

**GENERAL NOTES:**

1. CLEAR BERTHA STORM PANEL (2.25" DEEP) SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2006 EDITIONS OF THE INTERNATIONAL BUILDING CODE, (I.B.C.) AND INTERNATIONAL RESIDENTIAL CODE, (I.R.C.) WITH THE 2006 TEXAS REVISIONS, EFFECTIVE JANUARY 1, 2008. CLEAR BERTHA STORM PANEL (2.25" DEEP) SHALL BE INSTALLED AT SEAWARD AND INLAND AREAS, AS DEFINED BY THE TEXAS DEPARTMENT OF INSURANCE. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE INTERNATIONAL BUILDING CODE, FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE SHUTTER WILL BE INSTALLED, AND FOR A DIRECTIONALITY FACTOR  $KD=0.85$ , IN ACCORDANCE W/ ASCE 7-05 STANDARD. CLEAR BERTHA STORM PANEL (2.25" DEEP) ADEQUACY FOR IMPACT AND CYCLIC RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTIONS 1609.1.2 AND R301.1.3 OF THE ABOVE MENTIONED CODES, RESPECTIVELY, AS PER AMERICAN TEST LAB OF SOUTH FLORIDA REPORT #0605.01-07 PER ASTM E 330-02, ASTM E 1886-05 AND ASTM E 1996-05 STANDARDS. QUALIFYING MISSILE TYPE D (BASIC PROTECTION ONLY) AND WIND ZONES 1, 2 & 3.

2. CLEAR BERTHA STORM PANEL (2.25 DEEP) SHALL BE EXTRUDED USING ANY OF THE FOLLOWING POLYCARBONATE SOURCES WITH THEIR CORRESPONDING MODEL NUMBER:

GENERAL ELECTRIC PLASTICS	LEXAN 103
DOWN CHEMICAL	CALIBRE 302 V-6
BAYER MATERIAL / SCIENCE LLC.	MAKROLON #1804

MINIMUM PROPERTIES FOR ALL OF THE ABOVE POLYCARBONATES ARE AS FOLLOWS:

TYPICAL PROPERTIES	APPLICABLE STANDARD REFERENCE	RESULT
<u>PHYSICAL:</u>		
SPECIFIC GRAVITY	ASTM D792	1.20 G/CC
<u>MECHANICAL:</u>		
TENSILE YIELD STRENGTH	ASTM D638	8,700 p.s.i.
FLEXURAL STRENGTH AT YIELD	ASTM D790	12,500 p.s.i.
FLEXURAL MODULUS	ASTM D790	340,000 p.s.i.
<u>IMPACT:</u>		
NOTCHED IZOD	ASTM D256	18 FT-lb/in
<u>FIRE BURNING CHARACTERISTICS:</u>		
SMOKE DENSITY	ASTM D2843	75 (MAX)
RATE OF BURNING	ASTM D635	C-1 CLASS (MAX)
SELF IGNITION	ASTM D1929	650 °F

3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY & TEMPER.

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 OR AISI 304 SERIES STAINLESS STEEL, WITH 36 KSI MIN. YIELD STRENGTH.

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

(A) TO EXISTING POURED CONCRETE: MIN.  $f'c = 3$  KSI

- 1/4"  $\phi$  SG TAPCON ANCHORS MANUFACTURED BY I.T.W. BUILDEX.
- 1/4"  $\phi$  TAPCON ANCHORS MANUFACTURED BY I.T.W. BUILDEX.
- 1/4"x3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.

NOTES:

- A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON AND SG TAPCON ANCHORS IS 1 3/4".
- A.2) MINIMUM EMBEDMENT OF 3/4" SOLID SET ANCHORS INTO THE POURED CONCRETE IS 7/8". NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4"  $\phi$ -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: ASTM C-90  
-1/4"  $\phi$  TAPCON ANCHORS MANUFACTURED BY I.T.W. BUILDEX.

NOTES:

- B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4"
- B.2) 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 NOTE IN B.1) ABOVE.

(C) TO EXISTING WOOD (MIN. SPECIFIC GRAVITY,  $G=0.43$  MIN.) FRAME BUILDING, SEE SPECIFICATIONS ON SHEET 4. ANCHORAGE SHALL BE PERFORMED BEYOND ANY FINISH MATERIAL AT WALL LIKE BRICK VENEER, PLYWOOD, STUCCO OR ANY OTHER FINISH.

- 1/4"  $\phi$  TAPCON ANCHORS MANUFACTURED BY I.T.W. BUILDEX.
- 1/4"  $\phi$  SG TAPCON ANCHORS MANUFACTURED BY I.T.W. BUILDEX.
- 1/4" x 5/8" BRASS BUSHINGS AS DISTRIBUTED BY ALL POINT SCREW, BOLT & SPECIALITY COMPANY.

NOTES:

- C.1) MINIMUM THREADED PENETRATION INTO WOOD FOR TAPCON ANCHOR IS 1 1/2" MIN.
- C.2) MINIMUM THREADED PENETRATION INTO WOOD FOR 5/8" BRASS BUSHINGS BOLT AND SPECIALITY CO. BRASS BUSHINGS IS 5/8"
- C.3) 1/4"  $\phi$ -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

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

7. PANEL MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 3, SHEET 3 OF 6.

8. STORM PANEL SHALL BE **IMMEDIATELY REMOVED** AFTER THE HURRICANE AND SHALL BE STORED AND PROPERLY MAINTAINED.

9. 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.

10. 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.

11. CLEAR BERTHA STORM PANEL (2.25" DEEP) INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

12. (A) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.

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

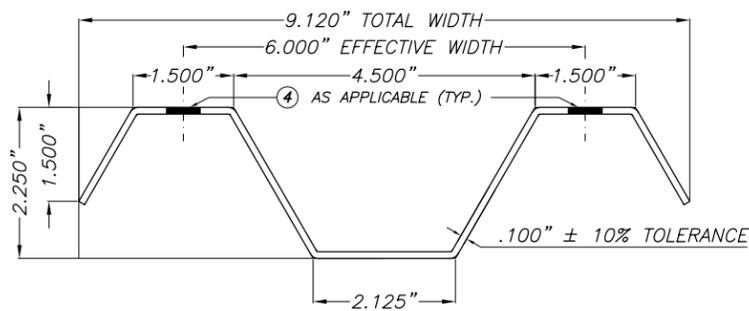
(C) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER OR 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.

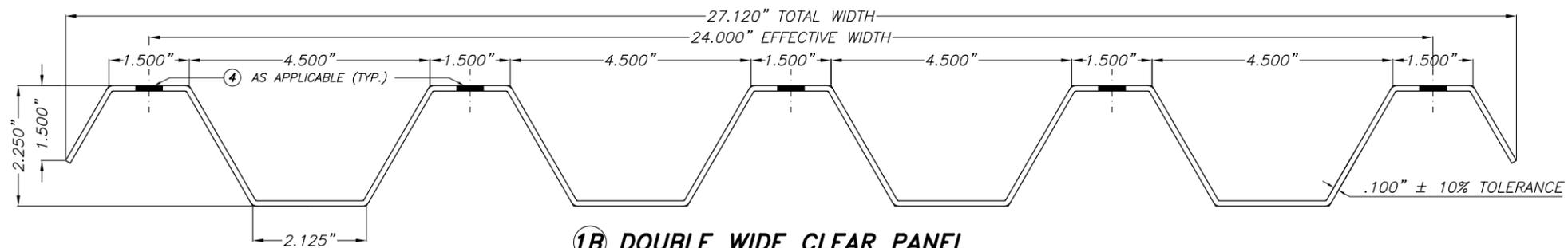
(E) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

**T.D.I.-2006**

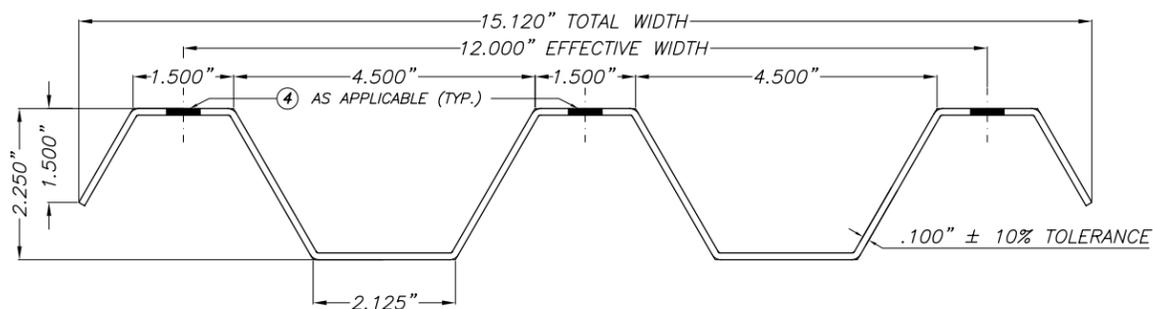
<b>WALTER A. TILLIT Jr. P.E.</b> PROFESSIONAL ENGINEER  6355 N.W. 36 STREET, STE. 305 VIRGINIA GARDENS, FL 33166 PHONE (305) 871-1530 FAX (305) 871-1531  TEXAS LIC. # 90691		CLEAR BERTHA STORM PANEL (2.25" DEEP)		DRAWN BY: R.E.	
		<b>EASTERN METAL SUPPLY, INC</b> 9400 TELGE ROAD HOUSTON, TX. 77095 PHONE: (800)996-6061 FAX: (281)656-2297		08/05/08 DATE	
		08-199 DRAWING No			
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	REVISED TITLE BLOCK/PE#	10/29/08	3		
2			4		



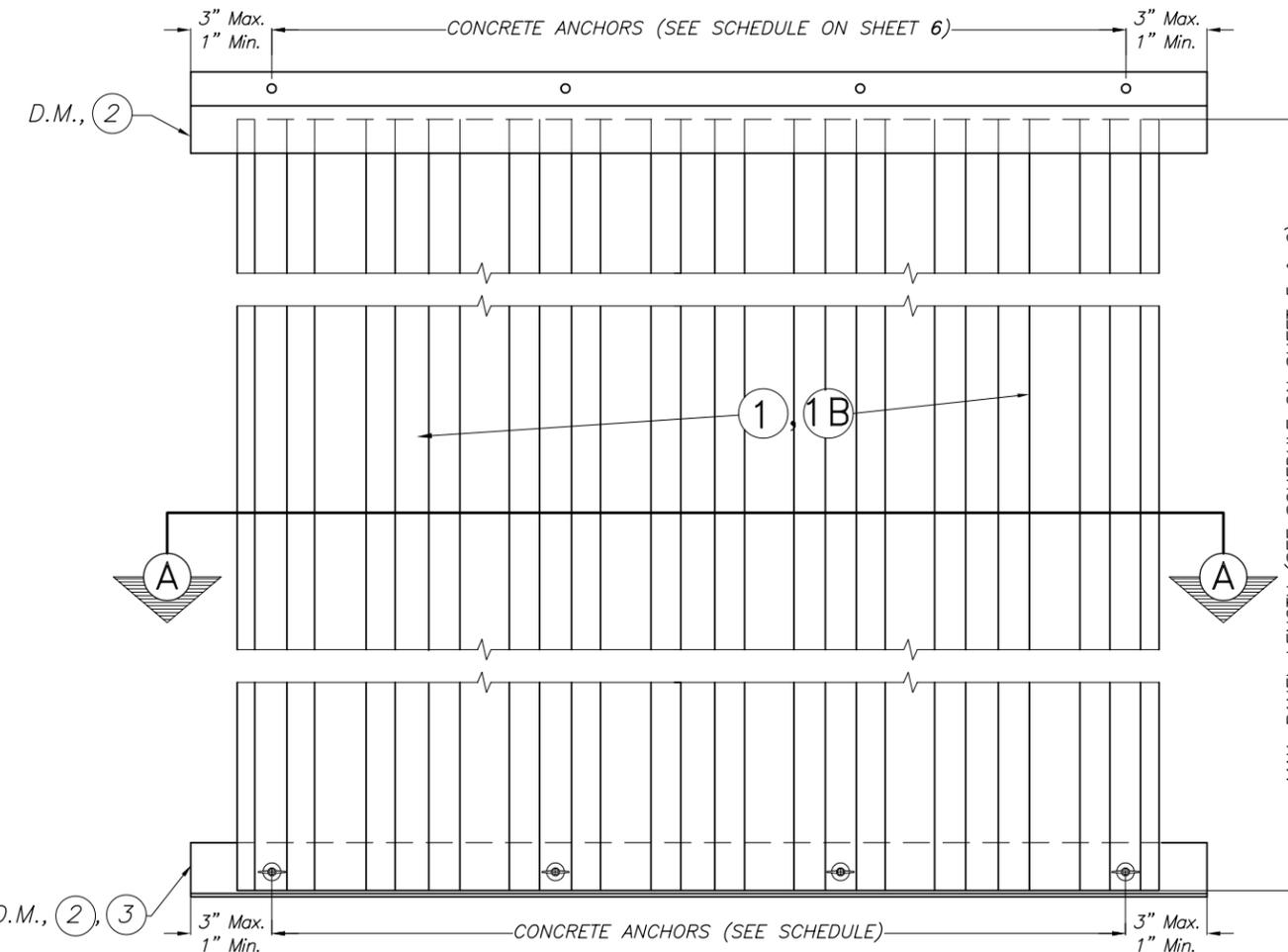
**1A HALF CLEAR PANEL**



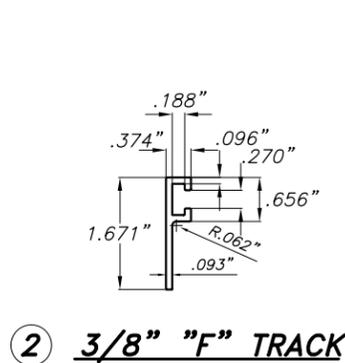
**1B DOUBLE WIDE CLEAR PANEL**



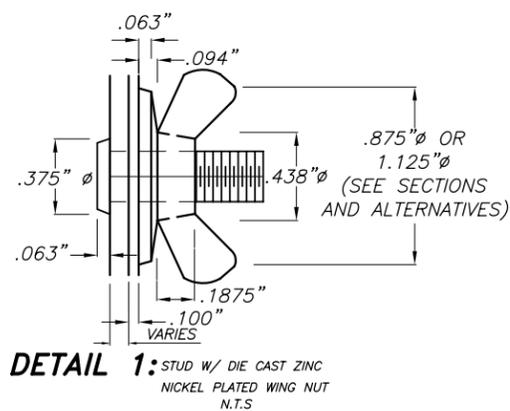
**1 SINGLE WIDE CLEAR PANEL**



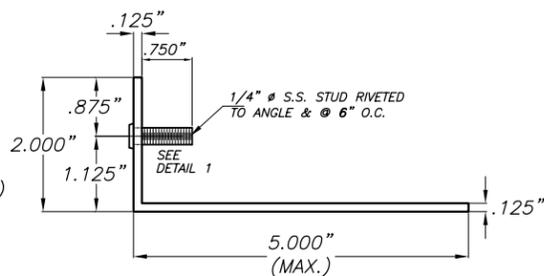
**STORM PANEL TYPICAL ELEVATION**



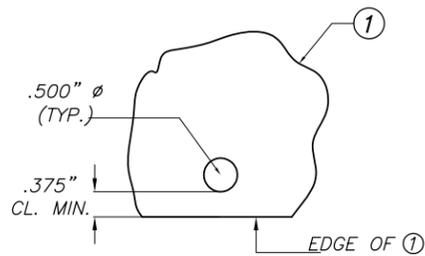
**2 3/8\"/>**



**DETAIL 1: STUD W/ DIE CAST ZINC NICKEL PLATED WING NUT N.T.S.**

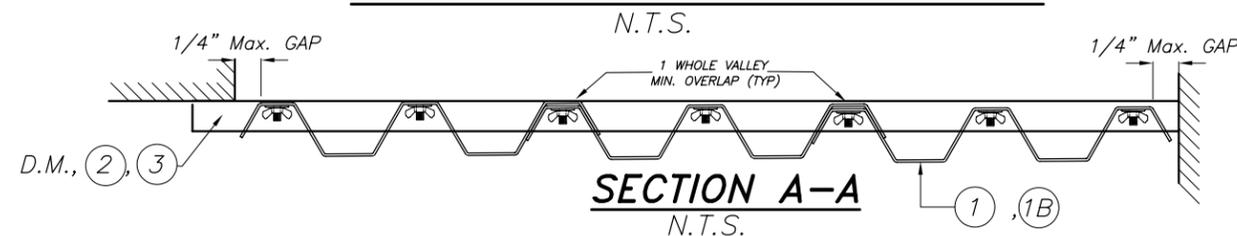


**3 2\"/>**



**4 ROUND HOLE AT PANEL**

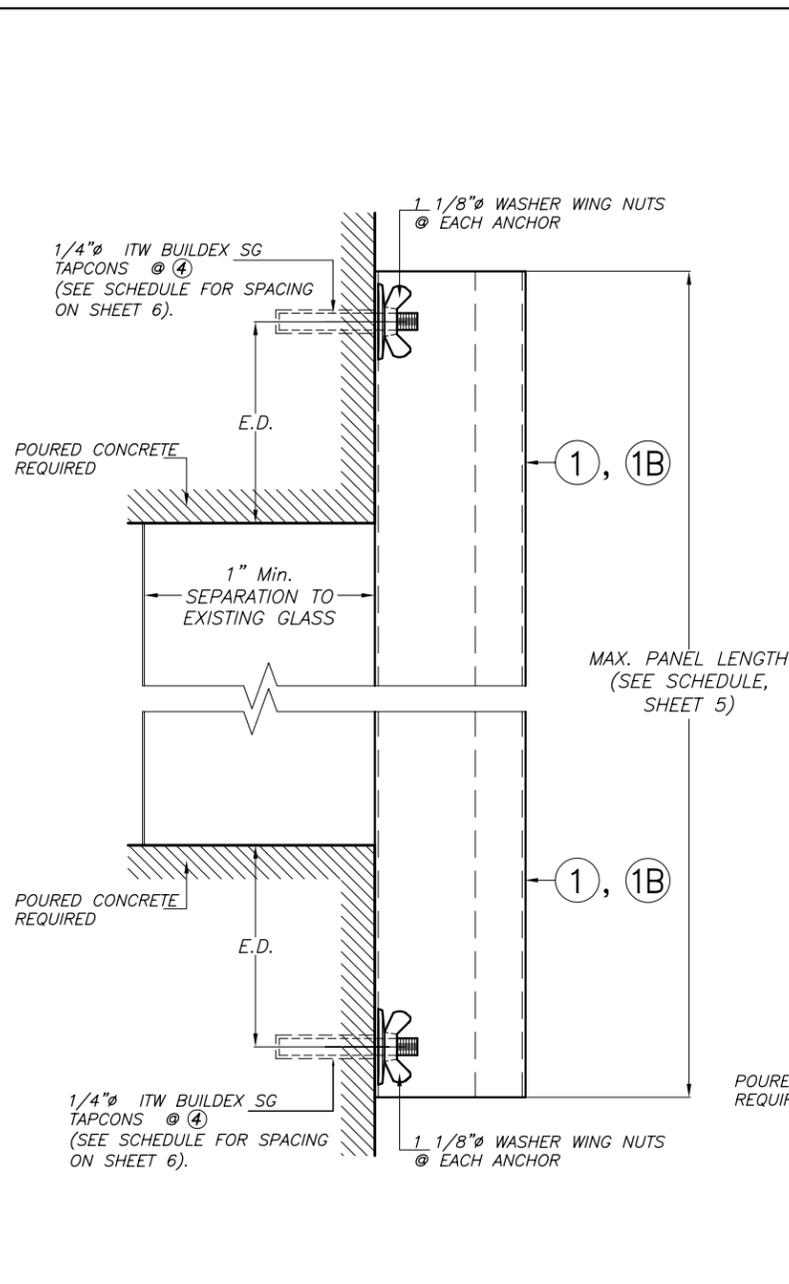
**COMPONENTS**  
SCALE 3/8"=1"



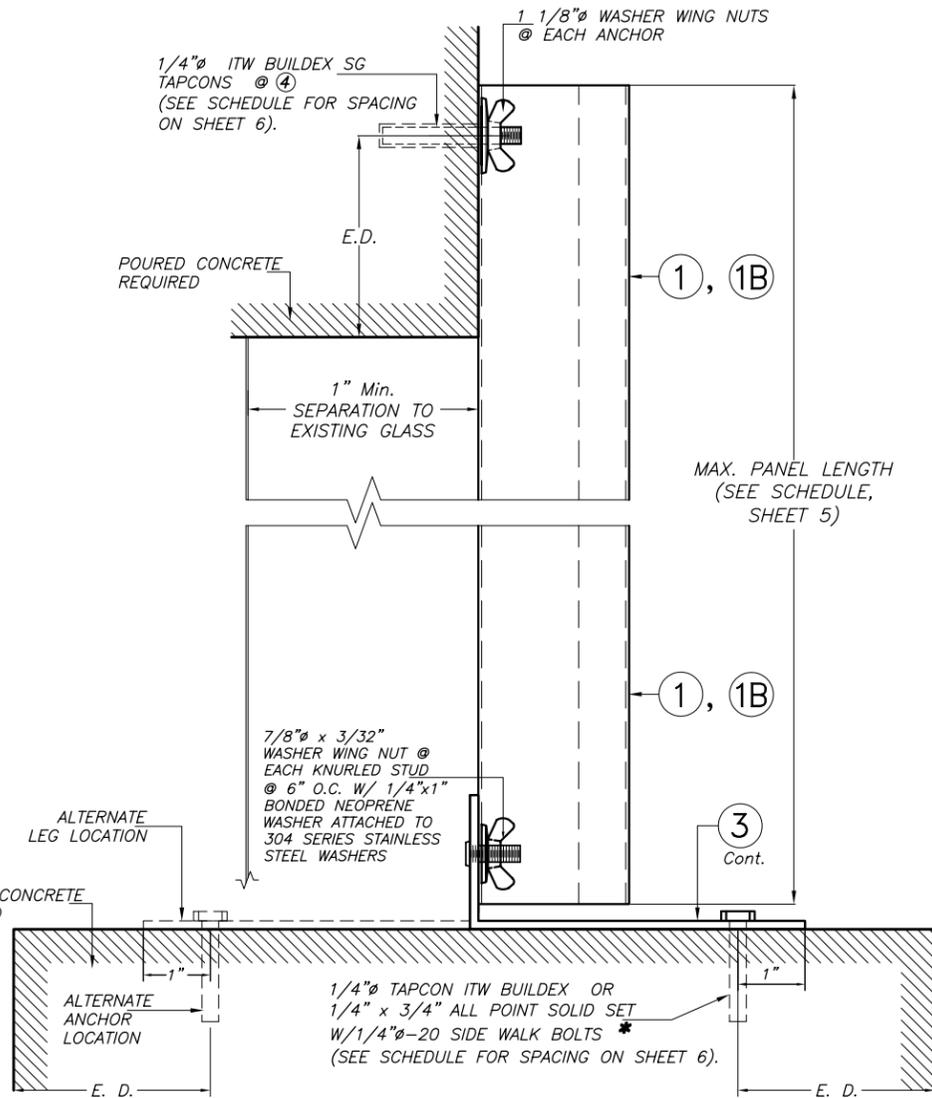
**SECTION A-A**  
N.T.S.

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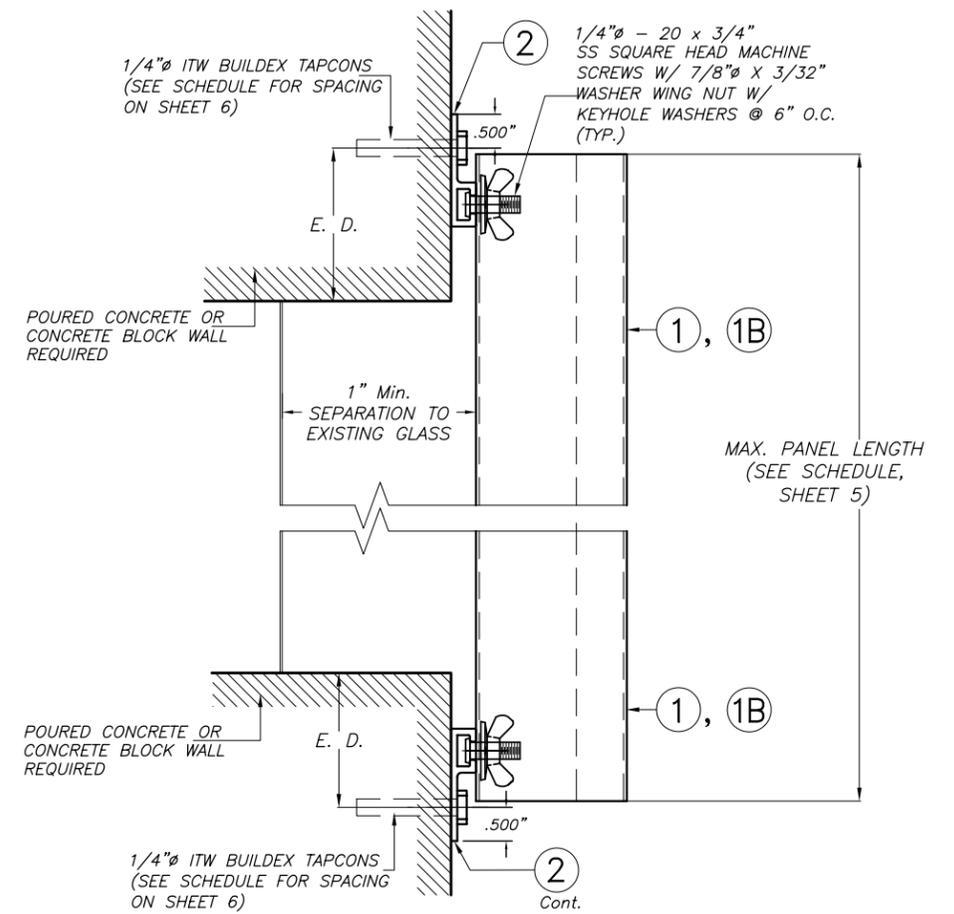
<b>WALTER A. TILLIT Jr. P.E.</b> PROFESSIONAL ENGINEER  6355 N.W. 36 STREET, STE. 305 VIRGINIA GARDENS, FL 33166 PHONE (305) 871-1530 FAX (305) 871-1531  TEXAS LIC. # 90691		<b>CLEAR BERTHA STORM PANEL</b> (2.25" DEEP)		DRAWN BY: R.E.	
		<b>EASTERN METAL SUPPLY, INC</b> 9400 TELGE ROAD HOUSTON, TX. 77095 PHONE: (800)996-6061 FAX: (281)656-2297		08/05/08 DATE	
		08-199 DRAWING No			
REV. No 1 2	DESCRIPTION REVISED TITLE BLOCK/PE# GENERAL	DATE 10/29/08 03/26/09	REV. No 3 4	DESCRIPTION PANELS (1), (1A)	DATE 04/15/09
SHEET 2 OF 6					



**DIRECT WALL MOUNTING (D.M.)**  
**SECTION 1**  
 SCALE 1/8"=1"



**WALL-FLOOR MOUNTING**  
**SECTION 2**  
 SCALE 1/8"=1"



**WALL MOUNTING 3/8" "F" TRACK**  
**SECTION 3**  
 SCALE 1/8"=1"

\* SIDE WALK BOLTS ARE 3/4" x 3/32" THICK HEAD MACHINE SCREW W/LENGTH AS PER NOTES A.2 (SHEET 1).

**E.D. = EDGE DISTANCE:**  
 SEE SCHEDULE ON SHEET 5

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

**WALTER A. TILLIT Jr. P.E.**  
 PROFESSIONAL ENGINEER

6355 N.W. 36 STREET, STE. 305  
 VIRGINIA GARDENS, FL 33166  
 PHONE (305) 871-1530 FAX (305) 871-1531

TEXAS LIC. # 90691

**CLEAR BERTHA STORM PANEL**  
 (2.25" DEEP)

**EASTERN METAL SUPPLY, INC**

9400 TELGE ROAD  
 HOUSTON, TX. 77095  
 PHONE: (800)996-6061 FAX: (281)656-2297

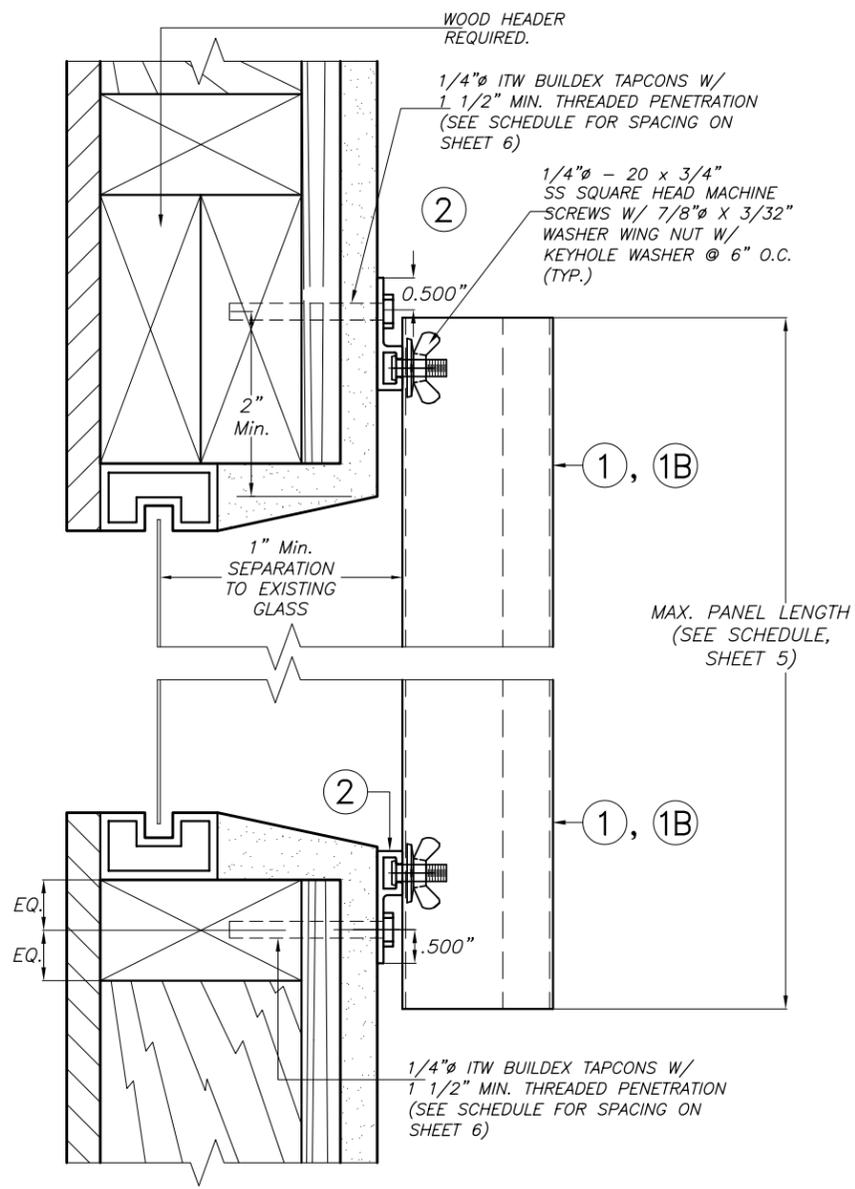
T.D.I.-2006

DRAWN BY:  
 R.E

08/05/08  
 DATE

08-199  
 DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	REVISED TITLE BLOCK/PE#	10/29/08	3		
2	GENERAL	03/26/09	4		



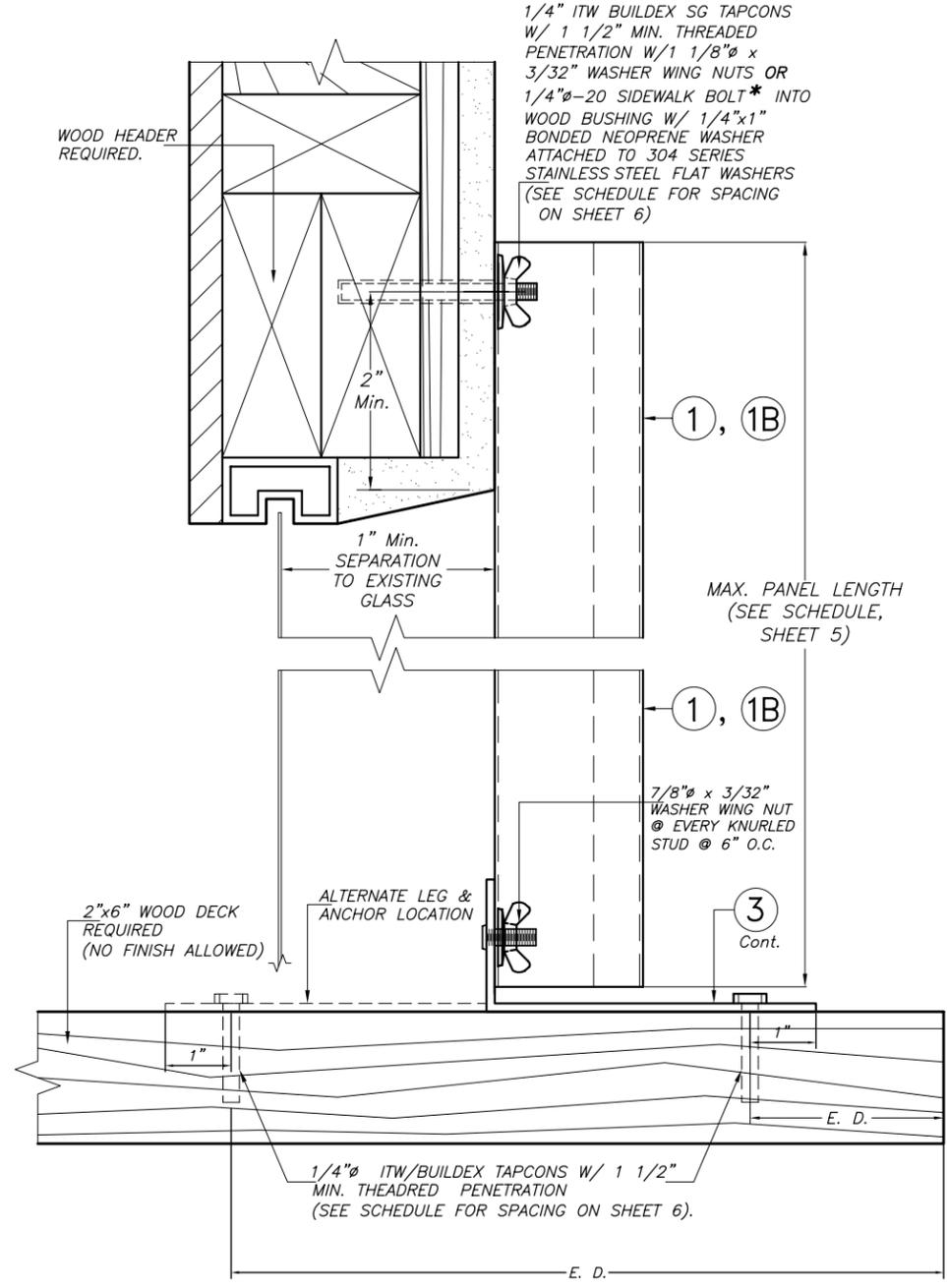
**WALL MOUNTING 3/8" "F" TRACK  
ALTERNATIVE 1**

SCALE 1/8"=1"

\* SIDE WALK BOLTS ARE 3/4"ØX3/32"THICK HEAD MACHINE SCREW W/LENGTH AS PER NOTES A.2 (SHEET 1).

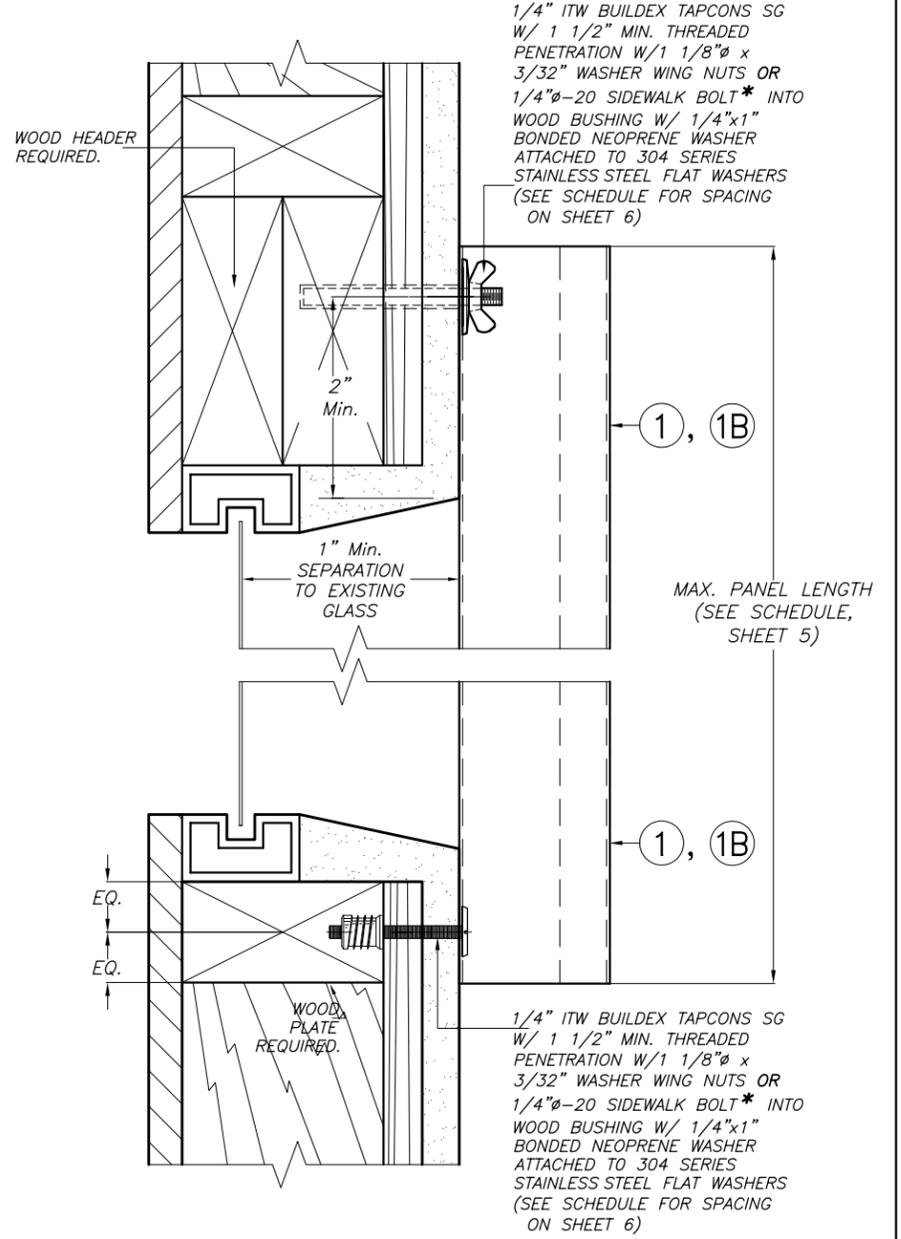
**NOTE FOR COMBINATION OF SECTIONS:**  
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

**NOTES:**  
1. INSTALLATIONS ARE ONLY VALID FOR DESIGN WIND LOADS AND PANEL LENGTHS AS PER SCHEDULE ON SHEET 5  
2. WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SPRUCE PINE-FIR W/ MINIMUM SPECIFIC DENSITY OF 0.43 OR EQUAL.



**WALL- FLOOR MOUNTING  
ALTERNATIVE 2**

SCALE 1/8"=1"



**WALL MOUNTING (DIRECT)  
ALTERNATIVE 3**

SCALE 1/8"=1"

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TEXAS LIC. # 90691

**CLEAR BERTHA STORM PANEL**  
(2.25" DEEP)  
**EASTERN METAL SUPPLY, INC**  
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T.D.I.-2006

DRAWN BY:  
R.E.  
08/05/08  
DATE  
08-199  
DRAWING No

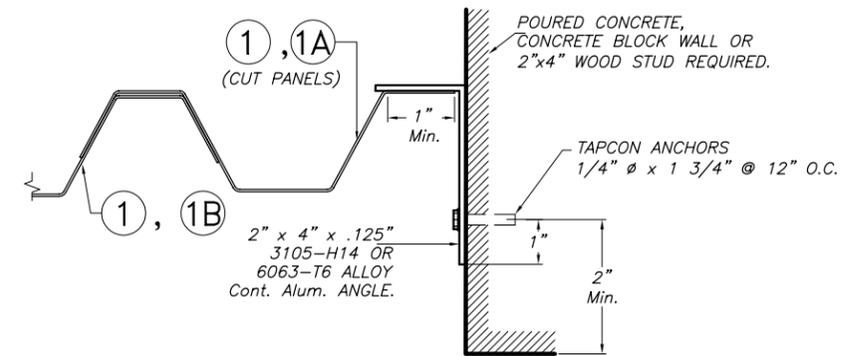
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2	GENERAL	03/26/09	4		

SHEET 4 OF 6

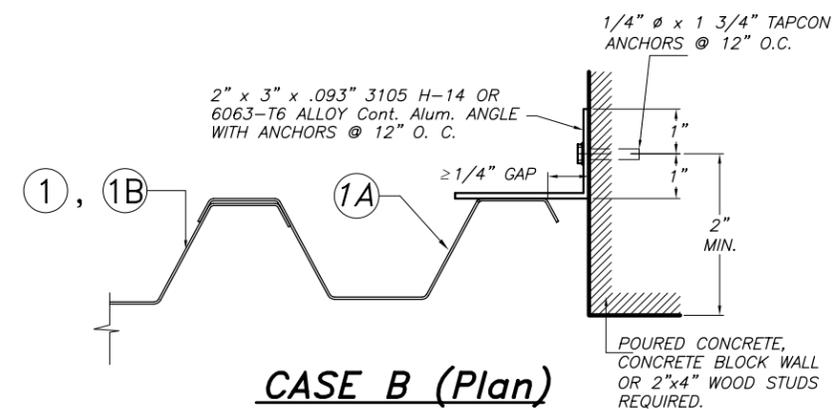
**MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM PANEL LENGTH "L" (Ft.) SCHEDULE FOR INSTALLATIONS IN CONCRETE, CONCRETE BLOCK AND WOOD FRAME STRUCTURES \***

MAXIMUM DESIGN PRESSURE RATING W (psf)	MAX PANEL LENGTH	
	MOUNTING W/ SECTIONS 1, 2 & ALTERNATIVES 2, 3	MOUNTING W/ SECTION 3 & ALTERNATIVE 1
+/- 0 to +/- 60	8' - 0"	8' - 0"
+/- 60 to +/- 75	8' - 0"	N/A
+/- 75 to +/- 80	6' - 9"	N/A
+/- 80 to +/- 85	6' - 5"	N/A
+/- 85 to +/- 90	6' - 0"	N/A
+/- 90 to +/- 95	5' - 8"	N/A
+/- 95 to +/- 100	5' - 5"	N/A
+/- 100 to +/- 105	5' - 2"	N/A
+/- 105 to +/- 110	4' - 11"	N/A
+/- 110 to +/- 115	4' - 9"	N/A
+/- 115 to +/- 120	4' - 6"	N/A
+/- 120 to +/- 125	4' - 4"	N/A
+/- 125 to +/- 130	4' - 2"	N/A

\* MINIMUM PANEL LENGTH TO BE 48"



**CASE A (Plan)**



**CASE B (Plan)**

**END CLOSURE DETAILS**

SCALE 1/4"=1"

T.D.I.-2006

<b>WALTER A. TILLIT Jr. P.E.</b> PROFESSIONAL ENGINEER  6355 N.W. 36 STREET, STE. 305 VIRGINIA GARDENS, FL 33166 PHONE (305) 871-1530 FAX (305) 871-1531  TEXAS LIC. # 90691		<b>CLEAR BERTHA STORM PANEL</b> (2.25" DEEP)		DRAWN BY: R.E	
		<b>EASTERN METAL SUPPLY, INC</b> 9400 TELGE ROAD HOUSTON, TX. 77095 PHONE: (800)996-6061 FAX: (281)656-2297		08/05/08 DATE	
		08-199 DRAWING No			
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	REVISED TITLE BLOCK/PE#	10/29/08	3		
2	PANELS (1), (1A)	04/15/09	4		

SHEET 5 OF 6

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

MAXIMUM NEGATIVE DESIGN LOAD W +/- (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E.D. = 3" *							APPLICABLE TO MOUNTING FOR SECTION / ALTERNATIVE	MAXIMUM PANEL LENGTH "L" (ft.)	
	TAPCON			SG TAPCON		SOLID SET	BRASS BUSHING			
	POURED CONCRETE	CONCRETE BLOCK	WOOD	POURED CONCRETE	WOOD	POURED CONCRETE	WOOD			
60 OR LESS	-	-	-	6"	-	-	-	SECTION 1 (TOP & BOTTOM)	6'-0" OR LESS	
	-	-	-	6"	-	-	-	SECTION 2 (TOP)		
	6"	-	-	-	-	6"	-	SECTION 2 (BOTTOM)		
	6"	6"	-	-	-	-	-	SECTION 3 (TOP & BOTTOM)		
	-	-	6"	-	-	-	-	ALTERNATIVE 1 (TOP & BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE 2 (TOP)		
	-	-	5 1/2"	-	-	-	6"	ALTERNATIVE 2 (BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE 3 (TOP & BOTTOM)		
	-	-	-	6"	-	-	-	SECTION 1 (TOP & BOTTOM)		> 6'-0" UP TO 8'-0"
	-	-	-	6"	-	-	-	SECTION 2 (TOP)		
	6"	-	-	-	-	6"	-	SECTION 2 (BOTTOM)		
	6"	6"	-	-	-	-	-	SECTION 3 (TOP & BOTTOM)		
	-	-	6"	-	-	-	-	ALTERNATIVE 1 (TOP & BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE 2 (TOP)		
	-	-	4"	-	-	-	6"	ALTERNATIVE 2 (BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE 3 (TOP & BOTTOM)		
-	-	-	6"	-	-	-	SECTION 1 (TOP & BOTTOM)	6'-0" OR LESS		
-	-	-	6"	-	-	-	SECTION 2 (TOP)			
-	-	-	-	-	6"	-	SECTION 2 (BOTTOM)			
6"	6"	-	-	-	-	-	SECTION 3 (TOP & BOTTOM)			
-	-	6"	-	-	-	-	ALTERNATIVE 1 (TOP & BOTTOM)			
-	-	-	-	6"	-	6"	ALTERNATIVE 2 (TOP)			
-	-	4"	-	-	-	6"	ALTERNATIVE 2 (BOTTOM)			
-	-	-	-	6"	-	6"	ALTERNATIVE 3 (TOP & BOTTOM)			
-	-	-	6"	-	-	-	SECTION 1 (TOP & BOTTOM)		> 6'-0" UP TO 8'-0"	
-	-	-	6"	-	-	-	SECTION 2 (TOP)			
6"	-	-	-	-	6"	-	SECTION 2 (BOTTOM)			
6"	6"	-	-	-	-	-	SECTION 3 (TOP & BOTTOM)			
-	-	6"	-	-	-	-	ALTERNATIVE 1 (TOP & BOTTOM)			
-	-	-	-	6"	-	6"	ALTERNATIVE 2 (TOP)			
-	-	3"	-	-	-	6"	ALTERNATIVE 2 (BOTTOM)			
-	-	-	-	6"	-	6"	ALTERNATIVE 3 (TOP & BOTTOM)			

MAXIMUM NEGATIVE DESIGN LOAD W +/- (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E.D. = 3" *							APPLICABLE TO MOUNTING FOR SECTION / ALTERNATIVE	MAXIMUM PANEL LENGTH L (ft.)	
	TAPCON			SG TAPCON		SOLID SET	BRASS BUSHING			
	POURED CONCRETE	CONCRETE BLOCK	WOOD	POURED CONCRETE	WOOD	POURED CONCRETE	WOOD			
> 75 TO 100	-	-	-	6"	-	-	-	SECTION 1 (TOP & BOTTOM)	6'-0" OR LESS	
	-	-	-	6"	-	-	-	SECTION 2 (TOP)		
	6"	-	-	-	-	6"	-	SECTION 2 (BOTTOM)		
	6"	6"	-	-	-	-	-	SECTION 3 (TOP & BOTTOM)		
	-	-	6"	-	-	-	-	ALTERNATIVE (TOP & BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE: (TOP)		
	-	-	5.5"	-	-	-	6"	ALTERNATIVE: (BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE: (TOP & BOTTOM)		
	-	-	-	6"	-	-	-	SECTION 1 (TOP & BOTTOM)		> 6'-0" UP TO 8'-0"
	-	-	-	6"	-	-	-	SECTION 2 (TOP)		
	6"	5 1/2"	-	-	-	6"	-	SECTION 2 (BOTTOM)		
	6"	N/A	-	-	-	-	-	SECTION 3 (TOP & BOTTOM)		
	-	-	6"	-	-	-	-	ALTERNATIVE (TOP & BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE: (TOP)		
	-	-	4"	-	-	-	4.5"	ALTERNATIVE: (BOTTOM)		
	-	-	-	-	6"	-	6"	ALTERNATIVE: (TOP & BOTTOM)		
-	-	-	6"	-	-	-	SECTION 1 (TOP & BOTTOM)	6'-0" OR LESS		
-	-	-	6"	-	-	-	SECTION 2 (TOP)			
6"	-	-	-	-	6"	-	SECTION 2 (BOTTOM)			
6"	6"	-	-	-	-	-	SECTION 3 (TOP & BOTTOM)			
-	-	6"	-	-	-	6"	ALTERNATIVE (TOP & BOTTOM)			
-	-	-	-	6"	-	6"	ALTERNATIVE: (TOP)			
-	-	4"	-	-	-	4.5"	ALTERNATIVE: (BOTTOM)			
-	-	-	-	6"	-	6"	ALTERNATIVE: (TOP & BOTTOM)			

**EDGE DISTANCE VERSUS SPACING FOR ANCHORS IN POURED CONCRETE OR CONCRETE BLOCK:**

MAXIMUM ANCHOR SPACINGS LISTED BELLOW ARE AS PER MIN. E.D. LESS THAN SCHEDULE INDICATED, REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. 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	
	1/4" TAPCON OR SG TAPCON	SOLID SET
	MIN. SPACING = 3"	MIN. SPACING = 3"
1 1/2"	.35	-
3"	1.00	1.00

**ANCHORS LEGEND:**

ANCHORS TYPE	MINIMUM ANCHOR SPACING	MINIMUM E.D.	
		POURED CONCRETE	CONCRETE BLOCK
1/4" TAPCON ITW/BUILDDEX MIN. 3192 psi. TO CONCRETE	3"	3"	3"
1/4" TAPCON ITW/BUILDDEX ASTM C-90 TO BLOCK	3"	3"	3"
1/4" TAPCON SG ITW/BUILDDEX MIN. 3295 psi. TO CONCRETE	3"	3"	-
ALL POINTS SOLID-SET MIN. 3000 psi. TO CONCRETE	3"	3 1/2"	-

**T.D.I.-2006**

<b>WALTER A. TILLIT Jr. P.E.</b> PROFESSIONAL ENGINEER  6355 N.W. 36 STREET, STE. 305 VIRGINIA GARDENS, FL 33166 PHONE (305) 871-1530 FAX (305) 871-1531  TEXAS LIC. # 90691	CLEAR BERTHA STORM PANEL (2.25" DEEP)	DRAWN BY: R.E.  08/05/08 DATE
	<b>EASTERN METAL SUPPLY, INC</b>  9400 TELGE ROAD HOUSTON, TX. 77095 PHONE: (800)996-6061 FAX: (281)656-2297	08-199 DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	REVISED TITLE BLOCK/PE#	10/29/08	3		
2			4		