



MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING

**BUILDING CODE COMPLIANCE OFFICE**  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908

**PRODUCT CONTROL NOTICE OF ACCEPTANCE**

**Gulfstream Aluminum and Shutter Corporation**  
**197 S.E. Monterey Rd.**  
**Stuart FL 34994**

**CONTRACTOR LICENSING SECTION**  
(305) 375-2527 FAX (305) 375-2558

**CONTRACTOR ENFORCEMENT SECTION**  
(305) 375-2966 FAX (305) 375-2908

**PRODUCT CONTROL DIVISION**  
(305) 375-2902 FAX (305) 372-6339

Your application for Product Approval of:  
**ASSA/Extruded Bertha Bahama Shutter**

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This approval shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at anytime from a jobsite or manufacturer's plant for quality control testing.

If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

**Acceptance No.: 99-1202.02**

**Expires: 01/25/2003**

Raul Rodriguez  
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL CONDITIONS**

**BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.  
Director

Miami-Dade County  
Building Code Compliance Office

**Approved: 01/25/2000**

1 of 3



**Gulfstream Aluminum & Shutter Corp.**

ACCEPTANCE No. : 99-1202.02

APPROVED : JAN 25 2000

EXPIRES : JAN 25 2003

**NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS**

**1. SCOPE**

This approves an extruded aluminum bahama type shutter, as described in Section 2 of this Notice of Acceptance, designed to comply with the South Florida Building Code, 1994 Edition for Miami-Dade County, for the locations where the pressure requirements, as determined by SFBC Chapter 23, do not exceed the Design Pressure Rating values indicated in the approved drawings.

**2. PRODUCT DESCRIPTION**

This extruded aluminum bahama type shutter and its components shall be constructed in strict compliance with the following documents: Drawing No. 99-326, titled "ASSA / Extruded Bertha Bahama Shutter", prepared by Tilteco Inc., dated October 29, 1999, sheets 1 through 8 of 8, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division. These documents shall hereinafter be referred to as the approved drawings.

**3. LIMITATIONS**

All permanent set components, included but not limited to embedded anchor bolts, threaded cones, metal shields, headers and sills, must be protected against corrosion, contamination and damage at all times.

**4. INSTALLATION**

This extruded aluminum bahama type shutter and its components shall be installed in strict compliance with the approved drawings.

**5. 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".

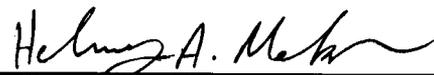
**6. BUILDING PERMIT REQUIREMENTS**

**6.1** Application for building permit shall be accompanied by copies of the following:

**6.1.1** This Notice of Acceptance.

**6.1.2** Duplicate copies of the approved drawings, as identified in Section 2 of this Notice of Acceptance, clearly marked to show the components selected for the proposed installation.

**6.1.3** Any other documents required by the Building Official or the South Florida Building Code (SFBC) in order to properly evaluate the installation of this system.



\_\_\_\_\_  
Helmy A. Makar, P.E.- Product Control Examiner  
Product Control Division

**Gulfstream Aluminum & Shutter Corp.**

ACCEPTANCE No. : 99-1202.02

APPROVED : JAN 25 2000

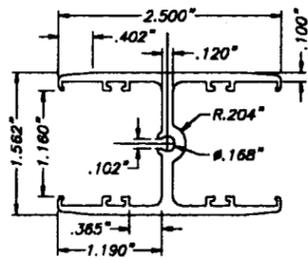
EXPIRES : JAN 25 2003

**NOTICE OF ACCEPTANCE: STANDARD CONDITIONS**

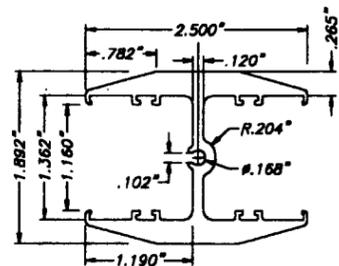
1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documents, including test-supporting data, engineering documents, are no older than eight (8) years.
2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
3. Renewals of Acceptance will not be considered if:
  - a. There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes.
  - b. The product is no longer the same product (identical) as the one originally approved.
  - c. If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product.
  - d. The engineer, who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
5. Any of the following shall also be grounds for removal of this Acceptance:
  - a. Unsatisfactory performance of this product or process.
  - b. Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
6. The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.
7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer needs not reseal the copies.
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.

**END OF THIS ACCEPTANCE**

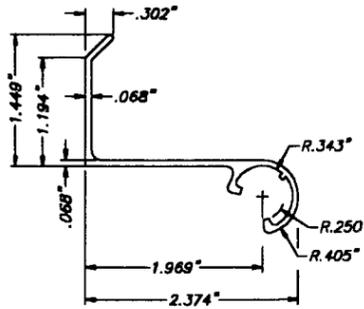
  
\_\_\_\_\_  
Helmy A. Makar, P.E.- Product Control Examiner  
Product Control Division



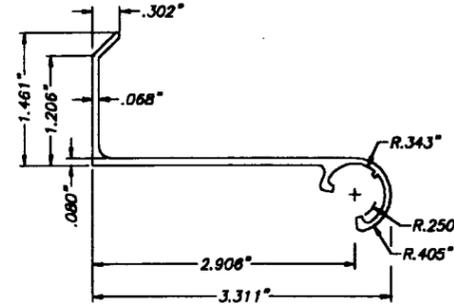
**(A1) REGULAR INTERIOR MULLION**  
6005-T5 Alum. ALLOY  
SCALE: 1/2" = 1"



**(A2) HEAVY INTERIOR MULLION**  
6005-T5 Alum. ALLOY  
SCALE: 1/2" = 1"



**(B) FEMALE HINGE**  
SCALE: 1/2" = 1"

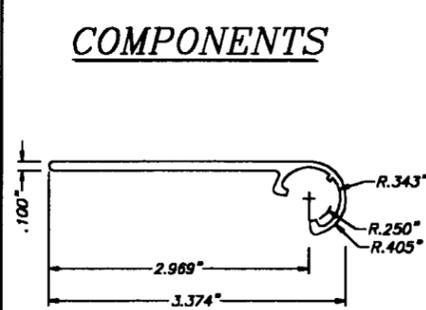


**(C) 1" B. O. FEMALE HINGE**  
SCALE: 1/2" = 1"

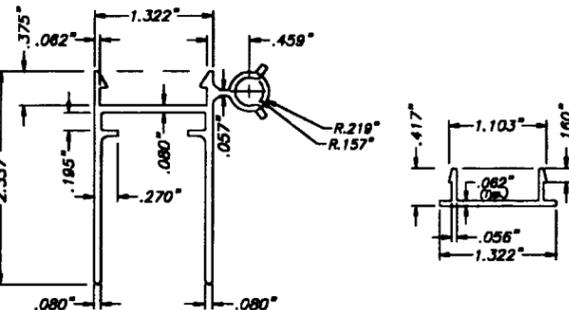
**GENERAL NOTES:**

- BAHAMA SHUTTER HAS BEEN DESIGNED IN ACCORDANCE WITH THE DADE COUNTY, 1984 EDITION OF THE SOUTH FLORIDA BUILDING CODE. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 6 OF ASCE 7-88, WITH 110 m.p.h. BASIC WIND SPEED. BAHAMA SHUTTER'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTIONS 2315 & 2314 RESPECTIVELY OF THE ABOVE MENTIONED CODE AS PER ATL REPORT # 0923.01-97.
- ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T8 ALLOY (UNLESS OTHERWISE NOTED).
- ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 ksi YIELD POINT AND 90 ksi TENSILE STRENGTH.
- ALL ALUMINUM POP RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.
- BOLTS TO BE 2024-T4 ALUMINUM ALLOY GALVANIZED OR STAINLESS STEEL WITH 35 ksi MINIMUM YIELD POINT.
- ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)
  - (A) TO EXISTING POURED CONCRETE:
    - 1/4" # TAPCON ANCHORS AS MANUFACTURED BY I.T.W. RAMSET OR ELCO INDUSTRIES, INC.
    - 1/4" # x 7/8" RAWL CALK-IN ANCHORS AS MANUFACTURED BY THE RAWL PLUG COMPANY, INC.
  - NOTES:
    - A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO POURED CONCRETE IS 1 1/2".
    - A.2) RAWL CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" #-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
    - A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1) & A.2) ABOVE.
  - (B) TO EXISTING CONCRETE BLOCK WALL:
    - 1/4" # TAPCON ANCHORS AS MANUFACTURED BY I.T.W. RAMSET OR ELCO INDUSTRIES, INC.
    - 1/4" # x 7/8" RAWL CALK-IN ANCHORS AS MANUFACTURED BY THE RAWL PLUG COMPANY, INC.
  - NOTES:
    - B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".
    - B.2) RAWL CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" #-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
    - B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES B.1) & B.2) ABOVE.
  - (C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.
- EACH SHUTTER SHALL HAVE A LEGIBLE AND READILY VISIBLE MARKING INSTRUCTING OWNER OR TENANT TO SECURE SHUTTER WITH SIDE & SILL BRACKETS DURING PERIODS OF HURRICANE WARNINGS.
- 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.
- SHUTTER'S MANUFACTURER STAMP SHALL BE PLACED ON THE EXPOSED SURFACE OF THE BAHAMA FRAME (A) OR (B). ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS: GULFSTREAM ALUMINUM AND SHUTTER CORP. STUART, FL. MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

**COMPONENTS**

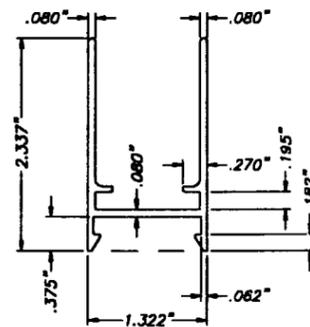


**(D) FLAT FEMALE HINGE**  
SCALE: 1/2" = 1"

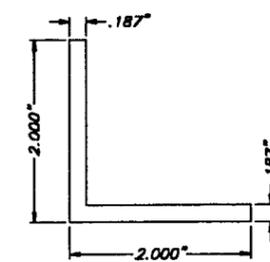


**(E) BAHAMA MALE FRAME**  
SCALE: 1/2" = 1"

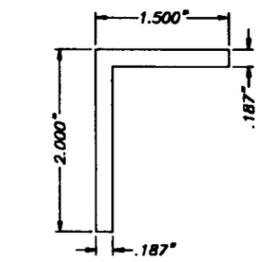
**(F) SNAP CAP**  
SCALE: 1/2" = 1"



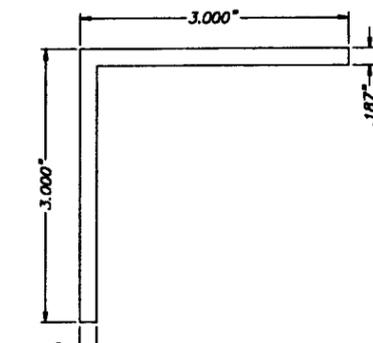
**(G) BAHAMA FRAME**  
SCALE: 1/2" = 1"



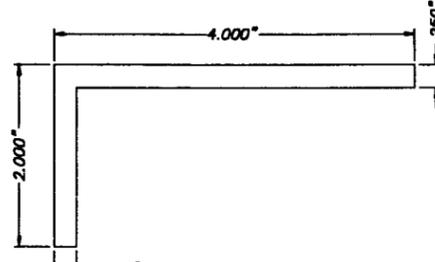
**(H) CORNER KEY**  
1" LONG  
SCALE: 1/2" = 1"



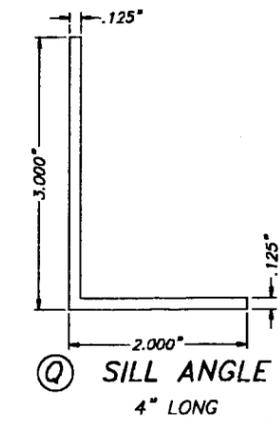
**(N) WALL MOUNT Alum. BRACKET**  
4" LONG  
SCALE: 1/2" = 1"



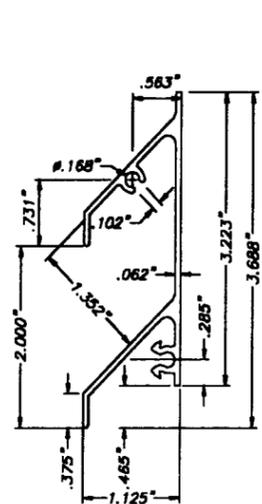
**(O) BUILD-OUT Alum. BRACKET**  
4" LONG  
SCALE: 1/2" = 1"



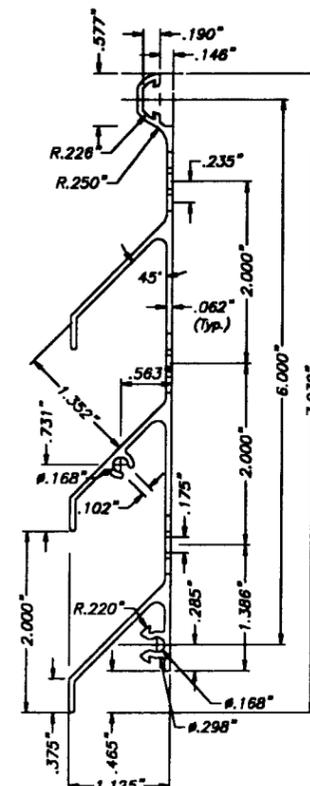
**(P) BUILD-OUT SIDE BRACKET**  
4" LONG  
SCALE: 1/2" = 1"



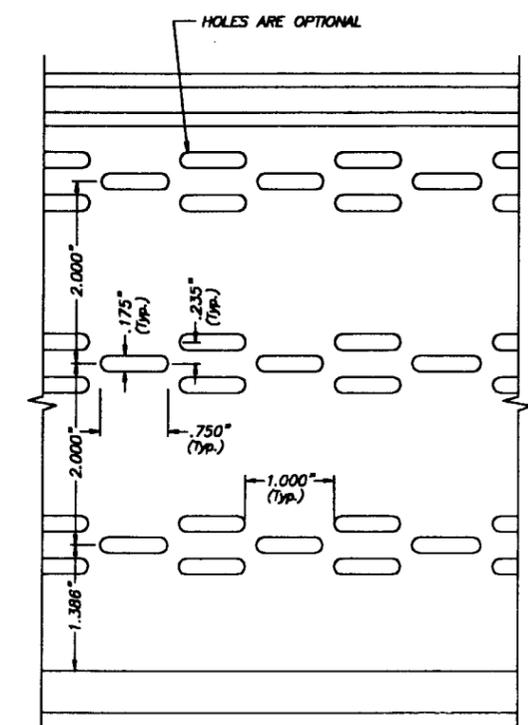
**(Q) SILL ANGLE**  
4" LONG  
SCALE: 1/2" = 1"



**(I) HALF SHUTTER BLADE**  
SCALE: 1/2" = 1"



**(J) SHUTTER BLADE**  
SCALE: 1/2" = 1"



**SHUTTER BLADE ELEVATION**  
SCALE: 1/2" = 1"

*10/29/99*

**TILECO Inc.**  
TILLIT TESTING & ENGINEERING COMPANY  
6585 N.W. 36th St., Ste. 217, WINDHAM GARDENS, FLORIDA 33168  
Phone: (305)871-1530 Fax: (305)871-1531  
WALTER A. TILLIT Jr., P. E.  
FLORIDA Lic. # 44167

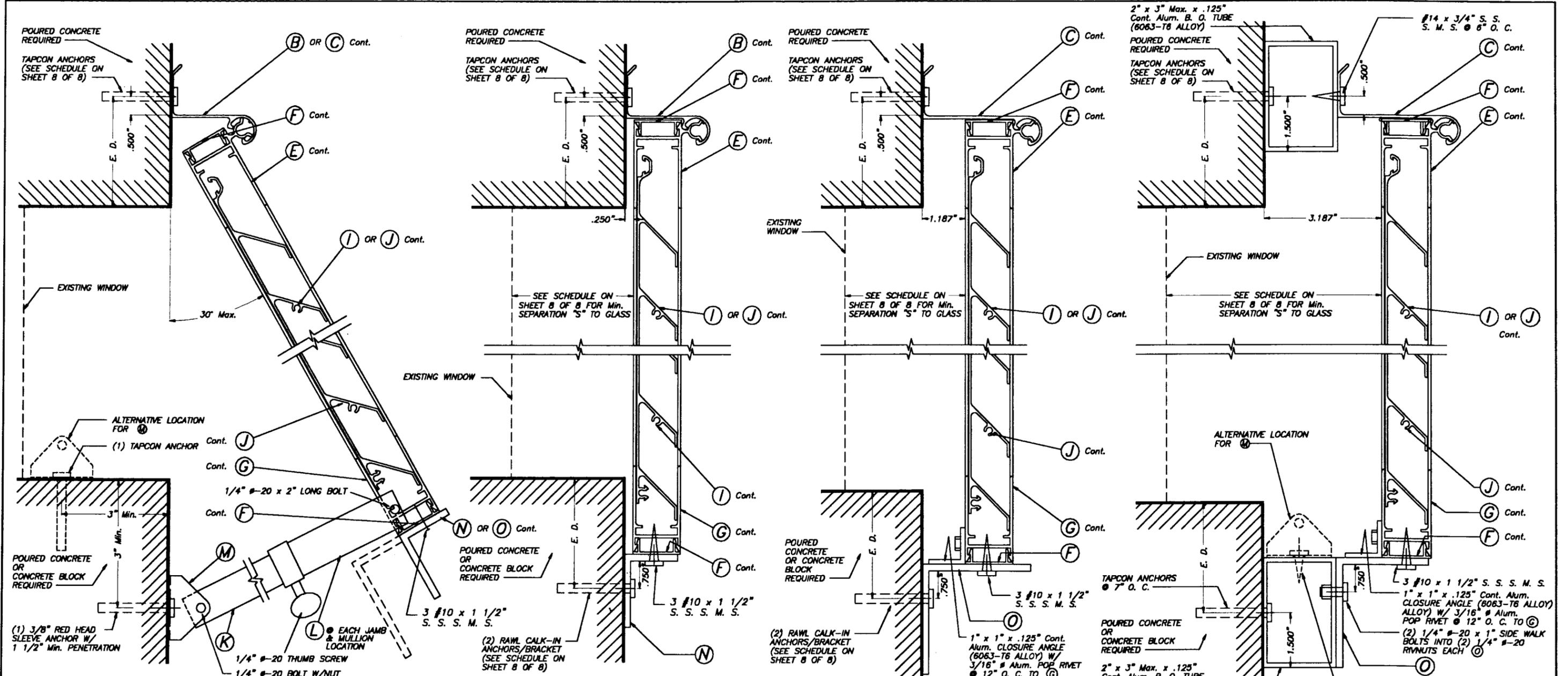
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|---|-------------|---------------------|
| ASSA / EXTRUDED BERTHA BAHAMA SHUTTER   |             | AS SHOWN SCALE      |
| GULFSTREAM ALUMINUM AND SHUTTER CORP.<br>(A.S.S.A. # 16)<br>197 S.E. MONTEREY ROAD<br>STUART, FL 34994. |             | 10/29/99 DATE       |
|   |             | 99 - 326 DRAWING No |
| REV. No   | DESCRIPTION | DATE                |
| 1   | -           | -                   |
| 2   | -           | -                   |

99-1202.02

MIAMI-DADE COUNTY

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE  
DATE *January 25, 2000*  
BY *Walter A. Tillit Jr.*  
PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE  
ACCEPTANCE NO. *99-1202.02*



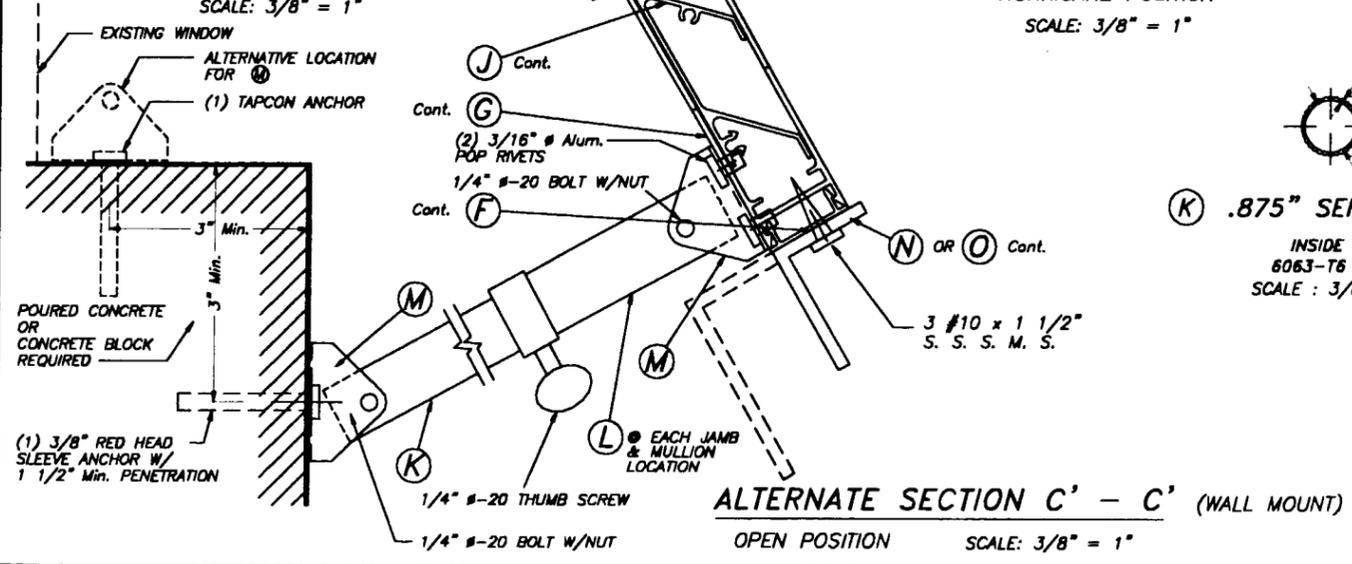


**SECTION C - C (WALL MOUNT)**  
 OPEN POSITION (74 m.p.h. WIND SPEED)  
 SCALE: 3/8" = 1"

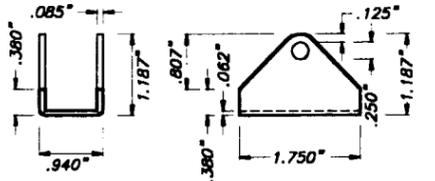
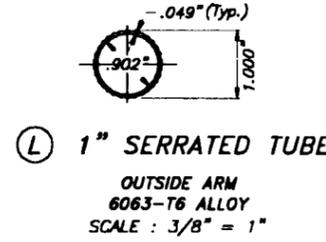
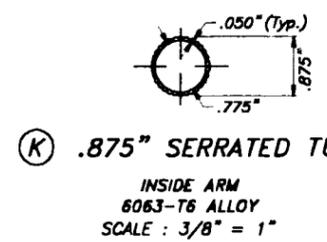
**SECTION C - C (WALL MOUNT)**  
 HURRICANE POSITION  
 SCALE: 3/8" = 1"

**SECTION D - D (BUILD-OUT)**  
 HURRICANE POSITION  
 SCALE: 3/8" = 1"

**SECTION E - E (BUILD-OUT)**  
 HURRICANE POSITION  
 SCALE: 3/8" = 1"



**ALTERNATE SECTION C' - C' (WALL MOUNT)**  
 OPEN POSITION  
 SCALE: 3/8" = 1"



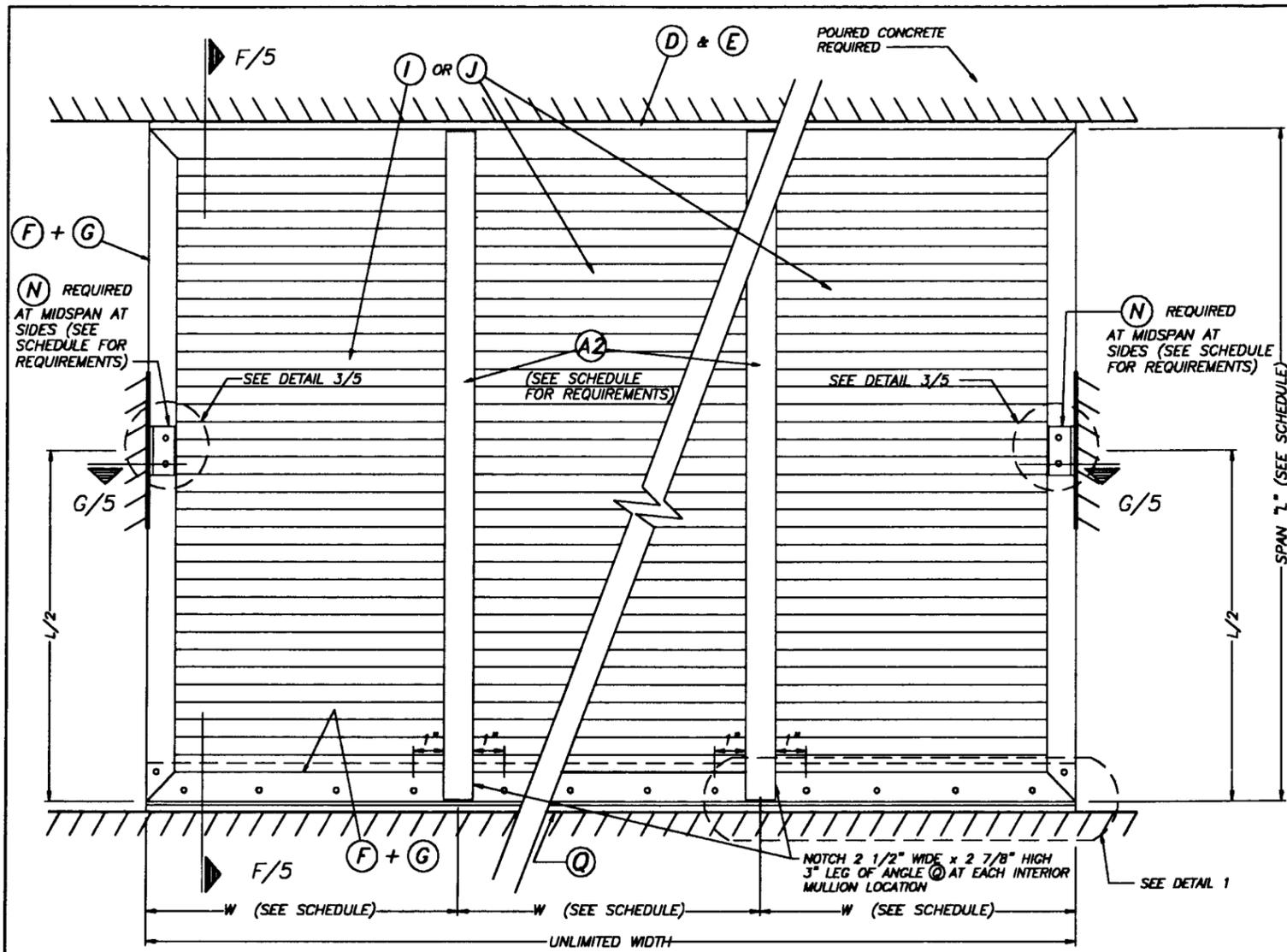
**(M) CAMEL BACK HINGE**  
 3003-H14 Alum. ALLOY  
 SCALE: 3/8" = 1"

APPROVED AS COMPLYING WITH THE  
 SOUTH FLORIDA BUILDING CODE  
 DATE January 25, 2000  
 BY Heleny A. Mader  
 PRODUCT CONTROL DIVISION  
 BUILDING CODE COMPLIANCE OFFICE  
 ACCEPTANCE NO. 99-1202-02

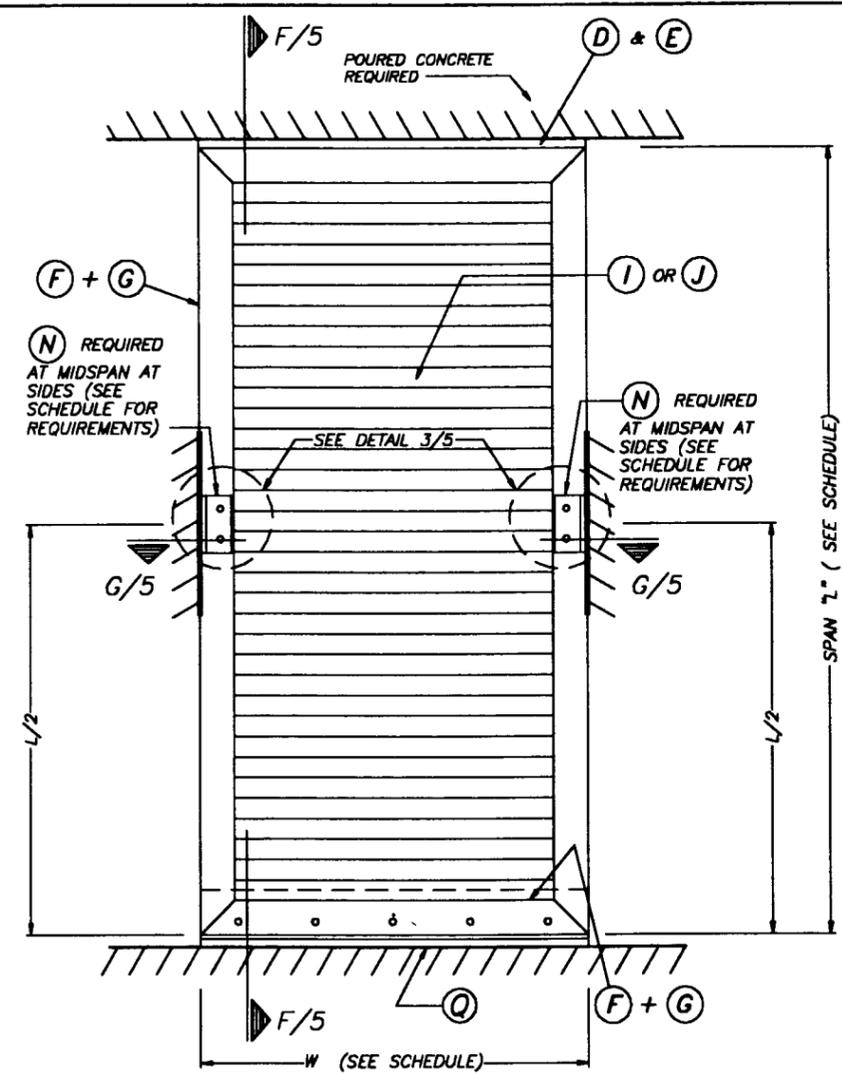
MIAMI-DADE COUNTY

|  |             |   |         |                |                     |
|--|-------------|---|---------|----------------|---------------------|
| <br><b>TILECO INC.</b><br>TILLIT TESTING & ENGINEERING COMPANY<br><small>6585 N.W. 38th St., Ste. 217, WIRGMA GARDENS, FLORIDA 33188<br/>         Phone: (305)871-1530 Fax: (305)871-1531</small><br>WALTER A. TILLIT Jr., P. E.<br>FLORIDA Lic. # 44167 |             | ASSA / EXTRUDED BERTHA BAHAMA SHUTTER   |         | AS SHOWN SCALE |                     |
|  |             | <b>GULFSTREAM ALUMINUM AND SHUTTER CORP.</b><br><small>(A.S.S.A. # 18)<br/>         197 S.E. MONTEREY ROAD<br/>         STUART, FL 34994.</small> |         | 10/29/99 DATE  |                     |
| REV. No  | DESCRIPTION | DATE  | REV. No | DESCRIPTION    | DATE                |
| 1  |             |   | 3       |                |                     |
| 2  |             |   | 4       |                |                     |
|  |             |   |         |                | 99 - 326 DRAWING No |
|  |             |   |         |                | SHEET 3 OF 8        |

*Davidson*  
 1/29/20

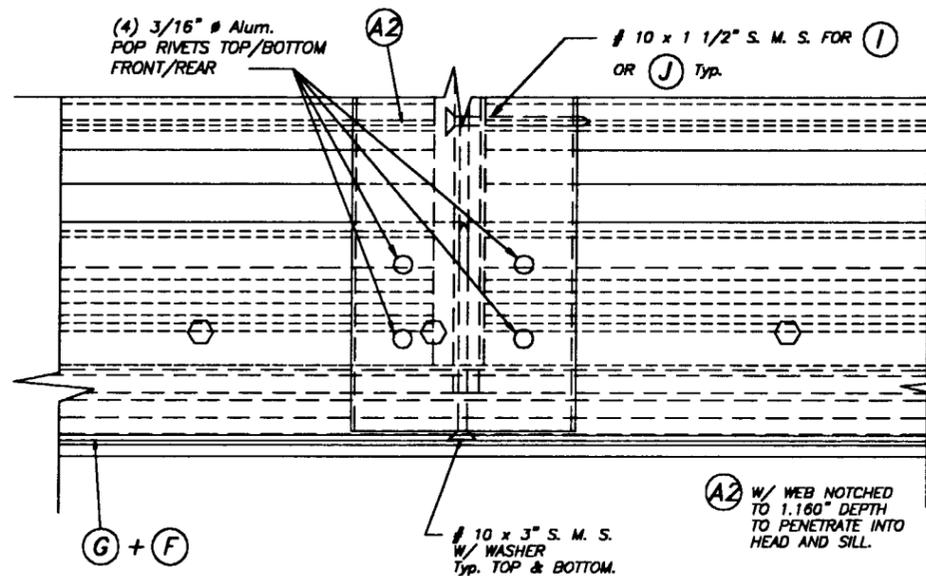


MULTIPLE UNIT

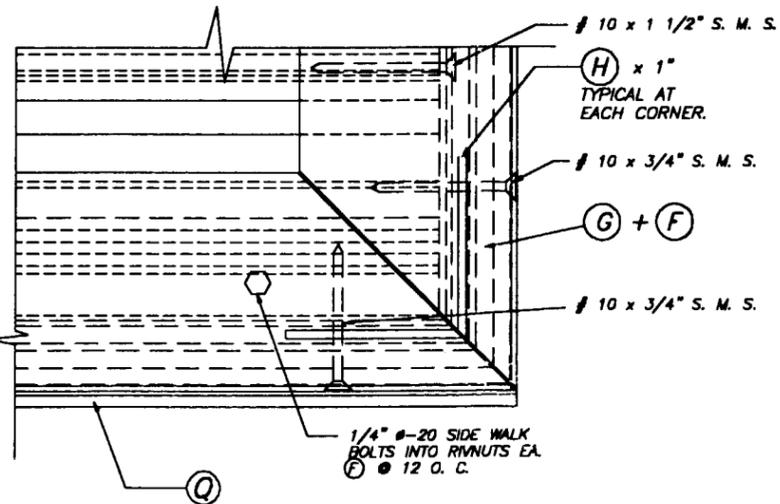


SINGLE UNIT

ELEVATIONS N. T. S.



DETAIL 1 SCALE: 1/2" = 1"



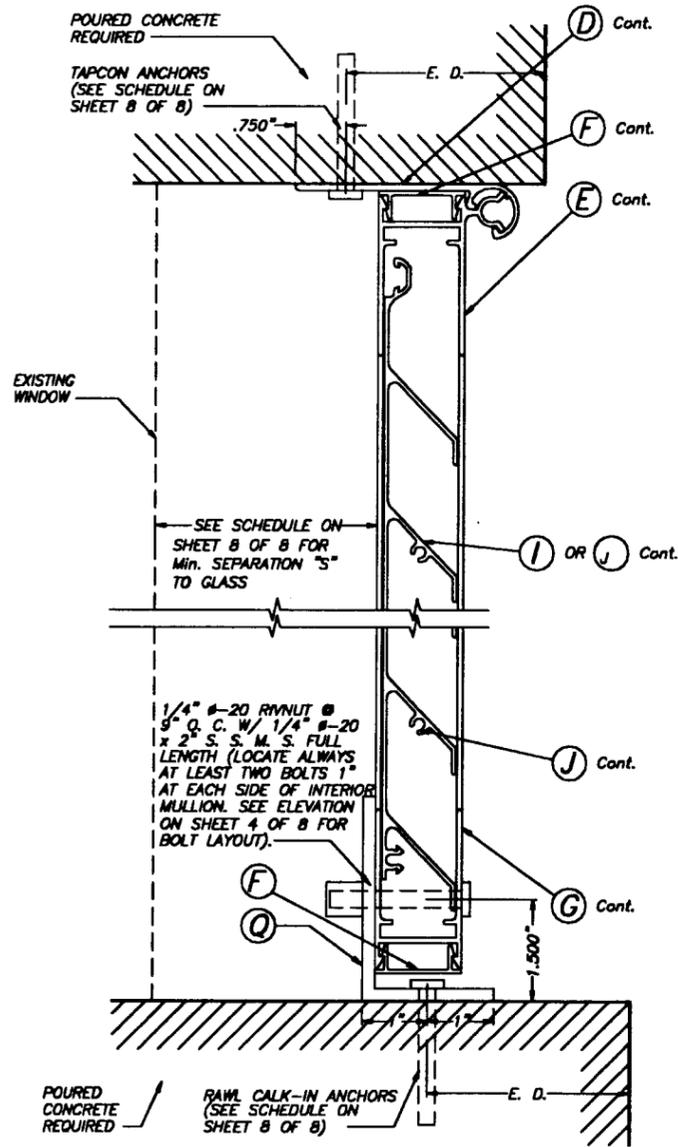
APPROVED AS COMPLYING WITH THE  
 SOUTH FLORIDA BUILDING CODE  
 DATE January 25, 2000  
 BY Helmut A. Mader  
 PRODUCT CONTROL DIVISION  
 BUILDING CODE COMPLIANCE OFFICE  
 ACCEPTANCE NO. 99-1202.02

MIAMI-DADE COUNTY

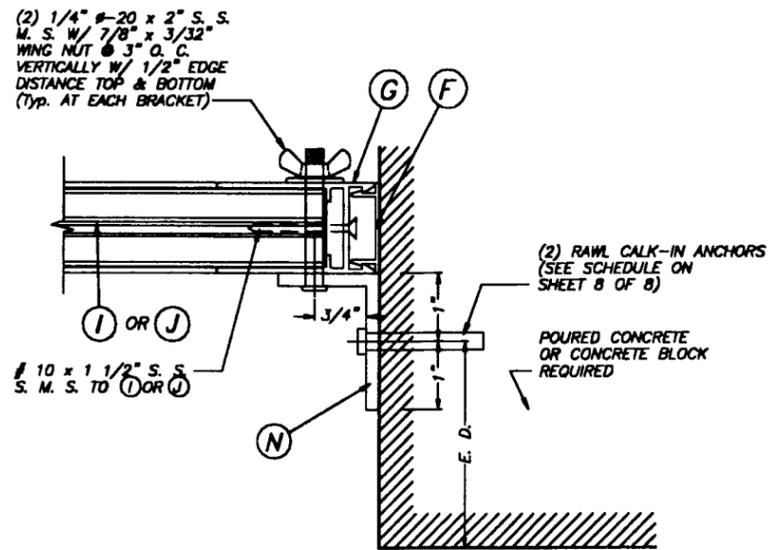
**TILECO INC.**  
 TILLIT TESTING & ENGINEERING COMPANY  
 6585 N.W. 36TH ST., SUITE 217, WIRGINIA GARDENS, FLORIDA 33186  
 Phone: (305)871-1530 Fax: (305)871-1531  
 WALTER A. TILLIT Jr., P. E.  
 FLORIDA Lic. # 44167

|  |             |                     |
|--|-------------|---------------------|
| ASSA / EXTRUDED BERTHA BAHAMA SHUTTER  |             | AS SHOWN SCALE      |
| GULFSTREAM ALUMINUM AND SHUTTER CORP.<br>(A.S.S.A # 16)<br>197 S.E. MONTEREY ROAD<br>STUART, FL 34994. |             | 10/29/99 DATE       |
|  |             | 99 - 326 DRAWING No |
| REV. No  | DESCRIPTION | DATE                |
| 1  | -           | 3                   |
| 2  | -           | 4                   |
|  |             | SHEET 4 OF 8        |

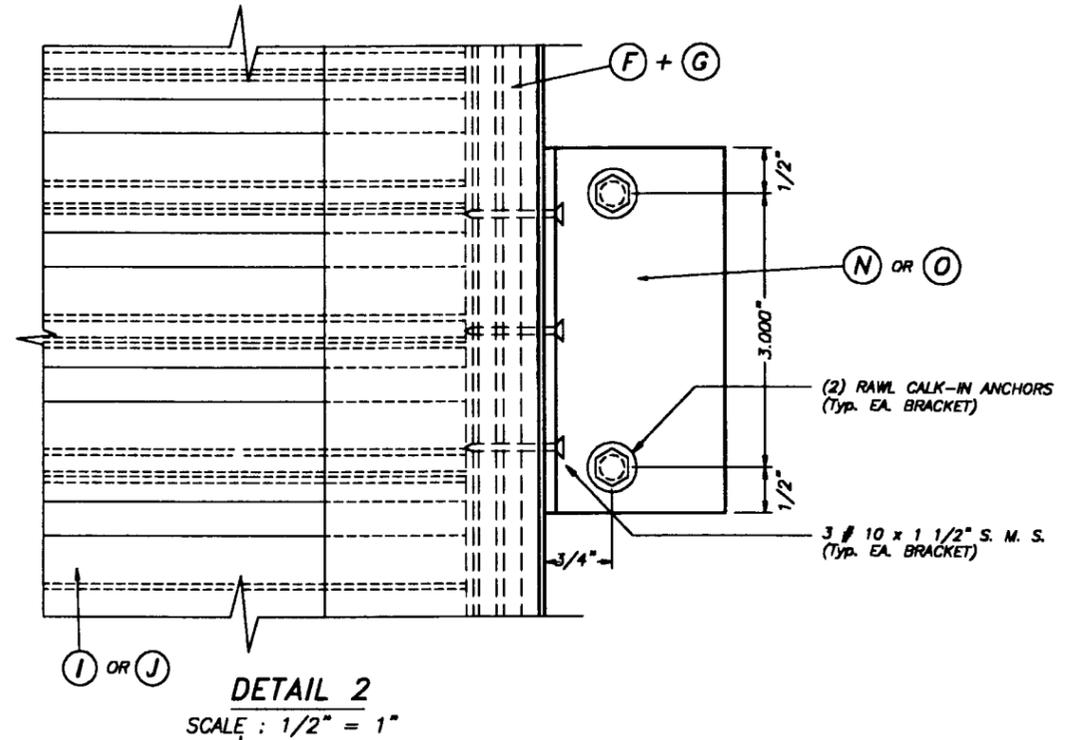
*Handwritten signature and date:*  
 10/29/99



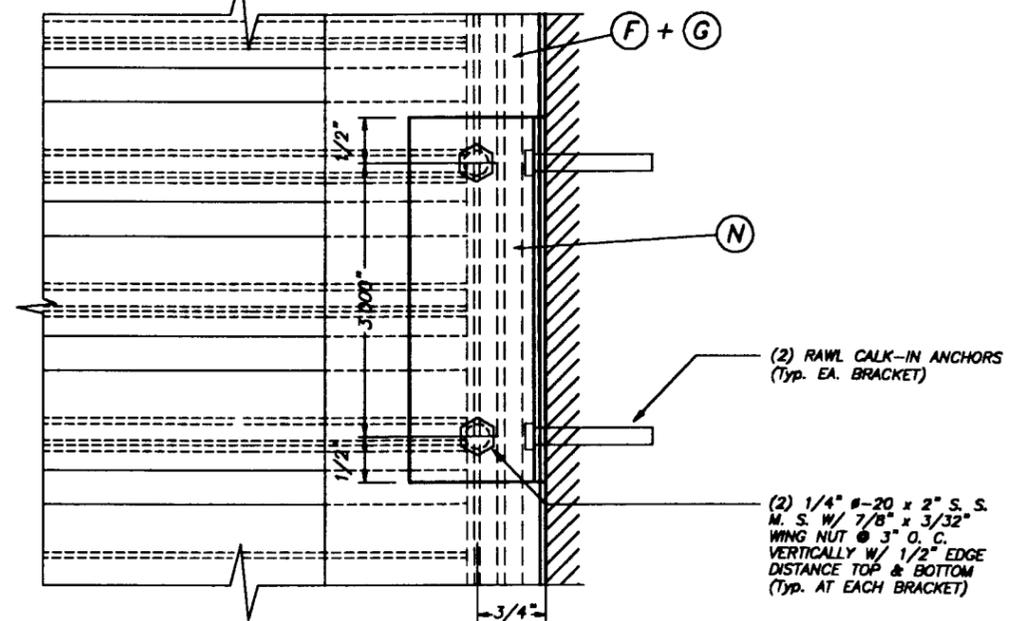
**SECTION F - F (FLOOR/CEILING MOUNT)**  
HURRICANE POSITION  
SCALE: 3/8" = 1"



**SECTION G - G (FLOOR/CEILING MOUNT)**  
HURRICANE POSITION  
SCALE: 3/8" = 1"



**DETAIL 2**  
SCALE: 1/2" = 1"



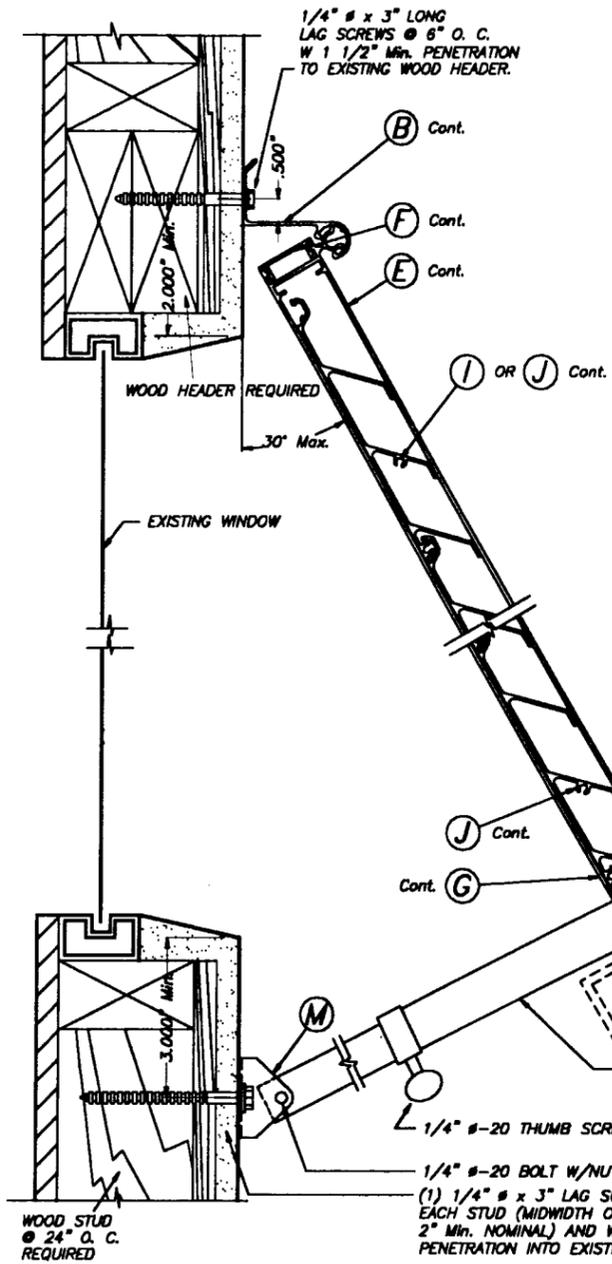
**DETAIL 3**  
SCALE: 1/2" = 1"

APPROVED AS COMPLYING WITH THE  
SOUTH FLORIDA BUILDING CODE  
DATE *January 25, 2000*  
BY *Helmut A. Mahr*  
PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE  
ACCEPTANCE NO. *99-1202-02*

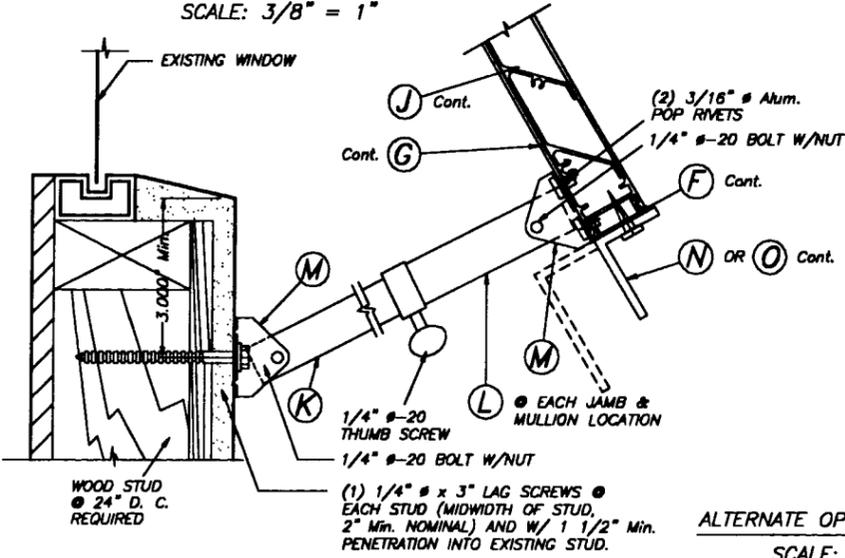
*Davis*  
*10/29/99*

MIAMI-DADE COUNTY

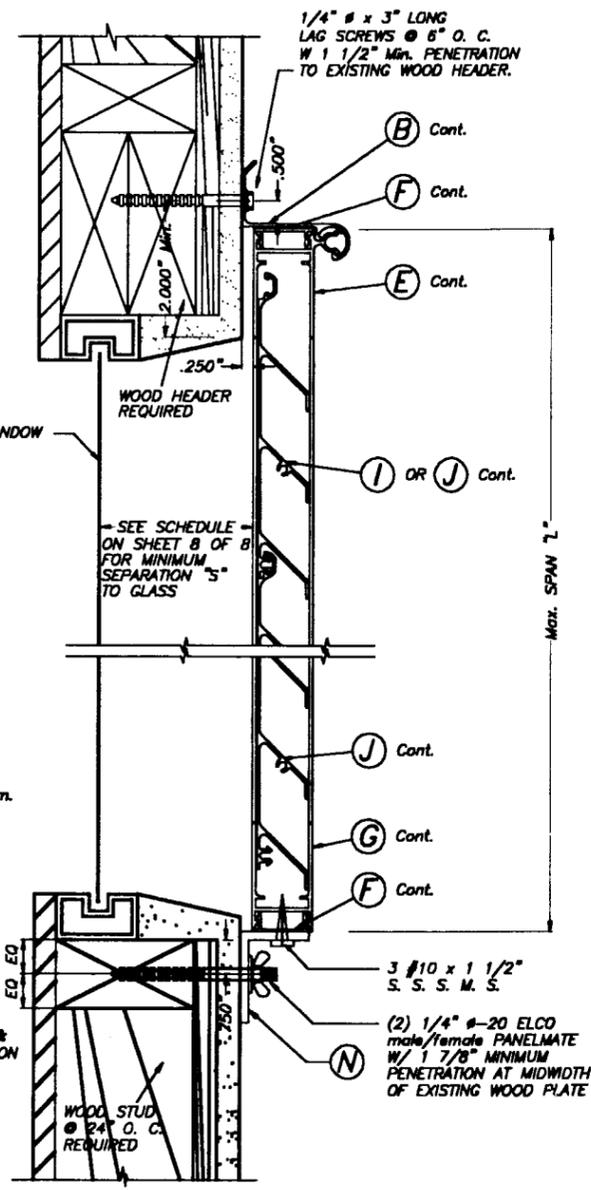
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|---|-------------|--|---------|---------------------|------|
| <br><b>TILECO INC.</b><br>TILLIT TESTING & ENGINEERING COMPANY<br>6545 N.W. 30th St., Ste. 217, Virginia Gardens, Florida 33166<br>Phone: (305)871-1530 Fax: (305)871-1531<br>WALTER A. TILLIT Jr., P. E.<br>FLORIDA Lic. # 44167 |             | ASSA / EXTRUDED BERTHA BAHAMA SHUTTER  |         | AS SHOWN SCALE      |      |
|   |             | <b>GULFSTREAM ALUMINUM AND SHUTTER CORP.</b><br>(A.S.S.A. # 16)<br>197 S.E. MONTEREY ROAD<br>STUART, FL 34994. |         | 10/29/99 DATE       |      |
|   |             |  |         | 99 - 326 DRAWING No |      |
| REV. No   | DESCRIPTION | DATE   | REV. No | DESCRIPTION         | DATE |
| 1   | -           | -  | 3       | -                   | -    |
| 2   | -           | -  | 4       | -                   | -    |



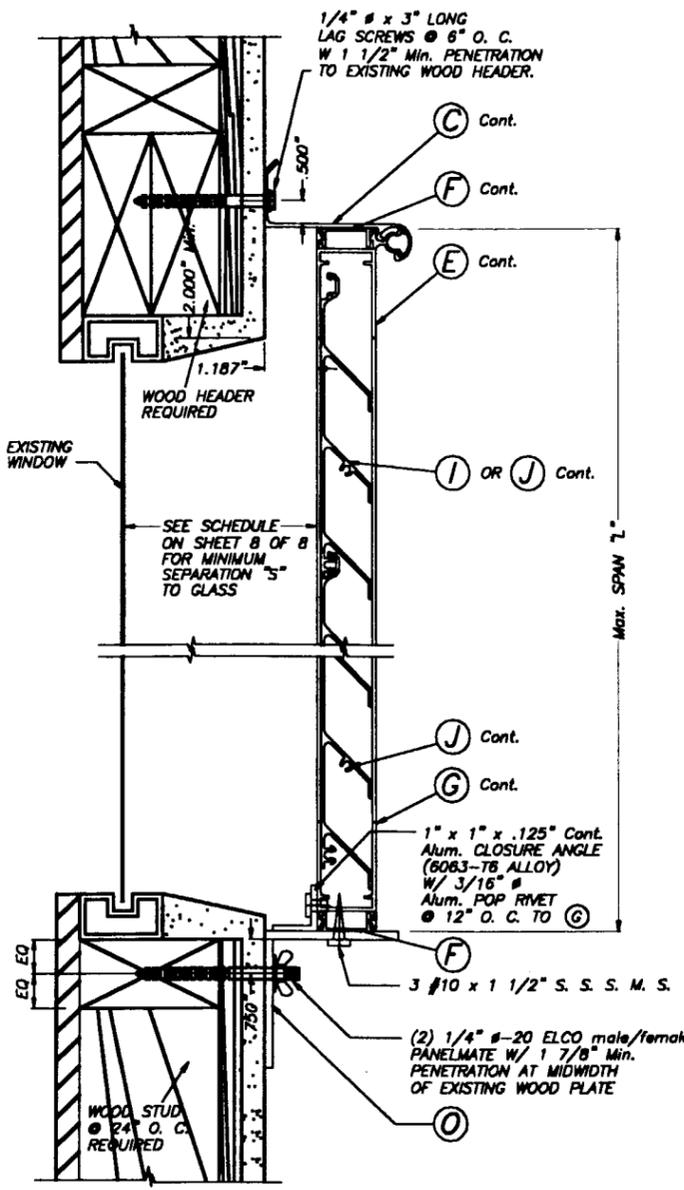
OPEN POSITION DETAIL : (74 m.p.h. OR LESS WIND SPEED)  
SCALE: 3/8" = 1"



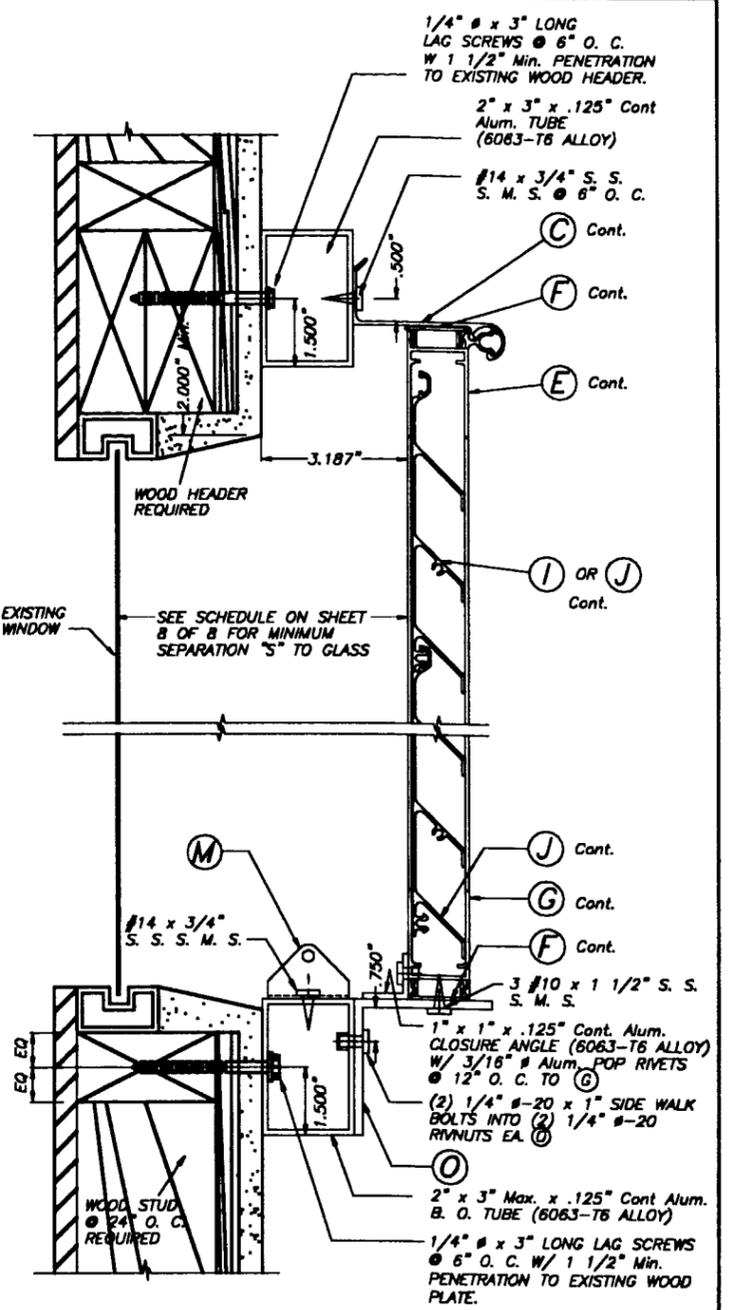
ALTERNATE OPEN POSITION DETAIL  
SCALE: 3/8" = 1"



ALTERNATIVE 1  
HURRICANE POSITION  
SCALE: 3/8" = 1"



ALTERNATIVE 2  
HURRICANE POSITION  
SCALE: 3/8" = 1"



ALTERNATIVE 3  
HURRICANE POSITION  
SCALE: 3/8" = 1"

**WALL MOUNTING INSTALLATION & BUILD-OUT**  
**- SECTION A**  
**INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS**

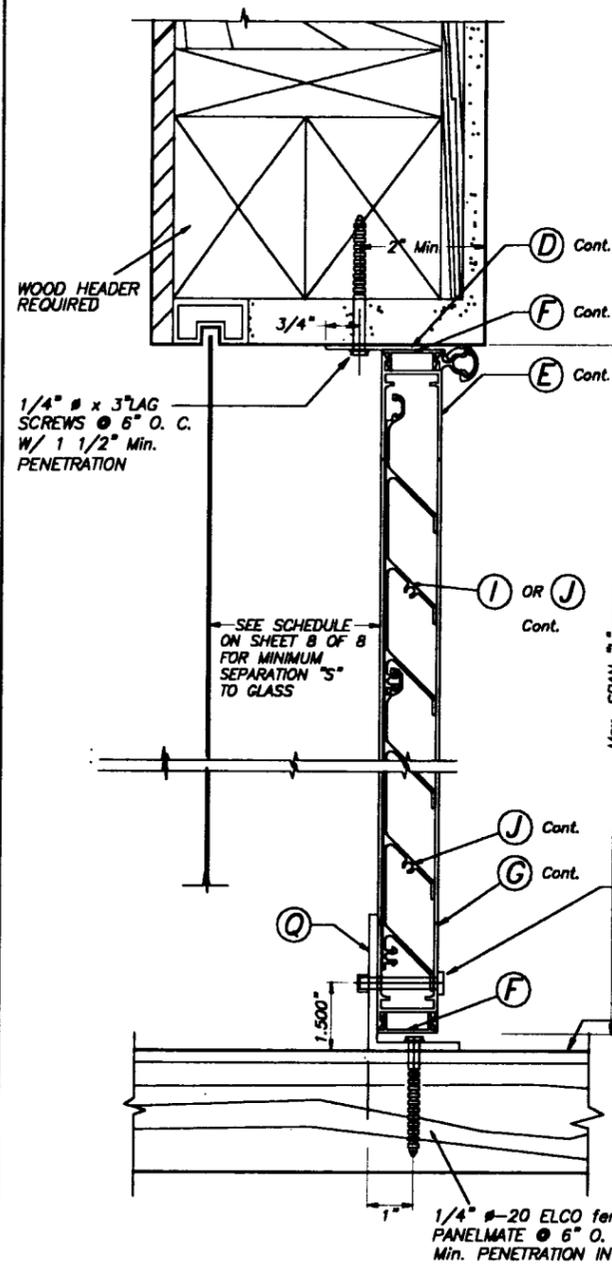
- NOTES :**
1. INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN +62.0, -75.0 p.s.f. AND Max. SHUTTER SPAN AS PER SCHEDULES ON SHEET B OF B.
  2. NEW 2" x 6" P. T. TO BE SOUTHERN PINE No. 2, SURFACED DRY WITH 19% M. M. C. W/ SPECIFIC DENSITY OF 0.55.
  3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

APPROVED AS COMPLYING WITH THE  
SOUTH FLORIDA BUILDING CODE  
DATE: *January 25, 2000*  
BY: *Helmut H. Moller*  
PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE  
ACCEPTANCE NO. *99-1202* - *MIAMI* - DADE COUNTY

**TILECO Inc.**  
TILIT TESTING & ENGINEERING COMPANY  
6585 N.W. 36TH ST., Ste. 217, WILLOW GARDENS, FLORIDA 33168  
Phone : (305)871-1530 Fax : (305)871-1531  
WALTER A. TILIT Jr., P. E.  
FLORIDA Lic. # 44167

|  |             |      |                     |             |      |
|--|-------------|------|---------------------|-------------|------|
| ASSA / EXTRUDED BERTHA BAHAMA SHUTTER                    |             |      | AS SHOWN SCALE      |             |      |
| GULFSTREAM ALUMINUM AND SHUTTER CORP.<br>(A.S.S.A. # 16) |             |      | 10/29/99 DATE       |             |      |
| 197 S.E. MONTEREY ROAD<br>STUART, FL 34994.              |             |      | 99 - 326 DRAWING No |             |      |
| REV. No  | DESCRIPTION | DATE | REV. No             | DESCRIPTION | DATE |
| 1  | -           | -    | 3                   | -           | -    |
| 2  | -           | -    | 4                   | -           | -    |

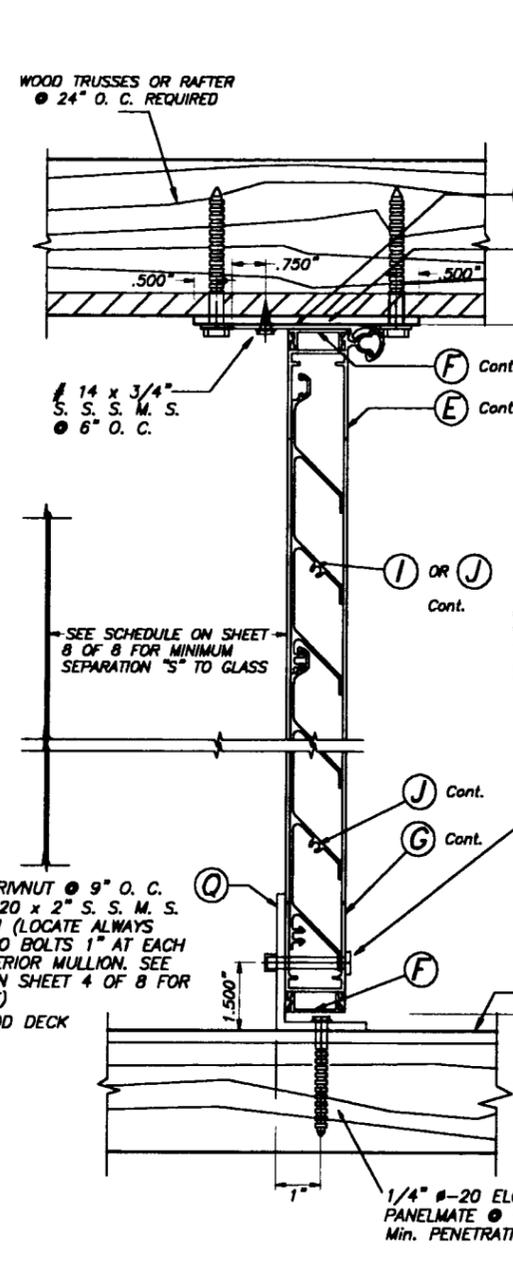
*2000 05 06*  
*10/29/99*



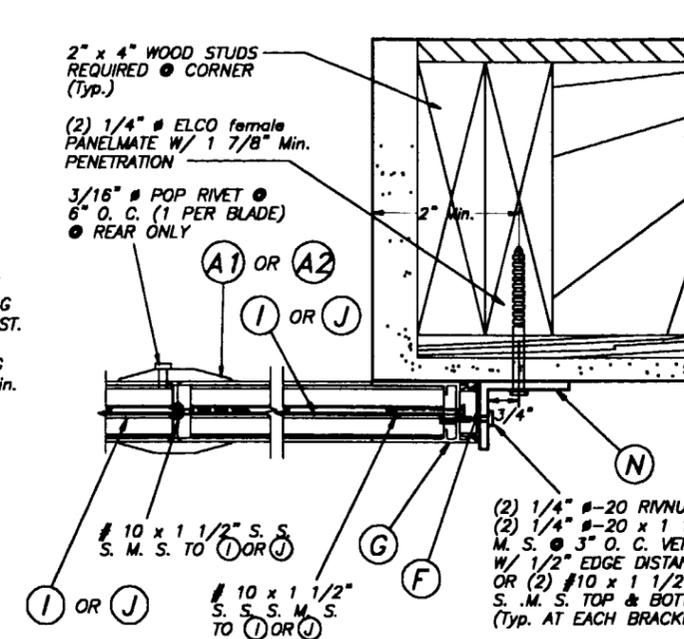
ALTERNATIVE 4A

FLOOR/CEILING MOUNTING INSTALLATION  
- SECTION A SCALE: 1/4" = 1"

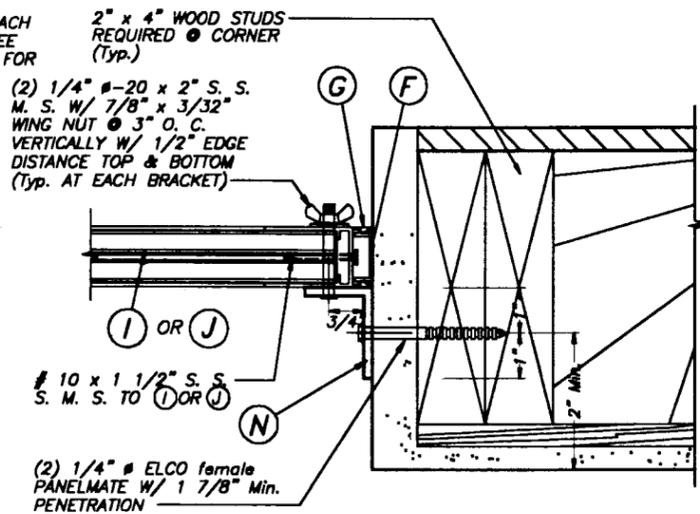
INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS



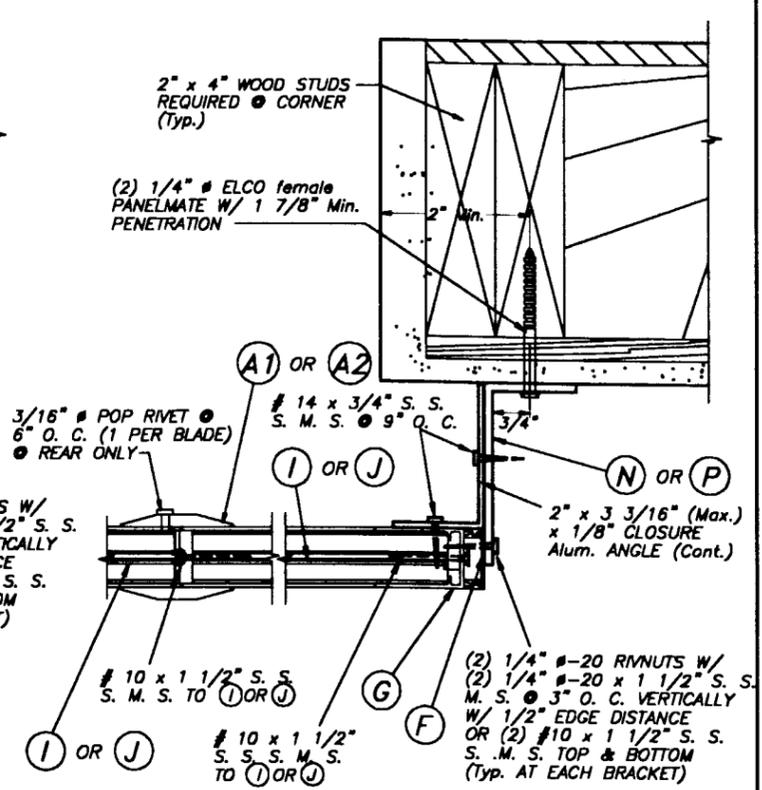
ALTERNATIVE 4B



SECTION A-A  
(WALL MOUNT) SCALE: 1/4" = 1"



SECTION G-G  
(FLOOR/CEILING MOUNT) SCALE: 1/4" = 1"



SECTION B-B  
(WALL MOUNT) SCALE: 1/4" = 1"

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE  
DATE January 25, 2000  
BY Helmut A. Mohr  
PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE  
ACCEPTANCE NO. 99-1202-02

- NOTES:
- INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN +62.0, -75.0 p.s.f. AND Max. SHUTTER SPAN AS PER SCHEDULES ON SHEET 8 OF 8.
  - 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.

*Walter A. Tillit Jr.*  
10/29/99

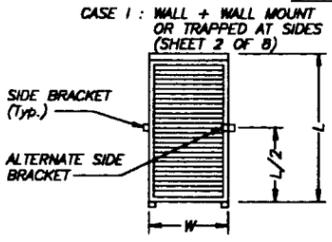
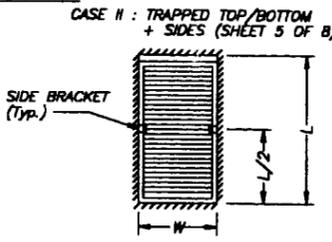
**TILECO Inc.**  
TILLIT TESTING & ENGINEERING COMPANY  
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|  |             |      |                        |             |      |
|--|-------------|------|------------------------|-------------|------|
| ASSA / EXTRUDED BERTHA BAHAMA SHUTTER                    |             |      | AS SHOWN SCALE         |             |      |
| GULFSTREAM ALUMINUM AND SHUTTER CORP.<br>(A.S.S.A. # 16) |             |      | 10/29/99<br>DATE       |             |      |
| 197 S.E. MONTEREY ROAD<br>STUART, FL 34994.              |             |      | 99 - 326<br>DRAWING No |             |      |
| REV. No  | DESCRIPTION | DATE | REV. No                | DESCRIPTION | DATE |
| 1  | -           | -    | 3                      | -           | -    |
| 2  | -           | -    | 4                      | -           | -    |

MIAMI-DADE COUNTY

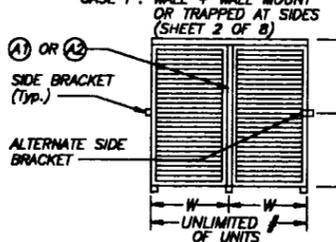
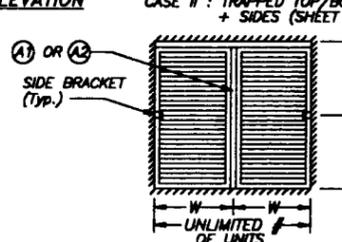
**SCHEDULE # 1**

**MAXIMUM SINGLE UNIT FOR A CORRESPONDING DESIGN PRESSURE AND MOUNTING TYPE**

| BAHAMA SHUTTER TYPE                        | SINGLE UNIT ELEVATION   |  |   |                                  |
|--|---|--|---|----------------------------------|
|  | CASE I : WALL + WALL MOUNT OR TRAPPED AT SIDES (SHEET 2 OF 8)                     |  | CASE II : TRAPPED TOP/BOTTOM + SIDES (SHEET 5 OF 8) |                                  |
|  |  |  |   |                                  |
| DESIGN PRESSURE RATING (p.s.f.) AND CASE # | MAXIMUM UNIT WIDTH "W" (IN)   | MAXIMUM SPAN "L" (IN)  |   | MINIMUM SEPARATION TO GLASS (IN) |
|  |   | W/O SIDE BRACKET   | W/ SIDE BRACKET                                     |                                  |
| CASES I & II +56.0, -63.0                  | 42"   | 52"  | N/A   | 3 1/8"                           |
| CASES I & II +75.0, -100.0                 | 42"   | N/A  | 96"   | 2 1/8"                           |

**SCHEDULE # 1A**

**MAXIMUM MULTIPLE UNIT FOR A CORRESPONDING DESIGN PRESSURE AND MOUNTING TYPE**

| BAHAMA SHUTTER TYPE                        | MULTIPLE UNIT ELEVATION   |   |   |                                |                                  |
|--|---|---|---|--------------------------------|----------------------------------|
|  | CASE I : WALL + WALL MOUNT OR TRAPPED AT SIDES (SHEET 2 OF 8)                       |   | CASE II : TRAPPED TOP/BOTTOM + SIDES (SHEET 5 OF 8) |                                |                                  |
|  |  |  |   |                                |                                  |
| DESIGN PRESSURE RATING (p.s.f.) AND CASE # | MAXIMUM UNIT WIDTH "W" (IN)   | MAXIMUM SPAN "L" (IN)   |   |                                | MINIMUM SEPARATION TO GLASS (IN) |
|  |   | W/O SIDE BRACKET  | W/ SIDE BRACKET                                     | INTERIOR MULLION TYPE REQUIRED |                                  |
| CASE I +50.0, -43.3                        | 36 1/2"   | 72 1/2"   | N/A   | A1                             | 2 1/2"                           |
| CASE I +62.0, -75.0                        | 36 1/2"   | N/A   | 83"   | A2                             | 2 3/8"                           |
| CASE II +62.0, -75.0                       | 36 1/2"   | N/A   | 84"   | A2                             | 2 3/8"                           |

**SCHEDULE # 2**

**LIMITATIONS FOR SINGLE AND MULTIPLE UNITS BAHAMA SHUTTER'S UNIT WIDTH (IN), SPAN L (IN) AND CORRESPONDING MAXIMUM DESIGN PRESSURE (p.s.f.) FOR THE INSTALLATION OF SIDE & SILL BRACKETS INTO CONCRETE & MASONRY BUILDINGS BY MEANS OF (2) 1/4" # x 7/8" RAWL CALK-IN ANCHORS \***

| MAXIMUM NEGATIVE DESIGN PRESSURE RATING (p.s.f.) | SINGLE UNITS            |          |          |          | MULTIPLE UNITS          |          |          |          |
|--|-------------------------|----------|----------|----------|-------------------------|----------|----------|----------|
|  | SIDE & SILL BRACKETS ** |          |          |          | SIDE & SILL BRACKETS ** |          |          |          |
|  | TO CONCRETE             |          | TO BLOCK |          | TO CONCRETE             |          | TO BLOCK |          |
|  | Max. "W"                | Max. "L" | Max. "W" | Max. "L" | Max. "W"                | Max. "L" | Max. "W" | Max. "L" |
| -55.7  | 42"                     | 96"      | 42"      | 96"      | 36 1/2"                 | 84"      | 36"      | 84"      |
| -65.0  | 42"                     | 96"      | 42"      | 96"      | 36 1/2"                 | 84"      | 36"      | 72"      |
| -75.0  | 42"                     | 96"      | 42"      | 96"      | 36 1/2"                 | 83"      | 31"      | 84"      |
| -83.0  | 42"                     | 96"      | 42"      | 96"      | N/A                     | N/A      | 36 1/2"  | 62"      |
| -100.0   | 42"                     | 96"      | 42"      | 63"      | N/A                     | N/A      | 27"      | 83"      |
|  |                         |          | 36"      | 73"      | N/A                     | N/A      | N/A      | N/A      |

\* FOR ELCO PANELMATES ((2) 1/4" # W/ 1 7/8" PENETRATION) USED AT SILL & SIDE BRACKETS FOR INSTALLATIONS INTO WOOD. SEE SCHEDULES # 1 & # 1A FOR SHUTTER SIZE.

\*\* IN ANY CASE, MAXIMUM "W" & "L" VALUES W/ CORRESPONDING DESIGN LOADS SHALL NOT EXCEED MAXIMUM VALUES INDICATED ON SCHEDULES # 1 & 1A.

**SCHEDULE # 3**

**MAXIMUM ANCHOR SPACING AT TOP FEMALE HINGES (B), (C), OR (D) AS WELL AS SILL ANGLE (Q) AT BOTTOM (AS APPLICABLE) FOR INSTALLATIONS INTO POURED CONCRETE HEADERS AND SILL \*\*\***

| DESIGN PRESSURE RATING (p. s. f.)            | SINGLE & MULTIPLE UNITS  |
|--|--------------------------|
|  | TOP & BOTTOM TO CONCRETE |
| ALL PRESSURES COVERED IN SCHEDULE # 1 & # 1A | 9" O. C.                 |

\*\*\* SEE SHEETS 6 & 7 OF 8 FOR ANCHOR SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

APPROVED AS COMPLYING WITH THE

SOUTH FLORIDA BUILDING CODE

DATE January 25, 2000

BY Helmut A. Mahr

PRODUCT CONTROL DIVISION

BUILDING CODE COMPLIANCE OFFICE

ACCEPTANCE NO. 99-1202-02

MIAMI-DADE COUNTY

*David*  
10/29/99

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|   |                |      |         |             |      |
|---|----------------|------|---------|-------------|------|
| ASSA / EXTRUDED BERTHA BAHAMA SHUTTER   | AS SHOWN SCALE |      |         |             |      |
| <b>GULFSTREAM ALUMINUM AND SHUTTER CORP.</b><br>(A.S.S.A # 16)<br>197 S.E. MONTEREY ROAD<br>STUART, FL 34994. | 10/29/99 DATE  |      |         |             |      |
|   | 99 - 326       |      |         |             |      |
|   | DRAWING No     |      |         |             |      |
| REV. No   | DESCRIPTION    | DATE | REV. No | DESCRIPTION | DATE |
| 1   | -              | -    | 3       | -           | -    |
| 2   | -              | -    | 4       | -           | -    |
| SHEET 8 OF 8  |                |      |         |             |      |