



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

NOTICE OF ACCEPTANCE (NOA)

www.miamidade.gov/pera/

Marvin Windows and Doors
Highway 11 West (P.O. Box 100)
Warroad, MN 56763-0100

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 "StormPlus IZ4 Casemaster Fixed Casement" Wood Fixed Window - L.M.I.

APPROVAL DOCUMENT: Drawing No. 1551, titled "Wood Casemaster fixed casement StormPlus IZ4", sheets 1 through 6 of 6, dated 04/02/08, with revision A1 dated 10/17/11, 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 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 # 08-0213.09 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. 11-1021.11
Expiration Date: July 03, 2013
Approval Date: December 22, 2011
Page 1

Marvin Windows and Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **1551**, titled "Wood Casemaster Fixed Casement StormPlus IZ4", sheets 1 through 6 of 6, dated 04/02/08, with revision A1 dated 10/17/11, 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, 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 203-94along with marked-up drawings and installation diagram of Storm Plus IZ4 Casemaster wood fixed window, Units 3, 8, 9, 10, 11, 12 & 13, prepared by Architectural Testing, Inc., **ATI-77779.01-201-18**, dated 01/28/08 and addendum letter dated 05/07/08, both, signed and sealed by Joseph A. Reed, P.E.
(Submitted under NOA# 08-0213.09)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC-2007 and FBC-2010, prepared by prepared by W. W. Schaefer Engineering & Consulting, P.A., dated 02/07/08 and updated on 10/17/11, signed and sealed by Warren W. Schaefer, P.E.
2. Glazing complies with ASTM E1300-04

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. ~~10-0413.04~~ issued to E.I. DuPont DeNemours & Co., Inc. for their "DuPont Sentry Glass® Interlayer" dated 05/26/10, expiring on 01/14/12.



Manuel Perez, P.E.
Product Control Examiner
NOA No. 11-1021.11

Expiration Date: July 03, 2013
Approval Date: December 22, 2011

Marvin Windows and Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. Statement letter of conformance complying with the FBC-2007 and FBC-2010, dated October 17, 2011, signed and sealed by Warren W. Schaefer, P.E.
2. Statement letter of no financial interest, dated October 17, 2011, signed and sealed by Warren W. Schaefer, P.E.
3. Laboratory compliance letter for Test Report No. **ATI 77779.01-201-18** issued by Architectural Testing, Inc., dated 05/07/08, signed and sealed by Joseph A. Reed, P.E.
4. Test Proposal #07-3071 issued by BCCO dated 06/21/07, revised on 07/02/07, issued by BCCO, signed by Manuel Perez, P.E.

G. OTHERS

1. Notice of Acceptance No. **08-0213.09**, issued to Marvin Windows and Doors for their Series "StormPlus IZ4 Casemaster" Wood Fixed Window – L.M.I., approved on 07/03/08 and expiring on 07/03/13.


Manuel Perez, P.E.
Product Control Examiner
NOA No. 11-1021-11

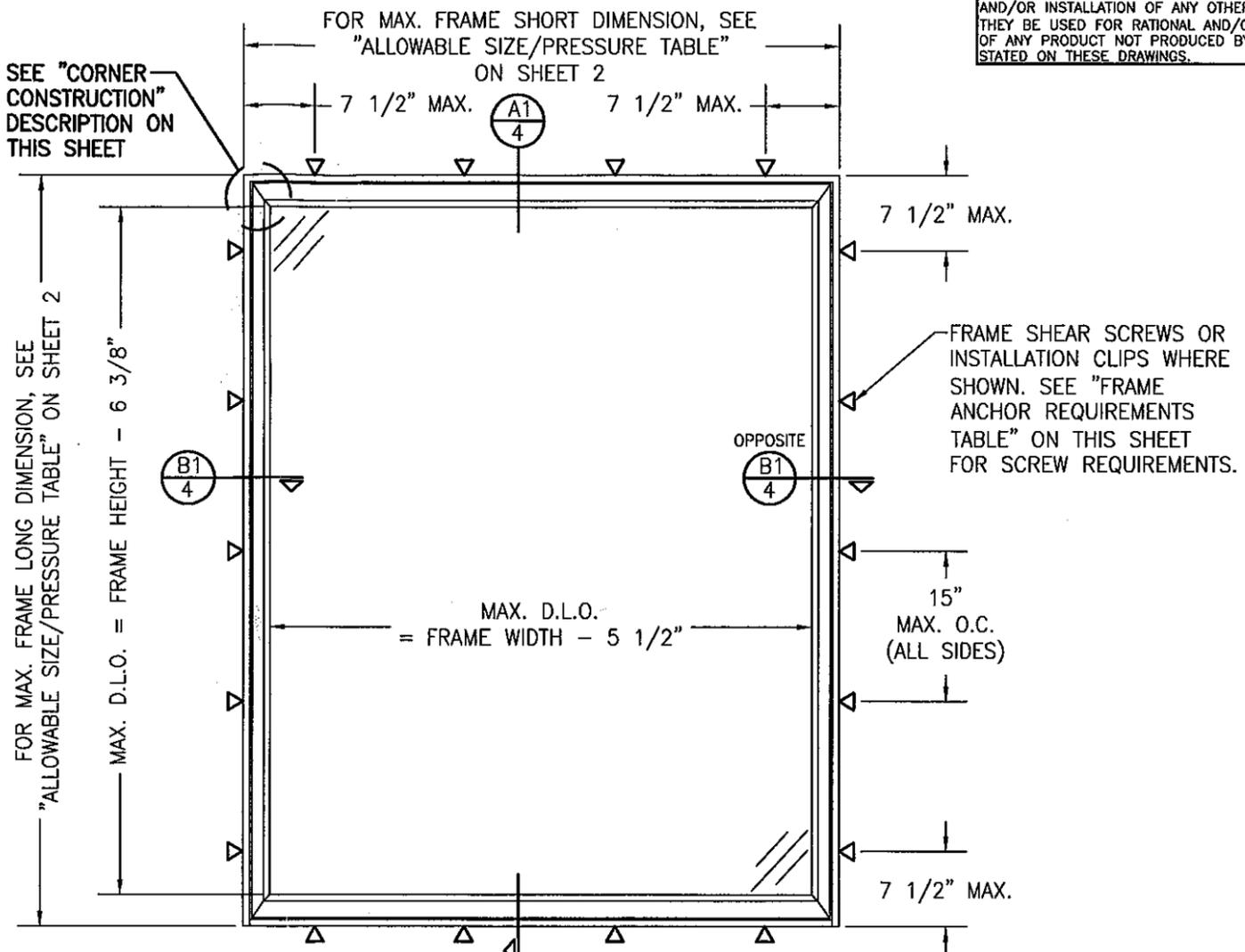
Expiration Date: July 03, 2013
Approval Date: December 22, 2011

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 $KD = 0.85$ 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 $CD = 1.6$ 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.

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.
PLOT:	1=16	DATE:	04/02/08
DATE:	10/17/11		
BY:	W.R.M.		
REVISION DESCRIPTION:	UPDATE TO CURRENT STANDARDS		
NO.	A1		



CORNER CONSTRUCTION (STANDARD RECTANGULAR WINDOWS)

FRAME CORNERS: THE SIDE WOOD MEMBERS ARE BUTTED TO THE HEAD & SILL MEMBERS, SECURED WITH THREE(3) GS16 1/2" X 1 1/2" STAPLES THROUGH THE HEAD & SILL INTO THE JAMB & ONE(1) 14 GA. 1/2" X 2" STAPLE THROUGH THE JAMB INTO THE HEAD & SILL & SEALED WITH SEALANT.

SASH CORNERS: SASH MEMBERS ARE MORTISED & TENONED AND SECURED WITH TWO(2) GS16 X 1 3/8" BRAD NAILS.

CORNER CONSTRUCTION (SHAPE WINDOWS)

FRAME CORNERS: THE SIDE WOOD MEMBERS ARE BUTTED TO THE HEAD & SILL MEMBERS & SECURED WITH NO. 7 X 2" SCREWS (3 AT SQUARE CORNERS; 4 AT SHAPED CORNERS) AND SEALED WITH SEALANT.

SASH CORNERS: SASH MEMBERS ARE BUTTED TOGETHER, JOINED WITH 2 NO. 7 X 2" TRIM HEAD SCREWS & SEALED WITH SEALANT.

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

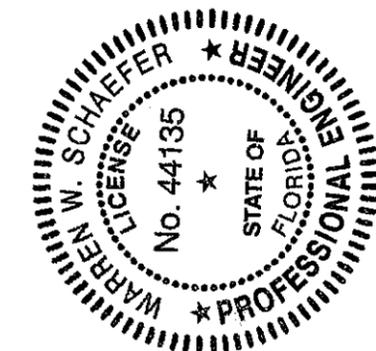
**ALLOWABLE DESIGN PRESSURE
(SINGLE WINDOWS)**
SEE LOAD TABLE ON SHEET 2

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SHEAR SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
C-90 CMU/2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 X 1 1/2" SMS	1 3/8"	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"

(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, 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 11-1021.11
Expiration Date 01/3/2013
By *Warren W. Schaefer*
Miami Dade Product Control



DRAWING TITLE: **WOOD CASEMASTER FIXED CASEMENT STORMPLUS IZ4**

MANUFACTURER: **MARVIN WINDOWS & DOORS**
HIGHWAY 11; P.O. BOX 100
WARROAD, MN 56763
800-346-5044

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

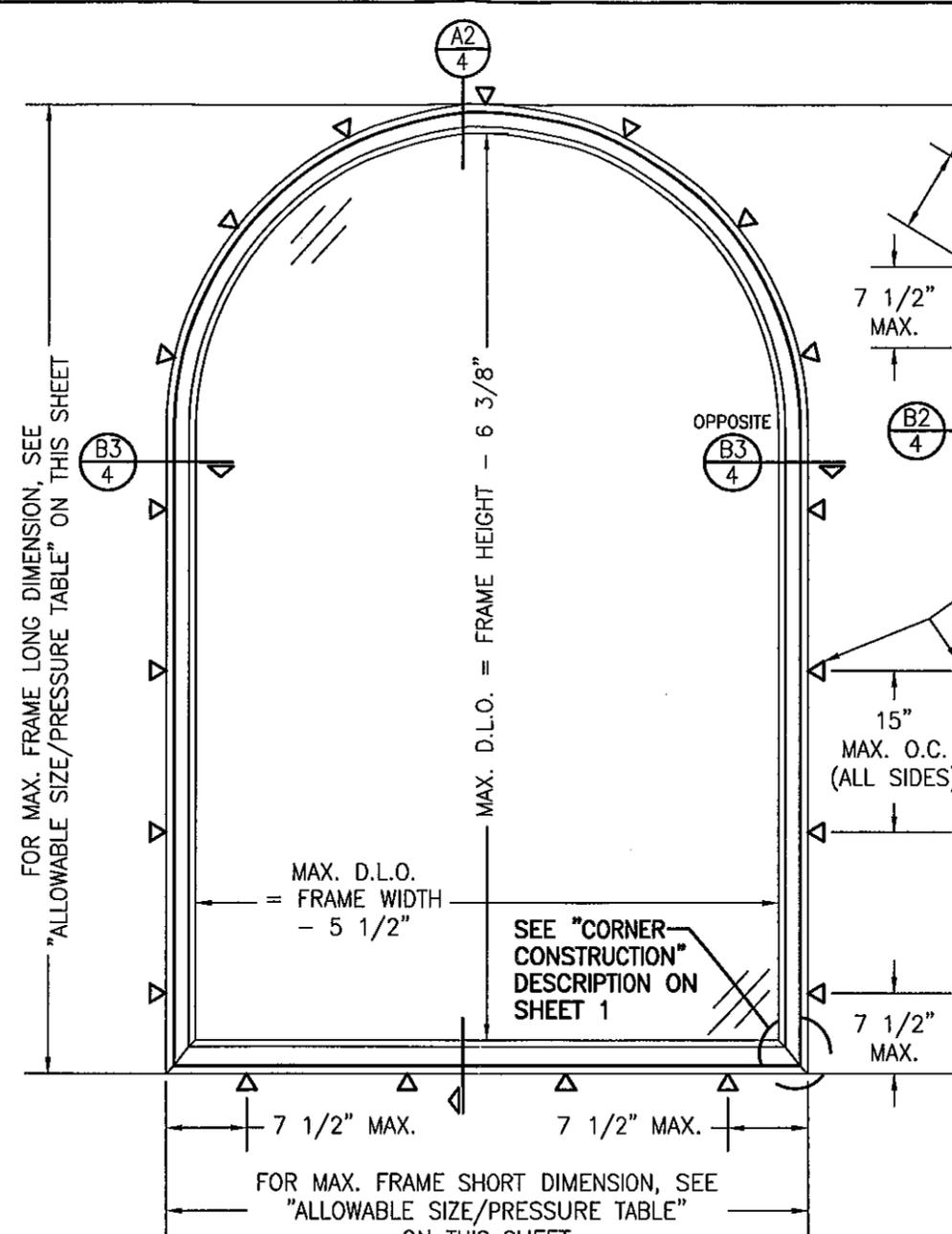
CERTIFICATION	04 17 2011
DRAWING NO.	1551
REV.	A
SHEET NO.	1 OF 6

ALLOWABLE WINDOW SIZE/PRESSURE TABLE

MAX. WINDOW FRAME LONG DIMENSION (IN.)	MAX. WINDOW FRAME SHORT DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)					
		GLASS OPTION "A"		GLASS OPTIONS "B"		GLASS OPTIONS "C"	
		POS.	NEG.	POS.	NEG.	POS.	NEG.
144	50	59.1	59.1	75.0	75.0		
	48	63.1	63.1	75.0	75.0		
	42	75.0	75.0	75.0	75.0		
	36	75.0	80.0	75.0	80.0		
	24	95.0	95.0	95.0	95.0	75.0	85.0
132	54	56.0	56.0	75.0	75.0		
	48	65.7	65.7	75.0	75.0		
	42	75.0	75.0	75.0	75.0		
	39	75.0	80.0	75.0	80.0		
	26	95.0	95.0	95.0	95.0	75.0	85.0
120	60	53.1	53.1	75.0	75.0		
	54	59.7	59.7	75.0	75.0		
	48	69.6	69.6	75.0	75.0		
	43	75.0	80.0	75.0	80.0		
	28	95.0	95.0	95.0	95.0	75.0	85.0
108	66	55.2	55.2	73.6	73.6		
	60	59.8	59.8	75.0	75.0		
	54	66.4	66.4	75.0	75.0		
	48	75.0	75.7	75.0	75.0		
	45	75.0	80.0	75.0	80.0		
96	36	95.0	95.0	95.0	95.0	75.0	85.0
	72	58.6	58.6	75.0	75.0		
	66	62.5	62.5	75.0	75.0		
	60	67.7	67.7	75.0	75.0		
	54	74.1	74.1	75.0	75.0		
90	49	75.0	80.0	75.0	80.0		
	36	95.0	95.0	95.0	95.0	75.0	85.0
	72	62.2	62.2	75.0	75.0		
	66	66.8	66.8	75.0	75.0		
	60	72.1	72.1	75.0	75.0		
84	54	75.0	78.1	75.0	75.0		
	52	75.0	80.0	75.0	80.0		
	38	95.0	95.0	95.0	95.0	75.0	85.0
	72	67.5	67.5	75.0	75.0		
	66	71.9	71.9	75.0	75.0		
78	60	75.0	76.9	75.0	75.0		
	56	75.0	80.0	75.0	80.0		
	41	95.0	95.0	95.0	95.0	75.0	85.0
	72	72.7	72.7	75.0	75.0		
	66	75.0	76.7	75.0	75.0		
72	61	75.0	80.0	75.0	80.0		
	44	95.0	95.0	95.0	95.0	75.0	85.0
	72	75.0	78.2	75.0	75.0		
	68	75.0	80.0	75.0	80.0		
	48	95.0	95.0	95.0	95.0	75.0	85.0
66	66	75.0	80.0	75.0	80.0		
	52	95.0	95.0	95.0	95.0	75.0	85.0
	60	75.0	80.0	75.0	80.0		
60	60	75.0	80.0	75.0	80.0		
	57	95.0	95.0	95.0	95.0	75.0	85.0

1. WINDOW SIZE DIMENSIONS SHOWN ARE MAXIMUM SIZES. SMALLER SIZES SHALL APPLY TO LOADS EQUAL TO THE NEAREST LARGER SIZE SHOWN IN TABLE.
 2. CROSSED OUT BOXES DESIGNATE SIZES NOT ACCEPTABLE FOR THE RESPECTIVE OPTIONS.

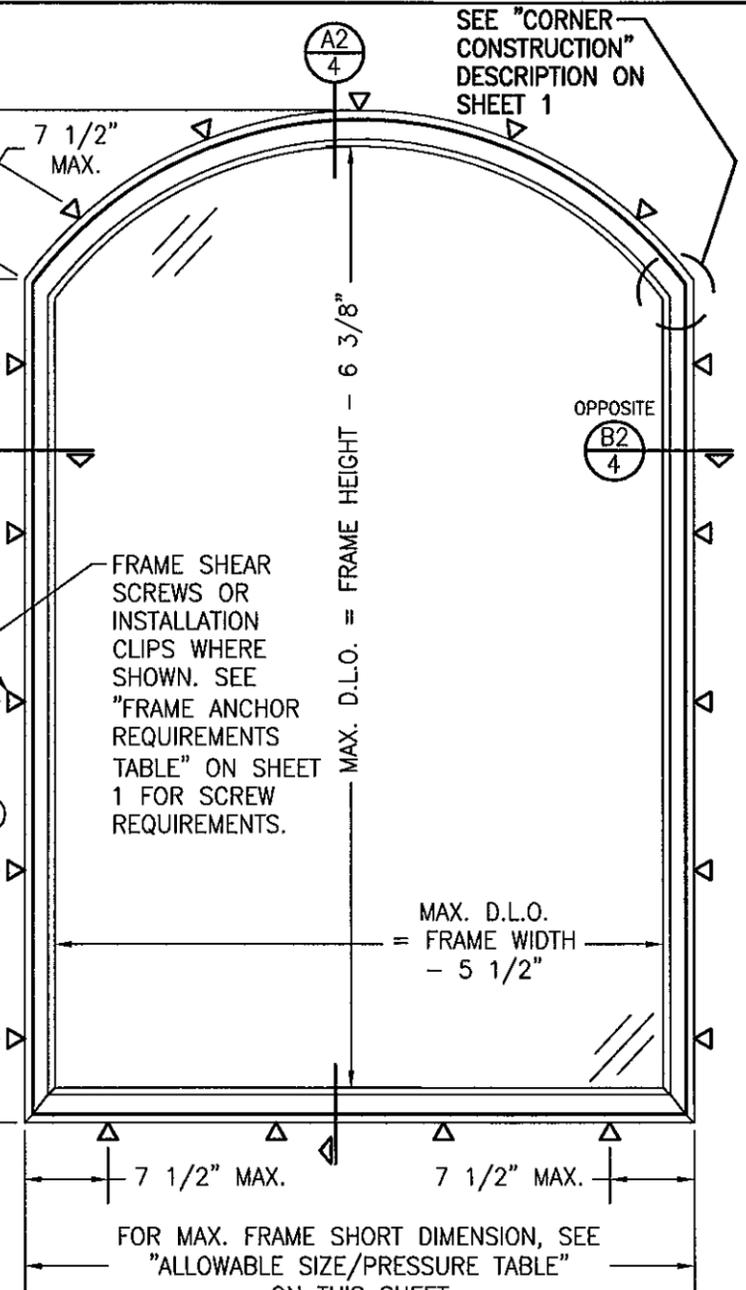
SEE SHEET 5 FOR GLASS OPTIONS



FOR MAX. FRAME LONG DIMENSION, SEE "ALLOWABLE SIZE/PRESSURE TABLE" ON THIS SHEET

FOR MAX. FRAME SHORT DIMENSION, SEE "ALLOWABLE SIZE/PRESSURE TABLE" ON THIS SHEET

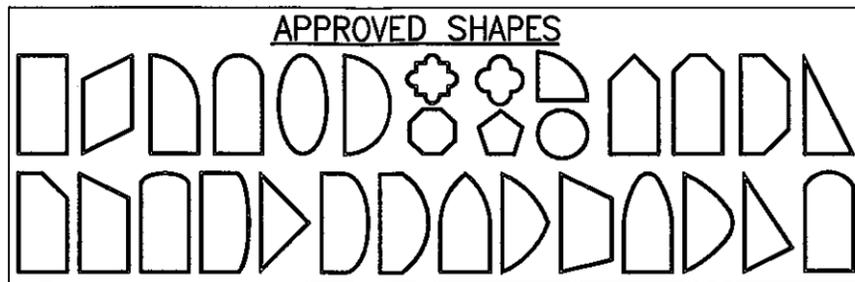
**EXTERIOR ELEVATION
SINGLE EXTENDED LEG HALF ROUND
TOP FIXED CASEMENT WINDOW**
SCALE: 3/4" = 1'-0"



FOR MAX. FRAME LONG DIMENSION, SEE "ALLOWABLE SIZE/PRESSURE TABLE" ON THIS SHEET

FOR MAX. FRAME SHORT DIMENSION, SEE "ALLOWABLE SIZE/PRESSURE TABLE" ON THIS SHEET

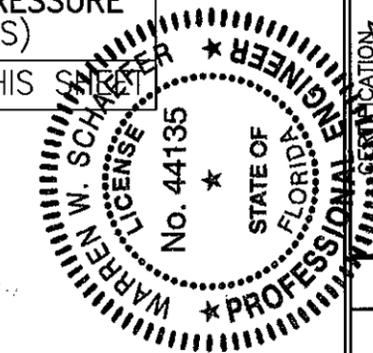
**EXTERIOR ELEVATION
SINGLE EYEBROW TOP FIXED
CASEMENT WINDOW**
SCALE: 3/4" = 1'-0"



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

**ALLOWABLE DESIGN PRESSURE
(SINGLE WINDOWS)**
 SEE LOAD TABLE ON THIS SHEET

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 11-1021.11
 Expiration Date: 03/31/2013
 By: *Warren W. Schaeffer*
 Miami Dade Product Control



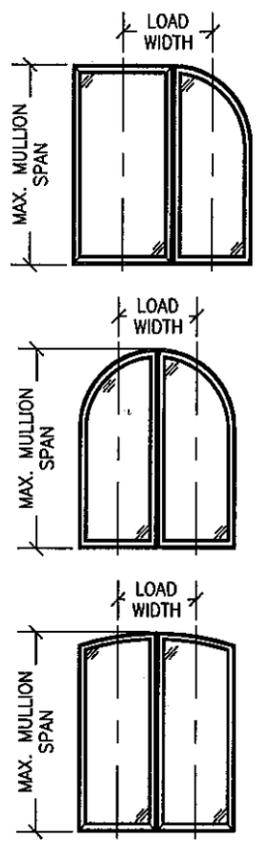
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-16	DATE: 04/02/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE WOOD CASEMASTER FIXED CASEMENT STORMPLUS IZ4	
CONSULTANTS W. W. SCHAEFFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER MARVIN WINDOWS & DOORS
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044
CERTIFICATION OCT 17 2011 WARREN W. SCHAEFFER, P.E. P.E. NO. 44135	DRAWING NO. 1551
	REV. A
	SHEET NO. 2 OF 6

MULLION ALLOWABLE LOAD TABLE				
MAXIMUM MULLION SPAN (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (POS. & NEG. PSF)		
		NON-REINFORCED MULLION	REINFORCED MULLION 4 ANCHORS	REINFORCED MULLION 6 ANCHORS
96	72		47.9	57.2
	66		49.8	59.4
	60		52.2	62.4
	54		55.5	66.3
	48		59.9	71.5
	42		65.7	78.4
	36		73.7	88.0
	30		85.1	95.0
90	24		95.0	95.0
	72		53.2	63.6
	66		55.0	65.7
	60		57.5	68.6
	54		60.8	72.6
	48		65.3	78.0
	42		71.4	85.3
	36		79.8	95.0
84	30		91.9	95.0
	24		95.0	95.0
	72		59.9	71.5
	66		61.5	73.4
	60		63.9	76.3
	54		67.2	80.3
	48		71.8	85.8
	42		78.2	93.4
78	36		87.1	95.0
	30		95.0	95.0
	72		68.4	81.7
	66		69.7	83.2
	60		71.8	85.8
	54		75.1	89.7
	48		79.8	95.0
	42		86.4	95.0
72	36		95.0	95.0
	72 OR MORE		79.8	95.0
	66		80.4	95.0
	60		82.1	95.0
	54		85.1	95.0
	48		89.8	95.0
	42		95.0	95.0
	71 1/8	71 OR MORE	67.4	82.1
66		68.2	82.5	95.0
60		70.0	84.1	95.0
54		72.5	87.1	95.0
48		76.3	91.7	95.0
42		82.0	95.0	95.0
36		90.3	95.0	95.0
30		95.0	95.0	95.0
66	66 OR MORE	79.1	95.0	95.0
	60	79.7	95.0	95.0
	54	81.8	95.0	95.0
	48	85.4	95.0	95.0
	42	91.1	95.0	95.0
60	36	95.0	95.0	95.0
	60 OR MORE	95.0	95.0	95.0

TABLE NOTES:
 1. LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT ALLOWED FOR THE INDIVIDUAL WINDOW SHALL CONTROL AS ALLOWABLE FOR THE OVERALL UNIT.
 2. ADD 3/8" TO LOAD WIDTH VALUES IN THIS TABLE WHEN 3/8" ALUMINUM REINFORCEMENT PLATE IS USED.
 3. CROSSED OUT BOXES DESIGNATE SIZES NOT ACCEPTABLE FOR THE RESPECTIVE OPTIONS.

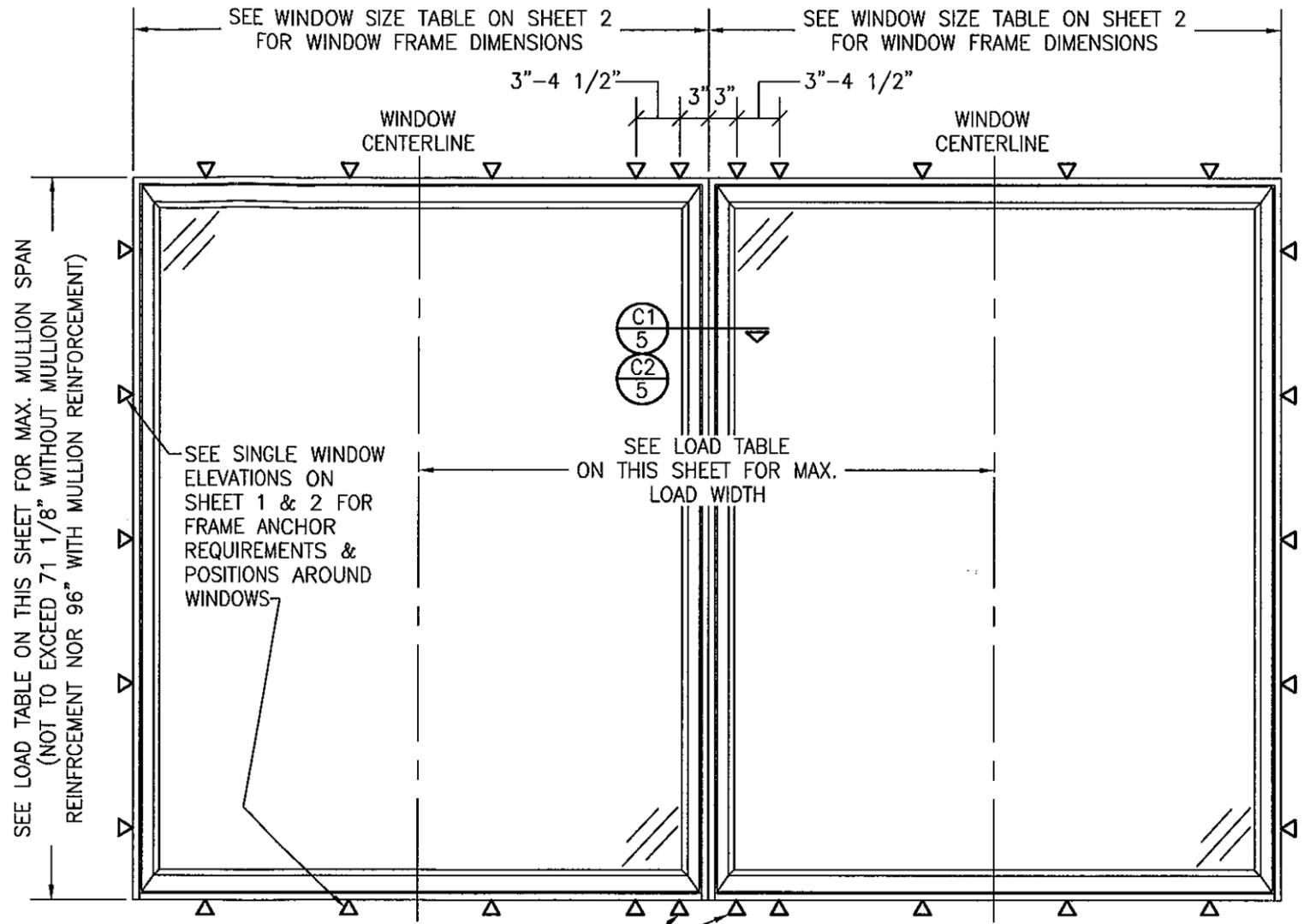
FOR NON-REINFORCED MULLION CONDITION, SEE SECTION C1/5.
 FOR REINFORCED MULLION CONDITION, SEE SECTION C2/5.

EXAMPLES OF SIDE-BY-SIDE SHAPED MULLED CONDITIONS



1. WINDOW SHAPES OTHER THAN THOSE SHOWN MAY APPLY PROVIDING THEY ARE APPLICABLE TO THOSE SHOWN ON SHEET 2.
2. SHAPED WINDOWS MAY ALSO BE MULLED TO RECTANGULAR WINDOWS AS TRANSOMS UNDER THE SAME RESTRICTIONS AS SIDE BY SIDE CONDITION SHOWN IN ELEVATION.

ALLOWABLE DESIGN PRESSURE (MULTIPLE WINDOWS)
 SEE LOAD TABLE ON THIS SHEET



SEE LOAD TABLE ON THIS SHEET FOR MAX. MULLION SPAN (NOT TO EXCEED 71 1/8" WITHOUT MULLION REINFORCEMENT NOR 96" WITH MULLION REINFORCEMENT)

SEE SINGLE WINDOW ELEVATIONS ON SHEET 1 & 2 FOR FRAME ANCHOR REQUIREMENTS & POSITIONS AROUND WINDOWS

SEE LOAD TABLE ON THIS SHEET FOR MAX. LOAD WIDTH

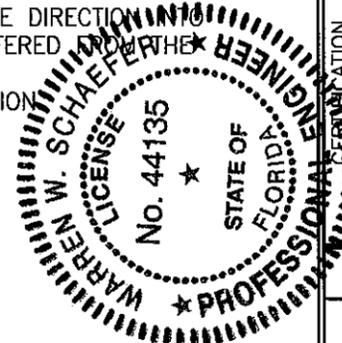
ADDITIONAL FRAME SCREWS OR INSTALLATION CLIPS WHERE SHOWN AT MULLION ENDS. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & CLIP SCREW REQUIREMENTS.

**EXTERIOR ELEVATION
 MULTIPLE CASEMENT/FIXED WINDOW**

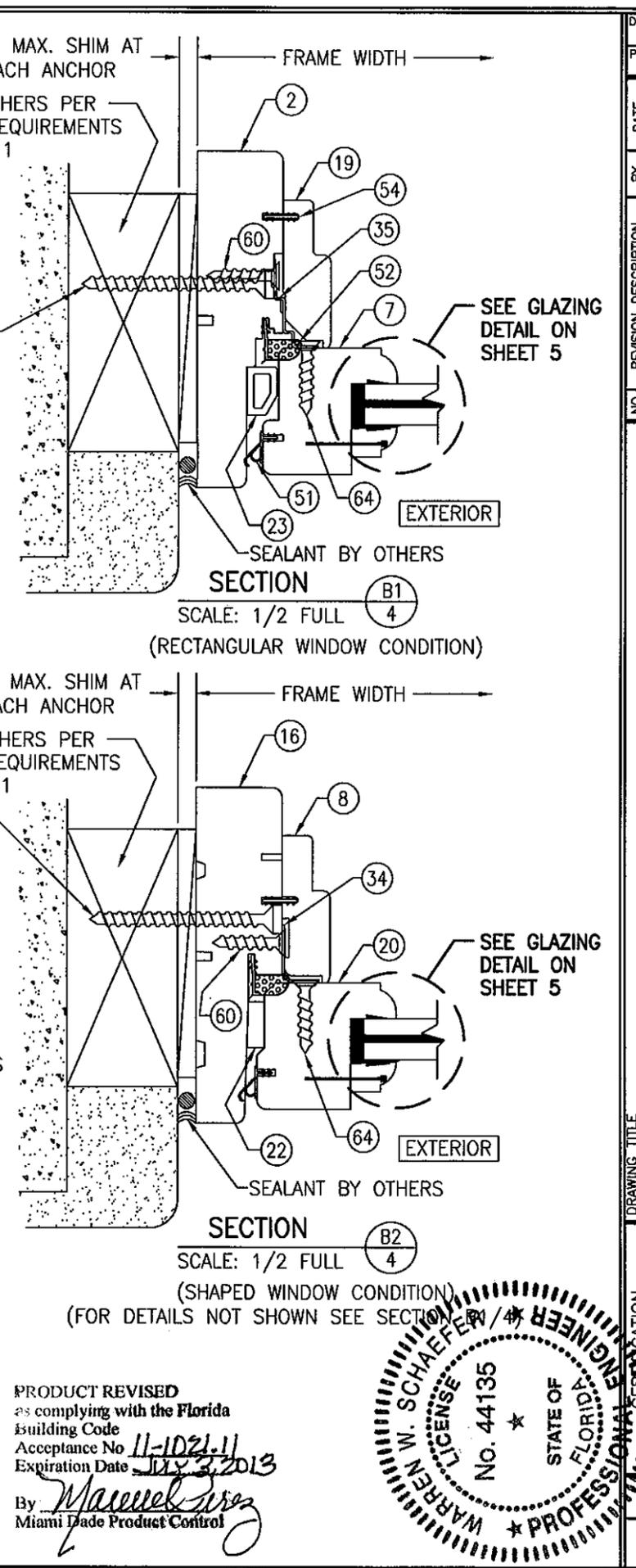
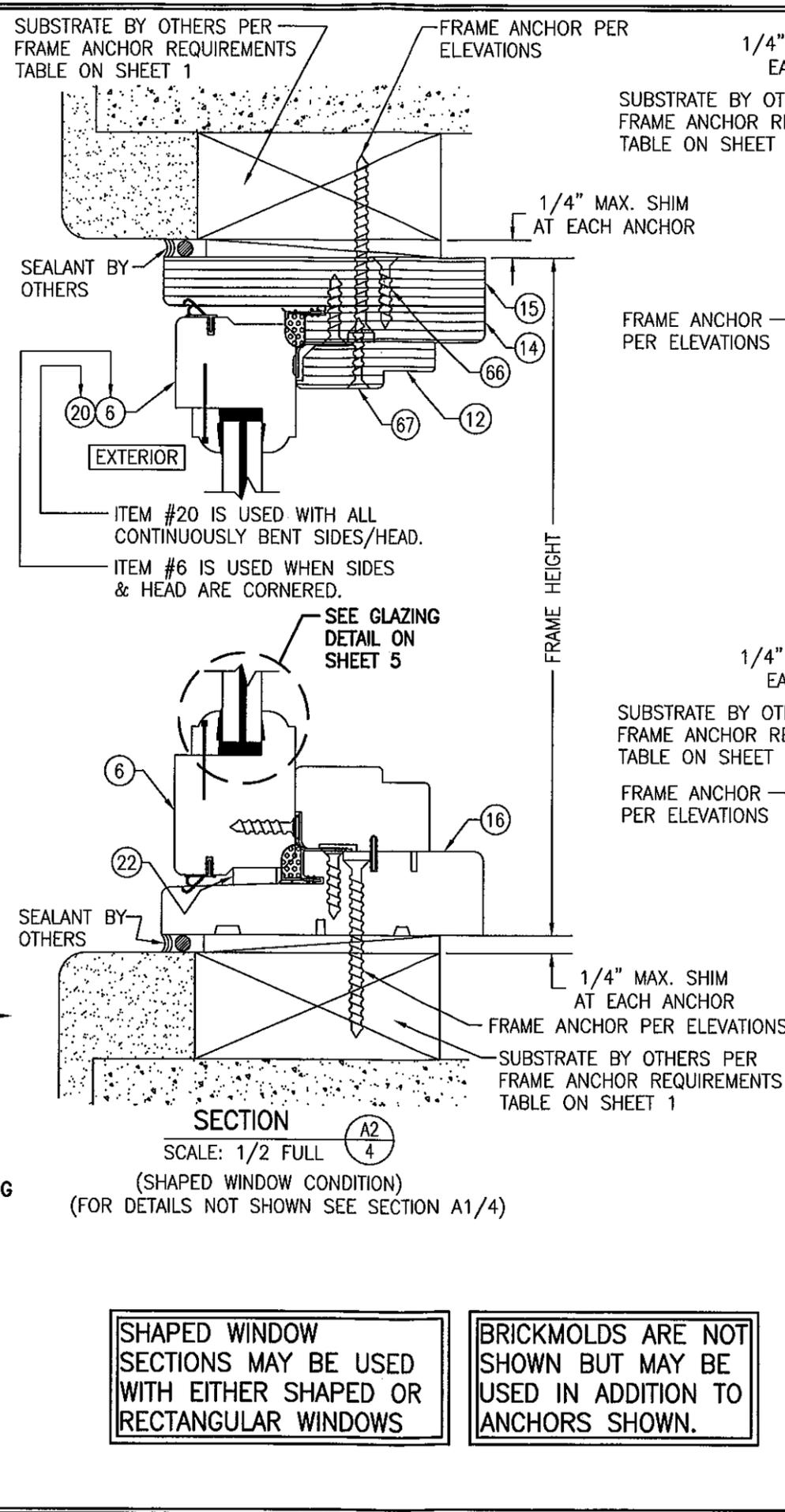
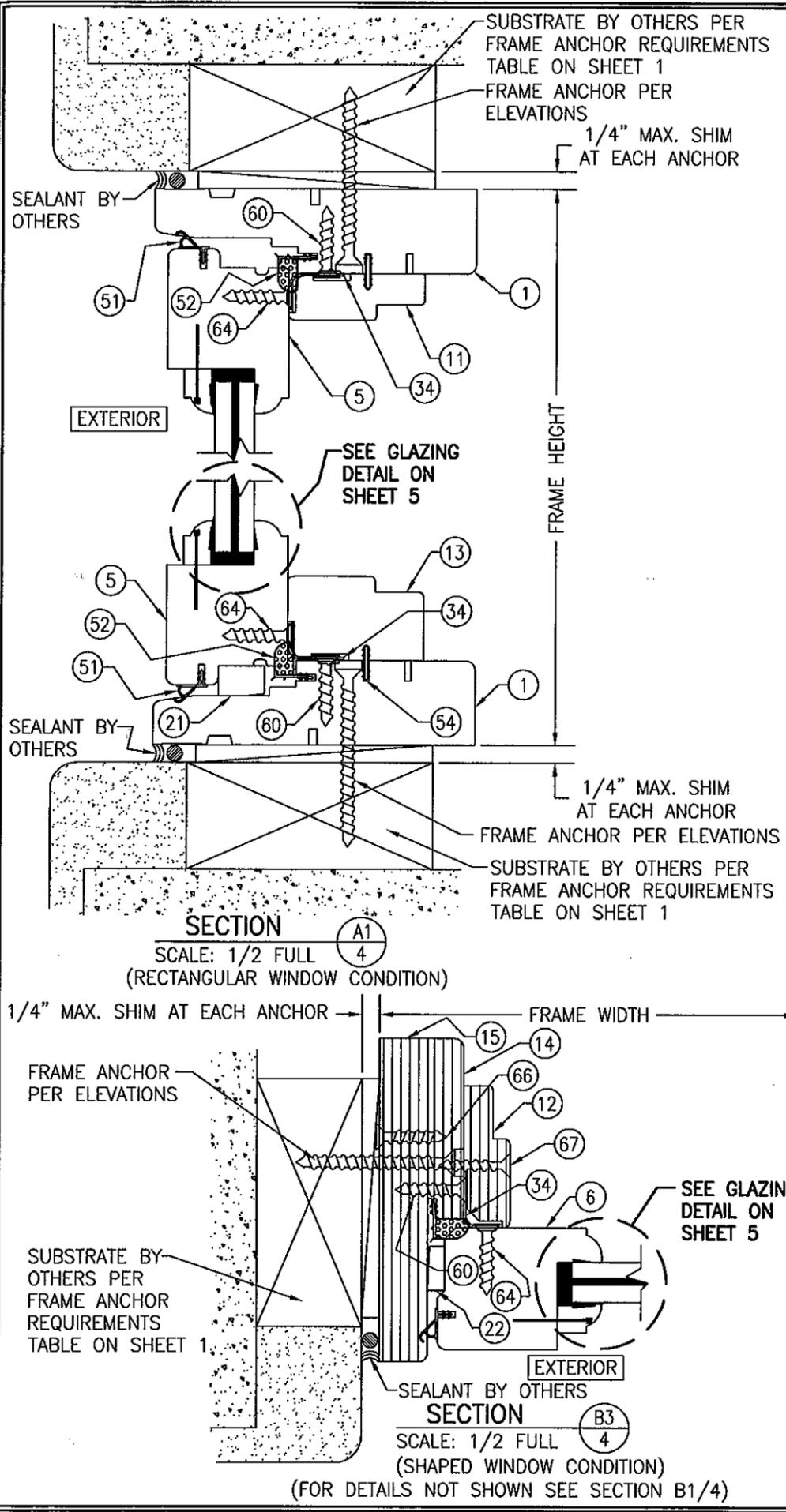
SCALE: 3/4" = 1'-0"
 (RECTANGULAR WINDOW SHOWN, SHAPED WINDOWS ALSO APPLY. SEE "APPROVED SHAPED MULLED CONDITIONS" TABLE ON THIS SHEET)

- MULTIPLE UNIT NOTES:**
1. FOR ALL DETAIL NOT SHOWN, SEE SINGLE WINDOW ELEVATIONS.
 2. MULLION MAY BE HORIZONTAL OR VERTICAL PROVIDING WINDOW SIZES ARE RESTRICTED AS SHOWN IN THIS ELEVATION.
 3. IF VERTICALLY STACKED, THE MANUFACTURER SHALL INSURE THAT THE DEAD LOAD WEIGHT OF THE WINDOWS CAN NOT CAUSE UNDUE FAILURE.
 4. THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED IN ONE DIRECTION ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED TO THE WINDOWS & THEIR MULLIONS.
 5. INDIVIDUAL WINDOW SIZES SHALL BE AS SPECIFIED IN THE SINGLE WINDOW ELEVATION.

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No 11-1021.11
 Expiration Date JULY 3, 2013
 By *Manuel Pura*
 Miami Dade Product Control



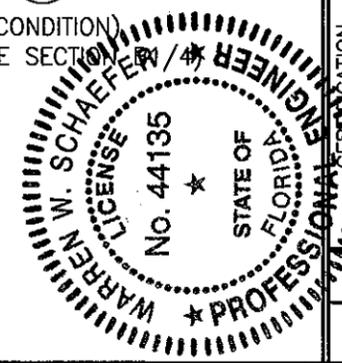
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=16	DATE: 04/02/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE WOOD CASEMASTER FIXED CASEMENT STORMPLUS IZ4	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
DRAWING NO. 1551 SHEET NO. 3 OF 6 REV. A	



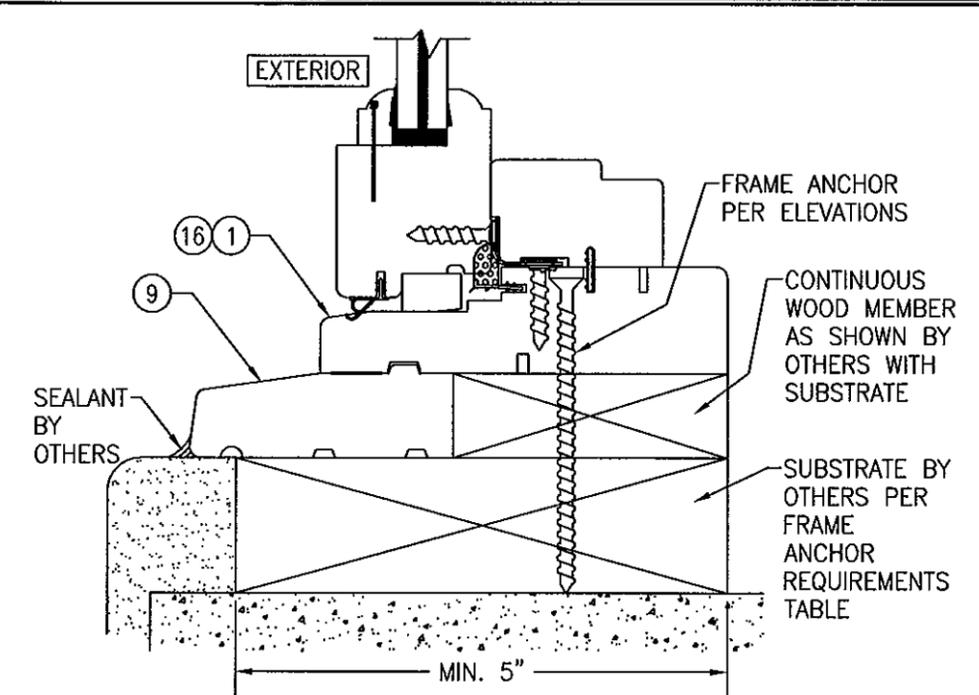
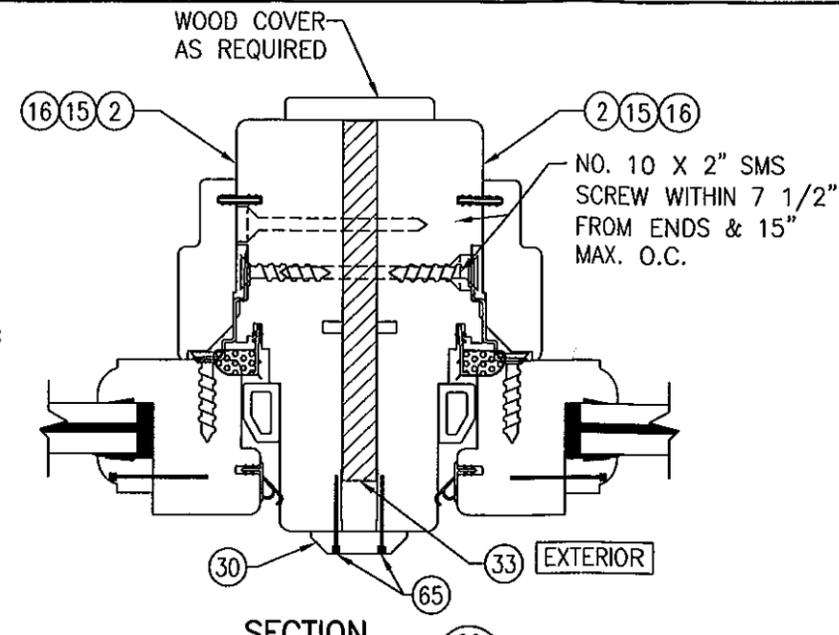
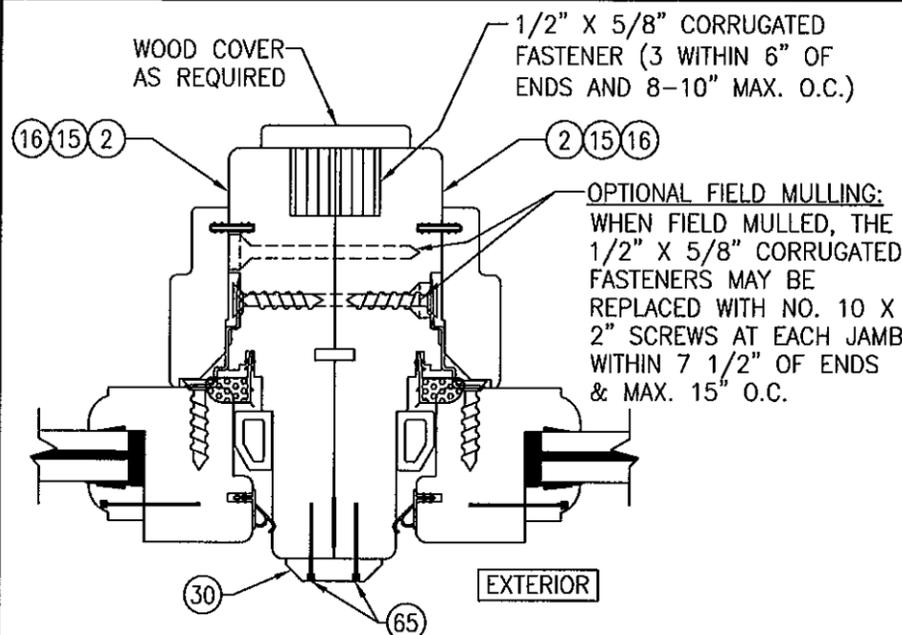
SHAPED WINDOW SECTIONS MAY BE USED WITH EITHER SHAPED OR RECTANGULAR WINDOWS

BRICKMOLDS ARE NOT SHOWN BUT MAY BE USED IN ADDITION TO ANCHORS SHOWN.

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 11-1021-11
Expiration Date July 3, 2013
By *Marcelo Cruz*
Miami Trade Product Control



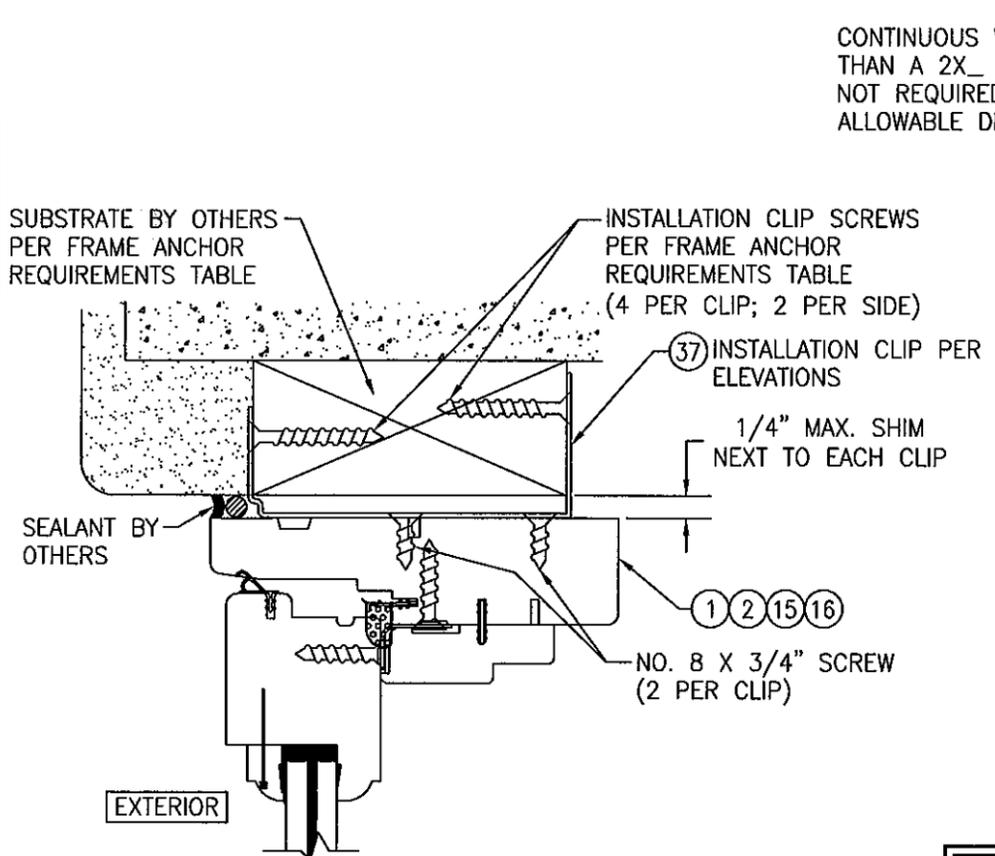
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-2	DATE: 04/02/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE WOOD CASEMASTER FIXED CASEMENT STORMPLUS IZ4	
MANUFACTURER MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
DRAWING NO.	REV
1551	A
SHEET NO.	
4	OF 6



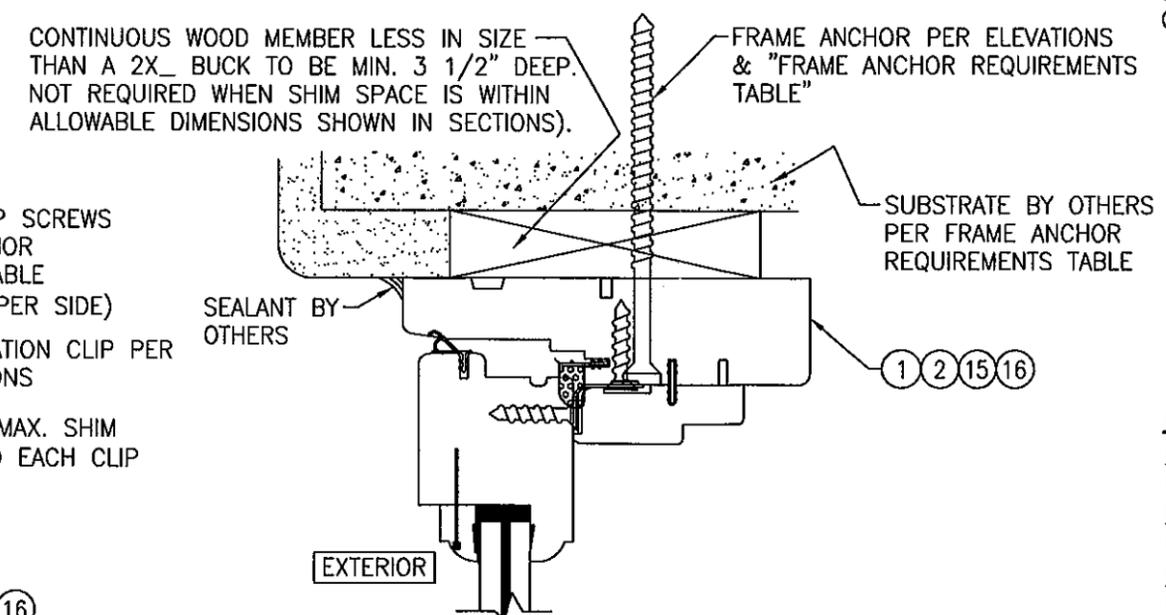
OPTIONAL DIRECT MOUNT DETAIL WITH SUB-SILL
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

SECTION C1
(NON-REINFORCED MULLION)
(FOR DETAILS NOT SHOWN SEE OTHER SECTIONS)
(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW CONDITIONS ARE JOINED THE SAME)

SECTION C2
(REINFORCED MULLION)
(FOR DETAILS NOT SHOWN SEE OTHER SECTIONS)
(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW CONDITIONS ARE JOINED THE SAME)



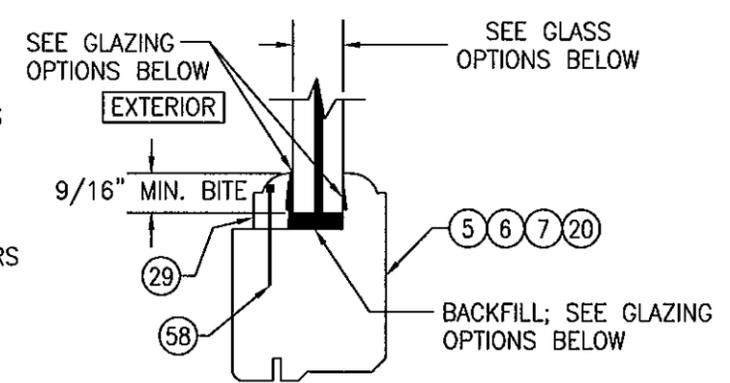
OPTIONAL INSTALLATION CLIP DETAIL
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW CONDITIONS ARE INSTALLED THE SAME)



OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW CONDITIONS ARE INSTALLED THE SAME)

BRICKMOLDS ARE NOT SHOWN BUT MAY BE USED IN ADDITION TO ANCHORS SHOWN.

SHAPED WINDOW SECTIONS MAY BE USED WITH EITHER SHAPED OR RECTANGULAR WINDOWS

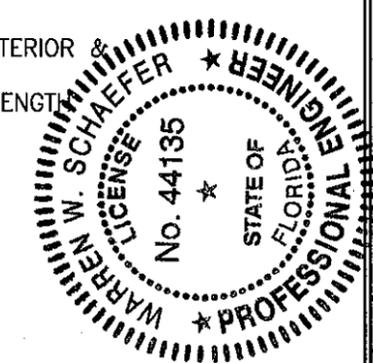


TYPICAL GLAZING DETAIL

GLASS OPTIONS:
GLASS OPTION A: 9/16" THICK LAMINATED GLASS (1/4" AN./0.09" DUPONT SG/1/4" AN.)
GLASS OPTION B: 9/16" THICK LAMINATED GLASS (1/4" HT.ST./0.09" DUPONT SG/1/4" HT.ST.)
GLASS OPTION C: 3/8" THICK LAMINATED GLASS (5/32" AN./0.090" DUPONT SG/5/32" AN.)

GLAZING OPTIONS:
GLAZING OPTION A: DOW 1199 EXTERIOR & INTERIOR WITH DOW 995 BACKFILL
GLAZING OPTION B: GE RAPID STRENGTH EXTERIOR, INTERIOR & BACKFILL

PRODUCT REVISED as complying with the Florida Building Code
Acceptance No 11-102111
Expiration Date 11/3/2013
By *Manuel Perez*
Miami Dade Product Control



DRAWN BY:	W.R.M.	CHECKED BY:	W.W.S.
PLOT:	1=2	DATE:	04/02/08
NO.		REVISION DESCRIPTION	
DATE		BY	

WOOD CASEMASTER FIXED CASEMENT STORMPLUS IZ4

MANUFACTURER
MARVIN WINDOWS & DOORS
HIGHWAY 11; P.O. BOX 100
WARROAD, MN 56763
800-346-5044

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

CERTIFICATION

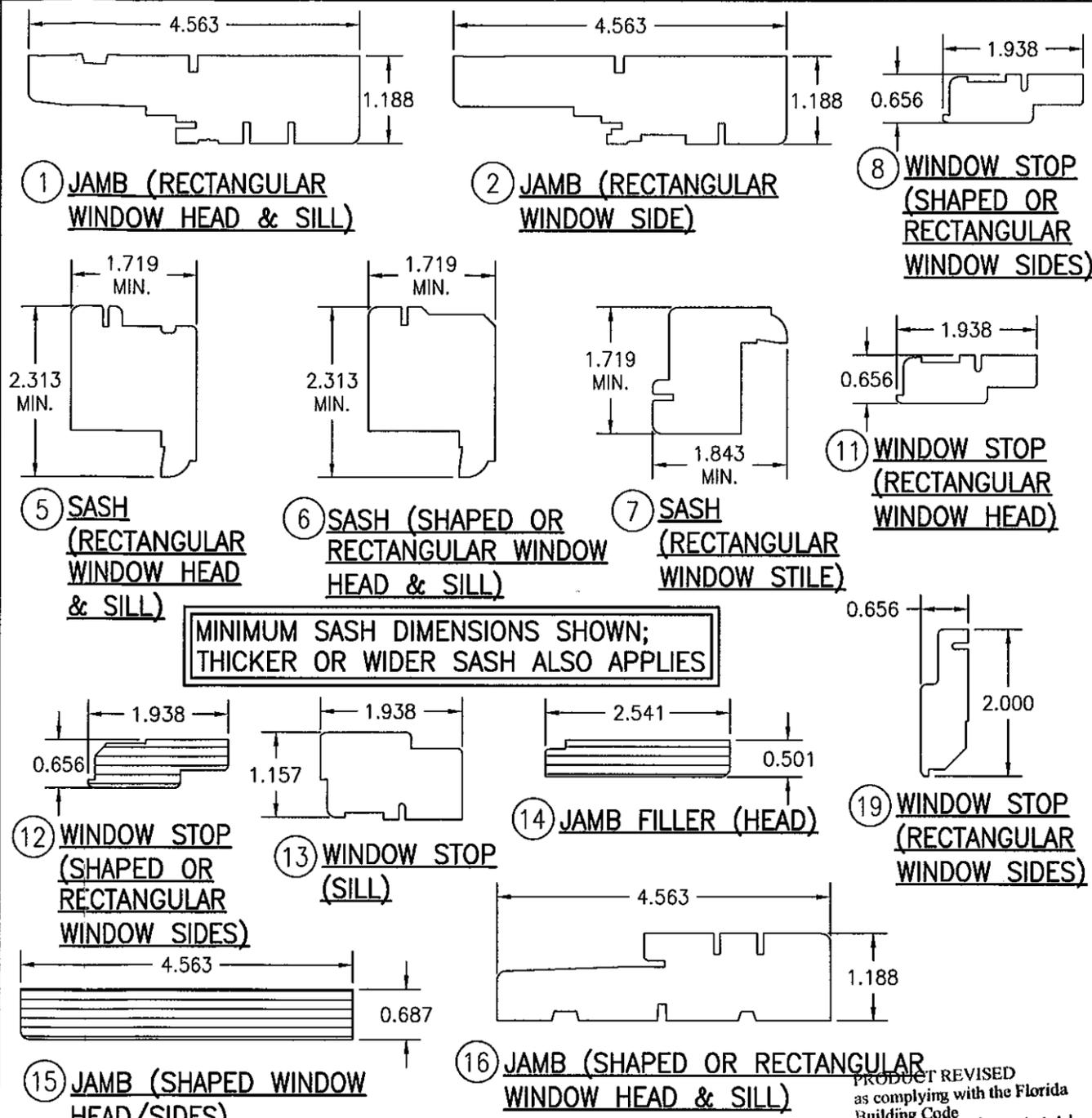
8/17/2011

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

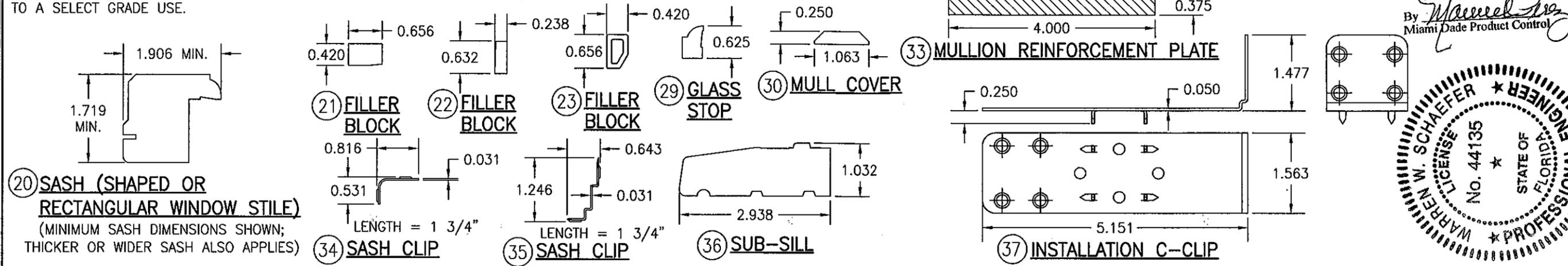
DRAWING NO. 1551
REV. A
SHEET NO. 5 OF 6

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	JAMB (RECTANGULAR WINDOW HEAD & SILL)	* WOOD
2	JAMB (RECTANGULAR WINDOW SIDES)	* WOOD
5	SASH (RECTANGULAR WINDOW HEAD & SILL)	* WOOD
6	SASH (SHAPED OR RECTANGULAR WINDOW HEAD & SILL)	* WOOD
7	SASH (RECTANGULAR WINDOW STILE)	* WOOD
8	WINDOW STOP (SHAPED OR RECTANGULAR WINDOW SIDES)	* WOOD
11	WINDOW STOP (RECTANGULAR WINDOW HEAD)	* WOOD
12	WINDOW STOP (SHAPED OR RECTANGULAR WINDOW SIDES)	* WOOD
13	WINDOW STOP (SILL)	* WOOD
14	JAMB FILLER (SHAPED WINDOW HEAD)	LVL
15	JAMB (SHAPED WINDOW HEAD/SIDES)	LVL
16	JAMB (SHAPED OR RECTANGULAR WINDOW HEAD & SILL)	PINE
19	WINDOW STOP (RECTANGULAR WINDOW SIDES)	* WOOD
20	SASH (SHAPED OR RECTANGULAR WINDOW STILE)	* WOOD
21	FILLER BLOCK	* WOOD (1 PER SIDE)
22	FILLER BLOCK	* WOOD (1 PER SIDE)
23	FILLER BLOCK	PVC (1 PER SIDE)
29	GLASS STOP	* WOOD
30	MULLION COVER	* WOOD
33	MULLION REINFORCEMENT PLATE	6061-T6 ALUMINUM
34	SASH CLIP	50 KSI GALV. STEEL 6" FROM CORNERS & MAX. 14" O.C.
35	SASH CLIP (USED ONLY AT RECTANGULAR WINDOW SIDES)	50 KSI GALV. STEEL 6" FROM CORNERS & MAX. 14" O.C.
36	SUB-SILL	* WOOD
37	INSTALLATION C-CLIP	50 KSI GALV. STEEL
SEALS & SEALANTS		
51	SASH WEATHERSTRIP	RIGID GLASS FILLED POLYPROPYLENE BY INTEK
52	VINYL FRAME WEATHERSTRIP	BY AMSBURY
54	CONNECTING BARB	PVC & GEON C70a0
MISC. FASTENERS		
58	F-18 x 1.125" BRAD NAIL	3" FROM CORNERS & MAX. 8" O.C.
60	NO. 8 X 1" SMS SCREW	2 PER CLIP INTO JAMB
64	NO. 7 X 1/2" SMS	2 PER CLIP INTO SASH
65	18 GA. X 3/4" BRAD NAIL	2" FROM ENDS & 5" TO 8" O.C.
66	NO. 8 X 1" SMS	2" FROM ENDS & 5" TO 8" O.C.
67	NO. 6 X 1" TRIM HEAD WOOD SCREW	2" FROM ENDS & 5" TO 8" O.C.

* ALL WOOD USED WITH TESTED UNITS IS MIN. GRADE 2 WESTERN PINE. ALTERNATE WOOD SPECIES TO PINE SHALL BE MIN. GRADE 2 WITH "E" = 1200000 PSI MIN. & "G" = 0.43 MIN
 NOTE: ALL WOOD IS RECEIVED BY MARVIN WINDOWS & DOORS AS GRADE 2, BUT IS MACHINED BY MARVIN TO A SELECT GRADE USE.



MINIMUM SASH DIMENSIONS SHOWN; THICKER OR WIDER SASH ALSO APPLIES



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 04/02/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	

WOOD CASEMASTER FIXED CASEMENT STORMPLUS IZ4

MANUFACTURER
MARVIN WINDOWS & DOORS
 HIGHWAY 11, P.O. BOX 100
 WARROAD, MN 56763
 800-346-5044

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

DRAWING TITLE

OCT 17 2011

WARREN W. SCHAEFER
 LICENSE NO. 44135
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

DRAWING NO.	REV.
1551	A
SHEET NO.	
6	OF 6