



**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) 372-6339

**NOTICE OF ACCEPTANCE (NOA)**

[www.maimidade.gov/buildingcode](http://www.maimidade.gov/buildingcode)

**EFCO Corporation**  
**1000 County Road**  
**Monett, MO 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 "810-I" Aluminum Project Out Window – S.M.I.**

**APPROVAL DOCUMENT:** Drawing No. 1575, titled "Series 810-I Small Missile Impact Fixed/Project Out Window", sheets 1 through 6 of 6, dated 2/11/08, 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 Revision stamp with the Notice of Acceptance number and Expiration date by the Miami-Dade County Product Control Division.

**MISSILE IMPACT RATING: Small Missile Impact Resistant**

**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" or the Product Control Seal, 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 # **02-0410.03** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Manuel Perez, P.E.**



**NOA No. 08-0225.04**  
**Expiration Date: November 07, 2012**  
**Approval Date: March 20, 2008**  
**Page 1**

**EFCO Corporation**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No. **1575**, titled "Series 810-I Small Missile Impact Fixed/Project Out Window", sheets 1 through 6 of 6, dated 02/11/08, 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) Uniform Static Air Pressure Test, Loading per SFBCPA 202-94  
2) Large Missile Impact Test per SFBC, PA 201-94  
3) Cyclic Wind Pressure Loading per SFBC, PA 203-94  
along with marked-up drawings and installation diagram of an aluminum project out window (spec.#7), prepared by Hurricane Test Laboratory, Test Report No. **HTL 0046-1116-01**, dated 11/26/01, signed and sealed by Vinu J. Abraham, P.E.  
*(Submitted under NOA# 02-0410.03)*
2. Test reports on: 1) Air Infiltration Test, per SFBC, PA 202-94  
2) Uniform Static Air Pressure Test, Loading per SFBC, PA 202-94  
3) Water Resistance Test, per SFBC, PA 202-94  
4) Small Missile Impact Test per SFBC, PA 201-94  
5) Cyclic Wind Pressure Loading per SFBC, PA 203-94  
6) Forced Entry Test, per SFBC 3603.2 (b) and PA 202-94  
along with marked-up drawings and installation diagram of an aluminum project out window (spec. #1,2,3,4,5,7) prepared by Hurricane Test Laboratory, Test Report No. **0046-0101-02**, dated 12/26/01, signed and sealed by Vinu J. Abraham, P.E.  
*(Submitted under NOA# 02-0410.03)*

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with FBC-2004, prepared by W.W. Schaefer Engineering & Consulting, P.A., dated 2/19/08, signed and sealed by Warren W. Schaefer, P.E.  
**Complies with ASTM E1300-02**

**D. QUALITY ASSURANCE**

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

  
Manuel Perez, P.E.  
Product Control Examiner

NOA No. 08-0225.04  
Expiration Date: November 07, 2012  
Approval Date: March 20, 2008

**EFCO Corporation**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**E. MATERIAL CERTIFICATIONS**

1. Notice of Acceptance No. **06-0216.06** issued to Solutia Inc. for their “**Saflex III** Clear or colored Interlayer” dated 05/04/06, expiring on 05/21/11.

**F. STATEMENTS**

1. Statement letter of conformance, dated 02/19/08, signed and sealed by Warren Schaefer, P.E.
2. Statement letter of no financial interest, dated 02/19/08, signed and sealed by Warren Schaefer, P.E.
3. Laboratory compliance letter for Test Report no. **HTL01085** issued by Hurricane Test Laboratory, dated 3/15/02, signed and sealed by Vinu J. Abraham, P.E.  
*(Submitted under NOA# 02-0410.03)*

**G. OTHER**

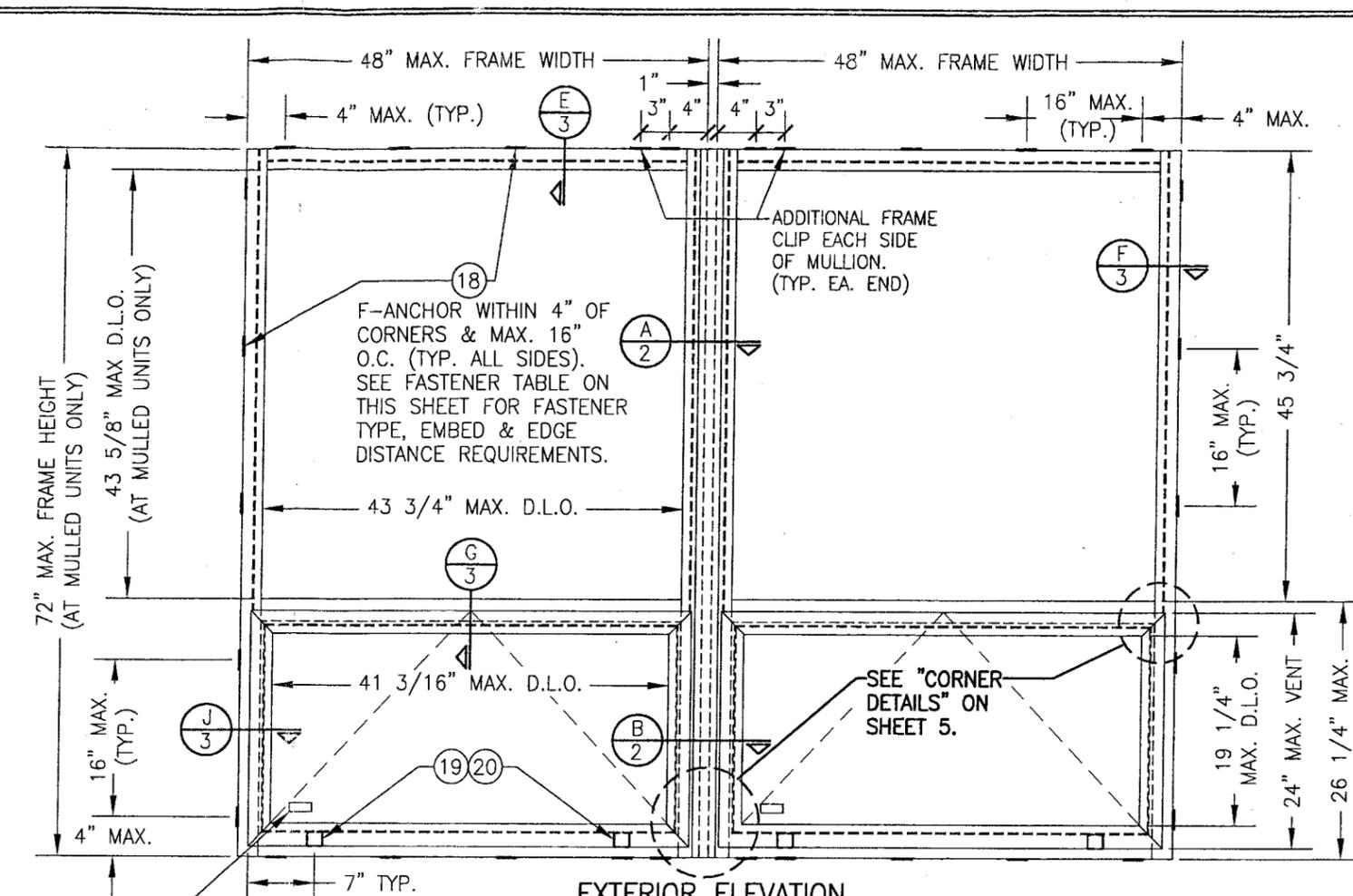
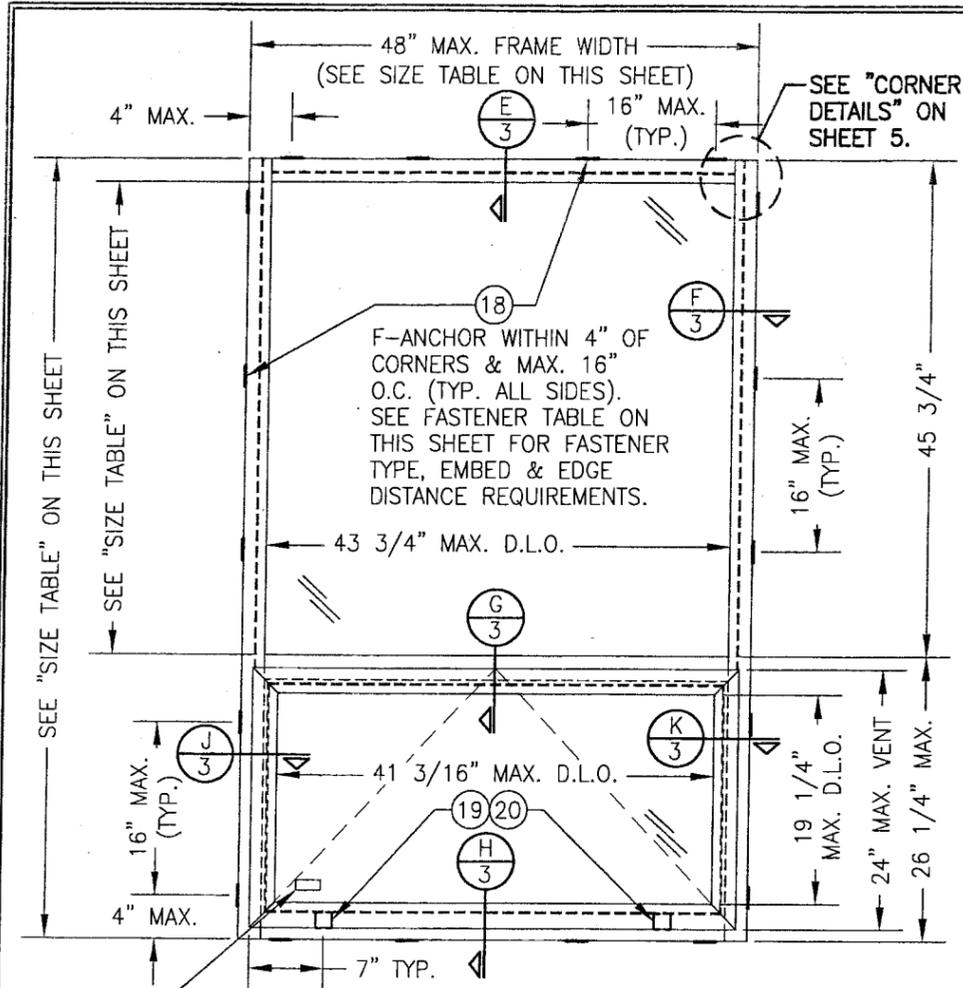
1. Notice of Acceptance No. **02-0410.03**, issued to EFCO Corporation for their Series “810-I” Aluminum **Project Out** Window, approved on 11/07/02 and expiring on 11/07/07.

  
Manuel Pérez, P.E.  
Product Control Examiner

NOA No. 08-0225.04

Expiration Date: November 07, 2012

Approval Date: March 20, 2008



**EXTERIOR ELEVATION  
SINGLE FIXED/PROJECT OUT WINDOW**  
SCALE: 3/4"=1'-0"

**EXTERIOR ELEVATION  
FIXED/PROJECT OUT WINDOW MULLIONED TO FIXED/PROJECT OUT WINDOW**  
SCALE: 3/4"=1'-0"  
MORE THAN 2 WINDOWS MAY BE STACKED HORIZONTALLY

THE FOLLOWING LABEL SHALL BE PLACED AT THE INNER BOTTOM RIGHT CORNER OF THE WINDOW:

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

**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(S).
2. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL 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 THE 2004 & 2007 FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR SMALL MISSILE IMPACT WINDOWS.
5. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2004 & 2007 FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. WHEN GLAZED FOR SMALL MISSILE IMPACT THESE WINDOWS MAY NOT BE INSTALLED AT ELEVATIONS BELOW 30 FT. ABOVE GRADE WITHOUT AN APPROVED SHUTTER.
7. ALL ANCHORS SHALL BE INSTALLED AS SPECIFIED ON THESE DRAWINGS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
8. 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.
9. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2004 & 2007 FLORIDA BUILDING CODE SECTION 2003.8.4.
10. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE & GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  SHALL BE USED.
11. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR WOOD SCREW DESIGN.
12. ALL SUBSTRATE SHALL HAVE THE FOLLOWING MINIMUM REQUIREMENTS.
  - a) ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
  - b) ALL WOOD SUBSTRATE SHALL BE MIN.  $G = 0.55$  DENSITY.
  - c) ALL METAL STUD SUBSTRATE SHALL BE MIN. 18 GA.  $F_y = 33$  ksi.
  - d) ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GA.  $F_y = 36$  ksi.

**ALLOWABLE DESIGN LOAD**

POSITIVE	NEGATIVE
90 PSF	100 PSF

**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"	120"	19 3/4"	91 5/8"	17 3/16"	19 1/4"
30"	115"	25 3/4"	86 5/8"	23 3/16"	19 1/4"
36"	96"	31 3/4"	67 5/8"	29 3/16"	19 1/4"
42"	82"	37 3/4"	53 5/8"	35 3/16"	19 1/4"
48"	72"	43 3/4"	43 5/8"	41 3/16"	19 1/4"

NOTES: 1) ALL MULLIED UNITS ARE LIMITED TO 72" TALL AS TESTED.  
2) ALL WINDOWS ARE LIMITED TO 48" MAXIMUM WIDTH.

**CLIP FASTENER REQUIREMENTS TABLE**

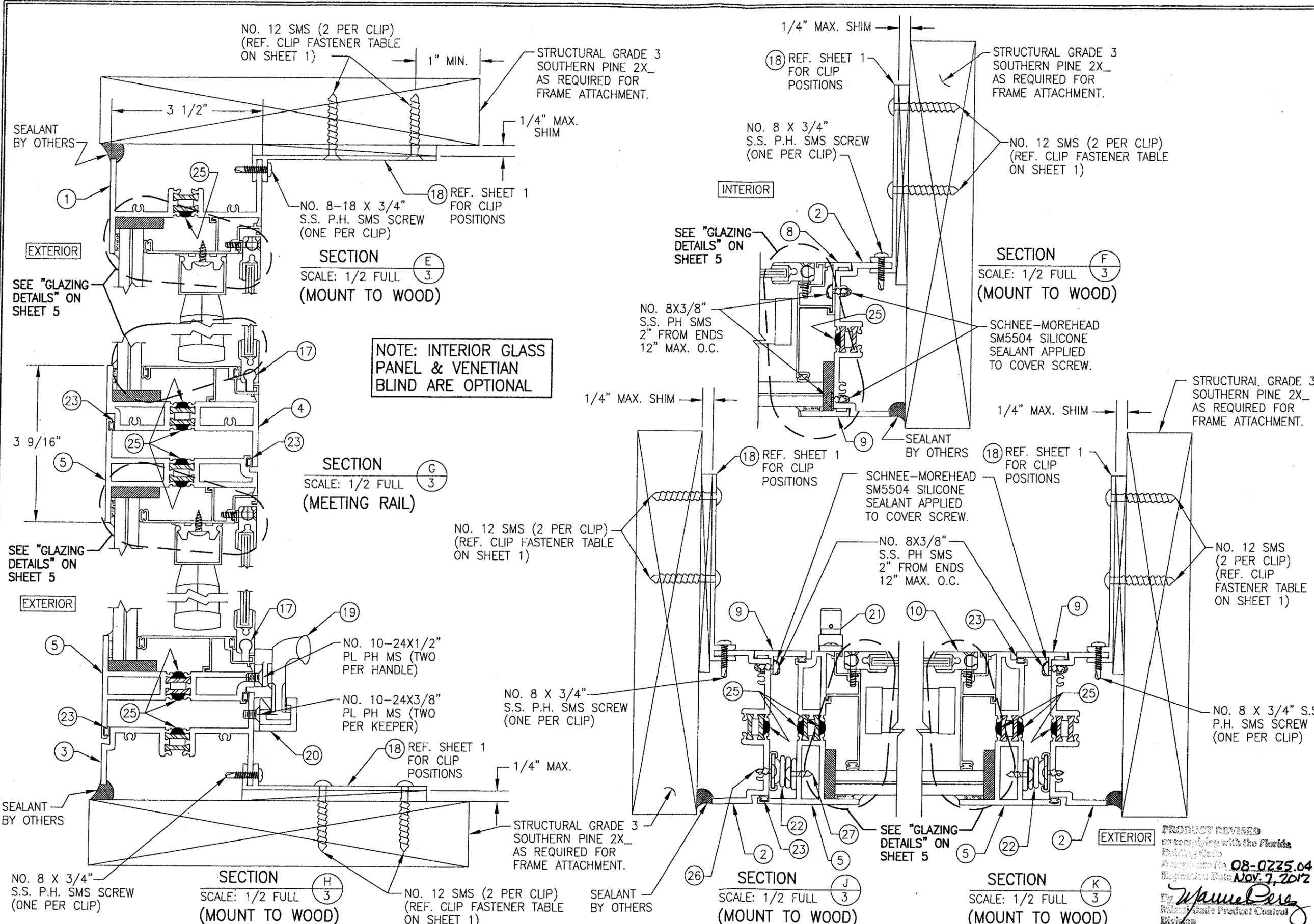
OPENING TYPE (SUBSTRATE)	CLIP TO OPENING FASTENER TYPE	NO. FASTENERS PER CLIP INTO SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
WOOD	NO. 12 SMS SCREW	2	1 3/8"	1"
MIN. 18 GA. STUD	NO. 12 TEK SCREW	2	FULL	1/2"
MIN. 12 GA. STRUCTURAL STEEL	NO. 12 TEK SCREW	2	FULL	1/2"
CMU/CONCRETE	(1) 1/4" CONCRETE SCREW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

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. **08-0275.04**  
Expiration Date **NOV. 7, 2012**  
By *Manuel Pera*  
Miami Dade Product Control Division

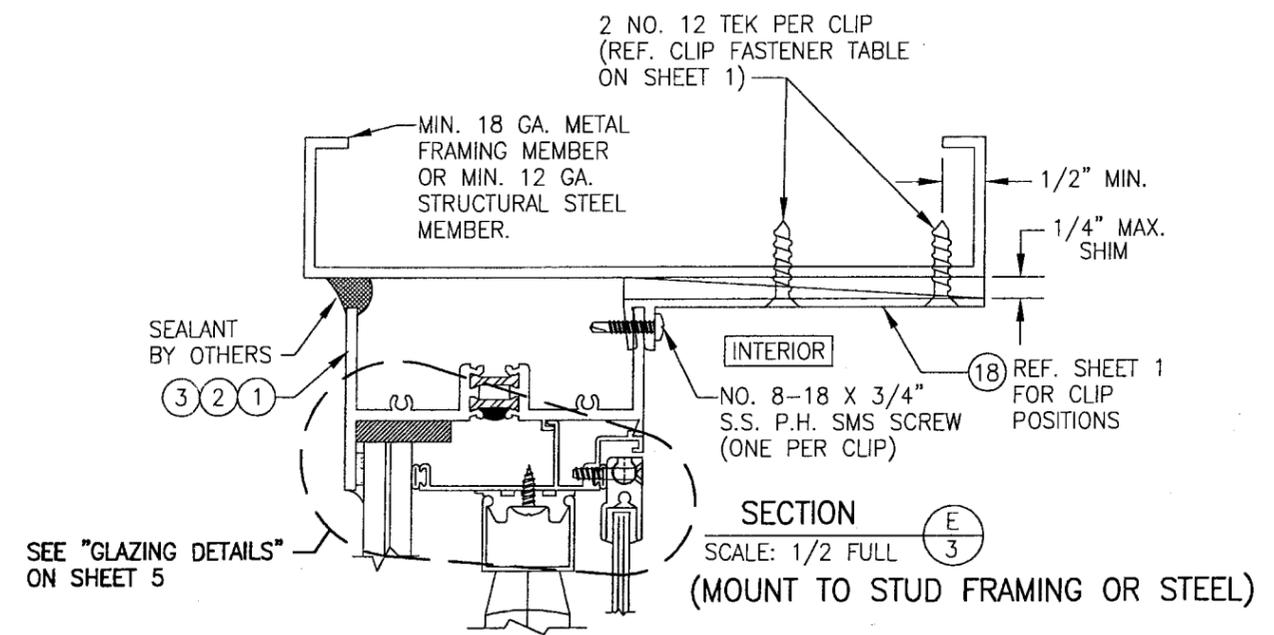
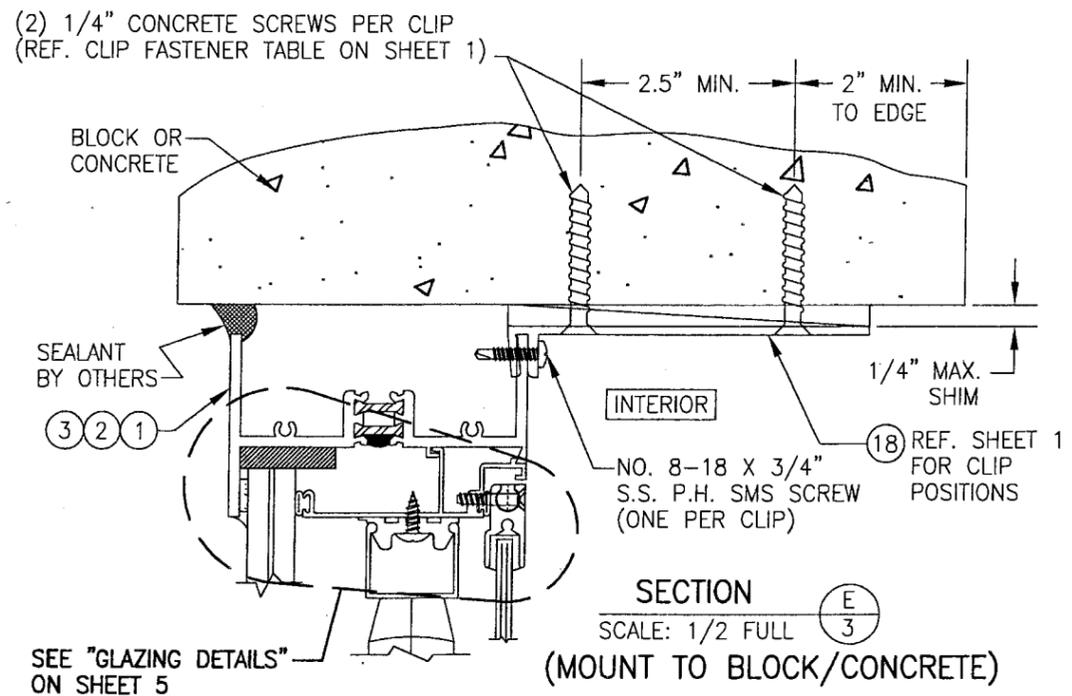
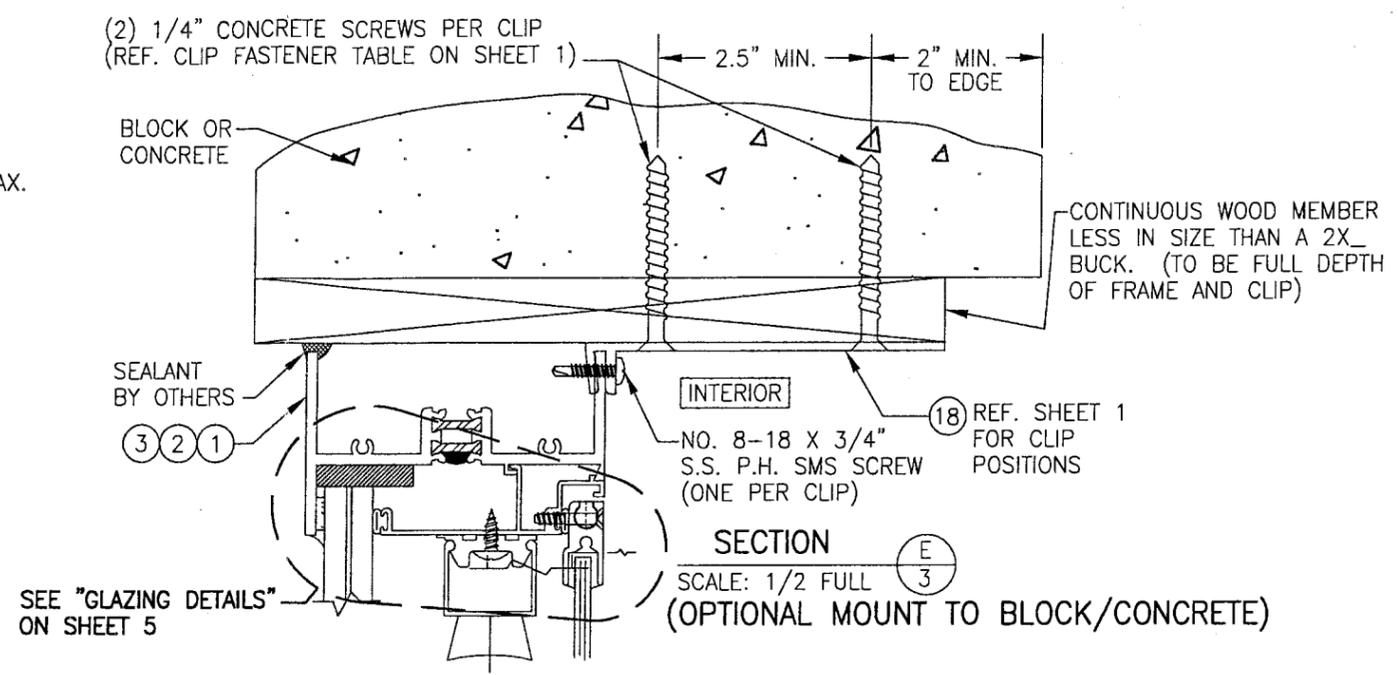
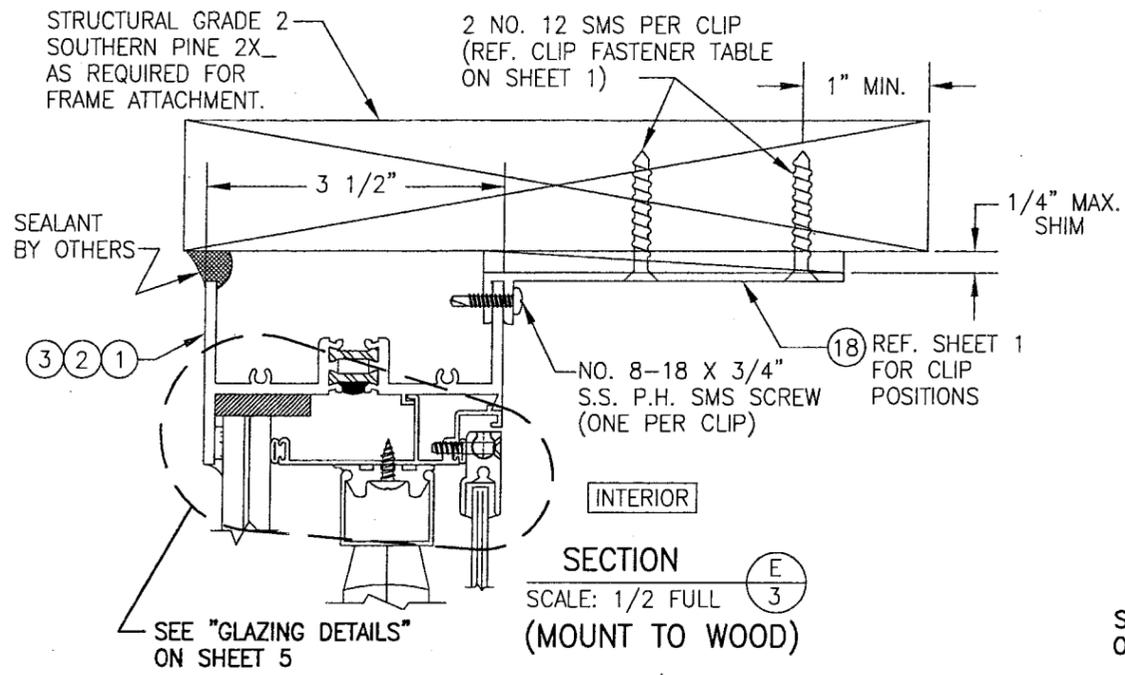
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PLOT: 1=16		DATE: 02/11/08	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: <b>SERIES 810-1 SMALL MISSILE IMPACT FIXED/PROJECT OUT WINDOW</b>			
CONSULTANTS: <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b>		MANUFACTURER: <b>EFCO CORPORATION</b>	
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: <b>FEB 20 2008</b>	DRAWING NO. <b>1575</b>	REV.	
	SHEET NO. <b>1</b>		OF <b>6</b>





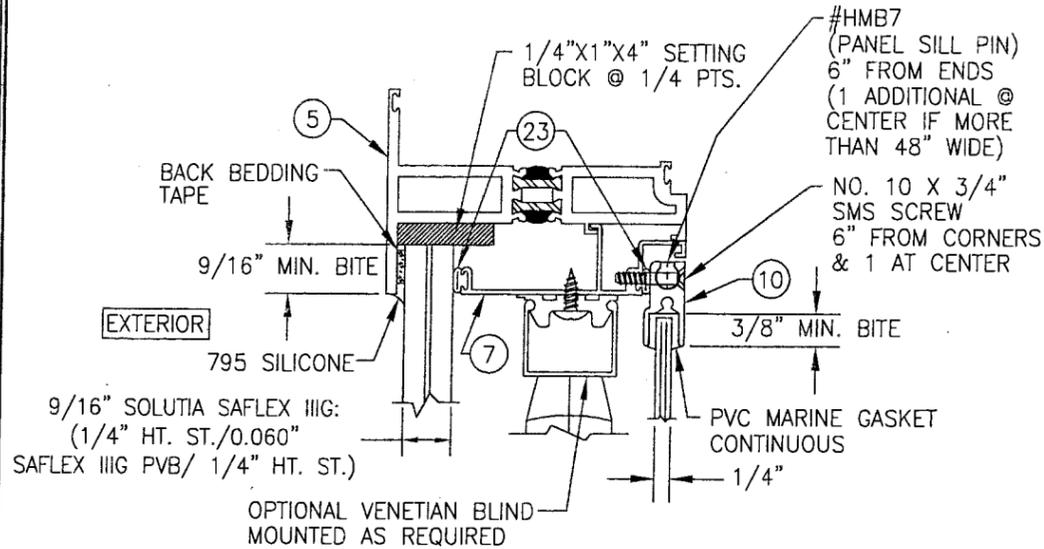
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PLOT: 1=2	DATE: 02/11/08
NO.	REVISION DESCRIPTION
DATE	BY
DRAWING TITLE: SERIES 810-1 SMALL MISSILE IMPACT FIXED/PROJECT OUT WINDOW	
MANUFACTURER: EFCO CORPORATION 1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169	
CONSULTANTS: W. SCHAEFER 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: FEB 20 2008 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1575	REV.
SHEET NO. 3 OF 6	

PRODUCT REVISED  
to comply with the Florida  
Building Code  
Amendment No. 08-0225.04  
Expiration Date Nov. 7, 2012  
By *Warren W. Schaefer*  
Reliance Product Control  
Division

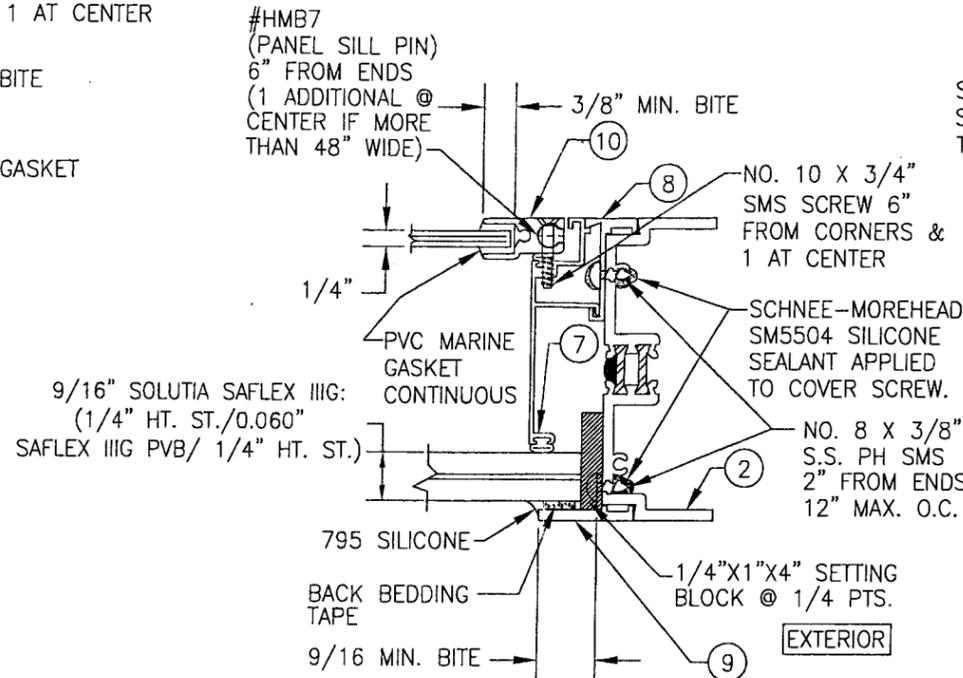


PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Approved by 08-0225.04  
 Nov. 7, 2012  
*Manuel Perez*

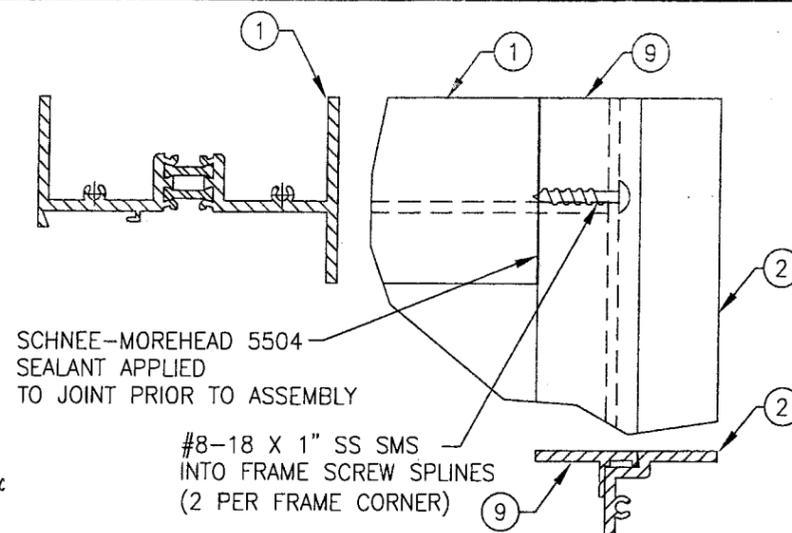
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 02/11/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE: SERIES 810-1 SMALL MISSILE IMPACT FIXED/PROJECT OUT WINDOW MANUFACTURER: EFCO CORPORATION	
CONSULTANT'S: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169	
CONSULTANT'S: 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
CERTIFICATION	
FEB 20 2000	
DRAWING NO.	REV.
1575	
SHEET NO.	
4	OF 6



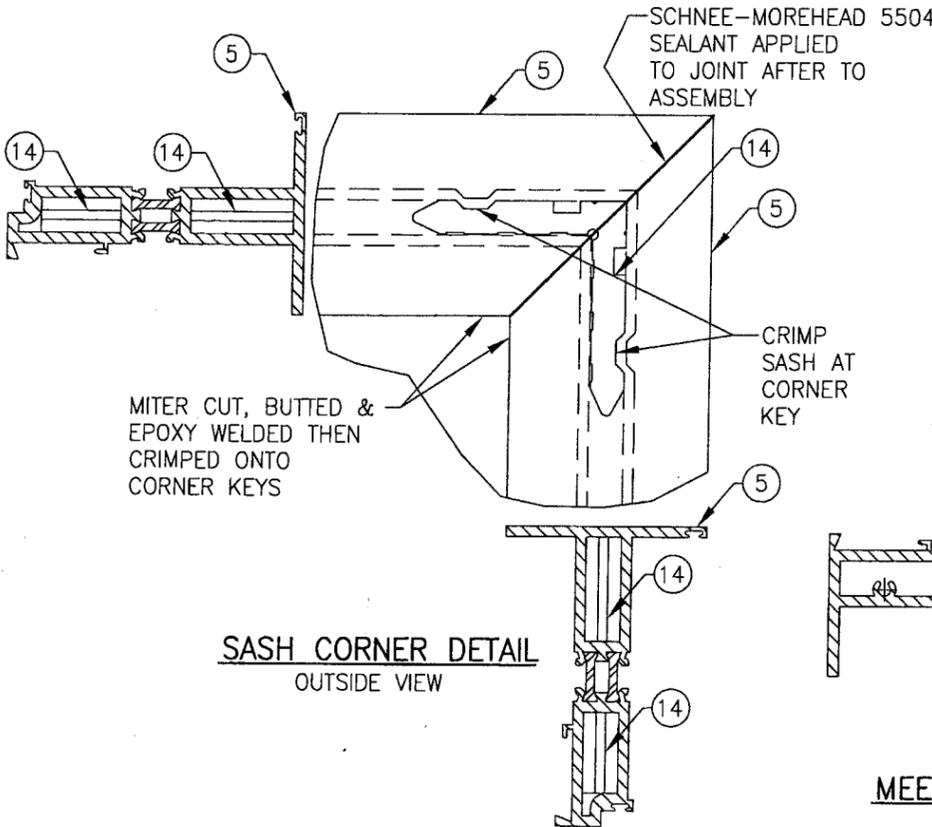
**PROJECT OUT GLAZING DETAIL**



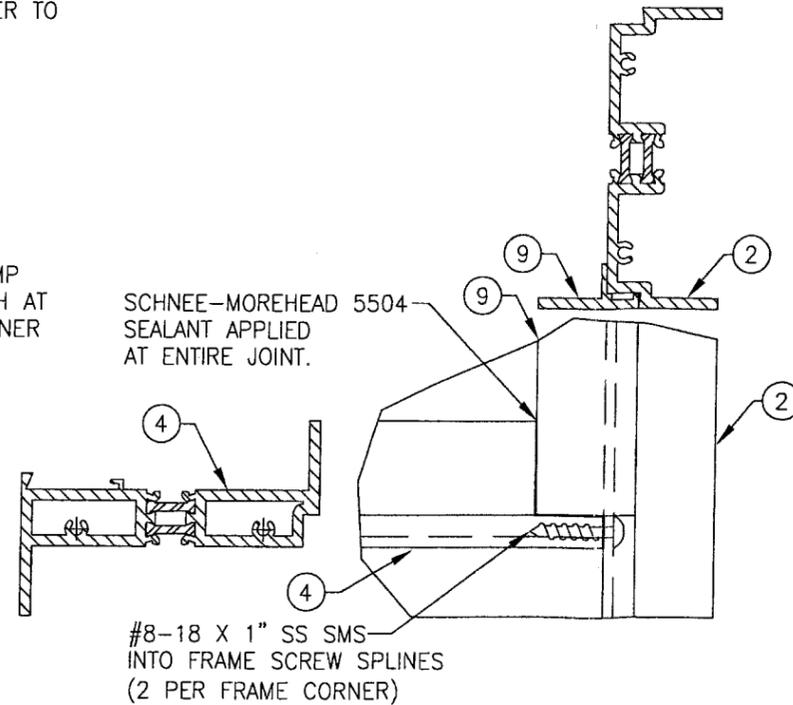
**FIXED GLAZING DETAIL**



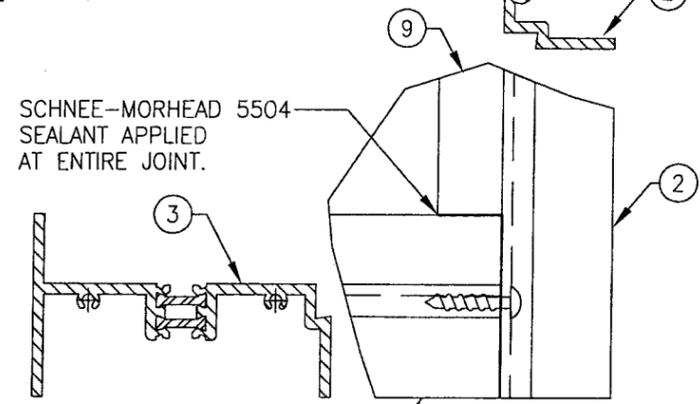
**FRAME TOP CORNER DETAIL**  
OUTSIDE VIEW



**SASH CORNER DETAIL**  
OUTSIDE VIEW



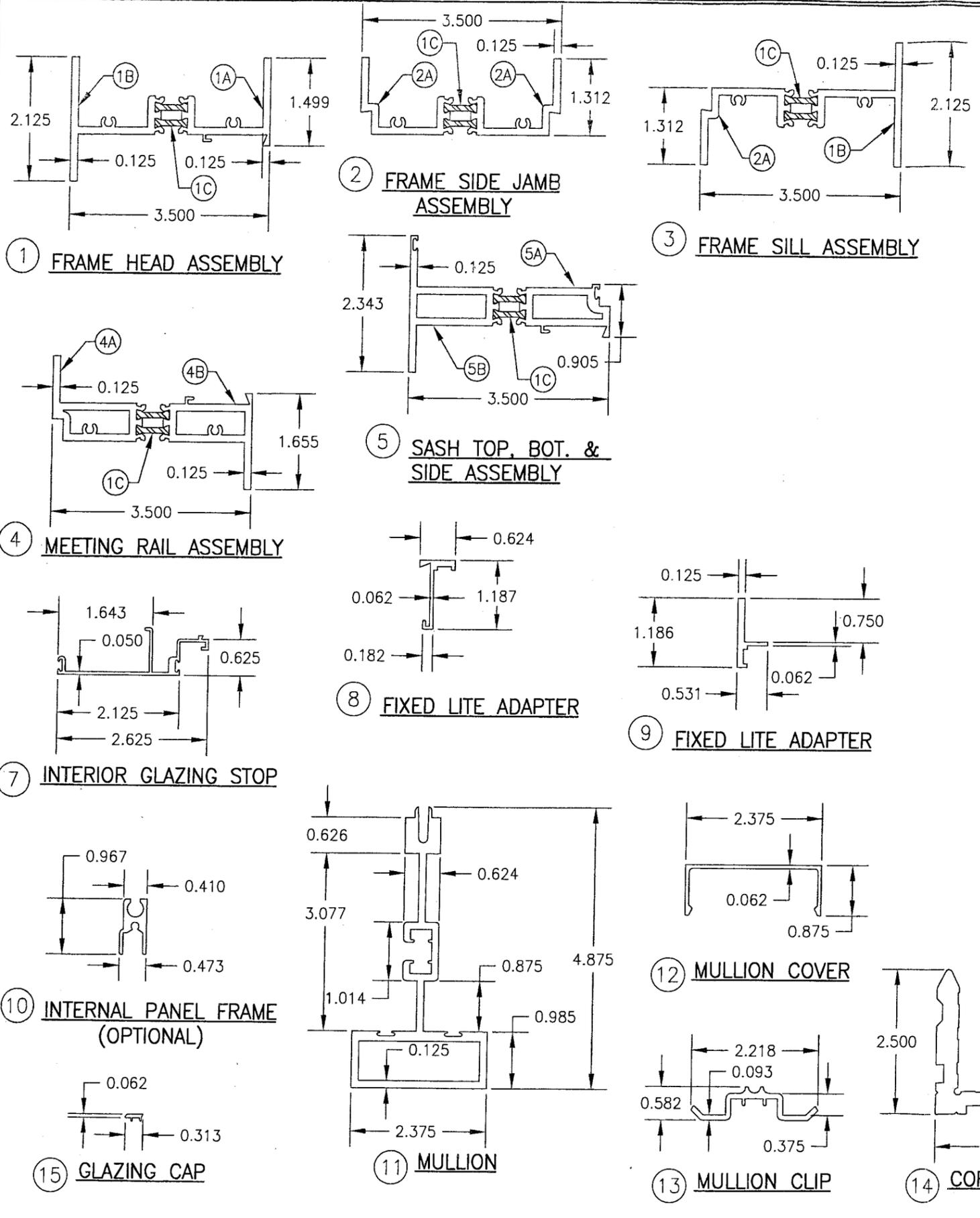
**MEETING RAIL END INTERSECTION DETAIL**  
OUTSIDE VIEW



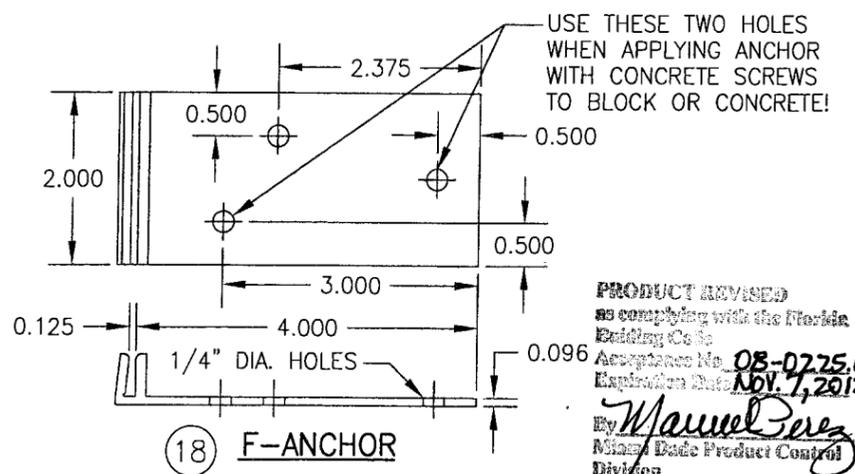
**FRAME BOTTOM CORNER DETAIL**  
OUTSIDE VIEW

PRODUCT REVISED as consultation with the Florida Building Code  
 Application No. **08-0225.04**  
 Expiration Date **Nov 7, 2012**  
*Manuel Perez*

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 02/11/08
NO.	REVISION DESCRIPTION
DATE	BY
DRAWING TITLE <b>SERIES 810-1 SMALL MISSILE IMPACT FIXED/PROJECT OUT WINDOW</b> CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
MANUFACTURER <b>EFCO CORPORATION</b> 1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169	
CERTIFICATION <b>FEB 20 2000</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. <b>1575</b>	REV.
SHEET NO. <b>5</b>	OF <b>6</b>



ITEM #	PART	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS			
1	1B02	FRAME HEAD ASSEMBLY	EFCO; 6063-T6 ALUMINUM
1A	8019	EXTERIOR FRAME MEMBER	EFCO; 6063-T6 ALUMINUM
1B	8018	INTERIOR FRAME MEMBER	EFCO; 6063-T6 ALUMINUM
1C	LAA3	INSULBAR STRUT (2 PER)	FIBER REINFORCED NYLON
2	1B07	FRAME SIDE JAMB ASSEMBLY	EFCO; 6063-T6 ALUMINUM
2A	8020	INTERIOR & EXTERIOR JAMB MEMBER	EFCO; 6063-T6 ALUMINUM
3	1B05	FRAME SILL ASSEMBLY	EFCO; 6063-T6 ALUMINUM
4	1B21	FRAME MEETING RAIL ASSEMBLY	EFCO; 6063-T6 ALUMINUM
4A	8256	EXTERIOR FRAME MEETING RAIL MEMBER	EFCO; 6063-T6 ALUMINUM
4B	8257	INTERIOR FRAME MEETING RAIL MEMBER	EFCO; 6063-T6 ALUMINUM
5	1B28	SASH TOP, BOTTOM & SIDE ASSEMBLY	EFCO; 6063-T6 ALUMINUM
5A	8503	INTERIOR SASH RAIL	EFCO; 6063-T6 ALUMINUM
5B	8504	EXTERIOR SASH RAIL	EFCO; 6063-T6 ALUMINUM
7	2097	INT. GLAZING STOP	EFCO; 6063-T6 ALUMINUM
8	8861	FIXED LITE ADAPTER	EFCO; 6063-T6 ALUMINUM
9	8862	VENT ADAPTER	EFCO; 6063-T6 ALUMINUM
10	ER65	INTERIOR PANEL FRAME (OPTIONAL)	EFCO; 6063-T6 ALUMINUM
11	1303	MULLION	EFCO; 6063-T6 ALUMINUM
12	EG79	MULLION COVER	EFCO; 6063-T6 ALUMINUM
13	EG78	MULLION CLIP	EFCO; 6063-T6 ALUMINUM
14	2878	SASH CORNER KEY	EFCO; 6063-T6 ALUMINUM
15	LB00	TRIM CAP	EFCO; 6063-T6 ALUMINUM
16	HMB7	INTERIOR PANEL FRAME PIN (OPTIONAL)	EFCO; 6063-T6 ALUMINUM
17	HMB8	INTERIOR PANEL FRAME LOCK (OPTIONAL)	EFCO; 6063-T6 ALUMINUM
18	1880	F-ANCHOR CLIP	EFCO; 6063-T6 ALUMINUM
HARDWARE			
19	HU41	CAM LOCKING HANDLE	BRONZE CRAFT (MANGANESE BRONZE)
20	HK10	CAM LOCK KEEPER	BRONZE CRAFT (MANGANESE BRONZE)
21	5005	VENETIAN BLIND TILT KNOB (OPTIONAL)	WINDOW ACCESSORY CO.
22	LA10	S.S. 4 BAR HINGE	TRUTH HARDWARE 300 SERIES
SEALS & SEALANTS			
23	WA04	CONT. VINYL BULB SEAL	CENTRAL PLASTICS
24	WVB4	CONT. VINYL BULB SEAL	CENTRAL PLASTICS
25	-	INSULBAR SEALANT (CONTINUOUS)	COLOR DOW 795
FASTENERS			
26	-	NO. 10 X 1/2" S.S. SMS	5 PER HINGE INTO JAMB
27	-	NO. 10 X 1/2" S.S. SMS	5 PER HINGE INTO SASH



DRAWN BY: W.R.M. CHECKED BY: W.W.S.  
 PLOT: 1=2 DATE: 02/11/08

NO. REVISION DESCRIPTION

DRAWING TITLE: SERIES 810-I SMALL MISSILE IMPACT FIXED/PROJECT OUT WINDOW MANUFACTURER

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: FEB 28 2008

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

DRAWING NO. 1575 REV. SHEET NO. 6 OF 6