



MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2902 FAX (305) 372-6339

NOTICE OF ACCEPTANCE (NOA)

www.miamidade.gov/buildingcode

Hartman Windows & Doors, LLC
531 Southern Blvd.
West Palm Beach, FL 33405

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code. This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: "Direct Set" Wood Fixed Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. **04-HWD-0003**, titled "Direct Set Window - Large Missile Impact Resistant", sheets 1 through 6 of 6, dated 11/22/04, last revision dated 12/17/08, prepared by Engineering Express, Inc., signed and sealed by Frank L. Bennardo, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and the 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 # **04-1129.04** and consists of this page 1 and evidence submitted pages E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
 04/08/2009

NOA No. 09-0224.09
Expiration Date: 10/13/2010
Approval Date: 04/08/2009
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL NOA NO. 04-1129.04

A. DRAWINGS

1. *Manufacturer's die drawings and sections.*
2. *Drawing No. 04-HWD-0003, titled "Direct Set Window - Large Missile Impact Resistant", sheets 1 through 6, of 6, dated 11/22/04, revised on 6/16/05, prepared by Frank L. Bennardo, P.E., Inc. Consulting Engineers, signed and sealed by Frank L. Bennardo, 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
along with marked-up drawings and installation diagram of one wood fixed window, O configuration, prepared by Hurricane Test Laboratory, LLC, Test Report No. HTL-0137-0911-01, dated 9/12/01, 2/21/02, signed & sealed by Vinu J. Abraham, P.E.*
2. *Test reports on 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of one wood fixed window, O configuration, prepared by Hurricane Test Laboratory, LLC, Test Report No. HTL-0137-0217-02, dated 9/12/01, 2/21/02, signed & sealed by Vinu J. Abraham, P.E.*
3. *Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of two direct set wood fixed window, one half round and one eyebrow shape, O configuration each, prepared by Hurricane Test Laboratory, LLC, Test Report No. HTL-0137-0101-04, dated 12/30/03, signed and sealed by Vinu J. Abraham, P.E.*

C. CALCULATIONS

1. *Anchor Calculations and structural analysis complying with FBC-2004, dated Nov. 22, 2004, revised on June 16, 2005, prepared by Frank L. Bennardo, P.E., Inc., signed and sealed by Frank L. Bennardo, P.E.
Complies with ASTM E1300-02*

D. QUALITY ASSURANCE

1. *By Miami Dade County Building Code Compliance Office (BCCO).*

E. MATERIAL CERTIFICATIONS

1. *Notice of Acceptance No. 02-1205.03 issued to Security Impact Glass Holding LLC for "SAF-GLAS Polycarbonate Laminate" dated 01/02/03, expiring on 12/16/072.*



Helmy Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 09-0224.09

Expiration Date: 10/13/2010
Approval Date: 04/08/2009

Hartman Windows & Doors, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. Notice of Acceptance No. **01-0205.02** issued to Solutia Inc. for their "**Saflex / Keepsafe Maximum**" dated 05/17/01, expiring on 05/21/06.
3. Notice of Acceptance No. **01-1204.01** issued to E.I. DuPont DeNemours for "**Sentry Glass Plus**" dated 01/17/02, expiring on 01/14/07.

F. STATEMENTS

1. Statement letter of conformance, dated November 22, 2004, signed and sealed by Frank L. Bennardo, P.E.
2. Statement letter of no financial interest, dated November 22, 2004, signed and sealed by Frank L. Bennardo, P.E.
3. Laboratory compliance letter HTL02080 for Test Reports No. HTL- 0137-1028-02 and HTL- 0137-0114-04, issued by Hurricane Test Laboratory, LLC., dated August 9, 2004, signed and sealed by Vinu J. Abraham, P.E.

G. OTHERS

1. None.

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No 04-HWD-0003, titled "Direct Set Window - Large Missile Impact Resistant", sheets 1 through 6 of 6, dated 11/22/04 with the latest revision dated 12/17/08, prepared by Engineering Express, Inc., signed and sealed by Frank L. Bennardo, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Statement letter of conformance with the FBC 2007, dated January 28, 2009, prepared by Engineering Express, Inc., signed and sealed by Frank L. Bennardo, P. E.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. 07-1116.04 issued to E.I. DuPont DeNemours & Co., Inc. for their "DuPont Sentry Glass ® Plus" dated 01/03/08, expiring on 01/14/12.
2. Notice of Acceptance No. 06-0216.06 issued to Solutia Inc. for their "Saflex IIIIG Clear or colored interlayer" dated May 04, 2006, expiring on May 21, 2011.



Helmy Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 09-0224.09
Expiration Date: 10/13/2010
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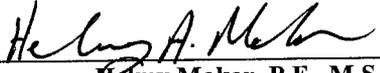
3. *Notice of Acceptance No. 07-1116.11 issued to SAF-GLASS for their "SAF-GLAS Polycarbonate Laminate" dated December 12, 2007, expiring on December 16, 2012.*

F. STATEMENTS

1. *Statement letter of conformance, dated March 10, 2009, signed and sealed by Frank L. Bennardo, P. E.*

G. OTHERS

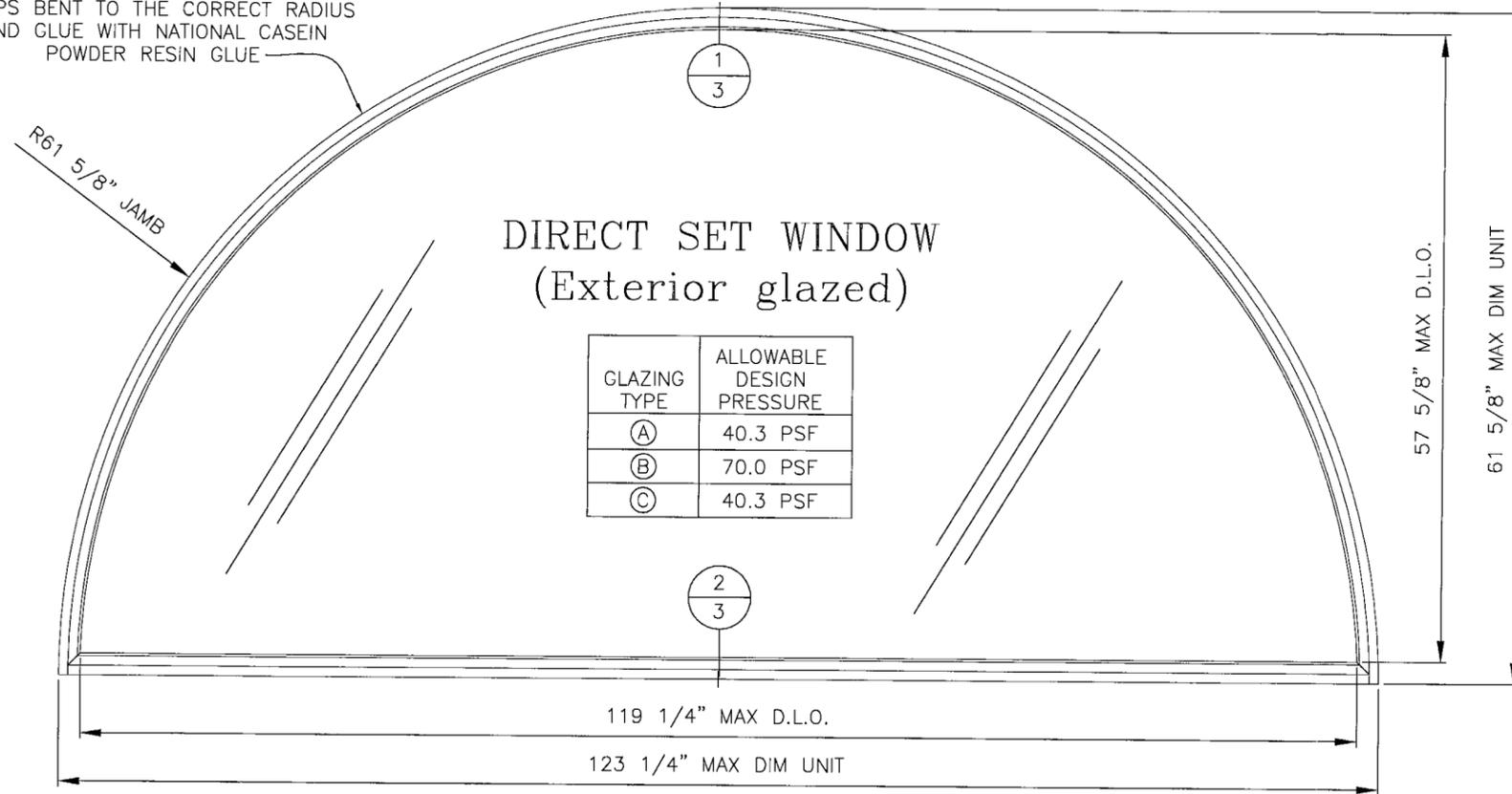
1. *Notice of Acceptance No. 04-1129.04, issued to Hartman Windows & Doors, LLC for their Series "Direct Set Wood Fixed Window - L. M. I.", approved on 10/13/05 and expiring on 10/13/10.*
2. *Statement letter of conformance with the FBC 2007, dated January 28, 2009, revised dated March 10, 2009, prepared by Engineering Express, Inc., signed and sealed by Frank L. Bennardo, P. E.*



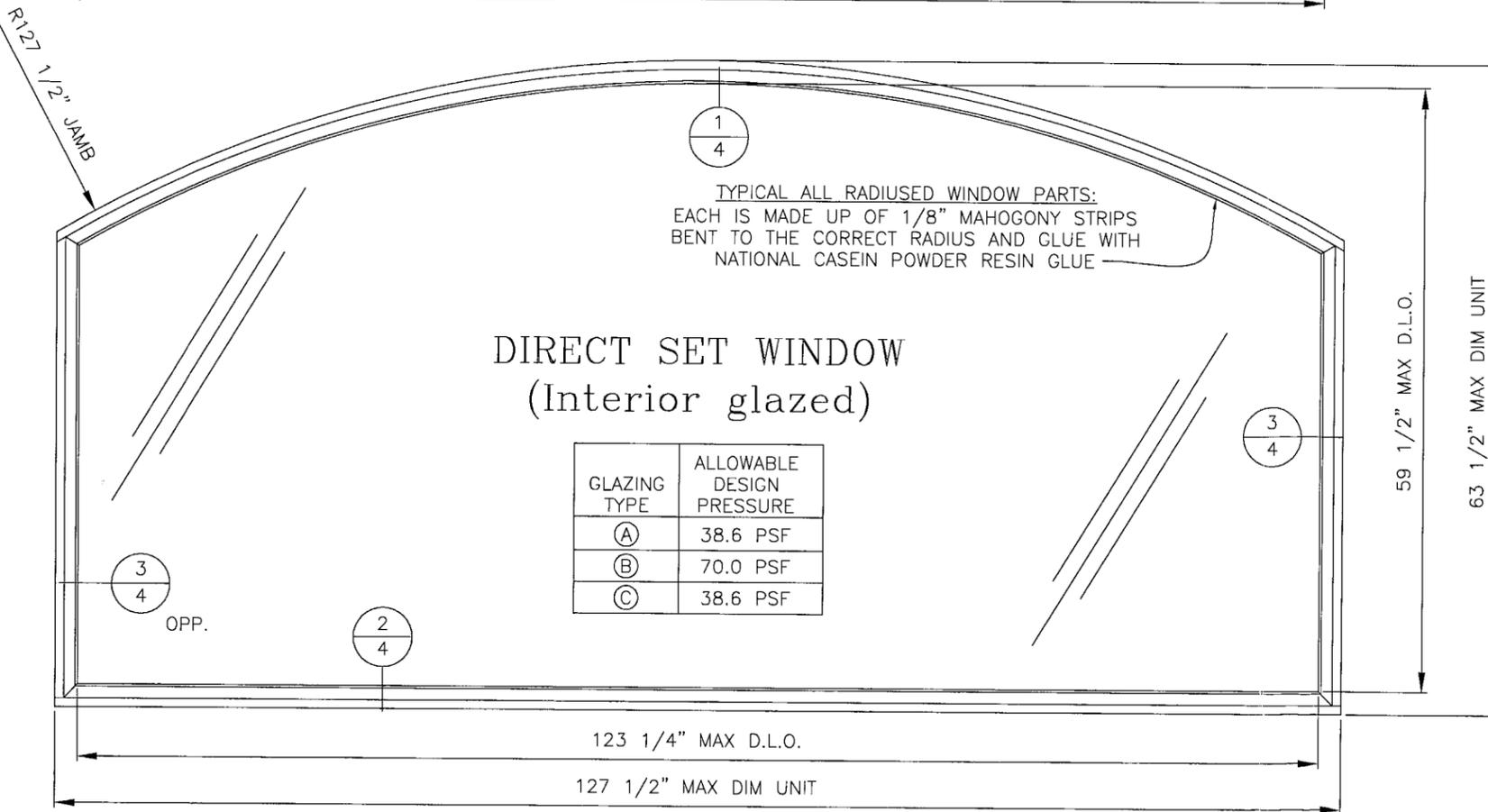
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Senior Product Control Examiner
NOA No. 09-0224.09
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DIRECT SET WINDOW

TYPICAL ALL RADIUSED WINDOW PARTS:
EACH IS MADE UP OF 1/8" MAHOGONY
STRIPS BENT TO THE CORRECT RADIUS
AND GLUE WITH NATIONAL CASEIN
POWDER RESIN GLUE



GLAZING TYPE	ALLOWABLE DESIGN PRESSURE
(A)	40.3 PSF
(B)	70.0 PSF
(C)	40.3 PSF



TYPICAL ALL RADIUSED WINDOW PARTS:
EACH IS MADE UP OF 1/8" MAHOGONY STRIPS
BENT TO THE CORRECT RADIUS AND GLUE WITH
NATIONAL CASEIN POWDER RESIN GLUE

GLAZING TYPE	ALLOWABLE DESIGN PRESSURE
(A)	38.6 PSF
(B)	70.0 PSF
(C)	38.6 PSF

GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE 2007 FLORIDA BUILDING CODE, FOR USE WITHIN THE HIGH VELOCITY HURRICANE ZONE, PER TAS 201 / 202 / 203 & ASTM E1300-98 STANDARDS.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE.
4. MULTIPLE UNITS MUST BE INSTALLED USING MIAMI-DADE COUNTY BCCO-APPROVED STRUCTURAL MULLIONS.
5. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
6. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
7. ALL FRAMING MEMBERS SHALL BE MAHOGANY WOOD HAVING MINIMUM SPECIFIC GRAVITY G=0.54 AND MIN DOWEL BEARING STRENGTH Fe=5450psi.
8. UNITS GLAZED WITH 7/16" LAMINATED GLASS ARE LARGE MISSILE IMPACT RESISTANT AND DO NOT REQUIRE IMPACT RESISTANT SHUTTERS.
9. EXTERIOR SEAM OF FRAME CORNERS SHALL BE SEALED WITH SILICONE.
10. ALL DIMENSIONAL LUMBER COMING INTO CONTACT WITH CONCRETE OR MASONRY MUST BE PRESSURE TREATED OR PROTECTED WITH ROOFING FELT PAPER AT THE CONTACT AREA AS PRESCRIBED IN THE 2007 FLORIDA BUILDING CODE, SECTION 2326.2.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 09-0224.09
Expiration Date 10/13/2010
By *Helmy A. Matar*
Miami Dade Product Control
Division

GLAZING OPTIONS:

- (A) 7/16" "Sentry Glass Plus" by E.I. Dupont (NOA #07-1116.04):
- 3/16" ANNEALED GLASS
- 0.090" DuPont SENTRYGLASS PLUS INTERLAYER
- 3/16" ANNEALED GLASS
- (B) 7/16" "SAFLEX" by Solutia (NOA #06-0216.06):
- 3/16" HEAT STRENGTHENED GLASS
- 0.090" SAFLEX PVB INTERLAYER
- 3/16" HEAT STRENGTHENED GLASS
- (C) 7/16" "SAF-GLAS" by Saf-Glas, LLC (NOA #07-1116.11):
- 3/16" ANNEALED GLASS
- 0.015" URETHANE ADHESIVE
- 0.070" POLYCARBONATE "S.I.G" INTERLAYER
- 0.015" URETHANE ADHESIVE
- 3/16" ANNEALED GLASS

FRANK L. BENNARDO, P.E.
#PE0046549

03/10/2009

VALID FOR (1) JOB(S) ONLY
VALID ONLY WITH RAISED ENGINEER SEAL

ENGINEERING EXPRESS
160 SW 12th AVENUE, #106
DEERFIELD BEACH, FL 33442
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CERT OF AUTH #9885
A FRANK L. BENNARDO, P.E., INC. INNOVATION

HARTMAN WINDOWS & DOORS, LLC
531 SOUTHERN BLVD - WEST PALM BEACH, FL 33405
PHONE: (954) 722-8707 FAX: (954) 783-0288

DIRECT SET WINDOW
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	11/22/04
2004 FBC	CL	FLB	06/16/05
2007 FBC	AML	CL	12/17/08

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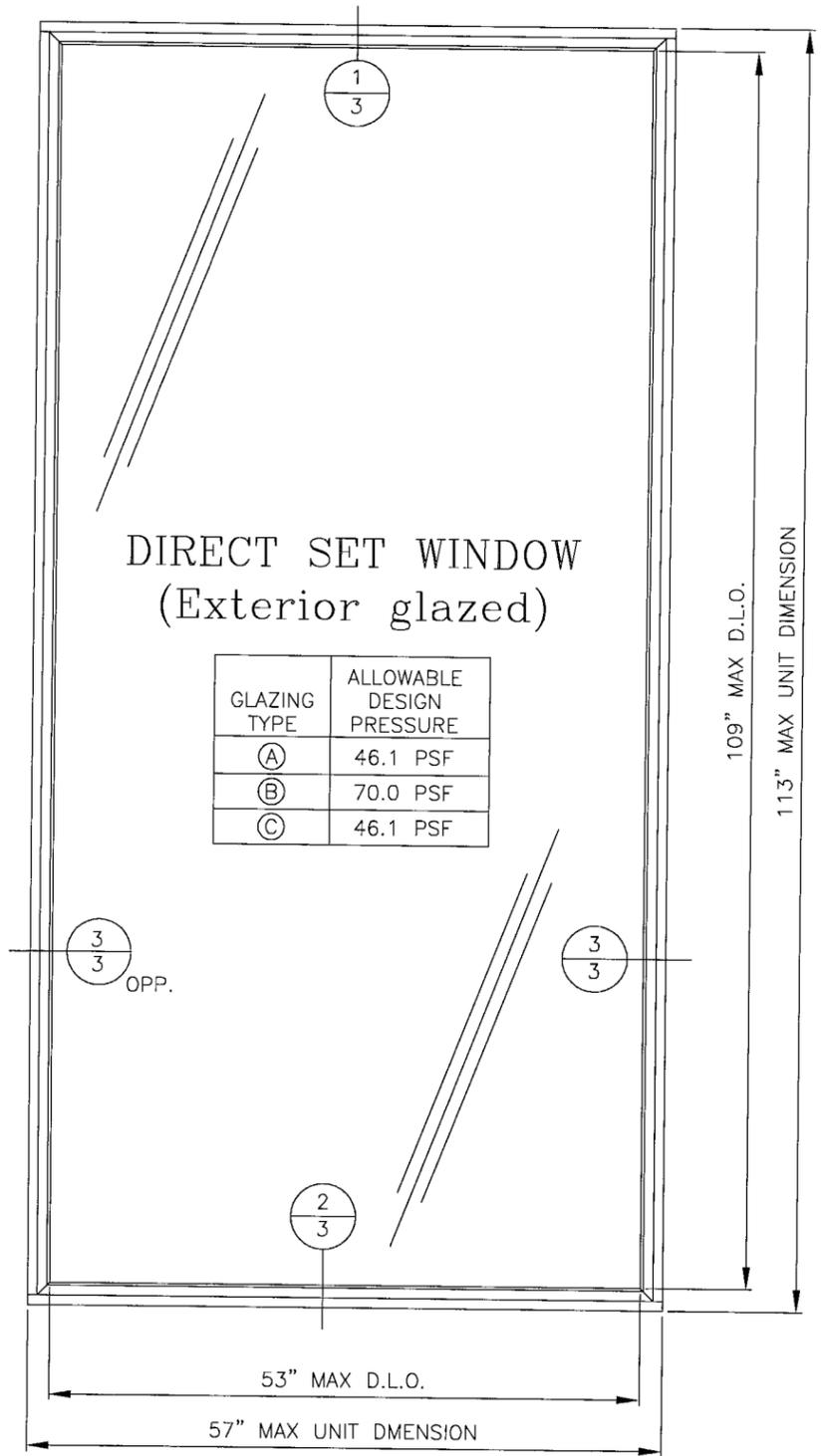
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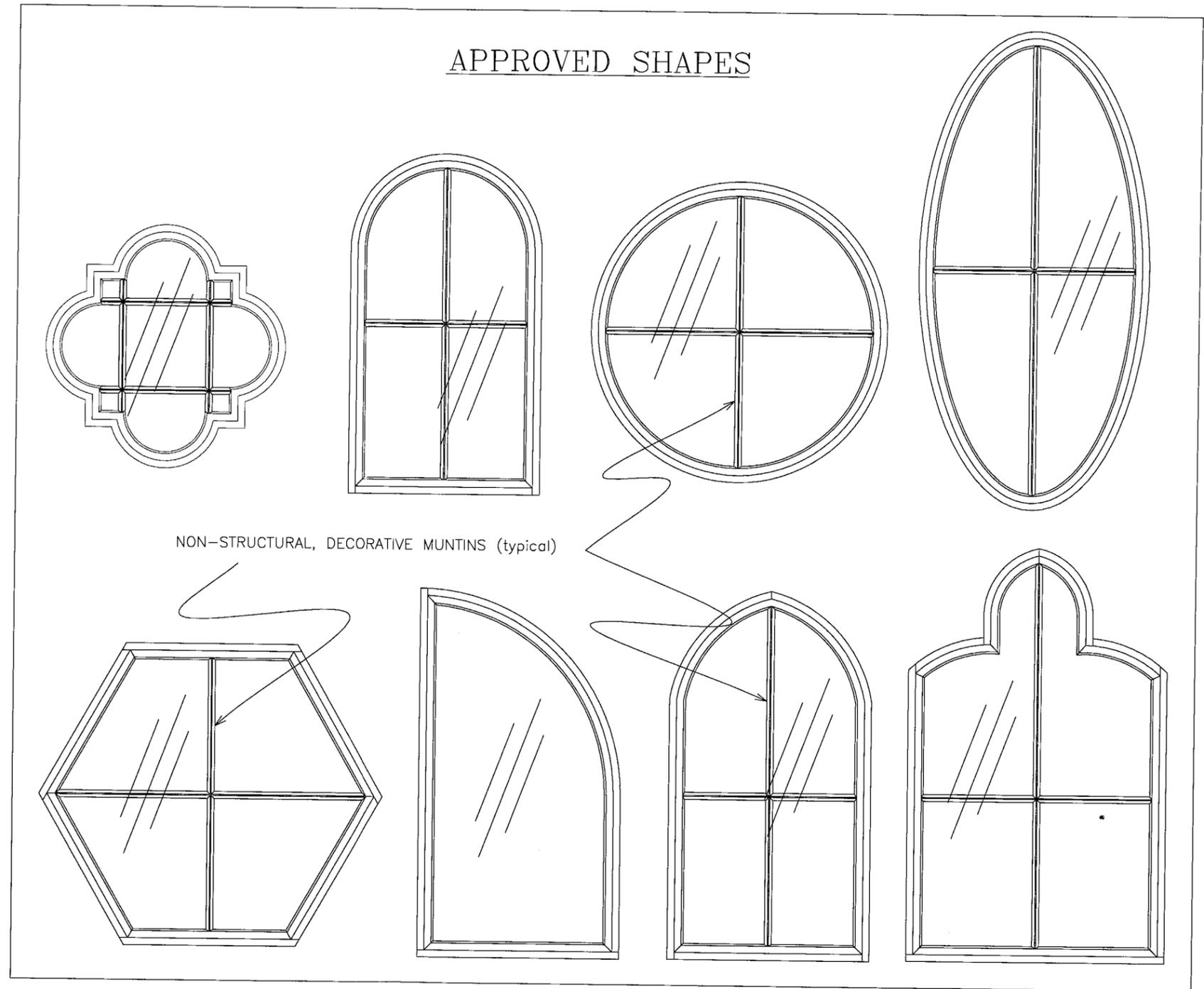
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APPROVED SHAPES



SHAPED UNIT NOTES:

- 1) UNITS OF ANY SHAPE ARE ALLOWED PROVIDED CONSTRUCTION, GLAZING, & ANCHORAGE ARE PER DETAILS SHOWN HEREIN.
- 2) ALL SHAPED UNITS (OTHER THAN THOSE SHOWN ON SHEET 1) SHALL FIT WITHIN THE RECTANGULAR DIMENSIONS SHOWN ABOVE.
- 3) ALL RADIUSED WINDOW PARTS ARE MADE UP OF 1/8" MAHOGONY STRIPS BENT TO THE CORRECT RADIUS AND GLUE WITH NATIONAL CASEIN POWDER RESIN GLUE

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. **09-0224.09**
Expiration Date **10/13/2010**
By *Heather A. McLean*
Miami Dade Product Control
Division

FRANK L. BENNARDO, P.E.
PE0046549

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DIRECT SET WINDOW
LARGE MISSILE IMPACT RESISTANT

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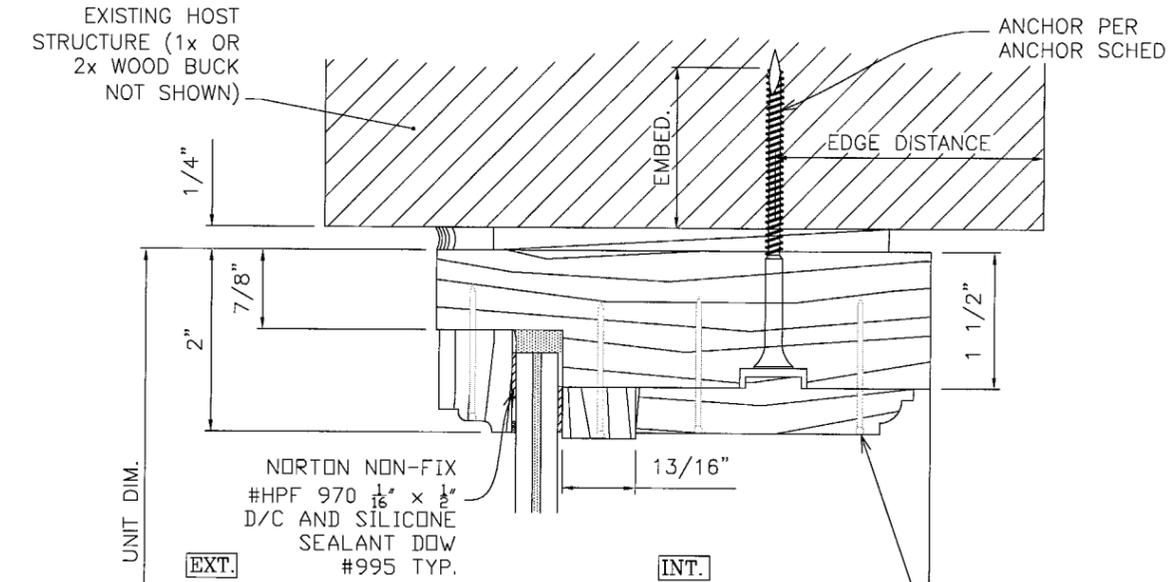
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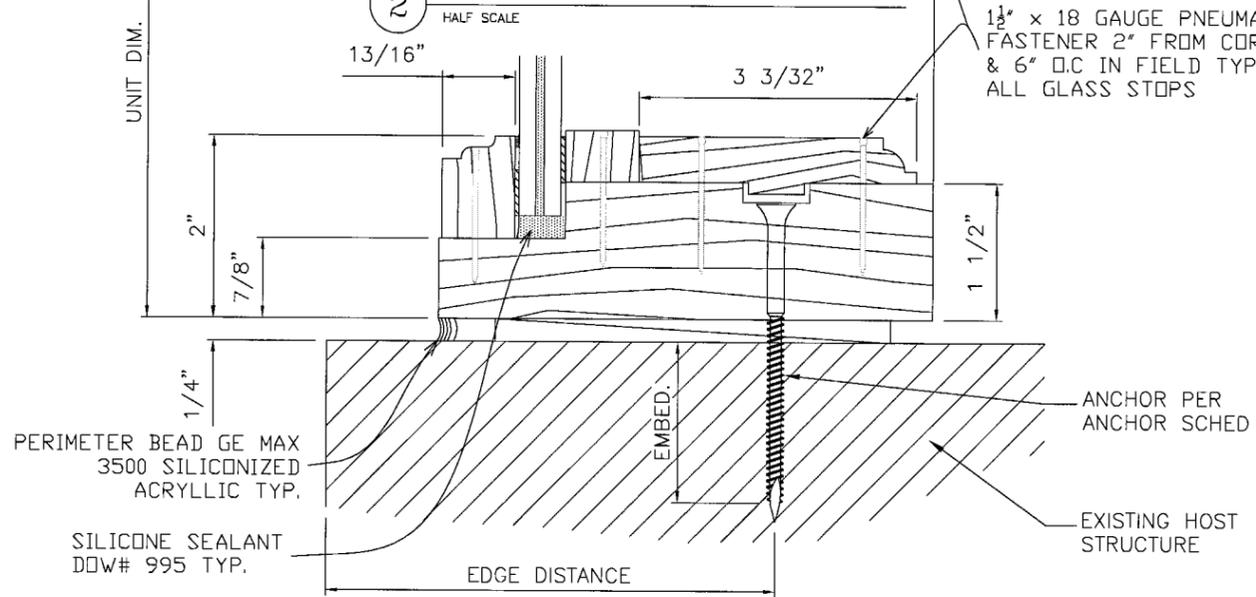
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1 DIRECT SET WINDOW HEAD
HALF SCALE

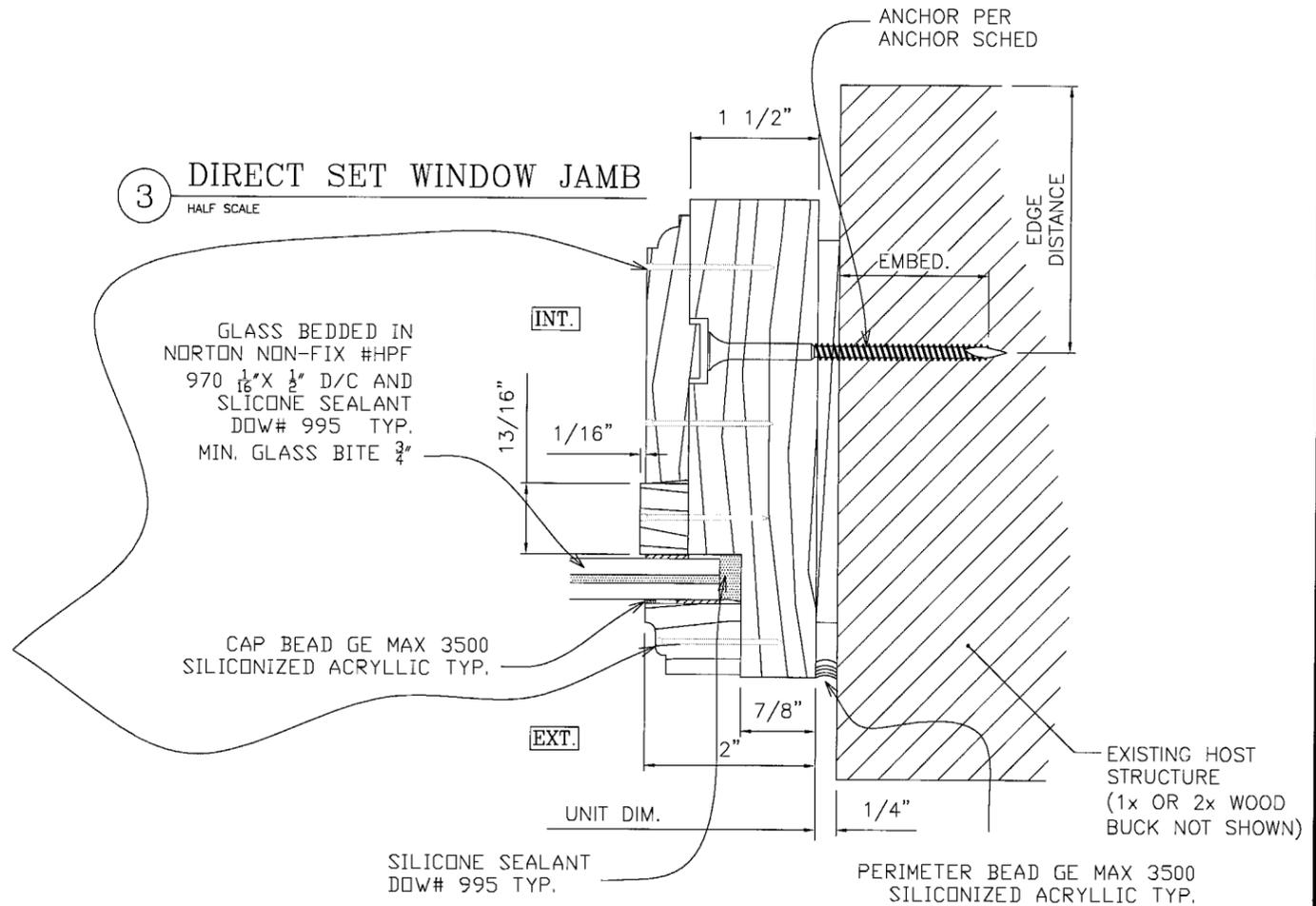


2 DIRECT SET WINDOW SILL
HALF SCALE



EXTERIOR GLAZED DETAILS

3 DIRECT SET WINDOW JAMB
HALF SCALE



ANCHOR SCHEDULE:

TO CONCRETE OR HOLLOW BLOCK
(WITH OR WITHOUT 1x WOOD BUCK)
1/4" ITW TAPCON WITH 1-1/4" MIN EMBED
& 2-1/2" MIN EDGE DISTANCE

TO 2x (MIN) WOOD BUCK OR WOOD STRUCTURE
#12 WOOD SCREW OR SMS WITH 1-1/2"
MIN EMBED & 1" MIN EDGE DISTANCE

ANCHOR NOTES:

1. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
2. TAPCONS SHALL BE MANUFACTURED BY ITW.
3. ALL UNITS SHALL BE ANCHORED TO EXISTING HOST STRUCTURE WITH ANCHORS AT 3" FROM EACH CORNER & 8" O.C. AROUND ENTIRE PERIMETER. REFER TO ANCHOR SCHEDULE FOR ALLOWABLE ANCHORS & ANCHORING CONDITIONS.
4. ALL SHEET METAL AND/OR WOOD SCREWS SHALL BE SAE GRADE 5 STEEL OR EQUIVALENT.
5. ENSURE MINIMUM 2-1/2" EDGE DISTANCE FOR ALL ANCHORS TO CONCRETE & TO HOLLOW BLOCK.
6. WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD. 1" EDGE DISTANCE IS ACCEPTABLE FOR ANCHORS TO WOOD FRAMING.
7. WOOD HOST STRUCTURE SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY.
8. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
9. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 09-0224.09
Expiration Date 10/13/2010
By *Helene A. Nelson*
Miami Dade Product Control
Division

FRANK L. BENNARDO, P.E.
PE0046549

03/10/2009

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DIRECT SET WINDOW
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
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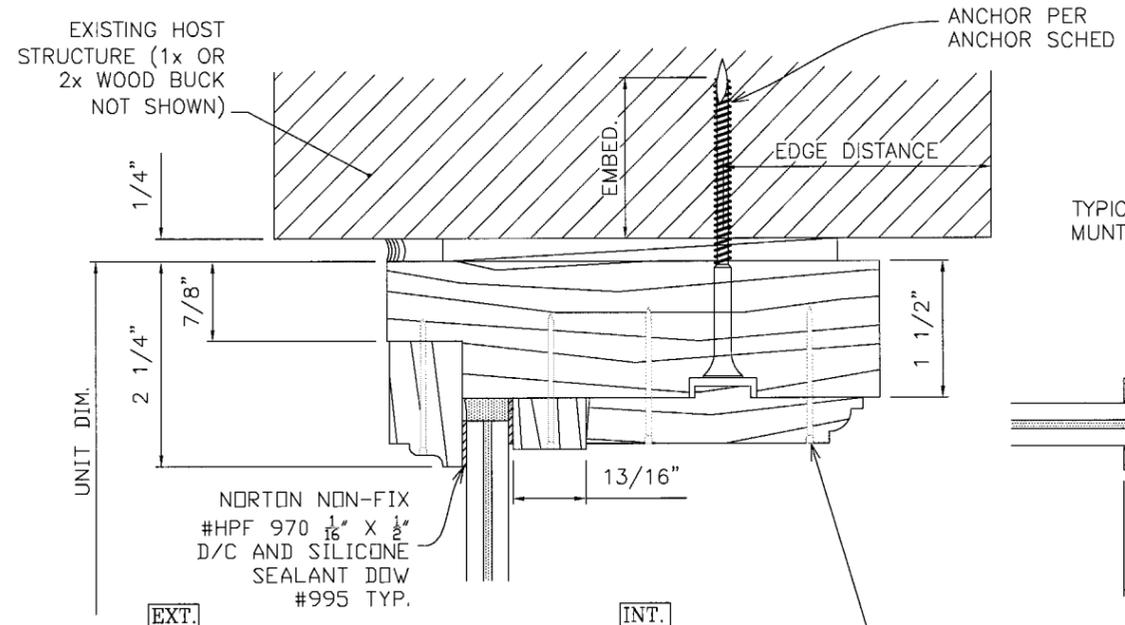
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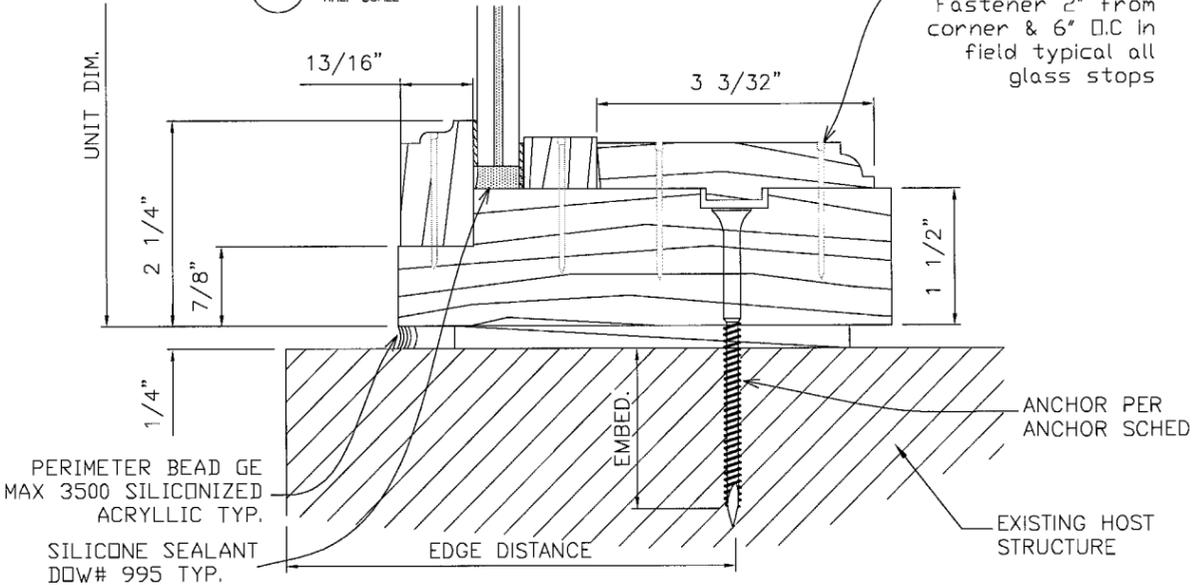
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INTERIOR GLAZED DETAILS

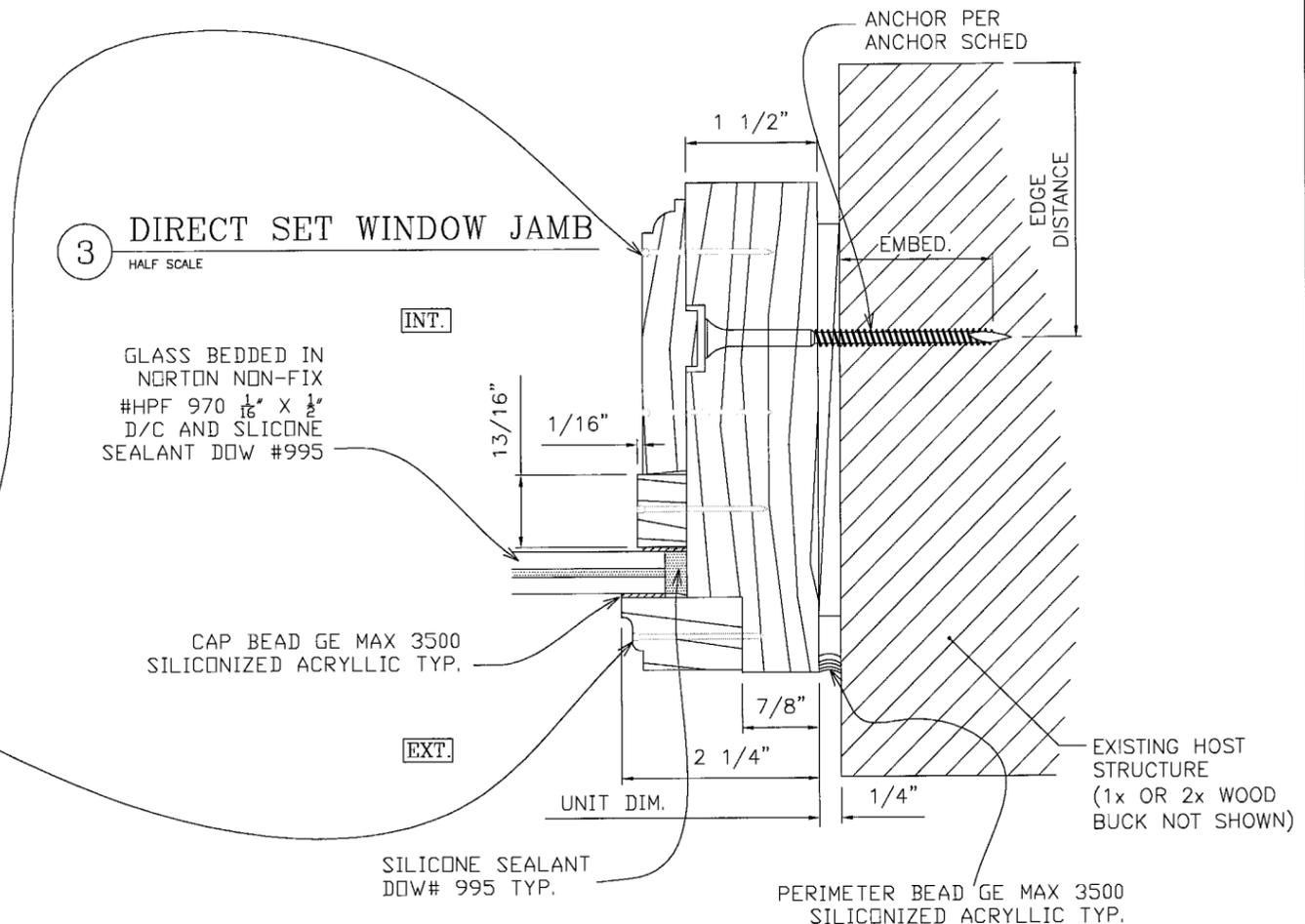
1 DIRECT SET WINDOW HEAD HALF SCALE



2 DIRECT SET WINDOW SILL HALF SCALE



3 DIRECT SET WINDOW JAMB HALF SCALE



ANCHOR SCHEDULE:

TO CONCRETE OR HOLLOW BLOCK
(WITH OR WITHOUT 1x WOOD BUCK)
1/4" ITW TAPCON WITH 1-1/4" MIN EMBED
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TO 2x (MIN) WOOD BUCK OR WOOD STRUCTURE
#12 WOOD SCREW OR SMS WITH 1-1/2"
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- ANCHOR NOTES:**
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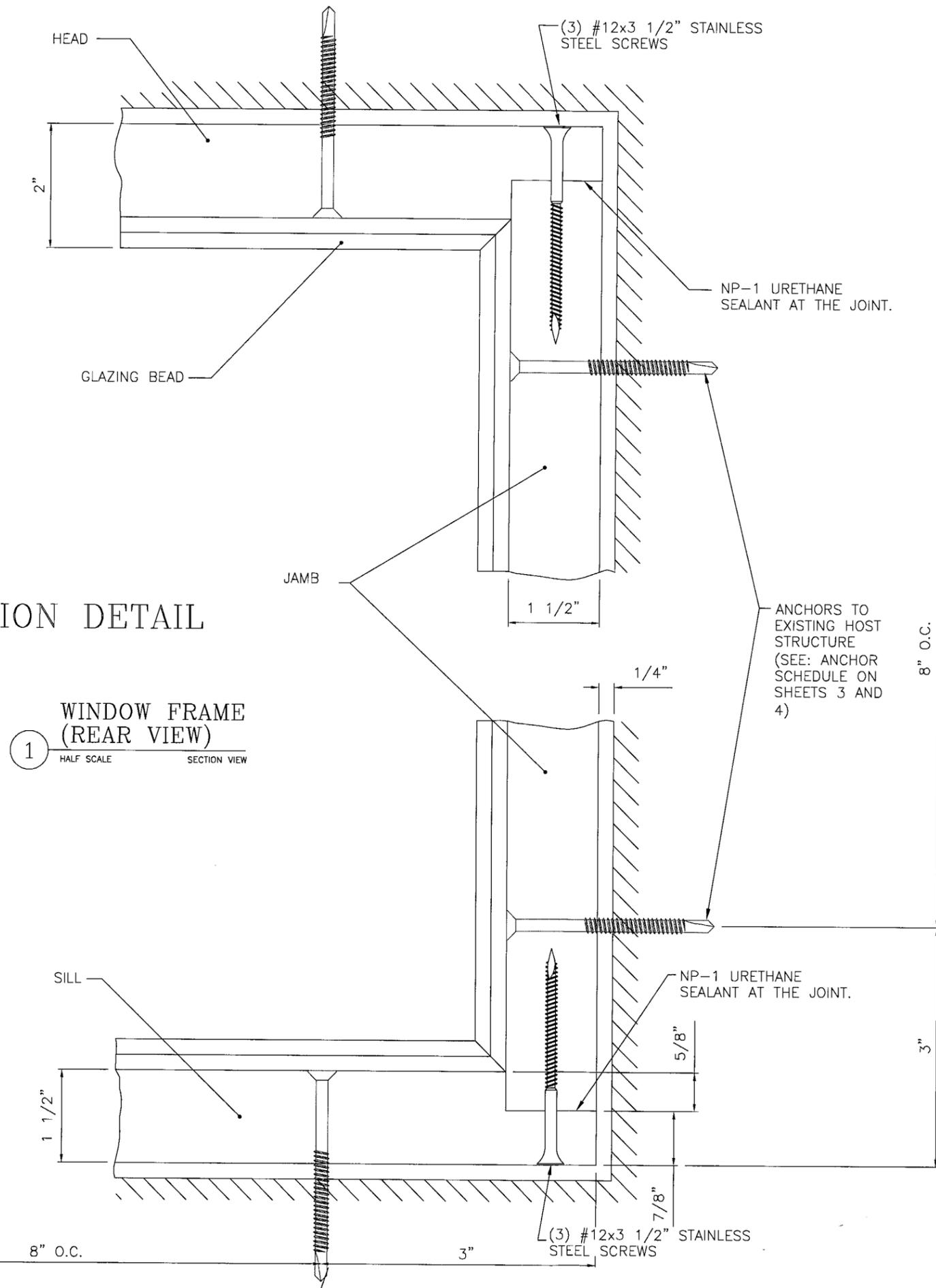
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 03/10/2009 - 2:10pm keithl

CORNER CONSTRUCTION DETAIL



1 WINDOW FRAME (REAR VIEW)
 HALF SCALE SECTION VIEW

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 09-0224-09
 Expiration Date 01/13/2010
 By *Heather A. Miller*
 Miami Dade Product Control
 Division

FRANK L. BENNARDO, P.E.
 #PE0046549
03/10/2009
 VALID FOR (1) JOB(S) ONLY
 VALID ONLY WITH RAISED ENGINEER SEAL

ENGINEERING EXPRESS®
 160 SW 12th AVENUE, #106
 DEERFIELD BEACH, FL 33442
 PH: (954) 354-0660 FAX: (954) 354-0443
 WWW.ENGEXP.COM
 CERT. OF AUTH #9885
 A FRANK L. BENNARDO, P.E., INC. INNOVATION

HARTMAN WINDOWS & DOORS, LLC
 531 SOUTHERN BLVD - WEST PALM BEACH, FL 33405
 PHONE: (954) 722-8707 FAX: (954) 783-0288

DIRECT SET WINDOW
 LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	11/22/04
2004 FBC	CL	FLB	06/16/05
2007 FBC	AML	CL	12/17/08

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