

GENERAL NOTES:

1. STORM PANEL SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2004 EDITION OF THE FLORIDA BUILDING CODE. THIS STORM PANEL SHALL NOT BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES (MMH-100 / BROWARD COUNTIES). DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE ABOVE MENTIONED CODE. FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE STORM PANEL WILL BE INSTALLED, AND FOR A DIRECTIONALITY FACTOR K_d=0.85, IN ACCORDANCE WITH ASCE 7-98 STANDARD. IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.E.D. AS TESTED WERE NOT OVER STRESSED, A 53% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS USED IN THEIR ANALYSIS. A DIRECTIONALITY FACTOR C_d=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 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER AITL REPORTS # 0121.01-98R, # 0039.01-00, # 0523.01-00 AND #0512.01-03 AND #0817.02-04, AS PER SS12-99 STANDARD.

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 (1) STUDDED PLATE AND (2) SWAP 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.

5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL OR AISI 304 SERIES STAINLESS STEEL WITH 55 KSI MINIMUM YIELD STRENGTH.

6. ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)

- (A) TO EXISTING POURED CONCRETE:
 - 1/4" # TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDER.
 - 1/4" # GF TAP-GRIP ANCHORS (BERTHA STUD-CON), AS MANUFACTURED BY TRU-FAST CORPORATION.
 - 1/4" # ZMAG NAILIN ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC.
 - 1/4" # x 7/8" CALK-IN ANCHORS OR ELCO MOLE & female PANELMATE AS MANUFACTURED BY POWER FASTENERS, INC. AND ELCO TEXTRON, RESPECTIVELY.
 - 1/4" # x 3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW BOLT & SPECIALTY COMPANY.
 - 1/4" # RED HEAD DYWIDOLT SLEEVE ANCHORS AS MANUFACTURED BY I.T.W. BUILDER/RAWSET.

NOTES:

A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHORS IS 1 3/4". FOR ZMAG NAILIN ANCHORS IS 1 3/8". FOR ELCO PANELMATE ANCHORS IS 1 3/4". FOR RED HEAD DYWIDOLT SLEEVE ANCHORS IS 1 1/8". AND FOR GF TAP-GRIP ANCHORS IS 1 1/4".

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

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

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

(B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4" # TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDER.
- 1/4" # GF TAP-GRIP ANCHORS (BERTHA STUD-CON), AS MANUFACTURED BY TRU-FAST CORPORATION.
- 1/4" # ZMAG NAILIN ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC.
- 1/4" # x 7/8" CALK-IN ANCHORS OR ELCO MOLE & female PANELMATE AS MANUFACTURED BY POWER FASTENERS, INC. AND ELCO TEXTRON, RESPECTIVELY.
- 1/4" # x 3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW BOLT & SPECIALTY COMPANY.
- 1/4" # RED HEAD DYWIDOLT SLEEVE ANCHORS AS MANUFACTURED BY I.T.W. BUILDER.

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON, ELCO PANELMATE, AND GF TAP-GRIP ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4". 1 3/8" FOR ZMAG NAILIN ANCHORS AND 1 1/8" FOR RED HEAD DYWIDOLT SLEEVE ANCHORS

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

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

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

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

7. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 8 (SHEET 3 & 4 OF 9) EXCEPT THAT HEADERS 3, 4 & 5 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/GULF ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. GULF AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.

10. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERAL 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.

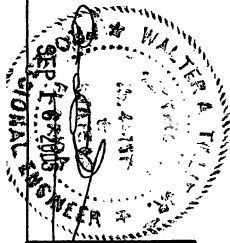
(c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

(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 FIELD, ENGINEER'S SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

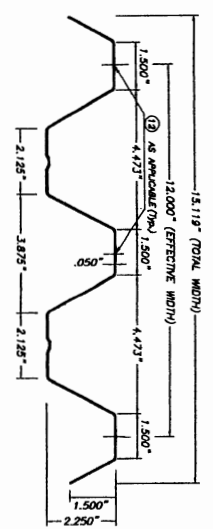
(e) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

11. SHUTTER MANUFACTURER'S LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION AT PANEL.

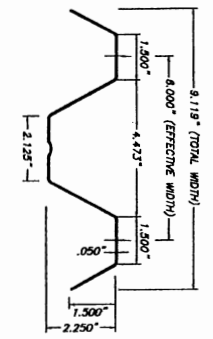
ONE LABEL SHALL BE PLACED FOR EVERY OPENING.
 LABEL SHALL READ AS FOLLOWS:
 EASTERN METAL SUPPLY, INC.
 WEST PALM BEACH, FL.
 FLORIDA STATEWIDE PRODUCT APPROVED.



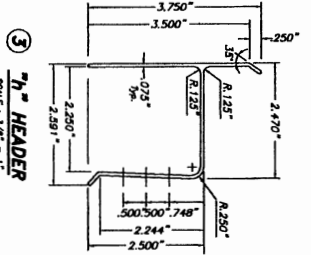
TILECO INC.		EASTERN METAL SUPPLY, INC.	
TILE TESTING & ENGINEERING COMPANY 1400 N.W. 35th St., Ft. Lauderdale, FL 33309 Phone: (305) 453-2200 Fax: (305) 453-2201 FBI-000879 WALTER A. TULLY, P.E. FLORIDA LIC # 12118		1948 WEST PALMS DRIVE WEST PALM BEACH, FL 33407	
0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY: 9/4/05 DATE	
F.B.C./Non High Velocity Hurricane Zone)		05-270 DRAWING NO	
SHEET 1 OF 9			



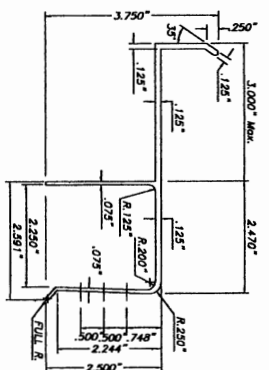
1 ALUMINUM PANEL
SCALE: 1/4" = 1"



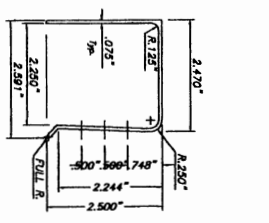
1A ALUMINUM HALF PANEL
SCALE: 1/4" = 1"



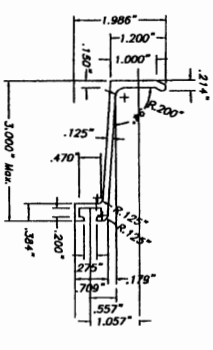
3 1/2\"/>



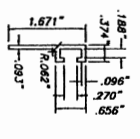
4 3\"/>



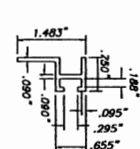
5 U-HEADER
SCALE: 1/4" = 1"



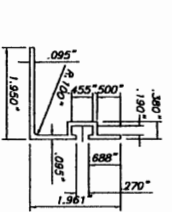
6 3\"/>



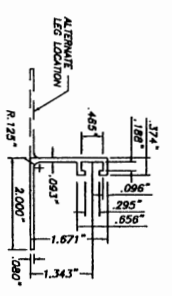
7 3/8\"/>



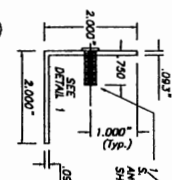
7A 3/4\"/>



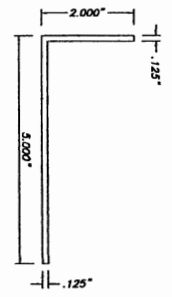
8 REVERSED F-TRACK
SCALE: 1/4" = 1"



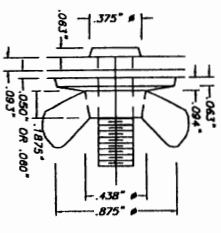
9 F-TRACK ANGLE
SCALE: 1/4" = 1"



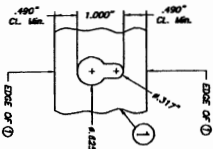
10 STUDDED ANGLE
SCALE: 1/4" = 1"



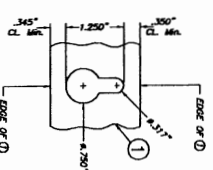
11 2\"/>



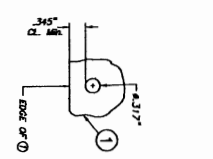
DETAIL 1: STUD W/ DIE CAST ZINC NICKEL PLATED WING NUT



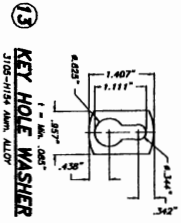
OPTION 1



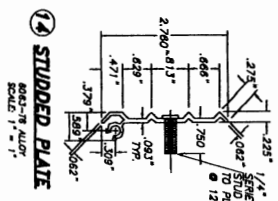
OPTION 2



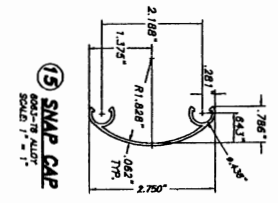
12A ROUND HOLE AT PANEL (OPTION TO 12)



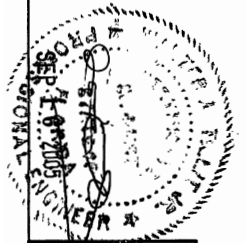
13 KEY HOLE WASHER
SCALE: 1/4" = 1"



14 STUDDED PLATE
SCALE: 1/4" = 1"



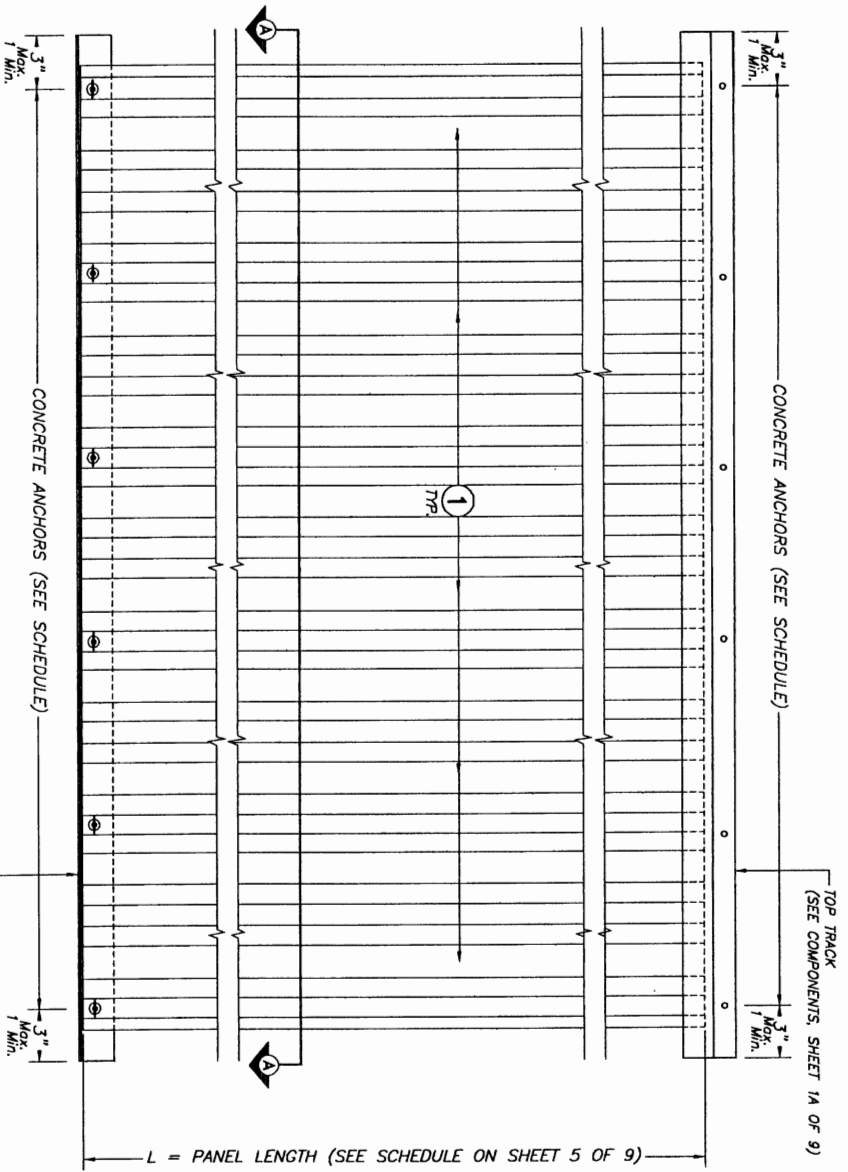
15 SNAP CAP
SCALE: 1/4" = 1"



TILECO INC.
TILFIT TESTING & ENGINEERING COMPANY
1500 N.W. 34th St., Suite 100, Pompano Beach, FL 33069
Phone: (305) 981-1100 FAX: (305) 981-1511
WALTER A. TILFIT, Jr., P. E.
EIT-00008719
FLORIDA REG. #41812

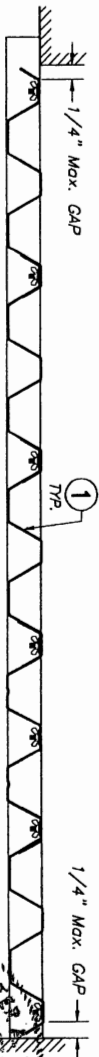
0.050" BERTHA ALUMINUM STORM PANEL		L.S.	
EASTERN METAL SUPPLY, INC		DRAWN BY:	
4588 WEST ROADS DRIVE		9/8/05	
WEST PALM BEACH, FL 33407		DATE	
REV. NO.	DESCRIPTION	REV. NO.	DESCRIPTION
1	OLD DWG. 04-288 1/17/05	2	KEY HOLE OPTION 1 8/17/05
2	OLD DWG. 03-553 1/15/04		
OS-270		DRAWING NO.	
SHEET 14 OF 9			

F.B.C./Non High Velocity Hurricane Zone)



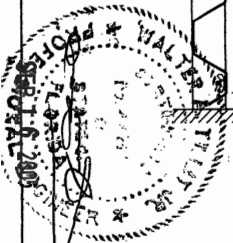
STORM PANEL TYPICAL ELEVATION

SCALE : 1/8" = 1"

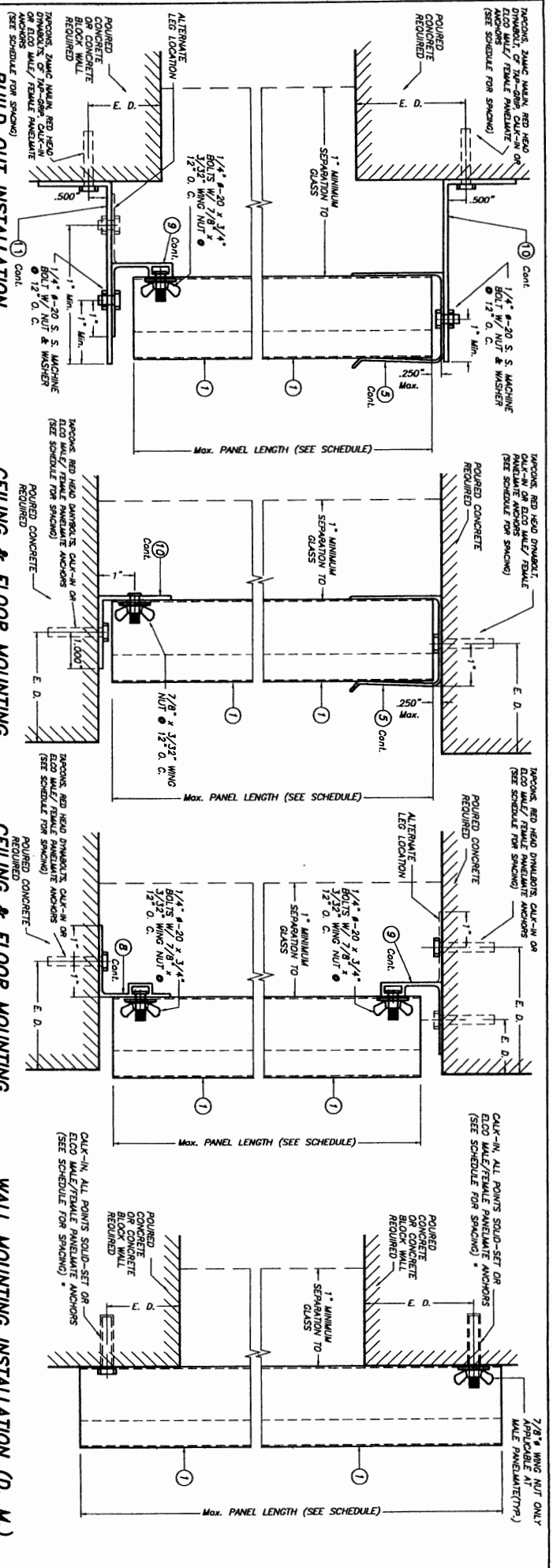


SECTION A-A

SCALE : 1/8" = 1"



<p>TILECO INC. TILLET TESTING & ENGINEERING COMPANY 4328 N.W. 24th St., Ste. 100, WOODLAND GARDENS, FL 33166 Phone: (305) 497-1100 FAX: (305) 497-1101 WALTER A. TILLET, P.E. License No. EB-0006719 FLORIDA Lic. # 44117</p>		<p>EASTERN METAL SUPPLY, INC 4388 WEST ROADS DRIVE WEST PALM BEACH, FL 33407</p>		<p>F.B.C./Non High Velocity Hurricane Zone</p>	
REV. NO.	DESCRIPTION	DATE	BY	DATE	DATE
1	OLD DWG. OR -	8/7/05			
2					
3					
<p>L.C. DRAWING BY: 9/8/05 DATE: 05-270 DRAWING NO.</p>				<p>SHEET 2 OF 9</p>	

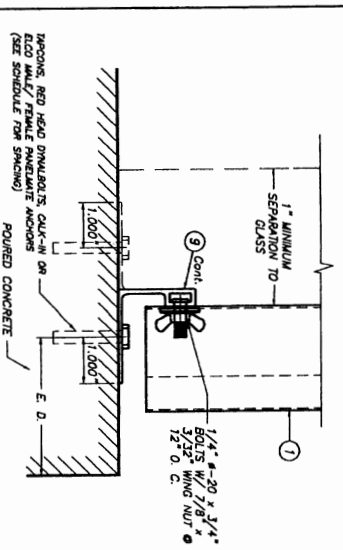


SECTION 5 SCALE: 3/8" = 1"

SECTION 6 SCALE: 3/8" = 1"

SECTION 7 SCALE: 3/8" = 1"

SECTION 8 SCALE: 3/8" = 1"

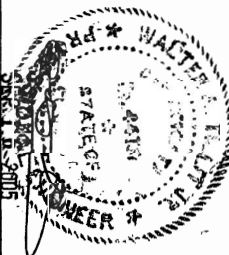


SECTION 5A SCALE: 3/8" = 1"

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEET 6 & 7 OF 9)

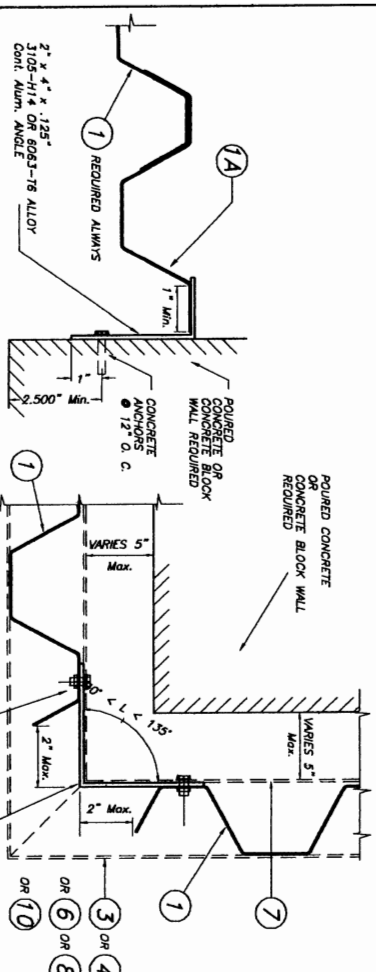
NOTE FOR COMBINATION OF SECTIONS:
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

- * SCREWS USED AT ANCHORS MAY BE 1/4" x 20 SIDE WALL BOLT W/ ② OR 1/4" x 20 TRUSS HEAD BOLT W/ ③ & ④
- * SIDE WALL 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)



TILECO INC.
TILIT TESTING & ENGINEERING COMPANY
4208 WEST ROCKS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561) 833-1200 FAX: (561) 833-1531
WALTER A. TULLIT, P. E.
FLORIDA LIC. #44187

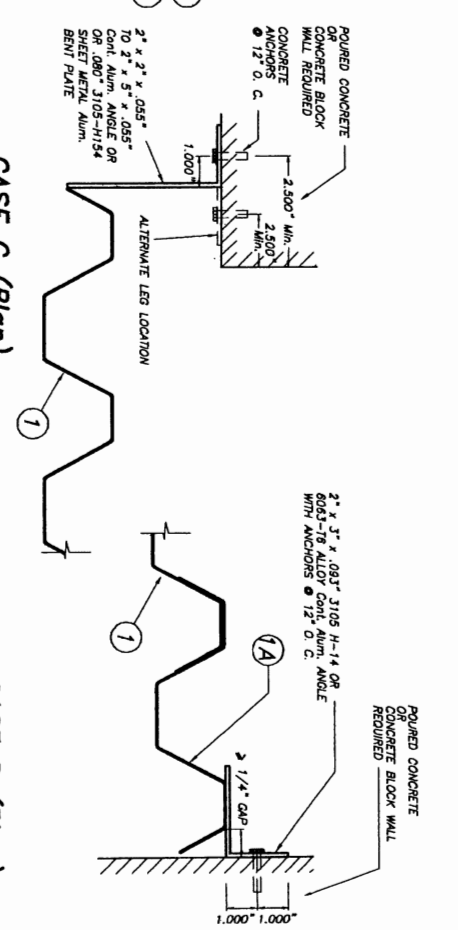
0.050" BERTHA ALUMINUM STORM PANEL		F.B.C./Non High Velocity Hurricane Zone)	
EASTERN METAL SUPPLY, INC		4208 WEST ROCKS DRIVE WEST PALM BEACH, FL 33407	
REV. NO.	DESCRIPTION	DATE	BY
1	OLD DWG. Q4-058 9/2/05		
2	OLD DWG. 02-353 8/2/04		
DRAWING NO. 05-270		DATE 9/8/05	
SHEET 4 OF 9			



CASE A (Plan)
SCALE: 1/4" = 1"

CASE B (Plan)
SCALE: 1/4" = 1"

END CLOSURES DETAILS



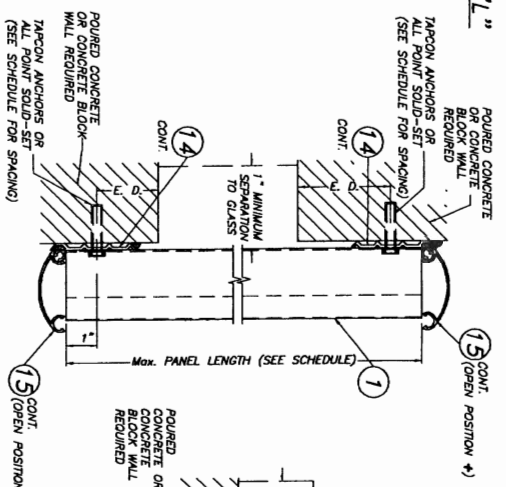
CASE C (Plan)
SCALE: 1/4" = 1"

CASE D (Plan)
SCALE: 1/4" = 1"

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM PANEL LENGTH "L" SCHEDULE FOR A GIVEN PANEL SYSTEM

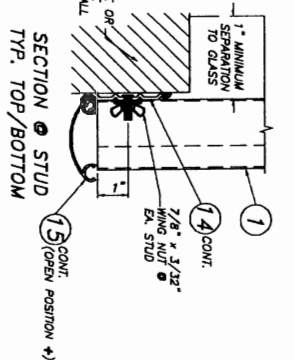
MAXIMUM DESIGN PRESSURE RATING W (p.s.f.)	MOUNTING W/D 1/2" HEADER (1)	MOUNTING W/D 3/4" HEADER (2)	WALL MOUNTING W/ COMPONENT (3) & (5)
+30.0, -30.0	12'-11"	12'-11"	12'-11"
+30.0, -35.0	12'-11"	12'-11"	12'-11"
+35.0, -40.0	12'-0"	12'-0"	12'-0"
+40.0, -45.0	11'-2"	11'-2"	11'-2"
+45.0, -50.0	10'-7"	10'-4"	10'-7"
+50.0, -55.0	10'-0"	9'-4"	10'-0"
+55.0, -60.0	9'-7"	8'-6"	9'-7"
+60.0, -65.0	9'-2"	7'-9"	9'-2"
+65.0, -70.0	8'-9"	7'-2"	8'-9"
+70.0, -75.0	8'-6"	6'-8"	8'-6"
+75.0, -80.0	8'-2"	6'-3"	8'-2"

NOTE: MINIMUM PANEL LENGTH IS 3'-0"

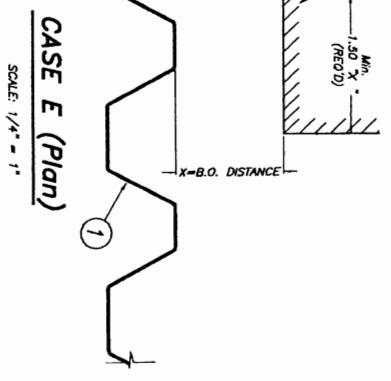


WALL MOUNTING INSTALLATION SECTION 9

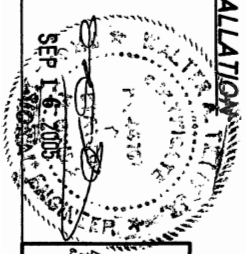
SCALE: 3/8" = 1"



SECTION 10 TYP. TOP/BOTTOM



CASE E (Plan)
SCALE: 1/4" = 1"



TILITECO INC.
TILITE TESTING & ENGINEERING COMPANY
4350 N.W. 24th St., Ste. 200, Boca Raton, FL 33434
Phone: (561) 991-1200, Fax: (561) 991-1211
E-mail: info@tiliteco.com
WALTER A. TILITE, P.E.
FLORIDA Lic. #41157

EASTERN METAL SUPPLY, INC.
4368 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407

0.050" BERTHA ALUMINUM STORM PANEL

F.B.C./Non High Velocity Hurricane Zone)

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD DWG. 04-024 07/02		1		
2	040 DWG. 02-053 07/04				

L.C. DRAWN BY: 9/8/05
DATE: 05-270
DRAWING NO: SHEET 5 OF 9

THIS SCHEDULE INDICATES REQUIRED ANCHOR SPACING FOR A GIVEN DESIGN LOAD W (P.S.F.) FOR A GIVEN ANCHOR TYPE. ANCHOR SPACING FOR A GIVEN DESIGN LOAD MUST BE VERIFIED AS PER SCHEDULE ON SHEET 4 OF 8.

MAXIMUM DESIGN PRESSURE RATING "W" (P.S.F.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND CONCRETE BLOCK STRUCTURES *

E. D. = EDGE DISTANCE

MAXIMUM DESIGN LOAD W (P.S.F.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **												APPLICABLE TO SECTIONS & PANEL LENGTH ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH (ft.)	
	TIRACONS TO CONCRETE	Z-MISC NAILING/ RED HD. DRIMBOLT TO CONCRETE	CALK-IN TO CONCRETE	SOLID-SET TO CONCRETE	PANELMATS TO CONCRETE	CF 1/2" GRP TO CONCRETE	TIRACONS TO MASONRY	Z-MISC NAILING/ RED HD. DRIMBOLT TO MASONRY	CALK-IN TO MASONRY	SOLID-SET TO MASONRY	PANELMATS TO MASONRY	CF 1/2" GRP TO MASONRY			
+35.0, -40.0	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1 (TOP)	8'-0"
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	OR
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	LESS
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	24 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 & 4 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (BOTTOM)	
OR	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	54 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	24 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 & 4 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
LESS	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	54 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	

MAXIMUM DESIGN LOAD W (P.S.F.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **												APPLICABLE TO SECTIONS & PANEL LENGTH ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH (ft.)	
	TIRACONS TO CONCRETE	Z-MISC NAILING/ RED HD. DRIMBOLT TO CONCRETE	CALK-IN TO CONCRETE	SOLID-SET TO CONCRETE	PANELMATS TO CONCRETE	CF 1/2" GRP TO CONCRETE	TIRACONS TO MASONRY	Z-MISC NAILING/ RED HD. DRIMBOLT TO MASONRY	CALK-IN TO MASONRY	SOLID-SET TO MASONRY	PANELMATS TO MASONRY	CF 1/2" GRP TO MASONRY			
+35.0, -40.0	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1 (TOP)	10'-0"
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	TO
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	12'-11"
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	24 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 & 4 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (BOTTOM)	
OR	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	54 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	24 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 & 4 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
LESS	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	54 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	

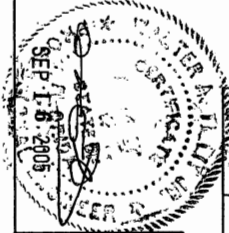
ONLY TIRACON ANCHORS OR ALL POINT SOLID-SET ALLOWED FOR MOUNTING SECTION 9

ANCHORS SPACING ONLY VALID FOR RED HEAD DRIMBOLT ANCHORS.

SEE SHEET 8 & 9 FOR ANCHORS TYPE & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE. FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLE SPACINGS SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (MIN. E. D. FOR CALK-IN ANCHORS & E.D. PANELMATS IS 2 1/2"; AND 3 1/2" FOR SOLID-SET ANCHORS).

ACTUAL E. D.	FACTOR			
	TIRACON/Z-MISC NAILING/ RED HD. DRIMBOLT/ PANELMATS	CALK-IN	SOLID-SET	CF 1/2" GRP
3"	.86	.75	.78	1.00
2 1/2"	.71	.50	-	.80
2"	.50	-	-	-



TILECO INC.
 TILITE TESTING & ENGINEERING COMPANY
 4388 WEST PALM BEACH BLVD. SUITE 200
 WEST PALM BEACH, FL 33407
 TEL: 561-833-1111 FAX: 561-833-1112
 EB-0008719
 WALTER A. TILITE, P.E.
 LICENSE NO. 13186

EASTERN METAL SUPPLY, INC.
 4388 WEST PALM BEACH BLVD
 WEST PALM BEACH, FL 33407

DATE: 9/8/05
 DRAWN BY: 05-270
 SHEET 6 OF 9

F.B.C./Non High Velocity Hurricane Zone)

THIS SCHEDULE INDICATES REQUIRED ANCHOR SPACING FOR MAXIMUM PANEL LENGTH FOR A GIVEN DESIGN LOAD MUST BE VERIFIED AS PER SCHEDULE ON SHEET 4 OF 8.

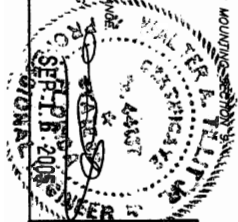
MAXIMUM DESIGN PRESSURE RATING "W" (ps.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND CONCRETE BLOCK STRUCTURES *

E. D. = EDGE DISTANCE

MAXIMUM DESIGN LOAD W (ps.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **												APPLICABLE TO SECTIONS & PANEL LENGTH ANY COMBINATION OF THESE	MAXIMUM PANEL LENGTH (ft.)	
	IRONS TO CONCRETE	ZINC VALU/ RED HD. DYNABOLT TO CONCRETE	CALK-IN TO CONCRETE	SOLID-SET TO CONCRETE	PANELMATS TO CONCRETE	CF 1/4"-GRIP TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE			
>+55.0, -80.0	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1 (TOP)	8'-0"
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	OR
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	LESS
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	24 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 & 4 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (BOTTOM)	
>+55.0, -80.0	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	54 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	9 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9" (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9" (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	24 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 & 4 (TOP)	
>+55.0, -80.0	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	3 & 4 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	6 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	54 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (TOP)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)	
	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	9 (TOP/BOTTOM)	

ACTUAL E. D.	FACTOR			
3"	IRONS/ZINC VALU/ RED HD. DYNABOLT PANELMATS	CALK-IN	SOLID-SET	CF 1/4"-GRIP
2 1/2"	.66	.75	.78	1.00
2"	.50	.50	.50	.80

+ ONLY IRONS ANCHORS OR ALL POINT SOLID-SET ALLOWED FOR MOUNTING ANCHORS ONLY W/ALD FOR RED HEAD DYNABOLT ANCHORS.
 ++ ANCHORS SPACING ONLY W/ALD FOR RED HEAD DYNABOLT ANCHORS.
 * SEE SHEET 8 & 9 OF 9 FOR ANCHORS TYPE & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.
 ** MAXIMUM ANCHOR SPACINGS ARE W/ALD FOR 3 1/2" EDGE DISTANCE FOR E. D. LESS THAN 3 1/2". REDUCE ANCHOR SPACING BY MULTIPLYING SPACINGS SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS (MIN. E. D. FOR CALK-IN ANCHORS & ETC PANELMATS IS 2 1/2", AND 3 1/2" FOR SOLID-SET ANCHORS).



TILECO INC.
 TILT TESTING & ENGINEERING COMPANY
 4500 WEST BOYS DRIVE
 WEST PALM BEACH, FL 33407
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 FAX (561) 833-8134
 WALTER A. TILLY, P. E.
 FLORIDA LIC. # 44183

EASTERN METAL SUPPLY, INC.
 4500 WEST BOYS DRIVE
 WEST PALM BEACH, FL 33407
 (561) 833-8134
 FAX (561) 833-8134
 WALTER A. TILLY, P. E.
 FLORIDA LIC. # 44183

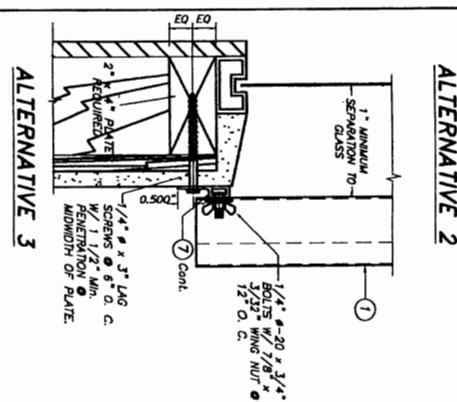
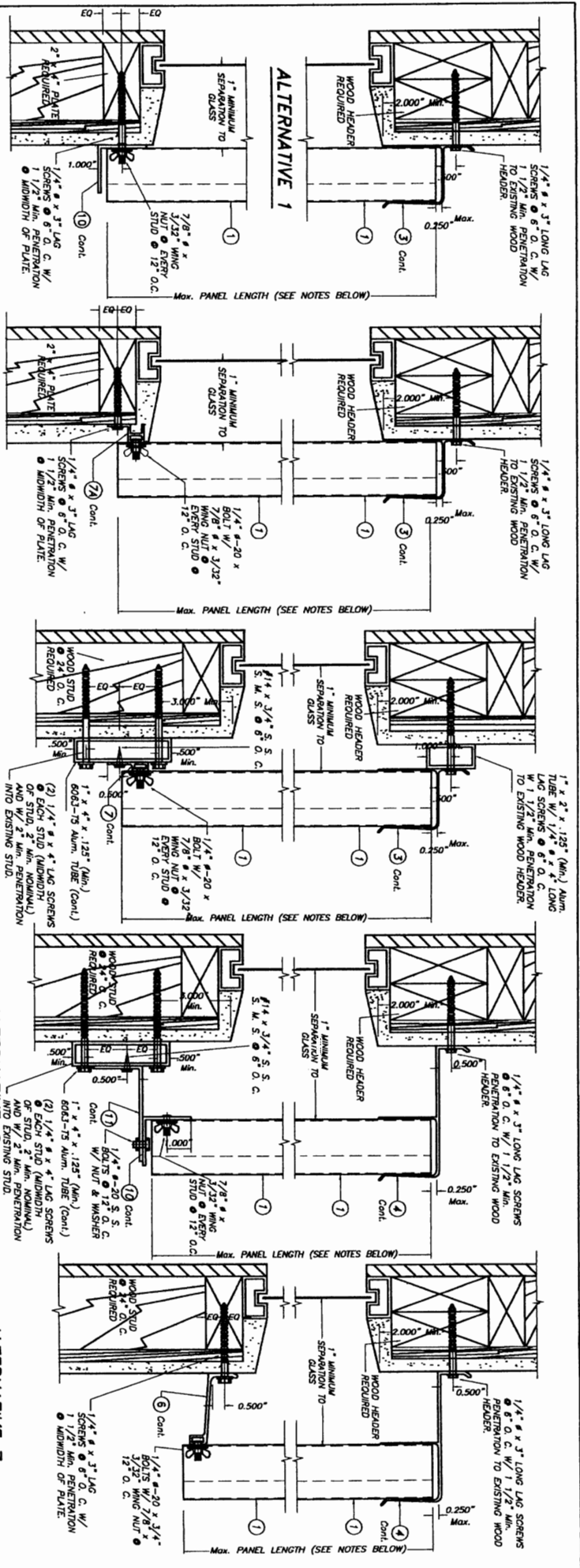
0.050" BERTHA ALUMINUM STORM PANEL

9/6/05
 DATE

05-270
 DRAWING NO

SHEET 7 OF 9

F.B.C./Non High Velocity Hurricane Zone)



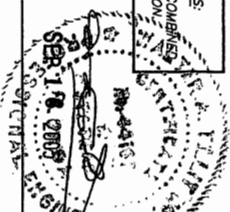
- NOTES:
1. INSTALLATIONS ARE ONLY VALID FOR DESIGN WIND LOADS UP TO +65.0, -72.0 psf AND PANEL'S LENGTHS UP TO 9'-0".
 2. FOR WOOD FRAME CONSTRUCTION, WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

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

WALL MOUNTING INSTALLATIONS
SECTIONS A

INSTALLATION DETAILS ON
EXISTING WOOD BUILDINGS

SCALE: 1/4" = 1"



TILTEC INC.
TILT TESTING & ENGINEERING COMPANY
150 N.W. 25th St., Suite 100
Fort Lauderdale, FL 33309
Phone: (954) 571-1234
Fax: (954) 571-1235
E-Mail: info@tiltec.com
Website: www.tiltec.com

EASTERN METAL SUPPLY, INC.
4288 WEST HOOKS DRIVE
WEST PALM BEACH, FL 33407
L.S. DRAWN BY: 5/8/05
DATE: 05-27-05
DRAWING NO. SHEET 8 OF 9

F.B.C./Non High Velocity Hurricane Zone)

