

MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

www.buildingcodeonline.com

NOTICE OF ACCEPTANCE (NOA)

Eastern Metal Supply, Inc.
4268 Westroads Dr.
West Palm Beach, Florida 33407

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: 0.050" Solid Bertha Aluminum Storm Panels Shutter

APPROVAL DOCUMENT: Drawing No. 05-078, titled "0.050" Bertha Aluminum Storm Panel", sheets 1 through 15 of 15, and 1A of 15, prepared by Tilteco, Inc., dated 04/28/2005, last revision #1 dated 04/28/2005, signed and sealed by Walter A. Tillit Jr., P.E. on 09/15/2005, bearing Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each panel shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # 03-0707.02 and consists of this page 1, evidence submitted pages E-1, E-2, and E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E.**

Helmy A. Makar
 07/13/2006

NOA No 05-0926.03
Expiration Date: 08/07/2008
Approval Date: 07/13/2006
 Page 1



Eastern Metal Supply, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #96-1203.08

A. DRAWINGS

1. Drawing Number 96-331, Eastern Metal Supply, Inc., 0.050" Bertha Storm Panel, sheets 1 through 8 of 8, prepared by Tilteco, Inc., revision 2, dated 07/15/97 signed and sealed by Walter A. Tillit Jr., P.E.

B. TESTS

1. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test on 0.050" aluminum storm panels, prepared by American Test Lab of South Florida, Test Report No. ATL #1022.01-96 dated 11/08/96, signed and sealed by William R. Mehner, P.E.

C. CALCULATIONS

1. Comparative Analysis and Anchor Analysis, dated 10/21/96, pages 1 through 15, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E.
2. Calculations for revised anchor schedule, dated 05/02/97, pages 1 through 33, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E.

D. MATERIAL CERTIFICATIONS

1. Mill Certified Inspection Report of coils, dated 01/23/96, for Aluminum Alloy 5052-H32 by Barmet Aluminum Corporation with chemical composition and physical properties.
2. Certified Tensile Test Report by Certified Testing Laboratories Report No. CTL #846B dated 10/31/96, for Aluminum Alloy, signed and sealed by Ramesh Patel, P.E.

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #98-0817.16

A. DRAWINGS

1. Drawing No. 98-172, titled "0.050" Bertha Storm Panel", prepared by Tilteco, Inc., dated July 7, 1998, last revision #1 dated July 7, 1998, sheets 1 through 8 of 8, signed and sealed by Walter A. Tillit Jr., P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. None.

D. MATERIAL CERTIFICATIONS

1. Mill Certified Test Report issued by Nichols Aluminum dated 05/28/98, with chemical composition and mechanical properties of the 3004-H34 Aluminum Alloy panel.



Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0926.03
Expiration Date: 08/07/2008
Approval Date: 07/13/2006

Eastern Metal Supply, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #00-0602.04

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #01-0516.06

A. DRAWINGS

1. *Drawing No. 01-058, titled "0.050" Solid Bertha Aluminum Storm Panel", sheets 1 through 15 of 15, prepared by Tilteco, Inc., dated August 27, 2001, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

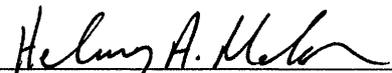
1. *Test reports on 1) Uniform Static Air Pressure Test, per SFBC PA 202-94
2) Large Missile Impact Test per SFBC, PA 201-94
3) Cyclic Wind Pressure Loading per SFBC, PA 203-94
along with marked-up drawings and installation diagram of 0.050" Solid Aluminum Storm Panels Shutter, prepared by ATL of South Florida, Test Report No. 0221.01-01, dated 05/02/01, signed and sealed by Henry Hattem, P.E.*
2. *Addendum to ATL of South Florida, Test Report No. 0221.01-01, dated 10/12/01, signed and sealed by Henry Hattem, P.E.*
3. *Addendum to ATL of South Florida, Test Report No. 0221.01-01, dated 02/04/02, signed and sealed by Henry Hattem, P.E.*

C. CALCULATIONS

1. *Anchor Analysis, dated 09/10/01, pages 1 through 53, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E.*

D. MATERIAL CERTIFICATIONS

1. *Mill Certified Inspection Report of coils, dated 04/24/01, for Aluminum Alloy 3004 -H34 by NA Nichols Aluminum with chemical composition and physical properties.*
2. *Certified Tensile Test Report by QC Metallurgical, Inc., Report No. ICM-384, dated 03/26/01, signed and sealed by frank Grate, P.E.*



Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0926.03
Expiration Date: 08/07/2008
Approval Date: 07/13/2006

Eastern Metal Supply, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 03-0707.02

A. DRAWINGS

1. *Drawing No. 03-141, titled "0.050" Solid Bertha Aluminum Storm Panel", sheets 1 through 15 of 15, prepared by Tilteco, Inc., dated July 02, 2003, last revision #1 dated July 02, 2003, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

E. OTHERS

1. *Letter from Tilteco, Inc., dated July 03, 2003, signed and sealed by Walter A. Tillit Jr., P.E., stating that the only change from the previous approved drawing # 01-058 are the general notes #1 & #11 to reference the Florida Building Code and the ASCE 7-98*

6. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 05-073, titled "0.030" Thick Galvanized Bertha Steel Storm Panel", sheets 1 through 9 of 9, and 1A of 9, prepared by Tilteco, Inc., dated 04/25/2005, last revision #1 dated 04/25/2005 signed and sealed by Walter A. Tillit Jr., P.E. on 09/15/2005*

B. TESTS

1. *Test report on Large Missile Impact Test and Cyclic Wind Pressure Test of Galvanized Steel Storm Panels, prepared by American Test Lab of South Florida, Report No. ATLSF 0616.01-05, dated September 15, 2005, signed and sealed by William R. Mehner, P.E.*

C. CALCULATIONS

1. *Storm panel shutter Calculations, sheets 1 through 91 by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E. on 09/13/2005.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *Tensile Test Report from QC Metallurgical, Inc., Job No. 51M-926, dated September 20, 2005, tested per ASTM E8-93, signed and sealed by Frank Grate, P.E.*



Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0926.03
Expiration Date: 08/07/2008
Approval Date: 07/13/2006

GENERAL NOTES:

1. STORM PANEL SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2004 EDITION OF THE FLORIDA BUILDING CODE. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 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.A.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 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER ATL REPORTS # 1022.01-01, # 0221.01 AND # 0616.02-05, AS PROTOCOLS TAS-201, TAS-202 AND TAS-203.

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

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

NOTES:

- A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHORS OR CRETE-FLEX SS4 IS 1 3/4"; FOR ZAMAC NAILIN ANCHORS IS 1 3/8"; FOR ELCO PANELMATE ANCHORS IS 1 3/4", AND FOR CF TAP-GRIP ANCHORS IS 1 1/4".
- A.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" ϕ -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- A.3) MINIMUM EMBEDMENT OF 1/4" ϕ 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" ϕ -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" ϕ TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX. (REGULAR OR 410 S.S.)
 - 1/4" ϕ CRETE-FLEX SS4 ANCHORS AS MANUFACTURED BY ELCO TEXTRON.
 - 1/4" ϕ CF TAP-GRIP ANCHORS (BERTHA STUD-CON), AS MANUFACTURED BY TRU-FAST CORPORATION.
 - 1/4" ϕ ZAMAC NAILIN ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC.
 - 1/4" ϕ x 7/8" CALK-IN ANCHORS OR ELCO male & female "PANELMATE" AS MANUFACTURED BY POWER FASTENERS, INC. AND ELCO TEXTRON, RESPECTIVELY.
 - 1/4" ϕ x 3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.

NOTES:

- B.1) MINIMUM EMBEDMENT OF TAPCON, ELCO PANELMATE, CF TAP-GRIP AND CRETE-FLEX SS4 ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4"; 1 3/8" FOR ZAMAC NAILIN ANCHORS.
- B.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" ϕ -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- B.3) MINIMUM EMBEDMENT OF 1/4" ϕ 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" ϕ -20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- B.4) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES IN B.1) AND B.2) ABOVE.

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

7. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 16 (SHEET 3 & 7 OF 15) EXCEPT THAT HEADERS 2, 3 & 4 SHALL NOT BE USED.

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

9. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.

10. STORM PANEL INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

11. (a) THIS PRODUCT APPROVAL DOCUMENT (P.A.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.A.D.

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

(c) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.

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

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

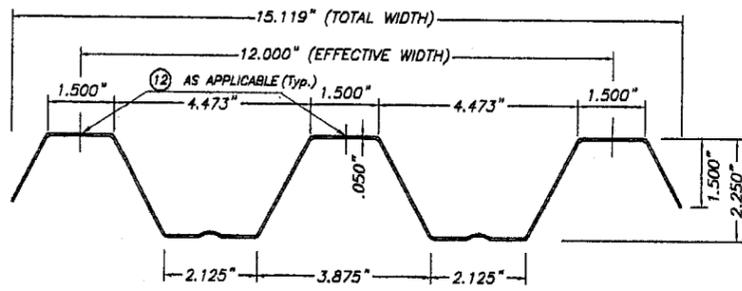
12. SHUTTER MANUFACTURER'S LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION AT PANEL. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:
EASTERN METAL SUPPLY, INC.
WEST PALM BEACH, FL.
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 05-9926.03
Expiration Date 08/07/2008
By *Heather A. Miller*
Miami Dade Product Control
Division

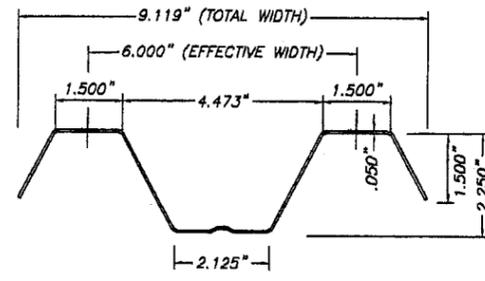
F.B.C.(High Velocity Hurricane Zone)

 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			L.G. DRAWN BY:
		EASTERN METAL SUPPLY, INC.			4/28/05 DATE
		4288 WESTROADS DR. WEST PALM BEACH, FL 33407			05-078 DRAWING No
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
2	-	-	4	-	-
					SHEET 1 OF 15

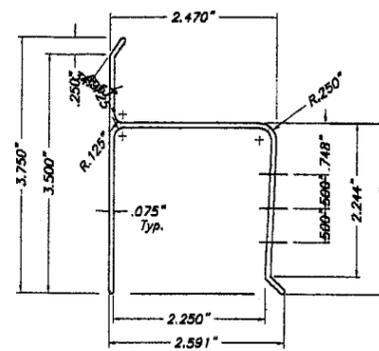
SEP 15 2005



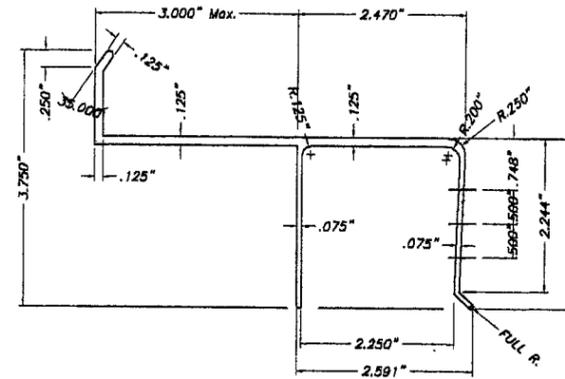
1 ALUMINUM PANEL
SCALE: 1/4" = 1"



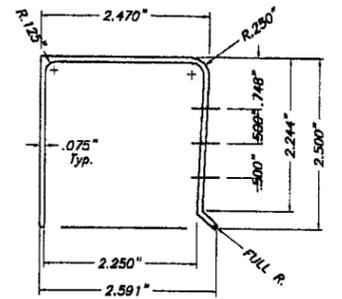
1A ALUMINUM HALF PANEL
SCALE: 1/4" = 1"



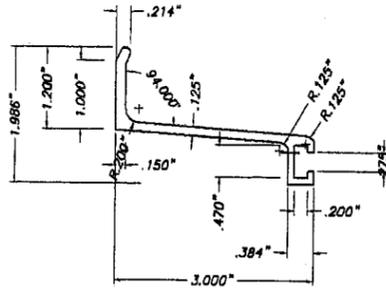
2 "h" HEADER
SCALE: 3/8" = 1"



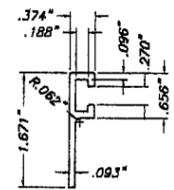
3 3" Max. "U" BUILD OUT
SCALE: 3/8" = 1"



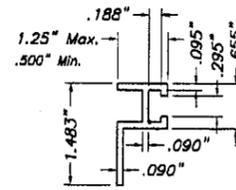
4 "U" HEADER
SCALE: 3/8" = 1"



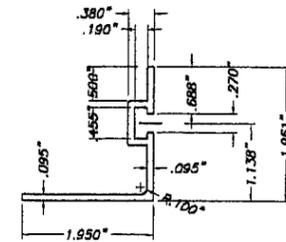
5 3" ANGLE BUILD OUT BRACKET
SCALE: 3/8" = 1"



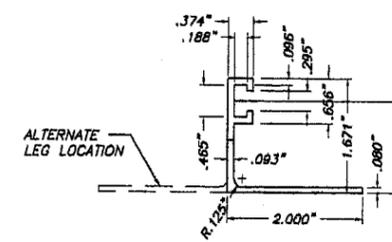
6 "F" TRACK
SCALE: 3/8" = 1"



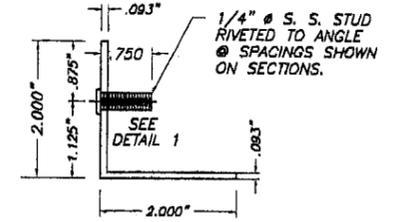
6A 1 1/4" MAX. B. O. "F" TRACK
SCALE: 3/8" = 1"



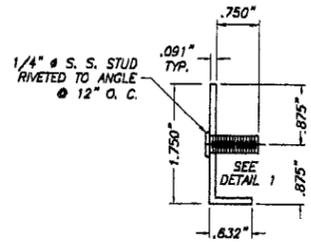
7 REVERSED "F" ANGLE TRACK
SCALE: 3/8" = 1"



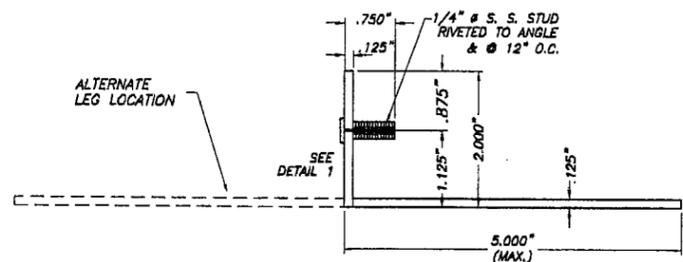
8 "F" TRACK ANGLE
SCALE: 3/8" = 1"



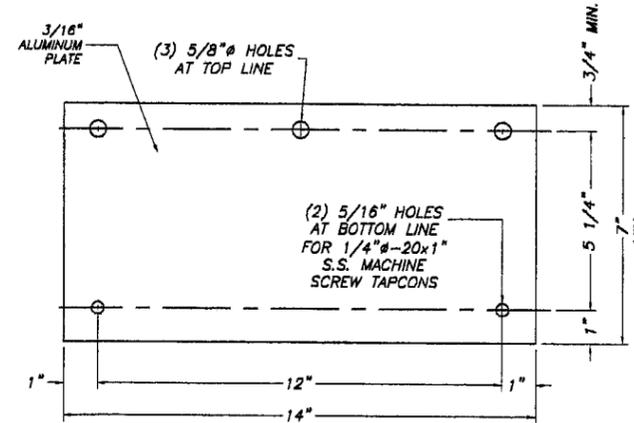
9 STUDDED ANGLE
6063-T5 ALUM. ALLOY
SCALE: 3/8" = 1"



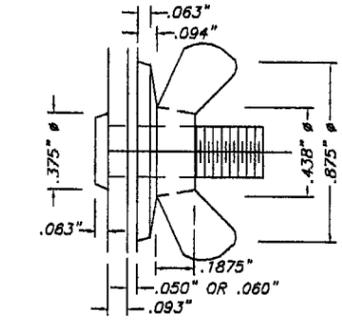
9A MINI WALL 1.75"x0.632" ANGLE WITH STUD
SCALE: 1/2" = 1"



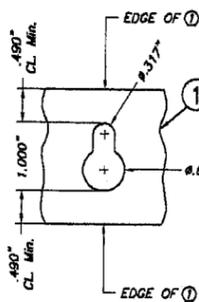
10 2"x5"(MAX.)x1/8" ANGLE WITH STUD
SCALE: 3/8" = 1"



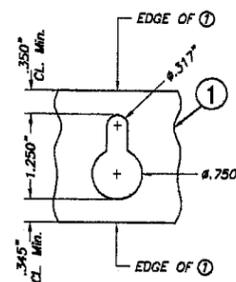
11 3/16"x7"x14" LONG WALL PLATE
SCALE: 3/16" = 1"



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

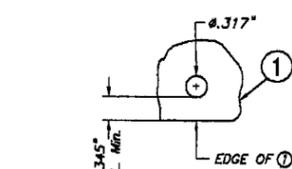


OPTION 1

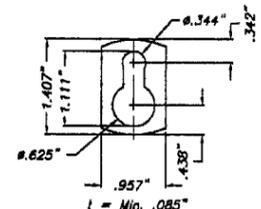


OPTION 2

12 KEY HOLE AT PANEL



12A ROUND HOLE AT PANEL (OPTION TO 12)



13 KEY HOLE WASHER
3105-H154 ALUM. ALLOY
SCALE: 3/8" = 1"

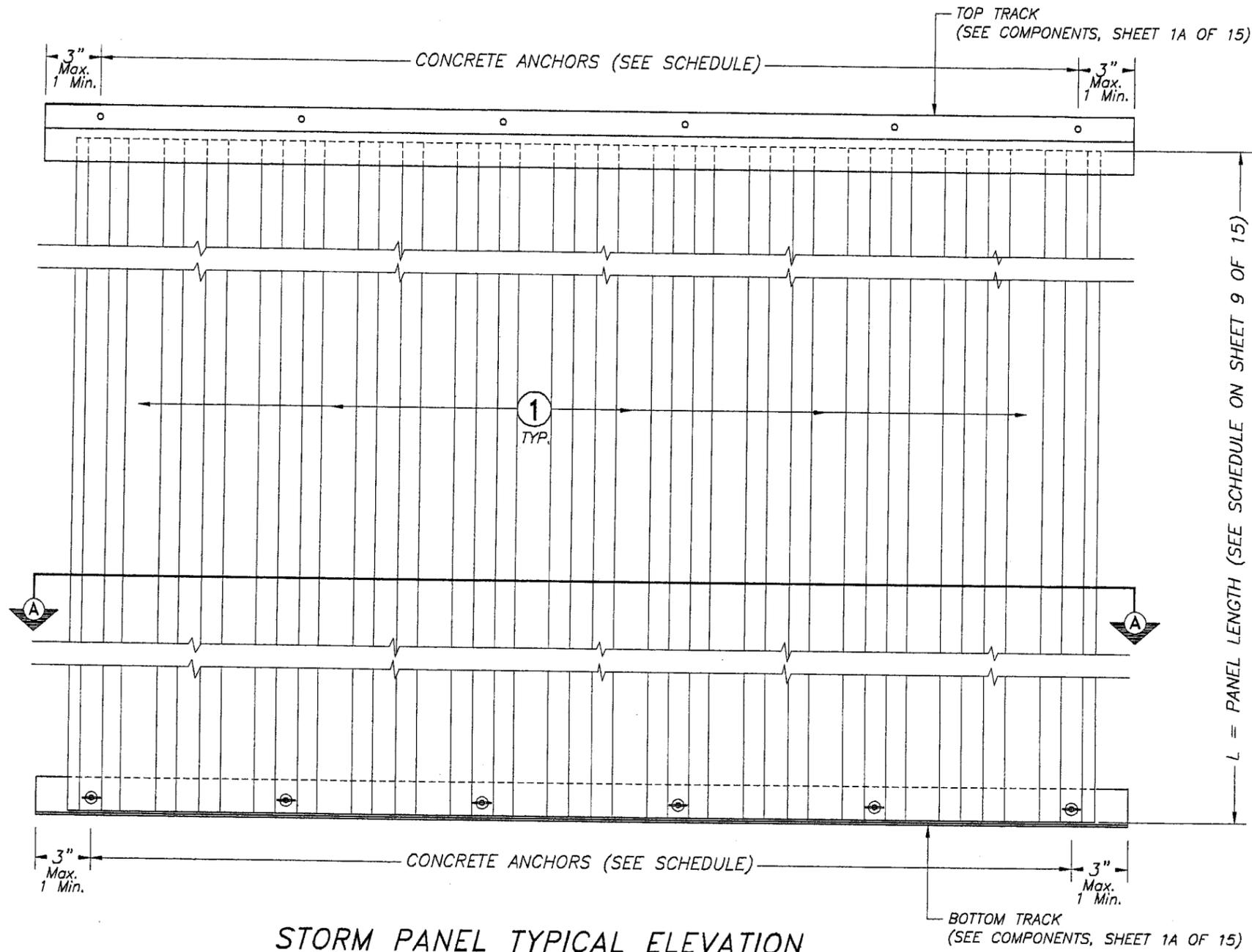
COMPONENTS

SEP 15 2005

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 05-0926.03
Expiration Date 08/07/2008
By *Heather A. Moran*
Miami Dade Product Control
Division

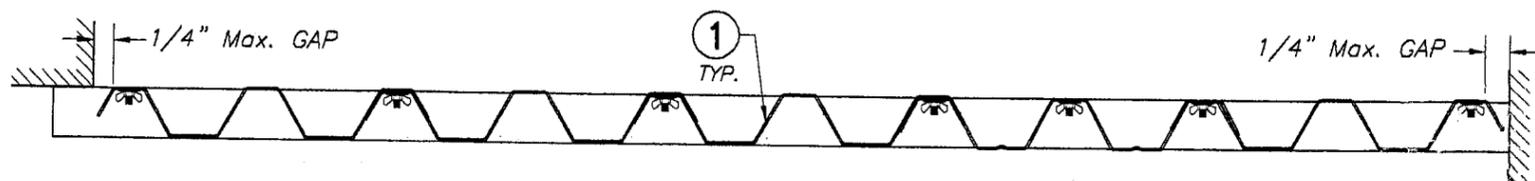
F.B.C.(High Velocity Hurricane Zone)

 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305)871-1830 Fax : (305)871-1831 EB-0008719 WALTER A. TILLIT Jr. P. E. FLORIDA Lic. # 44167		0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
		EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
		4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
2	-	-	4	-	-



STORM PANEL TYPICAL ELEVATION

SCALE : 1/8" = 1"



SECTION A-A

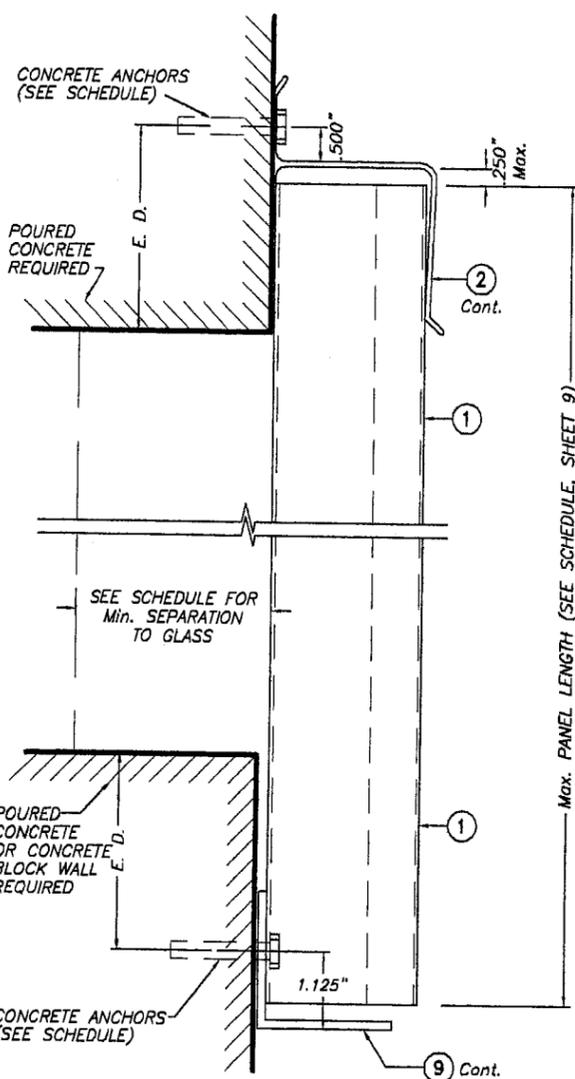
SCALE : 1/8" = 1"

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 05-0926-03
 Expiration Date 08/07/2008
 By *Helmut A. Tillit*
 Miami Dade Product Control
 Division

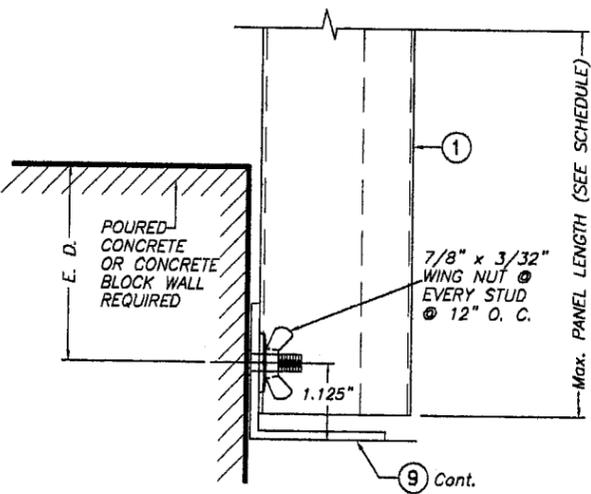
F.B.C.(High Velocity Hurricane Zone)

<p>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</p>		0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
		EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
		4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
2	-	-	4	-	-

SEP 15 2005



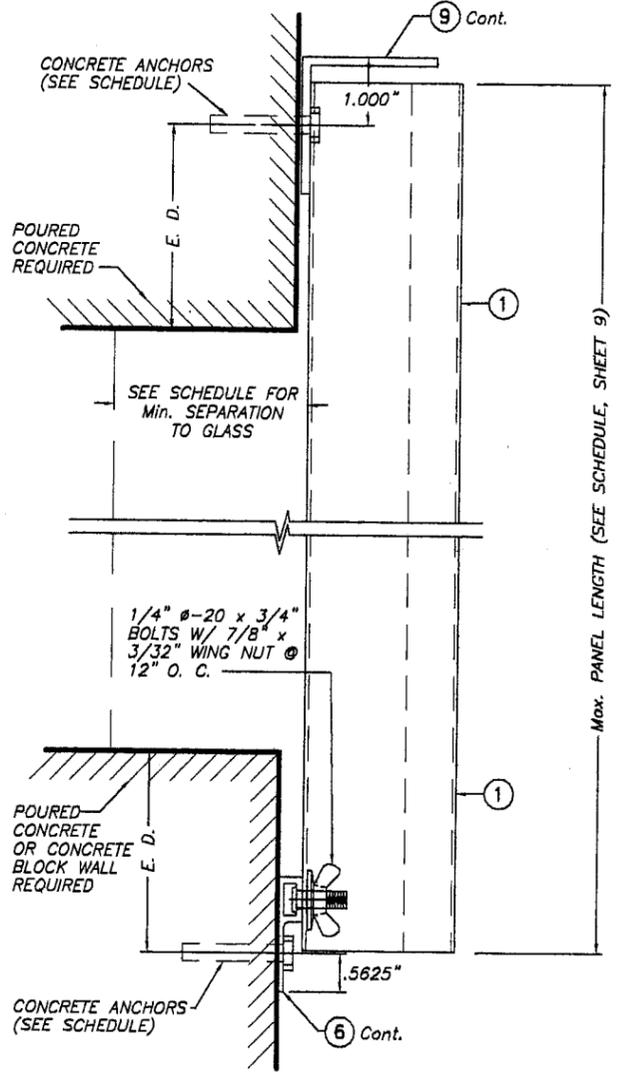
SECTION @ ANCHOR



SECTION @ STUD

WALL MOUNTING INSTALLATION SECTION 1
SCALE : 3/8" = 1"

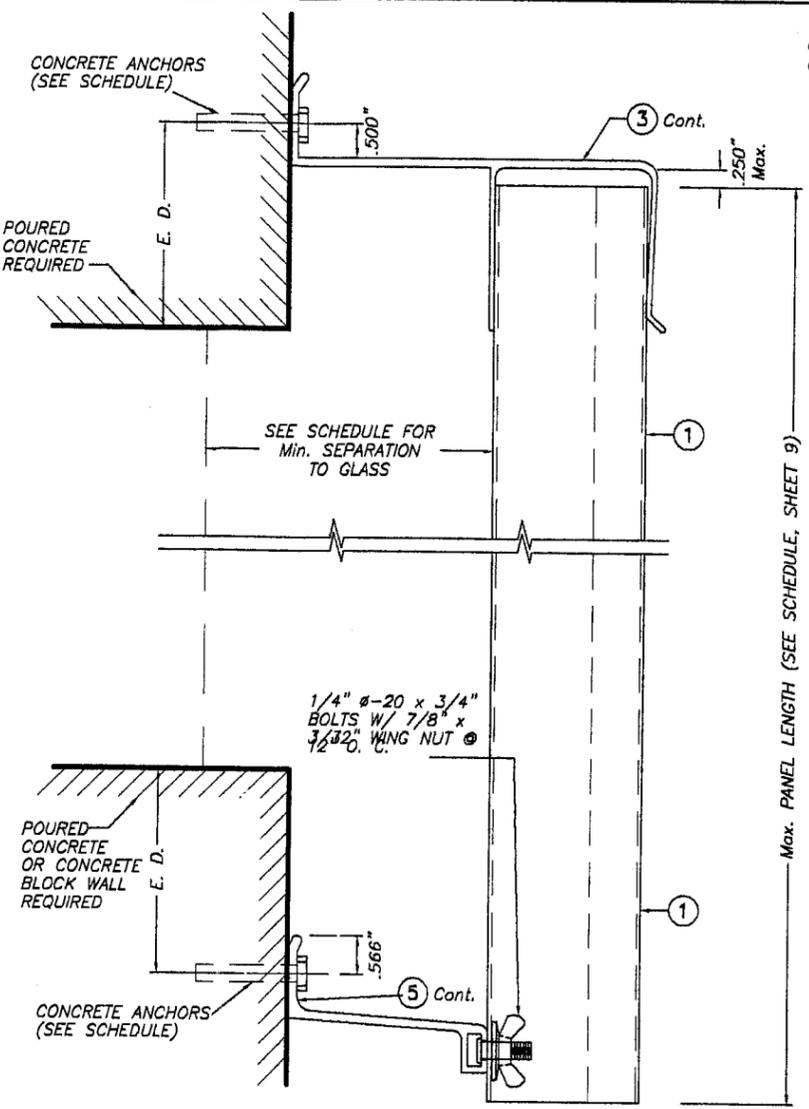
NOTE : DETAIL OF SECTION @ STUD VALID ALSO FOR WALL MOUNTING INSTALLATION - SECTION 2 (TOP)



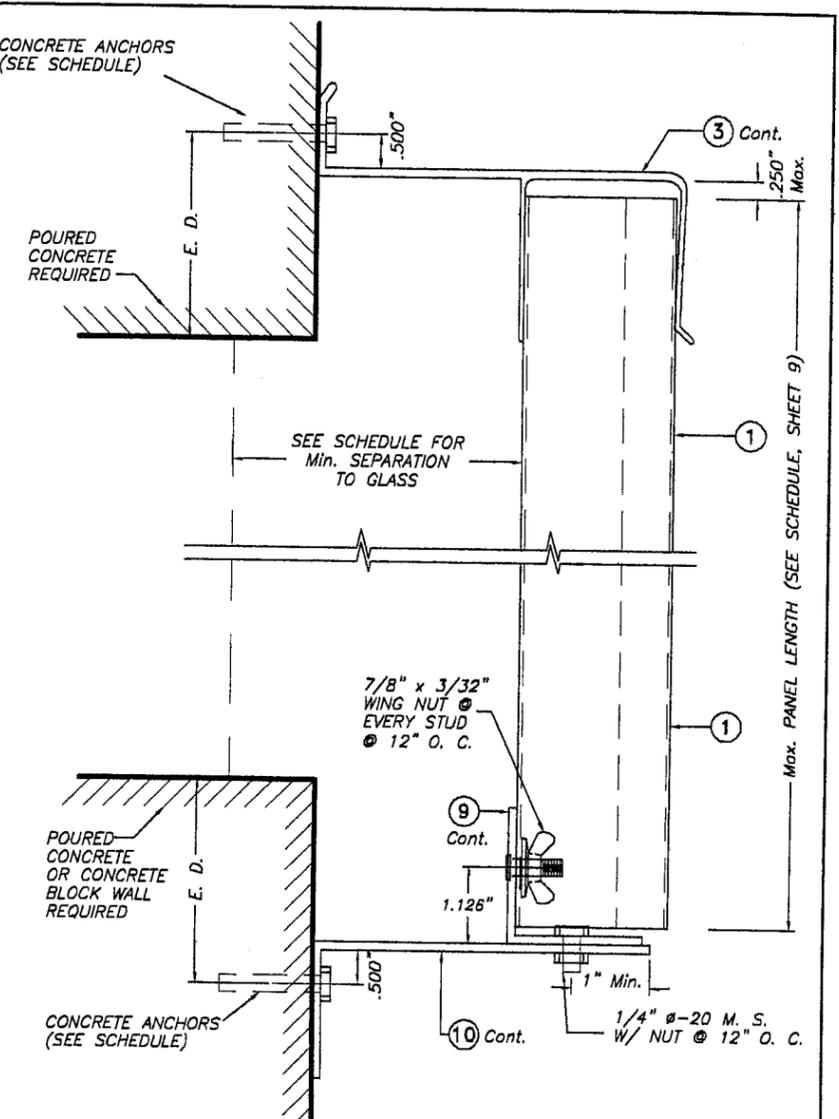
WALL MOUNTING INSTALLATION SECTION 2
SCALE : 3/8" = 1"

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

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



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



BUILD OUT INSTALLATION SECTION 4
SCALE : 3/8" = 1"

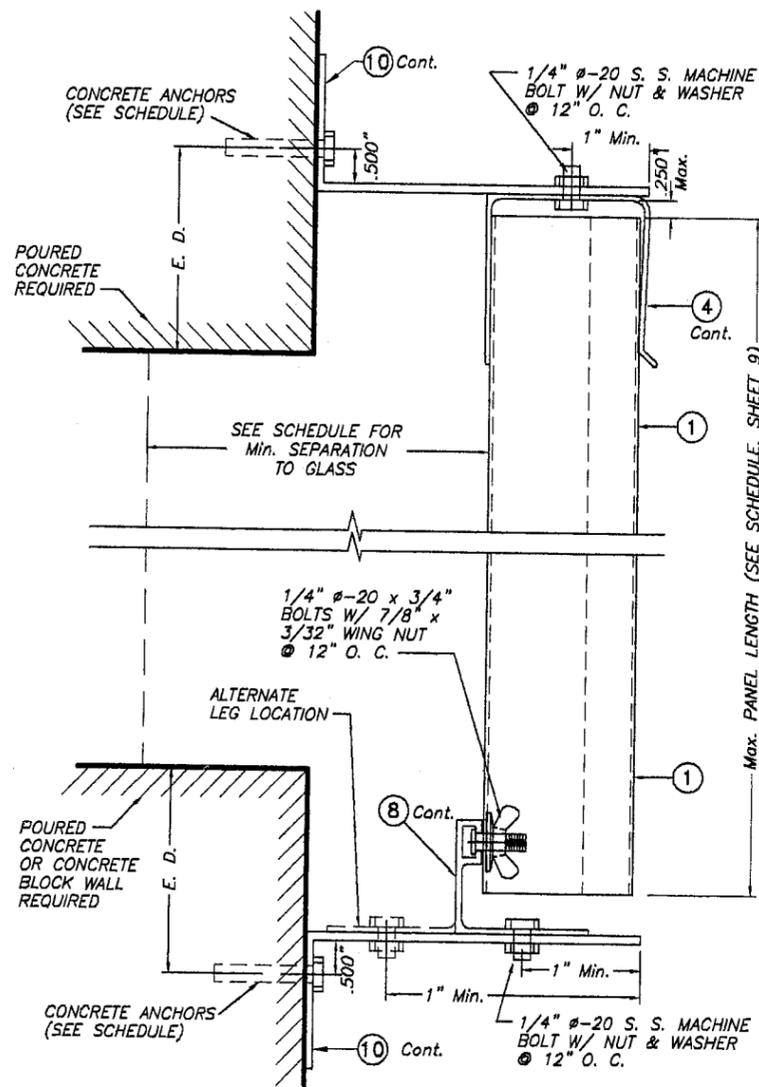
PRODUCT REVISED as complying with the Florida Building Code
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Miami Dade Product Control Division

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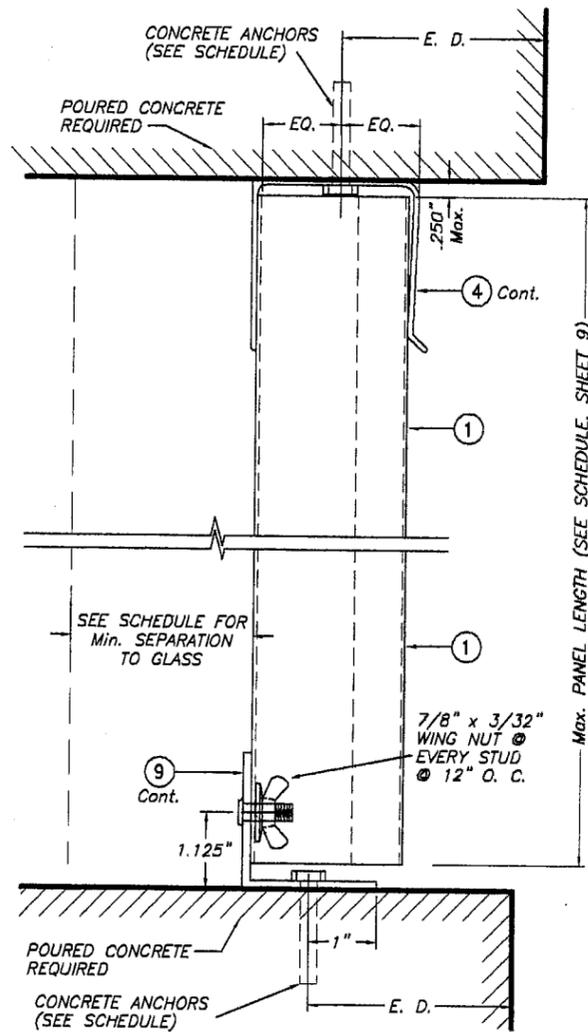
TILECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167

0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No
1	OLD 03-141	4/28/05	3
2	-	-	4

SEP 15 2005

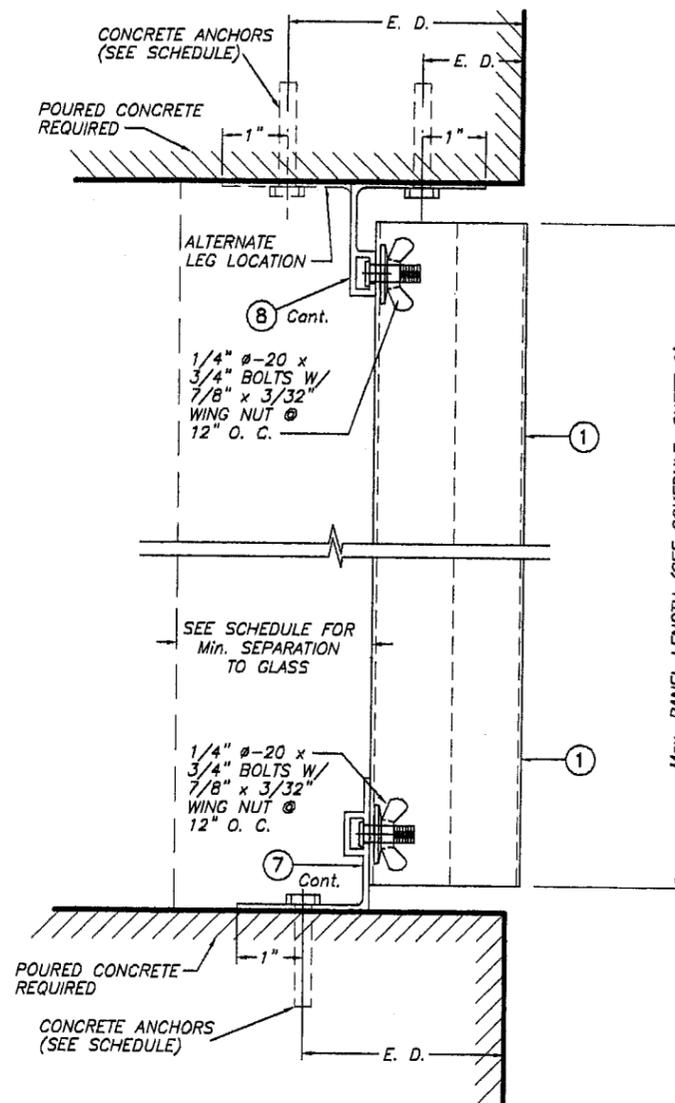


BUILD OUT INSTALLATION
- SECTION 5 SCALE : 3/8" = 1"



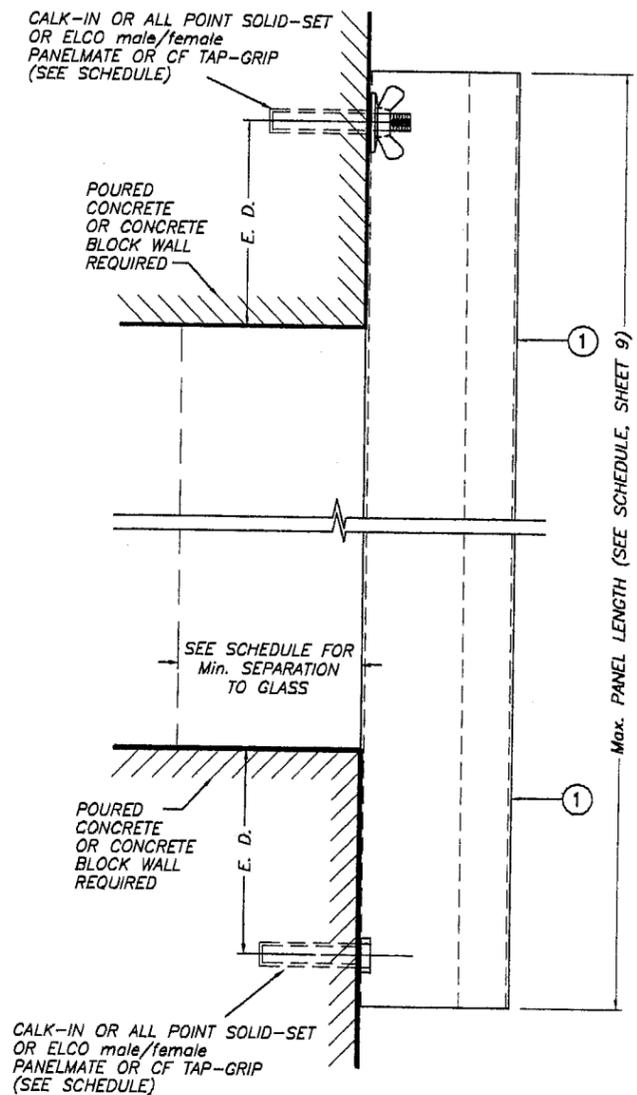
CEILING & FLOOR MOUNTING
INSTALLATION - SECTION 6

SCALE : 3/8" = 1"



CEILING & FLOOR MOUNTING
INSTALLATION - SECTION 7

SCALE : 3/8" = 1"



WALL MOUNTING INSTALLATION (D. M.)
- SECTION 8 SCALE : 3/8" = 1"

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

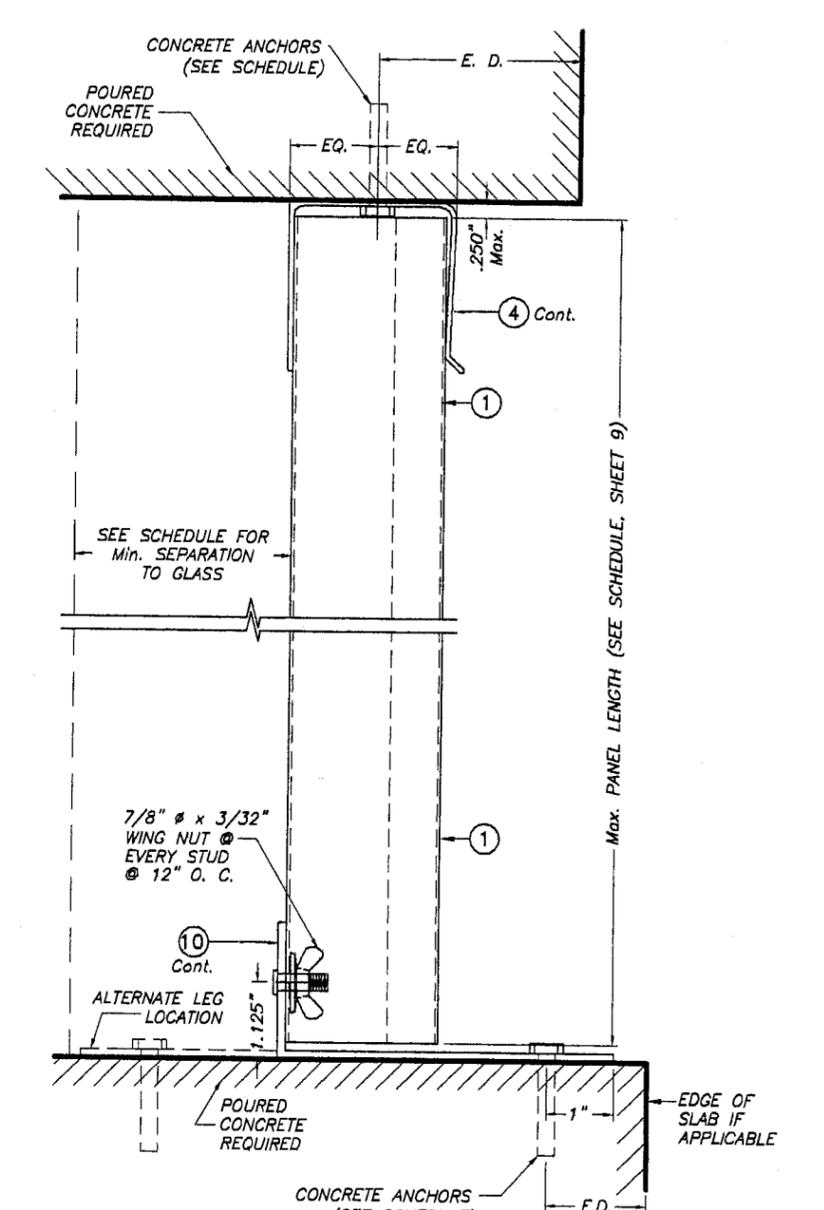
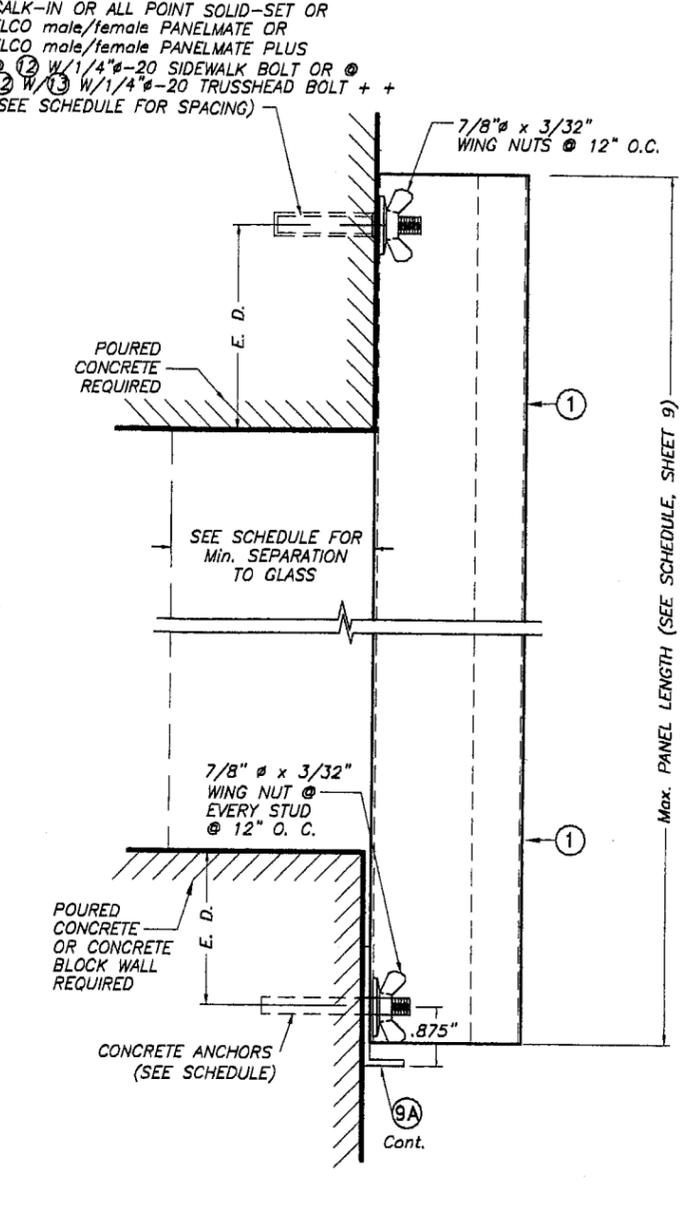
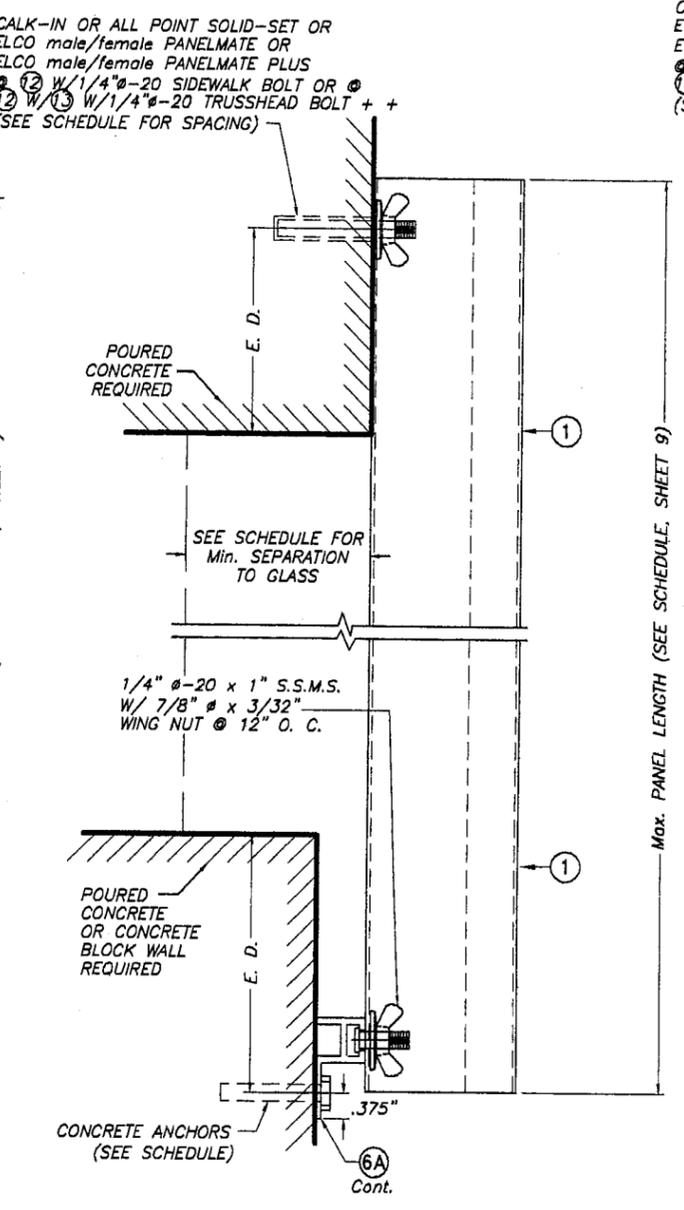
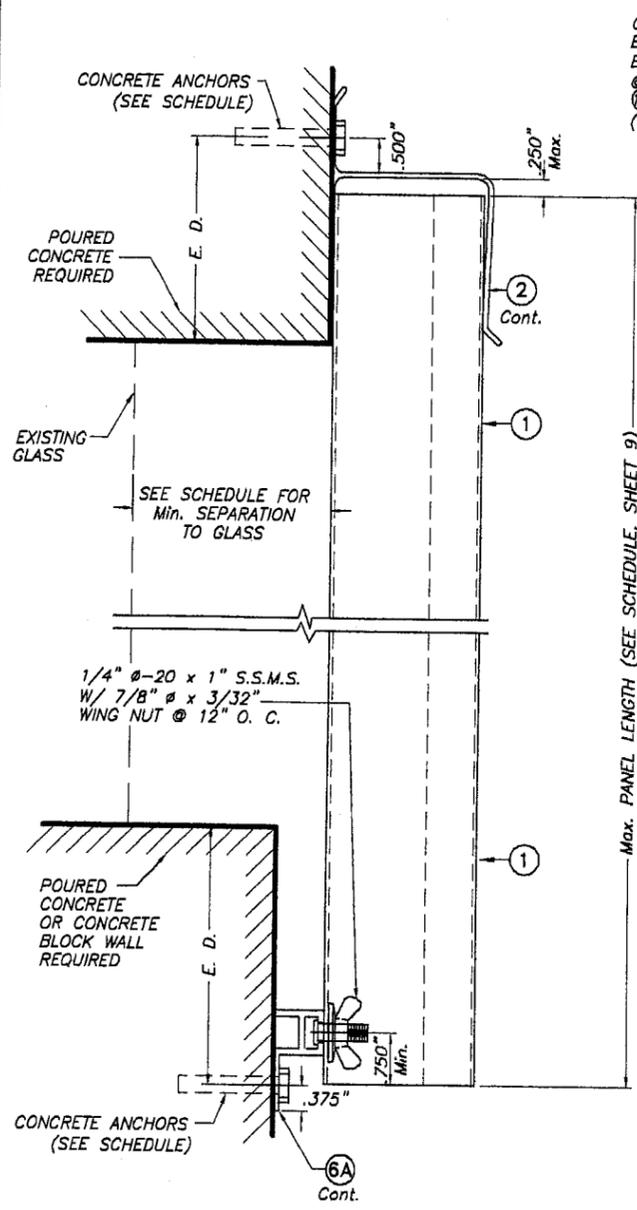
NOTE FOR COMBINATION OF SECTIONS :
 WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE
 COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

PRODUCT REVISED
 as complying with the Florida
 Building Code
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 By *Helmut A. Miller*
 Miami Dade Product Control
 Division

F.B.C.(High Velocity Hurricane Zone)

SEP 15 2005

<p>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</p>		0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
		EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
		4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
2	-	-	4	-	-



WALL MOUNTING INSTALLATION
SECTION 9

SCALE : 3/8" = 1"

WALL MOUNTING INSTALLATION
SECTION 10

SCALE : 3/8" = 1"

WALL MOUNTING INSTALLATION
SECTION 11

SCALE : 3/8" = 1"

CEILING & FLOOR MOUNTING
INSTALLATION SECTION 12

SCALE : 3/8" = 1"

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

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

++
SIDE WALK BOLTS ARE 3/4" 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)

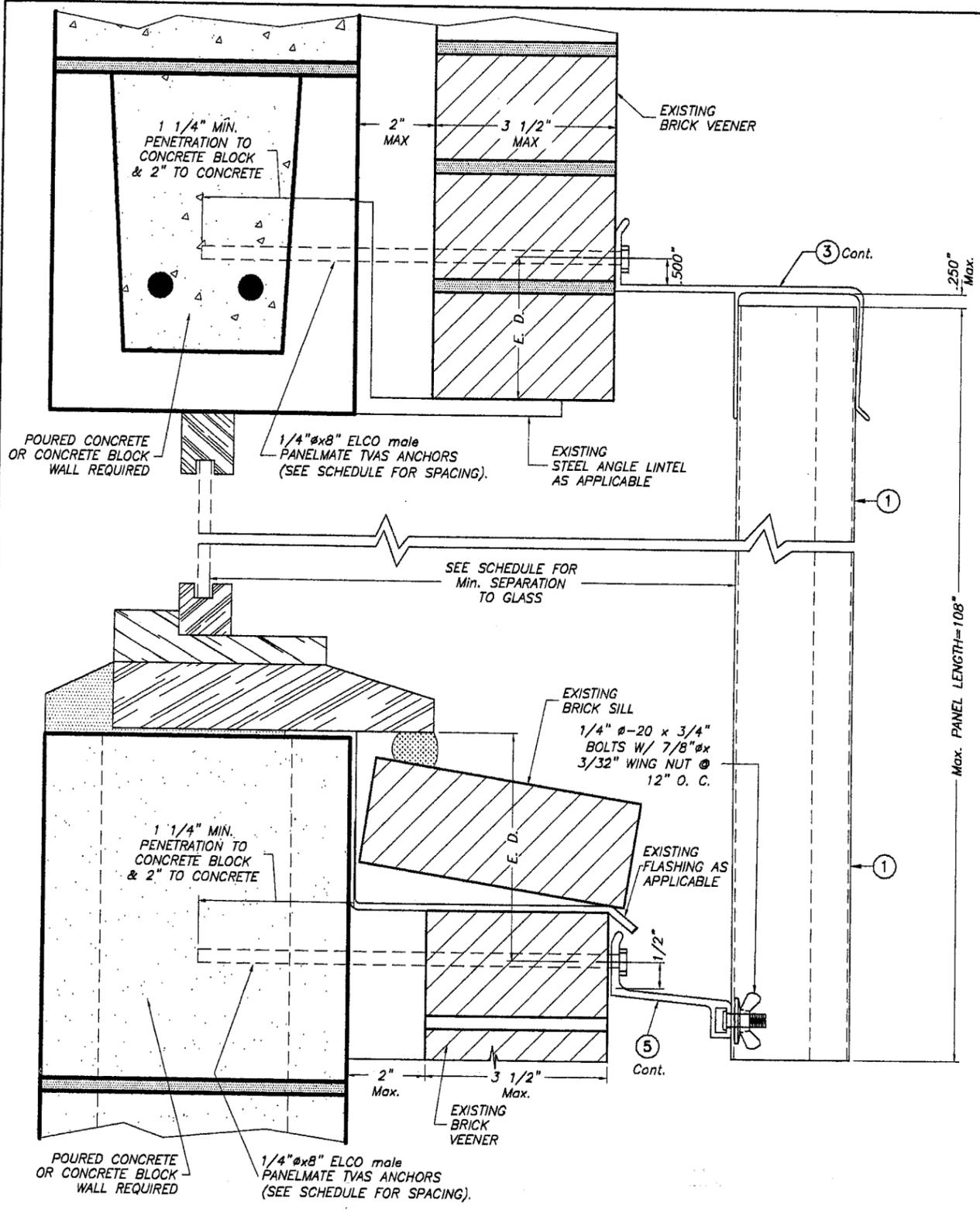
PRODUCT REVISED
as complying with the Florida
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Expiration Date 08/07/2008
By: *Helene A. Mark*
Miami Data Product Control
Division

F.B.C. (High Velocity Hurricane Zone)

SEP 15 2005

TILTECO INC.
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

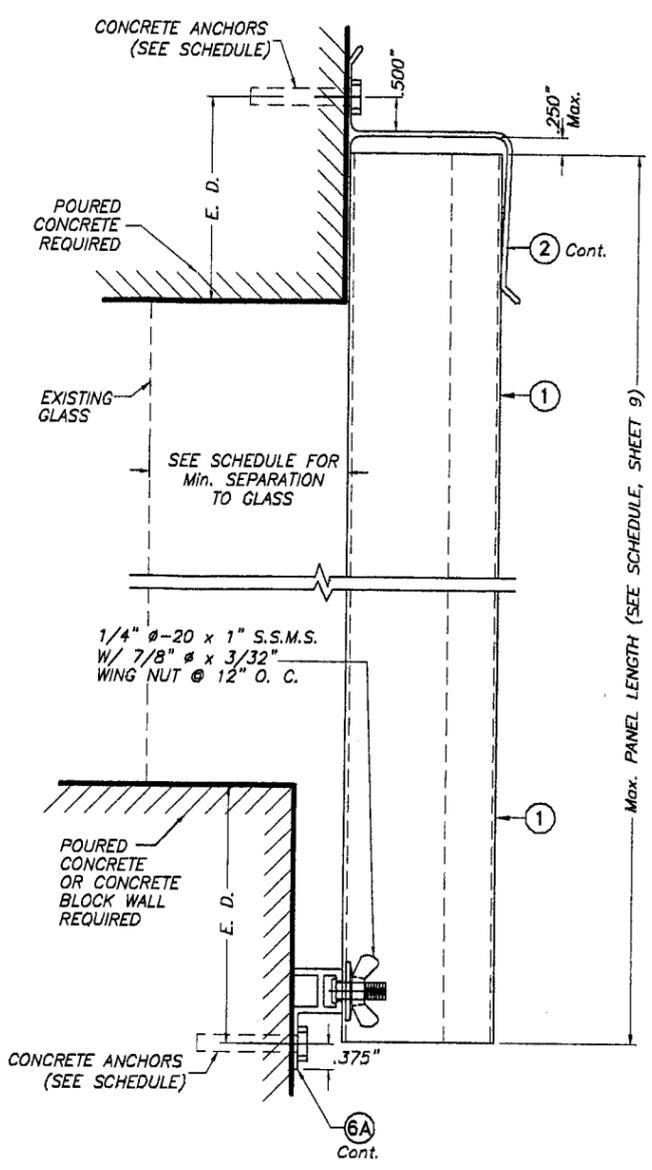
0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No
1	OLD 03-141	4/28/05	3
2	-	-	4
		SHEET 5 OF 15	



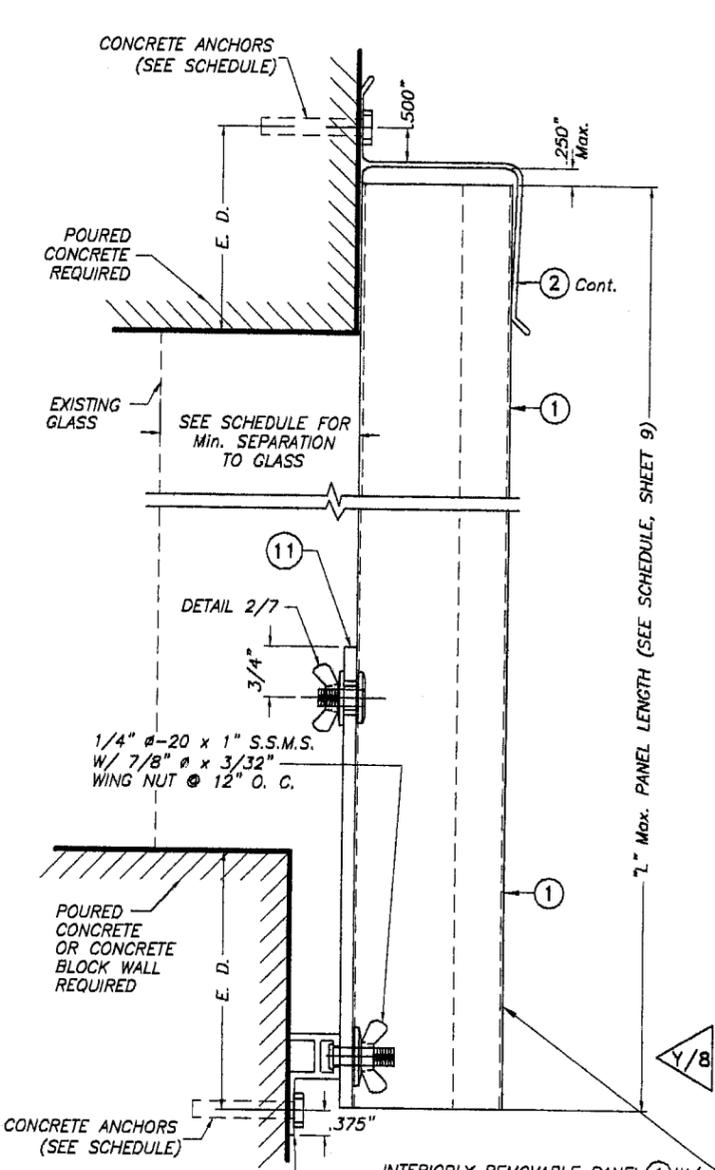
BUILD OUT INSTALLATION
SECTION 13
 SCALE : 3/8" = 1"

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

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



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



SECTION 14B

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

INTERIORLY REMOVABLE PANEL ① W/
 SIDEWALK BOLTS (SEE DETAIL 2)
 CONNECTED TO ① THRU 5/8" Ø
 HOLES AT ① @ 6" O.C. & FASTENED
 AT REAR W/ 7/8" Ø x 3/32" WING NUT
 @ EVERY SIDEWALK BOLT.

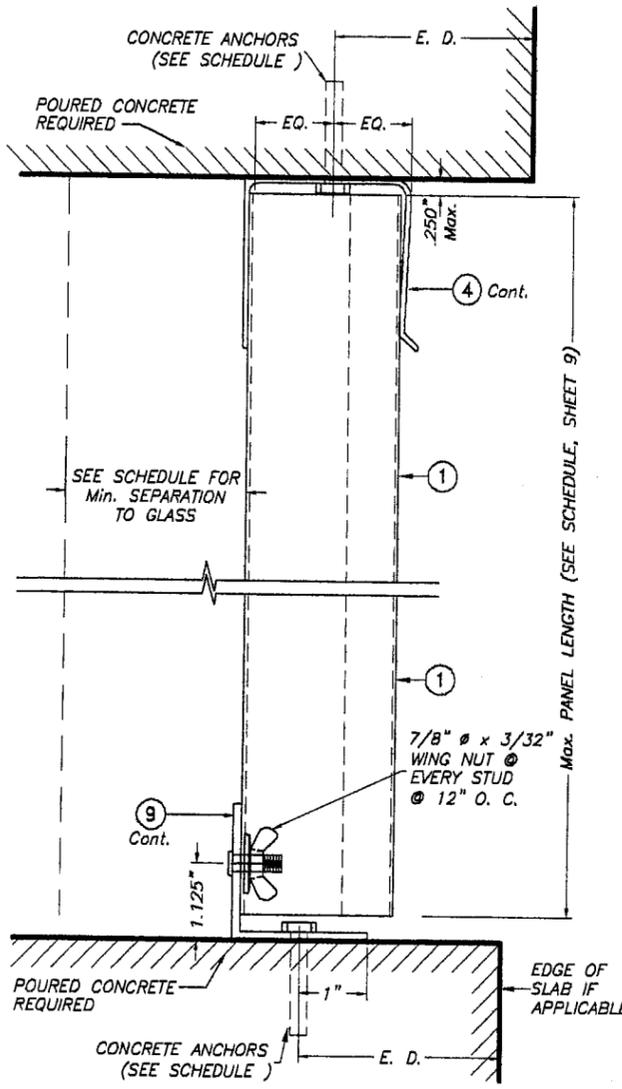
PRODUCT REVISED
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 Expiration Date 08/07/2008
 By *Helmut A. Miller*
 Miami Code Product Control
 Division

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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.
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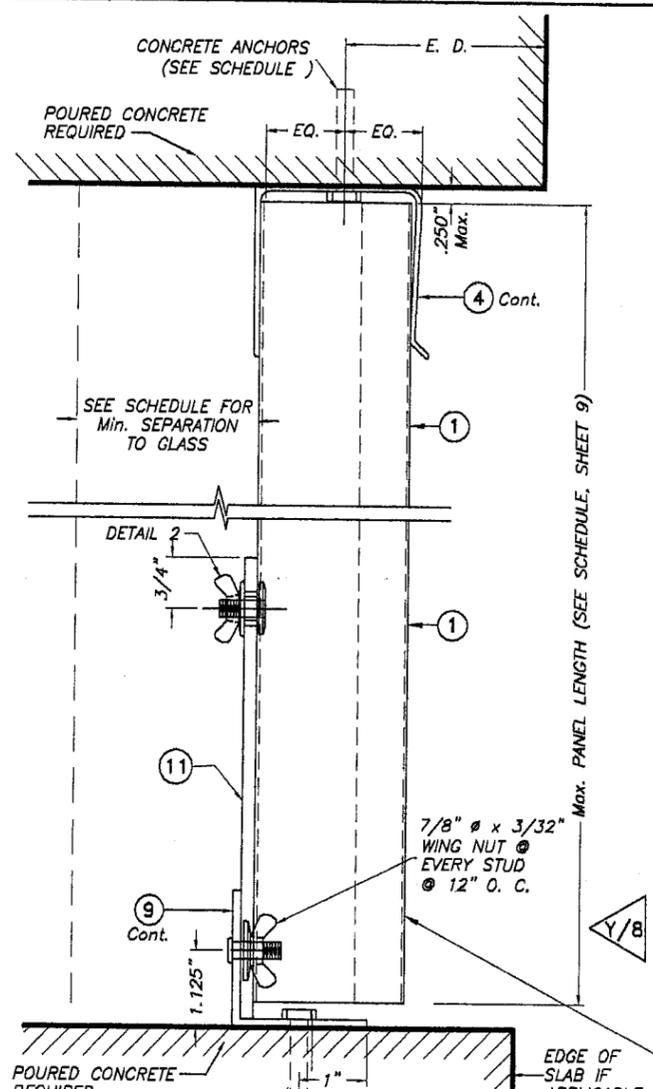
0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No
1	OLD 03-141	4/28/05	3
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SEP 15 2005



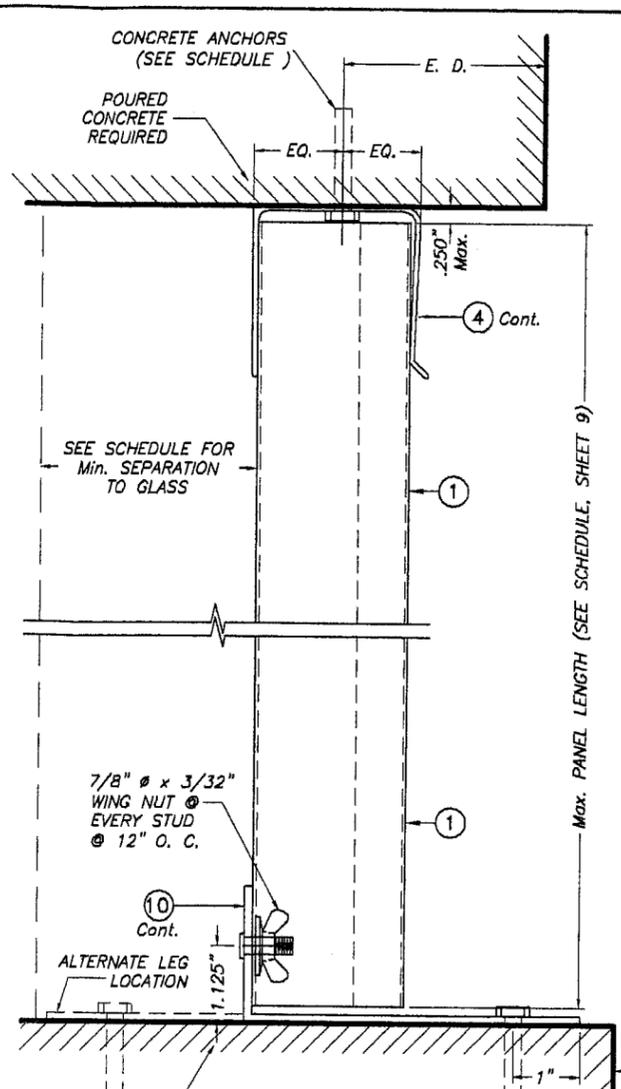
SECTION 15A
CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 15
SCALE: 3/8" = 1"



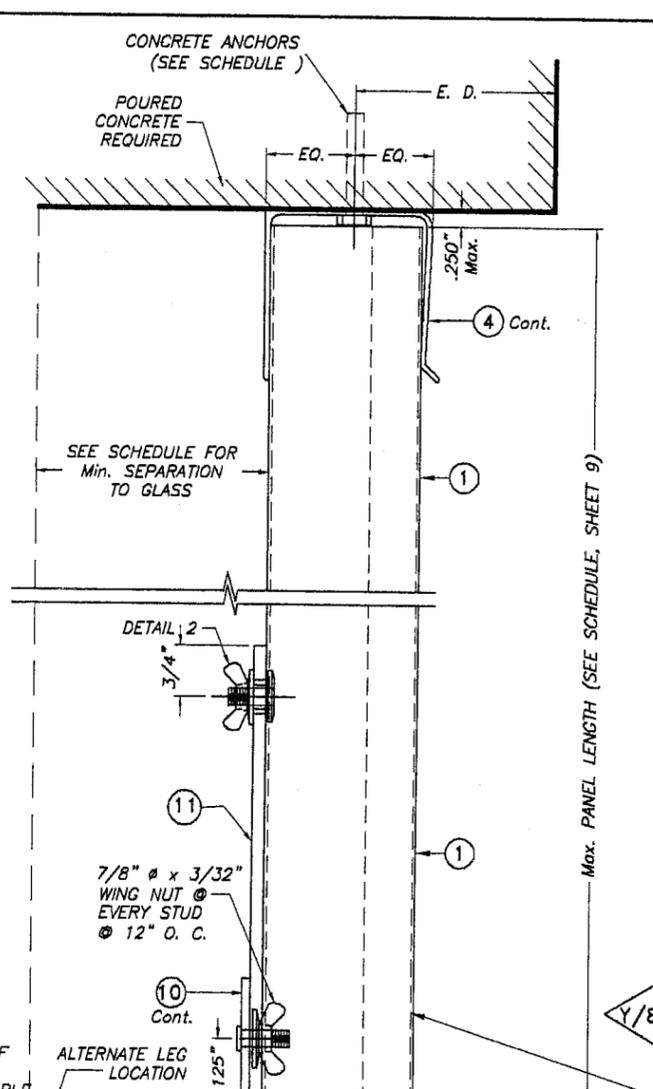
SECTION 15B
CEILING & FLOOR MOUNTING INSTALLATIONS

INTERIORLY REMOVABLE PANEL (1) W/
SIDEWALK BOLTS (SEE DETAIL 2)
CONNECTED TO (1) THRU 5/8" Ø
HOLES AT (1) @ 6" O.C. & FASTENED
AT REAR W/ 7/8" Ø x 3/32" WING NUT
@ EVERY SIDEWALK BOLT.



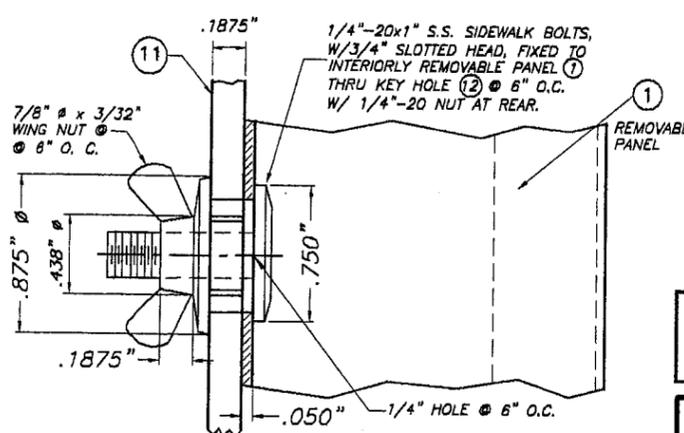
SECTION 16A
CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 16
SCALE: 3/8" = 1"



SECTION 16B
CEILING & FLOOR MOUNTING INSTALLATIONS

INTERIORLY REMOVABLE PANEL (1) W/
SIDEWALK BOLTS (SEE DETAIL 2)
CONNECTED TO (1) THRU 5/8" Ø
HOLES AT (1) @ 6" O.C. & FASTENED
AT REAR W/ 7/8" Ø x 3/32" WING NUT
@ EVERY SIDEWALK BOLT.



DETAIL 2 - INSTALLATION OF 1/4" x 1" SIDEWALK BOLTS @ REMOVABLE PANEL
SCALE: 1" = 1"

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

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

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

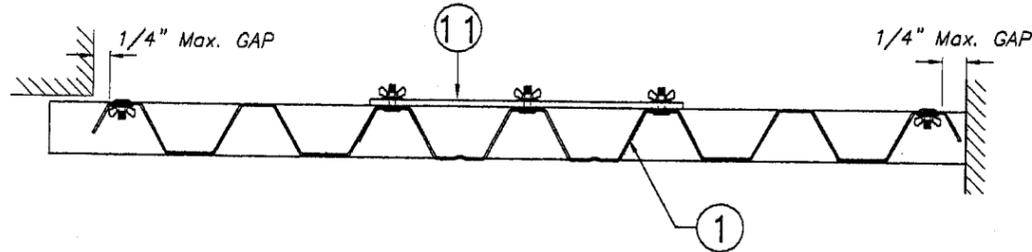
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Miami Dade Product Control
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F.B.C. (High Velocity Hurricane Zone)

SEP 15 2005

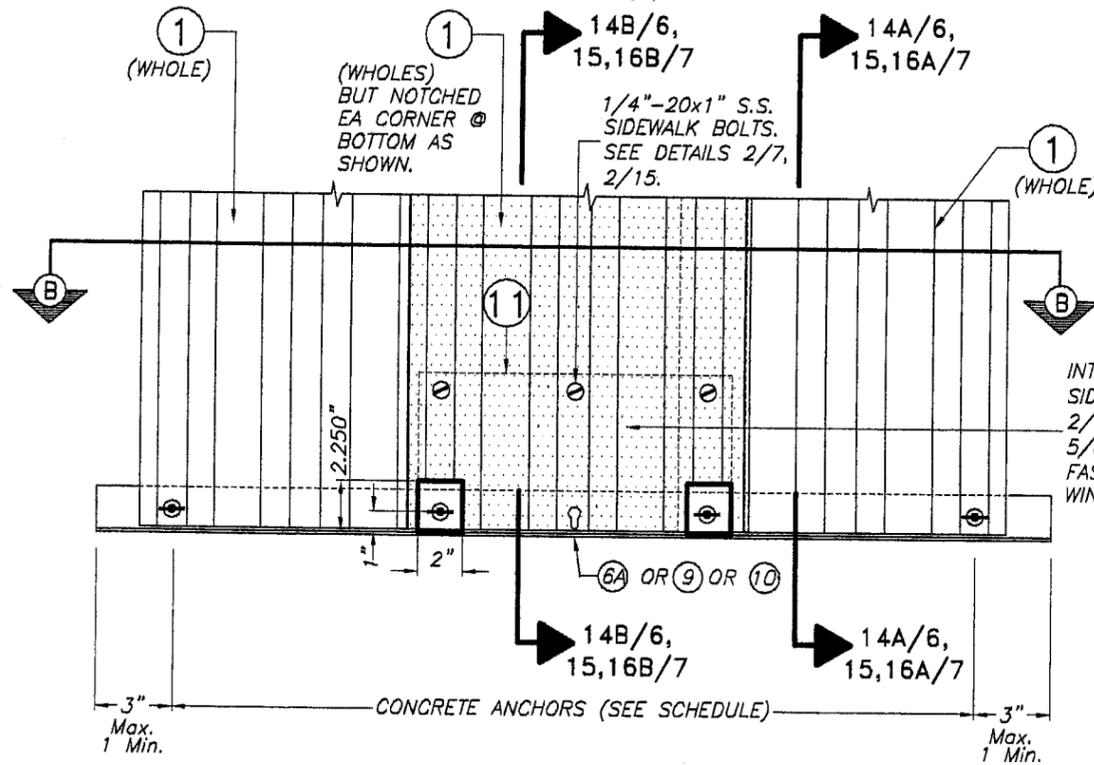
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT JR. P. E.
FLORIDA Lic. # 44167

0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No
1	OLD 03-141	4/28/05	3
2	-	-	4



SECTION B-B

SCALE : 1/8" = 1"



**INTERIORLY REMOVABLE STORM PANEL
PARTIAL ELEVATION Y**

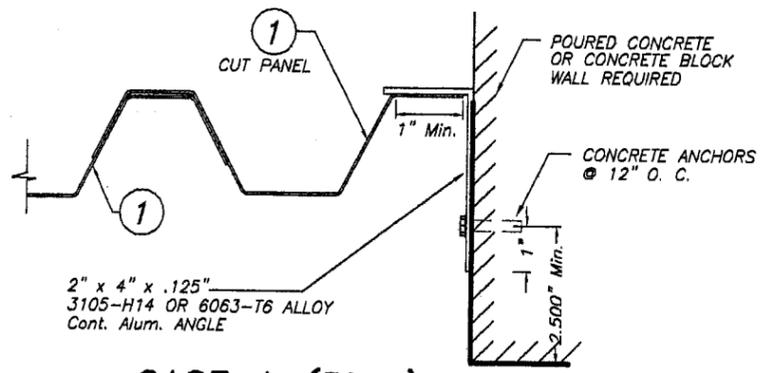
SCALE : 1/8" = 1"

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By *Heung A. Ma*
Miami Data Product Control
Division

F.B.C.(High Velocity Hurricane Zone)

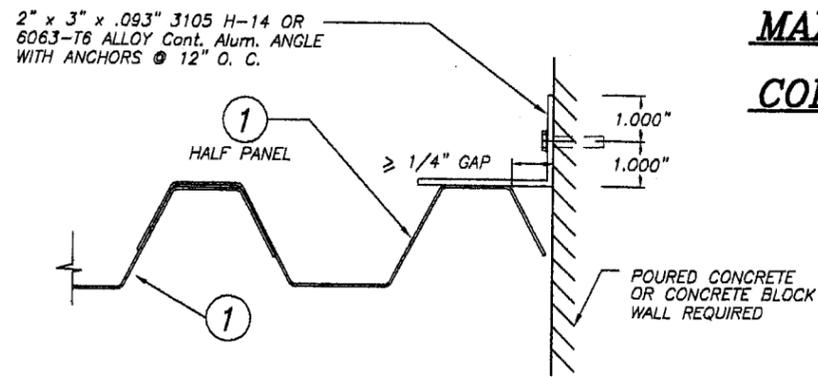
SEP 15 2005

 TILTECO Inc. <small>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</small>		0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
		EASTERN METAL SUPPLY, INC. <small>4268 WESTROADS DR. WEST PALM BEACH, FL 33407</small>		4/28/05 DATE	
		05-078 DRAWING No			
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
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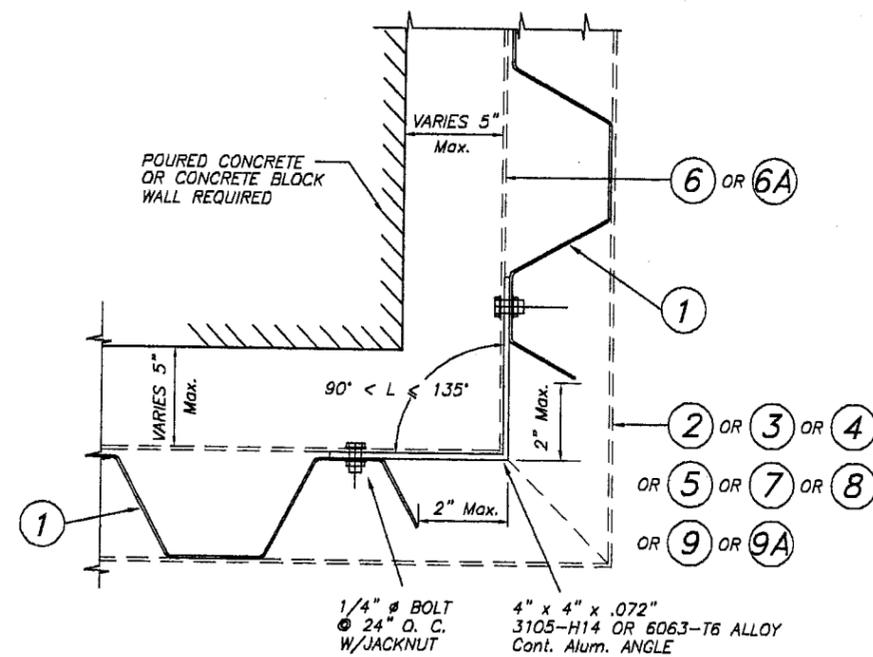
CASE A (Plan)

SCALE: 1/4" = 1"



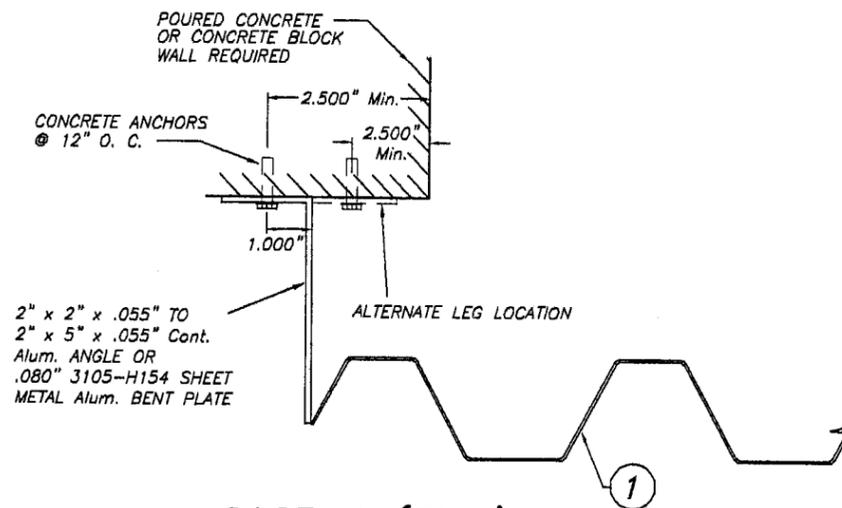
CASE D (Plan)

SCALE: 1/4" = 1"



CASE B (Plan)

SCALE: 1/4" = 1"



CASE C (Plan)

SCALE: 1/4" = 1"

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

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

END CLOSURES DETAILS

PRODUCT REVISED as complying with the Florida Building Code
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	EASTERN METAL SUPPLY, INC. 4268 WESTROADS DR. WEST PALM BEACH, FL 33407	4/28/05 DATE			
		05-078 DRAWING No			
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
2	-	-	4	-	-

SHEET 9 OF 15

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS IN CONCRETE AND CONCRETE BLOCK STRUCTURES

MAXIMUM DESIGN LOAD W (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" *																		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	REGULAR TAPCONS		CRETE-FLEX SS4		ZAMAC NAILIN		CALK-IN		SOLID-SET		CF TAP-GRIP		PANELMATES		PANELMATE PLUS		410 S.S. TAPCON			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+63.5, -63.5	8"	N/A	N/A	N/A	4"	N/A	8"	N/A	N/A	N/A	5"	N/A	3 1/2"	N/A	N/A	N/A	N/A	N/A	1 (TOP)	
	12"	6"	N/A	N/A	10"	7 1/2"	12"	9"	N/A	N/A	12"	7"	11"	11"	12"	7 1/2"	N/A	N/A	1 (BOTTOM)	
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	11"	N/A	N/A	N/A	N/A	N/A	2 (TOP)	
	12"	6"	N/A	N/A	10"	7 1/2"	12"	9"	N/A	N/A	12"	8"	11"	11"	12"	7 1/2"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	11"	N/A	N/A	N/A	N/A	N/A	3 (TOP)	
	12"	6"	N/A	N/A	10"	7 1/2"	12"	9"	N/A	N/A	12"	8"	11"	11"	12"	7 1/2"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	11"	N/A	N/A	N/A	N/A	N/A	4 (TOP)	
	12"	6"	N/A	N/A	10"	7 1/2"	12"	9"	N/A	N/A	12"	8"	11"	11"	12"	7 1/2"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	11"	N/A	N/A	N/A	N/A	N/A	5 (TOP)	
	12"	6"	N/A	N/A	10"	7 1/2"	12"	9"	N/A	N/A	12"	8"	11"	11"	12"	7 1/2"	N/A	N/A	5 (BOTTOM)	
	8 1/2"	N/A	12"	N/A	5 1/2"	N/A	7 1/2"	N/A	N/A	N/A	8 1/2"	N/A	11 1/2"	N/A	11"	N/A	9 1/2"	N/A	6 (TOP)	
	8 1/2"	N/A	12"	N/A	5 1/2"	N/A	7 1/2"	N/A	10 1/2"	N/A	8 1/2"	N/A	11 1/2"	N/A	11"	N/A	9 1/2"	N/A	6 (BOTTOM)	
	7 1/2"	N/A	11 1/2"	N/A	5"	N/A	7"	N/A	10 1/2"	N/A	7"	N/A	10 1/2"	N/A	10"	N/A	8 1/2"	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	N/A	N/A	12"	6"	12"	12"	12"	6"	6"	6"	12"	12"	N/A	N/A	8 (TOP/BOTTOM)	
	12"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	N/A	N/A	12"	N/A	12"	N/A	12"	N/A	9 (TOP)	
	12"	6"	12"	12"	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	11"	12"	7 1/2"	12"	7 1/2"	9 (BOTTOM)	
	N/A	N/A	N/A	N/A	N/A	N/A	12"	6"	12"	12"	N/A	N/A	12"	6"	12"	6"	N/A	N/A	10 (TOP)	
	12"	6"	12"	12"	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	10"	12"	7 1/2"	12"	7 1/2"	10 (BOTTOM)	
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12"	11"	N/A	N/A	N/A	N/A	13 (TOP)	
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12"	6"	N/A	N/A	N/A	N/A	13 (BOTTOM)	
	12"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	N/A	N/A	12"	N/A	12"	N/A	12"	N/A	14 (TOP)	
	12"	6"	12"	12"	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	11"	12"	7 1/2"	12"	7 1/2"	14A (BOTTOM)	
	12"	4 1/2"	12"	9"	N/A	N/A	12"	6 1/2"	N/A	N/A	N/A	N/A	12"	8"	12"	5 1/2"	12"	5 1/2"	14B (BOTTOM)	
	11 1/2"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	N/A	N/A	12"	N/A	12"	N/A	12"	N/A	12 (TOP)	
	8 1/2"	N/A	12"	N/A	N/A	N/A	7 1/2"	N/A	10 1/2"	N/A	N/A	N/A	11 1/2"	N/A	11"	N/A	9 1/2"	N/A	12 (BOTTOM)	
	11 1/2"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	N/A	N/A	12"	N/A	12"	N/A	12"	N/A	15 (TOP)	
	8 1/2"	N/A	12"	N/A	N/A	N/A	7 1/2"	N/A	N/A	N/A	N/A	N/A	11 1/2"	N/A	11"	N/A	9 1/2"	N/A	15A (BOTTOM)	
	N/A	N/A	3 1/2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3"	N/A	3"	N/A	3"	N/A	15B (BOTTOM)	
11 1/2"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	N/A	N/A	12"	N/A	12"	N/A	12"	N/A	16 (TOP)		
8 1/2"	N/A	12"	N/A	N/A	N/A	7 1/2"	N/A	N/A	N/A	N/A	N/A	11 1/2"	N/A	11"	N/A	9 1/2"	N/A	16A (BOTTOM)		
3"	N/A	4 1/2"	N/A	N/A	N/A	3"	N/A	N/A	N/A	N/A	N/A	4"	N/A	4"	N/A	4"	N/A	16B (BOTTOM)		
+85.0, -85.0	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	N/A	6"	N/A	6"	N/A	N/A	N/A	N/A	N/A	N/A	2 (TOP)	
	6"	5 1/2"	N/A	N/A	6"	6"	6"	6"	N/A	N/A	6"	6"	6"	6"	N/A	N/A	N/A	N/A	2 (BOTTOM)	
	6"	N/A	N/A	N/A	4 1/2"	N/A	6"	N/A	N/A	6"	N/A	5 1/2"	N/A	N/A	N/A	N/A	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	N/A	4 1/2"	N/A	6"	N/A	9 1/2"	N/A	6"	N/A	5 1/2"	N/A	N/A	N/A	N/A	N/A	6 (BOTTOM)	
	6"	N/A	N/A	N/A	4"	N/A	6"	N/A	9 1/2"	N/A	6"	N/A	4 1/2"	N/A	N/A	N/A	N/A	N/A	7 (TOP/BOTTOM)	
N/A	N/A	N/A	N/A	N/A	N/A	6"	6"	12"	12"	6"	6"	6"	6"	N/A	N/A	N/A	N/A	N/A	8 (TOP/BOTTOM)	

E. D. = EDGE DISTANCE

ANCHORS LEGEND

ANCHOR TYPE	Min. ANCHOR SPACING
REGULAR TAPCON, 410 S.S. TAPCON, CRETE-FLEX SS4, ZAMAC NAILING, CF TAP-GRIP, PANELMATE OR PANELMATE PLUS.	3.0"
CALK-IN	2.5"
SOLID-SET	3.5"

+63.5, -63.5: 9'-0" OR LESS

+85.0, -85.0: 9'-0" TO 10'-0"

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 05-0926-03
 Expiration Date 08/07/2008
 By: *Helmut A. Miller*
 District Product Control Division

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

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

SEP 15 2005

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

F.B.C.(High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL

EASTERN METAL SUPPLY, INC.
 4268 WESTROADS DR.
 WEST PALM BEACH, FL 33407

L.G. DRAWN BY:
 4/28/05 DATE
 05-078 DRAWING No
 SHEET 10 OF 15

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD Q3-141	4/28/05	3	-	-
2	-	-	4	-	-

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

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

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 CALK-IN ANCHORS IS 2 1/2")
FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR SHALL NOT BE LESS THAN MINIMUM SPACING INDICATED FOR EACH ANCHOR TYPE AT ANCHORS LEGEND.

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

ANCHORS LEGEND

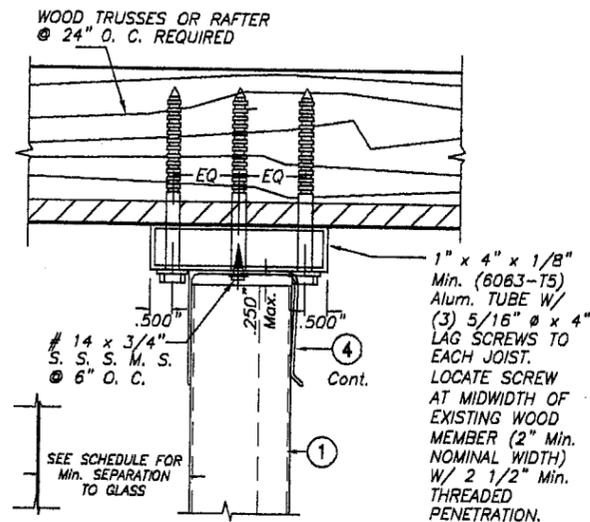
ANCHOR TYPE	Min. ANCHOR SPACING
REGULAR TAPCON, 410 S.S. TAPCON, CRETE-FLEX SS4, ZAMAC NAILING, CF TAP-GRIP, PANELMATE OR PANELMATE PLUS.	3.0"
CALK-IN	2.5"
SOLID-SET	3.5"

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 05-0926-03
 Expiration Date 08/07/2008
 By: *Heather A. Miller*
 Internal Dept. Product Control Division

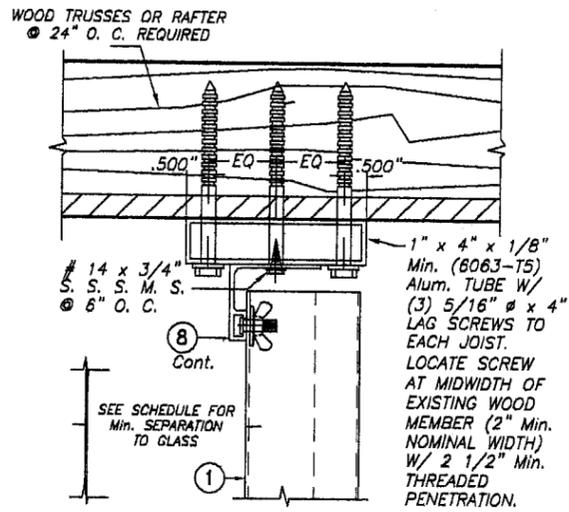
F.B.C. (High Velocity Hurricane Zone)

Walter A. Tillit Jr.
 SEP 15 2005

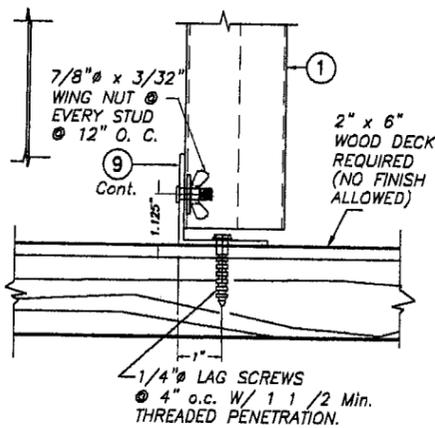
 TILTECO INC. <small>TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr. P. E. FLORIDA Lic. # 44167</small>	0.050" BERTHA ALUMINUM STORM PANEL	L.G. DRAWN BY:
	EASTERN METAL SUPPLY, INC. <small>4268 WESTROADS DR. WEST PALM BEACH, FL 33407</small>	4/28/05 DATE
	REV. NO. DESCRIPTION DATE REV. NO. DESCRIPTION DATE	05-078 DRAWING No
	1 OLD 03-141 4/28/05 3 - -	SHEET 11 OF 15
	2 - - - 4 - -	



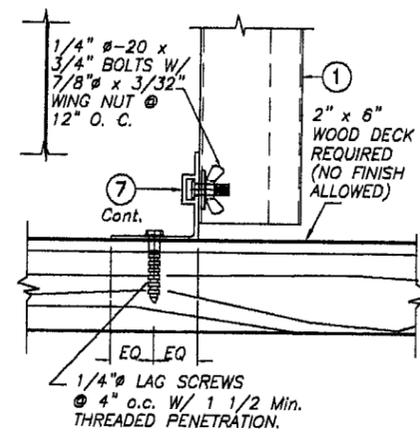
ALTERNATIVE 9A



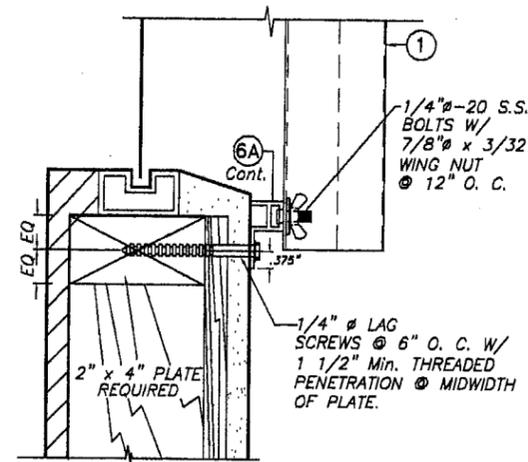
ALTERNATIVE 10



ALTERNATIVE 9

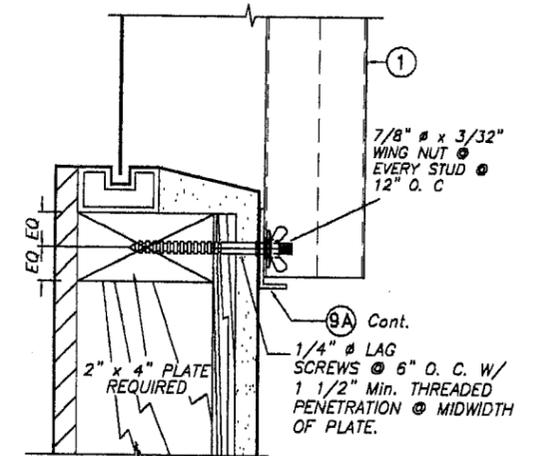


ALTERNATIVE 11



ALTERNATIVE 12 *

* VALID FOR Max. +63.5, -63.5 psf.



ALTERNATIVE 14

CEILING & FLOOR MOUNTING INSTALLATIONS

SCALE : 1/4" = 1"

WALL MOUNTING INSTALLATION

SCALE : 1/4" = 1"

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

NOTES:

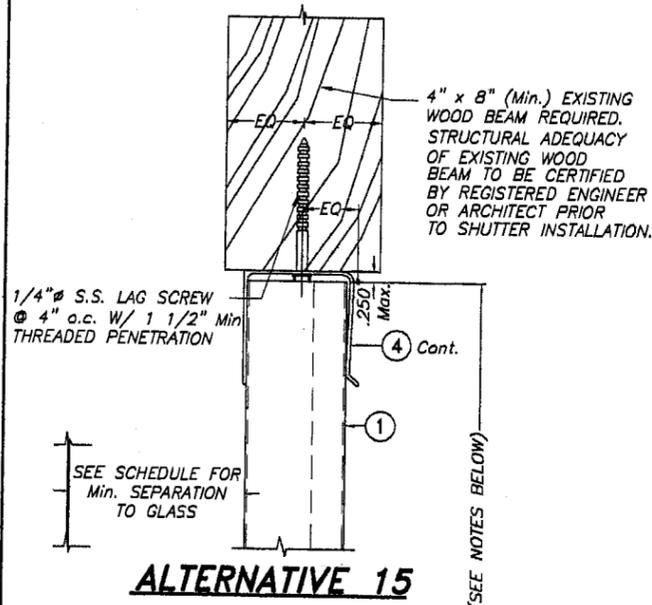
1. INSTALLATIONS ARE ONLY VALID FOR DESIGN WIND LOADS UP TO +65.0, -72.0 psf AND PANEL'S LENGTHS UP TO 9'-0", EXCEPT AS NOTED.
2. NEW 2" x 6" P. T. TO BE SOUTHERN PINE No. 2, SURFACED DRY WITH 19% M. M. C. W/ SPECIFIC DENSITY OF 0.55.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 05-0926.03
 Expiration Date 08/07/2008
 By *Helmut A. Till*
 Miami Dade Board Control
 Division

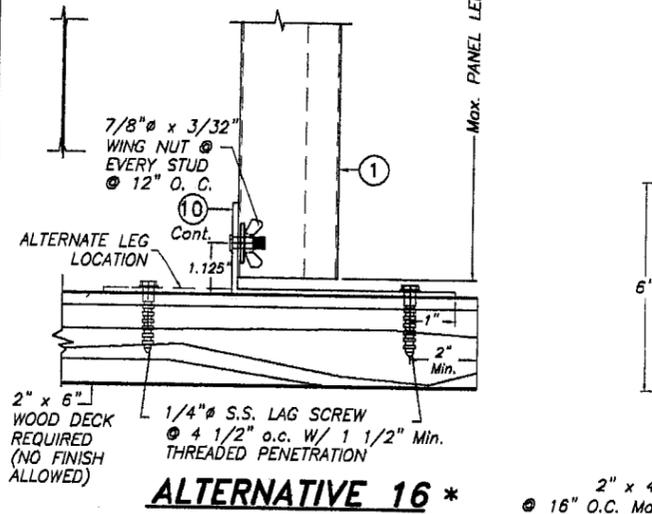
F.B.C.(High Velocity Hurricane Zone)

SEP 15 2005

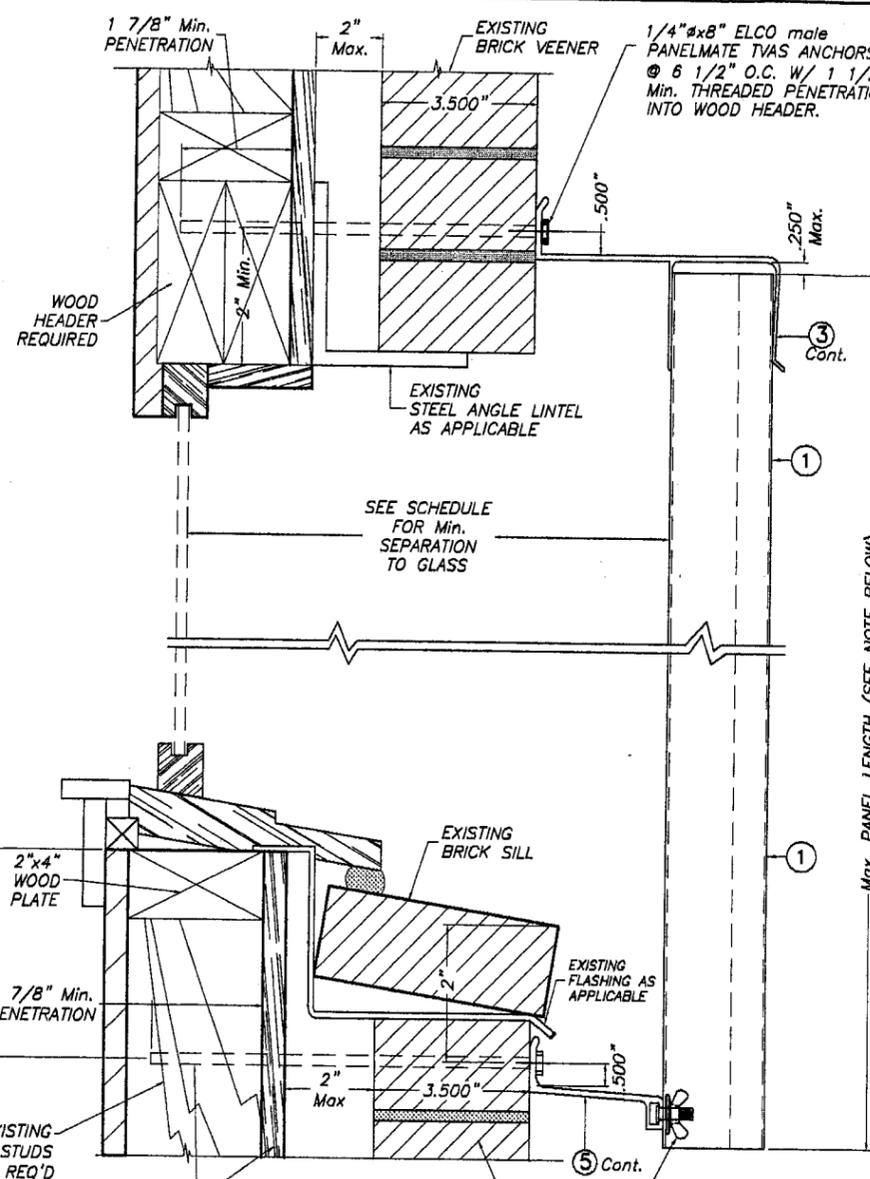
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305)871-1530 Fax : (305)871-1531 EB-0006719 WALTER A. TILLIT Jr. P. E. FLORIDA Lic. # 44167		0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
		EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
		4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
2	-	-	4	-	-



ALTERNATIVE 15



ALTERNATIVE 16 *



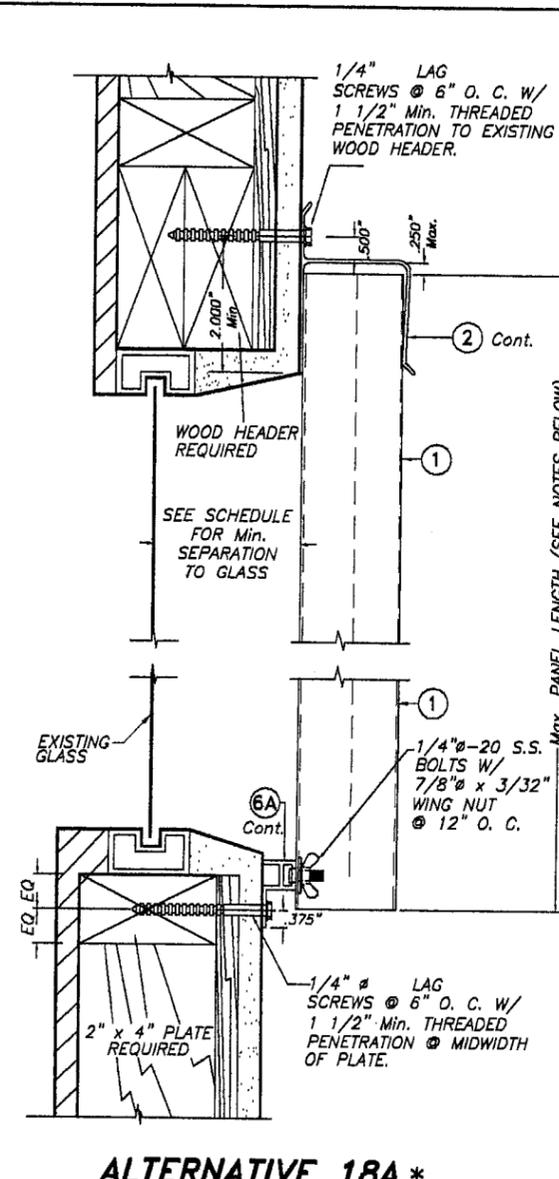
ALTERNATIVE 17 *

* VALID FOR Max. +63.5, -63.5 psf.

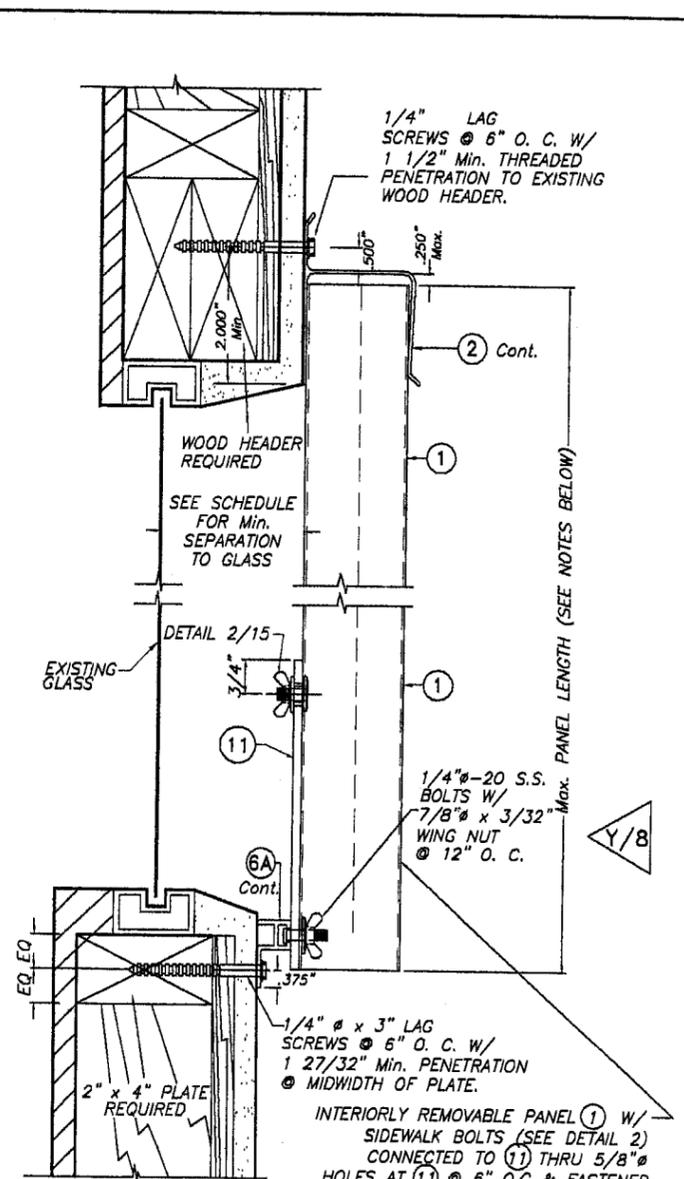
BUILD-OUT INSTALLATION

SCALE: 1/4" = 1"

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS



ALTERNATIVE 18A *



ALTERNATIVE 18B *

WALL MOUNTING INSTALLATIONS

SECTIONS 18

SCALE: 1/4" = 1" * VALID FOR Max. +63.5, -63.5 psf.

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

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

- NOTES:**
- INSTALLATIONS ARE ONLY VALID FOR DESIGN WIND LOADS UP TO +65.0, -65.0 psf AND PANEL'S LENGTHS UP TO 9'-0", EXCEPT AS NOTED.
 - NEW 2" x 6" P. T. TO BE SOUTHERN PINE No. 2, SURFACED DRY WITH 19% M. M. C. W/ SPECIFIC DENSITY OF 0.55.
 - FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

PRODUCT REVISED
to comply with the Florida
Building Code
Acceptance No 05-0926.03
Expiration Date 08/07/2008
By *Walter A. Tillit Jr.*
Regional Product Control
Division

SEP 15 2005

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

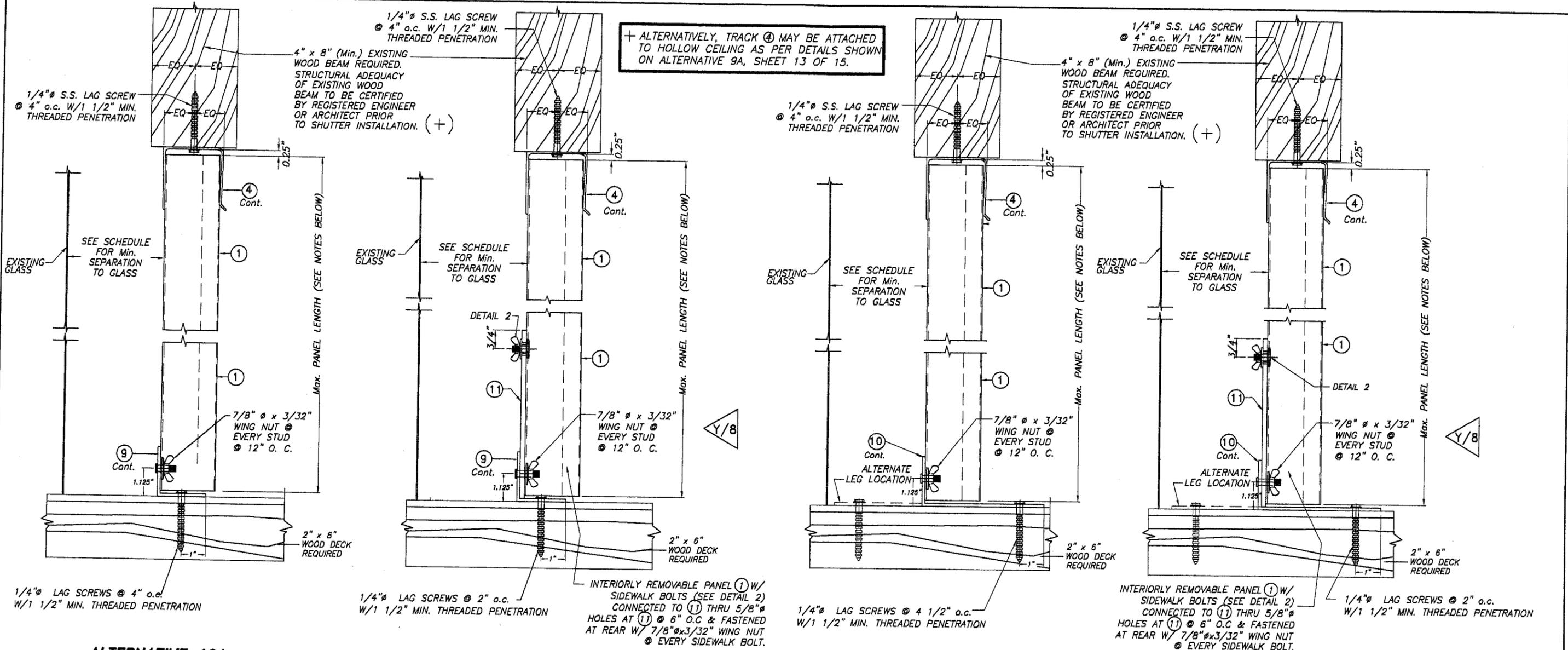
F.B.C.(High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL

EASTERN METAL SUPPLY, INC.
4268 WESTROADS DR.
WEST PALM BEACH, FL 33407

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-141	4/28/05	3	-	-
2	-	-	4	-	-

L.G. DRAWN BY:
4/28/05 DATE
05-078 DRAWING No
SHEET 14 OF 15



ALTERNATIVE 19A

CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 19

SCALE: 1/4" = 1"

ALTERNATIVE 19B

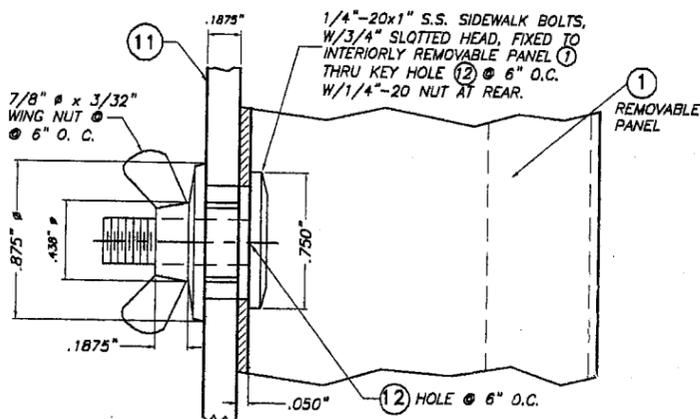
ALTERNATIVE 20A

CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 20

SCALE: 1/4" = 1"

ALTERNATIVE 20B



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

SCALE: 1" = 1"

NOTE FOR COMBINATION OF SECTIONS:

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

NOTES:

- INSTALLATIONS ARE ONLY VALID FOR DESIGN WIND LOADS UP TO +65.0, -65.0 psf AND PANEL'S LENGTHS UP TO 9'-0".
- NEW 2" x 6" P. T. TO BE SOUTHERN PINE No. 2, SURFACED DRY WITH 19% M. M. C. W/ SPECIFIC DENSITY OF 0.55.
- FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 05-0926.03
 Expiration Date 08/07/2008
 By: *Heather A. Miller*
 Miami Dade Product Control Division

F.B.C. (High Velocity Hurricane Zone)

<p>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</p>		0.050" BERTHA ALUMINUM STORM PANEL		L.G. DRAWN BY:	
		EASTERN METAL SUPPLY, INC.		4/28/05 DATE	
4268 WESTROADS DR. WEST PALM BEACH, FL 33407		05-078		DRAWING No	
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SEP 15 2005