



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY  
AFFAIRS (PERA)  
BOARD AND CODE ADMINISTRATION DIVISION  
**NOTICE OF ACCEPTANCE (NOA)**

MIAMI-DADE COUNTY, FLORIDA  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599  
[www.miamidade.gov/pera/](http://www.miamidade.gov/pera/)

**Tischler und Sohn (USA) Ltd.**  
**Six Suburban Avenue**  
**Stamford, CT 06901**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA-Product Control Section 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 Section (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. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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 "Mahogany Impact" Wood Outswing Casement Window - L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. 1530, titled "Out-Swing Impact Wood Casement Window", sheets 1 through 10 of 10, dated 04/03/08 with revision "A1" dated 10/25/11, prepared by W. W. Schaefer Engineering & Consultant, P. A., signed and sealed by Warren W. Schaefer, P. E., bearing the Miami-Dade County Product Control Section revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

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

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, 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 NOA No. 08-0804.14 and consists of this page 1, evidence pages E-1 and E-2, as well as approval document mentioned above.

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



*JGASCON*  
*1/12/12*

NOA No. 11-1101.10  
Expiration Date: January 08, 2014  
Approval Date: January 19, 2012  
Page 1

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.  
*(Submitted under previous NOA No. 08-0804.14)*
2. Drawing No. 1530, titled "Out-Swing Impact Wood Casement Window", sheets 1 through 10 of 10, dated 04/03/08 with revision "A1" dated 10/25/11, prepared by W. W. Schaefer Engineering & Consultant, P. A., signed and sealed by Warren W. Schaefer, P. E.

**B. TESTS**

1. Test reports on:
  - 1) Air Infiltration Test, per FBC, TAS 202-94
  - 2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
  - 3) Water Resistance Test, per FBC, TAS 202-94
  - 4) Large Missile Impact Test per FBC, TAS 201-94
  - 5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
  - 6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94along with marked-up drawings and installation diagram of Wood Fixed and operable wood casement Windows, prepared by Architectural Testing, Inc., Test Reports No.'s **ATI-77324.01-109-18**, dated 06/30/08, signed and sealed by Michael D. Stremmel, P. E.  
*(Submitted under previous NOA No. 08-0804.14)*

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with FBC-2004 and FBC-2007, prepared by W. W. Schaefer Engineering & Consultant, P. A., dated 07/28/08, signed and sealed by Warren W. Schaefer, P. E.  
*(Submitted under previous NOA No. 08-0804.14)*
2. Glazing complies with ASTM E1300-02/04

**D. QUALITY ASSURANCE**

1. Miami-Dade Department of Permitting, Environment, and Regulatory Affairs (PERA).

**E. MATERIAL CERTIFICATIONS**

1. Notice of Acceptance No. **11-0325.05** issued to **Solutia, Inc.** for their "**Saflex - Clear or colored Interlayer**" dated 04/21/11, expiring on 04/21/16.
2. Notice of Acceptance No. **08-0520.08** issued to **Solutia, Inc.** for their "**Vanceva Composites Glass Interlayer**" dated 07/17/08, expiring on 12/11/13.



Jaime D. Gascon, P. E.  
Product Control Section Supervisor  
NOA No. 11-1101.10  
Expiration Date: January 08, 2014  
Approval Date: January 19, 2012

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**F. STATEMENTS**

1. Statement letter of conformance, no financial interest and compliance with FBC 2010, issued by W. W. Schaefer Engineering & Consultant, P. A., dated 10/27/11, signed and sealed by Warren W. Schaefer, P.E.
2. Statement letter of independence, issued by W. W. Schaefer Engineering & Consultant, P. A., dated 10/24/11, signed and sealed by Warren W. Schaefer, P.E.
3. Distributor Agreement between Tischler und Sohn (USA), Ltd., Connecticut, USA, and Tischler/ Cornelius Korn, G.m.b.H., Wedel (Holstein) S. H., Germany, dated 04/13/09, signed by Tim Carpenter and Wilhelm Korn, respectively.
4. Statement letter of conformance and compliance with FBC 2007, issued by W. W. Schaefer Engineering & Consultant, P. A., dated 04/15/08, signed and sealed by Warren W. Schaefer, P. E.  
*(Submitted under previous NOA No. 08-0804.14)*
5. Statement letter of no financial interest and independence, issued by W. W. Schaefer Engineering & Consultant, P. A., dated 07/28/08, signed and sealed by Warren W. Schaefer, P. E.  
*(Submitted under previous NOA No. 08-0804.14)*
6. Laboratory compliance letters for Test Report No. **ATI-77324.01-109-18**, issued by Architectural Testing, Inc., dated 06/26 and 07/01/08, all signed and sealed by Michael D. Stremmel, P. E.  
*(Submitted under previous NOA No. 08-0804.14)*
7. Test Proposal No. **07-2960** issued by Product Control, dated 07/24/07 revised on 08/16/07 and signed by Manuel Perez, P. E.  
*(Submitted under previous NOA No. 08-0804.14)*

**G. OTHERS**

1. Notice of Acceptance No. **08-0804.14**, issued to Tischler und Sohn (USA), Ltd. for their Series "**Mahogany Impact Wood Outswing Casement Window - L.M.I.**", approved on 01/08/09 and expiring on 01/08/14.



Jaime D. Gascon, P. E.  
Product Control Section Supervisor  
NOA No. 11-1101.10  
Expiration Date: January 08, 2014  
Approval Date: January 19, 2012

**GENERAL NOTES:**

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & 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. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
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 FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT WINDOWS.
5. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE WINDOWS.
7. ALL ANCHORS SECURING WINDOW FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  MAY BE APPLIED PER THE ASCE 7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
11. ALL WOOD MEMBERS OF WINDOWS THAT MAY POSSIBLY COME INTO CONTACT WITH MASONRY OR CONCRETE SUBSTRATES, ARE SUBJECT TO MOISTURE &/OR ARE SUBJECT TO THE OUTSIDE ENVIRONMENT SHALL BE OF AN APPROVED DURABLE SPECIES OR BE TREATED IN AN APPROVED METHOD WITH AN APPROVED PRESERVATIVE PER FBC SECTION 2326.

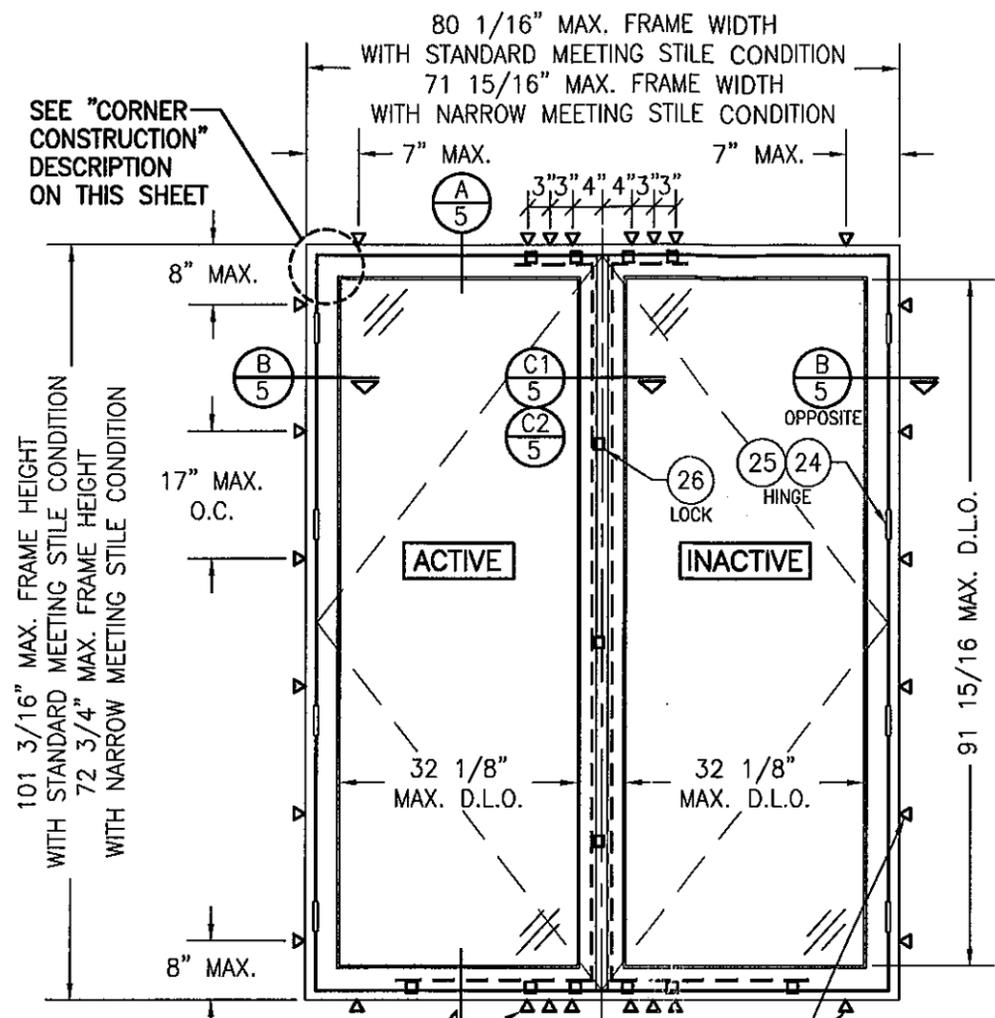
**CORNER CONSTRUCTION:**

- RECTANGULAR FRAME CORNERS: MORTISE & TENON CONSTRUCTION JOINED & GLUED WITH PONAL SUPER 3 WOOD GLUE OR EQUIVALENT.
- ARCHED FRAME CORNERS: ARCHED FRAME BUTTED TO STRAIGHT FRAME, JOINED WITH ONE(1) NO.14 X 3" WOOD SCREW, & GLUED WITH PONAL SUPER 3 WOOD GLUE OR EQUIVALENT.
- HALF ROUND FRAME CORNERS: FINGER JOINT CONSTRUCTION JOINED & GLUED WITH PONAL SUPER 3 WOOD GLUE OR EQUIVALENT.
- RECTANGULAR SASH CORNERS: MORTISE & TENON CONSTRUCTION JOINED & GLUED WITH PONAL SUPER 3 WOOD GLUE OR EQUIVALENT.
- ARCHED SASH CORNERS: ARCHED SASH BUTTED TO STRAIGHT SASH, JOINED WITH ONE(1) NO.14 X 3" WOOD SCREW, & GLUED WITH PONAL SUPER 3 WOOD GLUE OR EQUIVALENT.
- HALF ROUND SASH CORNERS: FINGER JOINT CONSTRUCTION JOINED & GLUED WITH PONAL SUPER 3 WOOD GLUE OR EQUIVALENT.

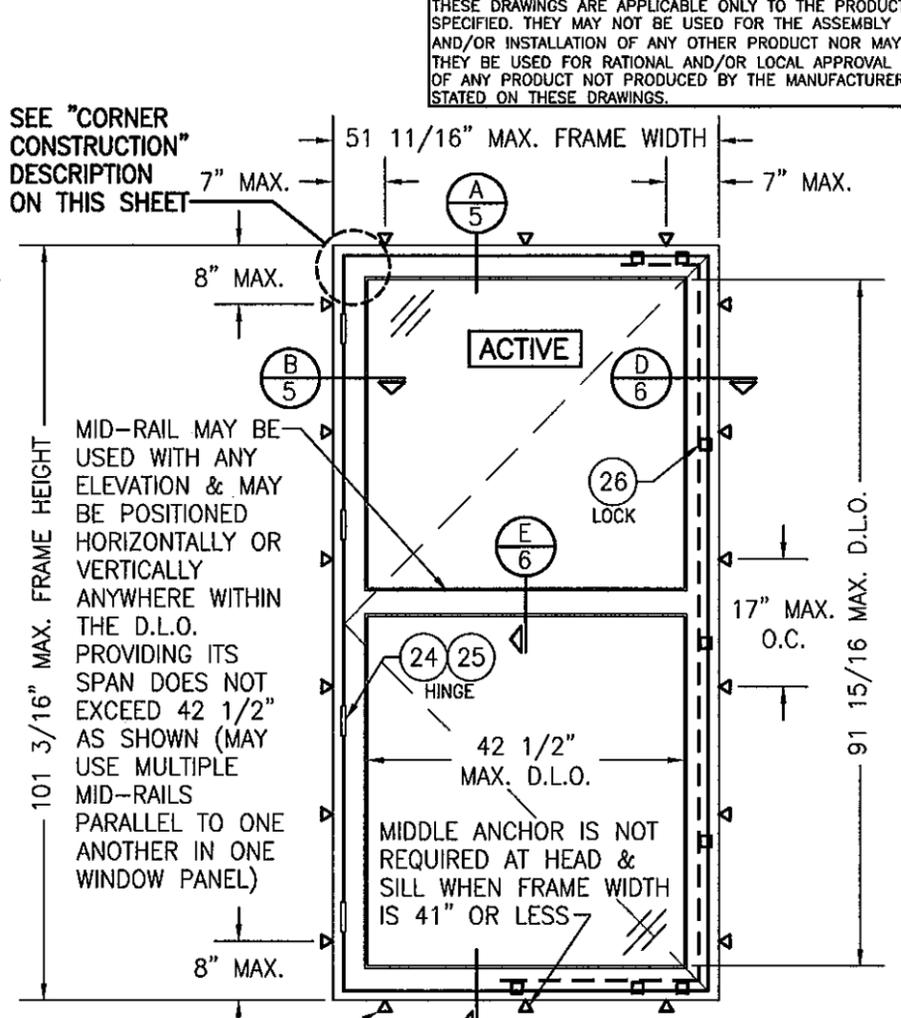
4 ANCHORS REQUIRED AT MEETING STILE ENDS WHEN WINDOW FRAME WIDTH IS 74" OR LESS OR WHEN FRAME HEIGHT IS 93" OR LESS; 6 ANCHORS REQUIRED OTHERWISE.

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWN BY:	W.R.M.	CHECKED BY:	W.W.S.
DATE:	10/25/11	DATE:	04/03/08
REVISION DESCRIPTION	BY	DATE	
1. UPDATE TO CURRENT STANDARDS	W.R.M.	10/25/11	



**EXTERIOR ELEVATION;  
DOUBLE RECTANGULAR CASEMENT WINDOWS**  
SCALE: 1/2" = 1'-0"



**EXTERIOR ELEVATION;  
SINGLE RECTANGULAR CASEMENT WINDOW**  
SCALE: 1/2" = 1'-0"

FRAME SHEAR SCREWS, INSTALLATION CLIPS, BTI BRACKETS OR ANGLE CLIPS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON THIS SHEET FOR REQUIREMENTS.

NOTE: WINDOW IS SHOWN WITH A MID-RAIL CONDITION. FULL LIGHT CONDITION ALSO APPLIES.

OCT 27 2011

FRAME ANCHOR REQUIREMENTS TABLE			
OPENING TYPE (SUBSTRATE)	FRAME/CLIP/BRACKET TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
<b>FRAME SCREWS</b>			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS/WOOD SCREW OR 1/4" BTI SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	(2) 1/4-14 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	(2) 1/4-14 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	(2) 1/4-14 SELF TAP/DRILLING SCREW	FULL	1/2"
C-90 CMU/2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
<b>INSTALLATION CLIP SCREWS</b>			
MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 12 X 1 1/2" SMS	1 3/8"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	(2) 12-14 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	(2) 12-14 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	(2) 12-14 SELF TAP/DRILLING SCREW	FULL	1/2"
C-90 CMU/2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
<b>BTI BRACKET &amp; ANGLE CLIP SCREWS</b>			
MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 X 1 1/2" SMS	1 1/8"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	(2) 8-18 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	(2) 8-18 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	(2) 8-18 SELF TAP/DRILLING SCREW	FULL	1/2"

(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).  
(2) ALL SELF TAP/DRILLING SCREWS SHALL BE MIN. GR. 5

ALLOWABLE DESIGN PRESSURE (SINGLE & DOUBLE WINDOWS)			
MAX. FRAME HEIGHT (IN.)	MAX. FRAME WIDTH (IN.)	ALLOWABLE PRESSURE	
		POSITIVE (PSF)	NEGATIVE (PSF)
<b>SINGLE WINDOW</b>			
101 3/16	51 11/16	(2) 70	(2) 70
77 3/16	37 3/16	70	(1) 85
<b>DOUBLE WINDOW</b>			
101 3/16	80 1/16	70	70
77 3/16	72"	70	(1) 85

(1) HIGHER PRESSURE OF -85 PSF IS ONLY APPLICABLE WHEN GLASS OPTION 2 & STANDARD SIZE MEETING STILES ARE USED  
(2) WITH FULL SIZE SINGLE WINDOWS USING GLASS OPTION 4, ALLOWABLE PRESSURE MUST BE REDUCED TO +/-66 PSF. PRESSURE MAY BE INCREASED TO +/-70 PSF IF THE D.L.O. WIDTH IS DECREASED TO MAX. 39.5" OR THE D.L.O. HEIGHT IS DECREASED TO MAX. 87".

SASH WIDTH & HEIGHT DIMENSIONS ARE APPROXIMATELY 3" LESS THAN THE FRAME WIDTH & HEIGHT	
<b>LOCK STRIKE REQUIREMENTS (TOP OF PANEL)</b>	
SASH WIDTH	QUANTITY PER PANEL
RECTANGULAR PANEL	
OVER 24"	2
LESS THAN 24"	1
ARCH TOP PANEL	
OVER 28"	3
15" TO 28"	2
LESS THAN 15"	1
ROUND TOP PANEL	
OVER 32"	4
20" TO 32"	3
12" TO 20"	2
LESS THAN 12"	1

LOCK STRIKE REQUIREMENTS (LOCK SIDE OF PANEL)	
SASH HEIGHT	QUANTITY PER PANEL
ALL PANEL SHAPES	
OVER 77"	3
40" TO 77"	2
LESS THAN 40"	1

LOCK STRIKE REQUIREMENTS (BOTTOM OF PANEL)	
SASH WIDTH	QUANTITY PER PANEL
ALL PANEL SHAPES	
OVER 32"	3
24" TO 32"	2
LESS THAN 24"	1

HINGE REQUIREMENTS	
(1) SASH HEIGHT	QUANTITY PER PANEL
OVER 74"	4
47" TO 74"	3
LESS THAN 47"	2

(1) THE "SASH HEIGHT" IS CONSIDERED TO BE FULL SASH HEIGHT FOR RECTANGULAR UNITS OR DISTANCE FROM THE BASE OF SASH TO SASH SPRINGLINE FOR SHAPED UNITS

as complying with the Florida Building Code  
Acceptance No. 11-110101  
Expiration Date 07/03/2014

By: *[Signature]*  
Miami Dade Product Control

11-110101-1530

REVISION NO. 1530  
REV. A

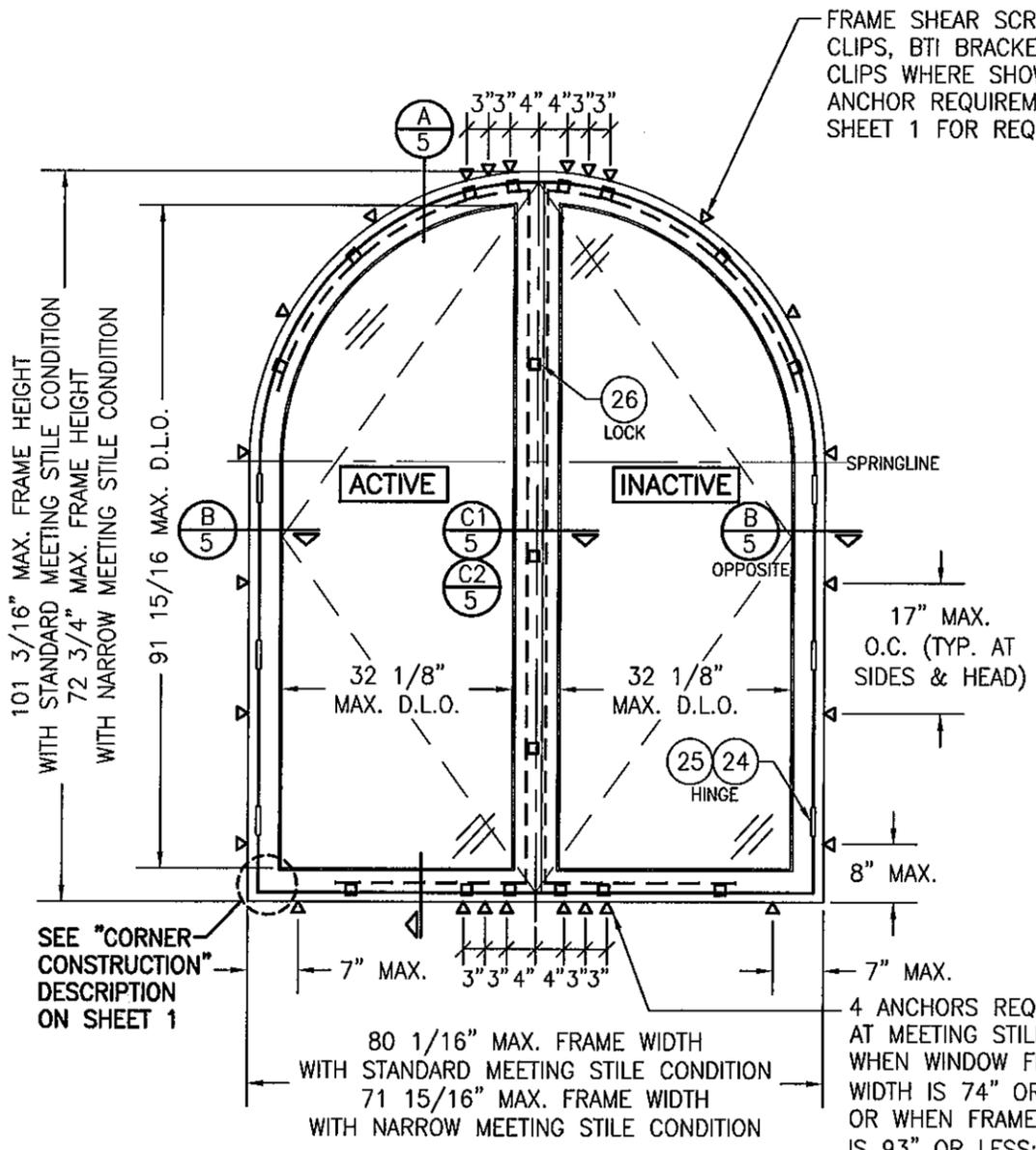
SHEET NO. 1 OF 10

DRAWING TITLE: OUT-SWING IMPACT WOOD CASEMENT WINDOW  
 MANUFACTURER: TISCHLER UND SOHN (USA) LTD.  
 SIX SUBURBAN AVENUE  
 STAMFORD, CONNECTICUT  
 203-674-0600

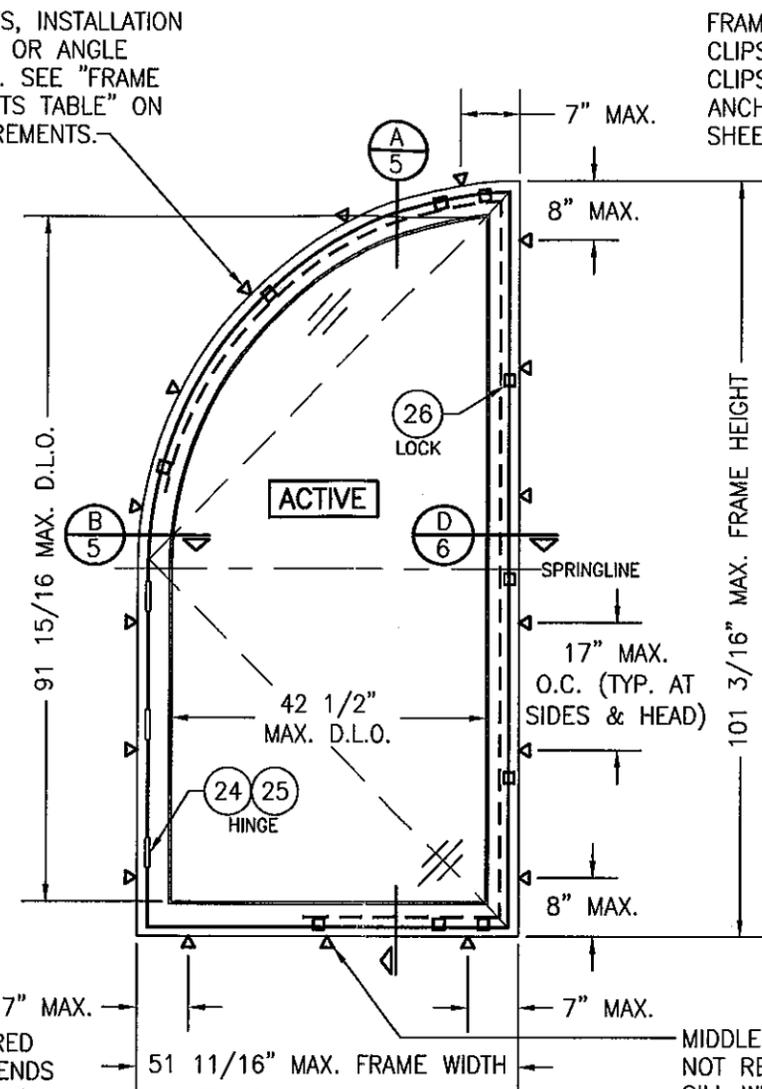
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)  
 7480 150TH COURT NORTH, #34-18  
 PALM BEACH GARDENS, FL 33418  
 PHONE: 561-744-3424

PROFESSIONAL ENGINEER  
 WARENE W. SCHAEFER, P.E.  
 P.E. NO. 44135

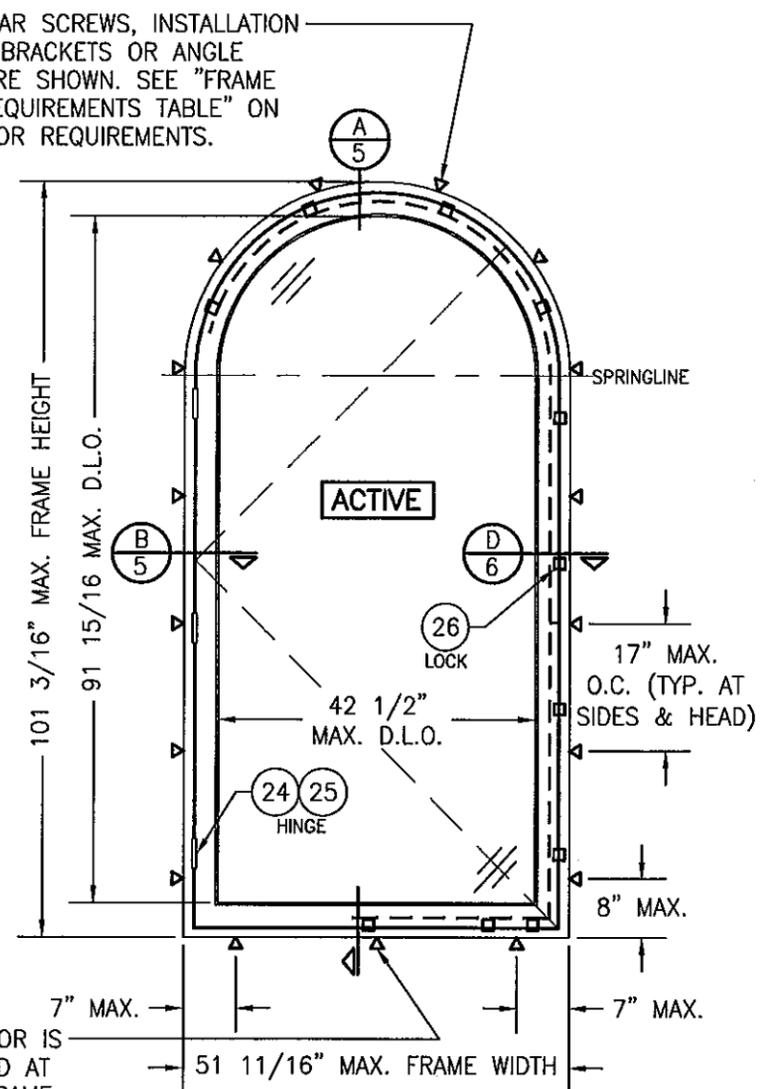
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 04/03/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	



**EXTERIOR ELEVATION:  
DOUBLE HALF ROUND CASEMENT WINDOWS**  
SCALE: 1/2" = 1'-0"



**EXTERIOR ELEVATION:  
SINGLE QUARTER ROUND CASEMENT WINDOW**  
SCALE: 1/2" = 1'-0"



**EXTERIOR ELEVATION:  
SINGLE HALF ROUND CASEMENT WINDOW**  
SCALE: 1/2" = 1'-0"

FRAME SHEAR SCREWS, INSTALLATION CLIPS, BTI BRACKETS OR ANGLE CLIPS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.

FRAME SHEAR SCREWS, INSTALLATION CLIPS, BTI BRACKETS OR ANGLE CLIPS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.

4 ANCHORS REQUIRED AT MEETING STILE ENDS WHEN WINDOW FRAME WIDTH IS 74" OR LESS OR WHEN FRAME HEIGHT IS 93" OR LESS; 6 ANCHORS REQUIRED OTHERWISE.

MIDDLE ANCHOR IS NOT REQUIRED AT SILL WHEN FRAME WIDTH IS 41" OR LESS

**ALLOWABLE DESIGN PRESSURE**  
SEE PRESSURE TABLE ON SHEET 1

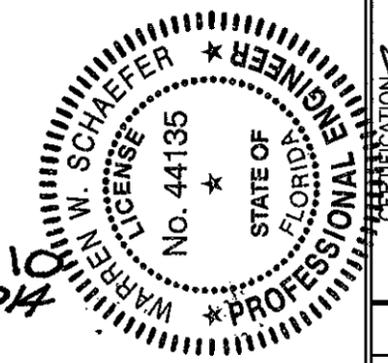
**ANCHOR NOTE:** ANCHOR SPACING AT THE HEAD OF ALL TYPES OF SHAPED WINDOWS MUST EQUAL THAT SPECIFIED AT THE SIDES (17" MAX. O.C.)

**APPROVED SHAPES**

**NOTES:**

- OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED IN THIS DRAWING.
- ALL SHAPED UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE RECTANGULAR UNITS & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE RECTANGULAR UNIT.

PRODUCT REVISED as complying with the Florida Building Code  
Acceptance No. 11-101-11  
Expiration Date 11/10/11  
By *[Signature]*  
Miami Dade Product Control



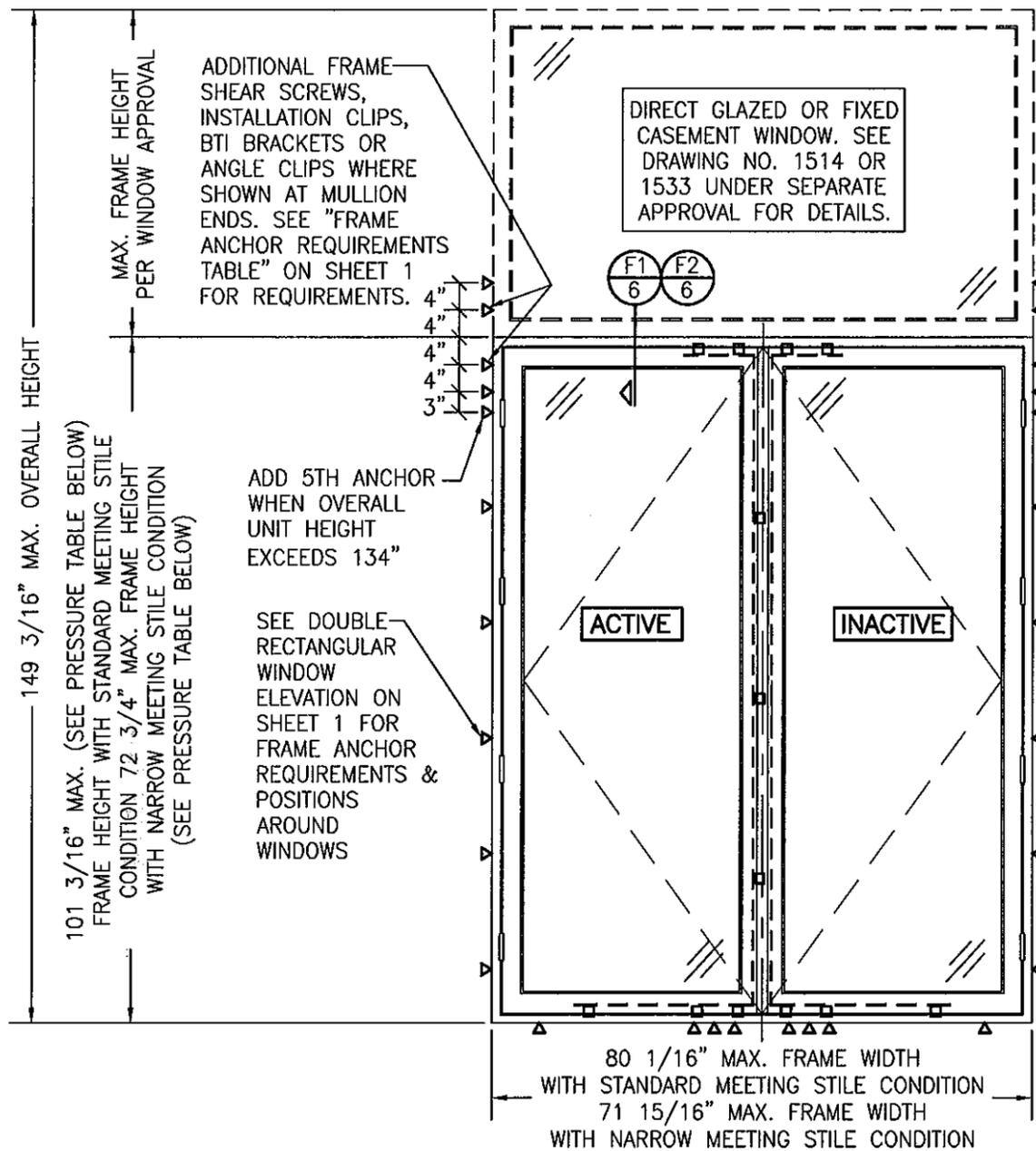
**DRAWING TITLE**  
OUT-SWING IMPACT WOOD CASEMENT WINDOW

**CONSULTANTS**  
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)  
7480 150TH COURT NORTH  
PALM BEACH GARDENS, FL 33418  
PHONE: 561-744-3424

**MANUFACTURER**  
TISCHLER UND SOHN (USA) LTD.  
SIX SUBURBAN AVENUE  
STAMFORD, CONNECTICUT  
203-674-0600

**CERTIFICATION**  
OCT 27 2011  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

**DRAWING NO.** 1530  
**REV.** A  
**SHEET NO.** 2 OF 10

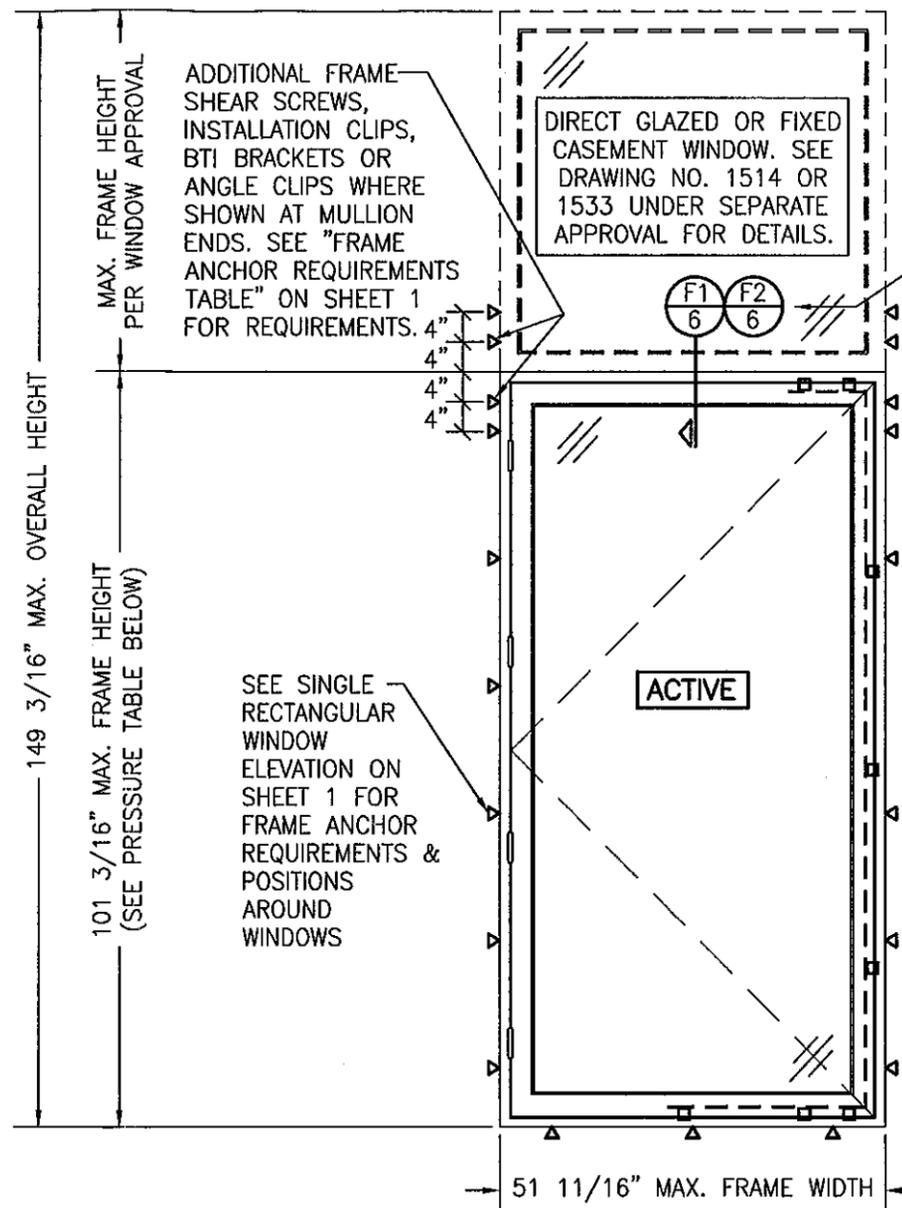


**EXTERIOR ELEVATION:  
DOUBLE CASEMENT WINDOWS WITH TRANSOM**

SCALE: 1/2" = 1'-0"  
(SEE DOUBLE RECTANGULAR WINDOW ELEVATION ON SHEET 1 FOR WINDOW DETAIL NOT SHOWN)

ALLOWABLE DESIGN PRESSURE (DOUBLE WINDOW TRANSOM UNIT)			
MAX. BOTTOM WINDOW FRAME HEIGHT (IN.)	MAX. FRAME WIDTH (IN.)	ALLOWABLE PRESSURE	
		POSITIVE (PSF)	NEGATIVE (PSF)
101 3/16	80 1/16	70	70
77 3/16	72"	70	(1) 85

(1) HIGHER PRESSURE OF -85 PSF IS ONLY APPLICABLE WHEN GLASS OPTION 2 & STANDARD SIZE MEETING STILES ARE USED



**EXTERIOR ELEVATION:  
SINGLE CASEMENT WINDOW WITH TRANSOM**

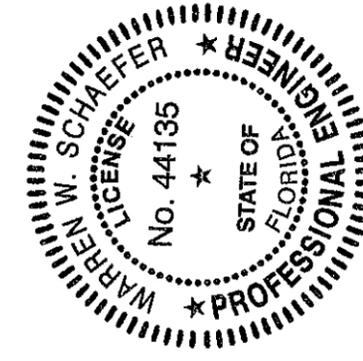
SCALE: 1/2" = 1'-0"  
(SEE SINGLE RECTANGULAR WINDOW ELEVATION ON SHEET 1 FOR WINDOW DETAIL NOT SHOWN)

ALLOWABLE DESIGN PRESSURE (SINGLE WINDOW TRANSOM UNIT)			
MAX. BOTTOM WINDOW FRAME HEIGHT (IN.)	MAX. FRAME WIDTH (IN.)	ALLOWABLE PRESSURE	
		POSITIVE (PSF)	NEGATIVE (PSF)
101 3/16	51 11/16	70	70
77 3/16	37 3/16	70	(1) 85

(1) HIGHER PRESSURE OF -85 PSF IS ONLY APPLICABLE WHEN GLASS OPTION 2 & STANDARD SIZE MEETING STILES ARE USED

NOTE: MULLION REINFORCEMENT IS OPTIONAL WITH THIS SINGLE WINDOW WITH TRANSOM ELEVATION & IS NOT REQUIRED

PRODUCT REVISED as complying with the Florida Building Code  
Acceptance No. 11-1161.00  
Expiration Date 01/08/2014  
By *[Signature]*  
Miami Dade Product Control



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 04/03/08
NO.	REVISION DESCRIPTION
BY	DATE

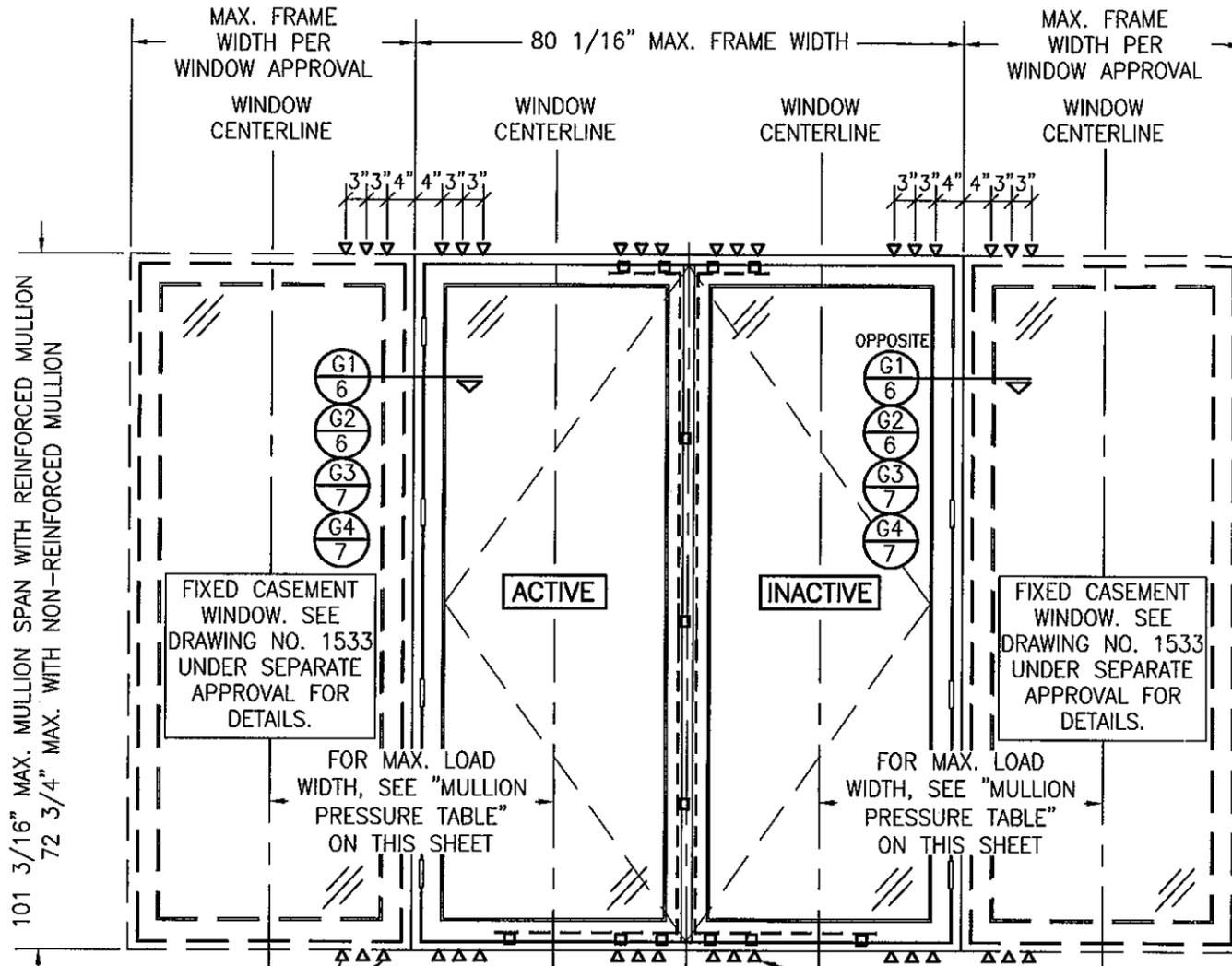
DRAWING TITLE: **OUT-SWING IMPACT WOOD CASEMENT WINDOW**

MANUFACTURER: **TISCHLER UND SOHN (USA) LTD.**  
SIX SUBURBAN AVENUE  
STAMFORD, CONNECTICUT 203-674-0600

CONSULTANTS: **W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)**  
7480 150TH COURT NORTH  
PALM BEACH GARDENS, FL 33418  
PHONE: 561-744-3424

CERTIFICATION: **OCT 27 2011**  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO. **1530** REV. **A**  
SHEET NO. **3** OF **10**



**EXTERIOR ELEVATION:  
MULTIPLE CASEMENT/FIXED WINDOWS**  
SCALE: 1/2" = 1'-0"

OXO UNIT IS SHOWN. ALL OTHER FIXED/OPERABLE COMBINATIONS ALSO APPLY WITH THE MULLION CONDITIONS SHOWN.

**MULTIPLE UNIT NOTES:**

1. FOR ALL DETAIL NOT SHOWN, INDIVIDUAL WINDOW ELEVATIONS.
2. THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE WINDOWS & THEIR MULLIONS.
3. ANY COMBINATION OF FIXED/OPERABLE WINDOWS IN ONE OPENING SHALL APPLY.
4. SHAPED WINDOWS ALSO APPLY TO SIDE MULLING (WHEN APPLICABLE) UNDER THE SAME RESTRICTIONS SHOWN.
5. MULLIONS MAY BE A 1-PIECE SECTION OR JAMB TO JAMB. SEE SECTIONS G1 THROUGH G4 FOR DETAIL.

ADDITIONAL FRAME SHEAR SCREWS, INSTALLATION CLIPS, BTI BRACKETS OR ANGLE CLIPS WHERE SHOWN AT MULLION ENDS. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS. (SEE MULLION PRESSURE TABLE FOR REQUIRED QUANTITY OF ANCHORS AT MULLION ENDS)

SEE INDIVIDUAL WINDOW ELEVATIONS FOR FRAME ANCHOR REQUIREMENTS & POSITIONS AROUND WINDOWS

**MULLION ALLOWABLE DESIGN PRESSURE**

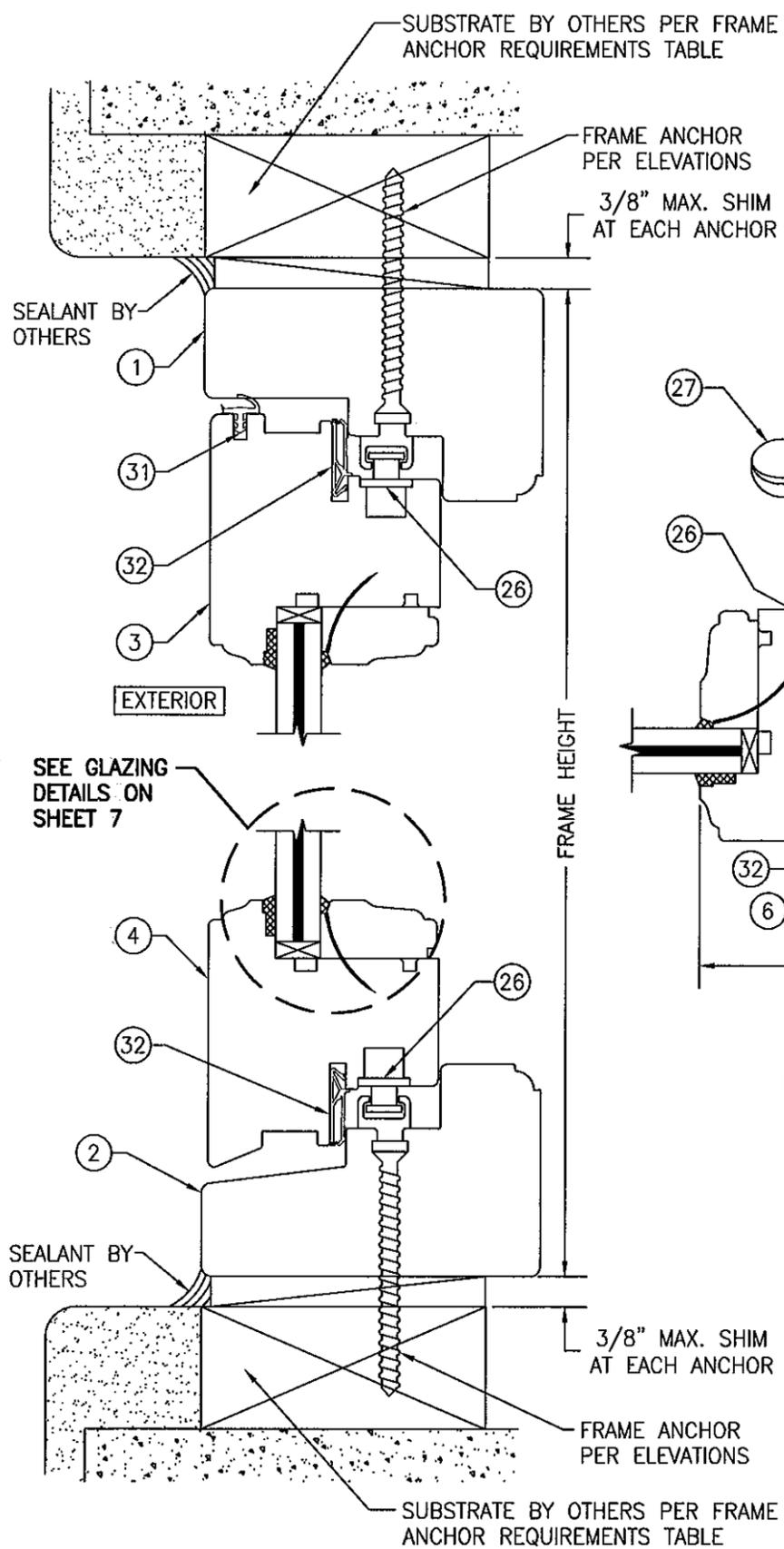
MAXIMUM MULLION SPAN (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)					
		NON-REINFORCED		REINFORCED			
		4 OR 6 END ANCHORS		4 END ANCHORS		6 END ANCHORS	
		POS.	NEG.	POS.	NEG.	POS.	NEG.
101	52	N/A	N/A	46.5	46.5	53.8	53.8
	49	N/A	N/A	49.3	49.3	57.1	57.1
	43	N/A	N/A	56.2	56.2	65.1	65.1
	37	N/A	N/A	65.3	65.3	70.0	75.2
	31	N/A	N/A	70.0	78.0	70.0	85.0
96	52	N/A	N/A	48.9	48.9	56.7	56.7
	49	N/A	N/A	51.9	51.9	60.1	60.1
	43	N/A	N/A	59.2	59.2	68.5	68.5
	37	N/A	N/A	68.8	68.8	70.0	79.6
	25	N/A	N/A	70.0	85.0	70.0	85.0
84	52	N/A	N/A	55.9	55.9	64.7	64.7
	49	N/A	N/A	59.3	59.3	68.7	68.7
	43	N/A	N/A	67.6	67.6	70.0	78.3
	37	N/A	N/A	70.0	78.6	70.0	85.0
77	52	N/A	N/A	61.0	61.0	70.0	70.6
	49	N/A	N/A	64.7	64.7	70.0	75.0
	43	N/A	N/A	70.0	73.8	70.0	85.0
72 3/4	52	54.7	54.7	64.6	64.6	70.0	74.8
	49	56.7	56.7	68.5	68.5	70.0	79.3
	43	62.0	62.0	70.0	78.1	70.0	85.0
	37	70.0	70.0	70.0	85.0	70.0	85.0
	31	70.0	80.7	70.0	85.0	70.0	85.0
67	52	66.9	66.9	70.0	70.1	70.0	81.2
	49	69.0	69.0	70.0	74.4	70.0	85.0
	43	70.0	74.9	70.0	84.8	70.0	85.0
	37	70.0	83.7	70.0	85.0	70.0	85.0
	31	70.0	85.0	70.0	85.0	70.0	85.0
61	52	70.0	77.0	70.0	77.0	70.0	85.0
	49	70.0	81.7	70.0	81.7	70.0	85.0
	43	70.0	85.0	70.0	85.0	70.0	85.0
55	52	70.0	85.0	70.0	85.0	70.0	85.0

- NOTES:**
1. LOAD WIDTH IS THE DISTANCE BETWEEN WINDOW CENTERLINES.
  2. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURES SHOWN IN THIS TABLE & THOSE SPECIFIED FOR THE INDIVIDUAL WINDOW.
  3. "N/A" DESIGNATES A SIZE NOT APPLICABLE TO THAT REINFORCEMENT CONDITION.
  4. SIZE VALUES IN TABLE ARE +/- 1/2"

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. 11-1161.10  
Expiration Date 01/08/2014  
By *[Signature]*  
Miami Dade Product Control

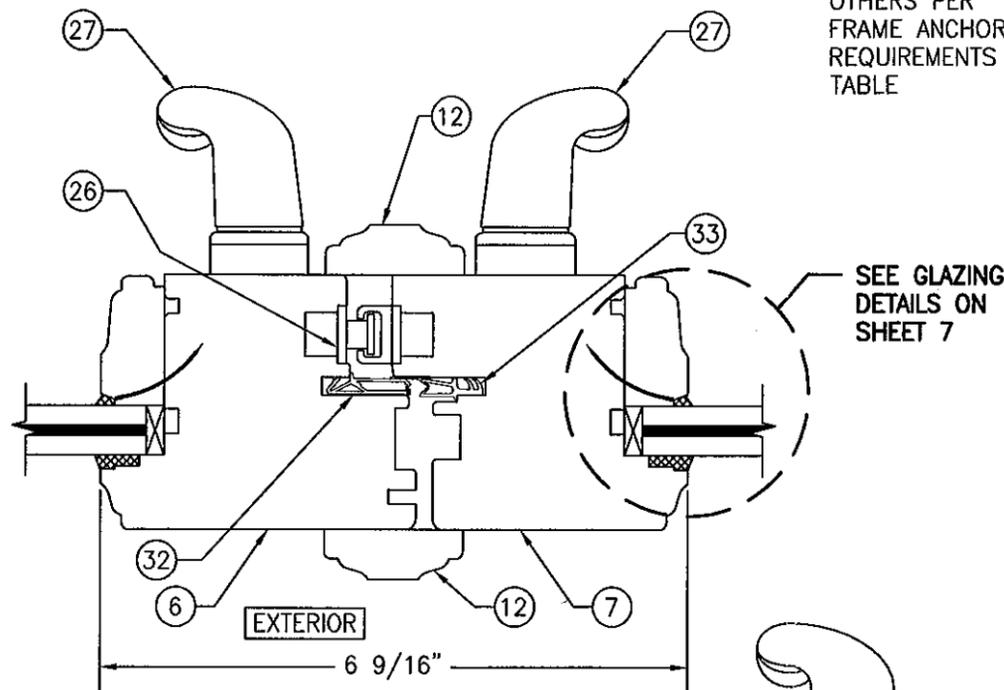
**OCT 27 2011**

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 04/03/08
DATE	BY
REVISION DESCRIPTION	NO.
<b>OUT-SWING IMPACT WOOD CASEMENT WINDOW</b> MANUFACTURER: <b>TISCHLER UND SOHN (USA) LTD.</b> SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 06307 203-674-0600 CONSULTANTS: <b>W. SCHAEFER ENGINEERING CONSULTING, P.A. (CA 6809)</b> 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
DRAWING NO. 1530	REV. A
SHEET NO. 4 OF 10	

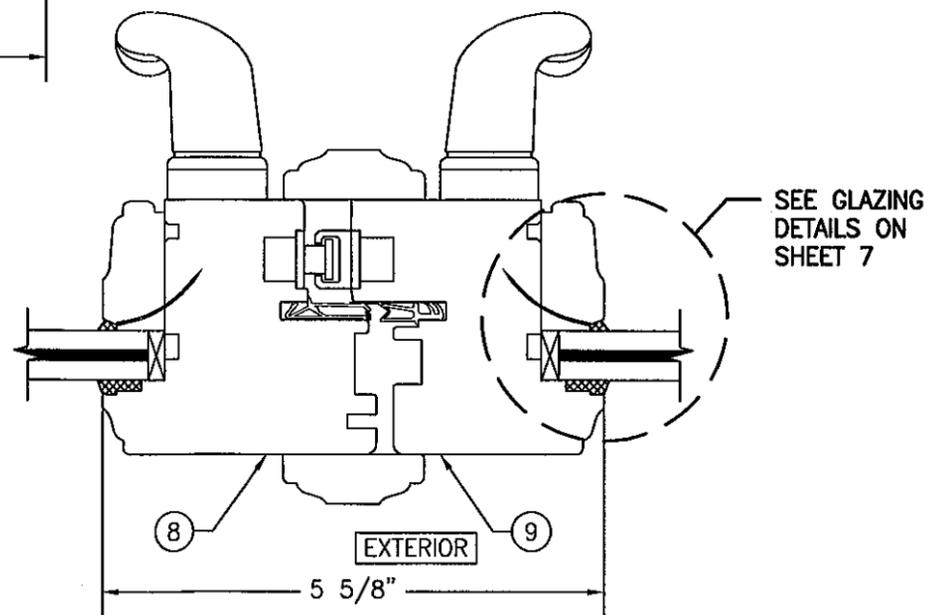


SECTION A  
SCALE: 1/2 FULL

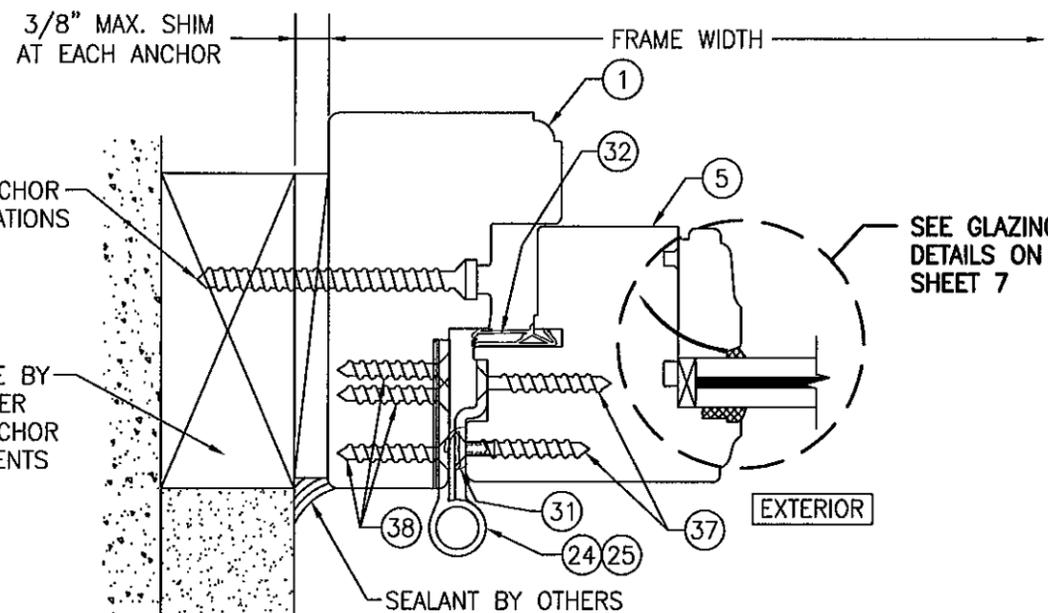
FRAME SHEAR SCREW INSTALLATION SHOWN. SEE OPTIONAL DETAILS FOR OTHER INSTALLATION CONDITIONS.



SECTION C1  
SCALE: 1/2 FULL  
(STANDARD MEETING STILE CONDITION)

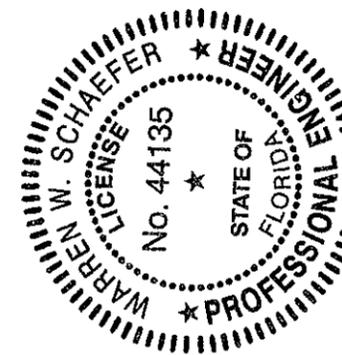


SECTION C2  
SCALE: 1/2 FULL  
(NARROW MEETING STILE CONDITION)  
(FOR DETAIL NOT SHOWN, SEE SECTION C1/5)



SECTION B  
SCALE: 1/2 FULL  
FRAME SHEAR SCREW INSTALLATION SHOWN. SEE OPTIONAL DETAILS FOR OTHER INSTALLATION CONDITIONS. (MORTISED BUTT HINGE CONDITIONS SHOWN, SURFACE MOUNT BUTT HINGE CONDITIONS ALSO APPLY)

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 11-1101.10  
Expiration Date 01/05/2014  
By *[Signature]*  
Miami Dade Product Control



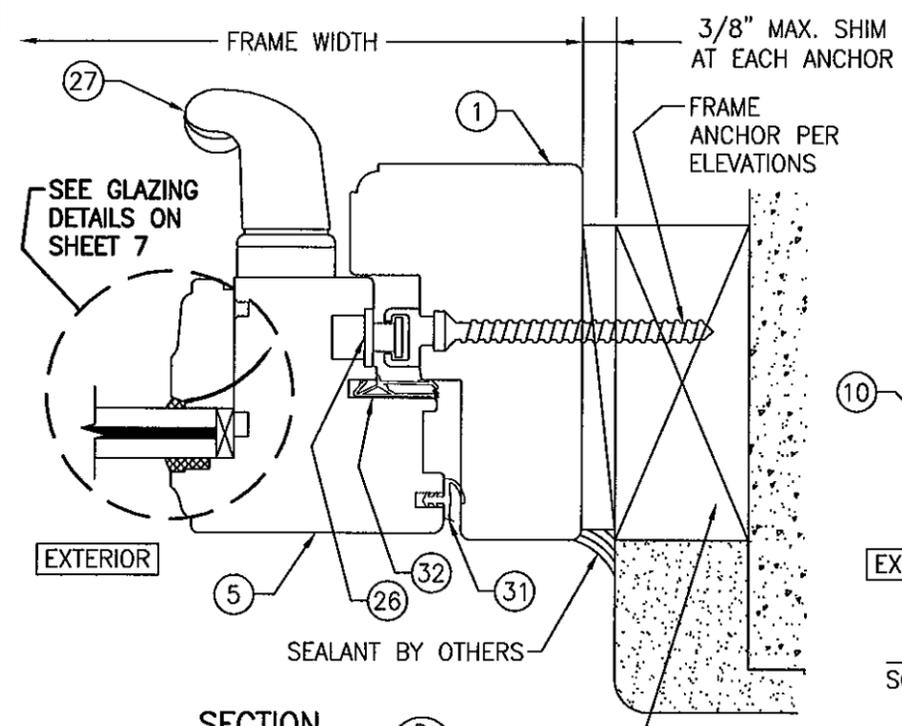
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-2	DATE: 04/03/08
NO.	REVISION DESCRIPTION
DATE	BY

DRAWING TITLE: **OUT-SWING IMPACT WOOD CASEMENT WINDOW**

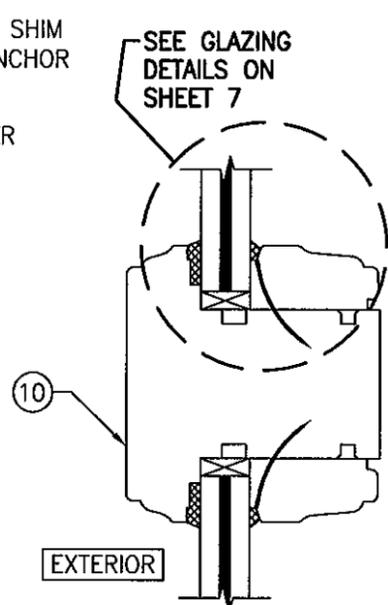
CONSULTANTS: **W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)**  
7480 150TH COURT NORTH  
PALM BEACH GARDENS, FL 33418  
PHONE: 561-744-3424

MANUFACTURER: **TISCHLER UND SOHN (USA) LTD.**  
SIX SUBURBAN AVENUE  
STAMFORD, CONNECTICUT  
203-674-0600

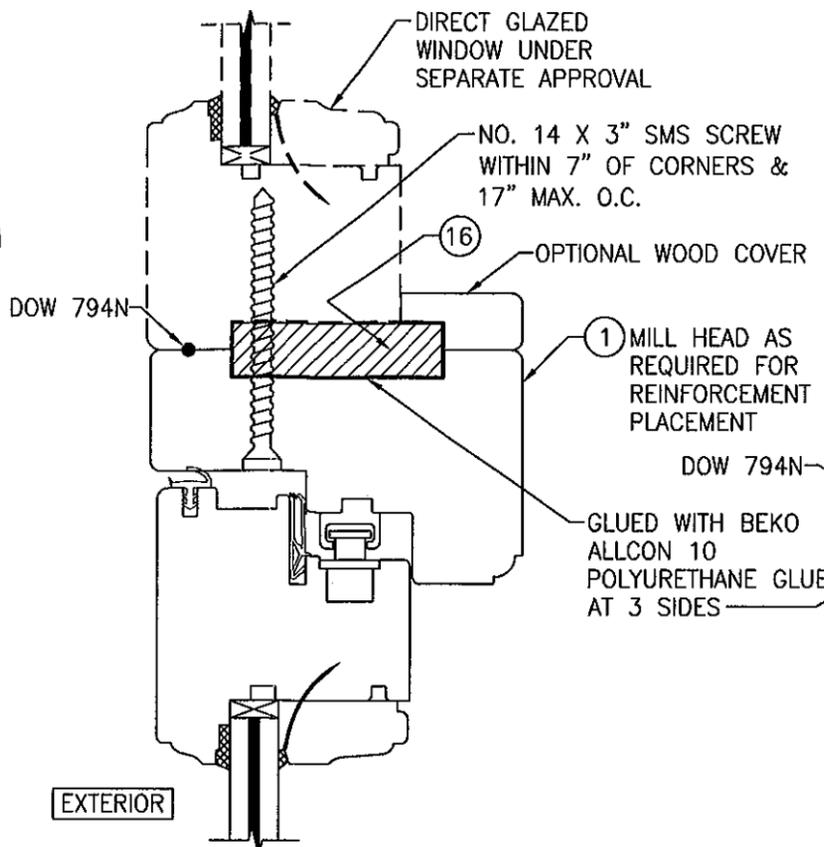
CERTIFICATION	DATE: <b>OCT 27 2011</b>
DRAWING NO.	REV.
<b>1530</b>	<b>A</b>
SHEET NO.	OF
<b>5</b>	<b>10</b>



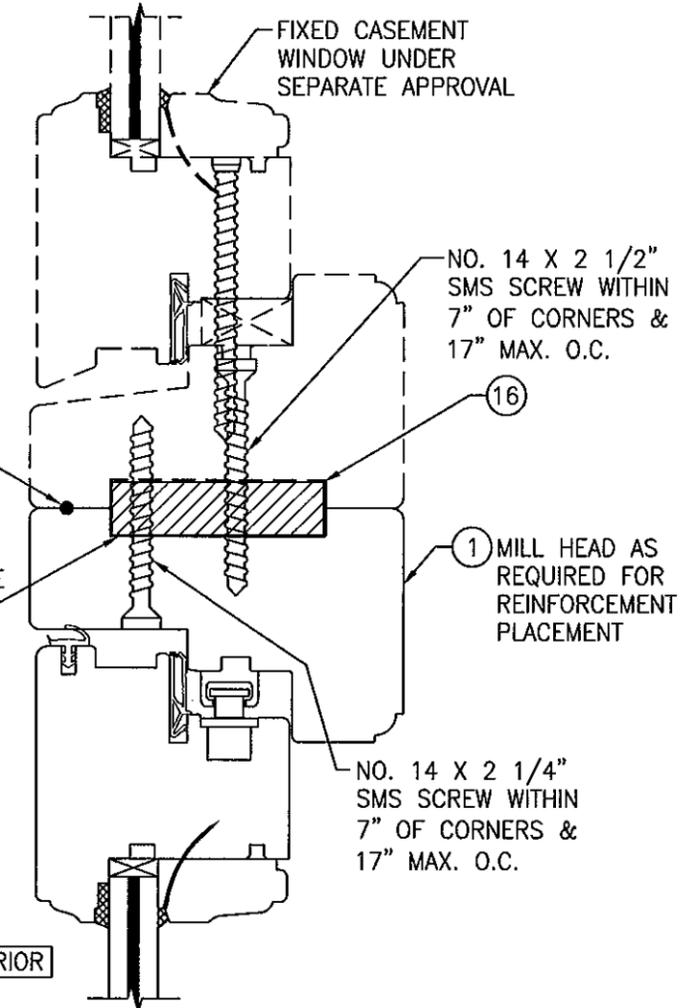
**SECTION D**  
SCALE: 1/2 FULL  
FRAME SHEAR SCREW INSTALLATION SHOWN. SEE OPTIONAL DETAILS FOR OTHER INSTALLATION CONDITIONS.



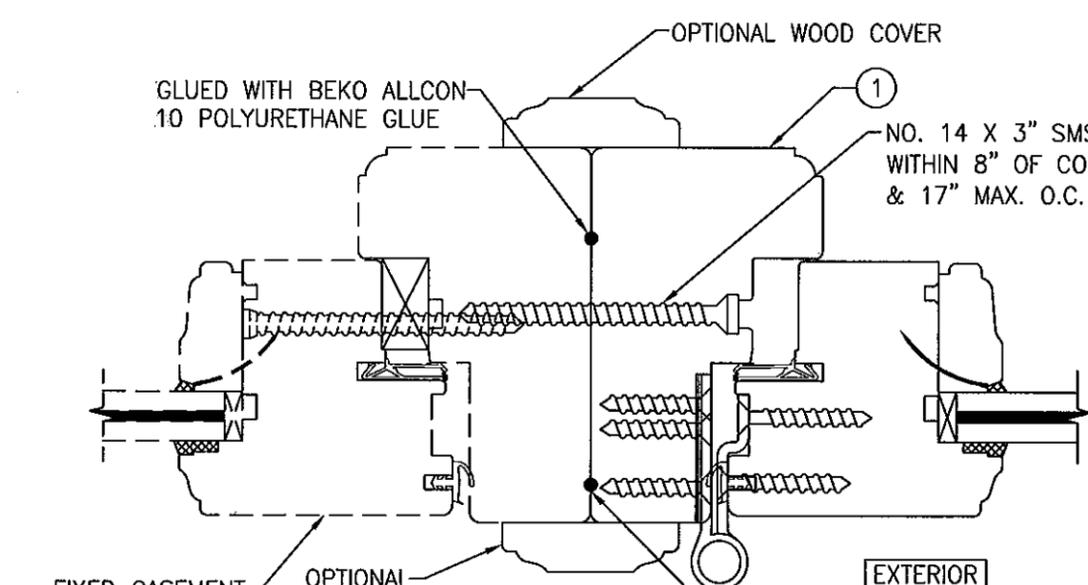
**SECTION E**  
SCALE: 1/2 FULL



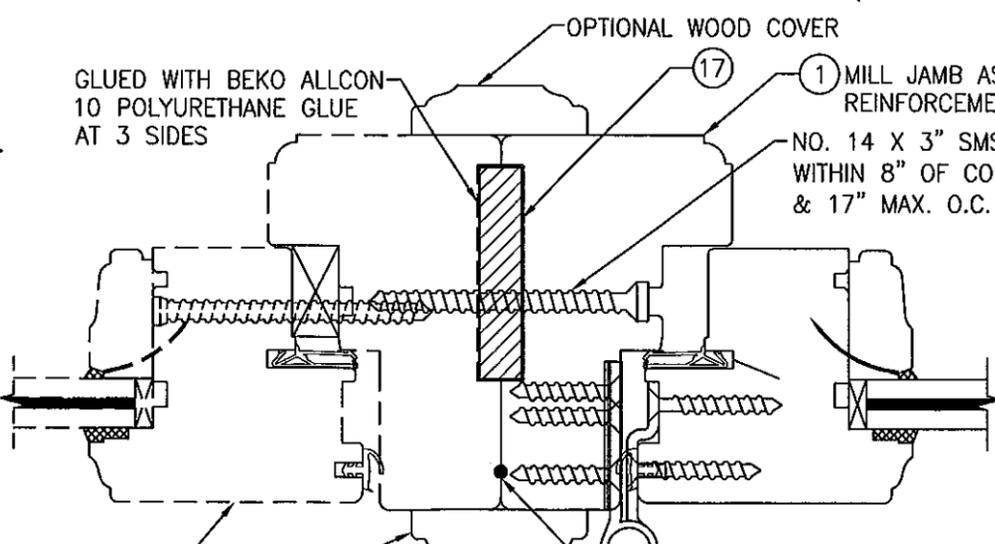
**SECTION F1**  
SCALE: 1/2 FULL  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



**SECTION F2**  
SCALE: 1/2 FULL  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



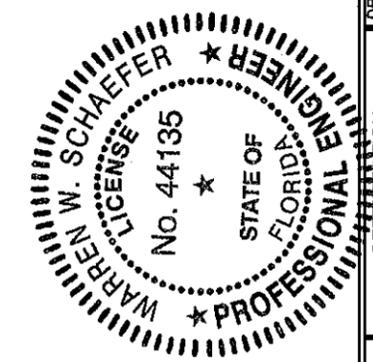
**SECTION G1**  
SCALE: 1/2 FULL  
**(NON-REINFORCED MULLION)**  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



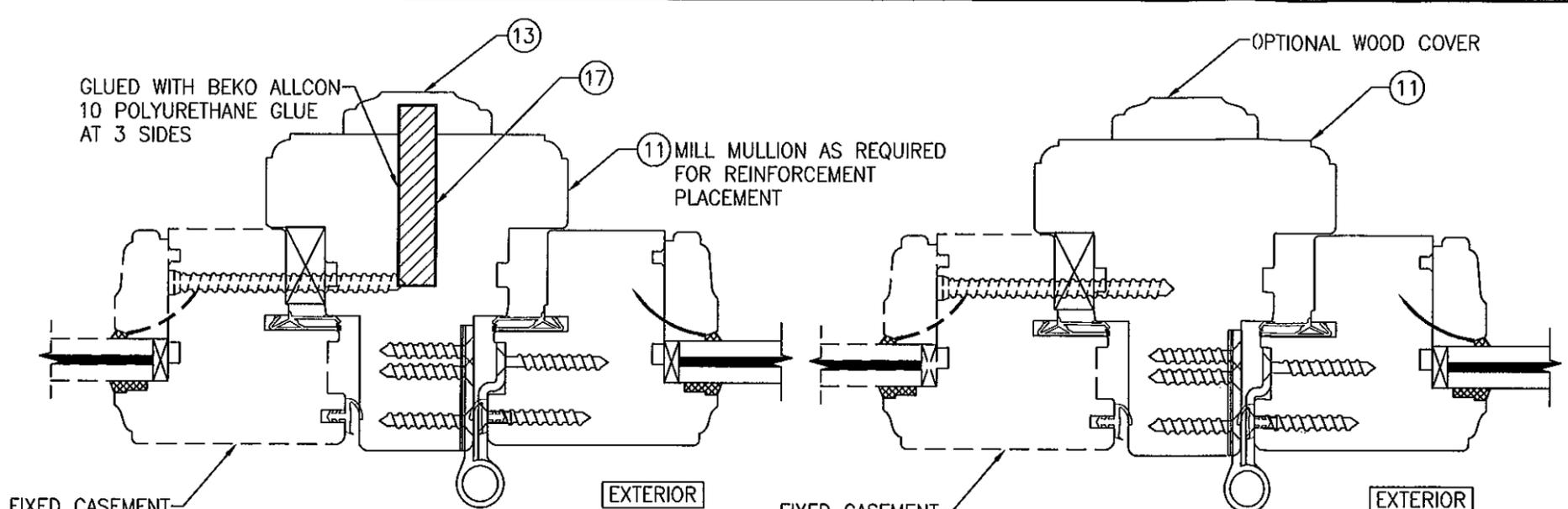
**SECTION G2**  
SCALE: 1/2 FULL  
**(REINFORCED MULLION)**  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

**MULLION SECTION NOTE**  
**(APPLICABLE TO SECTIONS G1-G4)**  
SECTIONS SHOW FIXED MULLION TO OPERABLE. OPERABLE TO OPERABLE IS JOINED THE SAME.

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. **11-1101-10**  
Expiration Date **04/01/2014**  
By *[Signature]*  
Miami Dade Product Control

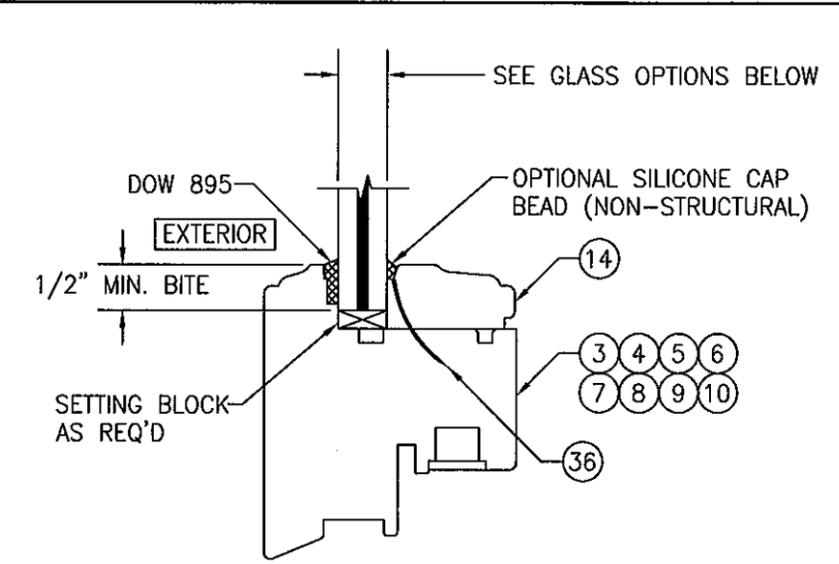


DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 04/03/08
DATE	BY
REVISION DESCRIPTION	NO.
<b>DRAWING TITLE</b> <b>OUT-SWING IMPACT WOOD CASEMENT WINDOW</b>	
<b>CONSULTANTS</b> <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A. (CA 6809)</b> 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE 561-744-3424	
<b>MANUFACTURER</b> <b>TISCHLER UND SOHN (USA) LTD.</b> SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
<b>CERTIFICATION</b> OCT 27 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	<b>DRAWING NO.</b> <b>1530</b>
<b>SHEET NO.</b> <b>6 OF 10</b>	<b>REV.</b> <b>A</b>



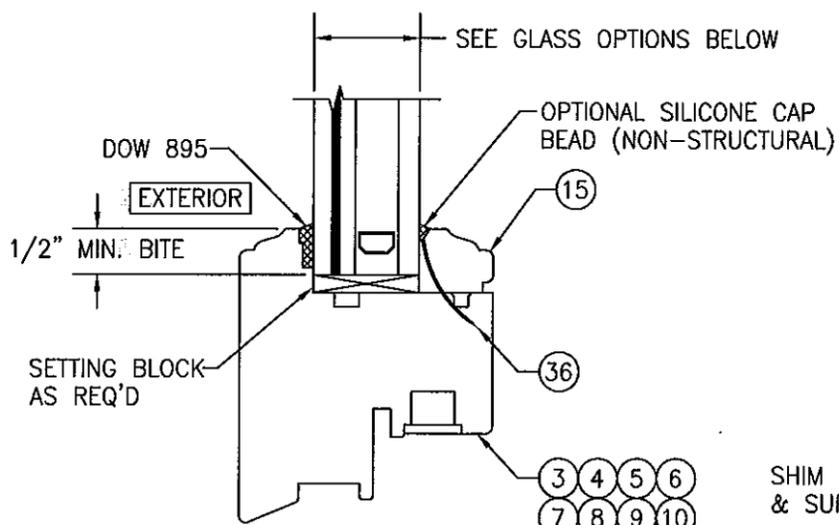
**SECTION G3**  
SCALE: 1/2 FULL  
**(REINFORCED MULLION)**  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

**SECTION G4**  
SCALE: 1/2 FULL  
**(NON-REINFORCED MULLION)**  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



**NON-I.G. GLAZING DETAIL**  
**GLASS OPTIONS 1, 2 & 3**

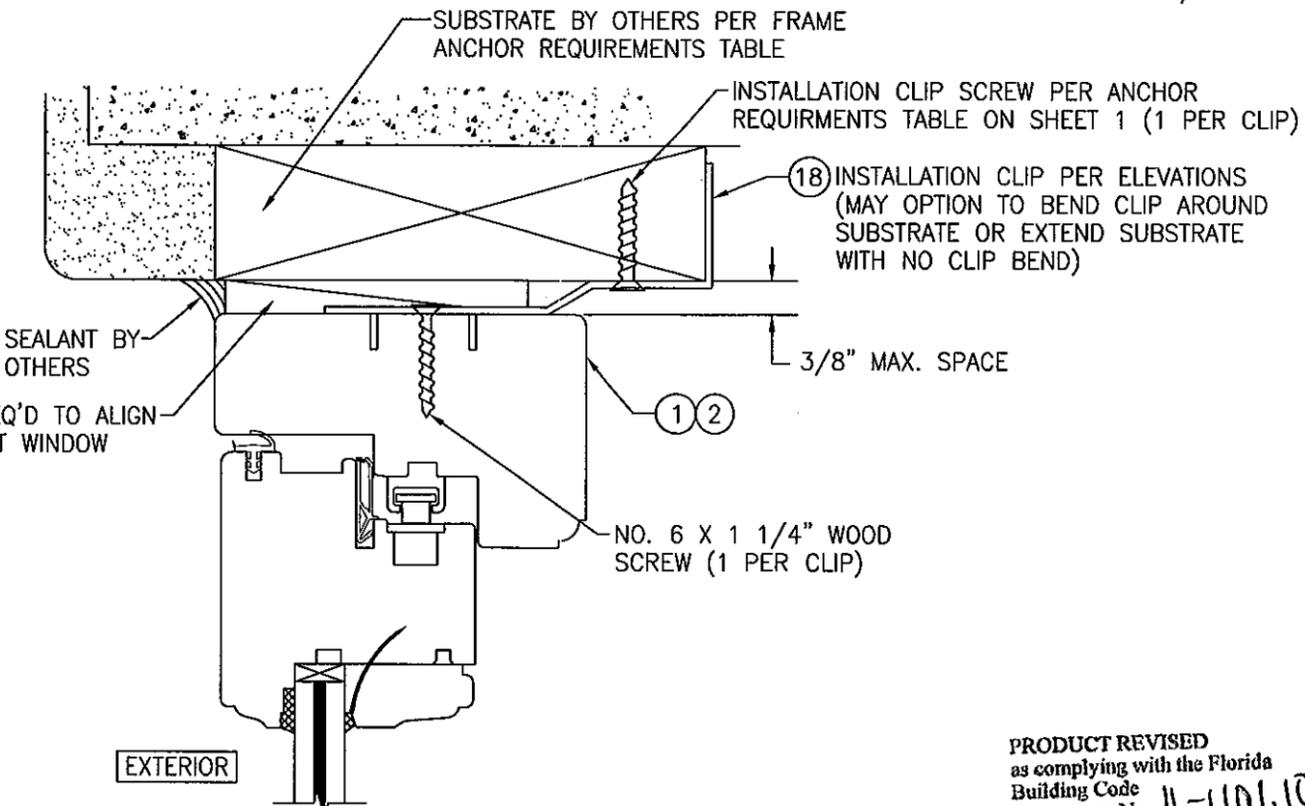
- GLASS OPTION 1: 9/16" LAMINATED GLASS (1/4" AN./0.09" SOLUTIA SALFEX IIIIG PVB/1/4" AN.)
- GLASS OPTION 2: 9/16" LAMINATED GLASS (1/4" H.S./0.075" SOLUTIA VANCEVA/1/4" H.S.)
- GLASS OPTION 3: 9/16" LAMINATED GLASS (1/4" AN./0.075" SOLUTIA VANCEVA/1/4" AN.)



**I.G. GLAZING DETAIL**  
**GLASS OPTIONS 4, 5 & 6**

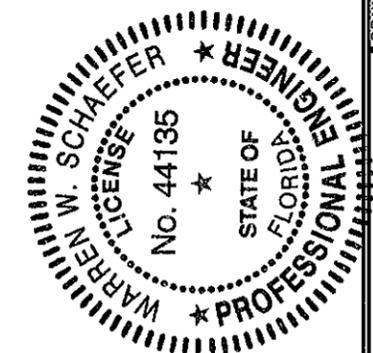
- GLASS OPTION 4: 1 3/16" LAMINATED I.G. (3/16" AN./0.09" SOLUTIA SALFEX IIIIG PVB/3/16" AN./1/2" AIR SPACE/1/4 AN.)
- GLASS OPTION 5: 1 3/16" LAMINATED I.G. (3/16" AN./0.09" SOLUTIA SALFEX IIIIG PVB/3/16" AN./1/2" AIR SPACE/1/4 TEMP.)
- GLASS OPTION 6: 1 3/16" LAMINATED I.G. (3/16" H.S./0.075" SOLUTIA VANCEVA/3/16" H.S./1/2" AIR SPACE/1/4 TEMP.)

NOTE: THE SINGLE PANE OF THE IG GLASS SHALL BE TEMPERED WHEN REQUIRED TO CONFORM WITH SECTION 2406.3 OF THE FLORIDA BUILDING CODE FOR USE OF GLASS IN HAZARDOUS LOCATIONS.



**OPTIONAL INSTALLATION CLIP DETAIL**  
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

PRODUCT REVISED as complying with the Florida Building Code  
Acceptance No. 11-1101.10  
Expiration Date 01/05/2014  
By *[Signature]*  
Miami Dade Product Control



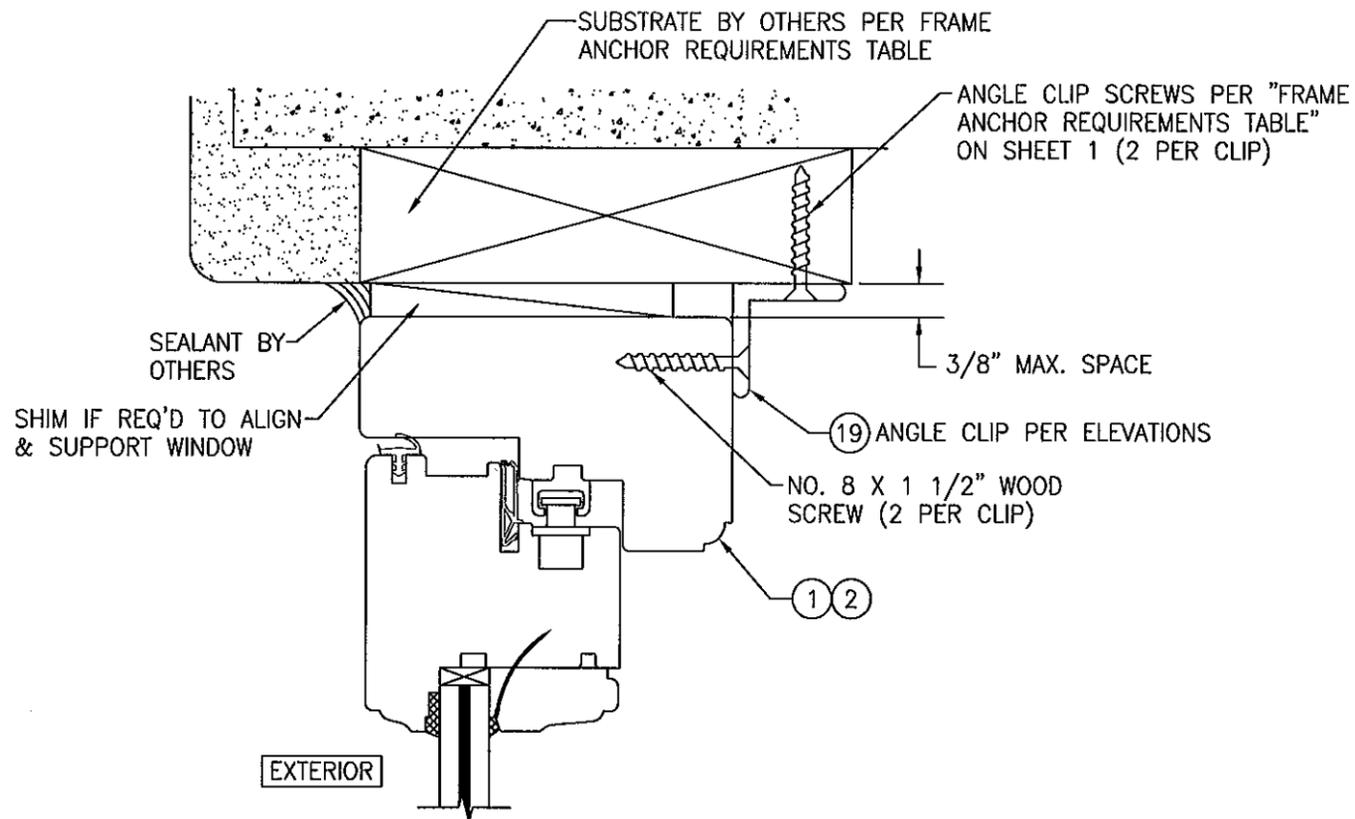
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 04/03/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	

**DRAWING TITLE**  
OUT-SWING IMPACT WOOD CASEMENT WINDOW

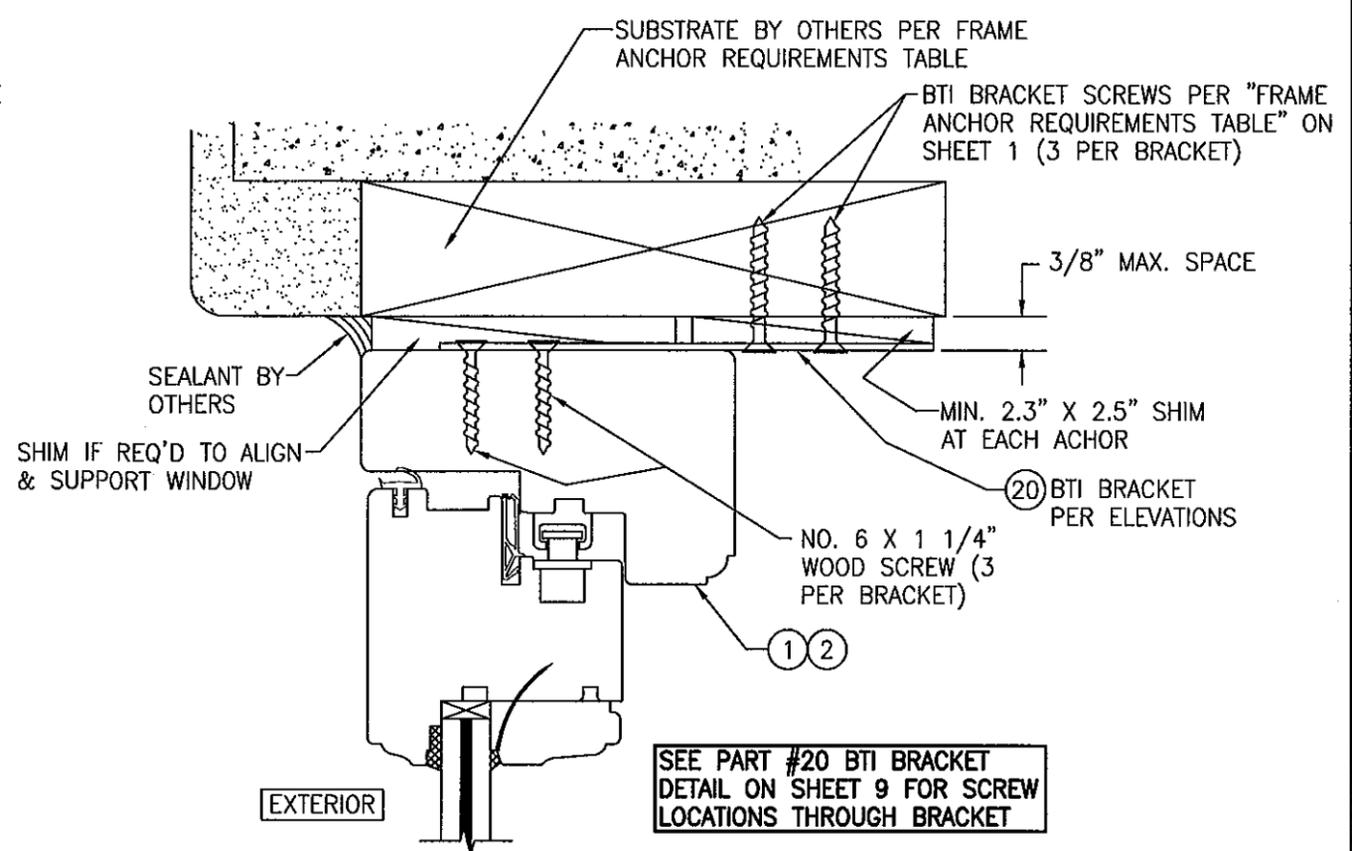
**CONSULTANTS**  
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)  
7480 150TH COURT NORTH  
PALM BEACH GARDENS, FL 33418  
PHONE: 561-744-3424

**MANUFACTURER**  
TISCHLER UND SOHN (USA) LTD.  
SIX SUBURBAN AVENUE  
STAMFORD, CONNECTICUT  
203-674-0600

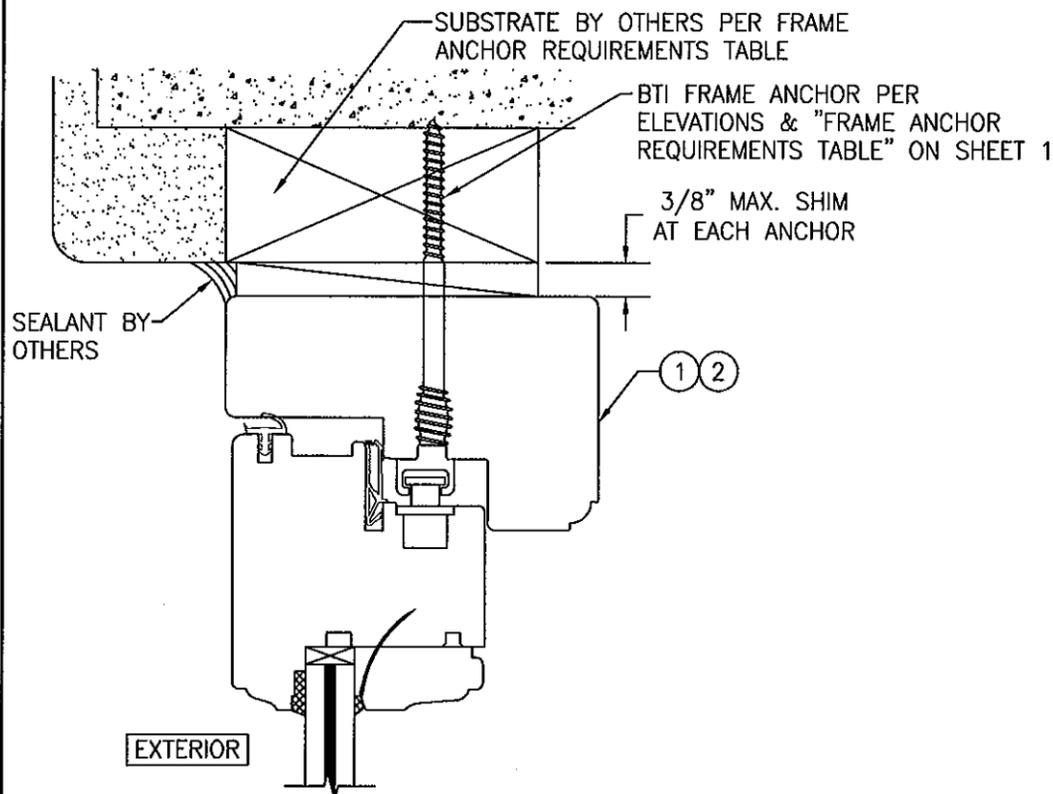
**CERTIFICATION**  
OCT 27 2011  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135



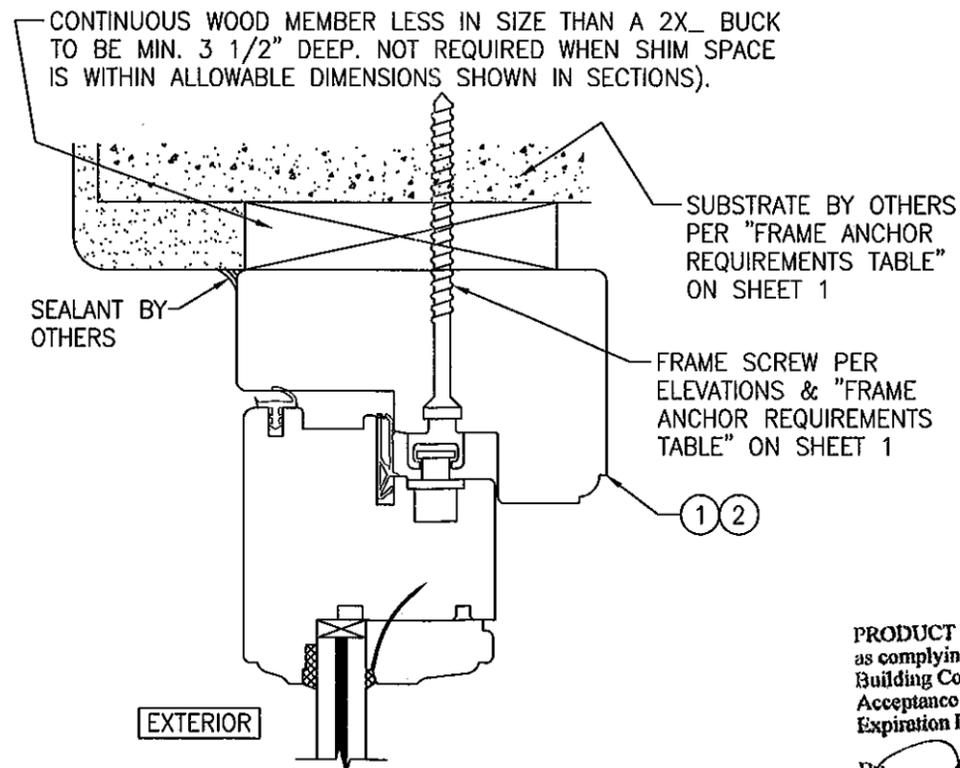
**OPTIONAL INSTALLATION ANGLE CLIP DETAIL**  
 (HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
 (FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



**OPTIONAL INSTALLATION BTI BRACKET DETAIL**  
 (HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
 (FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

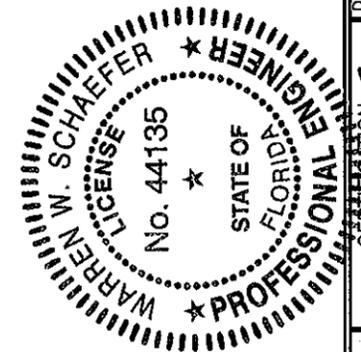


**OPTIONAL BTI SCREW DETAIL**  
 (HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
 (FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



**OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER**  
 (HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)  
 (FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 11-110110  
 Expiration Date 01/08/2014  
 By: *[Signature]*  
 Miami Dade Product Control



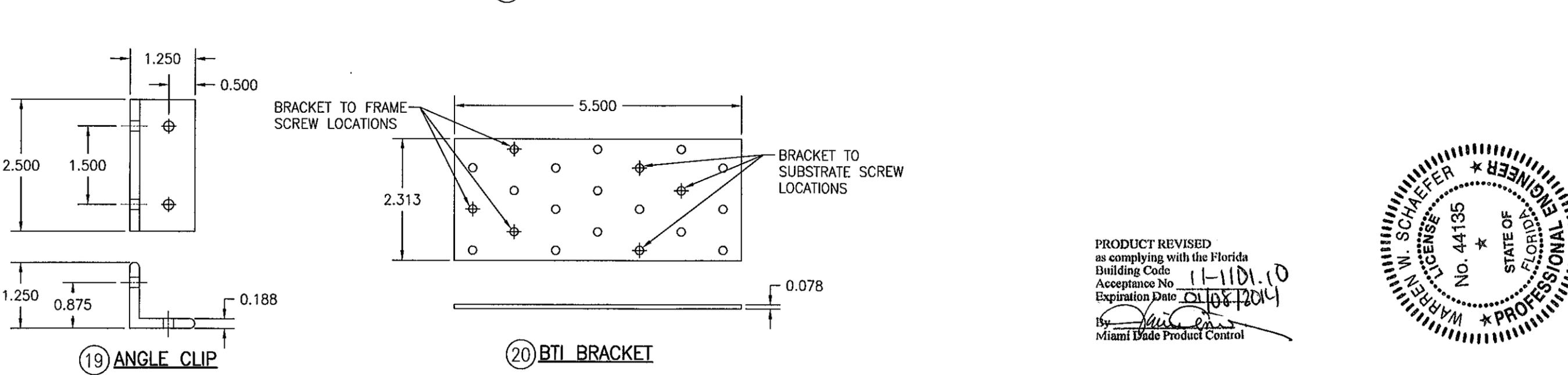
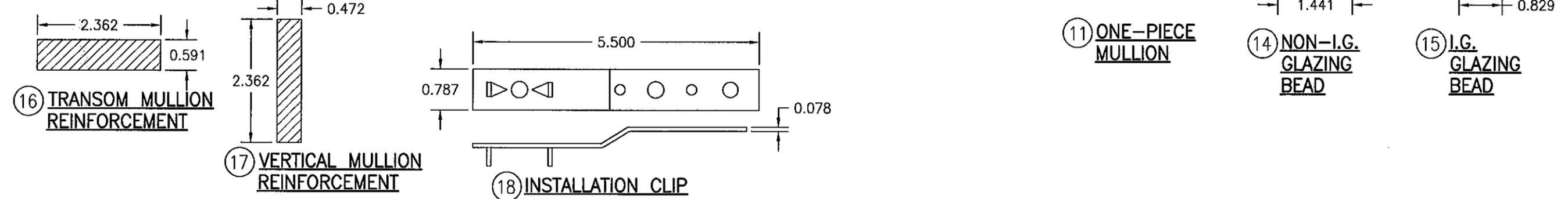
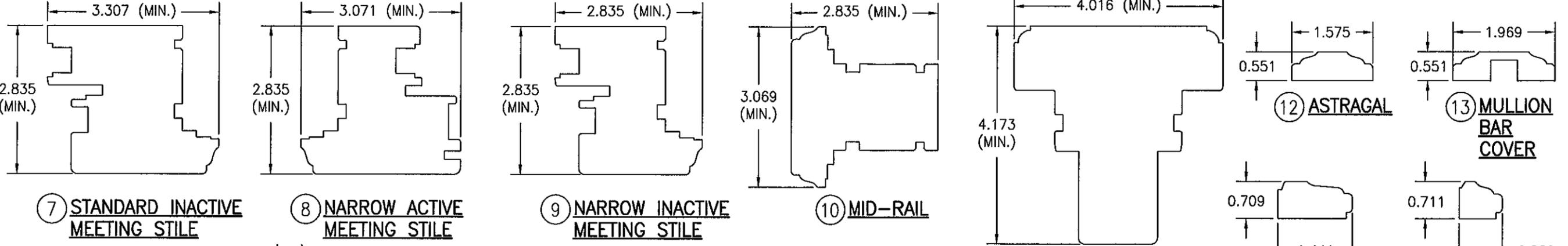
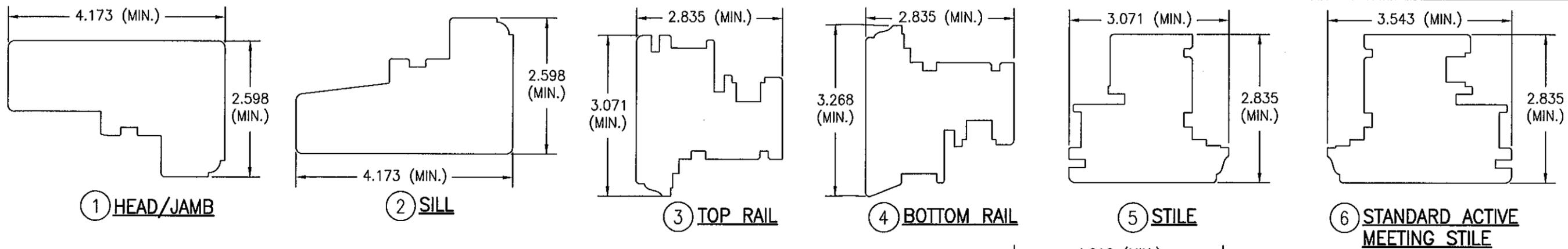
DRAWN BY:	W.R.M.	CHECKED BY:	W.W.S.
PLOT:	1-2	DATE:	04/03/08
DATE			
BY			
REVISION DESCRIPTION			
NO.			

DRAWING TITLE: **OUT-SWING IMPACT WOOD CASEMENT WINDOW**

CONSULTANTS: **W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)**  
 7480 150TH COURT NORTH  
 PALM BEACH GARDENS, FL 33418  
 PHONE: 561-744-3424

MANUFACTURER: **TISCHLER UND SOHN (USA) LTD.**  
 SIX SUBURBAN AVENUE  
 STAMFORD, CONNECTICUT  
 203-674-0600

CERTIFICATION: *[Signature]*  
 OCT 27 2011  
 WARREN M. SCHAEFER, P.E.  
 P.E. NO. 44135



PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 11-1101.10  
 Expiration Date 01/08/2014  
 By: *[Signature]*  
 Miami Dade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/03/08	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE <b>OUT-SWING IMPACT WOOD CASEMENT WINDOW</b>			
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A. (CA 6809)</b> 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER <b>TISCHLER UND SOHN (USA) LTD.</b> SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
CERTIFICATION <i>[Signature]</i> WARREN M. SCHAEFER P.E.		DATE <b>04/27/2011</b>	
DRAWING NO. <b>1530</b>		REV. <b>A</b>	
SHEET NO. <b>9 OF 10</b>			

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD/JAMB	MAHOGANY
2	SILL	MAHOGANY
3	TOP RAIL	MAHOGANY
4	BOTTOM RAIL	MAHOGANY
5	STILE	MAHOGANY
6	STANDARD ACTIVE MEETING STILE	MAHOGANY
7	STANDARD INACTIVE MEETING STILE	MAHOGANY
8	NARROW ACTIVE MEETING STILE	MAHOGANY
9	NARROW ACTIVE MEETING STILE	MAHOGANY
10	MID-RAIL	MAHOGANY
11	ONE-PIECE MULLION	MAHOGANY
12	ASTRAGAL	MAHOGANY
13	MULLION BAR COVER	MAHOGANY
14	NON-I.G. GLAZING BEAD	MAHOGANY
15	I.G. GLAZING BEAD	MAHOGANY
16	TRANSOM MULLION REINFORCEMENT	34 KSI STAINLESS STEEL OR A36 STEEL
17	VERTICAL MULLION REINFORCEMENT	34 KSI STAINLESS STEEL OR A36 STEEL
18	INSTALLATION CLIP	GALVANIZED 54 KSI STEEL
19	ANGLE CLIP	6061-T6 ALUMINUM
20	BTI BRACKET	GALVANIZED 54 KSI STEEL
HARDWARE		
24	BUTT HINGE 2 7/8" LONG	BY: GENIATE GMBH
25	BUTT HINGE 4 3/4" LONG	BY: GENIATE GMBH
26	MULTI-POINT LOCK SYSTEM	BY: SIEGENIA AUBI KG TYPE: MUSHROOM
27	HANDLE	AS REQUIRED TO OPERATE LOCK SYSTEM
SEALS & SEALANTS		
31	WEATHERSTRIP	THERMOPLASTIC ELASTOMER; BY: DEVENTER
32	WEATHERSTRIP	THERMOPLASTIC ELASTOMER; BY: DEVENTER
33	WEATHERSTRIP	THERMOPLASTIC ELASTOMER; BY: DEVENTER
FASTENERS		
36	OPTIONAL 18 GA. X 1 1/2" S.S. CURVED NAIL	4" FROM CORNERS & 12" MAX. O.C.
37	NO. 10 X 1 1/2" WOOD SCREW	2 PER HINGE INTO SASH
38	NO. 10 X 1 1/4" WOOD SCREW	3 PER HINGE INTO JAMB

NOTE: WOOD USED IN TESTING WAS SIPO MAHOGANY WITH A SPECIFIC GRAVITY OF G = 0.62 AND A MODULUS OF ELASTICITY OF E = 1,600,000 PSI. OTHER WOOD SPECIES APPLICABLE FOR USE WITH THIS PRODUCT ARE THOSE WITH A SPECIFIC GRAVITY OF 0.62 AND MODULUS OF ELASTICITY OF 1,600,000 PSI OR GREATER. ALL WOOD IS MINIMUM GRADE 2 MILLED BY TISCHLER UND SOHN TO SELECT.

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 11-1101.10  
Expiration Date 01/08/2014  
By *[Signature]*  
Miami Dade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/03/08	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: OUT-SWING IMPACT WOOD CASEMENT WINDOW			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
CERTIFICATION WARREN W. SCHAEFER LICENSE No. 44135 STATE OF FLORIDA PROFESSIONAL ENGINEER		OCT 27 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1530		REV. A	
SHEET NO. 10 OF 10			