



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.miamidade/buildingcode

NOTICE OF ACCEPTANCE (NOA)

EFCO Corporation
1000 County Road
Monett, MD 65708

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 Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series S-660 Aluminum Single Hung Window- L.M.I.

APPROVAL DOCUMENT: Drawing No. **1024**, titled "S-660 Large Missile Impact Single Hung Window", sheets 1 through 5 of 5, dated 11/01/2000, with the revision "B", dated 11/27/2006, prepared by W.W. Schaefer Engineering & Consulting, P.A, signed and sealed by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large Missile Impact

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and 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 and renews NOA# 00-0207.14** consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Jaime D. Gascon, P.E.**



J. Gascon
6/13/07

NOA No 07-0604.02
Expiration Date: September 27, 2011
Approval Date: July 05, 2007
Page 1

EFCO Corporation

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturers die drawings and sections.
2. Drawing No. **1024**, titled "S-660 Large Missile Impact Single Hung Window", sheets 1 through 5 of 5, dated 11/01/2000, with the revision "B", dated 11/27/2006, prepared by W.W. Schaefer Engineering & Consulting, P.A, signed and sealed by Warren W. Schaefer, P.E.

B. TESTS

1. Test reports on
 - 1) Air Infiltration Test, per FBC, TAS202-94.
 - 2) Uniform Static Air Pressure Test, Loading perFBC, TAS202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94.
 - 4) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94.
 - 5) Small Missile Impact Test, per FBC, TAS 201-94.
 - 6) Cyclic Wind Pressure Loading Test, per FBC, TAS 203-94along with marked-up drawings and installation diagram of an EFCO S6600/S660 aluminum windows in a mulled configuration, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HTL-0046-0610-99** dated from 09/20/99 to 04/12/99, signed and sealed by Vinu J Abraham, P.E.
"Submitted under NOA#00-0207.14"

C. CALCULATIONS

1. Revised Anchor Calculations, dated 08/09/06, prepared by W.W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.

D. QUALITY ASSURANCE

1. Miami Dade Building Code Compliance Office (BCCO).

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **06-0216.06**, issued to Solutia, Inc. for their "Saflex / IIG PVB Interlayer", approved on 05/04/06 and expiring on 05/21/11.

F. STATEMENTS

1. Letter of no financial interest, issued by W.W. Schaefer Engineering & Consulting, P.A. on November 07, 2000, signed and sealed by Warren Schaefer, P.E.
"Submitted under NOA#00-0207.14"
2. Letter of Code Compliance, issued by W.W. Schaefer Engineering & Consulting, P.A. on July 25, 2005, signed and sealed by Warren Schaefer, P.E.

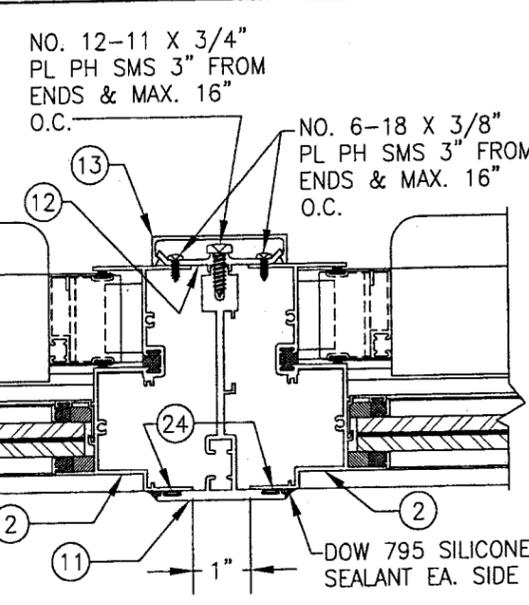
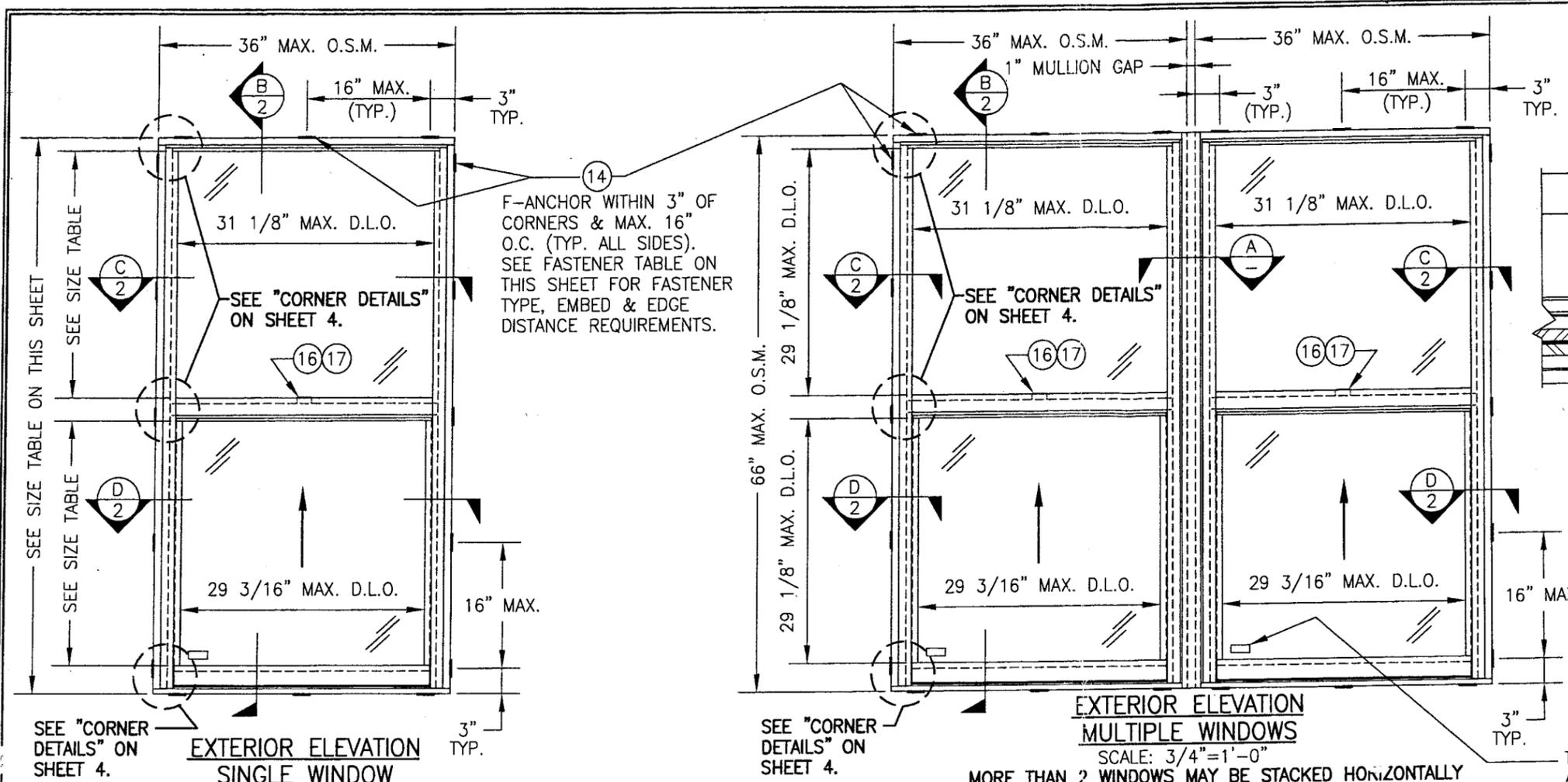
G. OTHER

1. None



Jaime D. Gascon, P.E.
Chief, Product Control Division
NOA No 07-0604.02

Expiration Date: September 27, 2011
Approval Date: July 05, 2007



FOR SINGLE HUNG WINDOW MULLED TO A PICTURE WINDOW, SEE DRAWING NO. 1025.

THE FOLLOWING LABEL SHALL BE PLACED AT THE INNER BOTTOM RIGHT CORNER OF THE WINDOW TO DISTINGUISH BETWEEN SMALL & LARGE MISSILE GLASS:

EFCO CORPORATION, MONETT MISSOURI
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
LARGE MISSILE IMPACT UNIT

O.S.M. = OUTSIDE FRAME MEASUREMENT

GENERAL NOTES

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN LOADS" TABLE.
2. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE DESIGNED & INSTALLED TO WITHSTAND WIND LOADS AS DETERMINED FOR EA. APPLICATION
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH FLORIDA BUILDING CODE PROTOCOLS TAS 201, 202 & 203 FOR LARGE MISSILE IMPACT WINDOWS.
5. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HIRICANE ZONES (HVHZ).
6. ALL FRAME ANCHORS SECURING WINDOW/DOOR FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
7. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2004 FLORIDA BUILDING CODE SECTION 2003.8.4.

WINDOW MAXIMUM SIZE TABLE (SINGLE WINDOWS ONLY)

| FRAME WIDTH | FRAME HEIGHT | TOP WINDOW D.L.O. | | BOTTOM WINDOW D.L.O. | |
|-------------|--------------|-------------------|----------|----------------------|----------|
| | | HORIZONTAL | VERTICAL | HORIZONTAL | VERTICAL |
| 24" | 99" | 19 1/8" | 45 5/8" | 17 3/16" | 45 5/8" |
| 27" | 88" | 22 1/8" | 40 1/8" | 20 3/16" | 40 1/8" |
| 30" | 79" | 25 1/8" | 35 5/8" | 23 3/16" | 35 5/8" |
| 33" | 72" | 28 1/8" | 32 1/8" | 26 3/16" | 32 1/8" |
| 36" | 66" | 31 1/8" | 29 1/8" | 29 3/16" | 29 1/8" |

NOTES: 1) ALL MULLED UNITS ARE LIMITED TO 66" TALL AS TESTED.
2) ALL WINDOWS ARE LIMITED TO 36" MAXIMUM WIDTH.

CLIP FASTENER REQUIREMENTS TABLE

| OPENING TYPE (SUBSTRATE) | (2) CLIP TO OPENING FASTENER TYPE | NO. FASTENERS PER CLIP INTO SUBSTRATE | MINIMUM EMBEDMENT | MINIMUM EDGE DIST. |
|--------------------------|-----------------------------------|---------------------------------------|-------------------|--------------------|
| WOOD | NO. 12 SMS SCREW | 3 | 1 1/8" | 1" |
| MIN. 18 GA. STUD | NO. 12 TEK SCREW | 3 | FULL | 1/2" |
| STRUCT. STEEL | NO. 12 TEK SCREW | 3 | FULL | 1/2" |
| CMU/CONCRETE | (1) 1/4" CONCRETE SCREW | 2 | 1 1/4" | 2" |

(1) CONCRETE SCREWS SHALL BE ELCO OR ITW RAMSET/RED HEAD TAPCONS, HILTI KWIK-CON II OR POWERS RAWL TAPPER (HARDENED STEEL OR S.S.).
(2) SEE F-ANCHOR #14 DETAIL ON SHEET 5 FOR CLIP SCREW POSITIONS WITHIN THE F-ANCHOR

ALLOWABLE DESIGN LOADS & IMPACT RATING (FOR SINGLE & MULLED UNITS)

| GLAZING DESCRIPTION | IMPACT RATING | ALLOWABLE PRESSURE | |
|--|---------------|--------------------|----------|
| | | POSITIVE | NEGATIVE |
| 1/4" HT. STR./0.09" SAFLEX PVB/1/4" HT. STR. | LARGE MISSILE | 80 PSF | 90 PSF |

LOAD TABLE NOTE:
1. ALL MULLED UNITS ARE LIMITED TO MAXIMUM HEIGHT OF 66".

PRODUCT REVISED as complying with the Florida Building Code
Acceptance No. 07-0604-02
Expiration Date 02/27/2011
By: *[Signature]*
Miami Dade Product Control Division

| | |
|---|--------------------|
| DRAWN BY: W.W.S. | CHECKED BY: W.W.S. |
| PLT: 1=16 | DATE: 11/01/00 |
| DATE: 07/25/05 | BY: WWS |
| REVISION DESCRIPTION: CHANGED GENERAL NOTES 4 & 5 TO STATE 2004 CODE COMPLIANCE | DATE: 11/27/06 |
| NO. A1 | BY: WWS |
| NO. B1 | DATE: 11/27/06 |

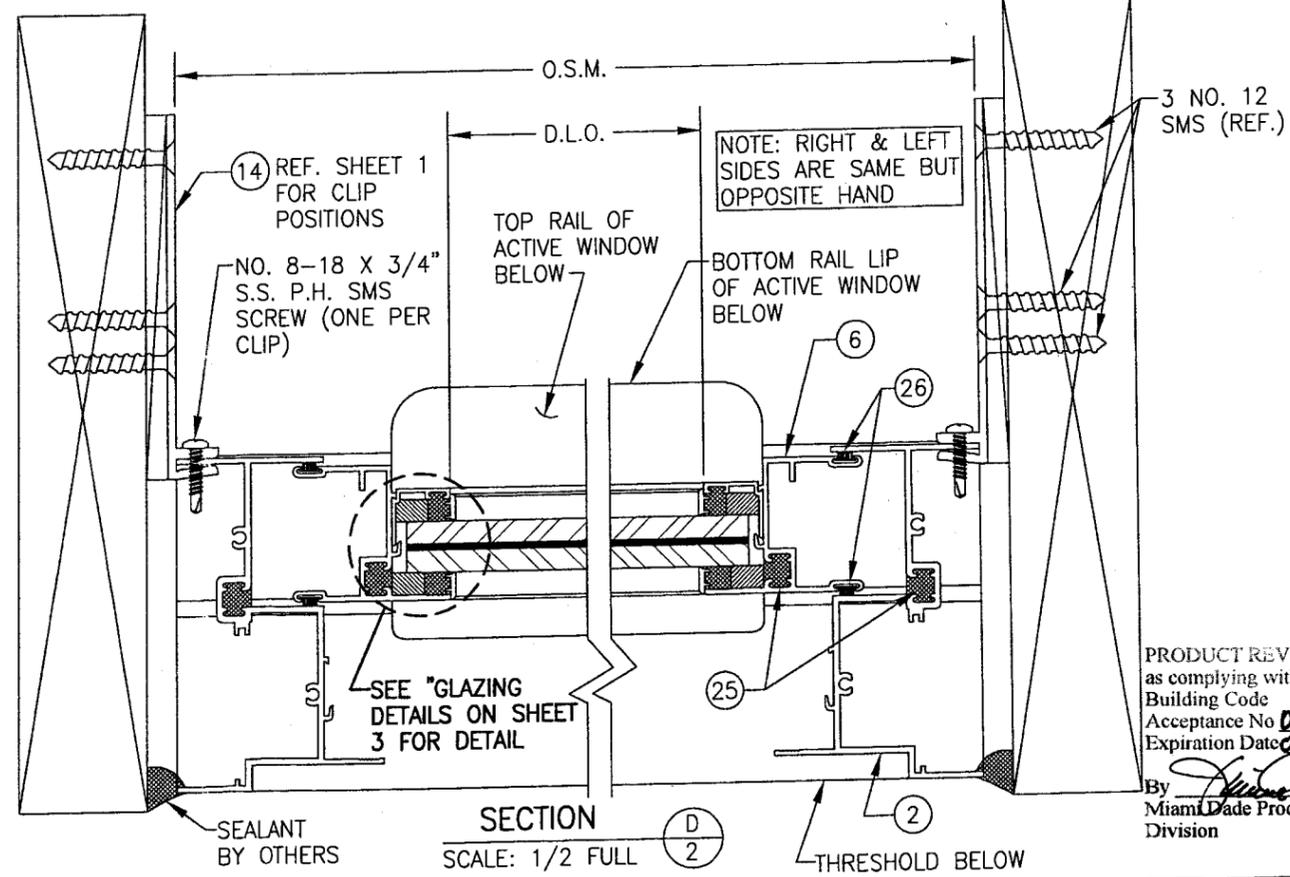
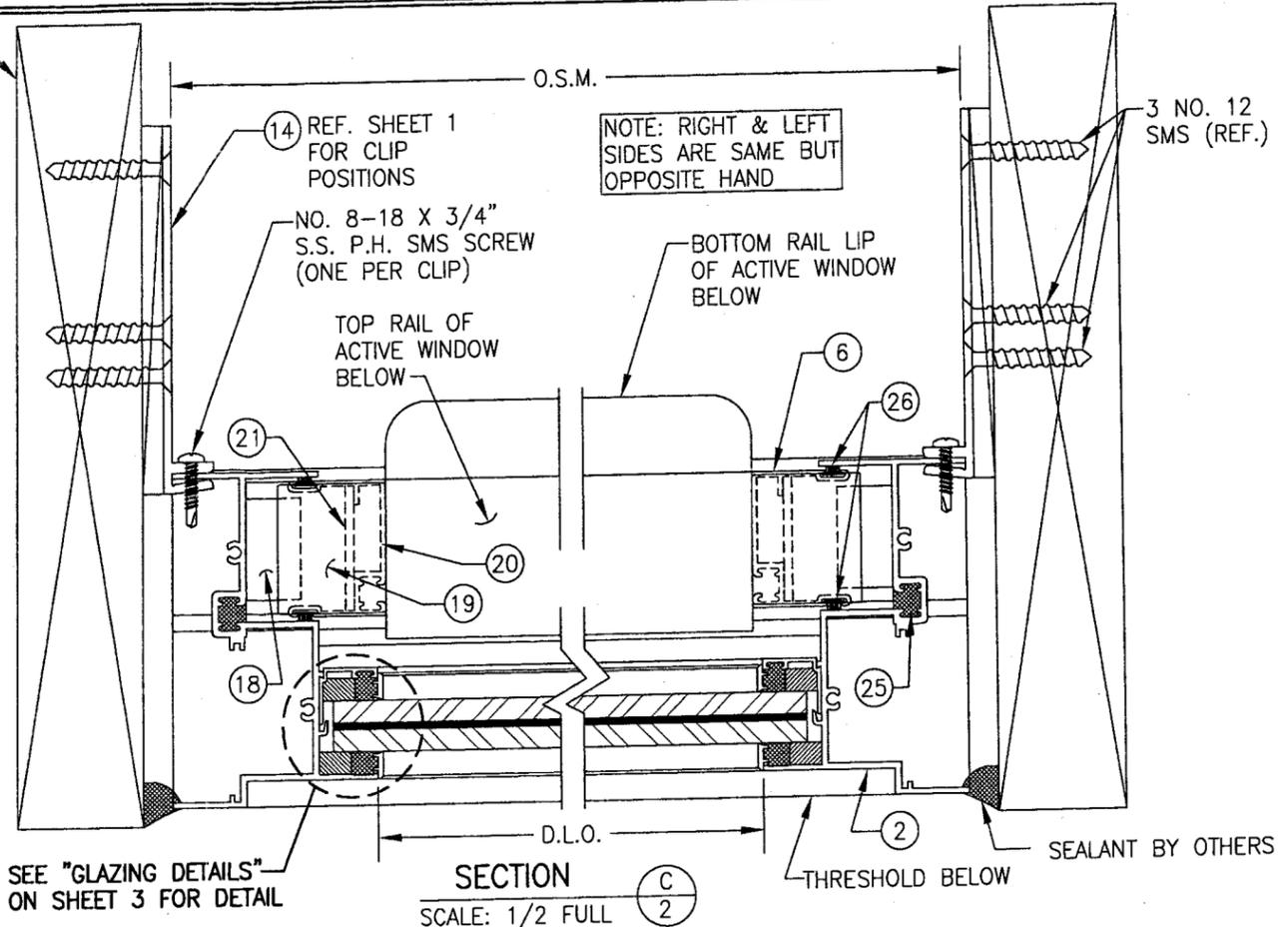
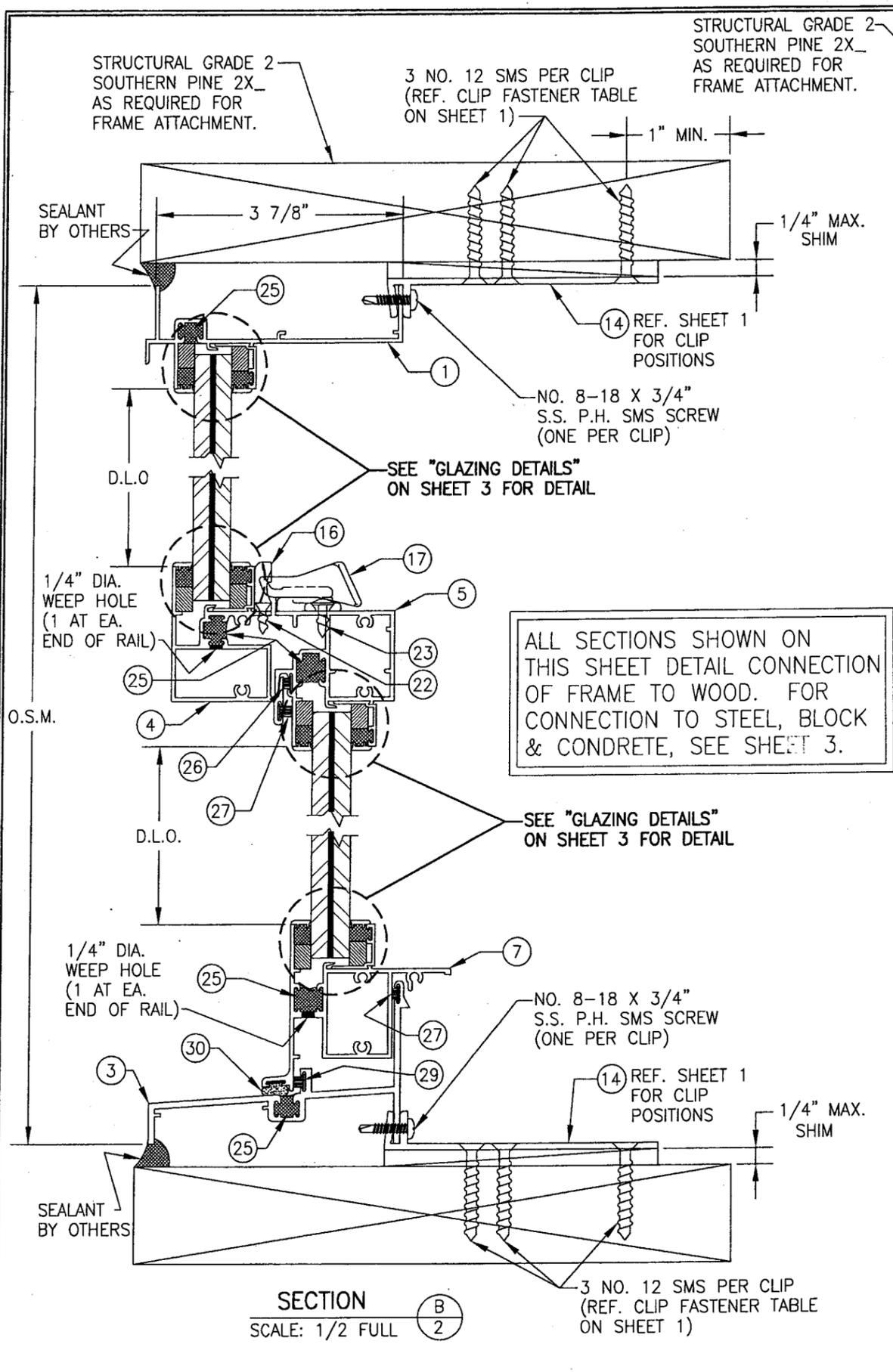
DRAWING TITLE: S-660 LARGE MISSILE IMPACT SINGLE HUNG WINDOW

MANUFACTURER: EFCO CORPORATION
1000 COUNTY ROAD, P.O. BOX 609
MONETT, MO 65708-0609
800-221-4169

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

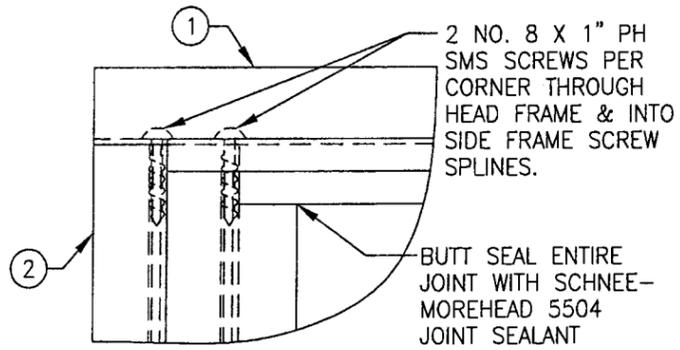
CERTIFICATION: NOV 27 2006
WARREN W. SCHAEFER, P.E.
P.E. NO. 44153

DRAWING NO.: 1024
REV.: B
SHEET NO.: 1 OF 5

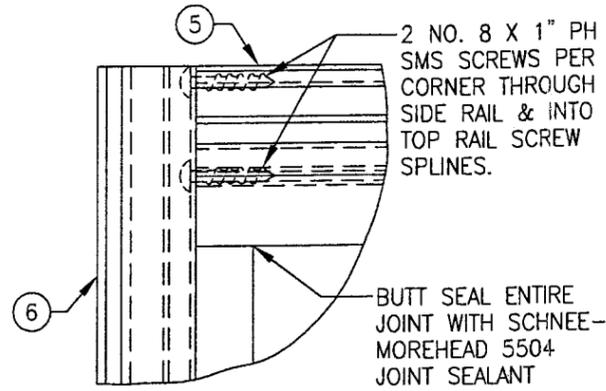


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|---|--|
| DRAWN BY: W.W.S. | CHECKED BY: W.W.S. |
| PLOT: 1=2 | DATE: 11/01/00 |
| DATE | |
| BY | |
| REVISION DESCRIPTION | |
| NO. | |
| DRAWING TITLE S-660 LARGE MISSILE IMPACT SINGLE HUNG WINDOW | |
| CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. | MANUFACTURER EFCO CORPORATION |
| 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903 | |
| 1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169 | |
| CERTIFICATION NOV 27 2006 | WARREN W. SCHAEFER, P.E. P.E. NO. 44135 |
| PRODUCT REVISED as complying with the Florida Building Code Acceptance No 07-0604.02 Expiration Date 09/27/2011 | |
| DRAWING NO. 1024 | REV. B |
| SHEET NO. 2 OF 5 | |

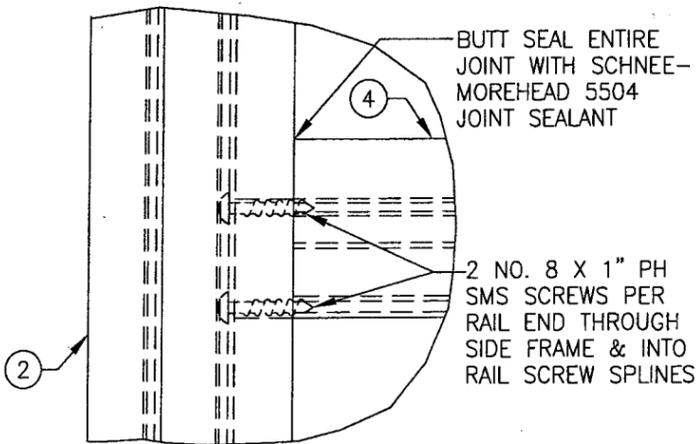
By *[Signature]*
Miami Dade Product Control Division



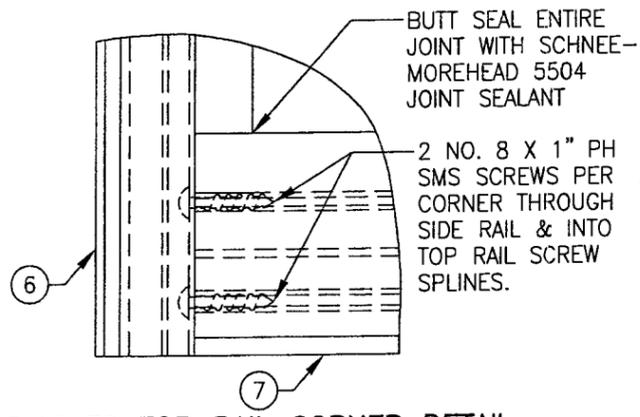
FRAME TOP CORNER DETAIL
OUTSIDE VIEW



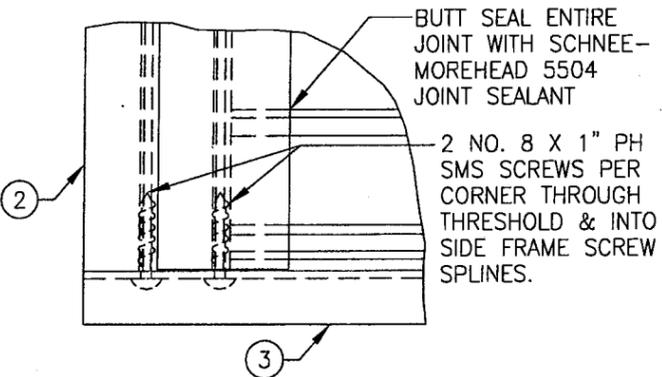
SIDE TO TOP RAIL CORNER DETAIL
BOTTOM ACTIVE WINDOW
OUTSIDE VIEW



BOTTOM RAIL OF TOP WINDOW
TO SIDE FRAME DETAIL
OUTSIDE VIEW



SIDE TO TOP RAIL CORNER DETAIL
BOTTOM ACTIVE WINDOW
OUTSIDE VIEW



THRESHOLD CORNER DETAIL
OUTSIDE VIEW

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No **07-0604.02**
Expiration Date **09/27/2011**

By *[Signature]*
Miami Dade Product Control
Division

| | |
|---------------------|-----------------------|
| DRAWN BY: W.W.S. | CHECKED BY: W.W.S. |
| PLOT: 1=2 | DATE: 11/01/00 |
| NO. | REVISION DESCRIPTION |
| DATE | BY |

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1000 COUNTY ROAD, P.O. BOX 609
MONETT, MO 65708-0609
800-221-4169

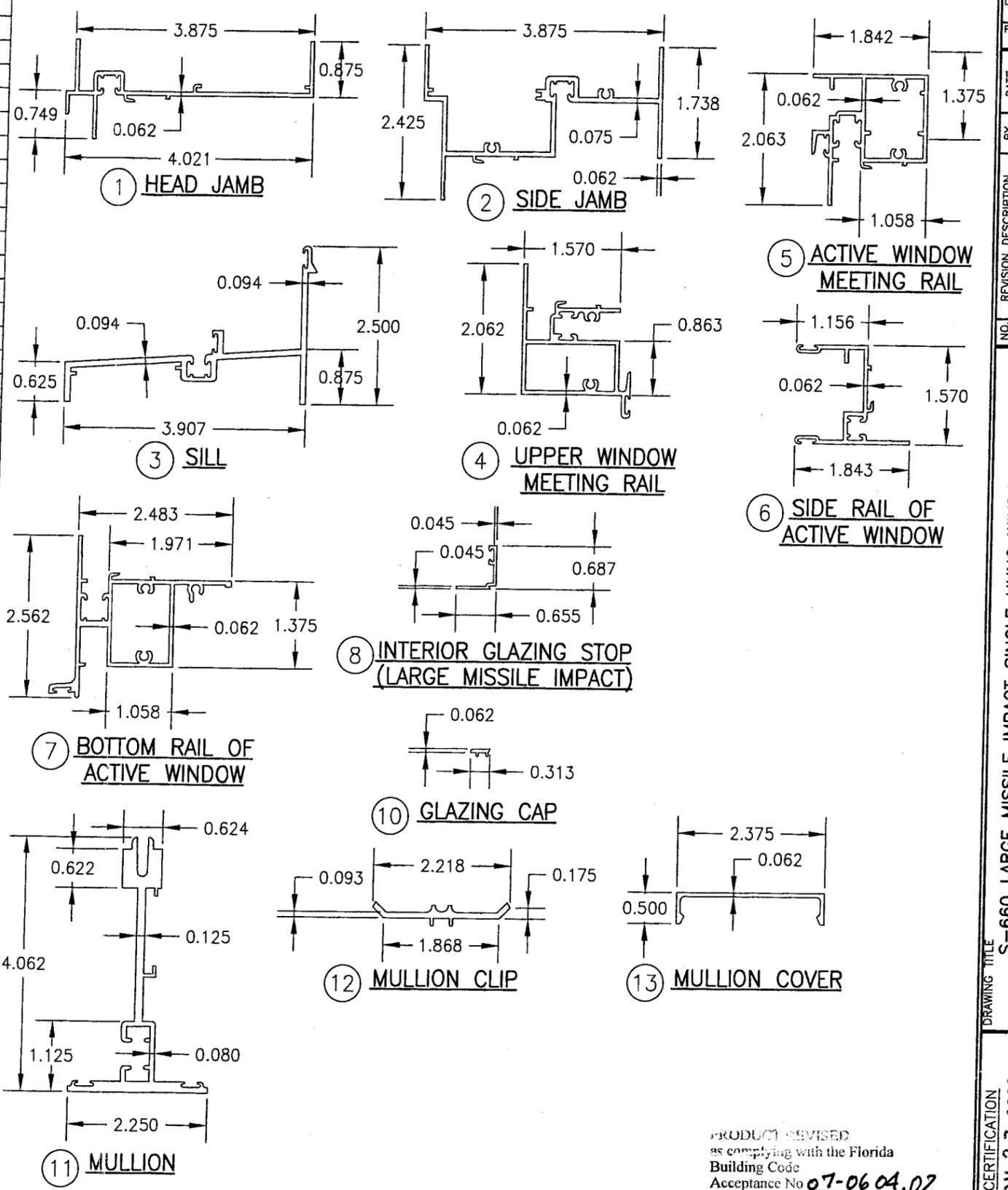
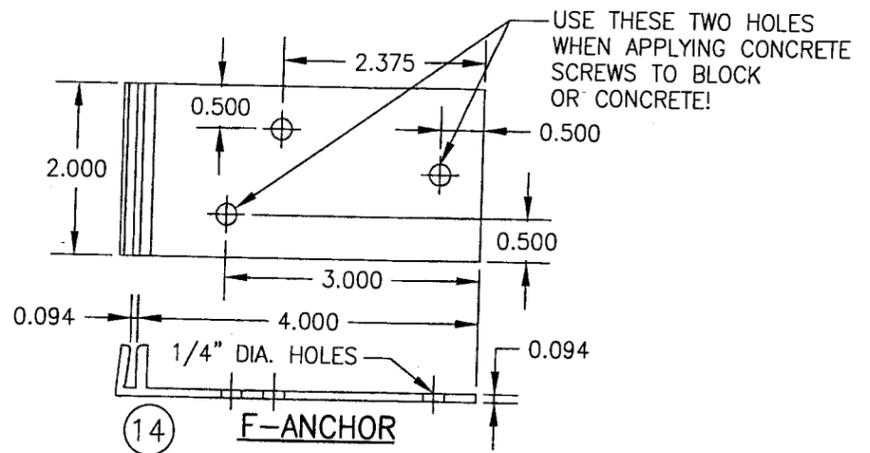
CONSULTANTS:
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

CERTIFICATION
NOV 27 2010

WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

| | |
|-------------|------|
| DRAWING NO. | REV. |
| 1024 | B |
| SHEET NO. | |
| 4 | OF 5 |

| ITEM # | PART | ITEM DESCRIPTION | MANUFACTURER/NOTES |
|------------------|-----------|--|---------------------------------------|
| PARTS | | | |
| 1 | ES97 | HEAD JAMB | EFCO; 6063-T6 ALUMINUM |
| 2 | ES98 | SIDE JAMB | EFCO; 6063-T6 ALUMINUM |
| 3 | 6020 | SILL | EFCO; 6063-T6 ALUMINUM |
| 4 | EN68 | UPPER WINDOW MEETING RAIL | EFCO; 6063-T6 ALUMINUM |
| 5 | E637 | ACTIVE WINDOW MEETING RAIL | EFCO; 6063-T6 ALUMINUM |
| 6 | E639 | ACTIVE WINDOW SIDE RAIL | EFCO; 6063-T6 ALUMINUM |
| 7 | 6543 | ACTIVE WINDOW BOTTOM RAIL | EFCO; 6063-T6 ALUMINUM |
| 8 | E349 | INT. GLAZING STOP (LG. MISSILE IMPACT) | EFCO; 6063-T6 ALUMINUM |
| 9 | - | - | - |
| 10 | LB00 | GLAZING CAP | FIBER REINFORCED NYLON |
| 11 | EG16 | MULLION | EFCO; 6063-T6 ALUMINUM |
| 12 | ED25 | MULLION CLIP | EFCO; 6063-T6 ALUMINUM |
| 13 | ED24 | MULLION COVER | EFCO; 6063-T6 ALUMINUM |
| 14 | KA23/1880 | F-ANCHOR | EFCO; 6063-T6 ALUMINUM |
| 15 | - | OPEN | - |
| HARDWARE | | | |
| 16 | HK87 | KEEPER | BRONZE CRAFT |
| 17 | HL86 | LATCH | BRONZE CRAFT |
| 18 | - | SASH BALANCE | BALANCE SYSTEMS |
| 19 | HGB9 | BALANCE RETAINER | EASLY PLASTICS |
| 20 | FVG5 | BALANCE RETAINER SHIM | CENTRAL PLASTICS |
| 21 | HMW7 | BALANCE SPACER | EASLY PLASTICS |
| FASTENERS | | | |
| 22 | - | NO. 6 X 3/8 FH SMS | FASTENS KEEPER TO RAIL (2 PER KEEPER) |
| 23 | - | NO. 8 X 3/8 PH SMS | FASTENS LATCH TO RAIL (2 PER LATCH) |
| SEALS & SEALANTS | | | |
| 24 | WVB4 | CONT. VINYL BULB SEAL | CENTRAL PLASTICS |
| 25 | - | POLYURETHANE SEALANT | P.R.C. |
| 26 | WF01 | PB-7515-270 WEATHER STRIPPING | SCHLEGEL |
| 27 | WW78 | PB-8515-270 WEATHER STRIPPING | SCHLEGEL |
| 28 | - | OPEN | - |
| 29 | - | PB-7522-270 WEATHER STRIPPING | SCHLEGEL |
| 30 | WQ06 | Q-LON WEATHER STRIP | SCHLEGEL |
| 31 | - | OPEN | - |
| 32 | - | 3/16 FOAM TAPE | NORTON |
| 33 | - | DOW 995 SILICONE | DOW CORNING |



| | |
|---------------------|-----------------------|
| DRAWN BY: W.W.S. | CHECKED BY: W.W.S. |
| PLOT: 1=1 | DATE: 11/01/00 |
| NO. | REVISION DESCRIPTION |
| | |
| | |

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Miami Date Product Control Division

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| DRAWING NO. 1024 | REV. B |
| SHEET NO. 5 | OF 5 |