



**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**

NOTICE OF ACCEPTANCE (NOA)

**Marvin Windows & Doors
Highway 11 W P.O. Box 100
Warroad, MN 56763**

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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Series "CUDH HP Clad Ultimate" Wood Double Hung Window

APPROVAL DOCUMENT: Drawing No. **00013061**, titled "Clad Ultimate Double Hung CUDH HP", Sheets 1 through 11 of 11, dated: Sheets 1 through 3, 6/8/99; Sheets 4 thru 7, 6/11/99, Sheets 8 thru 10, 6/15/99 and Sheet 11, 11/20/98, 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: None

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 **renews NOA # 99-0823.05** and, consists of this page 1 as well as approval document mentioned above. The submitted documentation was reviewed by **Jaime Eisen, P.E.**



**NOA No 03-0311.04
Expiration Date: March 10, 2008
Approval Date: April 17, 2003**

Marvin Windows & Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

(For File ONLY. Not part of NOA)

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **00013061**, titled "Clad Ultimate Double Hung CUDH HP", Sheets 1 through 11 of 11, dated: Sheets 1 through 3, 6/8/99; Sheets 4 thru 7, 6/11/99, Sheets 8 thru 10, 6/15/99 and Sheet 11, 11/20/98, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W, Schaefer, P.E.

B. TESTS

Submitted under NOA#99-0823.05

1. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 20294
3) Water Resistance Test, per FBC, TAS 202-94
4) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94
along with marked-up drawings and installation diagram of 3 specimens of Series CUDH HP double hung wood window (X/X, 37-3/8" x 76-3/8" w/1.448" sill) anchored with steel brackets or nailing fin, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-2289**, dated July 23, 1999, signed and sealed by Jose D. Mitrani, P.E.
2. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 20294
3) Water Resistance Test, per FBC, TAS 202-94
4) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94
along with marked-up drawings and installation diagram of 1 specimen of Series CUDH HP double hung wood window (X/X, 37-3/8" x 76-3/8" w/3-1/2" sill) anchored with steel brackets, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-2364**, dated July 23, 1999, signed and sealed by Jose D. Mitrani, P.E.

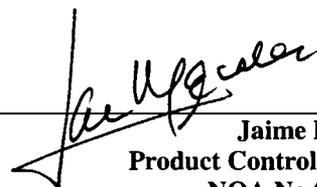
C. CALCULATIONS

Submitted under NOA#99-0823.05

1. Anchor Calculations, prepared by W. W. Schaefer Engineer & Consulting, P.A., dated 6/25/99, signed and sealed by Warren W. Schaefer, P.E.

D. MATERIAL CERTIFICATIONS

1. None



Jaime Eisen, P.E.
Product Control Examiner
NOA No 03-0311.04
Expiration Date: March 10, 2008
Approval Date: April 17, 2003

Marvin Windows & Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

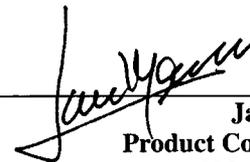
(For File ONLY. Not part of NOA)

E. STATEMENTS

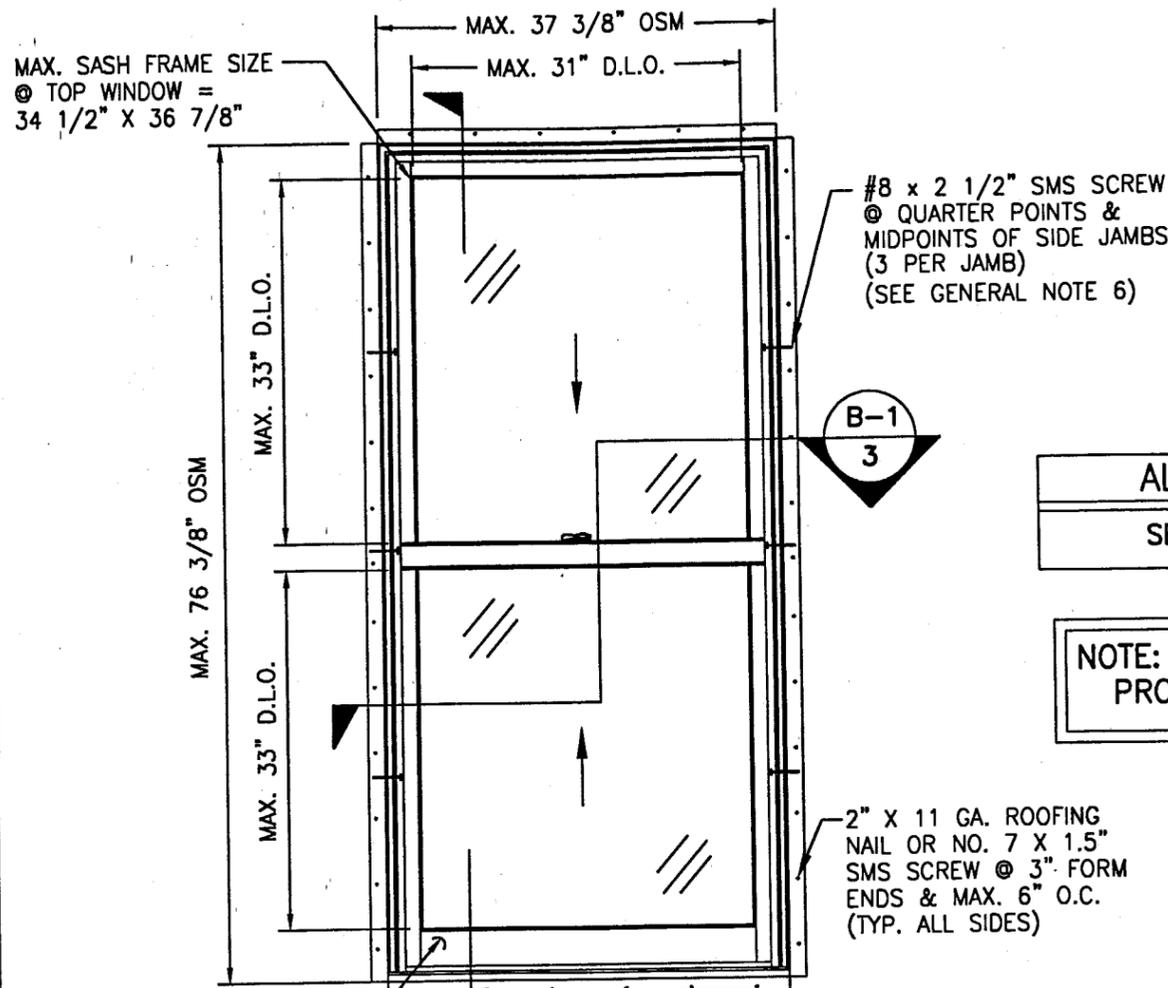
1. Statement letter of no change and stating that the engineer who performed the review of the product is still in the engineering business, issued by Marvin Windows & Doors, signed by Don Lagerstrom, dated 2/15/03.

F. OTHER

1. Notice of Acceptance No. **99-0823.05** Marvin Windows & Doors, for their Series "CUDH HP Clad Ultimate" Wood Double Hung Window, approved on 3/10/00 and expiring on 3/10/03.



Jaime Eisen, P.E.
Product Control Examiner
NOA No 03-0311.04
Expiration Date: March 10, 2008
Approval Date: April 17, 2003



MAX. SASH FRAME SIZE
 @ TOP WINDOW =
 34 1/2" X 36 7/8"

#8 x 2 1/2" SMS SCREW
 @ QUARTER POINTS &
 MIDPOINTS OF SIDE JAMBS
 (3 PER JAMB)
 (SEE GENERAL NOTE 6)

B-1
 3

ALLOWABLE DESIGN LOADS
 SEE LOAD TABLE ON SHEET 10

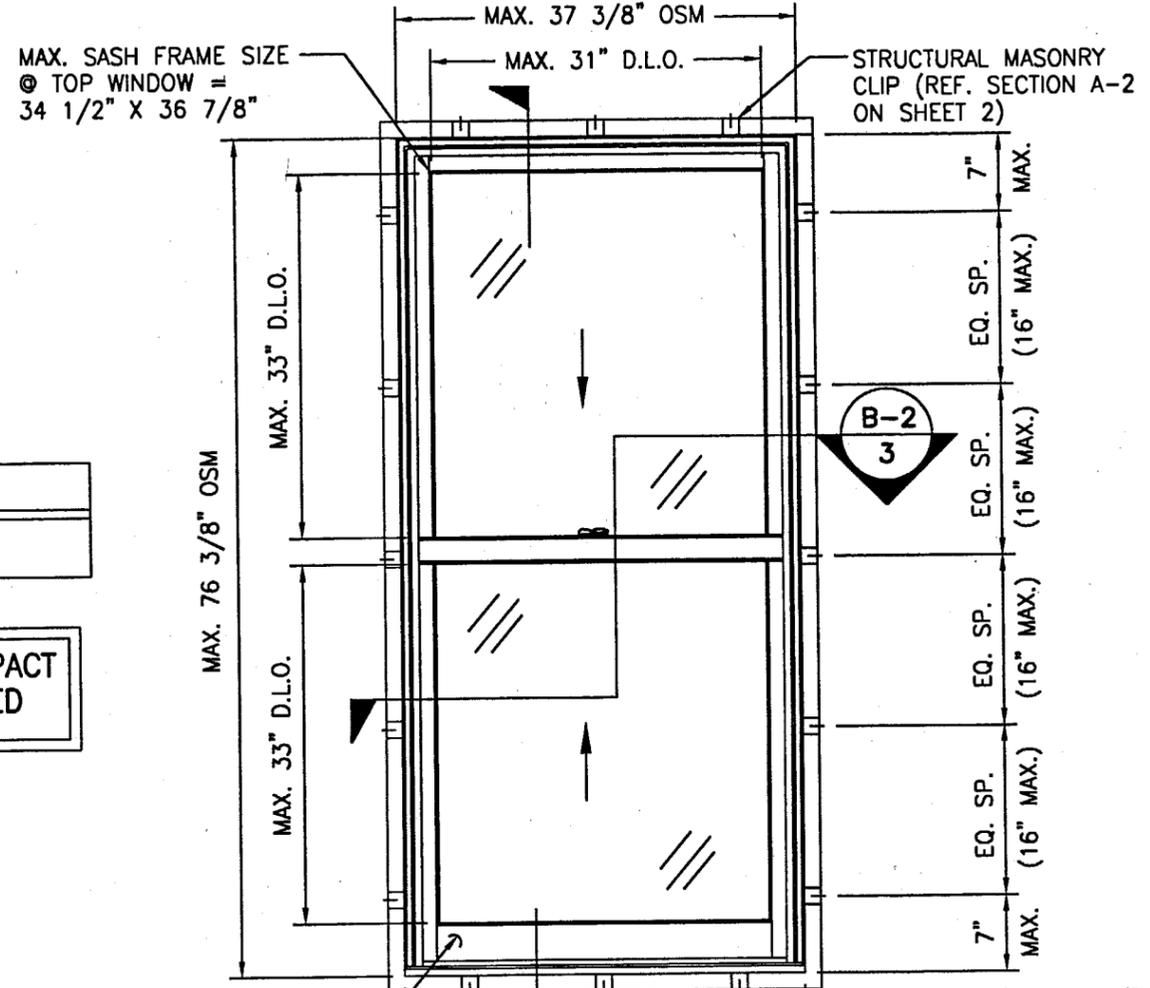
NOTE: THIS WINDOW IS A NON-IMPACT
 PRODUCT & MUST BE SHUTTERED

2" X 11 GA. ROOFING
 NAIL OR NO. 7 X 1.5"
 SMS SCREW @ 3" FORM
 ENDS & MAX. 6" O.C.
 (TYP. ALL SIDES)

EXTERIOR ELEVATION
 FIN MOUNT
 SCALE: 3/4"=1'-0"

GENERAL NOTES

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE LOAD TABLES ON SHEET 10.
2. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE DESIGNED & INSTALLED TO WITHSTAND WIND LOADS AS DETERMINED FOR EACH APPLICATION.
3. BUCKING FASTENERS MAY NOT EXCEED 16" O.C. SPACING AROUND OPENINGS REGARDLESS OF CIRCUMSTANCE.
4. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS.
5. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS PROPOSED FOR WATER, AIR, FORCED ENTRY & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH DADE COUNTY PROTOCAOL PA 202.
6. ALL JAMB TO BUCKING SHEAR FASTENERS MUST PENETRATE BUCK A MINIMUM OF 1 1/4" IF PENETRATION IS LESS THAN 1 1/4", THEN SCREW LENGTH SHALL INCREASE AS REQUIRED.
7. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SOUTH FLORIDA BUILDING CODE, 1994 EDITION.
8. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH DADE COUNTY PROTOCOL PA-202 FOR AIR, WATER, UNIFORM STATIC AIR PRESSURE & FORCED ENTRY.



MAX. SASH FRAME SIZE
 @ TOP WINDOW =
 34 1/2" X 36 7/8"

STRUCTURAL MASONRY
 CLIP (REF. SECTION A-2
 ON SHEET 2)

B-2
 3

MAX. SASH FRAME SIZE
 @ BOTTOM WINDOW =
 34 1/2" X 38 1/2"

A-2
 2

EXTERIOR ELEVATION
 STRUCTURAL CLIP MOUNT
 SCALE: 3/4"=1'-0"

PRODUCT RENEWED
 as complying with the Florida
 Building Code
 Acceptance No 03-0311.04
 Expiration Date 03/10/08

By *[Signature]*
 Miami Dade Product Control
 Division

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE *March 10, 2000*
 BY *Manuel Serey*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. *99-0823.05*

FEB 15 2000

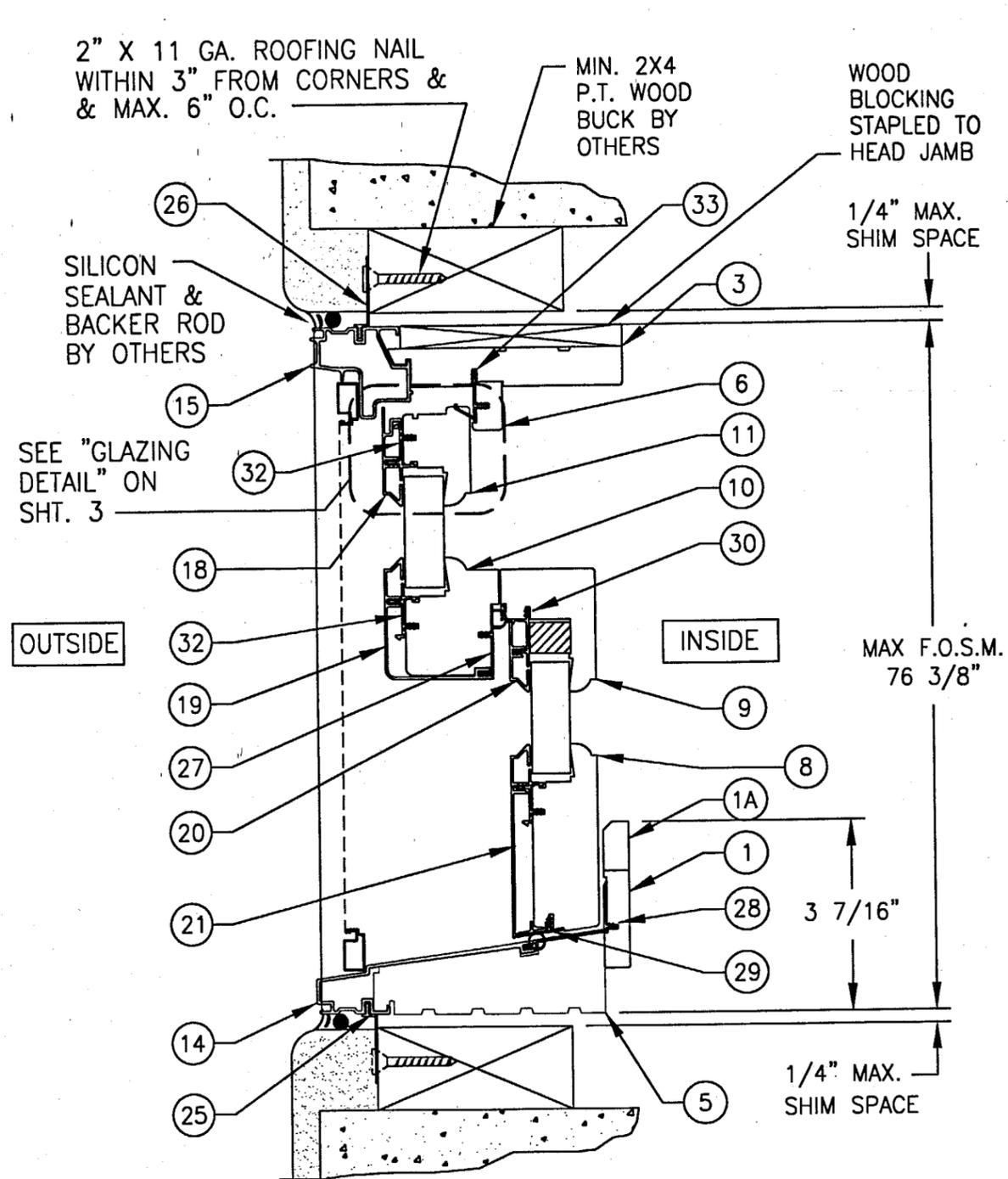
[Signature]

WARREN V. SCHAEFER, P.E.
 STRUCTURAL ENGINEER
 P.E. No. 44135

W. W. SCHAEFER ENGINEERING
 & CONSULTING, P.A.
 STRUCTURAL CONSULTING ENGINEERS
 600 SANDTREE DRIVE, SUITE 203F
 PALM BEACH GARDENS, FL 33410
 PHONE: 561-775-4902

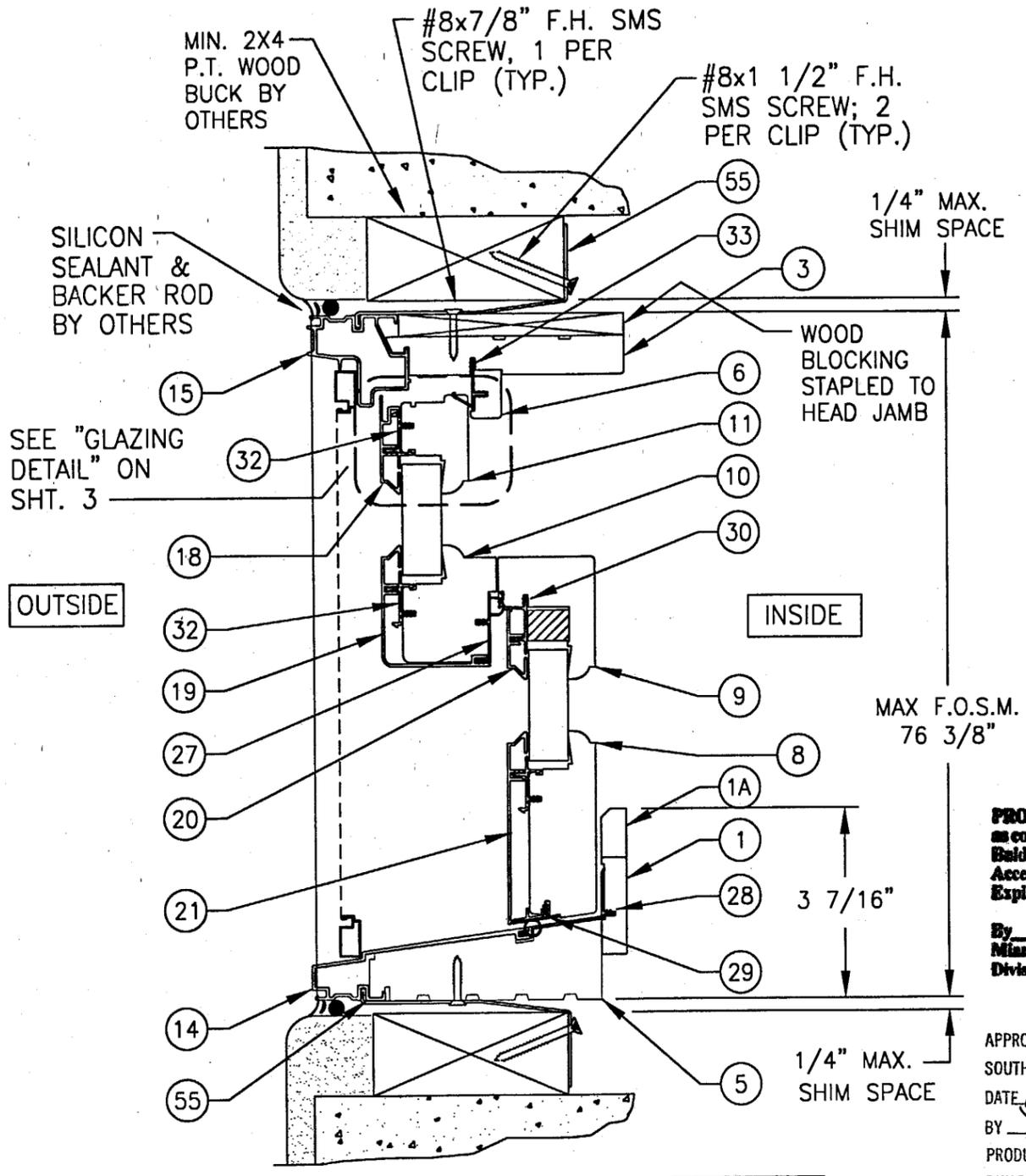
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<input type="checkbox"/> DIP	<input type="checkbox"/> AT MLDR.	BOX 100, WARROD, MN 56763	
<input type="checkbox"/> NO DIP	<input type="checkbox"/> IN PROD.	WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG			
PRODUCT: CUDH HP			
ASSEMBLY EXTERIOR ELEVATIONS			
MATERIAL: N/A	SIZE: B	DRAWING NO: 00013061	
SCALE: NONE	DATE: 10/8/99	DRAWN BY: BRAD ECI	SHEET: 1 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



SECTION A-1
SCALE: 3/8 FULL SIZE

NAIL FIN AND SCREW
INSTALLATION



SECTION A-2
SCALE: 3/8 FULL SIZE
**STRUCTURAL CLIP
INSTALLATION**

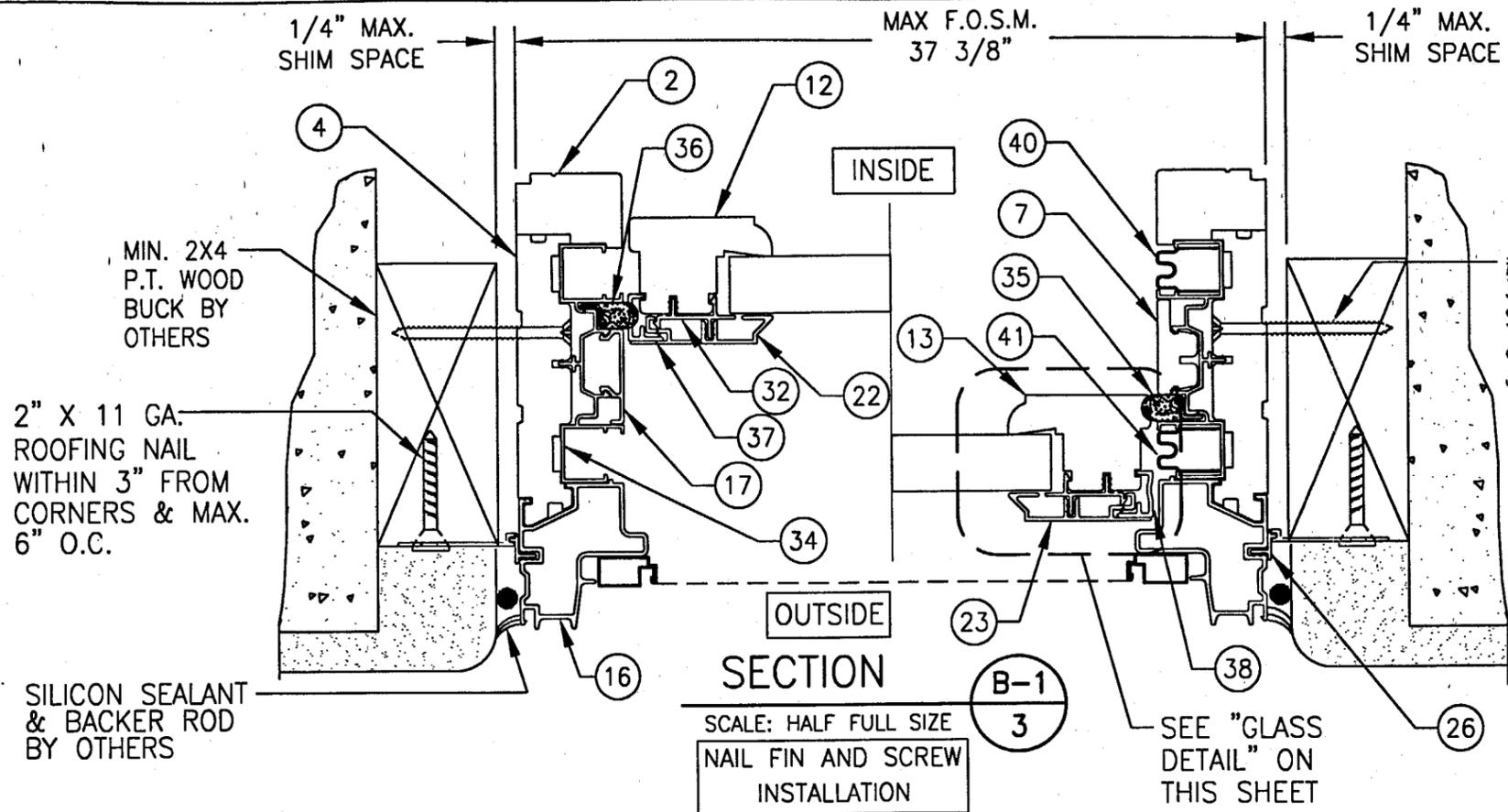
PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 03-0311.04
Expiration Date 03/10/08
By [Signature]
Miami Dade Product Control
Division

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE March 10, 2000
BY [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0823.05

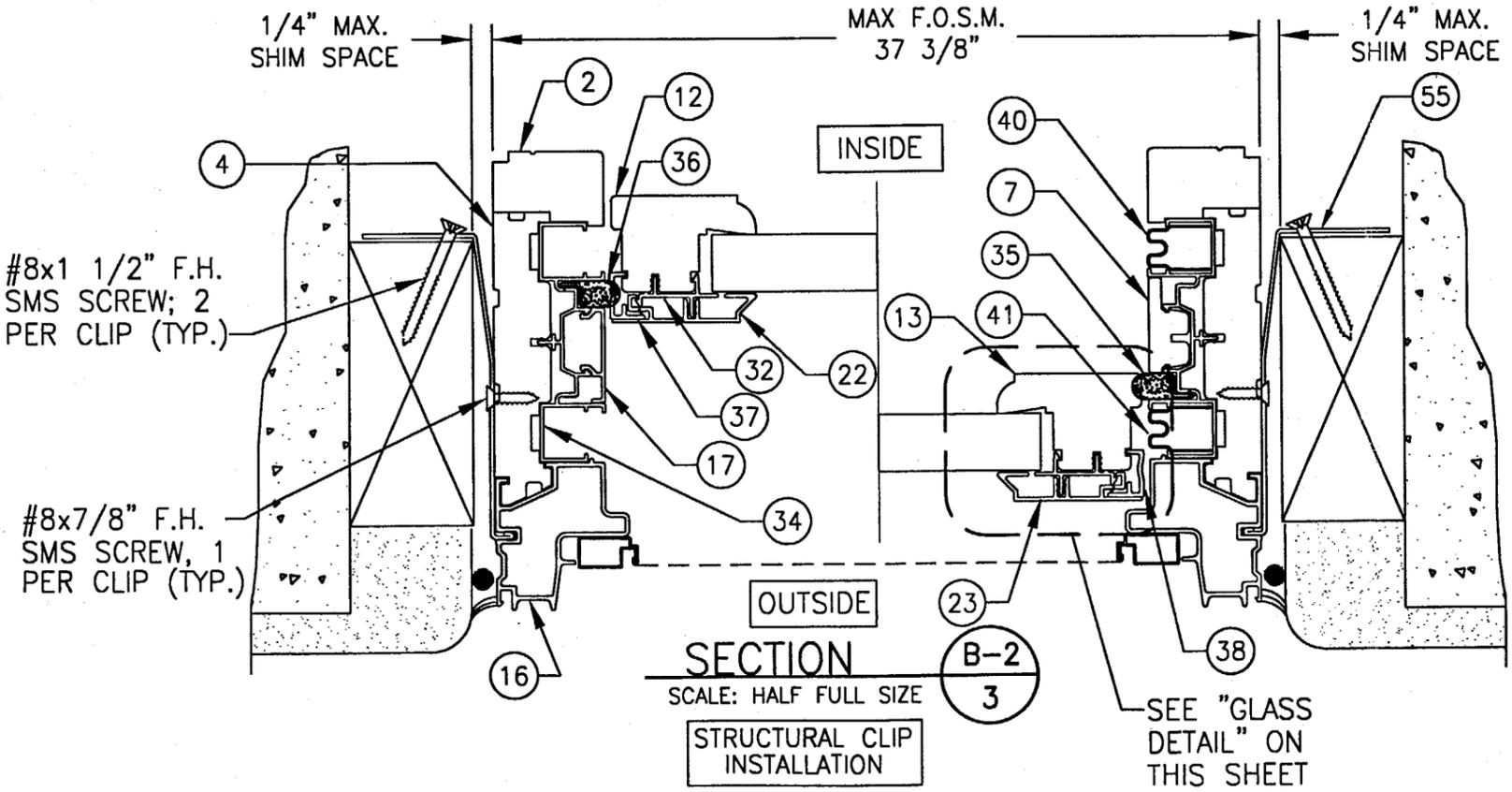
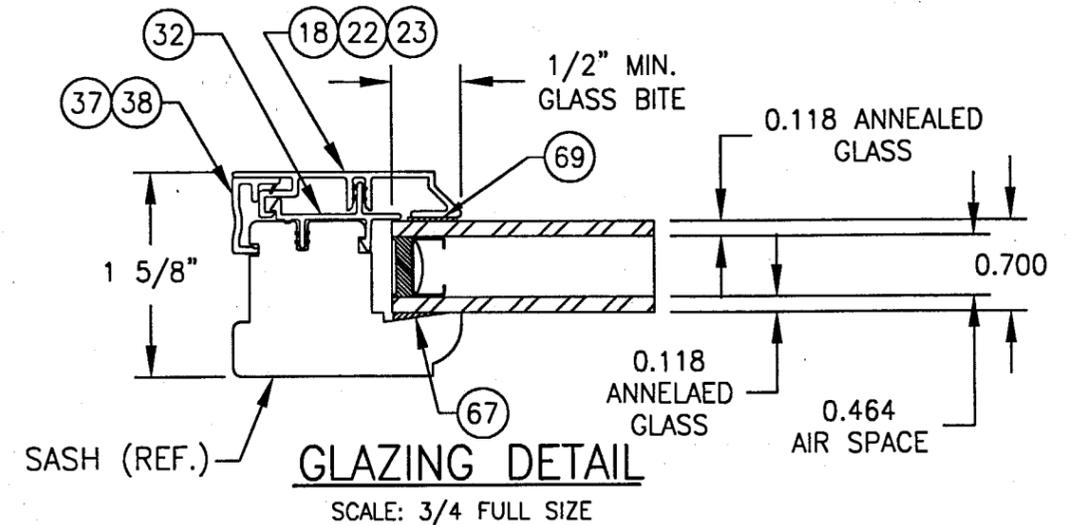
FEB 15 2000
[Signature]
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135
**W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.**
STRUCTURAL CONSULTING ENGINEERS
600 SANDTREE DRIVE, SUITE 203P
PALM BEACH GARDENS, FL 33409
PHONE: 561-776-4900

WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> AT MLDR. <input type="checkbox"/> NO DIP <input type="checkbox"/> IN PROD.		MARVIN RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG PRODUCT: CUDH HP		
ASSEMBLY VERTICAL CROSS SECTION		
MATERIAL: N/A	SIZE: B	DRAWING NO: 00013061
SCALE: NOTED	DATE: 6/8/99	DRAWN BY: BRAD BOI
REV#		SHEET: 2 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



#8 x 2 1/2" SMS SCREW
3 PER JAMB EVENLY
SPACED AT MIDPOINTS
& QUARTER POINTS OF
JAMBS (REF. ELEVATION)



PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-031109
Expiration Date 03/10/08
By [Signature]
Miami-Dade Product Control
Division

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE March 10, 2000
BY Manuel Perez
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0823.05

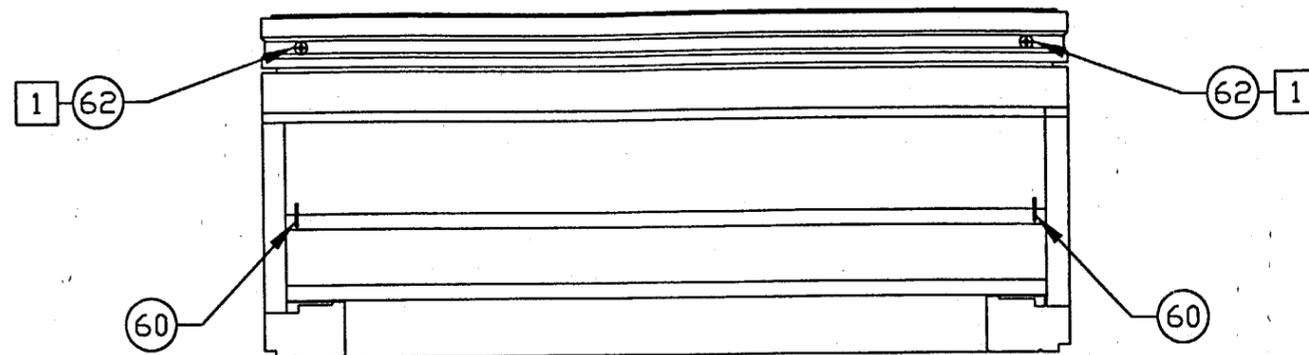
FEB 15 2000
[Signature]
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.
STRUCTURAL CONSULTING ENGINEERS
600 SANDTREE DRIV. SUITE 203F
PALM BEACH GARDENS, FL 33409
PHONE: 561-778-4902

WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> AT MLDR. <input type="checkbox"/> NO DIP <input type="checkbox"/> IN PROD.		MARVIN RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG PRODUCT: CUDH HP			
ASSEMBLY HORIZONTAL CROSS SECTION			
MATERIAL: N/A	SIZE: B	DRAWING NO: 00013061	
SCALE: DATE: NOTED 10/8/99	DRAWN BY: BRAD BOL	SHEET: 3 OF 11	

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

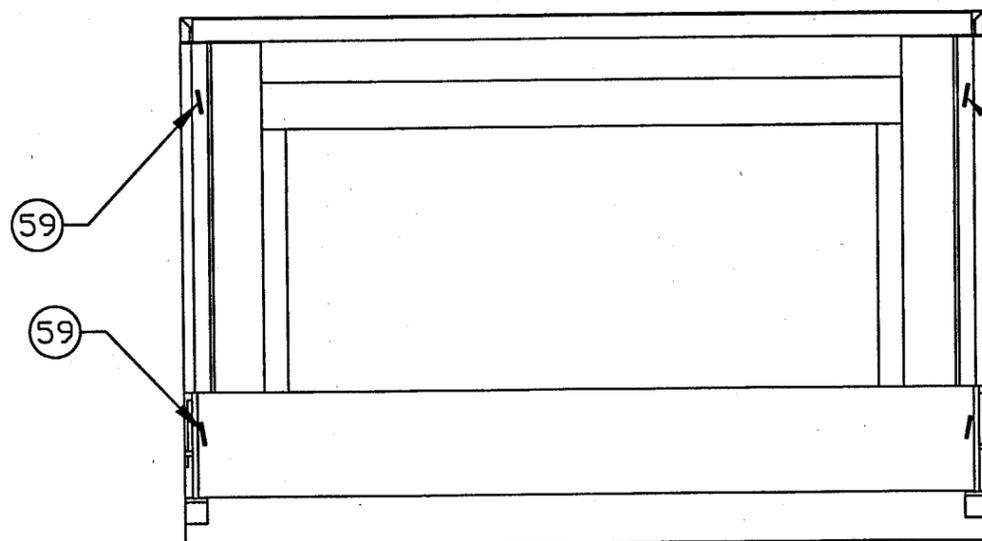
SEALANT INJECTION SCHEDULE

SYMBOL	QUAN. /TYPE SEALANT
1	8.0 GM. ±1 /7100
2	8.0 GM. ±1 /7100
3	8.0 GM. ±1 /7100



TOP VIEW

SCALE: 3/8 FULL SIZE

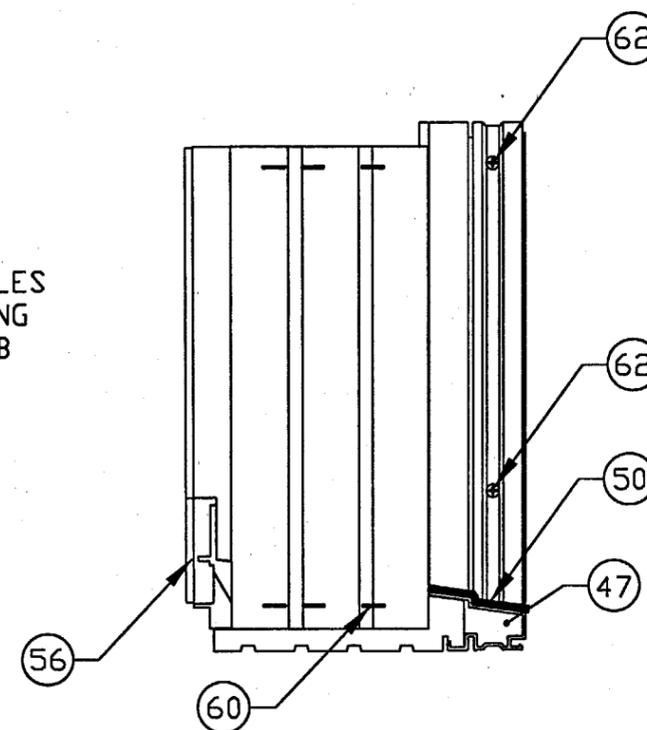


INTERIOR VIEW

(FRAME ASSEMBLY)

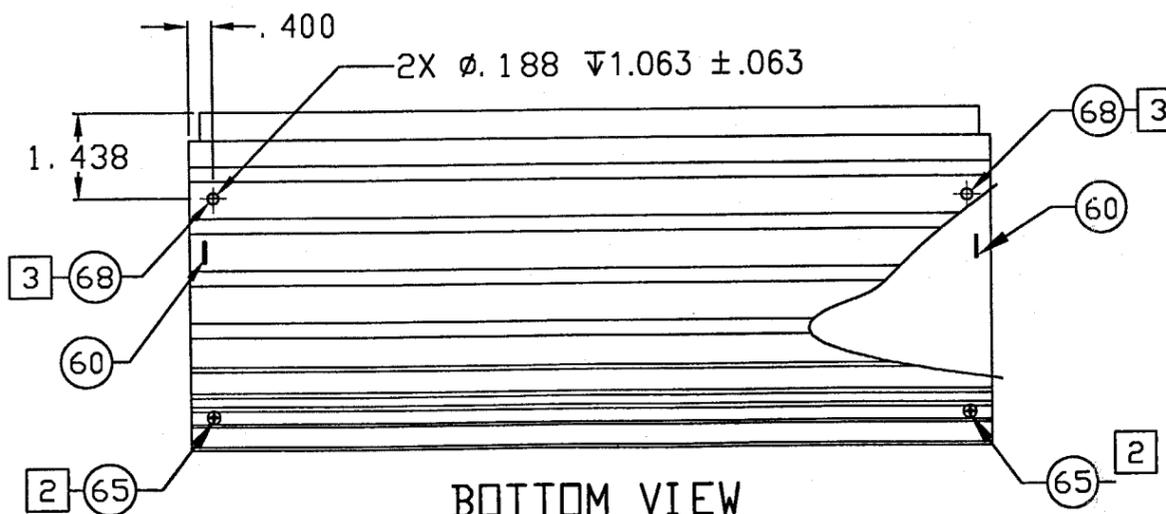
SCALE: 3/8 FULL SIZE

ROTATE STAPLES
10° FROM LONG
AXIS OF JAMB



RIGHT SIDE

SCALE: 3/8 FULL SIZE



BOTTOM VIEW

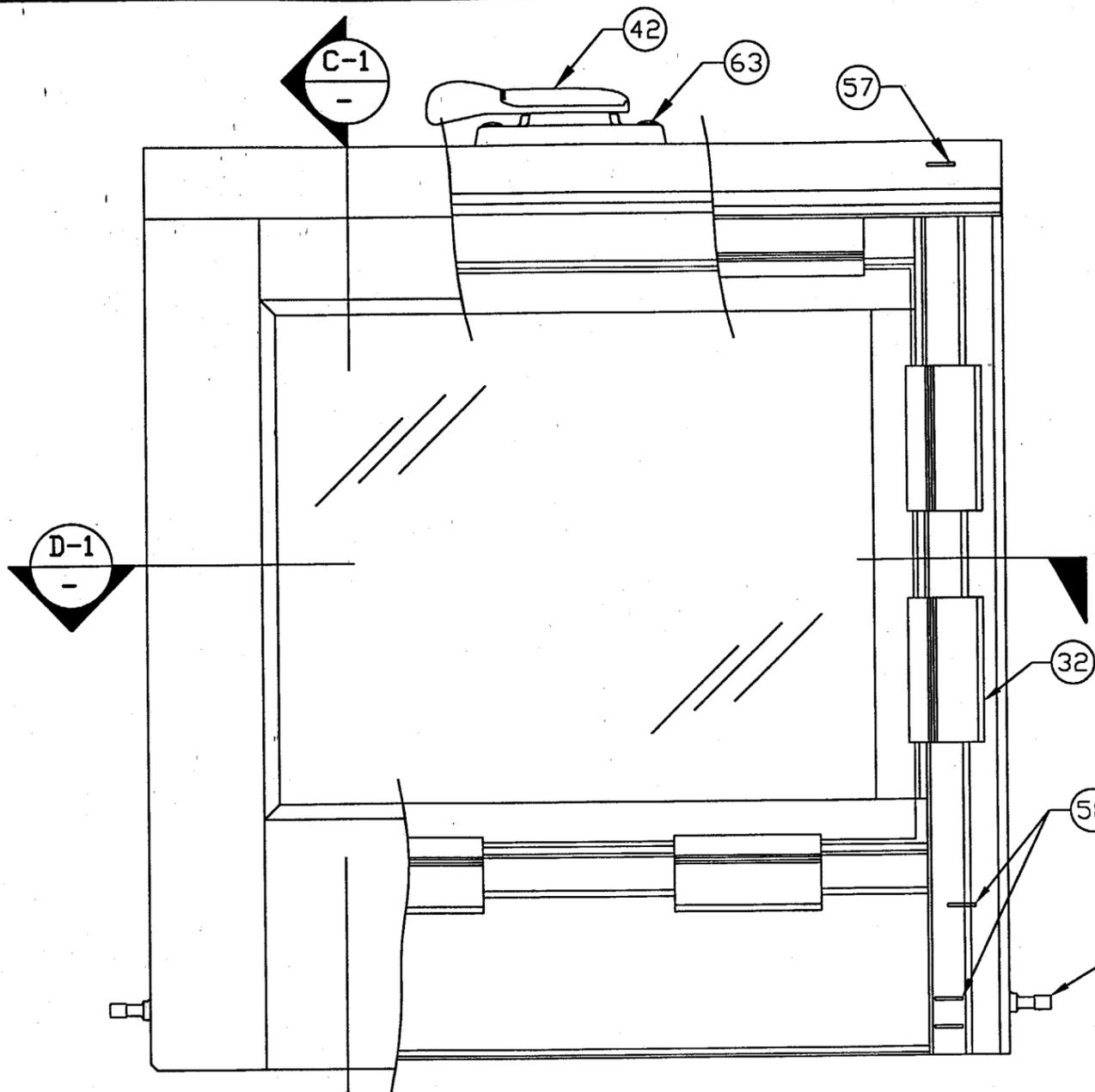
SCALE: 3/8 FULL SIZE

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-0311.04
Expiration Date 03/10/08
By *[Signature]*
Miami-Dade Product Control
Division

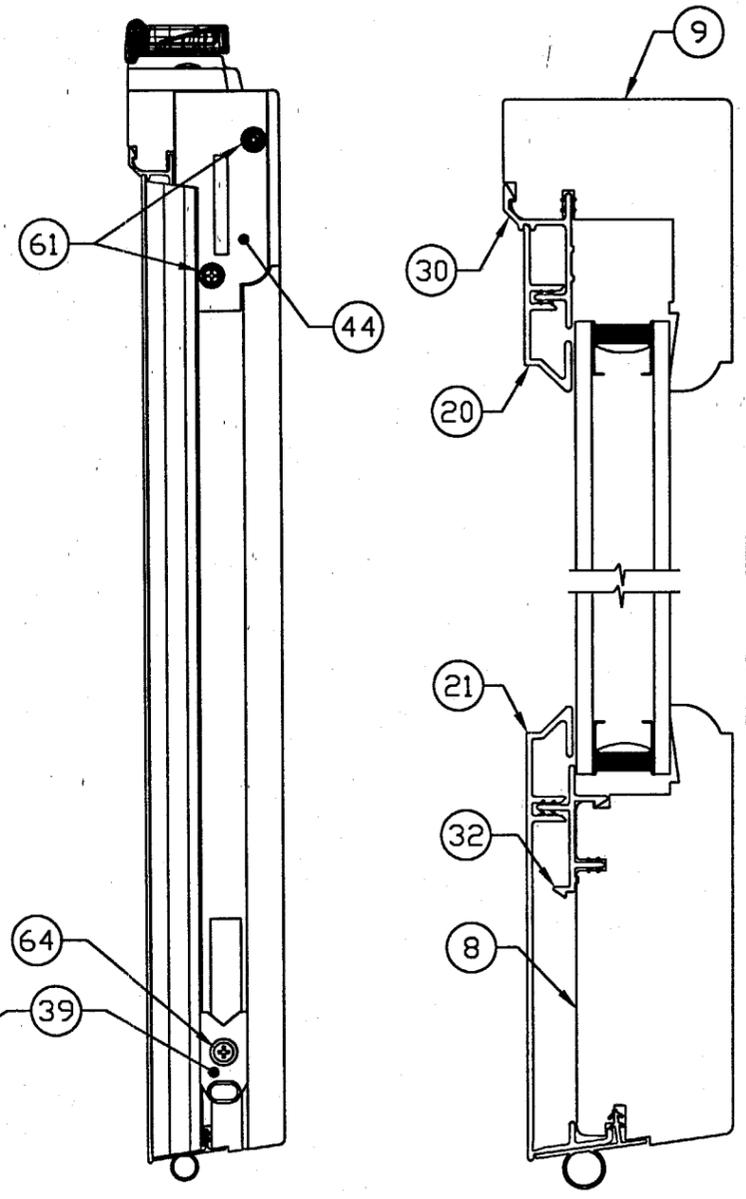
APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE *March 10, 2000*
BY *Manuel Sora*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0823.05

<p>FEB 15 2000</p> <p><i>[Signature]</i></p> <p>WARREN W. SCHAEFER, P.E. STRUCTURAL ENGINEER P.E. No. 44135</p>	<p>WOOD PART DIP SPEC</p> <p><input type="checkbox"/> DIP <input type="checkbox"/> AT MLDR.</p> <p><input type="checkbox"/> NO DIP <input type="checkbox"/> IN PROD.</p>	<p>MARVIN RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS & DOORS. (218) 386-1430 FAX 386-1913</p>
	<p>PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG PRODUCT: CUDH HP</p>	
<p>ASSEMBLY FRAME ASSEMBLY</p>		
<p>MATERIAL: NA</p>	<p>SIZE: B</p>	<p>DRAWING NO: 00013061</p>
<p>SCALE: NA</p>		<p>DATE: 10/11/99</p>
<p>SCALE: NA</p>		<p>DRAWN BY: BRAD BOL</p>
<p>SCALE: NA</p>		<p>SHEET: 4 OF 11</p>

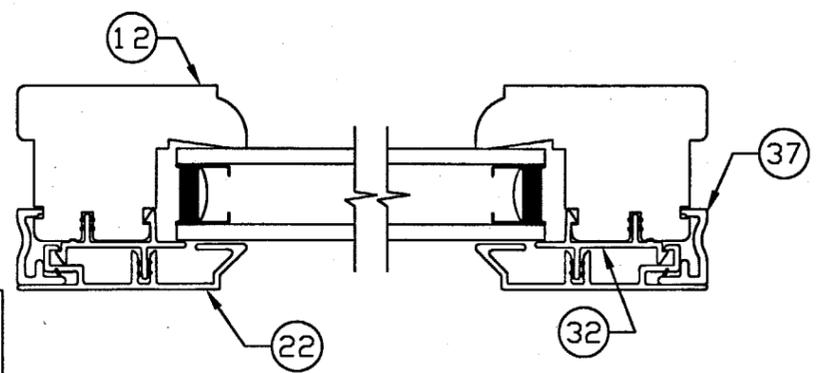
REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



**EXTERIOR VIEW
(BOTTOM SASH ASSEMBLY)**
SCALE: HALF FULL SIZE



RIGHT SIDE VIEW
SCALE: HALF FULL SIZE



SECTION D-1
SCALE: 3/4 FULL SIZE

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-0311.04
Expiration Date 03/10/08
By *[Signature]*
Miami Dept. Product Control
Division

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE *March 19, 2000*
BY *Manuel Cruz*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. *99-0823.05*

SECTION C-1
SCALE: 3/4 FULL SIZE

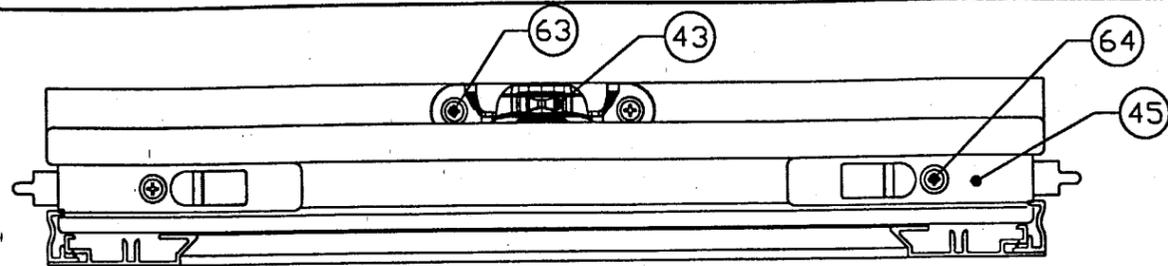
FER 15 2000
[Signature]
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135

**W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.**
STRUCTURAL CONSULTING ENGINEERS
600 SANDTREE DRIVE, SUITE 203B
PALM BEACH GARDENS, FL 33403
PHONE: 561-775-4902

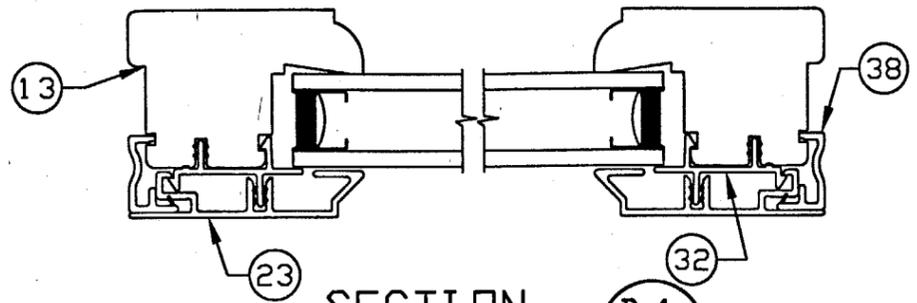
WOOD PART DIP SPEC
 DIP
 NO DIP
MARVIN RESEARCH AND DEVELOPMENT
BOX 100, WARROAD, MN 56763
WINDOWS & DOORS. (218) 386-1430 FAX 386-1913
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG
PRODUCT: CUDH HP

ASSEMBLY
BOTTOM SASH ASSEMBLY
MATERIAL: NA
SIZE: B
DRAWING NO: 00013061
SCALE: DATE: NOTED 6/11/99
DRAWN BY: BRAD BOF
SHEET: 5 OF 11

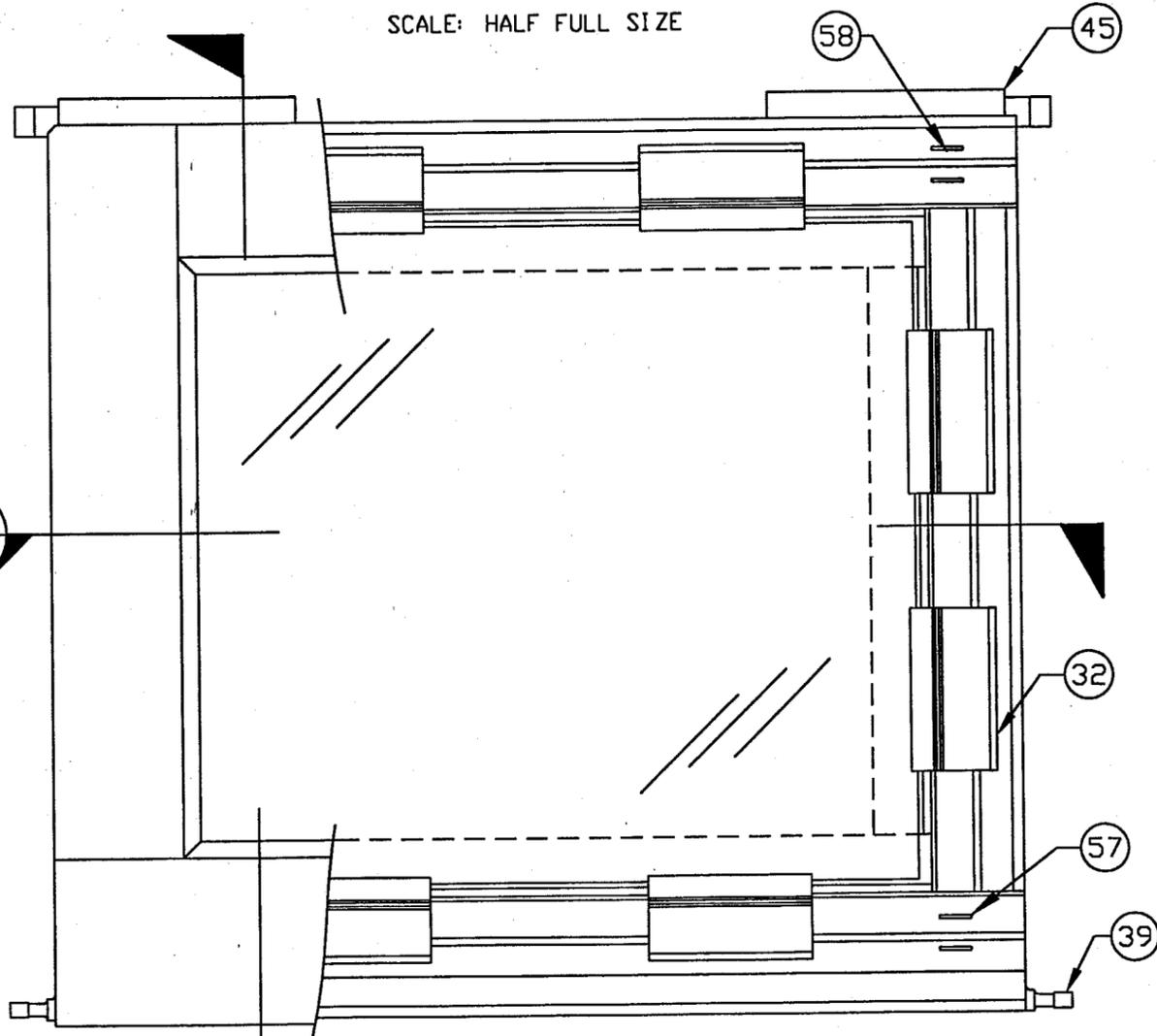
REV#	DESCRIPTION / REQUESTER	CON. NO.	DATE	DRAFTER



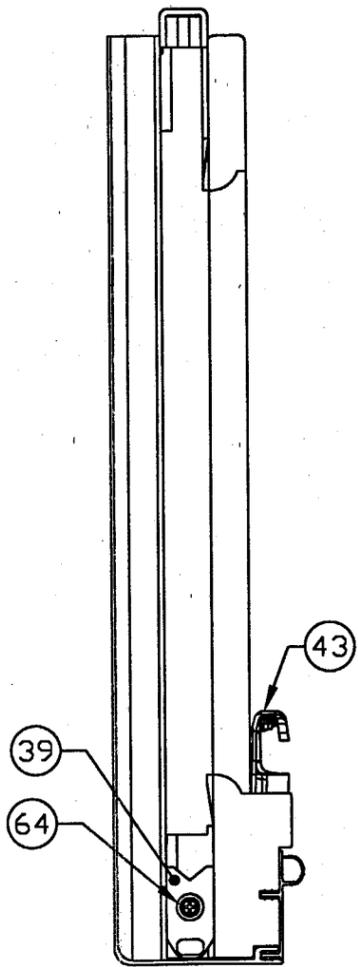
TOP VIEW
SCALE: HALF FULL SIZE



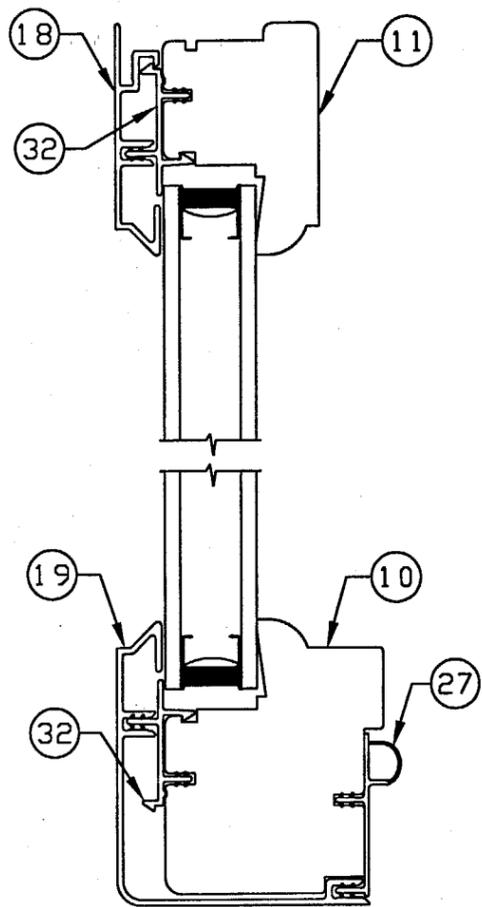
SECTION D-1
SCALE: 3/4 FULL SIZE



**EXTERIOR VIEW
TOP SASH ASSEMBLY**
SCALE: HALF FULL SIZE



RIGHT SIDE VIEW
SCALE: HALF FULL SIZE



SECTION E-1
SCALE: 3/4 FULL SIZE

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-0311.04
Expiration Date 03/10/08
By [Signature]
Miami Dade Product Control
Division

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE March 10, 2000
BY [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0823.05

FEB 15 2000

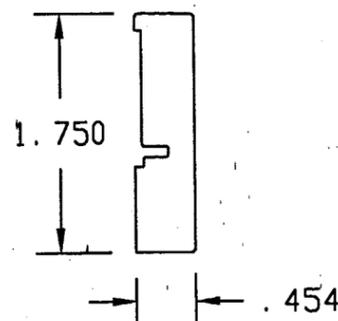
[Signature]
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135

**W. V. SCHAEFER ENGINEERING
& CONSULTING, P.A.**
STRUCTURAL CONSULTING ENGINEERS
600 SANDTREE DRIVE, SUITE 203B
PALM BEACH GARDENS, FL 33403
PHONE: 561-775-4902

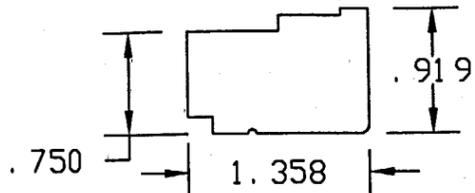
WOOD PART DIP SPEC
 DIP
 NO DIP
RESEARCH AND DEVELOPMENT
MARVIN BOX 100, WARROAD, MN 56763
WINDOWS&DOORS. (218) 386-1430 FAX 386-1913
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG
PRODUCT: CUDH HP

ASSEMBLY
TOP SASH ASSEMBLY
MATERIAL: NA
SIZE: B
DRAWING NO: 00013061
SCALE: 6/11/99
DATE: NOTED
DRAWN BY: BRAD BOF
SHEET: 6 OF 11

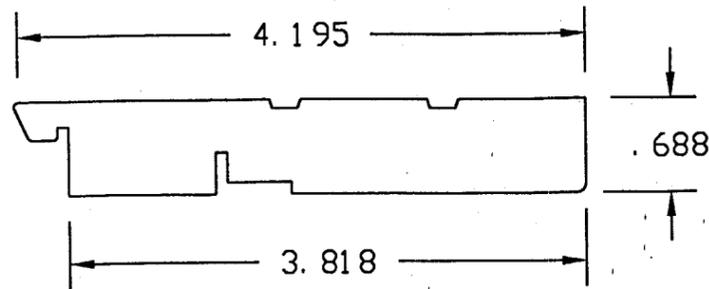
REV#	DESCRIPTION / REVISIONS	CON. NO.	DATE	DRAFTER



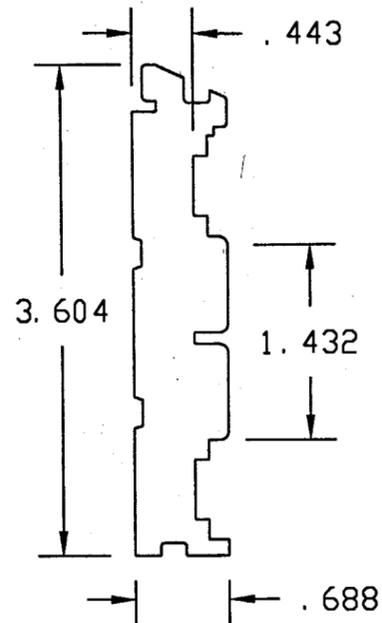
① **SILL LINER**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



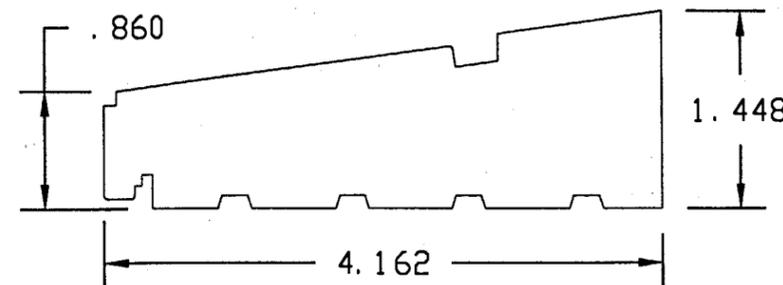
② **JAMB LINER**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



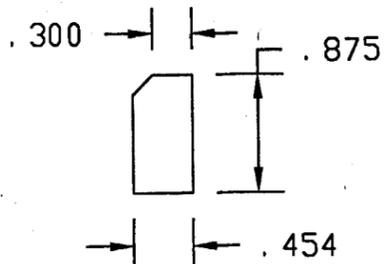
③ **HEADJAMB**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



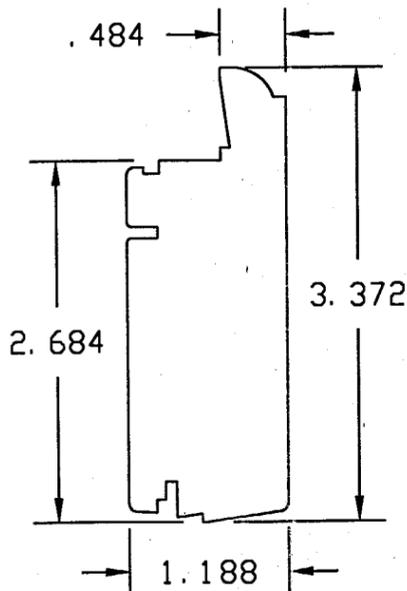
④ **SIDE JAMB**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



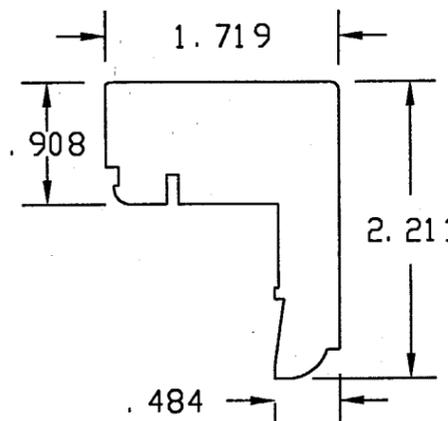
⑤ **SILL**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



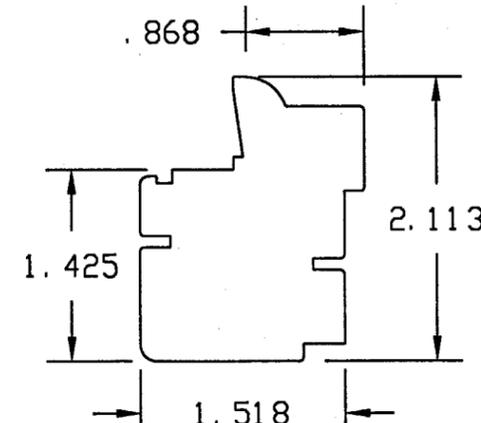
①A **SILL LINER EXTENSION**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



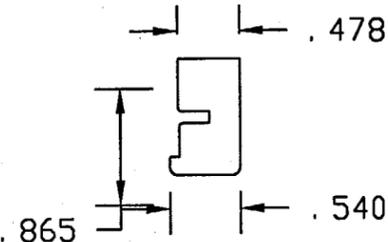
⑧ **BOTTOM RAIL**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



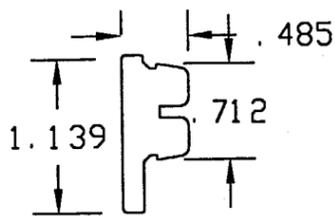
⑨ **CHECKRAIL SECTION**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



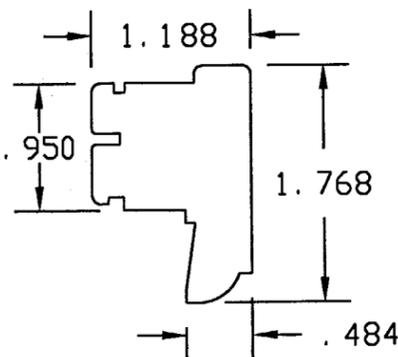
⑩ **CHECKRAIL SECTION**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



⑥ **PARTING STOP**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



⑦ **JAMB FILLER**
SUGAR OR PONDEROSA PINE
PINE. G=0.4



⑪⑫⑬ **TOP RAIL & STILES**
SUGAR OR PONDEROSA PINE
PINE. G=0.4

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE March 10, 2000
BY Manuel...
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0823.05

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-0311.04
Expiration Date 03/10/09
By [Signature]
Miami Dade Product Control
Division

FEB 15 2000
[Signature]
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135

W. V. SCHAEFER ENGINEERING & CONSULTING, P.A.
STRUCTURAL CONSULTING ENGINEERS
600 SANDTREE DRIVE, SUITE 203P
PALM BEACH GARDENS, FL 33410
PHONE: 561-772-4900

WOOD PART DIP SPEC
 DIP AT MLDR. **MARVIN** RESEARCH AND DEVELOPMENT
 NO DIP IN PROD. BOX 100, WARROD, MN 56763
WINDOWS&DOORS. (218) 386-1430 FAX 386-1913

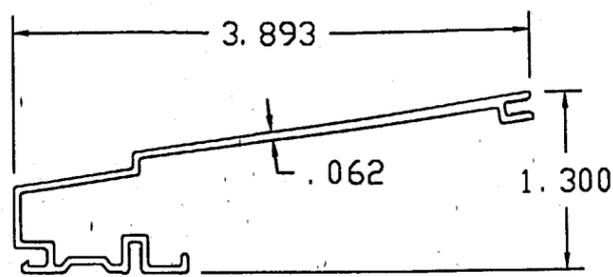
PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG
PRODUCT: CUDH HP

COMPONENT PROFILE
WOOD PROFILES

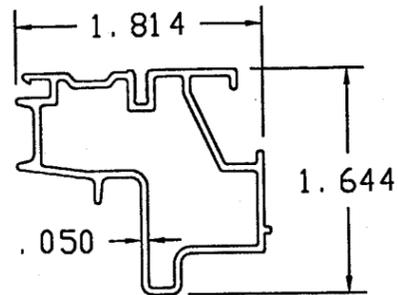
MATERIAL: N/A SIZE: B DRAWING NO: 00013061

SCALE: 3/4" = 1" DATE: 10/11/99 DRAWN BY: BRAD BOY SHEET: 7 OF 11

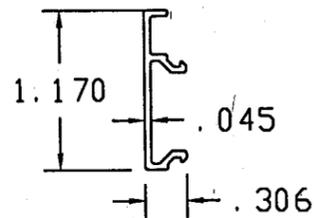
REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



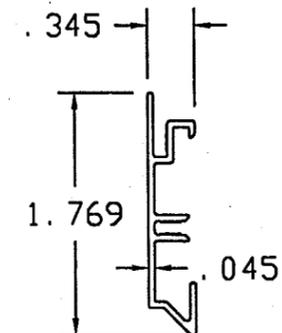
14 SILL CLADDING
ALUMINUM (6063-T5)



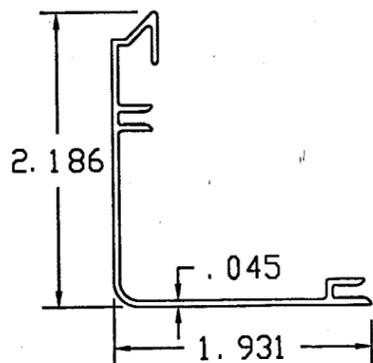
15 16 HEAD & SIDE JAMB CLADDING
ALUMINUM (6063-T5)



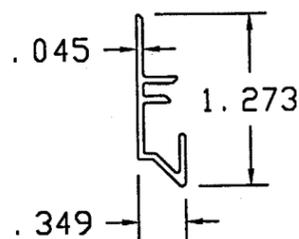
17 CLAD JAMB FILLER
ALUMINUM (6063-T5)



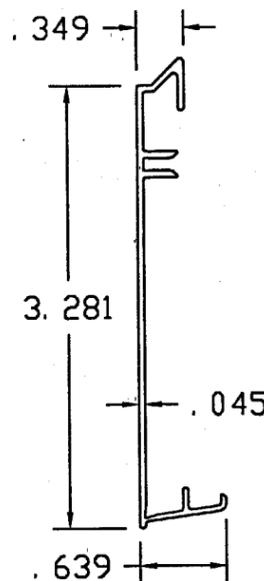
18 22 23 TOP RAIL & STILE CLADDING
ALUMINUM (6063-T5)



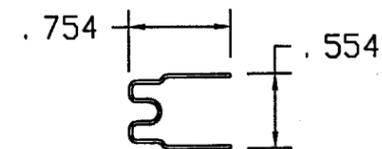
19 CHECK RAIL CLADDING
ALUMINUM (6063-T5)



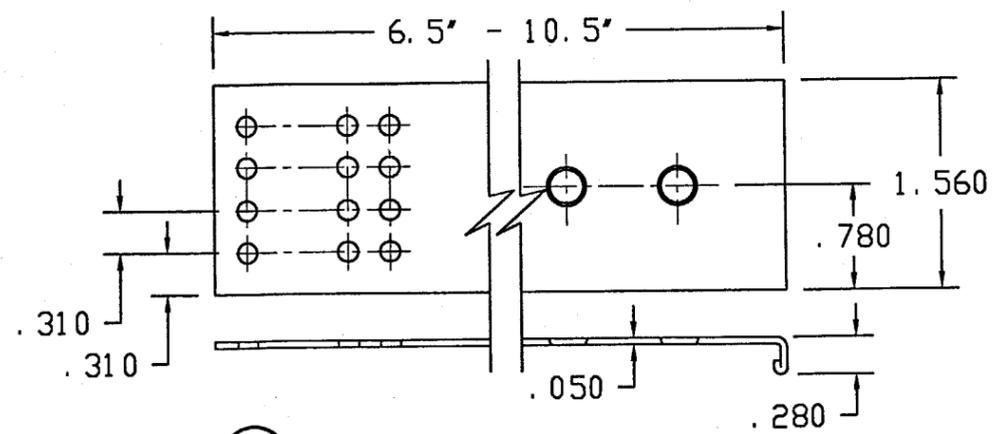
20 CHECK RAIL CLADDING
ALUMINUM (6063-T5)



21 BOTTOM RAIL CLADDING
ALUMINUM (6063-T5)



40 41 BALANCE TUBE
GALV STEEL OR ALUM (6063-T5)



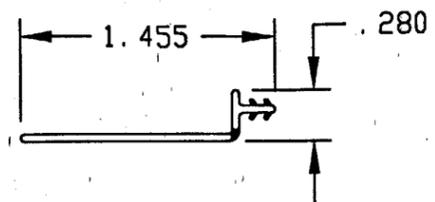
55 MASONRY CLIP
GALVANIZED CARBON STEEL

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-0311.04
Expiration Date 03/10/08
By *[Signature]*
Miami Dade Product Control
Division

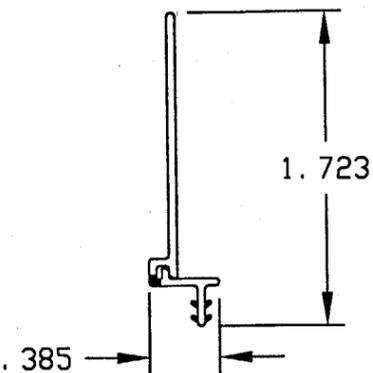
APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE *March 10, 2000*
BY *Manuel Perez*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. *99-0823.05*

<p>FEB 15 2000</p> <p><i>[Signature]</i></p> <p>WARREN W. SCHAEFER, P.E. STRUCTURAL ENGINEER P.E. No. 44135</p>	WOOD PART DIP SPEC	<p>MARVIN RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS & DOORS (218) 386-1430 FAX 386-1913</p>	
	<input type="checkbox"/> DIP <input type="checkbox"/> NO DIP	PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG PRODUCT: CUDH HP	
COMPONENT PROFILE ALUMINUM & STEEL PROFILES			
MATERIAL: NOTED	SIZE: B	DRAWING NO: 00013061	
	SCALE: 3/4"	DATE: 01/15/99	DRAWN BY: ERAC

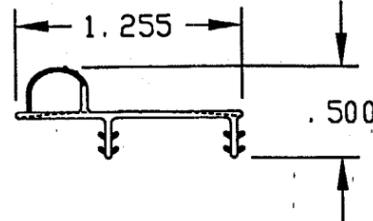
REV#	DESCRIPTION / REQUESTER	CON NO	DATE	DRAFTER



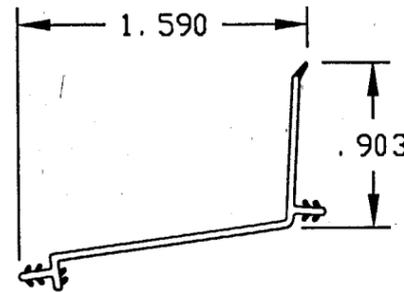
25 SILL NAILING FIN
VINYL (PVC)



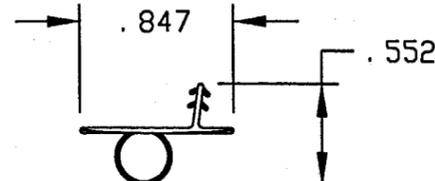
26 HINGED JAMB NAILING FIN
VINYL (PVC)



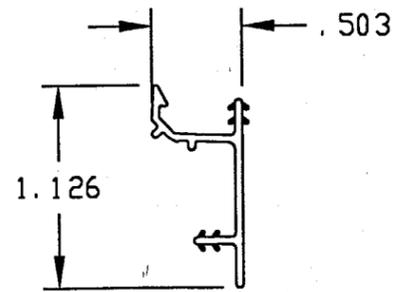
27 CHECK RAIL W. S.
VINYL (PVC)



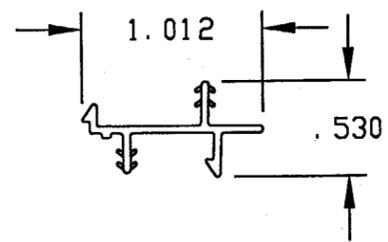
28 SILL COVER
VINYL (PVC)



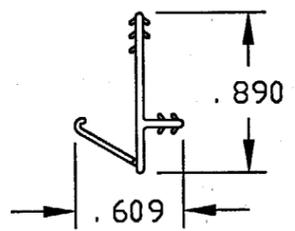
29 BOTTOM RAIL W. S.
VINYL (PVC)



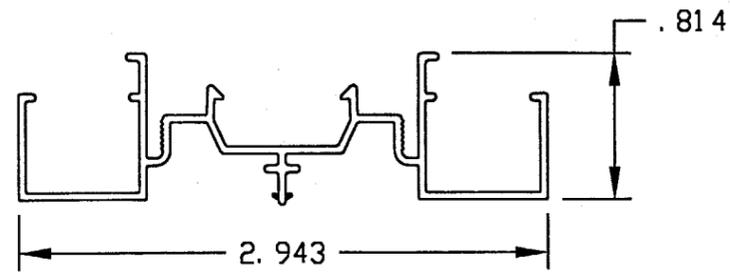
30 RAIL CLAD CONNECTOR
VINYL (PVC)



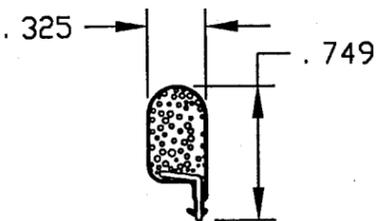
32 SASH CLADDING CLIP
VINYL (PVC)



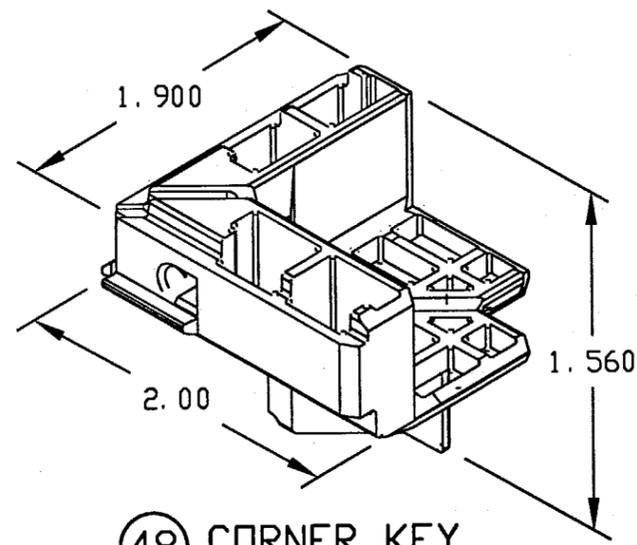
33 HEAD JAMB PARTING STOP W. S.
VINYL (PVC)



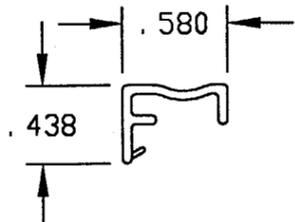
34 JAMB LINER
VINYL (PVC)



35 36 FRAME W. S.
VINYL (POLYPROPYLENE & URETHANE)



48 CORNER KEY
33% GLASS FILL NYLON



37 38 SASH W. S. CONTACT STRIP
VINYL (PVC)

W. S. = WEATHER STRIP

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-0311.04
Expiration Date 03/10/08
By: *[Signature]*
National Data Product Control
Division

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE: *March 10, 2000*
BY: *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. *99-0823.05*

FEB 15 2000
[Signature]
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135
V. V. SCHAEFER ENGINEERING
& CONSULTING, P.A.
STRUCTURAL CONSULTING ENGINEERS
600 SANDTREE DRIVE, SUITE 203B
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902

WOOD PART DIP SPEC		MARVIN RESEARCH AND DEVELOPMENT	
<input type="checkbox"/> DIP	<input type="checkbox"/> NO DIP	BOX 100, WARROAD, MN 56763	
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG		WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
PRODUCT: CUDH HP		COMPONENT PROFILE	
MATERIAL:		SIZE: B	DRAWING NO: 00013061
SCALE: 1:1	DATE: 6/15/99	DRAWN BY: BRAD BUL	SHEET: 5 OF 5

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

DESIGN LOAD CAPACITY-PSF				
WINDOW DIMENSIONS		INSULATED GLASS PER DRAWINGS		
HEIGHT	WIDTH	POSITIVE "A"	POSITIVE "B"	NEGATIVE
32.38"	21.38"	66.7	102	102
36.38"		66.7	92	92
40.38"		66.7	83	83
44.38"		66.7	79	79
48.38"		66.7	79	79
52.38"		66.7	79	79
56.38"		66.7	79	79
60.38"		66.7	79	79
64.38"		66.7	79	79
68.38"		66.7	79	79
72.38"		66.7	73	73
76.38"		63.0	63	63
32.38"	25.38"	66.7	102	102
36.38"		66.7	92	92
40.38"		66.7	83	83
44.38"		66.7	76	76
48.38"		66.7	70	70
52.38"		66.0	66	66
56.38"		66.0	66	66
60.38"		66.0	66	66
64.38"		66.0	66	66
68.38"		66.0	66	66
72.38"		63.0	63	63
76.38"		54.0	54	54
32.38"	29.38"	66.7	94	94
36.38"		66.7	88	88
40.38"		66.7	83	83
44.38"		66.7	76	76
48.38"		66.7	70	70
52.38"		64.0	64	64
56.38"		60.0	60	60
60.38"		57.0	57	57
64.38"		57.0	57	57
68.38"		57.0	57	57
72.38"		57.0	57	57
76.38"		49.0	49	49
32.38"	31.38"	66.7	86	86
36.38"		66.7	79	79
40.38"		66.7	74	74
44.38"		66.7	71	71
48.38"		66.7	69	69
52.38"		66.7	64	64
56.38"		66.0	60	60
60.38"		66.0	56	56
64.38"		64.0	54	54
68.38"		60.0	54	54
72.38"		57.0	54	54
76.38"		54.0	48	48

DESIGN LOAD CAPACITY-PSF				
WINDOW DIMENSIONS		INSULATED GLASS PER DRAWINGS		
HEIGHT	WIDTH	POSITIVE "A"	POSITIVE "B"	NEGATIVE
32.38"	33.38"	66.7	78	78
36.38"		66.7	72	72
40.38"		66.7	67	67
44.38"		64.0	64	64
48.38"		61.0	61	61
52.38"		60.0	60	60
56.38"		58.0	58	58
60.38"		58.0	56	56
64.38"		57.0	52	52
68.38"		56.0	50	50
72.38"		53.0	50	50
76.38"		50.0	46	46
32.38"	35.38"	66.7	72	72
36.38"		66.0	66	66
40.38"		62.0	62	62
44.38"		58.0	58	58
48.38"		56.0	56	56
52.38"		54.0	54	54
56.38"		5.0	52	52
60.38"		51.0	51	51
64.38"		51.0	51	51
68.38"		51.0	49	49
72.38"		50.0	48	48
76.38"		48.0	46	46
32.38"	37.38"	66.7	67	67
36.38"		61.0	61	61
40.38"		57.0	57	57
44.38"		53.0	53	53
48.38"		51.0	51	51
52.38"		49.0	49	49
56.38"		47.0	47	47
60.38"		46.0	46	46
64.38"		46.0	46	46
68.38"		45.0	45	45
72.38"		45.0	45	45
76.38"		45.0	45	45

WIDTH = OUTSIDE MEASUREMENT OF FRAME (OSM)
HEIGHT = OUTSIDE MEASUREMENT OF FRAME (OSM)
POSITIVE "A" = ALLOWABLE POSITIVE PRESSURE
AS CONTROLLED BY WATER INFILTRATION OR WIND PRESSURE
POSITIVE "B" = ALLOWABLE POSITIVE PRESSURE AS
CONTROLLED BY WIND PRESSURE ONLY
NEGATIVE = ALLOWABLE NEGATIVE PRESSURE.

NOTE: ALL RESULTING PRESSURES ARE
AS CONTROLLED BY WORSE CASE
CONSIDERING, FRAME STRESS &
DEFLECTIONS, GLASS LOAD CAPACITY,
CHECK RAIL END REACTION & FASTENER
CAPACITIES.

TESTED WINDOW				
SIZE		TESTED DESIGN PRESSURE	TESTED WATER PRESSURE	TEST REPORT NUMBER
WIDTH	HEIGHT			
37.38"	76.38"	+/- 45 PSF	+66.7 PSF	2364

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-0311.04
Expiration Date 03/10/08
By *Warren W. Schaefer*
Miami Dade Product Control
Division

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE *March 10, 2000*
BY *Manuel...*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. *99-0823.05*

← TESTED UNIT

FEB 15 2000
Warren W. Schaefer
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.
STRUCTURAL CONSULTING ENGINEERS
600 SANDTRIF DRIVE, SUITE 203F
PA. # BEACH GARDENS, FL 33417
PHONE: 561-775-4902

WOOD PART DIP SPEC
 DIP
 NO DIP
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG
PRODUCT: CUDH HP
COMPONENT PROFILE
DESIGN LOAD CAPACITY TABLE
MATERIAL: B SIZE: B DRAWING NO: 00013061
SCALE: N/A DATE: 10/15/99 DRAWN BY: BRAD LEE SHEET: 10 OF 10

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

MATERIAL LIST

PART NO.	REFERENCE NO.	DESCRIPTION	NOTES
PARTS & EXTRUSIONS			
1	00011803	WOOD SILL LINER	
1A	00013856	WOOD SILL LINER EXTENSION	
2	00011796	WOOD JAMB LINER	
3	00012269	WOOD HEAD JAMB	
4	00012262	WOOD SIDE JAMB	
5	00011801	WOOD SILL	
6	00011805	WOOD HEAD JAMB PARTING STOP	
7	00012343	WOOD JAMB FILLER	
8	00011754	WOOD BOTTOM RAIL	FOR BOTTOM WINDOW
9	00011752	WOOD CHECK RAIL SECTION	FOR BOTTOM WINDOW
10	00011751	WOOD CHECK RAIL SECTION	FOR TOP WINDOW
11	00011742	WOOD TOP RAIL	FOR TOP WINDOW
12	00011755	WOOD STILE	FOR BOTTOM WINDOW
13	00011758	WOOD STILE	FOR TOP WINDOW
14	00011810	SILL CLADDING	
15	00012378	HEAD JAMB CLADDING	
16	00012349	SIDE JAMB CLADDING	
17	00012530	CLAD JAMB FILLER	
18	00012163	TOP RAIL CLADDING	FOR TOP WINDOW
19	00012167	CHECK RAIL CLADDING	FOR TOP WINDOW
20	00011830	CHECK RAIL CLADDING	FOR BOTTOM WINDOW
21	0002166	BOTTOM RAIL CLADDING	FOR BOTTOM WINDOW
22	00012164	STILE CLADDING	FOR BOTTOM WINDOW
23	00012165	STILE CLADDING	FOR TOP WINDOW
24	00005346	NAILING FIN DRIP CAP	NOT SHOWN ON DRAWINGS
25	00005284	SILL NAILING FIN	
26	00005301	JAMB NAILING FIN	
27	00011849	CHECK RAIL W/S	
28	00011813	SILL COVER	
29	00011848	BOTTOM RAIL W/S	FOR BOTTOM WINDOW
30	00011811	TOP RAIL CLAD CONNECTOR	FOR BOTTOM WINDOW
31	00012323	VINYL SASH STOP	NOT SHOWN ON DRAWINGS
32	00012117	SASH CLADDING CLIP	
33	00012531	HEAD JAMB PARTING STOP W/S	
34	00012310	JAMB LINER	
35	00011879	FRAME W/S	FOR TOP WINDOW
36	00011879	FRAME W/S	FOR BOTTOM WINDOW
37	00011918	SASH W/S CONTACT STRIP	FOR BOTTOM WINDOW
38	00011918	SASH W/S CONTACT STRIP	FOR TOP WINDOW

ALTERNATE WOOD SPECIES FOR ALL WOOD MEMBERS

1. MAHOGANY
2. OAK
3. CHERRY
4. CYPRESS
5. DOUGLAS FIR

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE March 10, 2000
BY Maurice Perez
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0823-05

MATERIAL LIST

PART NO.	REFERENCE NO.	DESCRIPTION	NOTES
PURCHASED PARTS			
39	00011844	CLUTCH PIVOT PIN	ZINC DIECAST BY MIDWEST MOULDING
40	00012309	BALANCE TUBE	ALUMINUM OR STEEL BY AMESBURY
41	00012309	BALANCE TUBE	ALUMINUM OR STEEL BY AMESBURY
42	00012532	LOCK ASSEMBLY	ZINC DIECAST BY TRUTH HARDWARE
43	00012533	KEEPER ASSEMBLY	ZINC DIECAST BY TRUTH HARDWARE
44	00012534	ENDPLATE ASSEMBLY	33% GLASS FILLED NYLON BY MIDWEST MOULDING
45	00012535	TILT LATCH ASSEMBLY	33% GLASS FILLED NYLON BY MIDWEST MOULDING
46	00012421	OPERATION CHORD	POLYESTER BY CORDMASTER
47	00012069	SILL END PLUG	33% GLASS FILLED NYLON BY MIDWEST MOULDING
48	00012434	CORNER KEY	33% GLASS FILLED NYLON BY MIDWEST MOULDING
49	00012433	JAMB END PLUG	33% GLASS FILLED NYLON BY MIDWEST MOULDING
50	00012407	SILL TO JAMB GASKET	PVC FOAM BY CLIMATECH
51	00003521	GLASS SETTING BLOCK	SANTOPRENE BY GENERAL WINDOW PRODUCTS
52	00012513	FOAM HARDWARE GASKET	PVC FOAM BY CLIMATECH
53	-	.375 FOAM BAKER ROD @ HEAD JAMB	CLOSED CELL FOAM BY NAMETECH
54	00012655	SHIPPING CLIP	
55	11860012	MASONRY CLIP	GALVANIZED STEEL BY WABANICA
56	00012834	SILL LINER PLUG	
FASTENERS			
57	11820078	GSN18x7/8" STAPLE	AS SHOWN ON DRAWING
58	11820100	GSN18x1" STAPLE	AS SHOWN ON DRAWING
59	11820086	GSN18x1 1/2" STAPLE	FRAME JAMB & SILL LINER; 3" FROM ENDS & 5" O.C.
60	11820120	GSN18x2" STAPLE	FRAME CORNERS; 3 @ SIDES 1 @ HEAD & SILL
61	11800510	#6-20x5/8" F.H. SMS SCREW	2 PER END PLATE ASSEMBLY @ BOTTOM WINDOW
62	FAST-530	#7-19x5/8" F.H. S.S. SMS SCREW	1 EACH END OF FRAME CLADDING TYP. @ ALL SIDES
63	00003205	#7-19x7/8" F.H. S.T. SMS SCREW	2 PER LOCK & KEEPER ASSEMBLY
64	00013166	#7-19x1 1/4" P.H. SMS SCREW	2 PER CLUTCH PIVOT PIN @ TOP & BOTTOM WINDOWS
65	FAST-0545	#8-15x1 1/2" F.H. S.S. SMS SCREW	1 EA. END OF SILL CLADDING
SEALANTS			
67	-	DOW 345 SILICONE	BY DOW CORNING
68	-	SM 7100 URETHANE	BY SCHNEE MOREHEAD, INC.; INJECTED INTO FRAME CORNERS
69	-	.040 x 3/8 GLAZING TAPE	BY ARON MFG.

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 03-031104
Expiration Date 03/10/08
By [Signature]
Miami-Dade Product Control
Division

FEB 15 2000

[Signature]

WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135

**W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.**
STRUCTURAL CONSULTING ENGINEERS
600 SANDTREE DRIVE, SUITE 203P
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4966

WOOD PART DIP SPEC	<input type="checkbox"/> DIP	<input type="checkbox"/> AT MLDR.	MARVIN	RESEARCH AND DEVELOPMENT BOX 100, WARROD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913
	<input type="checkbox"/> NO DIP	<input type="checkbox"/> IN PROD.		
PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG				
PRODUCT: CUDH HP				
CHART BILL OF MATERIALS				
MATERIAL: N/A	SIZE: B	DRAWING NO: 00013061		
SCALE: N/A		DATE: 1/20/00	DRAWN BY: [Signature]	SHEET: 1 OF 1