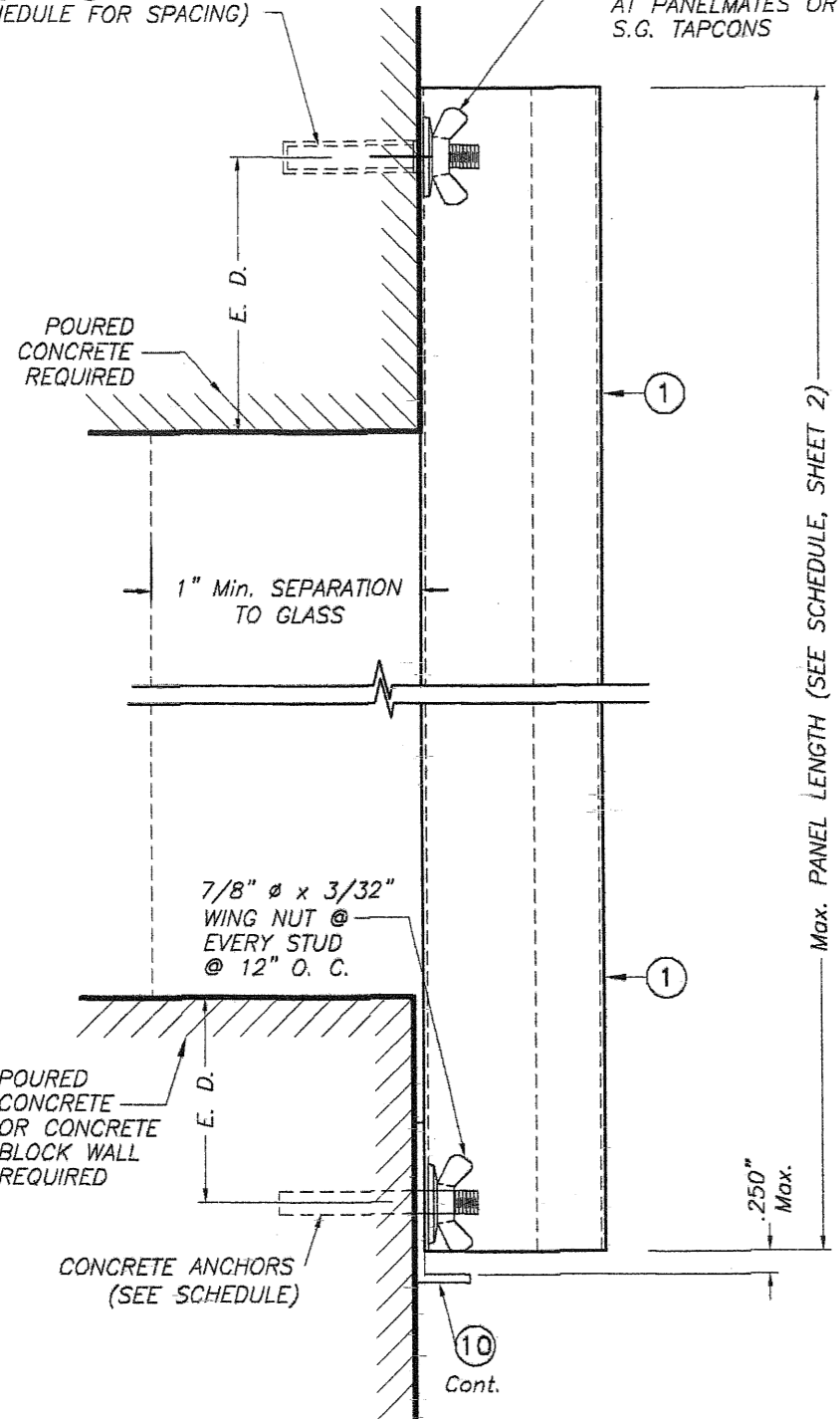
© 2011 TILTECO, INC.

**TILTECO INC.**

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

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)					
0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)			M.C.V./R.E./A.G. DRAWN BY:		
EASTERN METAL SUPPLY, INC			12/06/11 DATE:		
426B WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716			11-221 DRAWING No		
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		
SHEET 5 OF 17					

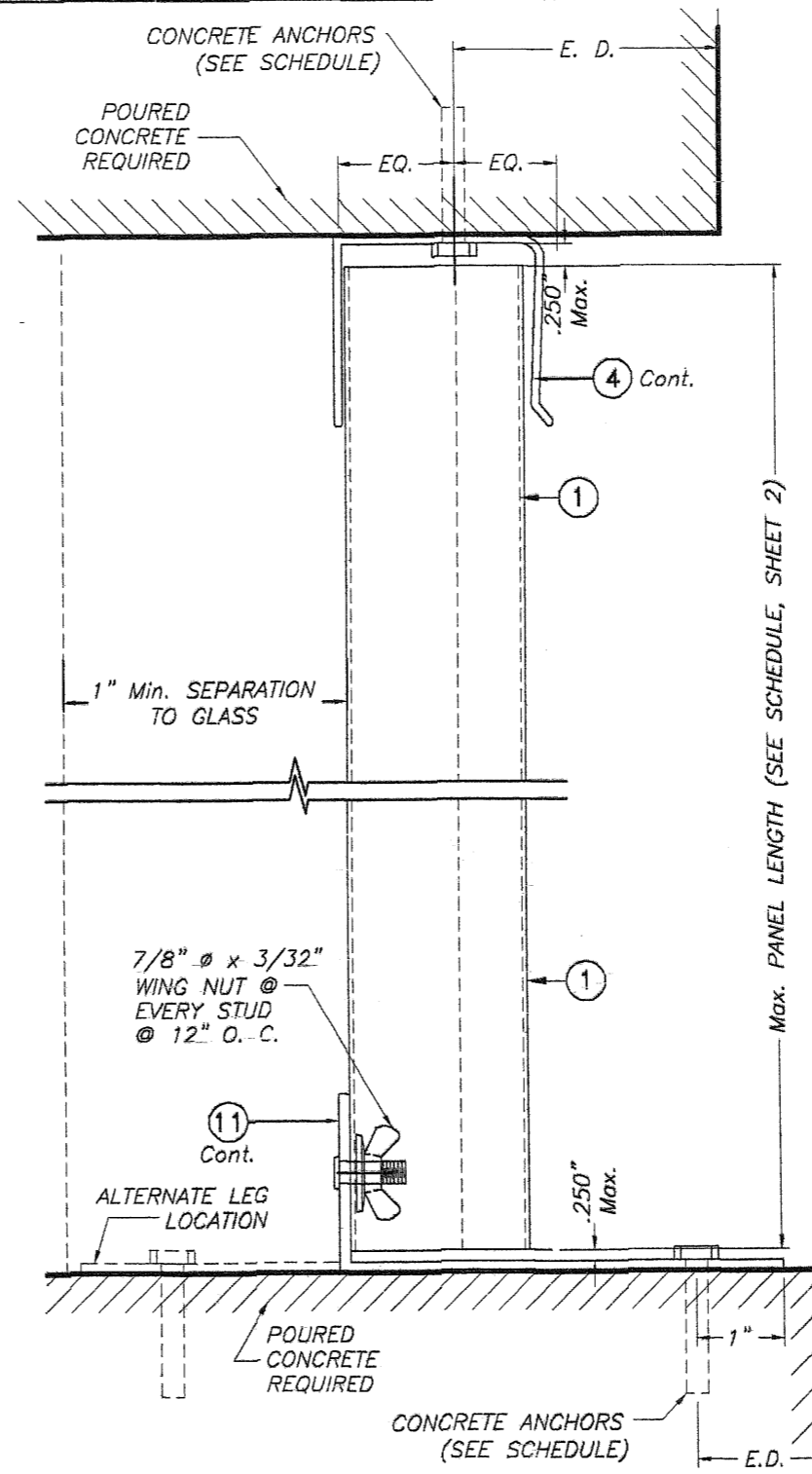
SOLID SET OR ELCO male PANELMATE OR S.G. TAPCONS  
 @ (12) OR (12A) W/1/4"Ø-20 SIDEWALK BOLT OR @  
 (12) OR (12A)W/ (13) W/1/4"Ø-20 TRUSSHEAD BOLT + +  
 (SEE SCHEDULE FOR SPACING)



**WALL MOUNTING INSTALLATION**

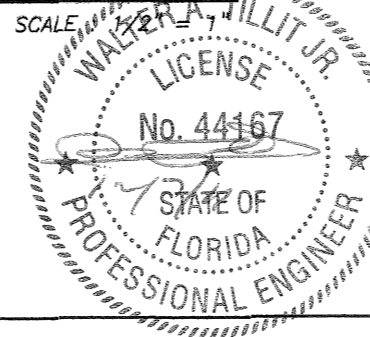
**SECTION 9**

SCALE : 1/2" = 1"



**CEILING & FLOOR MOUNTING INSTALLATION**

**SECTION 10**



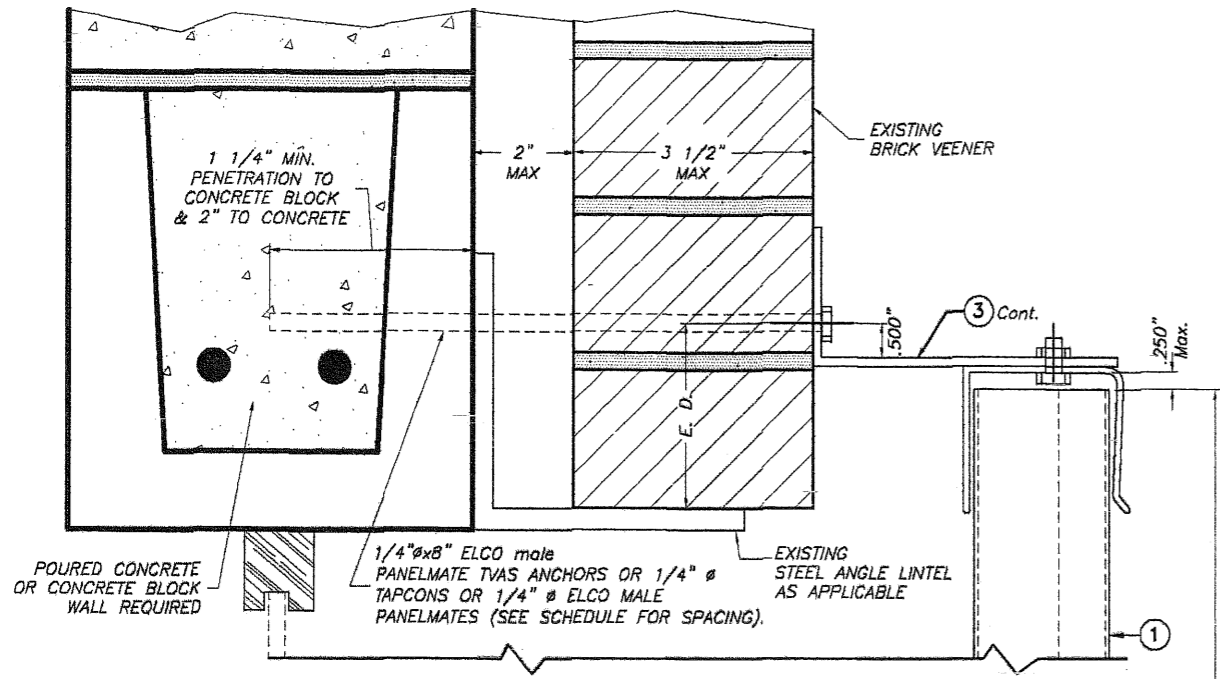
E. D. = EDGE DISTANCE  
 (SEE SCHEDULE ON  
 SHEETS 9 & 10 & 11)

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

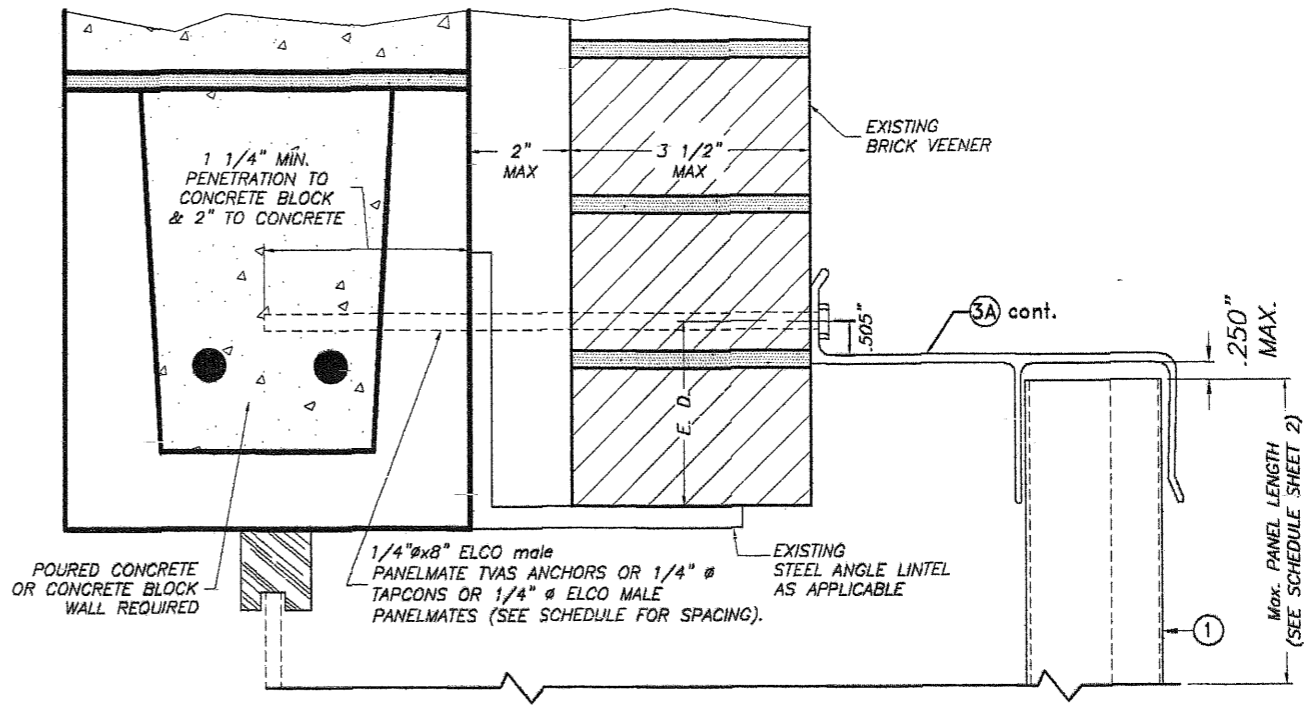
+ +  
 SIDE WALK BOLTS ARE 3/4"Øx3/32"THICK  
 HEAD MACHINE SCREW W/LENGTH  
 AS PER NOTES A.2 & B.2 (SHEET 1)  
 + +  
 TRUSS HEAD BOLTS ARE 1/2"Øx1/8"THICK  
 HEAD MACHINE SCREW W/LENGTH  
 AS PER NOTES A.2 & B.2 (SHEET 1)

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

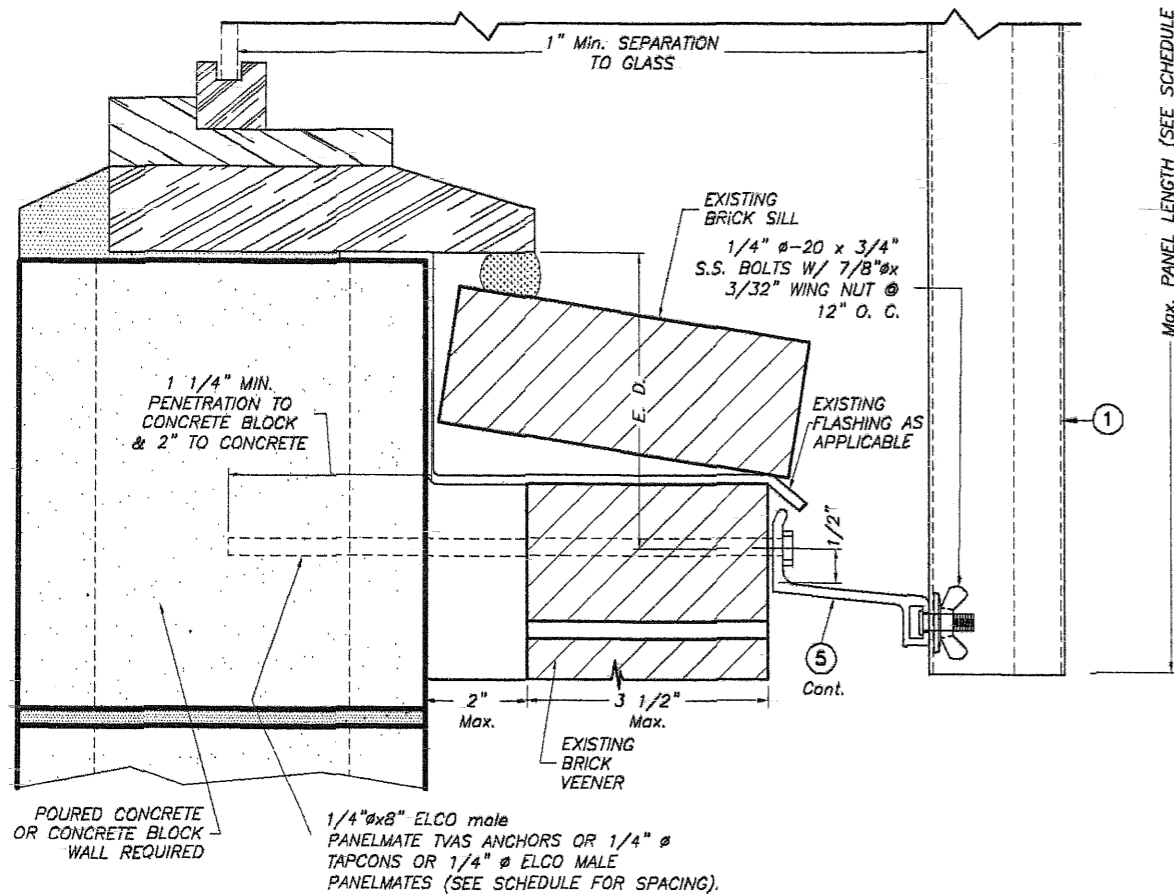
©2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G. DRAWN BY:	
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530, Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44167		EASTERN METAL SUPPLY, INC		12/06/11 DATE:	
		4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716		11-221 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		



**OPTION #1**  
**SECTION 11A**



**OPTION #2**  
**SECTION 11A**



**BUILD OUT INSTALLATION**  
**SECTION 11**

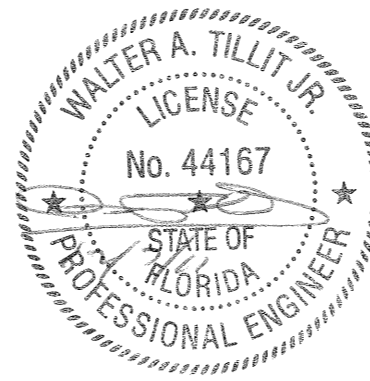
SCALE : 3/8" = 1"

E. D. = EDGE DISTANCE  
(SEE SCHEDULE ON  
SHEETS 9 & 10 & 11)

NOTE FOR COMBINATION OF SECTIONS :

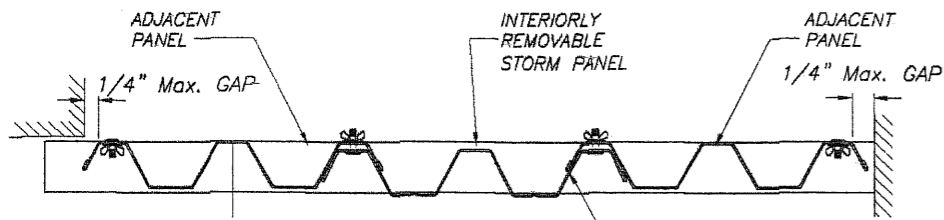
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE  
COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

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



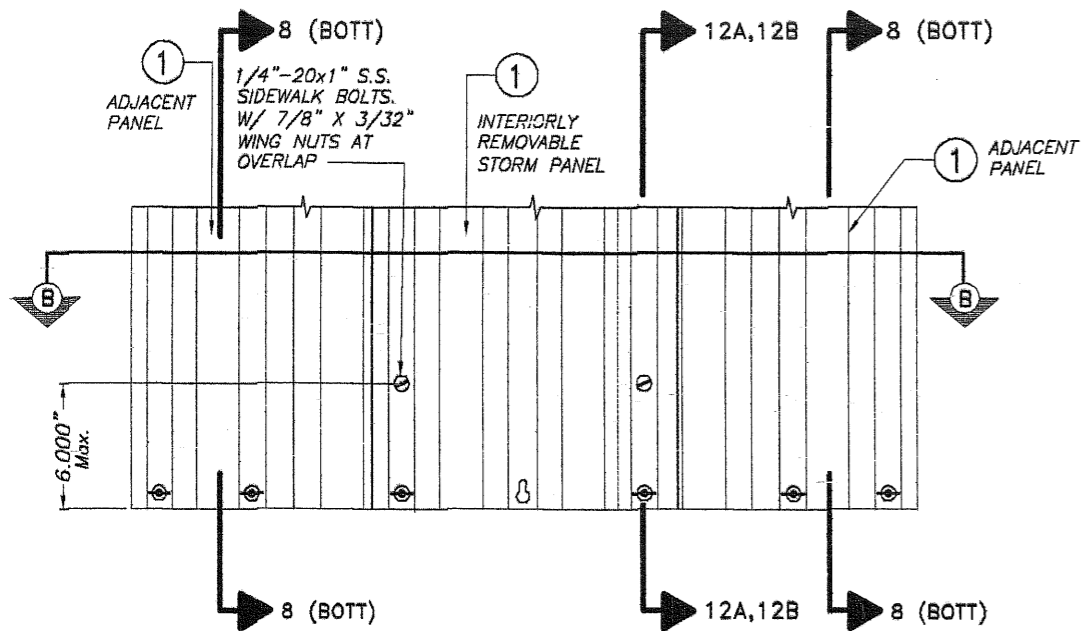
FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G.	
		<b>EASTERN METAL SUPPLY, INC</b> 4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1718		DRAWN BY:	
				12/06/11 DATE:	
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL. 33166 Phone: (305)871-1530, Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44167		11-221 DRAWING No		SHEET 6A OF 17	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-148	12/06/11	3		
2			4		



**SECTION B-B**

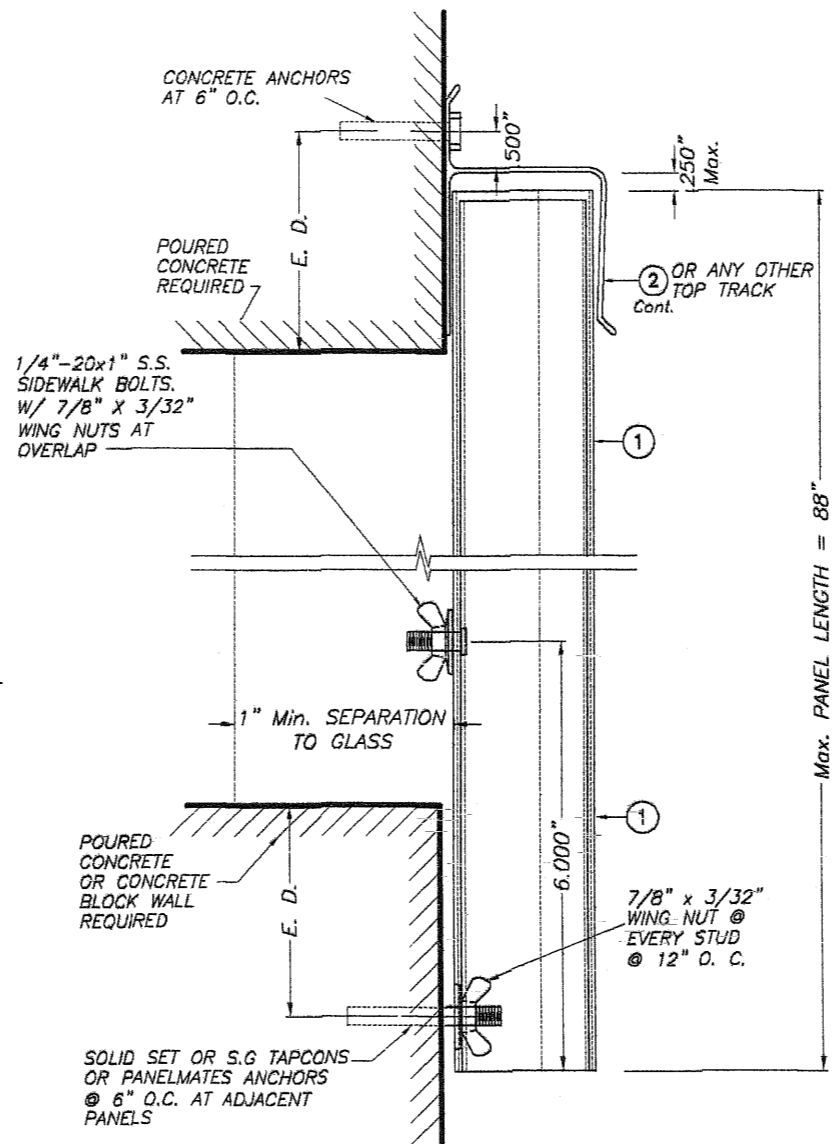
SCALE : 1 1/2" = 1"



**INTERIORLY REMOVABLE STORM PANEL**

**PARTIAL ELEVATION**

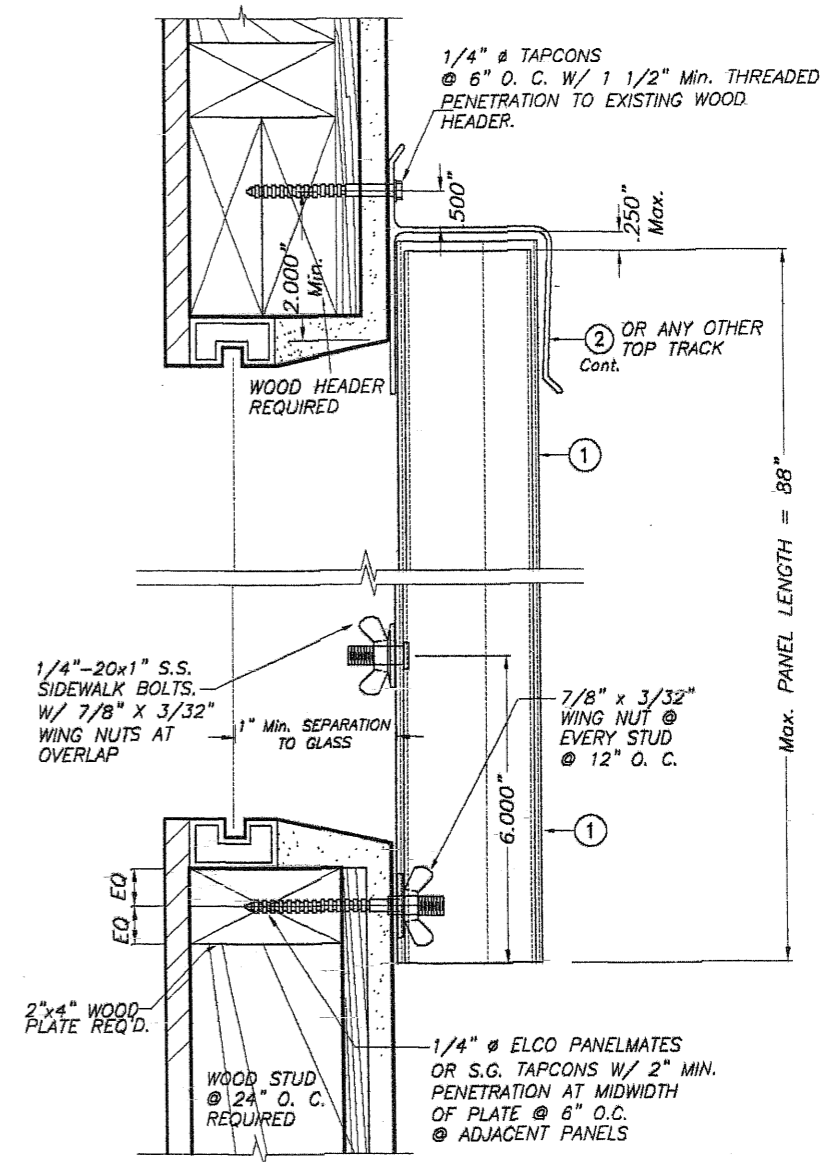
SCALE : 1 1/2" = 1"



**WALL MOUNTING INSTALLATION**

**SECTION 12A**

SCALE : 1/2" = 1"



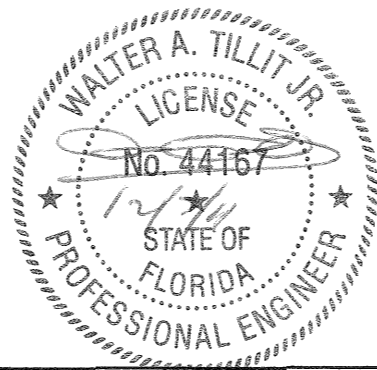
**WALL MOUNTING INSTALLATION**

**SECTION 12B**

SCALE : 1/2" = 1"

**INTERIORLY REMOVABLE STORM PANEL SECTIONS**

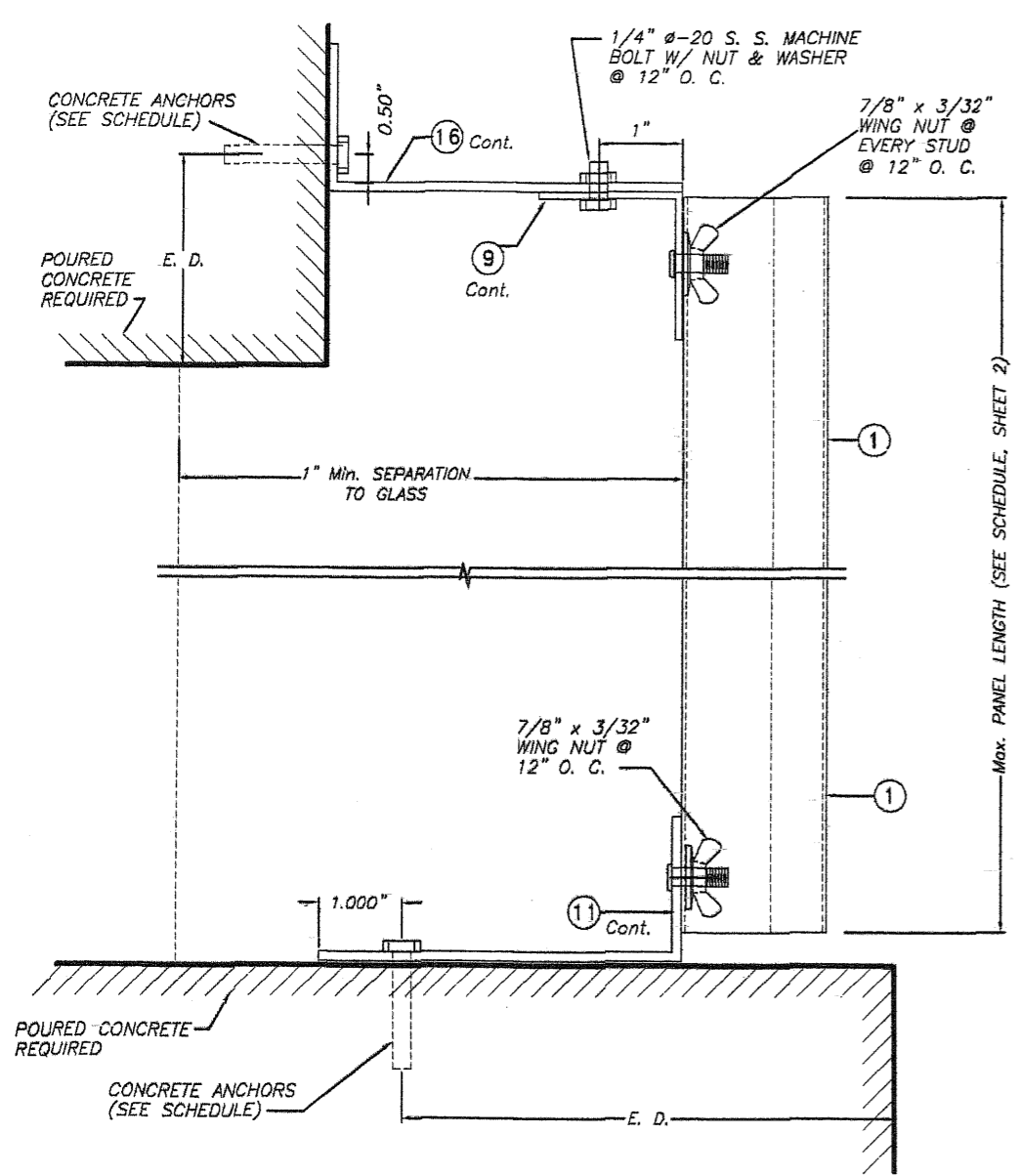
MAX. A.S.D DESIGN PRESSURE RATING = +50.0, -50.0 p.s.f.



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G.	
		<b>EASTERN METAL SUPPLY, INC</b> 4288 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716		DRAWN BY:	
				12/06/11 DATE:	
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530, Fax: (305)871-1531 EB-0006719		WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44167		11-221 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		



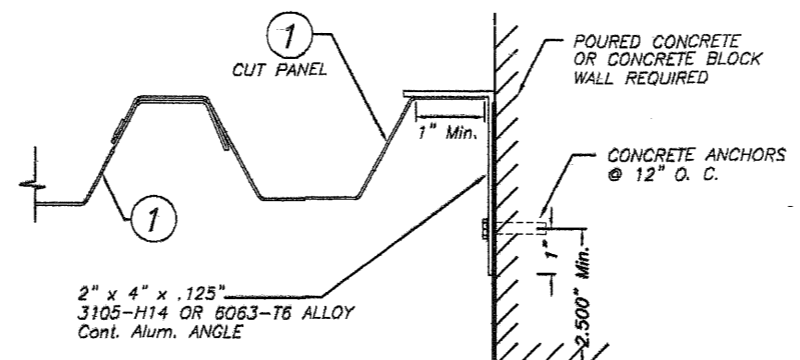


**CEILING & FLOOR MOUNTING  
INSTALLATION - SECTION 13**

SCALE: 1/2" = 1"

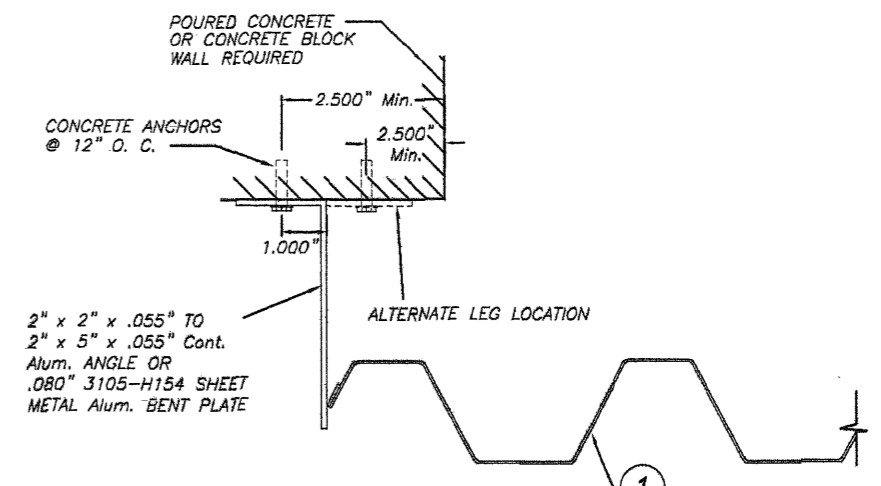
E. D. = EDGE DISTANCE  
(SEE SCHEDULE ON  
SHEETS 9, 10 & 11)

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



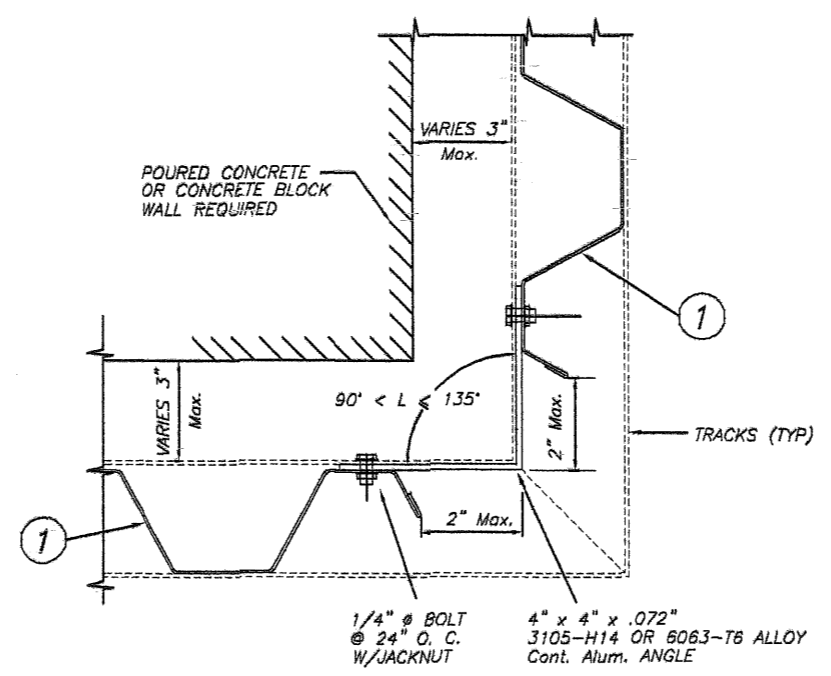
**CASE A (Plan)**

SCALE: 1/4" = 1"



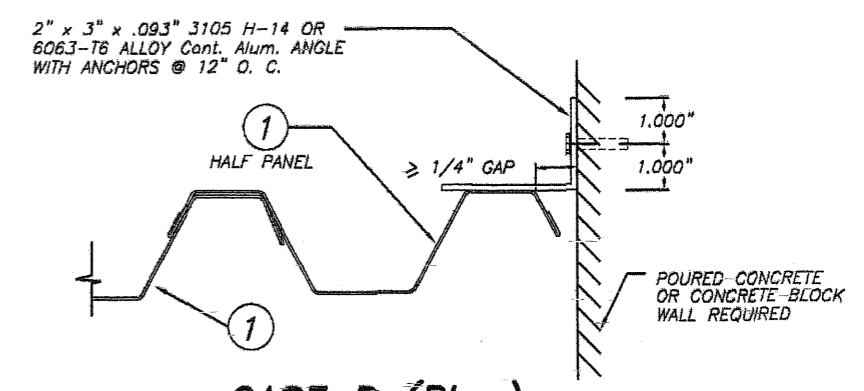
**CASE C (Plan)**

SCALE: 1/4" = 1"



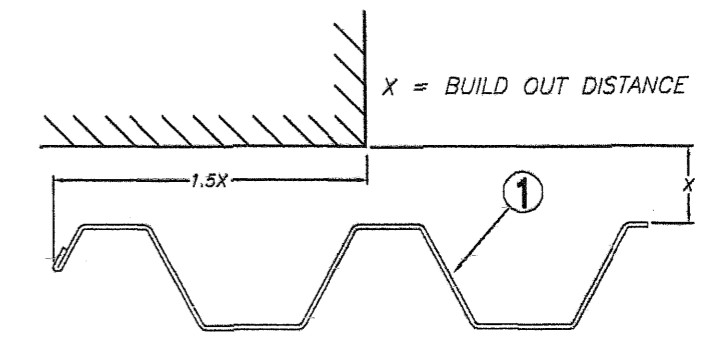
**CASE B (Plan)**

SCALE: 1/4" = 1"



**CASE D (Plan)**

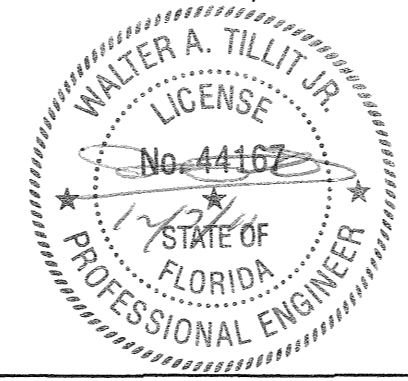
SCALE: 1/4" = 1"



**CASE E (Plan)**

SCALE: 1/4" = 1"

**END CLOSURES DETAILS**



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G. DRAWN BY:	
		<b>EASTERN METAL SUPPLY, INC</b> 4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716		12/06/11 DATE:	
				11-221 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		

**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.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **										APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (H.)
	REGULAR TAPCONS		SOLID SET		S.G. TAPCON		PANELMATES		PANELMATE TVAS			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 OR LESS	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	1 (TOP)	8'-0" OR LESS
	12"	11"	12"	12"	12"	12"	12"	12"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	2 (TOP)	
	9"	9"	9"	9"	9"	9"	9"	9"	9"	9"	2 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	3A (TOP)	
	9"	9"	9"	9"	9"	9"	9"	9"	9"	9"	3 (BOTTOM)	
	12"	11"	12"	12"	12"	12"	12"	12"	12"	12"	4 (TOP)	
	12"	11"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	5A (TOP)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	6 (TOP)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	6 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	7 (TOP)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	7 (BOTTOM)	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP)	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	8 (BOTTOM)	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	9 (TOP)	
	12"	11"	12"	12"	12"	12"	12"	12"	12"	12"	9 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	10 (TOP)	
	6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	10 (BOTTOM)	
9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	11A (TOP)		
9"	9"	9"	9"	9"	9"	9"	9"	9"	9"	11 (BOTTOM)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	6"	N/A	13 (TOP)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (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" (H.)
	REGULAR TAPCONS		SOLID SET		S.G. TAPCON		PANELMATES		PANELMATE TVAS			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 OR LESS	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	1 (TOP)	> 8'-0" UP TO 13'-0"*
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	2 (TOP)	
	9"	9"	9"	9"	9"	9"	9"	9"	9"	9"	2 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	3A (TOP)	
	9"	9"	9"	9"	9"	9"	9"	9"	9"	9"	3 (BOTTOM)	
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	4 (TOP)	
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	5A (TOP)	
	9"	N/A	11"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (BOTTOM)	
	9"	N/A	11 1/2"	N/A	12"	N/A	12"	N/A	N/A	N/A	6 (TOP)	
	9"	N/A	11"	N/A	12"	N/A	12"	N/A	N/A	N/A	6 (BOTTOM)	
	9"	N/A	11"	N/A	12"	N/A	12"	N/A	N/A	N/A	7 (TOP)	
	9"	N/A	11"	N/A	12"	N/A	12"	N/A	N/A	N/A	7 (BOTTOM)	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP)*	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	8 (BOTTOM)*	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	9 (TOP)*	
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	9 (BOTTOM)	
	9"	N/A	11 1/2"	N/A	12"	N/A	12"	N/A	N/A	N/A	10 (TOP)	
	6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	10 (BOTTOM)	
9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	11A (TOP)		
9"	9"	9"	9"	9"	9"	9"	9"	9"	9"	11 (BOTTOM)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	6"	N/A	13 (TOP)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	6"	N/A	13 (BOTTOM)		

\* USE 6" OC FOR PANEL LENGTHS LARGER THAN 10' - 0" AND USE 12" OC AS SHOWN ON SCHEDULE FOR PANELS LENGTHS EQUAL OR SHORTER THAN 10' - 0

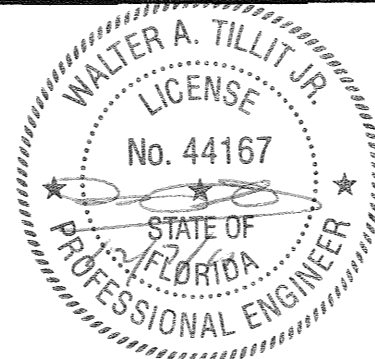
\*\* MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE. FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (NOTE: MIN. E. D. FOR SOLIDSET ANCHORS IS 3") FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR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

ACTUAL E. D.	FACTOR		
	TAPCON (REGULAR)	S.G. TAPCON, PANELMATE OR PANELMATE TVAS	SOLID SET
3"	-	.86	.75
2 1/2"	-	.71	.50
2"	-	.50	-
1 1/2"	.35	-	-

**ANCHORS LEGEND**

ANCHOR TYPE	Min. ANCHOR SPACING
TAPCON (REGULAR OR S.G.) PANELMATE OR PANELMATE TVAS	3"
SOLID SET	3"

E. D. = EDGE DISTANCE



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.	0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)	M.C.V./R.E./A.G. DRAWN BY:
<b>TILTECO inc.</b>	<b>EASTERN METAL SUPPLY, INC</b>	12/06/11 DATE:
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44167	4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716	11-221 DRAWING No
REV. NO. 1 DESCRIPTION OLD 08-146 DATE 12/06/11	REV. NO. 3 DESCRIPTION DATE	SHEET 9 OF 17

**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.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		PANELMATES		PANELMATE TVAS			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 UP TO +60.0, -60.0	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	8'-0" OR LESS
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	2 (TOP)	
	9"	7"	9"	9"	9"	9"	9"	9"	9"	9"	2 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	3A (TOP)	
	9"	7"	9"	9"	9"	9"	9"	9"	9"	9"	3 (BOTTOM)	
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	4 (TOP)	
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	5A (TOP)	
	10"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (BOTTOM)	
	10"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	6 (TOP)	
	10"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	6 (BOTTOM)	
	10"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	7 (TOP)	
	10"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	7 (BOTTOM)	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP)	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	8 (BOTTOM)	
	N/A	N/A	12"	12"	12"	12"	12"	12"	12"	12"	9 (TOP)	
	12"	7"	12"	12"	12"	12"	12"	12"	12"	12"	9 (BOTTOM)	
	10"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	10 (TOP)	
	6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	10 (BOTTOM)	
9"	7"	N/A	N/A	N/A	N/A	9"	7"	9"	7"	11A (TOP)		
9"	7"	N/A	N/A	N/A	N/A	9"	7"	9"	7"	11 (BOTTOM)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (TOP)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (BOTTOM)		

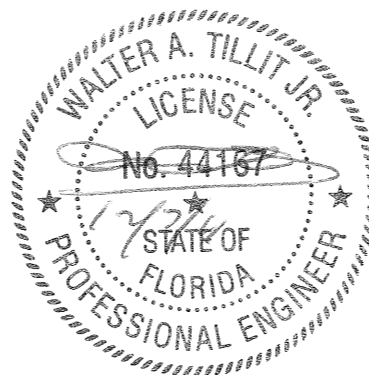
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2"*										APPLICABLE TO SECTIONS & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS		SOLID SET		S.G.TAPCON		PANELMATES		PANELMATE TVAS			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+60.0, -60.0 UP TO +80.0, -80.0	11"	N/A	11"	N/A	11"	N/A	11"	N/A	11"	N/A	1 (TOP)	9'-0" OR LESS
	11"	4"	11"	11"	11"	11"	11"	7"	11"	7"	1 (BOTTOM)	
	11"	N/A	11"	N/A	11"	N/A	11"	N/A	11"	N/A	2 (TOP)	
	8"	4"	9"	9"	9"	9"	9"	7"	9"	7"	2 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	3A (TOP)	
	8"	4"	9"	9"	9"	9"	9"	7"	9"	7"	3 (BOTTOM)	
	11"	4"	11"	11"	11"	11"	11"	7"	11"	7"	4 (TOP)	
	11"	4"	11"	11"	11"	11"	11"	7"	11"	7"	4 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	5A (TOP)	
	5"	8"	7"	N/A	9"	N/A	8"	N/A	N/A	N/A	5 (BOTTOM)	
	9"	N/A	10"	N/A	12"	N/A	11"	N/A	N/A	N/A	6 (TOP)	
	8"	N/A	7"	N/A	9"	N/A	8"	N/A	N/A	N/A	6 (BOTTOM)	
	5"	N/A	7"	N/A	9"	N/A	8"	N/A	N/A	N/A	7 (TOP)	
	5"	N/A	7"	N/A	9"	N/A	8"	N/A	N/A	N/A	7 (BOTTOM)	
	N/A	N/A	12"	12"	12"	12"	12"	6"	12"	6"	8 (TOP)	
	N/A	N/A	12"	12"	12"	12"	12"	6"	12"	6"	8 (BOTTOM)	
	N/A	N/A	12"	12"	12"	12"	12"	6"	12"	6"	9 (TOP)	
	11"	4"	11"	11"	11"	11"	11"	7"	11"	7"	9 (BOTTOM)	
	9"	N/A	10"	N/A	12"	N/A	11"	N/A	N/A	N/A	10 (TOP)	
	8"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	10 (BOTTOM)	
8"	4"	N/A	N/A	N/A	N/A	9"	7"	9"	7"	11A (TOP)		
8"	4"	N/A	N/A	N/A	N/A	9"	7"	9"	7"	11 (BOTTOM)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (TOP)		
6"	N/A	12"	N/A	8"	N/A	6"	N/A	N/A	N/A	13 (BOTTOM)		

**ANCHORS LEGEND**

ANCHOR TYPE	Min. ANCHOR SPACING
TAPCON (REGULAR OR S.G.) PANELMATE OR PANELMATE TVAS	3"
SOLID SET	3"

\*\*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 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.

ACTUAL E. D.	FACTOR		
	TAPCON (REGULAR)	S.G. TAPCON, PANELMATE OR PANELMATE TVAS	SOLID SET
3"	-	.86	.75
2 1/2"	-	.71	.50
2"	-	.50	-
1 1/2"	.35	-	-



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.	0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)	M.C.V./R.E./A.G. DRAWN BY:																		
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. 44167	<b>EASTERN METAL SUPPLY, INC</b> 4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716	12/06/11 DATE: 11-221 DRAWING No																		
<table border="1"> <thead> <tr> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 08-148</td> <td>12/06/11</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> </tr> </tbody> </table>	REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE	1	OLD 08-148	12/06/11	3			2			4				SHEET 10 OF 17
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE															
1	OLD 08-148	12/06/11	3																	
2			4																	

**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.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		PANELMATES		PANELMATE TVAS			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 UP TO +60.0, -60.0	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	1 (TOP)	>8'-0" UP TO 12'-6"
	12"	4 1/2"	12"	12"	12"	12"	12"	8 1/2"	12"	8 1/2"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	2 (TOP)	
	9"	4 1/2"	9"	9"	9"	9"	9"	8 1/2"	9"	8 1/2"	2 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	3A (TOP)	
	9"	4 1/2"	9"	9"	9"	9"	9"	8 1/2"	9"	8 1/2"	3 (BOTTOM)	
	12"	4 1/2"	12"	12"	12"	12"	12"	8 1/2"	12"	8 1/2"	4 (TOP)	
	12"	4 1/2"	12"	12"	12"	12"	12"	8 1/2"	12"	8 1/2"	4 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	5A (TOP)	
	6 1/2"	N/A	7 1/2"	N/A	8"	N/A	7 1/2"	N/A	N/A	N/A	5 (BOTTOM)	
	9"	N/A	9 1/2"	N/A	10"	N/A	9 1/2"	N/A	N/A	N/A	6 (TOP)	
	6 1/2"	N/A	7 1/2"	N/A	8"	N/A	7 1/2"	N/A	N/A	N/A	6 (BOTTOM)	
	6"	N/A	6 1/2"	N/A	7"	N/A	6 1/2"	N/A	N/A	N/A	7 (TOP)	
	6"	N/A	6 1/2"	N/A	7"	N/A	6 1/2"	N/A	N/A	N/A	7 (BOTTOM)	
	N/A	N/A	12" *	12" *	12" *	12" *	12" *	6" *	12" *	6" *	8 (TOP) *	
	N/A	N/A	12" *	12" *	12" *	12" *	12" *	6" *	12" *	6" *	8 (BOTTOM) *	
	N/A	N/A	12" *	12" *	12" *	12" *	12" *	6" *	12" *	6" *	9 (TOP) *	
	12"	4 1/2"	12"	12"	12"	12"	12"	8 1/2"	12"	8 1/2"	9 (BOTTOM)	
	9"	N/A	9 1/2"	N/A	10"	N/A	9 1/2"	N/A	N/A	N/A	10 (TOP)	
	6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	10 (BOTTOM)	
9"	4 1/2"	N/A	N/A	N/A	N/A	9"	4 1/2"	9"	4 1/2"	11A (TOP)		
9"	4 1/2"	N/A	N/A	N/A	N/A	9"	4 1/2"	9"	4 1/2"	11 (BOTTOM)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (TOP)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (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		PANELMATES		PANELMATE TVAS			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+90.0, -90.0 UP TO +100.0, -130.0	8 1/2"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	1 (TOP)	7'-0" OR LESS
	9"	7"	9"	9"	9"	9"	9"	7"	9"	7"	1 (BOTTOM)	
	9"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	2 (TOP)	
	9"	4"	9"	9"	9"	9"	9"	7"	9"	9"	2 (BOTTOM)	
	8"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	3A (TOP)	
	9"	4"	9"	9"	9"	9"	9"	7"	9"	9"	3 (BOTTOM)	
	9"	7"	9"	9"	9"	9"	9"	7"	9"	7"	4 (TOP)	
	9"	7"	9"	9"	9"	9"	9"	7"	9"	7"	4 (BOTTOM)	
	8"	N/A	9"	N/A	9"	N/A	9"	N/A	9"	N/A	5A (TOP)	
	5"	N/A	6"	N/A	7"	N/A	7"	N/A	N/A	N/A	5 (BOTTOM)	
	7"	N/A	8"	N/A	10"	N/A	8"	N/A	N/A	N/A	6 (TOP)	
	5"	N/A	6"	N/A	7"	N/A	7"	N/A	N/A	N/A	6 (BOTTOM)	
	5"	N/A	6"	N/A	7"	N/A	7"	N/A	N/A	N/A	7 (TOP)	
	5"	N/A	6"	N/A	7"	N/A	7"	N/A	N/A	N/A	7 (BOTTOM)	
	N/A	N/A	12"	6"	12"	6"	12"	6"	12"	6"	8 (TOP)	
	N/A	N/A	12"	6"	12"	6"	12"	6"	12"	6"	8 (BOTTOM)	
	N/A	N/A	12"	6"	12"	6"	12"	6"	12"	6"	9 (TOP)	
	9"	7"	9"	9"	9"	9"	9"	7"	9"	7"	9 (BOTTOM)	
	7"	N/A	8"	N/A	10"	N/A	8"	N/A	N/A	N/A	10 (TOP)	
	5"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	10 (BOTTOM)	
5"	4"	N/A	N/A	N/A	N/A	7"	7"	7"	7"	11A (TOP)		
5"	4"	N/A	N/A	N/A	N/A	7"	7"	7"	7"	11 (BOTTOM)		
6"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (TOP)		
5"	N/A	6"	N/A	6"	N/A	6"	N/A	N/A	N/A	13 (BOTTOM)		

\* USE 6" OC FOR PANEL LENGTHS LARGER THAN 10'-0" AND USE 12" AS SHOWN ON SCHEDULE FOR PANELS LENGTHS EQUAL OR SHORTER THAN 10'-0"

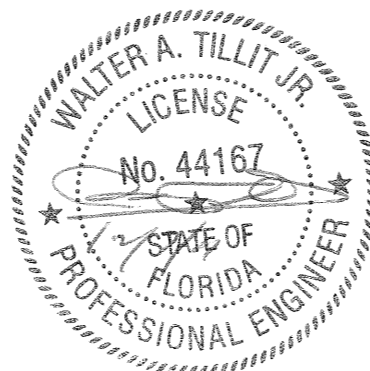
**ANCHORS LEGEND**

ANCHOR TYPE	Min. ANCHOR SPACING
TAPCON (REGULAR OR S.G.) PANELMATE OR PANELMATE TVAS	3"
SOLID SET	3"

E. D. = EDGE DISTANCE

\*\* 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 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.

ACTUAL E. D.	FACTOR		
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3"	-	.86	.75
2 1/2"	-	.71	.50
2"	-	.50	-
1 1/2"	.35	-	-



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TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone: (305)871-1330 Fax: (305)871-1531  
EB-0006719  
WALTER A. TILLIT Jr., P.E.  
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL  
(2.00" DEEP)

**EASTERN METAL SUPPLY, INC**

4288 WEST ROADS DRIVE  
WEST PALM BEACH, FL. 33407  
PHONE: (561)209-8263, FAX: (561)841-1716

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

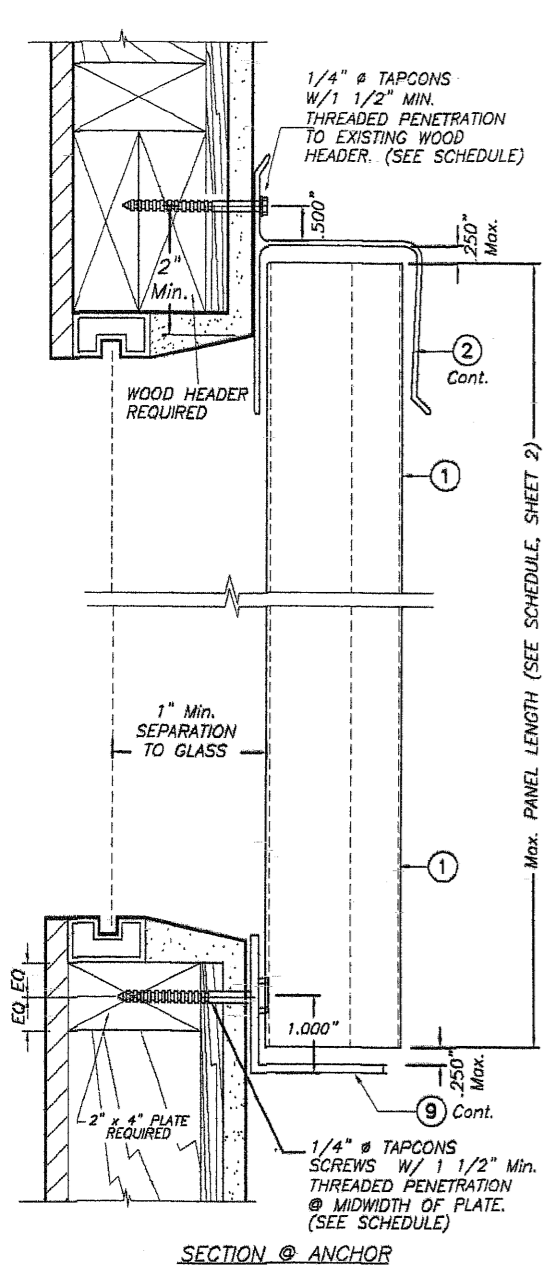
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12/06/11  
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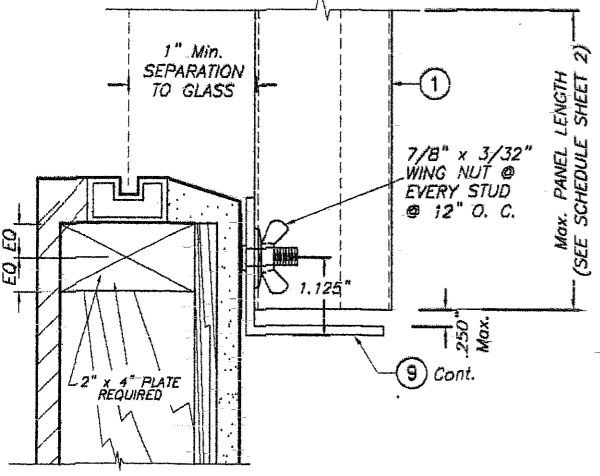
11-221

DRAWING No

SHEET 11 OF 17

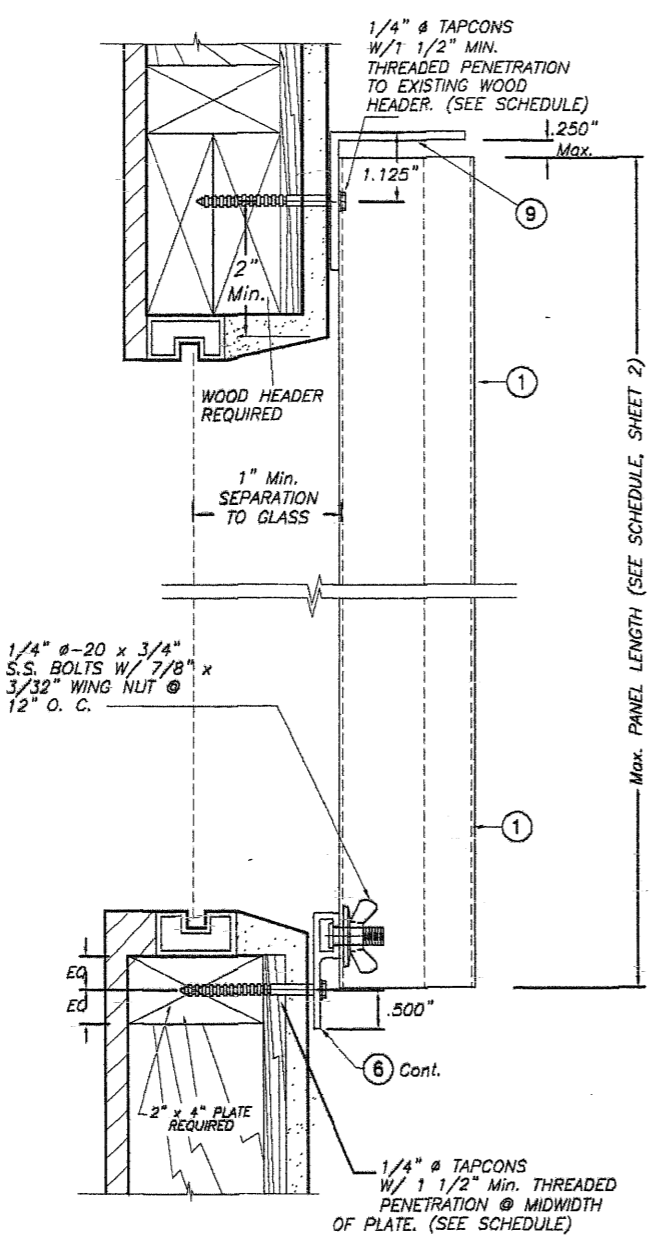


SECTION @ ANCHOR



SECTION @ STUD  
**ALTERNATIVE 1**

SCALE : 1/2" = 1"

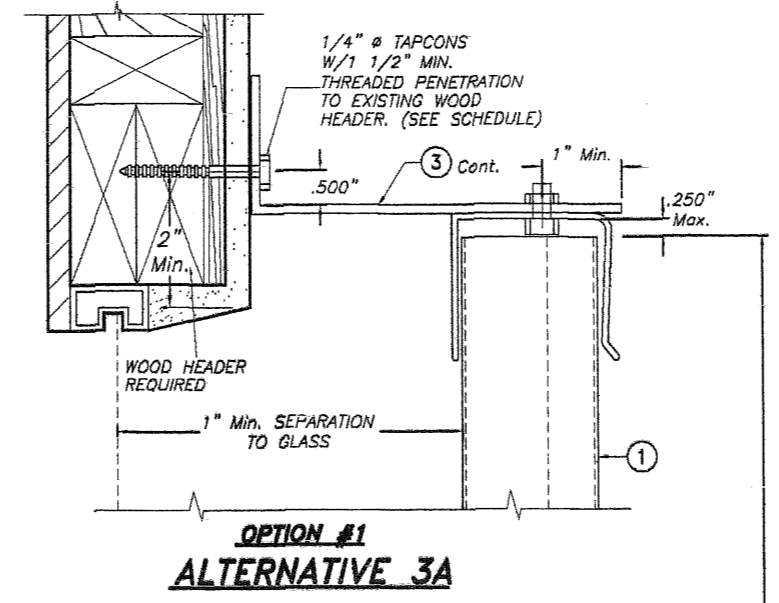


**ALTERNATIVE 2**

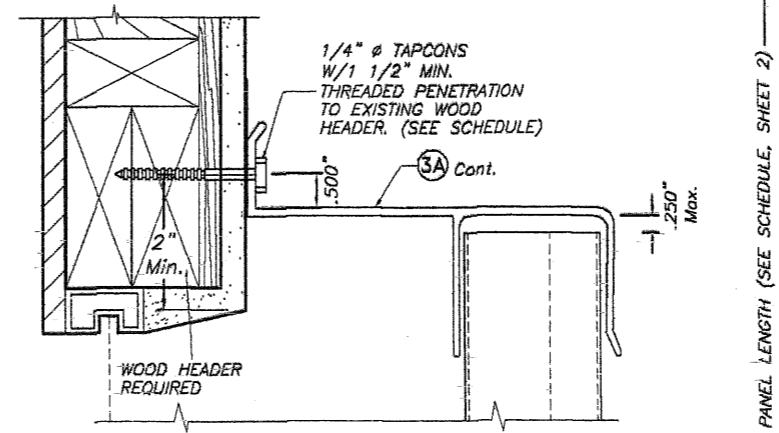
SCALE : 1/2" = 1"

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

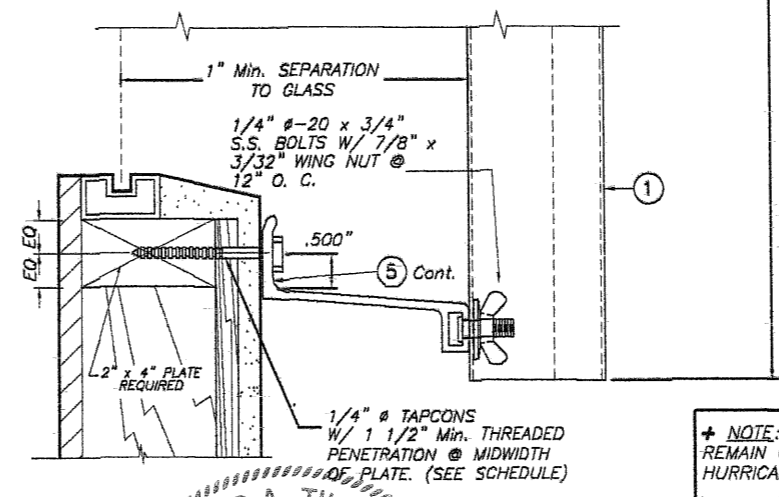
- NOTES:
- INSTALLATIONS ARE ONLY VALID FOR MAX. A.S.D. DESIGN PRESSURE RATING AND PANEL LENGTHS AS PER SCHEDULES ON SHEET 2
  - SEE ANCHOR SCHEDULE ON SHEETS 16 & 17.
  - FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.



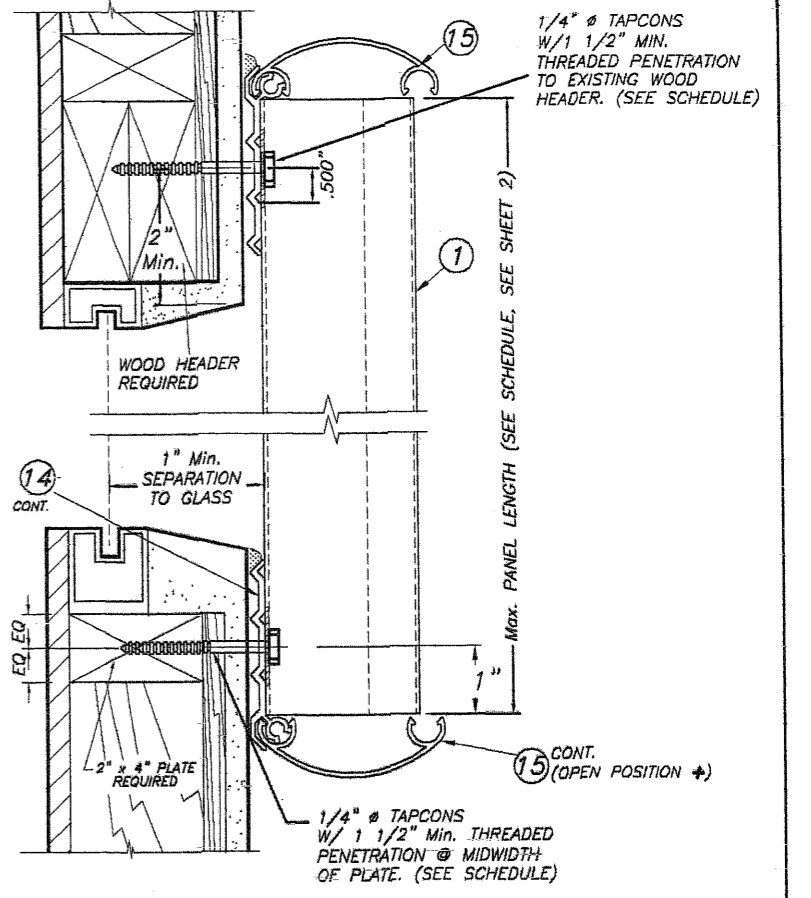
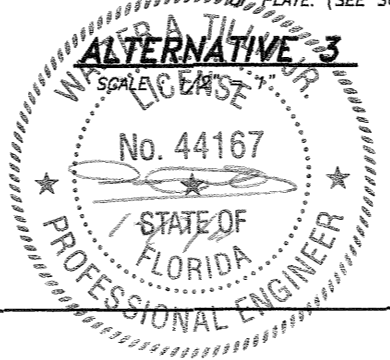
**OPTION #1  
ALTERNATIVE 3A**



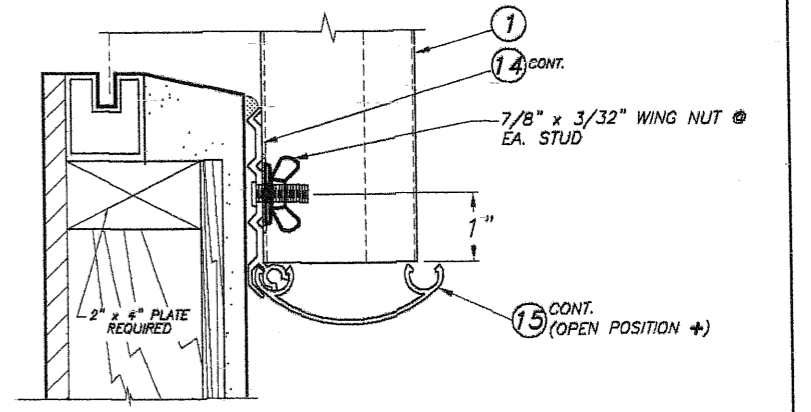
**OPTION #2  
ALTERNATIVE 3A**



**OPTION #3  
ALTERNATIVE 3**



SECTION @ ANCHOR



SECTION @ STUD  
**ALTERNATIVE 4**

SCALE : 1/2" = 1"

+ NOTE: SNAP CAP (15) TO REMAIN CLOSED AT NON HURRICANE CONDITIONS.

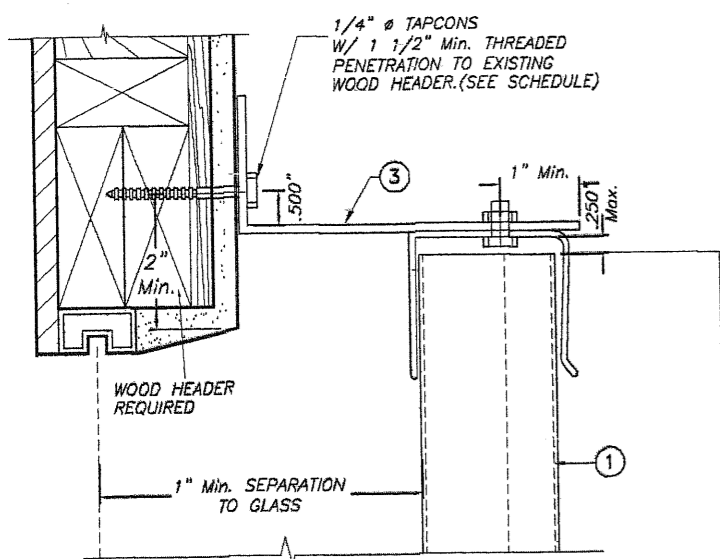
FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.

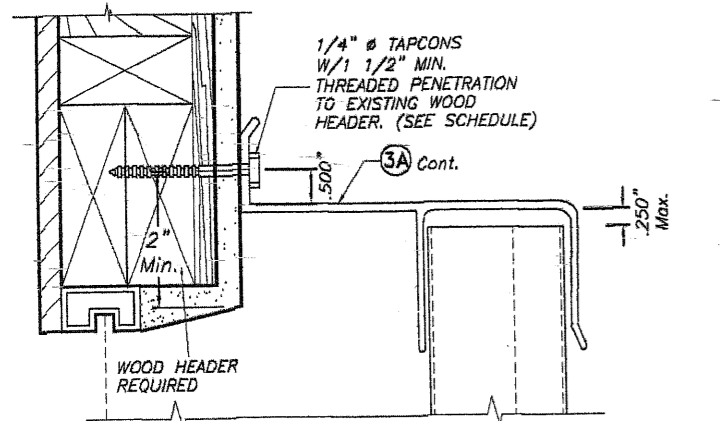
**TILTECO INC.**

TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone : (305)871-1530, Fax : (305)871-1531  
EB-0006719  
WALTER A. TILLIT JR., P.E.  
FLORIDA Lic. 44167

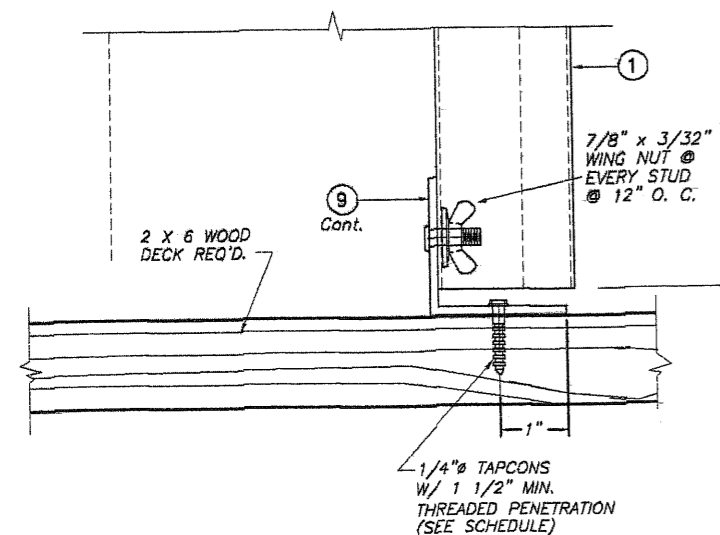
0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G.			
		DRAWN BY:			
		12/06/11			
		DATE:			
		11-221			
		DRAWING No			
		SHEET 12 OF 17			
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-146	12/06/11	3		
2			4		



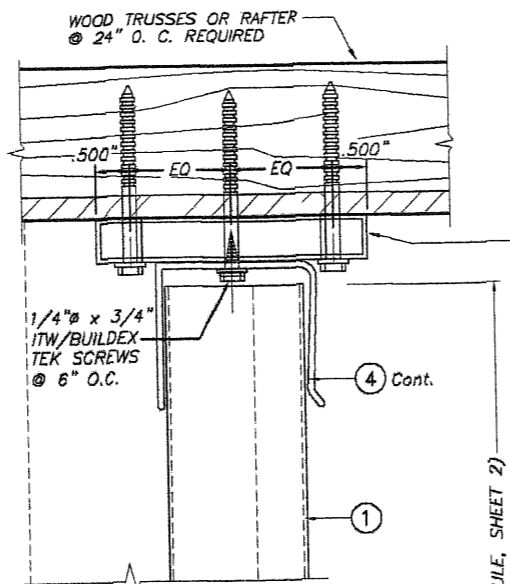
**OPTION #1  
ALTERNATIVE 5A**



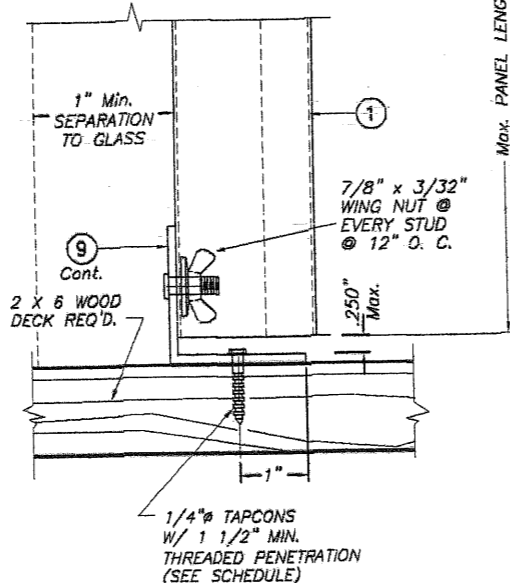
**OPTION #2  
ALTERNATIVE 5A**



**ALTERNATIVE 5**  
SCALE: 1/2" = 1"

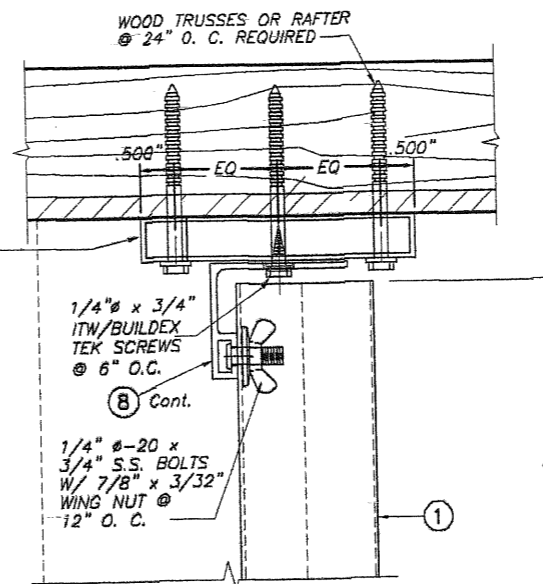


**ALTERNATIVE 6A**  
SCALE: 1/2" = 1"  
(LIMITED TO +60.0, -66.0 p.s.f. DESIGN LOAD AND UP TO 9'-0" Max. PANEL LENGTH)

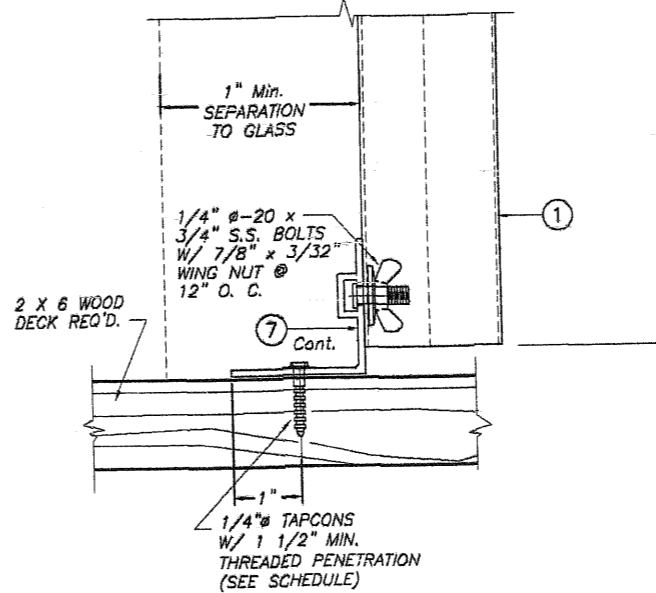


**ALTERNATIVE 6**  
SCALE: 1/2" = 1"

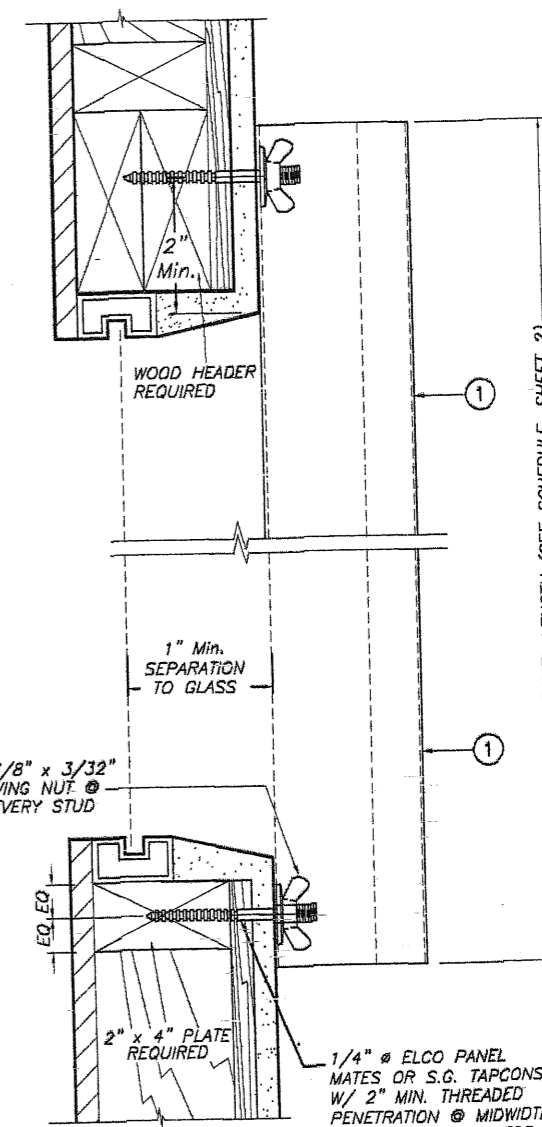
1" x 4" x 1/8" Min. (6063-16) Alum. TUBE W/ (3) 5/16" x LAG SCREWS TO EACH JOIST. LOCATE SCREW AT MIDWIDTH OF EXISTING WOOD MEMBER (2" Min. NOMINAL WIDTH) W/ 2" Min. THREADED PENETRATION.



**ALTERNATIVE 7A**  
SCALE: 1/2" = 1"  
(LIMITED TO +60.0, -66.0 p.s.f. DESIGN LOAD AND UP TO 9'-0" Max. PANEL LENGTH)



**ALTERNATIVE 7**  
SCALE: 1/2" = 1"



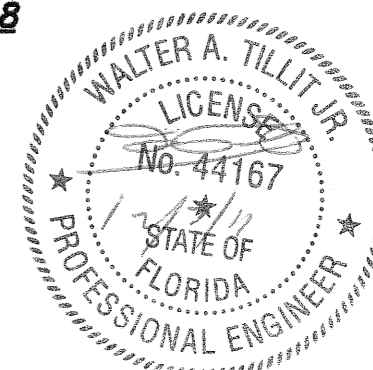
**ALTERNATIVE 8**  
SCALE: 1/2" = 1"

**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 16 & 17.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

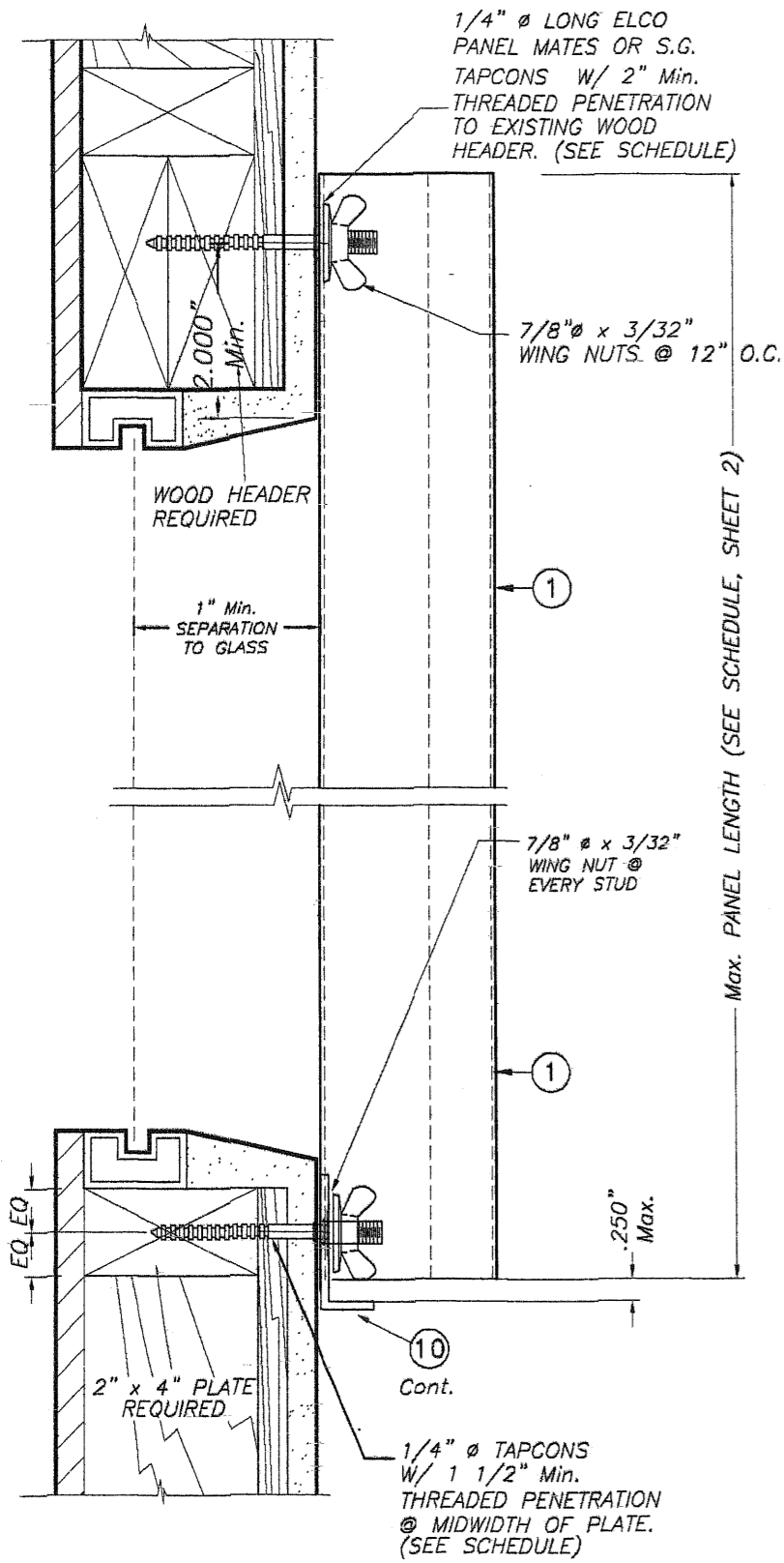
**NOTE FOR COMBINATION OF SECTIONS :**

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



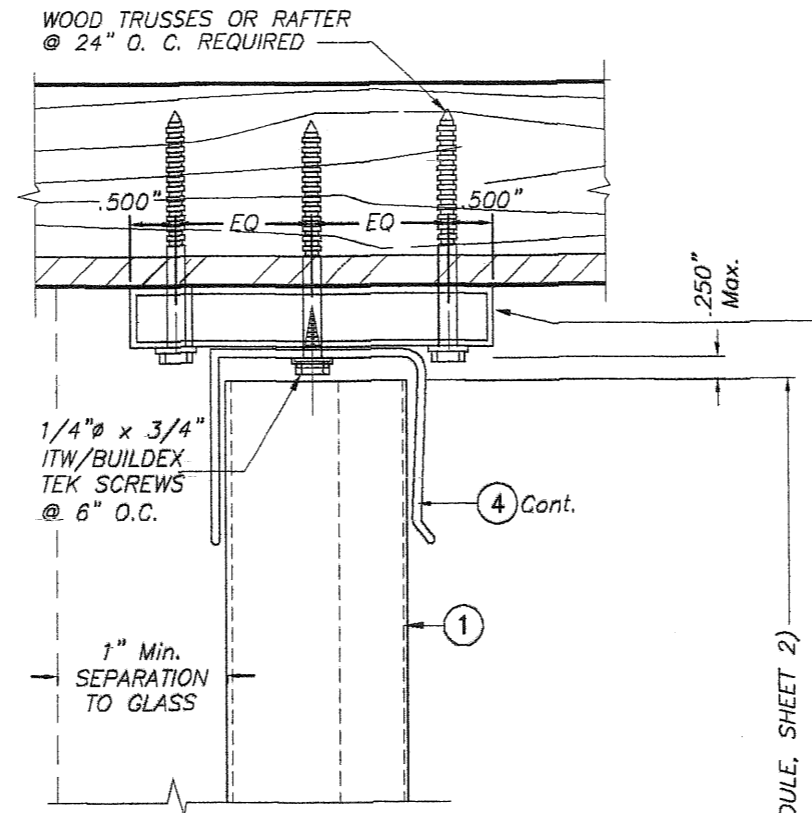
FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G. DRAWN BY:																			
		<b>EASTERN METAL SUPPLY, INC</b> 4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716		12/06/11 DATE:																			
				11-221 DRAWING No																			
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL. 33166 Phone: (305)871-1530, Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44167		<table border="1"> <thead> <tr> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 08-146</td> <td>12/06/11</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> </tr> </tbody> </table>		REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE	1	OLD 08-146	12/06/11	3			2			4			SHEET 13 OF 17	
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE																		
1	OLD 08-146	12/06/11	3																				
2			4																				



**ALTERNATIVE 9**

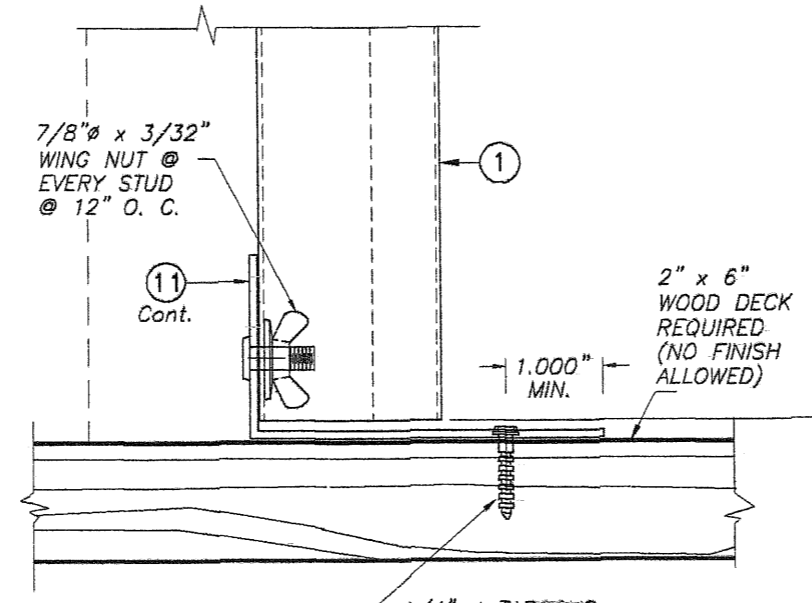
SCALE : 1/2" = 1"



**ALTERNATIVE 10A**

SCALE : 1/2" = 1"

(LIMITED TO +60.0, -66.0 p.s.f. DESIGN LOAD  
AND UP TO 9'-0" Max. PANEL LENGTH)



**ALTERNATIVE 10**

SCALE : 1/2" = 1"

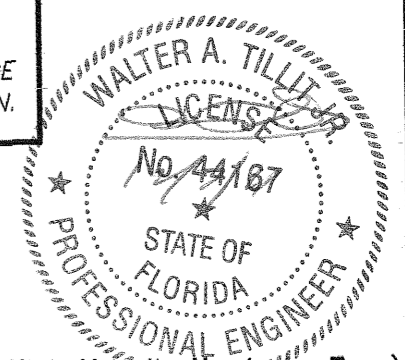
1" x 4" x 1/8"  
Min. (6063-T6)  
Alum. TUBE W/  
(3) 5/16"  $\phi$  x 4"  
LAG SCREWS TO  
EACH JOIST.  
LOCATE SCREW  
AT MIDWIDTH OF  
EXISTING WOOD  
MEMBER (2" Min.  
NOMINAL WIDTH)  
W/ 2" Min.  
THREADED  
PENETRATION.

**NOTES:**

1. INSTALLATIONS ARE ONLY VALID FOR MAX. A.S.D. DESIGN PRESSURE RATING & PANEL'S LENGTHS AS PER SCHEDULES ON SHEET 2 (EXCEPT AS-NOTED)
2. SEE ANCHOR SCHEDULE ON SHEET 16 & 17.
3. 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 :**

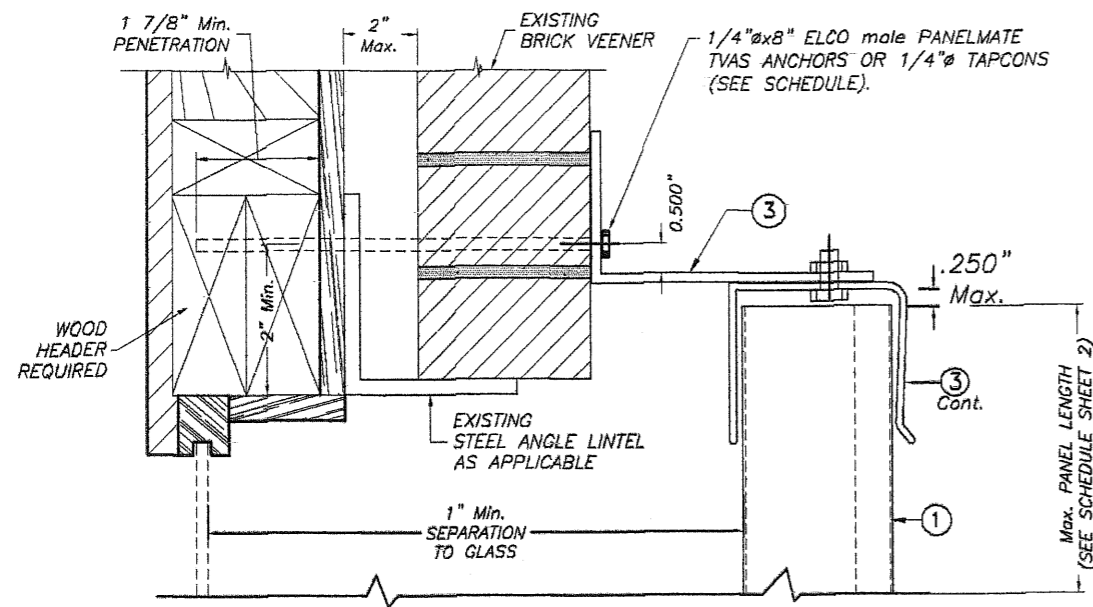
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE  
COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



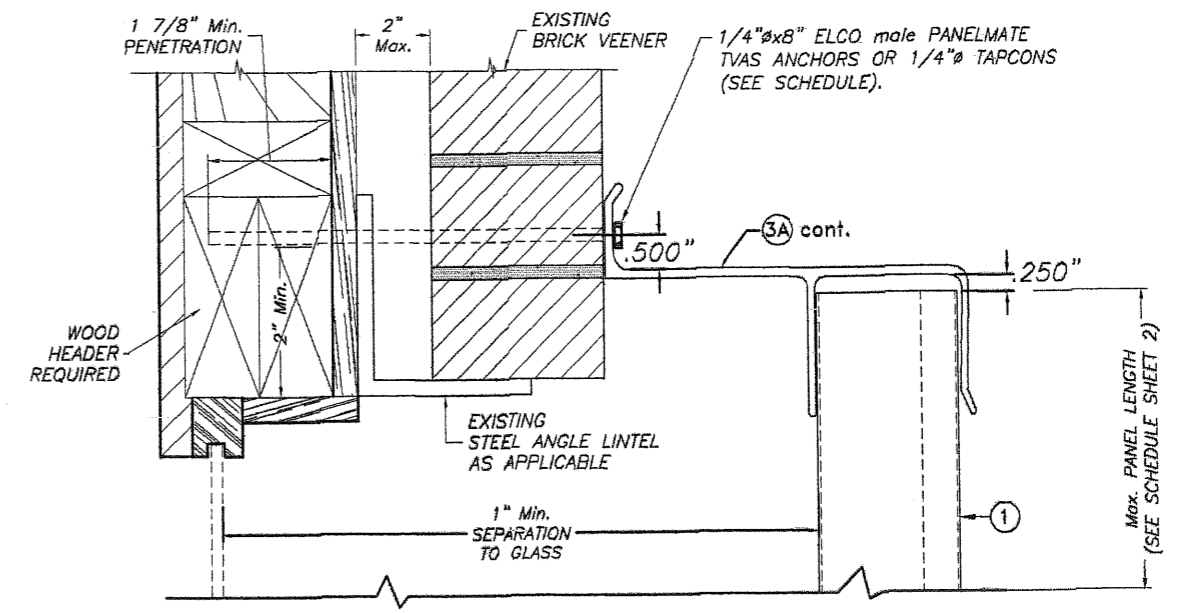
**INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS**

FLORIDA BUILDING CODE (Non High Velocity, Hurricane Zone)

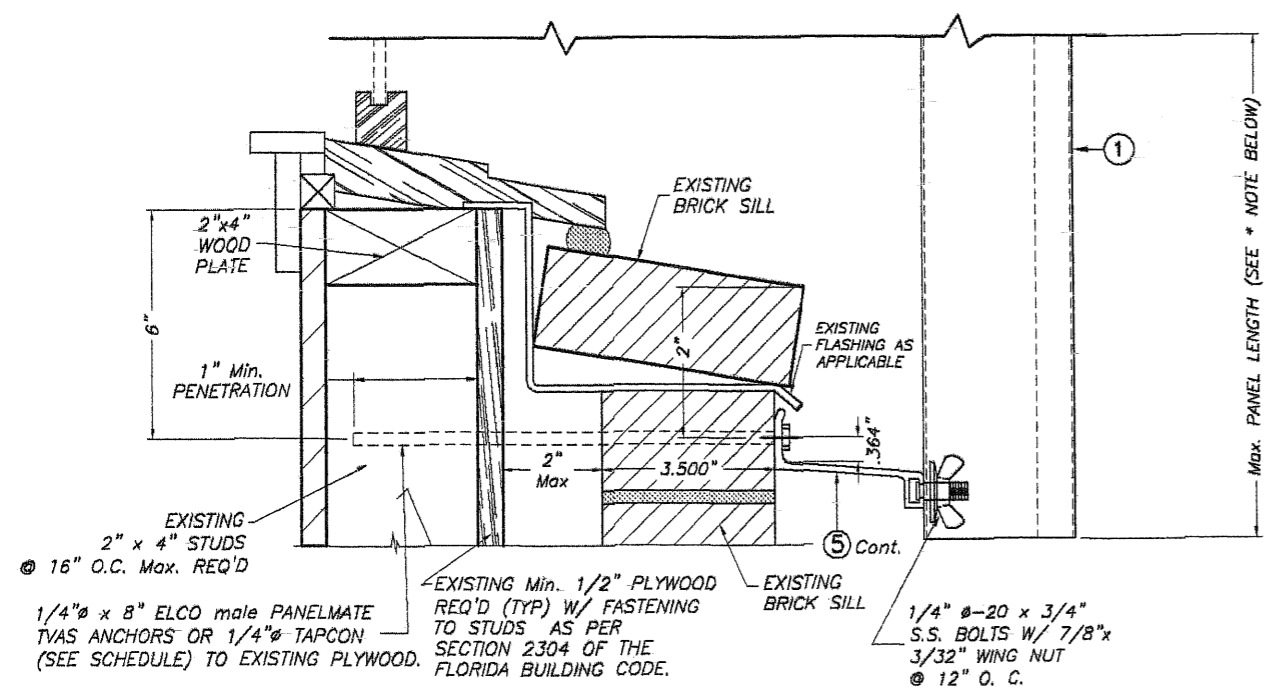
<p>© 2011 TILTECO, INC.</p> <p><b>TILTECO INC.</b></p> <p>TILLIT TESTING &amp; ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL. 33166 Phone : (305)871-1530 . Fax : (305)871-1531 EB-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44187</p>		<p>0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)</p> <p><b>EASTERN METAL SUPPLY, INC</b></p> <p>4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716</p>	<p>M.C.V./R.E./A.G. DRAWN BY:</p> <p>12/06/11 DATE:</p> <p>11-221 DRAWING No</p> <p>SHEET 14 OF 17</p>		
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-148	12/06/11	3		
2			4		



**OPTION #1**  
**ALTERNATIVE 11A**



**OPTION #2**  
**ALTERNATIVE 11A**



**ALTERNATIVE 11**  
**BUILD-OUT INSTALLATION**  
SCALE: 1/2" = 1"

\* VALID FOR MAX. A.S.D DESIGN PRESSURE RATING +50.0, -60.0 p.s.f. FOR UP TO 78" PANELS LENGTHS, AND FOR +50.0, -50.0 p.s.f., FOR PANEL LENGTHS GREATER THAN 78" UP TO 108"

**INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS**

**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 16 & 17.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

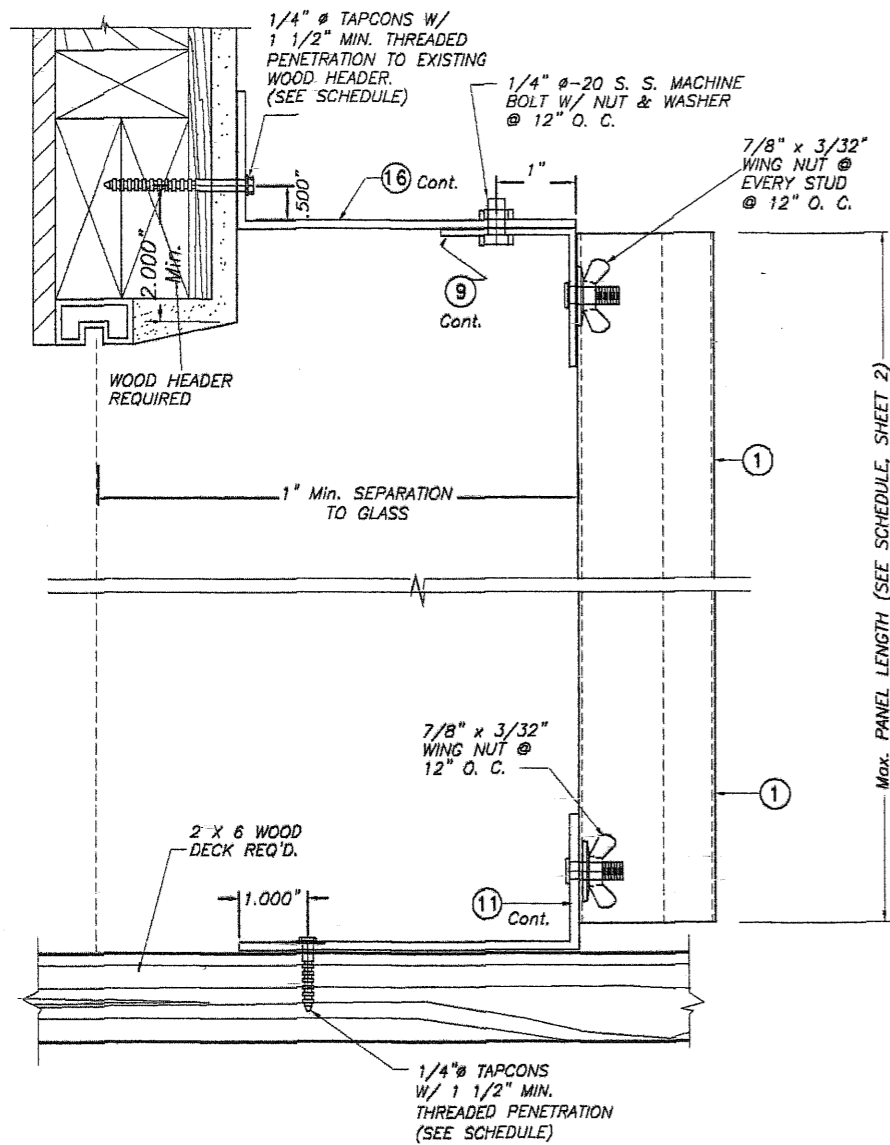
**NOTE FOR COMBINATION OF SECTIONS :**  
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

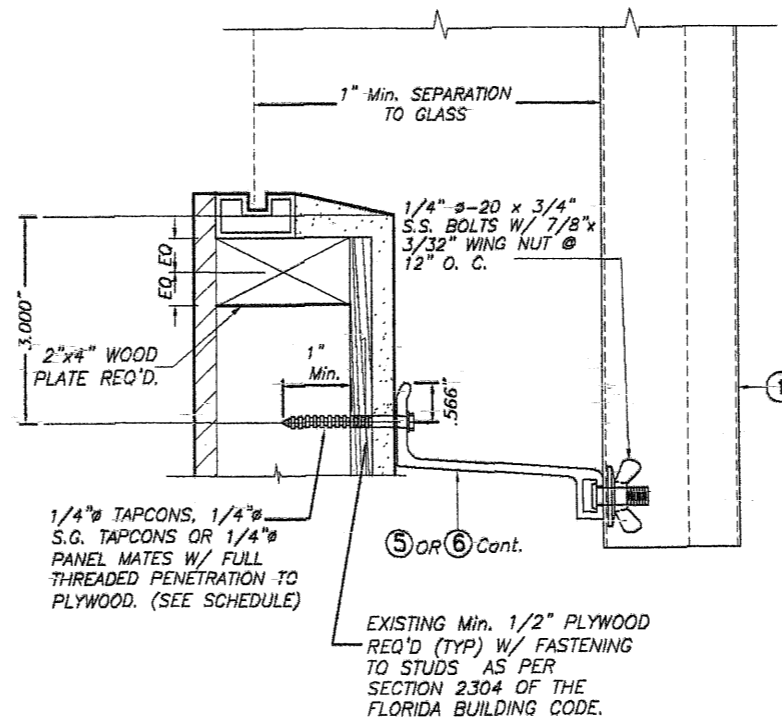
 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530 . Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. 44167	0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)	M.C.V./R.E./A.G. DRAWN BY:
	<b>EASTERN METAL SUPPLY, INC.</b> 4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716	12/06/11 DATE:
REV. NO. DESCRIPTION DATE REV. NO. DESCRIPTION DATE 1 OLD 08-146 12/06/11 3 2	11-221 DRAWING No	SHEET 14A OF 17





**ALTERNATIVE 13**

SCALE : 1/2" = 1"



**ALTERNATIVE 14**

SCALE : 1/2" = 1"

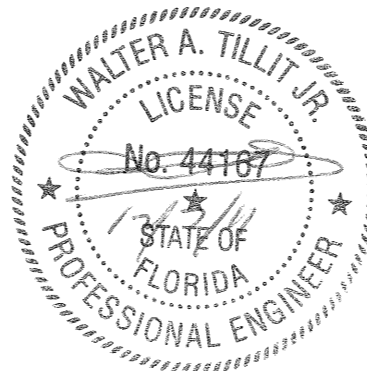
**NOTES:**

1. INSTALLATIONS ARE ONLY VALID FOR MAX. A.S.D. DESIGN PRESSURE RATING AND PANEL'S LENGTHS AS PER SCHEDULES ON SHEET 2
2. SEE ANCHOR SCHEDULE ON SHEET 16 & 17.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

\* VALID FOR MAX. A.S.D. DESIGN PRESSURE RATING +50.0, -60.0 p.s.f. FOR UP TO 78" PANELS LENGTHS, AND FOR +50.0, -50.0 p.s.f., FOR PANEL LENGTHS GREATER THAN 78" UP TO 108"

NOTE FOR COMBINATION OF SECTIONS :

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



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2011 TILTECO, INC.		0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G.																		
		<b>EASTERN METAL SUPPLY, INC</b> 4268 WEST ROADS DRIVE WEST PALM BEACH, FL. 33407 PHONE: (561)209-8263, FAX: (561)841-1716		DRAWN BY:																		
				DATE:																		
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL. 33186 Phone: (305)871-1533, Fax: (305)871-1531 EB-0006719		WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44167		11-221																		
		<table border="1"> <thead> <tr> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 08-146</td> <td>12/06/11</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> </tr> </tbody> </table>		REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD 08-146	12/06/11	3			2			4			DRAWING No
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE																	
1	OLD 08-146	12/06/11	3																			
2			4																			
				SHEET 15 OF 17																		

**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 # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS	S.G.TAPCON	PANELMATES OR PANELMATE TVAS		
+40.0, -40.0 OR LESS	12"	N/A	N/A	1 (TOP)	8'-0" OR LESS
	12"	N/A	N/A	1 (BOTTOM)	
	12"	N/A	N/A	2 (TOP)	
	9"	N/A	N/A	2 (BOTTOM)	
	9"	N/A	N/A	3A (TOP)	
	9"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	N/A	4 (TOP)	
	12"	N/A	N/A	4 (BOTTOM)	
	9"	N/A	N/A	5A (TOP)	
	9"	N/A	N/A	5 (BOTTOM)	
	9"	N/A	N/A	6 (BOTTOM)	
	8 1/2"	N/A	N/A	7 (BOTTOM)	
	N/A	12"	12"	8 (TOP)	
	N/A	12"	12"	8 (BOTTOM)	
	N/A	12"	12"	9 (TOP)	
	12"	N/A	N/A	9 (BOTTOM)	
	6"	N/A	N/A	10 (BOTTOM)	
	9"	N/A	9"	11A (TOP)	
	4"	N/A	4"	11 (BOTTOM)	
	6"	N/A	N/A	13 (TOP)	
6"	N/A	N/A	13 (BOTTOM)		
4"	4"	4"	14 (BOTTOM)		

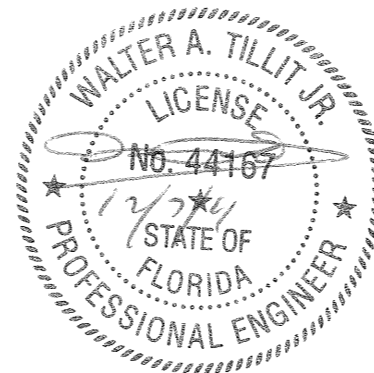
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS	S.G.TAPCON	PANELMATES OR PANELMATE TVAS		
+40.0, -40.0 OR LESS	12"	N/A	N/A	1 (TOP)	>8'-0" UP TO 13'-0" *
	12"	N/A	N/A	1 (BOTTOM)	
	12"	N/A	N/A	2 (TOP)	
	9"	N/A	N/A	2 (BOTTOM)	
	9"	N/A	N/A	3A (TOP)	
	9"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	N/A	4 (TOP)	
	12"	N/A	N/A	4 (BOTTOM)	
	9"	N/A	N/A	5A (TOP)	
	5 1/2"	N/A	N/A	5 (BOTTOM)	
	5 1/2"	N/A	N/A	6 (BOTTOM)	
	5 "	N/A	N/A	7 (BOTTOM)	
	N/A	12"	12"	8 (TOP) *	
	N/A	12"	12"	8 (BOTTOM) *	
	N/A	12"	12"	9 (TOP)	
	12"	N/A	N/A	9 (BOTTOM)	
	5 1/2"	N/A	N/A	10 (BOTTOM)	
	9"	N/A	9"	11A (TOP)	
	4" **	N/A	4" **	11 (BOTTOM) **	
	6"	N/A	N/A	13 (TOP)	
5 1/2"	N/A	N/A	13 (BOTTOM)		
4" **	4" **	4" **	14 (BOTTOM)**		

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS	S.G.TAPCON	PANELMATES OR PANELMATE TVAS		
+40.0, -40.0 UP TO +60.0, -60.0	12"	N/A	N/A	1 (TOP)	8'-0" OR LESS
	12"	N/A	N/A	1 (BOTTOM)	
	12"	N/A	N/A	2 (TOP)	
	9"	N/A	N/A	2 (BOTTOM)	
	9"	N/A	N/A	3A (TOP)	
	9"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	N/A	4 (TOP)	
	12"	N/A	N/A	4 (BOTTOM)	
	9"	N/A	N/A	5A (TOP)	
	8"	N/A	N/A	5 (BOTTOM)	
	8"	N/A	N/A	6 (BOTTOM)	
	5 1/2"	N/A	N/A	7 (BOTTOM)	
	N/A	12"	12"	8 (TOP)	
	N/A	12"	12"	8 (BOTTOM)	
	N/A	12"	12"	9 (TOP)	
	12"	N/A	N/A	9 (BOTTOM)	
	6"	N/A	N/A	10 (BOTTOM)	
	9"	N/A	9"	11A (TOP)	
	4" *	N/A	4" *	11 (BOTTOM) *	
	6"	N/A	N/A	13 (TOP)	
6"	N/A	N/A	13 (BOTTOM)		
4" *	4" *	4" *	14 (BOTTOM) *		

\* USE 6" OC SPACING FOR PANEL LENGTHS LARGER THAN 10' - 0" AND USE 12" OC AS SHOWN ON SCHEDULE FOR PANELS LENGTHS EQUAL OR SHORTER THAN 10' - 0"

\*\* VALID ONLY FOR UP TO 108" PANELS LENGTHS.

\* VALID ONLY FOR UP TO +50.0, -60.0 p.s.f. MAX. A.S.D. DESIGN PRESSURE RATING WITH 78" Max. PANEL LENGTHS OR FOR UP TO +50.0, -50.0 p.s.f. MAX. A.S.D. DESIGN PRESSURE RATING WITH 96" Max. PANEL LENGTHS.



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**TILTECO INC.**

TILLIT TESTING & ENGINEERING COMPANY  
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166  
 Phone: (305)871-1530, Fax: (305)871-1531  
 EB-0006719  
 WALTER A. TILLIT JR., P.E.  
 FLORIDA Lic. 44167

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)		M.C.V./R.E./A.G.
EASTERN METAL SUPPLY, INC		12/06/11
4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PHONE: (561)209-8263, FAX: (561)841-1716		DATE:
REV. NO. DESCRIPTION DATE REV. No. DESCRIPTION DATE		11-221
1	QLD 08-146	12/06/11
2		
		DRAWING No
		SHEET 16 OF 17

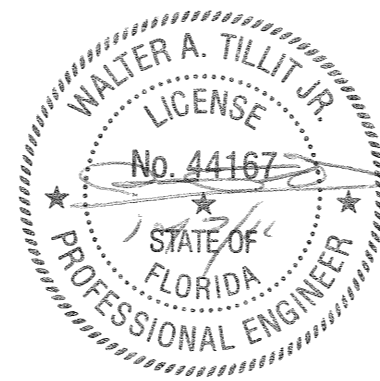
**MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS**

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS	S.G.TAPCON	PANELMATES OR PANELMATE TVAS		
+60.0, -80.0 UP TO +80.0, -90.0	11"	N/A	N/A	1 (TOP)	9'-0" OR LESS
	11"	N/A	N/A	1 (BOTTOM)	
	11"	N/A	N/A	2 (TOP)	
	9"	N/A	N/A	2 (BOTTOM)	
	9"	N/A	N/A	3A (TOP)	
	9"	N/A	N/A	3 (BOTTOM)	
	11"	N/A	N/A	4 (TOP)	
	11"	N/A	N/A	4 (BOTTOM)	
	9"	N/A	N/A	5A (TOP)	
	3 1/2"	N/A	N/A	5 (BOTTOM)	
	3 1/2"	N/A	N/A	6 (BOTTOM)	
	3 1/2"	N/A	N/A	7 (BOTTOM)	
	N/A	12"	6"	8 (TOP)	
	N/A	12"	6"	8 (BOTTOM)	
N/A	12"	6"	9 (TOP)		
11"	N/A	N/A	9 (BOTTOM)		
3 1/2"	N/A	N/A	10 (BOTTOM)		
9"	N/A	9"	11A (TOP)		
N/A	N/A	N/A	11 (BOTTOM)		
6"	N/A	N/A	13 (TOP)		
3 1/2"	N/A	N/A	13 (BOTTOM)		
N/A	N/A	N/A	14 (BOTTOM)		

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS	S.G.TAPCON	PANELMATES OR PANELMATE TVAS		
+40.0, -40.0 UP TO +60.0, -80.0	12"	N/A	N/A	1 (TOP)	>8'-0" UP TO 12'-6"
	12"	N/A	N/A	1 (BOTTOM)	
	12"	N/A	N/A	2 (TOP)	
	12"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	N/A	3A (TOP)	
	12"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	N/A	4 (TOP)	
	12"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	N/A	5A (TOP)	
	4"	N/A	N/A	5 (BOTTOM)	
	4"	N/A	N/A	6 (BOTTOM)	
	3 1/2"	N/A	N/A	7 (BOTTOM)	
	N/A	12" *	6" *	8 (TOP) *	
	N/A	12" *	6" *	8 (BOTTOM) *	
N/A	12"	6"	9 (TOP)		
12"	N/A	N/A	9 (BOTTOM)		
4"	N/A	N/A	10 (BOTTOM)		
12"	N/A	10 1/2"	11A (TOP)		
4" **	N/A	4" **	11 (BOTTOM) **		
12"	N/A	N/A	13 (TOP)		
4"	N/A	N/A	13 (BOTTOM)		
4" **	4" **	4" **	14 (BOTTOM) **		

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS	S.G.TAPCON	PANELMATES OR PANELMATE TVAS		
+90.0, -90.0 UP TO +100.0, -130.0	8 1/2"	N/A	N/A	1 (TOP)	7'-0" OR LESS
	9"	N/A	N/A	1 (BOTTOM)	
	9"	N/A	N/A	2 (TOP)	
	9"	N/A	N/A	2 (BOTTOM)	
	8"	N/A	N/A	3A (TOP)	
	9"	N/A	N/A	3 (BOTTOM)	
	9"	N/A	N/A	4 (TOP)	
	9"	N/A	N/A	4 (BOTTOM)	
	8"	N/A	N/A	5A (TOP)	
	3"	N/A	N/A	5 (BOTTOM)	
	3"	N/A	N/A	6 (BOTTOM)	
	3"	N/A	N/A	7 (BOTTOM)	
	N/A	12"	6"	8 (TOP)	
	N/A	12"	6"	8 (BOTTOM)	
N/A	12"	6"	9 (TOP)		
9"	N/A	N/A	9 (BOTTOM)		
3"	N/A	N/A	10 (BOTTOM)		
5"	N/A	6"	11A (TOP)		
N/A	N/A	N/A	11 (BOTTOM)		
6"	N/A	N/A	13 (TOP)		
3"	N/A	N/A	13 (BOTTOM)		
N/A	N/A	N/A	14 (BOTTOM)		

\* USE 6" OC SPACING FOR PANEL LENGTHS LARGER THAN 10' - 0" AND USE 12" OC AS SHOWN ON SCHEDULE FOR PANELS LENGTHS EQUAL OR SHORTER THAN 10' - 0"  
 \*\* VALID ONLY FOR UP TO +50.0, -50.0 p.s.f. MAX. A.S.D. DESIGN PRESSURE RATING WITH 108" Max. PANEL LENGTHS.



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

©2011 TILTECO, INC.  TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530, Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. 44167	0.050" BERTHA ALUMINUM STORM PANEL (2.00" DEEP)	M.C.V./R.E./A.G. DRAWN BY:																		
	EASTERN METAL SUPPLY, INC 4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PHONE: (561)209-8263, FAX: (561)841-1716	12/06/11 DATE:																		
<table border="1"> <tr><th>REV. NO</th><th>DESCRIPTION</th><th>DATE</th><th>REV. NO</th><th>DESCRIPTION</th><th>DATE</th></tr> <tr><td>1</td><td>OLD 08-146</td><td>12/06/11</td><td>3</td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td>4</td><td></td><td></td></tr> </table>	REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE	1	OLD 08-146	12/06/11	3			2			4			11-221 DRAWING No	SHEET 17 OF 17
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE															
1	OLD 08-146	12/06/11	3																	
2			4																	