



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)

Hurricane Buster Brothers, Inc.
8752 S.W. 129th Street
Miami, Florida 33176

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: ASSA / Residential Bertha Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. **05-127**, titled "ASSA/ Residential Bertha Accordion Shutter", sheets 1 through 10 of 10, and sheet 1A of 10, prepared by Tilteco, Inc., dated 06/01/2005, last revision #1 dated June 01, 2005, signed and sealed by Walter A. Tillit Jr., P.E., bearing the 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 unit 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 # 03-0130.10** and consists of this page 1, evidence submitted page(s) as well as approval document mentioned above.

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

Helmy A. Makar
 10/06/2005

NOA No 05-0817.02
Expiration Date: 02/11/2008
Approval Date: 10/06/2005



Hurricane Buster Brothers, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #99-1227.12

A. DRAWINGS

1. *Drawing No. 99-352, prepared by Tilteco Inc., titled "ASSA / Residential Bertha Accordion Shutter", dated November 16, 1999, sheets 1 through 10 of 10, signed and sealed by Walter A. Tillit, Jr., P.E. on December 22, 1999.*

B. TESTS

1. *See Association's generic approval under 98-0103.*

C. CALCULATIONS

1. *See Association's generic approval under 98-0103.*

D. MATERIAL CERTIFICATIONS

1. *See Association's generic approval under 98-0103.*

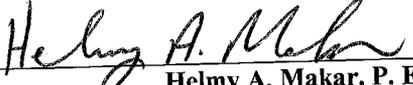
E. STATEMENTS

1. *Release letter issued by the American Shutter Systems Association, Inc., dated November 16, 1999, certifying this product to meet the criteria of product tested and approved, and allowing Hurricane Buster Brothers, Inc. to use the test results approved under Miami-Dade County Approval No. 98-0103, signed by Mr. John J. Cooper.*
2. *Acknowledgment letter by Hurricane Buster Brothers, Inc. dated December 21, 1999, signed by Mr. Pedro L. Gonzalez.*
3. *Letter by Tilteco Inc., dated December 22, 1999, certifying that the drawing (No. 99-352) prepared for Hurricane Buster Brothers, Inc. signed and sealed by Mr. Walter A. Tillit, Jr., P.E., is engineering wise identical to ASSA's generic drawing (No. 98-209).*
4. *Acceptance Letter issued to Mr. Pedro L. Gonzalez on February 3, 2000 and returned signed by Mr. Pedro L. Gonzalez on February 4, 2000, who confirmed to issue the proposed Notice of Acceptance as presented and reviewed.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #03-0130.10

A. DRAWINGS

1. *Drawing No. 03-020, titled "ASSA / Residential Bertha Accordion Shutter", sheets 1 through 10 of 10, prepared by Tilteco, Inc., dated January 23, 2003, last revision #1 dated January 23, 2003 signed and sealed Walter A. Tillit, Jr., P.E.*



Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0817.02
Expiration Date: 02/11/2008
Approval Date: 10/06/2005

Hurricane Buster Brothers, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS

1. *None. See Association's generic approval # 03-0115.*

C. CALCULATIONS

1. *None. See Association's generic approval # 03-0115.*

D. MATERIAL CERTIFICATIONS

1. *None. See Association's generic approval # 03-0115.*

E. STATEMENTS

1. *Letter issued by Mr. Walter A. Tillit, Jr., P.E., dated January 23, 2003, indicating that the only change is update General Note numbers 1 & 12 to reference the Florida Building Code and ASCE 7-98.*

3. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 05-127, titled "ASSA/ Residential Bertha Accordion Shutter", sheets 1 through 10 of 10, and sheet 1A of 10, prepared by Tilteco, Inc., dated 06/01/2005, last revision #1 dated June 01, 2005, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *See Association's generic approval under 05-0167.*

C. CALCULATIONS

1. *See Association's generic approval under 05-0167.*

D. QUALITY ASSURANCE

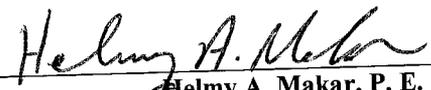
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *See Association's generic approval under 05-0167.*

F. STATEMENTS

1. *Letter by Tilteco Inc., dated June 13, 2005, certifying that the drawing (No. 05-127) prepared for Hurricane Buster Brothers, Inc., signed and sealed by Mr. Walter A. Tillit, Jr., P.E., is engineering wise identical to ASSA's generic drawing (No. 05-124).*



Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0817.02
Expiration Date: 02/11/2008
Approval Date: 10/06/2005

GENERAL NOTES:

1. ACCORDION SHUTTER SHOWN ON THIS PRODUCT APPROVAL DOCUMENT HAS BEEN VERIFIED FOR CODE 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. 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. ACCORDION SHUTTER'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 REPORT # 0902.01-98 AND 0701.01-05, PER TAS-201, TAS-202, AND TAS-203 PROTOCOLS.

2. STAINLESS STEEL SHEET METAL SCREWS USED AT LOUVER PIN SHALL BE # 10 x 3", 410-HT MINIMUM SERIES WITH 135.0 ksi YIELD POINT & 180 ksi TENSILE STRENGTH. SCREWS SHALL BE COATED WITH XYLAN 5000 SERIES FLUOROPOLYMER COATINGS AS MANUFACTURED BY WHITFORD Co, BOX 507 WEST CHESTER PA. 19381.

3. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALLOY.

4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018.

5. ALL ALUMINUM POP RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.

6. BOLTS TO BE 2024-T4 ALUMINUM ALLOY GALVANIZED OR STAINLESS STEEL WITH 35 ksi MINIMUM YIELD STRENGTH.

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

(A) TO EXISTING POURED CONCRETE:

- 1/4"Ø TAPCON ANCHORS, AS MANUFACTURED BY I.T.W. BUILDDEX.
- 1/4"Ø ZAMAC NAILIN ANCHORS, AS MANUFACTURED BY POWERS FASTENERS, INC.
- 1/4"Ø x 7/8" CALK-IN AS MANUFACTURED BY POWERS FASTENERS.

NOTES:

- A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS AND ZAMAC NAILIN INTO POURED CONCRETE IS 1 3/4".
- A.2) 1/4"Ø x 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST.
- A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1 & A.2 ABOVE.

(B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4"Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDDEX.
- 1/4"Ø ZAMAC NAILIN ANCHORS AS MANUFACTURED POWERS FASTENERS, INC.
- 1/4"Ø x 7/8" CALK-IN AS MANUFACTURED BY POWERS FASTENERS, INC.

NOTES:

- B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS, AND ZAMAC NAILIN ANCHORS INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".
- B.2) 1/4"Ø x 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST.
- B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE 1 1/4" MINIMUM FOR ANCHORS MENTIONED IN B.1.), & 7/8" FOR ANCHORS MENTIONED IN B.2.).

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

8. THIS RESIDENTIAL ACCORDION SHUTTER SYSTEM IS PATENT PENDING. COMPONENTS OF THIS APPROVAL ARE COVERED IN WHOLE OR PART BY U.S. PATENT ISSUED TO EASTERN METAL SUPPLY, INC.

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. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.

10. EACH UNIT MUST BEAR A PERMANENT LABEL IN A VISIBLE PLACE WITH A WARNING NOTE INSTRUCTING THE TENANT OR HOME OWNER THAT ALL LOCKING PINS, AS WELL AS BOTH LOCKERS MUST BE PROPERLY INSTALLED & BOLTED DURING PERIODS OF HURRICANE WARNING.

11. SHUTTER'S MANUFACTURER LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF THE FEMALE LOCK SLAT (COMPONENT) (1) OR (2)

ONE LABEL SHALL BE PLACED FOR EVERY OPENING, LABEL SHALL READ AS FOLLOWS:

HURRICANE BUSTER BROTHERS, INC.
MIAMI, FLORIDA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

12. (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 PRODUCT APPROVAL 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 DELEGATED ENGINEER TO THE P.A.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

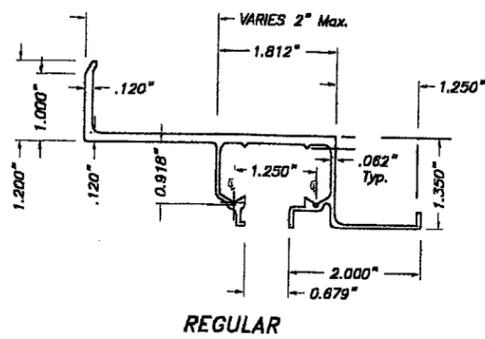
(e) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER THAT PREPARED IT.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 05-0817.02
Expiration Date 02/11/2008
By *Helmy A. Nasser*
Miami Dade Product Control
Division

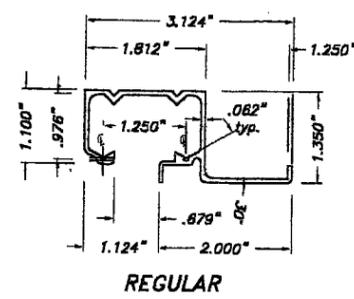
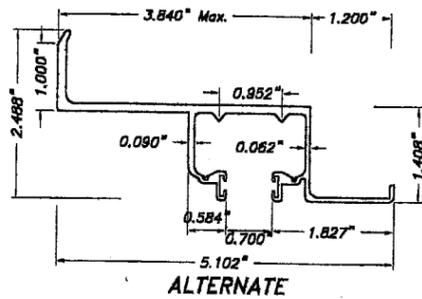
[Signature]
AUG 05 2005

 TILLIT TESTING & ENGINEERING COMPANY 6325 N.W. 39th St., Ste. 302, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1830 Fax: (305)871-1831 EB-0008719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		DRAWN BY M.C.V.	
		HURRICANE BUSTER BROTHERS, INC. (ASSA # 155) 8752 S.W. 129th ST. MIAMI, FL 33178 PH: (305)258-8883, FAX: (305)258-8086		08/01/05 DATE	
		05-127		DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD DWG 03-020	8/01/05	3	-	-
2	-	-	4	-	-
SHEET 1 OF 10					

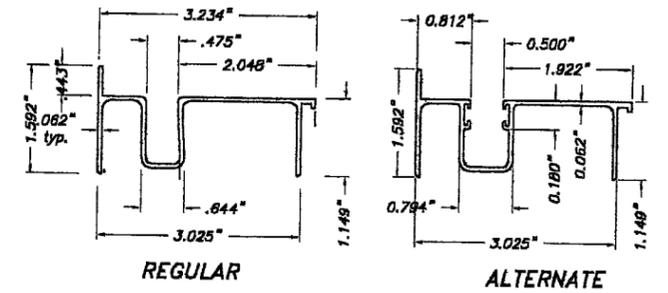
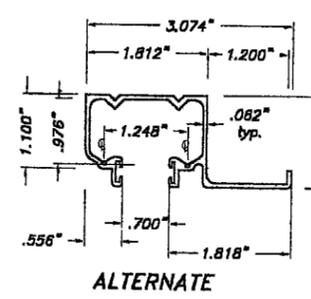
F.B.C. (High Velocity Hurricane Zone)



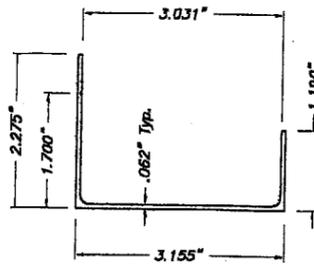
(A1) WALL HEADERS
(A1) WALL HEADERS (INVERTED USE)
 SCALE: 3/8" = 1"



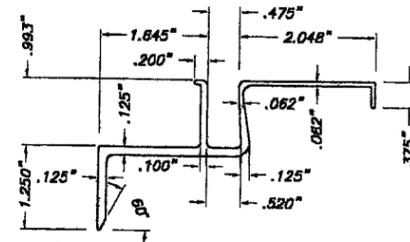
(B) CEILING HEADER
 SCALE: 3/8" = 1"



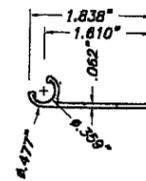
(C) SILL
 SCALE: 3/8" = 1"



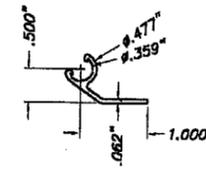
(D) SILL ADAPTER
 SCALE: 3/8" = 1"



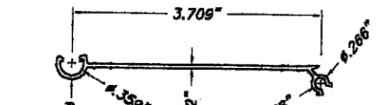
(E) BOTTOM BUILT-OUT
 SCALE: 3/8" = 1"



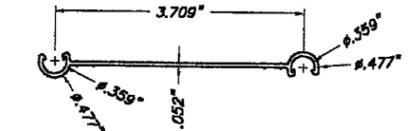
(F) FEMALE END SLAT
 SCALE: 3/8" = 1"



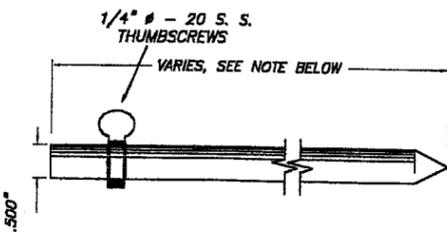
(F1) STARTER STRIP
 SCALE: 3/8" = 1"



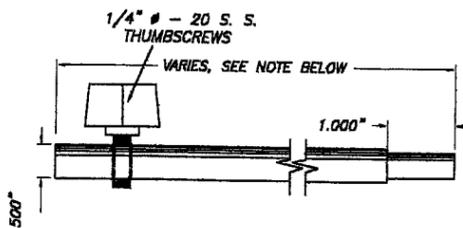
(G) RESIDENTIAL BLADE
 SCALE: 3/8" = 1"
 COVERED UNDER US PATENT # 5458179



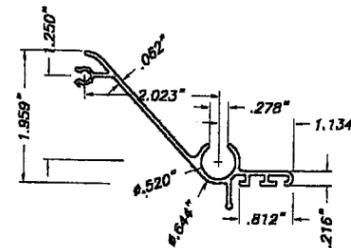
(G1) FEMALE RESIDENTIAL BLADE
 SCALE: 3/8" = 1"



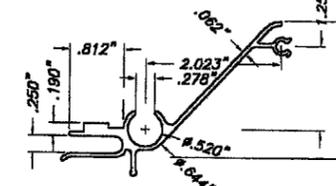
(H) LOCKING PIN
 SCALE: 3/8" = 1"



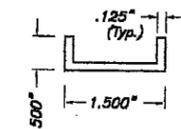
(H1) ALTERNATE LOCKING PIN
 SCALE: 3/8" = 1"



(I) MALE LOCK SLAT
 SCALE: 3/8" = 1"



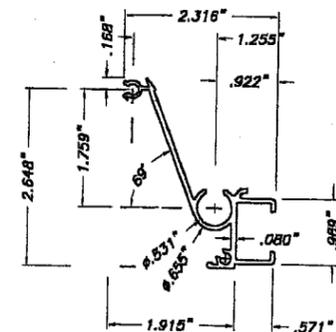
(J) FEMALE LOCK SLAT
 SCALE: 3/8" = 1"



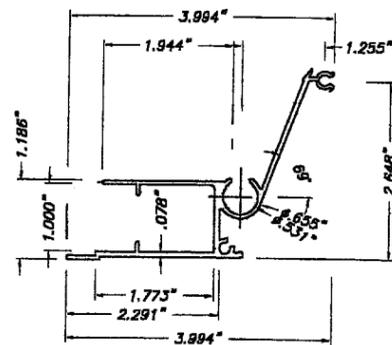
(K) LOCK CLIP
 4" LONG
 SCALE: 3/8" = 1"

6" Min. FOR UP TO 9'-0" SHUTTER BLADE LENGTHS,
 12" Min. FOR SHUTTER BLADE LENGTHS GREATER THAN
 9'-0" UP TO 12'-0".

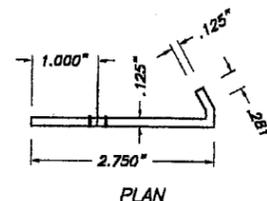
COMPONENTS



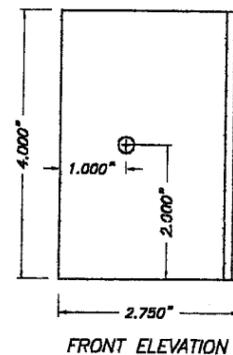
(L) MALE LOCK SLAT
 SCALE: 3/8" = 1"



(M) FEMALE LOCK SLAT
 SCALE: 3/8" = 1"

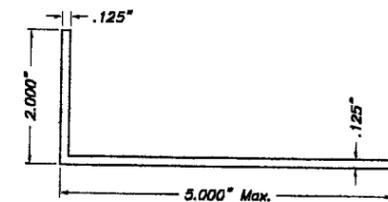


(N) LOCKER
 SCALE: 3/8" = 1"



FRONT ELEVATION

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 05-0817.02
 Expiration Date 02/11/2008
 By *Helmut A. Tillit*
 Miami Dade Product Control
 Division

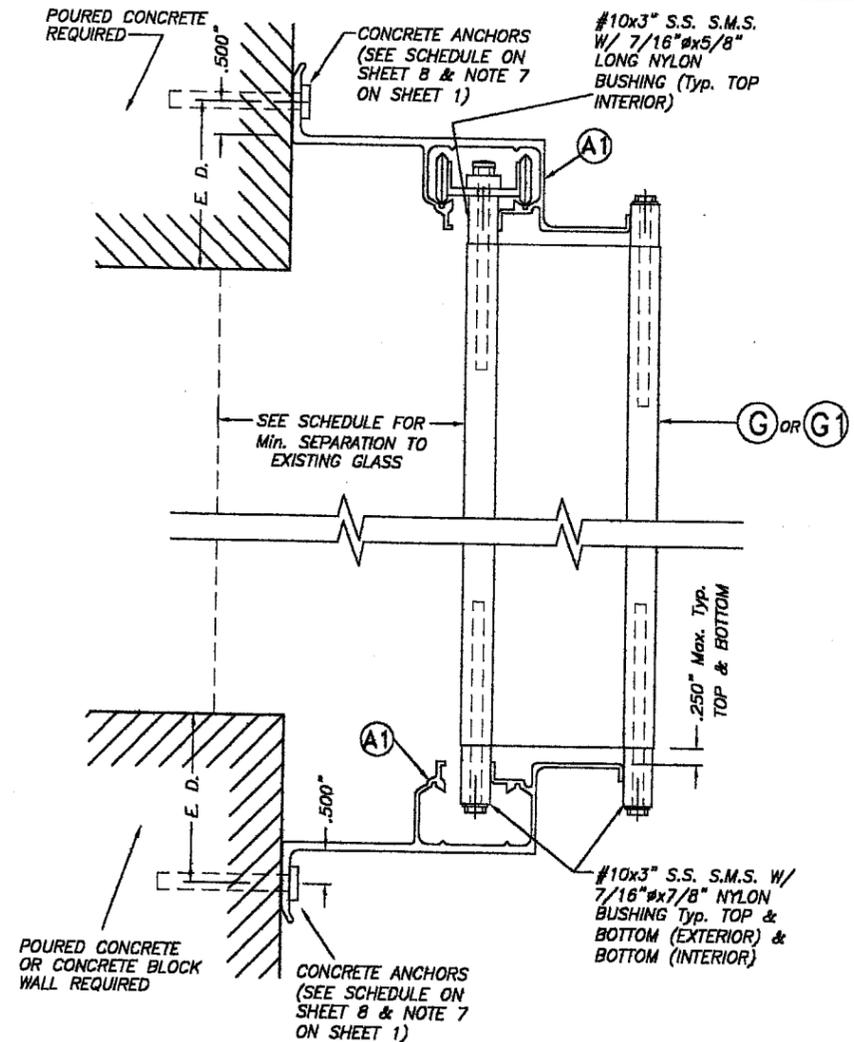


(O) ALUMINUM ANGLE
 SCALE: 3/8" = 1"

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

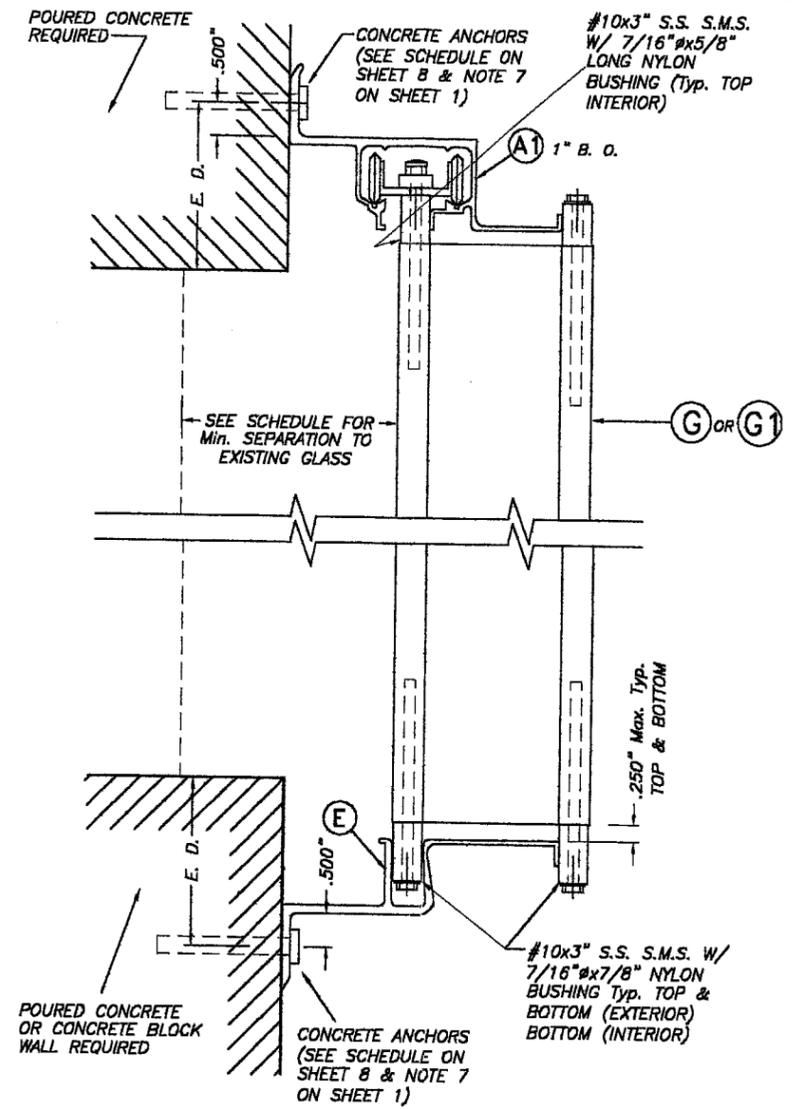
		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		DRAWN BY M.C.V.	
		HURRICANE BUSTER BROTHERS, INC. (ASSA # 155) 8752 S.W. 129th ST. MIAMI, FL 33176 PH: (305)256-8883, FAX: (305)256-8086		06/01/05 DATE	
TILLIT TESTING & ENGINEERING COMPANY 6359 N.W. 38th ST., Ste. 305, VIRGINIA GARDENS, FLORIDA 33168 Phone: (305)871-1830, Fax: (305)871-1831 EB-0008719 WALTER A. TILLIT JR., P. E. FLORIDA Lic. # 44167		REV. No. DESCRIPTION DATE REV. No. DESCRIPTION DATE 1 OLD DWG 03-020 8/01/05 2 - - - 2 - - - 4 - - -		05-127 DRAWING No SHEET 1A OF 10	

AUG 05 2005



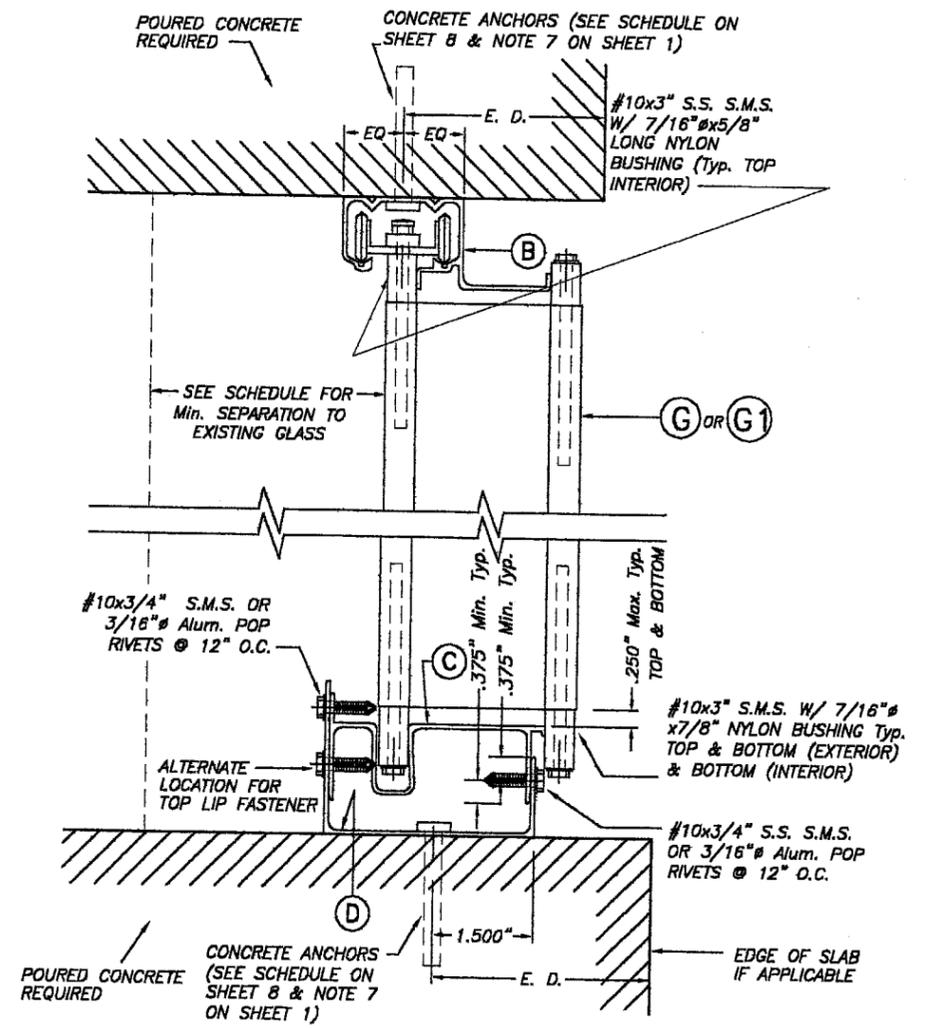
WALL MOUNTING INSTALLATION

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



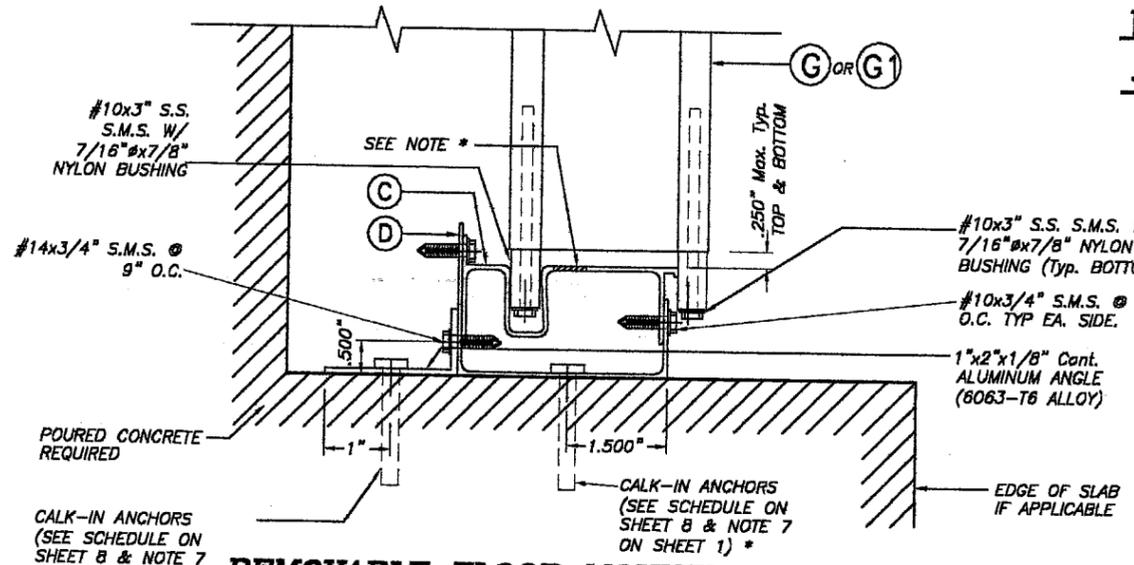
WALL MOUNTING INSTALLATION

- SECTION A1 SCALE: 3/8" = 1"



CEILING & FLOOR MOUNT. INSTALLAT.

- SECTION B SCALE: 3/8" = 1"



REMOVABLE FLOOR MOUNTING INSTALLATION

- SECTION B1 SCALE: 3/8" = 1"

* ALTERNATIVELY TO 1" x 2" Alum. ANGLE W/ ANCHOR, DRILL HOLE AT © TO INSTALL CALK-IN AT Ⓣ. COVER HOLE WITH NYLON CAPS.

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEET 8 OF 10)

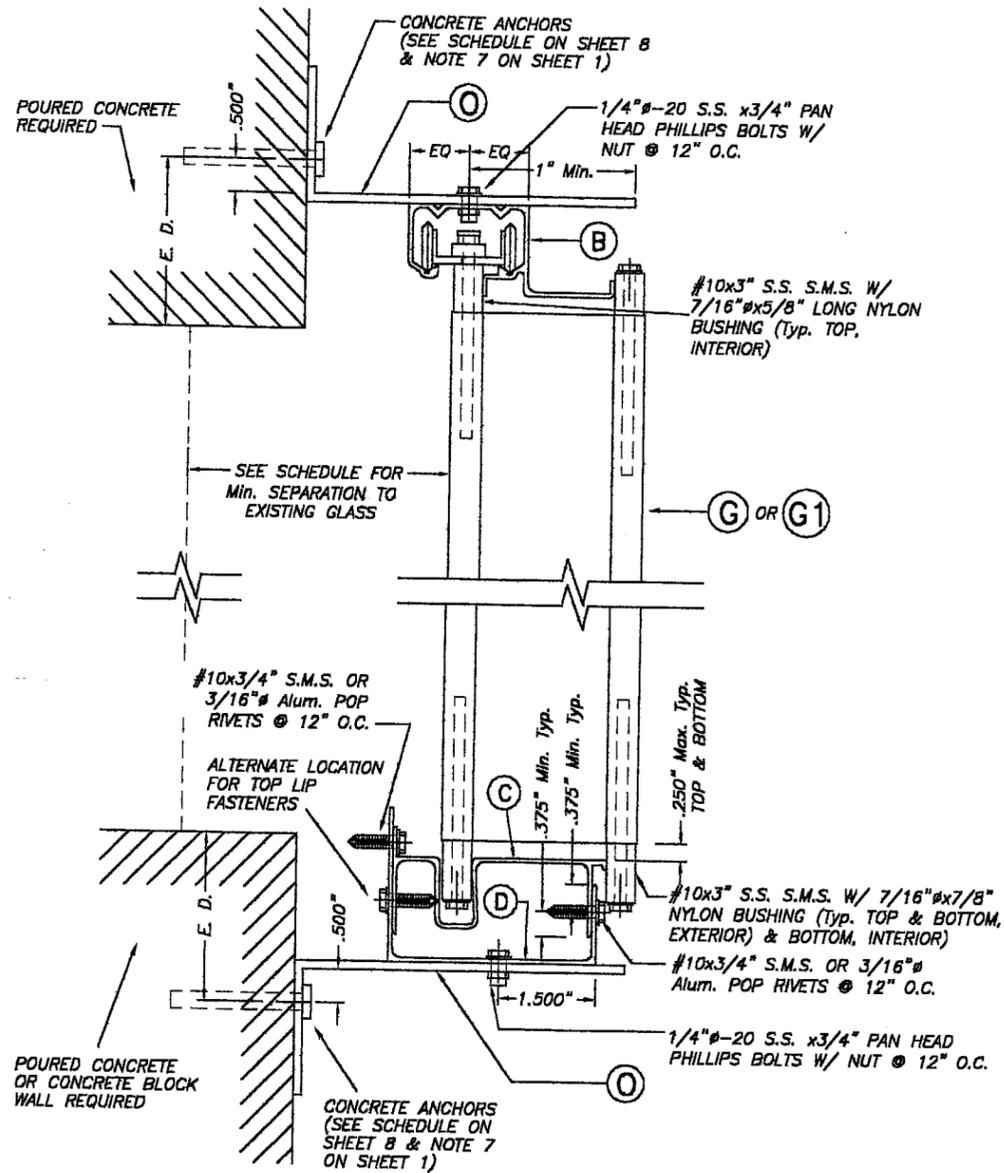
NOTE FOR COMBINATION OF SECTIONS :
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

PRODUCT REVISED as complying with the Florida Building Code
Acceptance No 05-0817.02
Expiration Date 02/11/2008
By *Walter A. Tillit Jr.*
Miami Dade Product Control Division

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

 TILTECO Inc. TILLIT TESTING & ENGINEERING COMPANY 4305 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33186 Phone : (305)871-1830 . Fax : (305)871-1831 EB-0008719 WALTER A. TILLIT JR., P. E. FLORIDA Lic. # 44167	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER HURRICANE BUSTER BROTHERS, INC. (ASSA # 155) 8752 S.W. 129th ST. MIAMI, FL 33176 PH: (305)256-8883, FAX: (305)256-6066	DRAWN BY M.C.V. 06/01/05 DATE 05-127 DRAWING No SHEET 2 OF 10																		
	<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD DWG 03-020</td> <td>8/01/05</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD DWG 03-020	8/01/05	3	-	-	2	-	-	4	-	-	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE															
1	OLD DWG 03-020	8/01/05	3	-	-															
2	-	-	4	-	-															

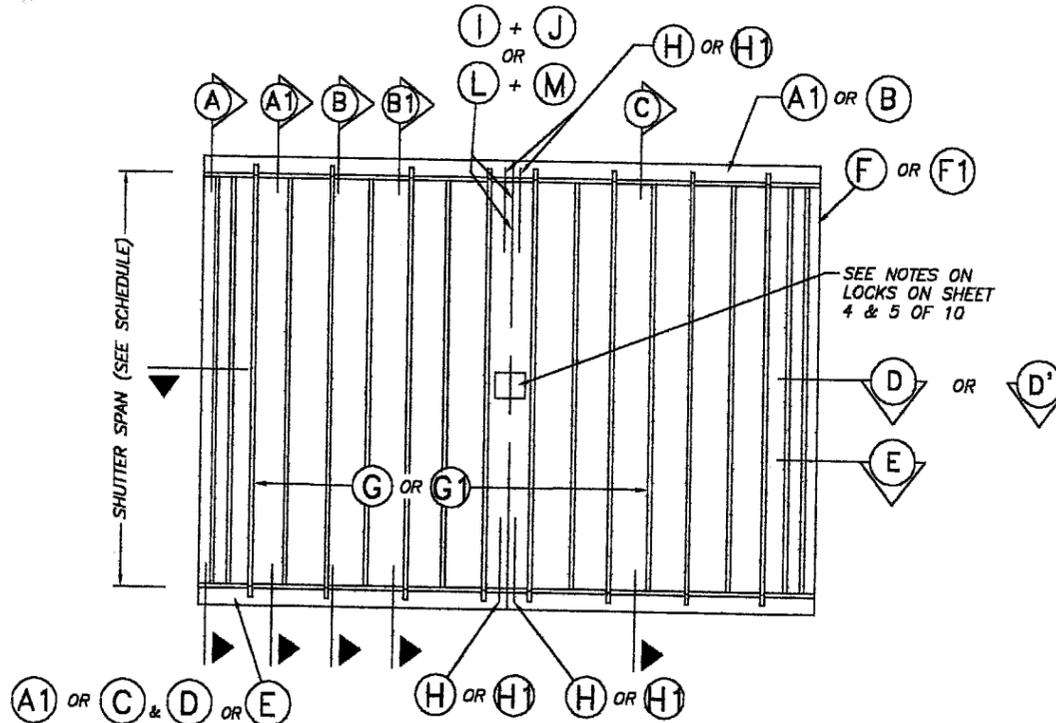
Walter A. Tillit Jr.
AUG 05 2005



WALL MOUNTING INSTALLATION (BUILD-OUT)

- SECTION C

SCALE : 3/8" = 1'



TYPICAL ELEVATION N. T. S.

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON SHEET 8 OF 10)

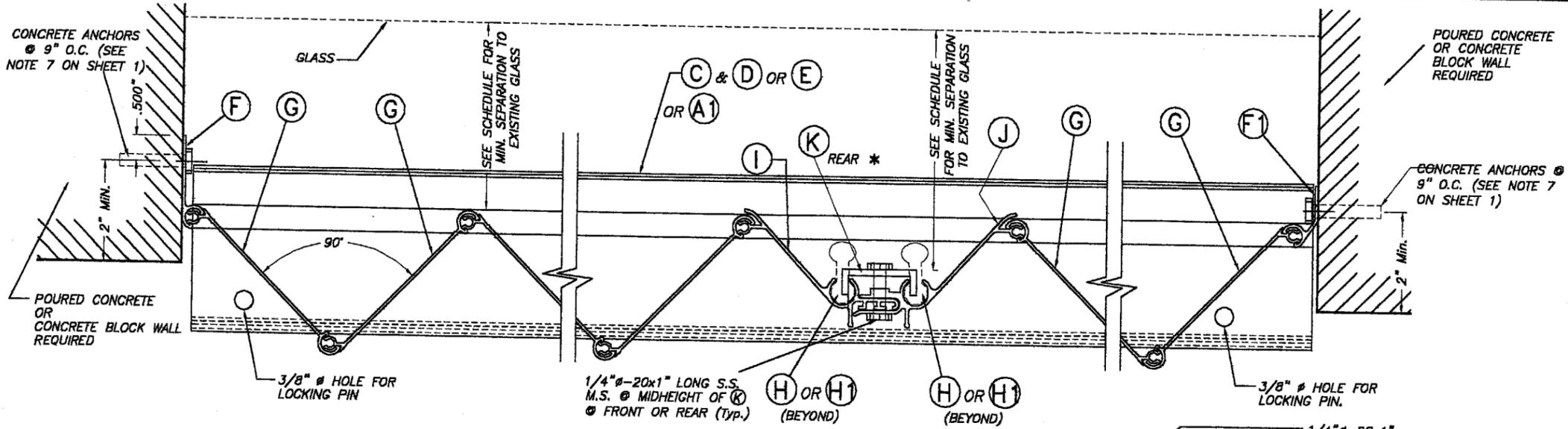
NOTE FOR COMBINATION OF SECTIONS :
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 05-0817-02
Expiration Date 02/11/2008
By *Helmut Hiller*
Miami Dade Product Control
Division

[Signature]
AUG 05 2005

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

 TILECO inc. TILLIT TESTING & ENGINEERING COMPANY 8395 N.W. 30th St., Ste. 302, VIRGINIA GARDENS, FLORIDA 33198 Phone : (305)871-1530 Fax : (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44187	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	DRAWN BY M.C.V.																		
	HURRICANE BUSTER BROTHERS, INC. (ASSA # 155)	06/01/05 DATE																		
	8752 S.W. 129th ST. MIAMI, FL 33176 PH: (305)258-8883, FAX: (305)258-8086	05-127 DRAWING No																		
<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD DWG 03-020</td> <td>6/01/05</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD DWG 03-020	6/01/05	3	-	-	2	-	-	4	-	-	SHEET 3 OF 10	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE															
1	OLD DWG 03-020	6/01/05	3	-	-															
2	-	-	4	-	-															



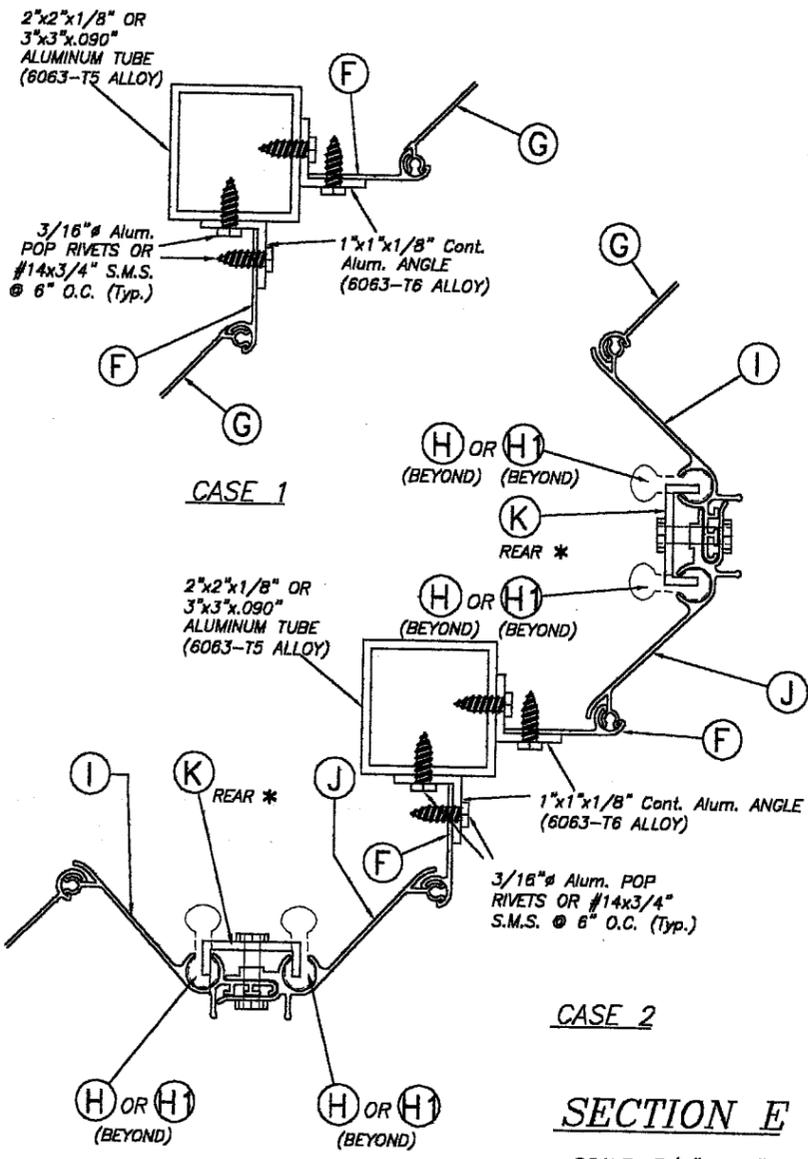
NOTES ON LOCKS: APPLICABLE TO LOCK DETAILS SHOWN ON THIS SHEET.

* CENTERMATES (1) & (2) SHALL ALWAYS BE LOCKED BY USING LOCK CLIP (K) INSTALLED FROM THE INSIDE OF SHUTTER W/ 1/4" #20 x 1" S.S. SIDEWALK BOLT AS SHOWN ON SECTIONS D & E. BOLT SHALL PENETRATE (K) LOCK CLIP, AS WELL AS (1) & (2) ENTIRELY. LOCK CLIP (K) 1/2" FLANGES SHALL FIT ENTIRELY INTO (1) & (2) LOCKING PIN GROOVES BEFORE SIDEWALK BOLT IS TIGHTENED.

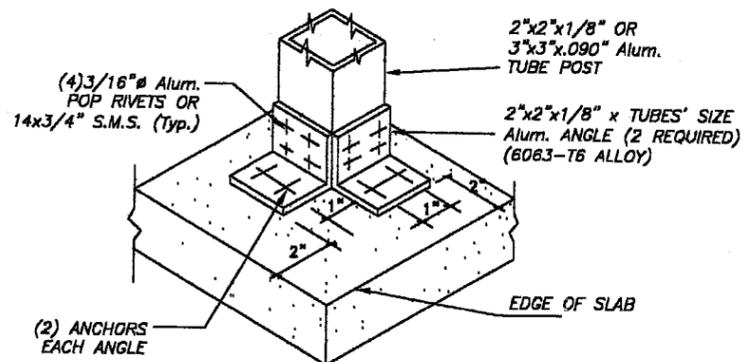
** ALTERNATIVELY TO USING (K) LOCK CLIP, CENTERMATES (1) & (2) SHALL ALWAYS BE LOCKED BY INSTALLING A 1/4" #20 x 1" S.S. SIDEWALK BOLT DIRECTLY THRU BOTH CENTERMATES. FOR THIS PURPOSE, (1) & (2) CENTERMATES SHALL BE PRE-DRILLED AT THE BOLT LOCATION AS WELL AS TAPPED THRU IN ORDER TO ACCEPT THE 1/4" #20 SIDEWALK BOLT. THIS BOLT MAY BE INSTALLED FROM EITHER THE FRONT OR REAR OF SHUTTER.

SECTION D
SCALE: 3/8" = 1"

SECTIONS D, D' & E W/O (K) **
SCALE: 3/8" = 1"



SECTION E
SCALE: 3/8" = 1"



ISOMETRIC (CORNER POST) (Typ. AT TOP & BOTTOM SLABS)

SECTION D' : ONE SIDED SHUTTER END CONNECTION DETAIL

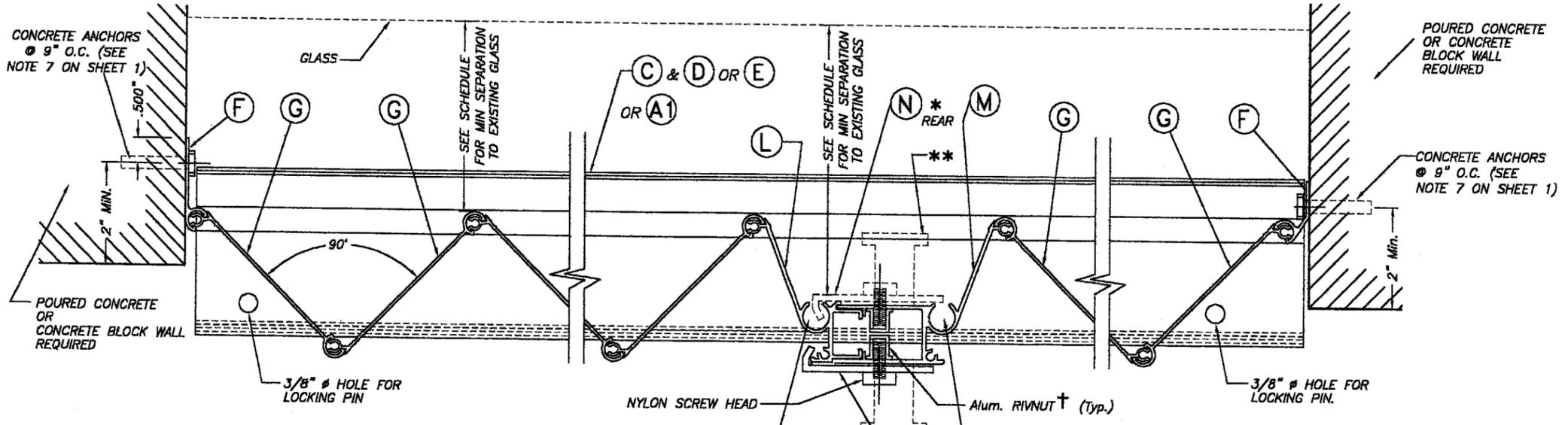
SCALE: 3/8" = 1"

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No 05-0817.02
 Expiration Date 02/11/2008
 By *Helmut H. Mader*
 Miami Dade Product Control Division

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

<p>TILLIT TESTING & ENGINEERING COMPANY 6325 N.W. 38th St., Ste. 302, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)971-1330 Fax: (305)971-1331 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</p>		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		DRAWN BY M.C.V.	
		HURRICANE BUSTER BROTHERS, INC. (ASSA # 155) 8752 S.W. 129th St. MIAMI, FL 33178 PH: (305)256-8883, FAX: (305)256-6086		06/01/05 DATE	
		05-127 DRAWING No		SHEET 4 OF 10	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD DWG 03-020	8/01/05	3	-	-
2	-	-	4	-	-

AUG 05 2005



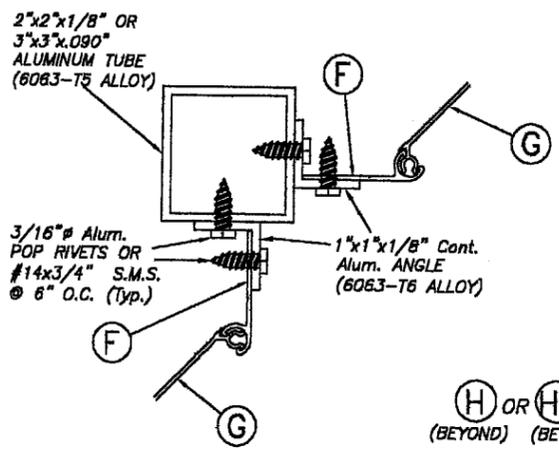
NOTES ON LOCKS : APPLICABLE TO LOCK DETAILS SHOWN ON THIS SHEET.

* LOCKER (N) SHALL ALWAYS BE USED FOR ANY SPAN AND INSTALLATIONS AT ANY ELEVATION. LOCKER (N) MAY BE USED AS AN INSIDE OR OUTSIDE LOCKER IF ATTACHED TO (L) & (M) W/ 1/4" #20 x 1" LONG S. S. THREADED BOLT W/ 1/4" #20 x 5/8" INTERNALLY THREADED ALUMINUM RIVNUT. SEE INSTALLATION DETAIL ON THIS SHEET.

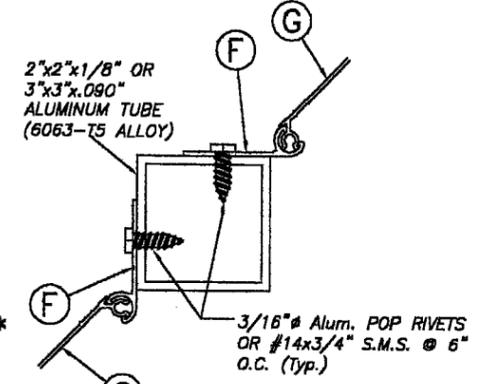
** FOR INSTALLATIONS AT ANY ELEVATION OF BUILDING AND IN ADDITION TO (N) LOCKERS, A REGULAR T LOCK MAY BE USED FOR SECURITY PURPOSES AT ANY DESIRED LOCATION OF CENTERMATE (INSIDE OR OUTSIDE). WHEN USED INSIDE, MINIMUM SEPARATION TO GLASS SHALL ALSO BE VERIFIED FROM THE TIP OF SUCH T LOCK OR FROM THE OTHER SHUTTER COMPONENTS SHOWN ON SECTION D (WHICHEVER IS MORE CRITICAL).

† : SERIES 9444 ALUMINUM (2024-T3 ALLOY) LARGE FLANGE THIN SHEET NUTSERT, PART # 0820, AS MANUFACTURED BY AVDEL CHERRY TEXTORN, PARSIPPANY, NEW JERSEY 07054 OR EQUAL.

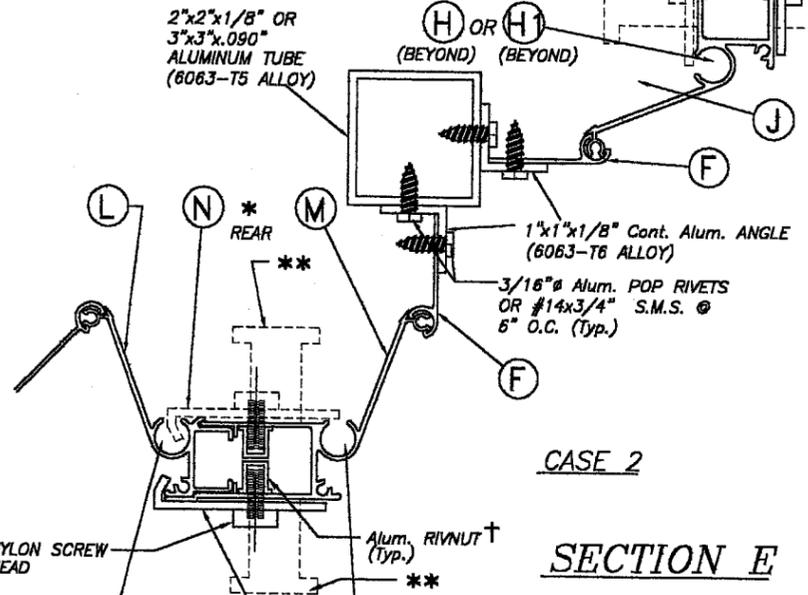
SECTION D
SCALE: 3/8" = 1"



CASE 1

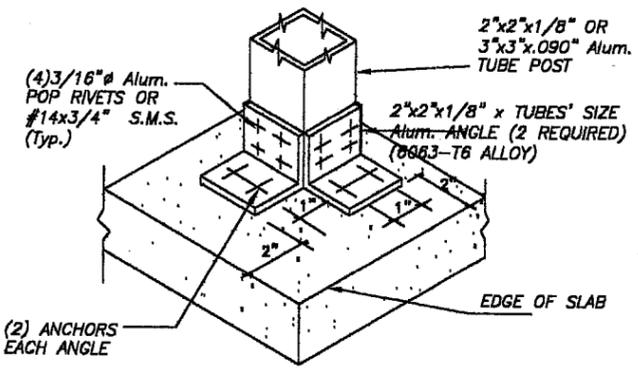


CASE 3

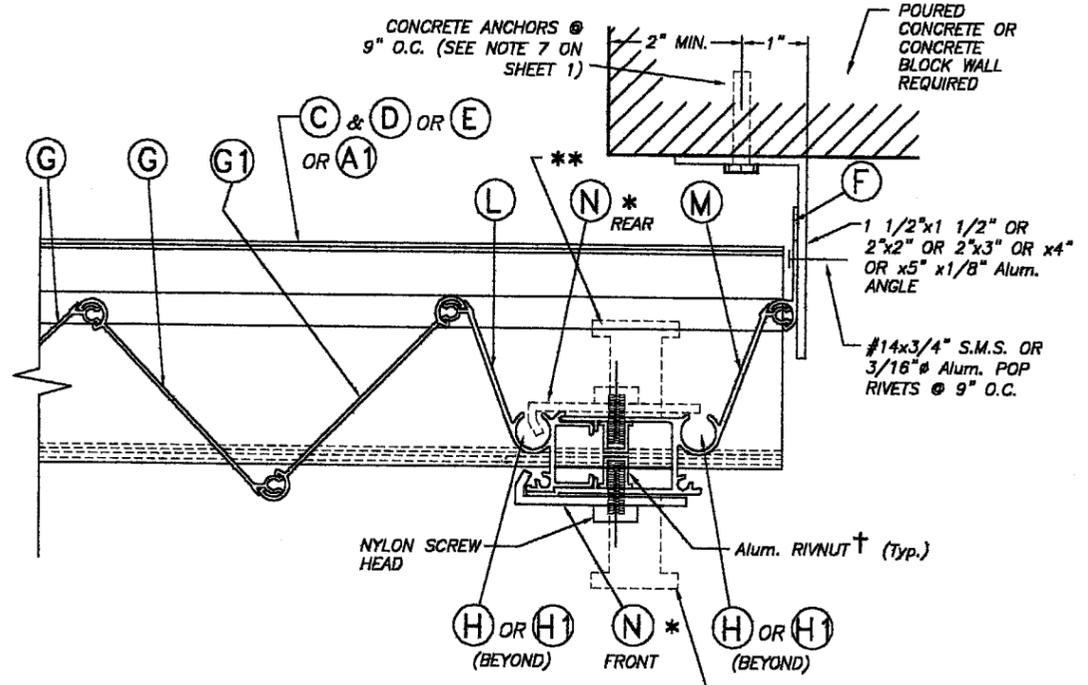


CASE 2

SECTION E
SCALE: 3/8" = 1"



ISOMETRIC (CORNER POST) (Typ. AT TOP & BOTTOM SLABS)



ONE SIDED SHUTTER: END CONNECTION DETAIL
SCALE: 3/8" = 1"

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 05-0817.02 Expiration Date 02/11/2008

By *Helmut A. Miller*
Miami Dade Product Control Division

AUG 05 2005

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

<p>TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 38th St., Ste. 302, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1630 Fax: (305)871-1531 EE-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</p>		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		DRAWN BY M.C.V.	
		<p>HURRICANE BUSTER BROTHERS, INC. (ASSA # 155)</p> <p>8752 S.W. 129th ST. MIAMI, FL 33176 PH: (305)256-8883, FAX: (305)256-8066</p>		08/01/05 DATE	
REV. No		DESCRIPTION		DATE	
1		OLD DWG 03-020		6/01/05	
2				-	
		REV. No		DESCRIPTION	
		1		-	
		2		-	
		3		-	
		4		-	
		5		-	
		6		-	
		7		-	
		8		-	
		9		-	
		10		-	
		11		-	
		12		-	
		13		-	
		14		-	
		15		-	
		16		-	
		17		-	
		18		-	
		19		-	
		20		-	
		21		-	
		22		-	
		23		-	
		24		-	
		25		-	
		26		-	
		27		-	
		28		-	
		29		-	
		30		-	
		31		-	
		32		-	
		33		-	
		34		-	
		35		-	
		36		-	
		37		-	
		38		-	
		39		-	
		40		-	
		41		-	
		42		-	
		43		-	
		44		-	
		45		-	
		46		-	
		47		-	
		48		-	
		49		-	
		50		-	
		51		-	
		52		-	
		53		-	
		54		-	
		55		-	
		56		-	
		57		-	
		58		-	
		59		-	
		60		-	
		61		-	
		62		-	
		63		-	
		64		-	
		65		-	
		66		-	
		67		-	
		68		-	
		69		-	
		70		-	
		71		-	
		72		-	
		73		-	
		74		-	
		75		-	
		76		-	
		77		-	
		78		-	
		79		-	
		80		-	
		81		-	
		82		-	
		83		-	
		84		-	
		85		-	
		86		-	
		87		-	
		88		-	
		89		-	
		90		-	
		91		-	
		92		-	
		93		-	
		94		-	
		95		-	
		96		-	
		97		-	
		98		-	
		99		-	
		100		-	
		101		-	
		102		-	
		103		-	
		104		-	
		105		-	
		106		-	
		107		-	
		108		-	
		109		-	
		110		-	
		111		-	
		112		-	
		113		-	
		114		-	
		115		-	
		116		-	
		117		-	
		118		-	
		119		-	
		120		-	
		121		-	
		122		-	
		123		-	
		124		-	
		125		-	
		126		-	
		127		-	
		128		-	
		129		-	
		130		-	
		131		-	
		132		-	
		133		-	
		134		-	
		135		-	
		136		-	
		137		-	
		138		-	
		139		-	
		140		-	
		141		-	
		142		-	
		143		-	
		144		-	
		145		-	
		146		-	
		147		-	
		148		-	
		149		-	
		150		-	
		151		-	
		152		-	
		153		-	
		154		-	
		155		-	
		156		-	
		157		-	
		158		-	
		159		-	
		160		-	
		161		-	
		162		-	
		163		-	
		164		-	
		165		-	
		166		-	
		167		-	
		168		-	
		169		-	
		170		-	
		171		-	
		172		-	
		173		-	
		174		-	
		175		-	
		176		-	
		177		-	
		178		-	
		179		-	
		180		-	
		181		-	
		182		-	
		183		-	
		184		-	
		185		-	
		186		-	
		187		-	
		188		-	
		189		-	
		190		-	
		191		-	
		192		-	
		193		-	
		194		-	
		195		-	
		196		-	
		197		-	
		198		-	
		199		-	
		200		-	
		201		-	
		202		-	
		203		-	
		204		-	
		205		-	
		206		-	
		207		-	
		208		-	
		209		-	
		210		-	
		211		-	
		212		-	
		213		-	
		214		-	
		215		-	
		216		-	
		217		-	
		218		-	
		219		-	
		220		-	
		221		-	
		222		-	
		223		-	
		224		-	
		225		-	
		226		-	
		227		-	
		228		-	
		229		-	
		230		-	
		231		-	
		232		-	
		233		-	
		234		-	
		235		-	
		236		-	
		237		-	
		238		-	
		239		-	
		240		-	
		241		-	
		242		-	
		243		-	
		244		-	
		245		-	
		246		-	
		247		-	
		248		-	
		249		-	
		250		-	
		251		-	
		252		-	
		253		-	
		254		-	
		255		-	
		256		-	
		257		-	
		258		-	
		259		-	
		260		-	
		261		-	
		262		-	
		263		-	
		264		-	
		265		-	
		266		-	
		267		-	
		268		-	
		269		-	
		270		-	
		271		-	
		272		-	
		273		-	
		274		-	
		275		-	
		276		-	
		277		-	
		278		-	
		279</			

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

(VALID FOR SECTIONS A, A1 & C ON SHEET 2 & 3 OF 10).

NOTE: DESIGN PRESSURE RATING CORRESPONDS ONLY TO NEGATIVE PRESSURE (SUCTION) LOADS, IN ACCORDANCE WITH ASCE 7-98 CRITERIA FOR A GIVEN OPENING. IF NEGATIVE PRESSURE VALUES COMPLY WITH THE REQUIRED PRESSURE FOR THE OPENING, THE POSITIVE PRESSURE WILL AUTOMATICALLY QUALIFY AND NEED NOT TO BE CHECKED.

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
40.0	12'-1"	3 7/8"	3"
42.5	11'-11"	3 7/8"	3"
45.0	11'-9"	3 7/8"	3"
47.5	11'-7"	3 7/8"	3"
50.0	11'-5"	3 7/8"	3"
52.5	11'-1"	3 7/8"	3"
55.0	10'-10"	3 7/8"	3"
57.5	10'-7"	3 7/8"	3"
60.0	10'-5"	3 7/8"	3"
62.5	10'-2"	3 7/8"	3"
65.0	10'-0"	3 7/8"	3"
67.5	9'-10"	3 7/8"	3"
70.0	9'-7"	3 7/8"	3"
72.5	9'-5"	3 7/8"	3"
75.0	9'-4"	3 7/8"	3"
77.5	9'-2"	3 7/8"	3"
80.0	9'-0"	3 7/8"	3"
82.5	8'-9"	3 7/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
85.0	8'-6"	3 7/8"	3"
87.5	8'-3"	3 7/8"	3"
90.0	8'-0"	3 3/8"	3"
92.5	7'-9"	3 3/8"	3"
95.0	7'-7"	3 3/8"	3"
97.5	7'-5"	3 3/8"	3"
100.0	7'-2"	3 3/8"	3"
102.5	7'-0"	3 3/8"	3"
105.0	6'-10"	3 3/8"	3"
107.5	6'-8"	3 3/8"	3"
110.0	6'-7"	3 3/8"	3"
112.5	6'-5"	3 3/8"	3"
115.0	6'-3"	3 3/8"	3"
117.5	6'-2"	3 3/8"	3"
120.0	6'-0"	3 3/8"	3"
122.5	5'-11"	3 3/8"	3"
125.0	5'-9"	3 3/8"	3"
127.5	5'-8"	3 3/8"	3"
130.0	5'-6"	3 3/8"	3"
132.5	5'-5"	3 3/8"	3"
135.0	5'-4"	3 3/8"	3"
137.5	5'-3"	3 3/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
140.0	5'-2"	3 3/8"	3"
142.5	5'-1"	3 3/8"	3"
145.0	5'-0"	3 3/8"	3"
147.5	4'-11"	3 3/8"	3"
150.0	4'-10"	3 3/8"	3"
152.5	4'-9"	3 3/8"	3"
155.0	4'-8"	3 3/8"	3"
157.5	4'-7"	3 3/8"	3"
160.0	4'-6"	3 3/8"	3"
162.5	4'-5"	3 3/8"	3"
165.0	4'-4"	3 3/8"	3"
167.5	4'-4"	3 3/8"	3"
170.0	4'-3"	3 3/8"	3"
172.5	4'-2"	3 3/8"	3"
175.0	4'-1"	3 3/8"	3"
177.5	4'-1"	3 3/8"	3"
180.0	4'-0"	3 3/8"	3"

TABLE 1:

MINIMUM SEPARATION BETWEEN GLASS AND SHUTTER FOR A GIVEN SHUTTER SPAN "L" FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ABOVE GRADE OF A GIVEN BUILDING. 30'-0" ELEVATION SHALL BE MEASURED AT BOTTOM OF SHUTTER SEPARATION TO BE MEASURED AS INDICATED ON SECTION D, SHEET 4 OF 10.

SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION
LESS OR EQUAL THAN 8'-0"	3 3/8"
>8'-0" TO 12'-0"	3 7/8"

* FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ELEVATION OF BUILDING. SEE TABLE 1 FOR MINIMUM SEPARATION TO GLASS FOR SPANS SHORTER THAN THE MAXIMUM ALLOWED SHOWN ON SCHEDULE.
 ** FOR SHUTTERS INSTALLED ABOVE 30'-0" ELEVATION OF BUILDING, MEASURED AT BOTTOM OF SHUTTER

AUG 05 2005

 TILECO Inc. TILLIT TESTING & ENGINEERING COMPANY 4385 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33188 Phone: (305)971-1530, Fax: (305)971-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER HURRICANE BUSTER BROTHERS, INC. (ASSA # 155) 8752 S.W. 129th ST. MIAMI, FL 33176 PH: (305)256-8883, FAX: (305)256-8066	DRAWN BY M.C.V. 06/01/05 DATE 05-127 DRAWING No SHEET 6 OF 10		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD DWG 03-020	6/01/05	3	-	-
2	-	-	4	-	-

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 05-0817-02
 Expiration Date 02/11/2008
 By *Helmut A. Mehn*
 Miami Dade Product Control
 Division

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

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

(VALID FOR SECTION B & B1 ON SHEET 2 OF 10).

NOTE: DESIGN PRESSURE RATING CORRESPONDS ONLY TO NEGATIVE PRESSURE (SUCTION) LOADS, IN ACCORDANCE WITH ASCE 7-98 CRITERIA FOR A GIVEN OPENING. IF NEGATIVE PRESSURE VALUES COMPLY WITH THE REQUIRED PRESSURE FOR THE OPENING, THE POSITIVE PRESSURE WILL AUTOMATICALLY QUALIFY AND NEED NOT TO BE CHECKED.

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
40.0	12'-0"	3 7/8"	3"
42.5	11'-11"	3 7/8"	3"
45.0	11'-9"	3 7/8"	3"
47.5	11'-7"	3 7/8"	3"
50.0	11'-5"	3 7/8"	3"
52.5	11'-3"	3 7/8"	3"
55.0	11'-1"	3 7/8"	3"
57.5	10'-10"	3 7/8"	3"
60.0	10'-7"	3 7/8"	3"
62.5	10'-4"	3 7/8"	3"
65.0	10'-2"	3 7/8"	3"
67.5	10'-0"	3 7/8"	3"
70.0	9'-10"	3 7/8"	3"
72.5	9'-8"	3 7/8"	3"
75.0	9'-6"	3 7/8"	3"
77.5	9'-4"	3 7/8"	3"
80.0	9'-2"	3 7/8"	3"
82.5	9'-0"	3 7/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
85.0	8'-11"	3 7/8"	3"
87.5	8'-9"	3 7/8"	3"
90.0	8'-5"	3 7/8"	3"
92.5	8'-3"	3 7/8"	3"
95.0	8'-1"	3 7/8"	3"
97.5	7'-10"	3 3/8"	3"
100.0	7'-8"	3 3/8"	3"
102.5	7'-6"	3 3/8"	3"
105.0	7'-3"	3 3/8"	3"
107.5	7'-1"	3 3/8"	3"
110.0	6'-11"	3 3/8"	3"
112.5	6'-10"	3 3/8"	3"
115.0	6'-8"	3 3/8"	3"
117.5	6'-6"	3 3/8"	3"
120.0	6'-5"	3 3/8"	3"
122.5	6'-3"	3 3/8"	3"
125.0	6'-1"	3 3/8"	3"
127.5	6'-0"	3 3/8"	3"
130.0	5'-11"	3 3/8"	3"
132.5	5'-9"	3 3/8"	3"
135.0	5'-8"	3 3/8"	3"
137.5	5'-7"	3 3/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
140.0	5'-6"	3 3/8"	3"
142.5	5'-4"	3 3/8"	3"
145.0	5'-3"	3 3/8"	3"
147.5	5'-2"	3 3/8"	3"
150.0	5'-1"	3 3/8"	3"
152.5	5'-0"	3 3/8"	3"
155.0	4'-11"	3 3/8"	3"
157.5	4'-10"	3 3/8"	3"
160.0	4'-9"	3 3/8"	3"
162.5	4'-8"	3 3/8"	3"
165.0	4'-8"	3 3/8"	3"
167.5	4'-7"	3 3/8"	3"
170.0	4'-6"	3 3/8"	3"
172.5	4'-5"	3 3/8"	3"
175.0	4'-4"	3 3/8"	3"
177.5	4'-4"	3 3/8"	3"
180.0	4'-3"	3 3/8"	3"

TABLE 1:

MINIMUM SEPARATION BETWEEN GLASS AND SHUTTER FOR A GIVEN SHUTTER SPAN "L" FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ABOVE GRADE OF A GIVEN BUILDING. 30'-0" ELEVATION SHALL BE MEASURED AT BOTTOM OF SHUTTER SEPARATION TO BE MEASURED AS INDICATED ON SECTION D, SHEET 4 OF 10.

SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION
LESS OR EQUAL THAN 8'-0"	3 3/8"
>8'-0" TO 12'-0"	3 7/8"

* FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ELEVATION OF BUILDING. SEE TABLE 1 FOR MINIMUM SEPARATION TO GLASS FOR SPANS SHORTER THAN THE MAXIMUM ALLOWED SHOWN ON SCHEDULE.
 ** FOR SHUTTERS INSTALLED ABOVE 30'-0" ELEVATION OF BUILDING, MEASURED AT BOTTOM OF SHUTTER

AUG 05 2005

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No 05-0817.02
 Expiration Date 02/11/2008
 By *Heung A. Miller*
 Miami Dade Product Control Division

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

 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 8355 N.W. 36th St., Ste. 303, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 • Fax: (305)871-1531 EB-0006718 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44187	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	DRAWN BY M.C.V.																		
	HURRICANE BUSTER BROTHERS, INC. (ASSA # 155) 8752 S.W. 129th ST. MIAMI, FL 33178 PH: (305)256-8883, FAX: (305)256-6066	06/01/05 DATE																		
		05-127 DRAWING No																		
	<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD DWG 03-020</td> <td>6/01/05</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD DWG 03-020	6/01/05	3	-	-	2	-	-	4	-	-	SHEET 7 OF 10
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE															
1	OLD DWG 03-020	6/01/05	3	-	-															
2	-	-	4	-	-															

**MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND
CORRESPONDING MAXIMUM ANCHOR SPACING (in.) SCHEDULE. †**

MAXIMUM DESIGN LOAD "W" (p.s.f.)	SECTIONS A, A1, C			SECTIONS A, A1, C			SECTIONS B, & B1		
	WALL MOUNTING INSTALLATION AT TOP OR BOTTOM (TO CONCRETE)			WALL MOUNTING INSTALLATION AT BOTTOM (TO MASONRY)			CEILING & FLOOR MOUNTING INSTALLATION AT TOP OR BOTTOM (TO CONCRETE)		
	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3
FROM 40.0 TO 62.5	9"	9"	9"	9"	8"	6 1/2"	9"	6"	4 1/2"
	9"	9"	9"	9"	5 1/2"	4 1/2"	9"	8"	6 1/2"
FROM 62.6 TO 75.0	9"	9"	8"	9"	6 1/2"	6"	8 1/2"	5"	4 1/2"
	9"	9"	6"	8"	4 1/2"	4"	9"	6 1/2"	6"
FROM 75.1 TO 92.5	9"	7"	7"	9"	5 1/2"	5 1/2"	6 1/2"	4"	-
	9"	9"	9"	6 1/2"	3 1/2"	3 1/2"	9"	5 1/2"	5 1/2"
FROM 92.6 TO 120.0	9"	5"	-	7"	4 1/2"	-	5"	4"	-
	9"	9"	-	5"	4"	-	7"	5 1/2"	-
FROM 120.1 TO 180.0	5"	5"	-	4 1/2"	4 1/2"	-	4"	4"	-
	9"	9"	-	-	-	-	5 1/2"	5 1/2"	-

ANCHOR SPACING LEGEND

- (1) Max. ANCHOR SPCG. VALID FOR SPANS OF 5'-0" OR LESS.
- (2) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 5'-0" TO 8'-6".
- (3) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 8'-6" TO Max. ALLOWED.

NOTES ON ANCHOR SPACING SCHEDULE

- † SEE SHEET 9 & 10 OF 10 FOR ANCHOR 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 MULTIPLYING SPACINGS SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (Min. E. D. FOR CALK-IN IS 2 1/2"). THIS OPERATION SHALL ONLY BE PERFORMED WHEN REQUIRED SPACING RESULTS INTO A MINIMUM OF 3" O.C.

ACTUAL E. D.= EDGE DISTANCE	FACTOR	
	TAPCON / ZAMAC NAILIN	CALK-IN
3"	.86	.75
2 1/2"	.71	.50
2"	.50	-

ZAMAC NAILIN

TAPCON OR CALK-IN

ANCHOR SPACING LEGEND

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 05-0817.02
Expiration Date 02/11/2008
By: *Helmer H. Miller*
Miami Dept. Product Control
Division

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

AUG 05 2005

 TILTECO INC. <small>TILLIT TESTING & ENGINEERING COMPANY 8325 N.W. 36th St., Ste. 306, VIRGINIA GARDENS, FLORIDA 33186 Phone: (305)871-1530 • Fax: (305)871-1831 EE-0008719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</small>	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER HURRICANE BUSTER BROTHERS, INC. <small>(ASSA # 155)</small> 8752 S.W. 129th ST. MIAMI, FL 33178 PH: (305)256-8883, FAX: (305)256-8068	DRAWN BY M.C.V. 06/01/05 DATE 05-127 DRAWING No																	
	<table border="1" style="width: 100%; font-size: small;"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD DWG 03-020</td> <td>8/01/05</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD DWG 03-020	8/01/05	3	-	-	2	-	-	4	-	-
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE														
1	OLD DWG 03-020	8/01/05	3	-	-														
2	-	-	4	-	-														

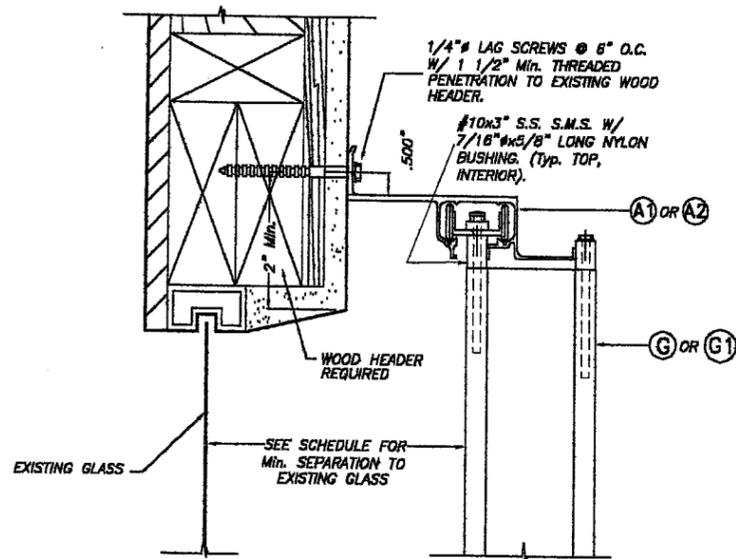
INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

NOTES:

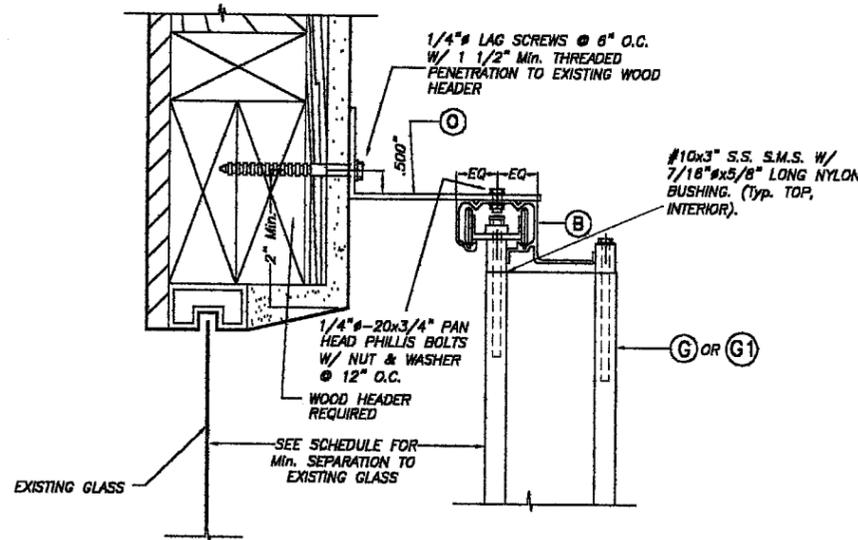
1. INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN 75 p.s.f. AND 9'-0" Max. SHUTTER SPAN.
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

NOTE FOR COMBINATION OF SECTIONS:

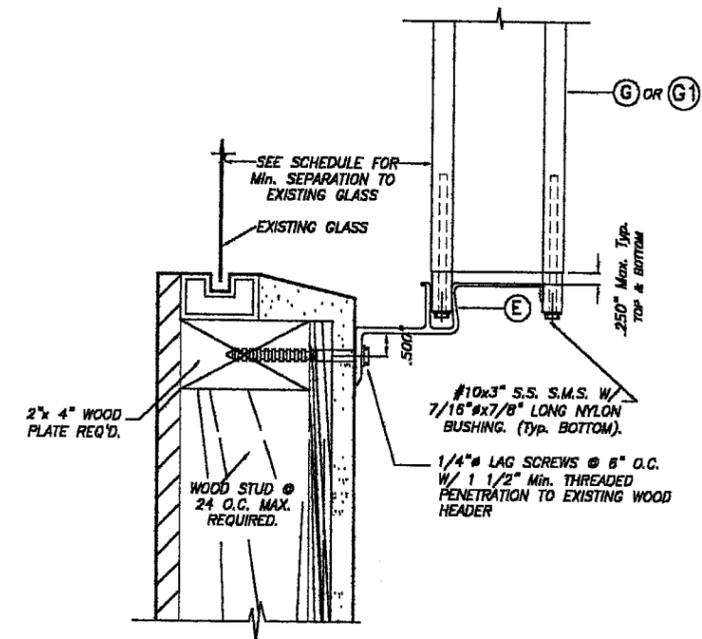
WALL MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



ALTERNATIVE 1



ALTERNATIVE 2



ALTERNATIVE 3

WALL MOUNTING INSTALLATION - SECTION A

SCALE: 1/4" = 1"

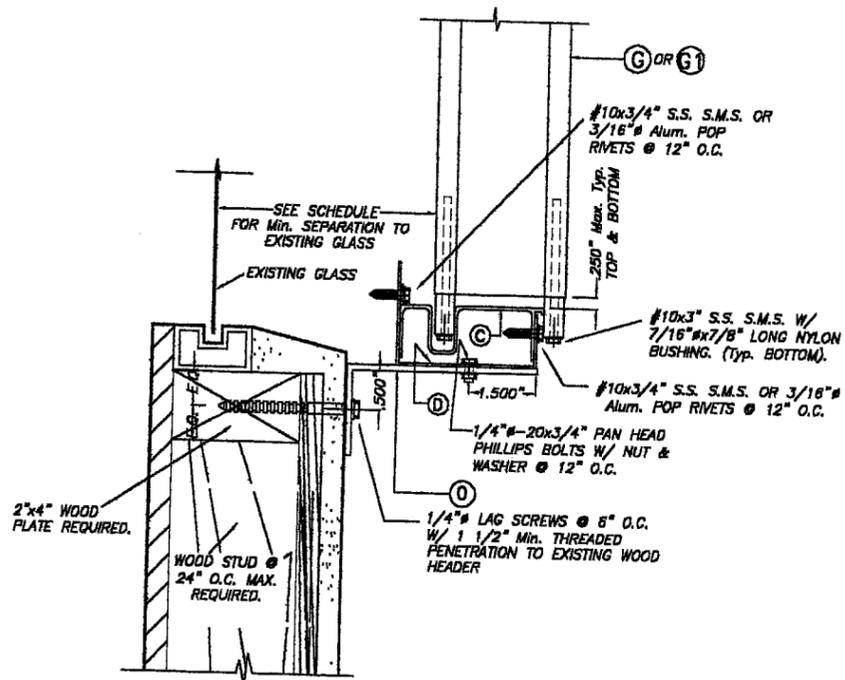
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 05-0817-02
Expiration Date 02/11/2008
By *Heung A. Mohr*
Miami Dade Product Control
Division

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

AUG 05, 2005

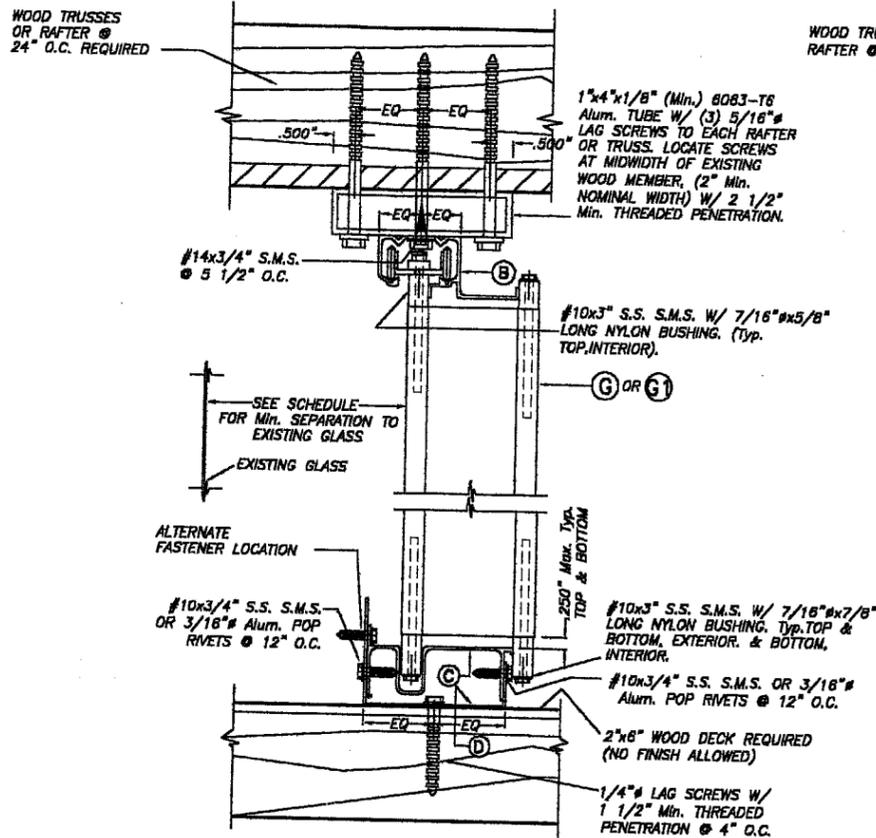
 TILTECO Inc. <small>TILLIT TESTING & ENGINEERING COMPANY 6305 N.W. 36th St., Ste. 305, VARGEM GARDENS, FLORIDA 33186 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</small>	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	DRAWN BY M.C.V.																	
	HURRICANE BUSTER BROTHERS, INC. (ASSA # 155)	06/01/05 DATE																	
<small>8752 S.W. 129th ST. MIAMI, FL 33178 PH: (305)256-8883, FAX: (305)256-8068</small>	05-127 DRAWING No																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD DWS 03-020</td> <td>6/01/05</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD DWS 03-020	6/01/05	3	-	-	2	-	-	4	-	-	SHEET 9 OF 10
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE														
1	OLD DWS 03-020	6/01/05	3	-	-														
2	-	-	4	-	-														

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS



ALTERNATIVE 5

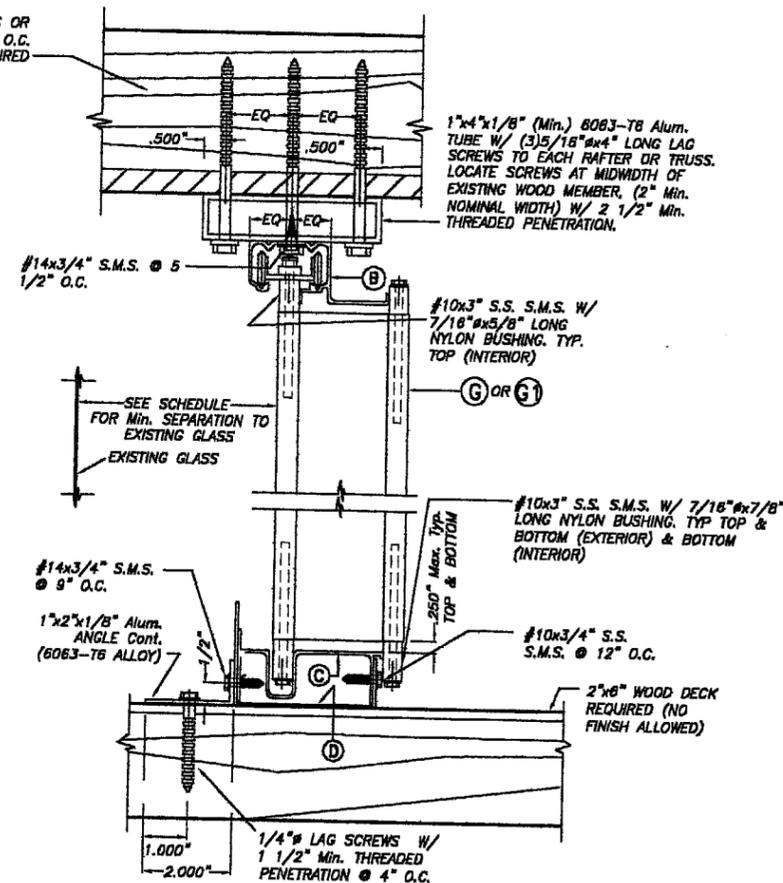
SCALE: 1/4" = 1"



CEILING & FLOOR MOUNTING INSTALLATION

- SECTION B

SCALE: 1/4" = 1"



CEILING & FLOOR MOUNTING INSTALLATION

- SECTION B1

SCALE: 1/4" = 1"

NOTE :

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

NOTES :

- INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN 75 p.s.f. AND 9'-0" Max. SHUTTER SPAN.
- 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. 05-0817.02 Expiration Date 02/17/2008
By *Walter A. Tillit Jr.*
Miami Dade Product Control Division

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

<p>TILLIT TESTING & ENGINEERING COMPANY 8355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</p>		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		DRAWN BY M.C.V.	
		<p>HURRICANE BUSTER BROTHERS, INC. (ASSA # 155)</p> <p>8752 S.W. 129th ST. MIAMI, FL 33176 PH: (305)256-8883, FAX: (305)256-6066</p>		08/01/05 DATE	
AUG 05 2005		REV. No. 1		05-127 DRAWING No	
		REV. No. 2		SHEET 10 OF 10	