



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

**MIAMI-DADE COUNTY, FLORIDA**  
**METRO-DADE FLAGLER BUILDING**  
**140 WEST FLAGLER STREET, SUITE 1603**  
**MIAMI, FLORIDA 33130-1563**  
**(305) 375-2901 FAX (305) 372-6339**

**NOTICE OF ACCEPTANCE (NOA)**

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

**NR Architectural Products**  
**4348 White Drive**  
**West Palm Beach, FL 33407**

**SCOPE:**

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

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

**DESCRIPTION: Series "NRAP 2500-PO" Aluminum Projected Window – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. **09-040**, titled "NRAP 2500-PO Project-Out Window Large Missile Impact", sheets 1 through 9 of 9, dated 03/04/09, prepared by EngCo Inc., signed and sealed by Pedro De Figueiredo, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval 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 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 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. 09-0402.22**  
**Expiration Date: September 23, 2014**  
**Approval Date: September 23, 2009**  
**Page 1**

**NR Architectural Products**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No **09-040**, Sheets 1 through 9 of 9, titled "NRAP 2500-PO Project-Out Window Large Missile Impact", dated 03/04/09, prepared by EngCo Inc., signed and sealed by Pedro De Figueiredo, 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, TAS 202-94along with marked-up drawings and installation diagram of NRAP 2500-PO aluminum project-out window, specimens #1, #2, #3, #4, #5, #6 and #8, prepared by Hurricane Test Laboratory, LLC, Test Report No. **HTL-0242-1202-08**, dated 02/18/09, and addendum letter dated 08/19/09, all signed and sealed by Vinu J. Abraham, 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 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, TAS 202-94along with marked-up drawings and installation diagram of NRAP 2500-PO aluminum project-out window, specimens #7 and #9, prepared by Hurricane Test Laboratory, LLC, Test Report No. **HTL-0242-1202-08A**, dated 02/18/09, signed and sealed by Vinu J. Abraham, P.E.

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with FBC-2007, prepared by EngCo Inc., dated 3/4/09, signed and sealed by Pedro De Figueiredo, P.E.  
**Complies with ASTM E1300-04**

**D. QUALITY ASSURANCE**

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

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 09-0402.22  
Expiration Date: September 23, 2014  
Approval Date: September 23, 2009

**NR Architectural Products**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**E. MATERIAL CERTIFICATIONS**

1. Notice of Acceptance No. **09-0312.03** issued to E.I. DuPont DeNemours & Co., Inc. for their “**DuPont Sentry Glass® Interlayer**” dated 05/13/09, expiring on 01/14/12.
2. Notice of Acceptance No. **09-0312.02** issued to E.I. DuPont DeNemours & Co., Inc. for their “**DuPont Butacite® PVB, Interlayer**” dated 05/13/09, expiring on 12/11/10.

**F. STATEMENTS**

1. Statement letter of conformance and no financial interest, dated March 21, 2009, signed and sealed by Pedro De Figueiredo, P.E.
2. Laboratory compliance letters for Test Reports No. **HTL- 0242-1202-08** and **HTL- 0242-1202-08A**, issued by Hurricane Test Laboratory, Inc., dated 02/18/09, both signed and sealed by Vinu J. Abraham, P.E.

**G. OTHERS**

1. None.

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 09-0402.22  
Expiration Date: September 23, 2014  
Approval Date: September 23, 2009

**GENERAL NOTES: FLORIDA BUILDING CODE 2007**

1- CODE: THIS PRODUCT HAS BEEN TESTED AND DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2007 INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).

2- DEFINITION: THIS PRODUCT IS A PROJECT-OUT TYPE WINDOW DESIGNED, CONSTRUCTED AND TESTED TO PROVIDE PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS (LARGE MISSILE) WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.

3- POSTING:

"NR ARCHITECTURAL PRODUCTS, INC.  
WEST PALM BEACH - FLORIDA  
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED"

4- DESIGN LOADS: THE DESIGNED LOADS MUST BE CALCULATED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE CALCULATED DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE WINDOW PRESSURE.

5- MATERIAL: GLAZING TO BE IMPACT LAMINATED GLASS AS SPECIFIED ON THIS APPROVAL.

6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE AS SPECIFIED IN THE CURRENT SET OF DRAWINGS. INSTALLATION AND LOADS AS PER THIS APPROVAL. ANCHOR QUANTITY & SPACING MUST NOT EXCEED THE MAXIMUM LIMITS SPECIFIED BY THIS APPROVAL.

7- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:

7.1- THE STABILITY OF THE STRUCTURE WHERE THE PRODUCT IS TO BE ATTACHED INSURING PROPER ANCHORAGE.

7.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.

7.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.

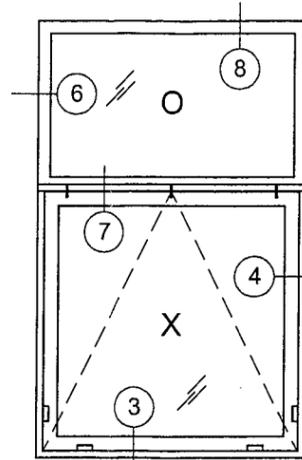
8- 33 1/3% INCREASE IN ALLOWABLE LOADS HAVE NOT BEEN USED IN THE DESIGN OF THE ANCHORS FOR THIS PRODUCT APPROVAL, HOWEVER, WOOD SCREWS WITH 1.6 INCREASE FOR WIND LOAD DURATION HAVE BEEN USED.

9- DISSIMILAR MATERIALS: MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL, THAT COME IN CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2007 FLORIDA BUILDING CODE.

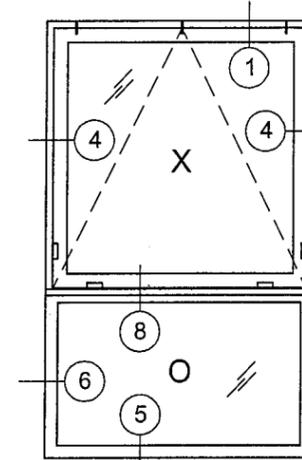
10- WOOD BUCKS (1x or 2x) BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

FOR ALLOWABLE SIZES AND PRESSURES REFER TO SHEETS 2, 3 AND 4

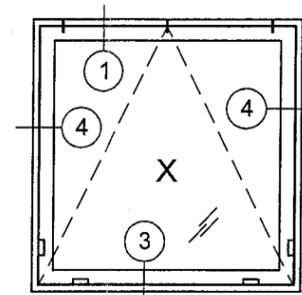
**TYPICAL ELEVATIONS**



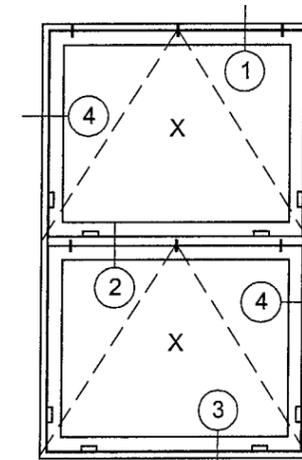
(DX) COMBINATION  
FIXED / PROJECT-OUT  
SEE SHEET 3 FOR RATING



(XD) COMBINATION  
PROJECT-OUT / FIXED  
SEE SHEET 3 FOR RATING



(X) SINGLE  
PROJECT-OUT WINDOW  
SEE SHEET 2 FOR RATING



(XX) COMBINATION  
PROJECT-OUT / PROJECT-OUT  
SEE SHEET 4 FOR RATING

**INDEX:**

SHEET	DESCRIPTION
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5 of 9	TYPICAL DETAILS
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MANUFACTURER:

**NR**

ARCHITECTURAL PRODUCTS, INC.

4348 WESTROADS DRIVE  
WEST PALM BEACH  
FLORIDA - 33407  
WWW.NRWINDOWS.COM  
PH.: (561) 844-1121  
FAX: (561) 844-6131

PRODUCT:

**NRAP 2500-PO**  
PROJECT-OUT WINDOW  
LARGE MISSILE IMPACT

Engineering:

**EngCo Inc.**

CA 8116  
6971 W. Sunrise Blvd. 104  
Plantation, Fl. 33313  
ENGCO@AOL.COM

AUG 24 2009

Engineer Seal  
Pedro De Figueiredo  
PE 52609

DRAFTING:

**PK DRAFTING & MORE**

MIAMI-DADE BCCO:

Approved as complying with the  
Florida Building Code  
Date SEPT. 23, 2009  
NOA# 01-0407-02  
Miami Dade Product Control  
Division  
By Manuel P. [Signature]

Date: 03/04/2009  
Scale: NA  
Design by: PPMF

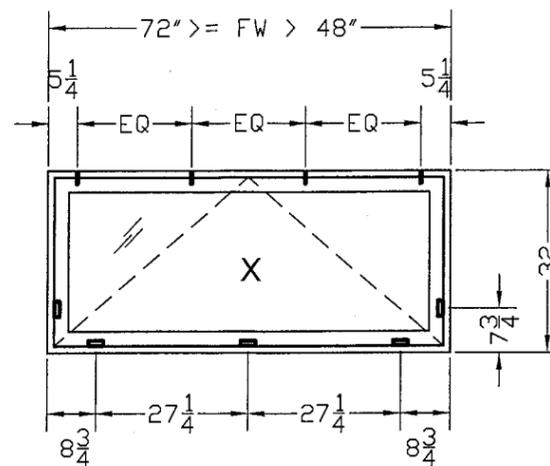
Drawing Number  
**09-040**

SHEET  
1 of 9

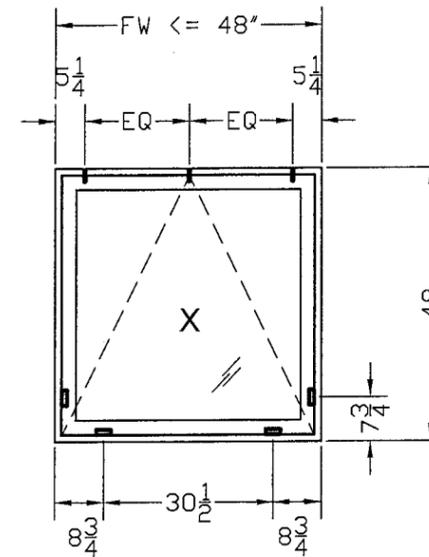
TABLE 1  
DESIGNED RATING FOR SINGLE PROJECT-OUT UNITS (PSF)

MAX. FRAME		GLASS TYPE G1		GLASS TYPE G2	
FW	FH	EXT (+)	INT (-)	EXT (+)	INT (-)
32	32	75.0	75.0	120.0	120.0
	36	75.0	75.0	120.0	120.0
	40	75.0	75.0	120.0	120.0
	44	75.0	75.0	120.0	120.0
	48	75.0	75.0	120.0	120.0
	52	75.0	75.0	93.7	93.7
	56	65.6	65.6	65.6	65.6
	64	35.1	35.1	35.1	35.1
72	20.5	20.5	20.5	20.5	
36	32	75.0	75.0	120.0	120.0
	36	75.0	75.0	120.0	120.0
	40	75.0	75.0	120.0	120.0
	44	75.0	75.0	120.0	120.0
	48	75.0	75.0	120.0	120.0
	52	75.0	75.0	87.0	87.0
	56	60.5	60.5	60.5	60.5
	64	32.1	32.1	32.1	32.1
40	32	75.0	75.0	120.0	120.0
	36	75.0	75.0	120.0	120.0
	40	75.0	75.0	120.0	120.0
	44	75.0	75.0	120.0	120.0
	48	75.0	75.0	120.0	120.0
	52	75.0	75.0	82.4	82.4
	56	56.9	56.9	56.9	56.9
	64	28.5	28.5	28.5	28.5
44	32	75.0	75.0	120.0	120.0
	36	75.0	75.0	120.0	120.0
	40	75.0	75.0	120.0	120.0
	44	75.0	75.0	120.0	120.0
	48	75.0	75.0	120.0	120.0
	52	75.0	75.0	79.3	79.3
	64	39.3	39.3	39.3	39.3
	72	23.4	23.4	23.4	23.4
48	32	75.0	75.0	120.0	120.0
	36	75.0	75.0	120.0	120.0
	40	75.0	75.0	120.0	120.0
	44	75.0	75.0	120.0	120.0
	48	75.0	75.0	120.0	120.0
	52	75.0	75.0	104.7	104.7
52	32	75.0	75.0	120.0	120.0
	36	75.0	75.0	112.9	112.9
	40	75.0	75.0	108.0	108.0
	44	75.0	75.0	104.7	104.7
56	32	75.0	75.0	108.0	108.0
	36	75.0	75.0	101.1	101.1
	40	75.0	75.0	96.0	96.0
64	32	75.0	75.0	90.0	90.0
	36	75.0	75.0	83.5	83.5
72	32	75.0	75.0	77.1	77.1

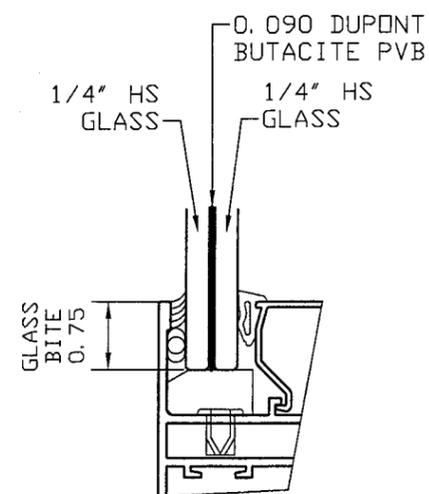
FW- FRAME WIDTH IN INCHES  
FH- FRAME HEIGHT IN INCHES  
PRESSURES IN PSF



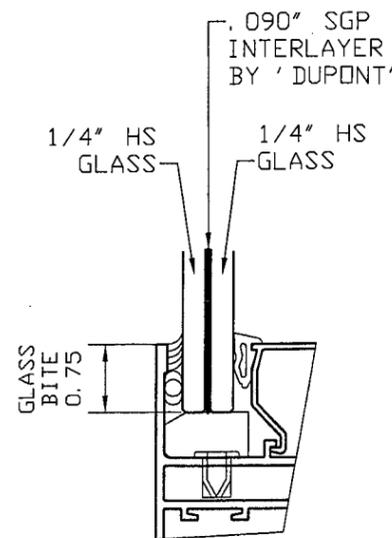
UNITS WITH WIDTH GREATER THAN 48" WILL REQUIRE:  
3 SILL LOCKS AND 4 HEADER SNUBBERS



UNITS WITH WIDTH LESS OR EQUAL THAN 48" WILL REQUIRE:  
2 SILL LOCKS AND 3 HEADER SNUBBERS



GLASS TYPE G1  
9/16" LAMINATED



GLASS TYPE G2  
9/16" LAMINATED

MANUFACTURER:  
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PE 52609

DRAFTING:  
**PK DRAFTING & MORE**

MIAMI-DADE BCCO:  
Approved as complying with the Florida Building Code  
Date: SEPT. 23, 2009  
NO. 09-0462.22  
Miami Dade Product Control  
By: *Manuel Perez*

Date: 03/04/2009  
Scale: NA  
Design by: PPMF

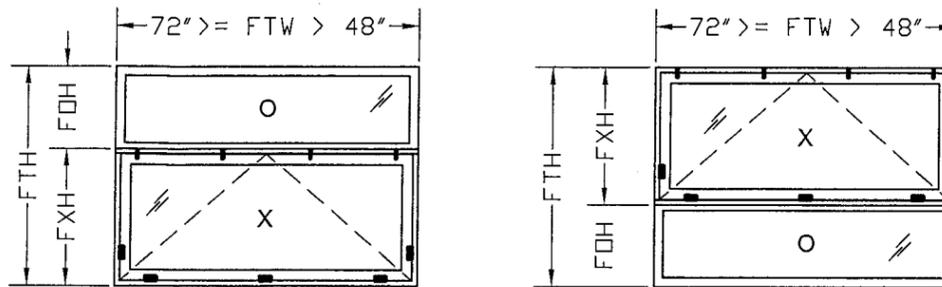
Drawing Number  
**09-040**

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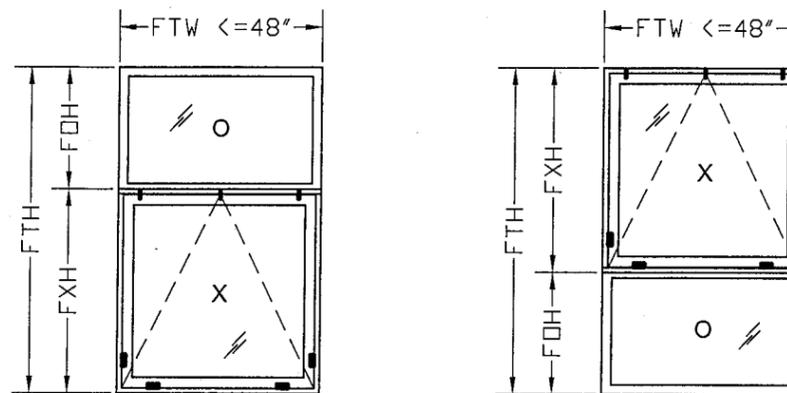
TABLE 2  
DESIGNED RATING FOR COMBINATION PROJECT-OUT AND FIXED UNITS (PSF)

MAXIMUM FRAME DIMENSIONS				GLASS TYPE G1		GLASS TYPE G2	
FTW	FXH	FDH	FTH	EXT (+)	INT (-)	EXT (+)	INT (-)
32	32	43.000	75.000	75.0	75.0	120.0	120.0
	36	43.000	79.000	75.0	75.0	120.0	120.0
	40	43.000	83.000	75.0	75.0	120.0	120.0
	44	43.000	87.000	75.0	75.0	120.0	120.0
	48	43.000	91.000	75.0	75.0	120.0	120.0
	52	43.000	95.000	75.0	75.0	93.7	93.7
	56	43.000	99.000	65.6	65.6	65.6	65.6
	64	43.000	107.000	35.1	35.1	35.1	35.1
72	43.000	115.000	20.5	20.5	20.5	20.5	
36	32	38.125	70.125	75.0	75.0	120.0	120.0
	36	38.125	74.125	75.0	75.0	120.0	120.0
	40	38.125	78.125	75.0	75.0	120.0	120.0
	44	38.125	82.125	75.0	75.0	120.0	120.0
	48	38.125	86.125	75.0	75.0	120.0	120.0
	52	38.125	90.125	75.0	75.0	87.0	87.0
	56	38.125	94.125	60.5	60.5	60.5	60.5
	64	38.125	102.125	32.1	32.1	32.1	32.1
40	32	34.375	66.375	75.0	75.0	120.0	120.0
	36	34.375	70.375	75.0	75.0	120.0	120.0
	40	34.375	74.375	75.0	75.0	120.0	120.0
	44	34.375	78.375	75.0	75.0	120.0	120.0
	48	34.375	82.375	75.0	75.0	120.0	120.0
	52	34.375	86.375	75.0	75.0	82.4	82.4
	56	34.375	90.375	56.9	56.9	56.9	56.9
	64	34.375	98.375	32.1	32.1	32.1	32.1
44	32	31.250	63.250	75.0	75.0	120.0	120.0
	36	31.250	67.250	75.0	75.0	120.0	120.0
	40	31.250	71.250	75.0	75.0	120.0	120.0
	44	31.250	75.250	75.0	75.0	120.0	120.0
	48	31.250	79.250	75.0	75.0	120.0	120.0
	52	31.250	83.250	75.0	75.0	79.3	79.3
	56	31.250	87.250	60.5	60.5	60.5	60.5
	64	31.250	95.250	32.1	32.1	32.1	32.1
48	32	28.625	60.625	75.0	75.0	120.0	120.0
	36	28.625	64.625	75.0	75.0	120.0	120.0
	40	28.625	68.625	75.0	75.0	120.0	120.0
	44	28.625	72.625	75.0	75.0	120.0	120.0
	48	28.625	76.625	75.0	75.0	120.0	120.0
	52	28.625	80.625	75.0	75.0	82.4	82.4
	56	28.625	84.625	60.5	60.5	60.5	60.5
	64	28.625	92.625	32.1	32.1	32.1	32.1
52	32	26.375	58.375	75.0	75.0	94.5	94.5
	36	26.375	62.375	75.0	75.0	90.8	90.8
	40	26.375	66.375	75.0	75.0	88.0	88.0
	44	26.375	70.375	75.0	75.0	86.1	86.1
	48	26.375	74.375	75.0	75.0	84.2	84.2
	52	26.375	78.375	75.0	75.0	82.4	82.4
	56	26.375	82.375	60.5	60.5	60.5	60.5
	64	26.375	90.375	32.1	32.1	32.1	32.1
56	32	24.500	56.500	70.9	70.9	70.9	70.9
	36	24.500	60.500	67.7	67.7	67.7	67.7
	40	24.500	64.500	65.3	65.3	65.3	65.3
	44	24.500	68.500	63.0	63.0	63.0	63.0
	48	24.500	72.500	60.7	60.7	60.7	60.7
	52	24.500	76.500	58.4	58.4	58.4	58.4
	56	24.500	80.500	56.1	56.1	56.1	56.1
	64	24.500	88.500	32.1	32.1	32.1	32.1
64	32	21.500	53.500	42.6	42.6	42.6	42.6
	36	21.500	57.500	40.4	40.4	40.4	40.4
	40	21.500	61.500	38.2	38.2	38.2	38.2
	44	21.500	65.500	36.0	36.0	36.0	36.0
	48	21.500	69.500	33.8	33.8	33.8	33.8
	52	21.500	73.500	31.6	31.6	31.6	31.6
	56	21.500	77.500	29.4	29.4	29.4	29.4
	64	21.500	85.500	15.2	15.2	15.2	15.2
72	32	19.125	51.125	27.3	27.3	27.3	27.3
	36	19.125	55.125	25.1	25.1	25.1	25.1
	40	19.125	59.125	22.9	22.9	22.9	22.9
	44	19.125	63.125	20.7	20.7	20.7	20.7
	48	19.125	67.125	18.5	18.5	18.5	18.5
	52	19.125	71.125	16.3	16.3	16.3	16.3
	56	19.125	75.125	14.1	14.1	14.1	14.1
	64	19.125	83.125	7.1	7.1	7.1	7.1

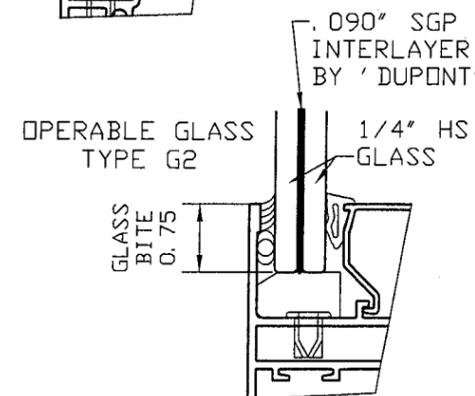
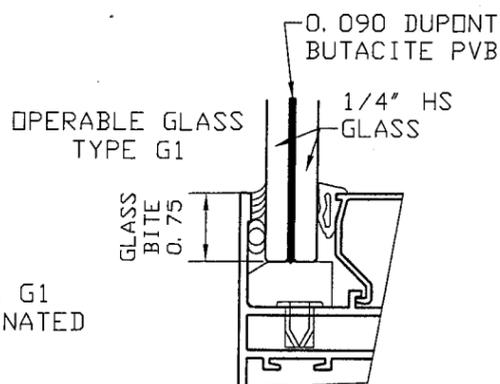
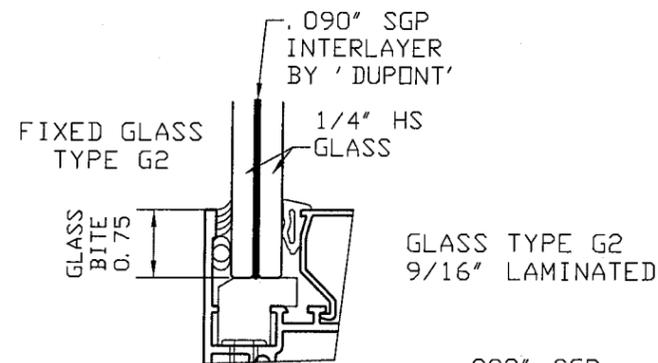
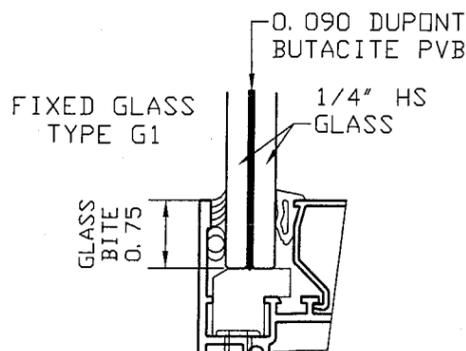
FTW- MAXIMUM FRAME TOTAL WIDTH IN INCHES  
 FXH- MAXIMUM OPERABLE FRAME HEIGHT IN INCHES  
 FDH- MAXIMUM FIXED FRAME HEIGHT IN INCHES  
 FTH- MAXIMUM FRAME TOTAL HEIGHT IN INCHES  
 PRESSURES IN PSF



UNITS WITH FRAME WIDTH GREATER THAN 48" WILL REQUIRE:  
 3 SILL LOCKS AND 4 HEADER SNUBBERS  
 SEE SINGLE WINDOW FOR HARDWARE LOCATION



UNITS WITH WIDTH LESS OR EQUAL THAN 48" WILL REQUIRE:  
 2 SILL LOCKS AND 3 HEADER SNUBBERS  
 SEE SINGLE WINDOW FOR HARDWARE LOCATION



GLASS TYPE G1  
 9/16" LAMINATED

MANUFACTURER:

**NR**  
 ARCHITECTURAL  
 PRODUCTS, INC.  
 4348 WESTROADS DRIVE  
 WEST PALM BEACH  
 FLORIDA - 33407  
 WWW.NRWINDOWS.COM  
 PH.: (561) 844-1121  
 FAX: (561) 844-6131

PRODUCT:  
**NRAP 2500-PO**  
 PROJECT-OUT WINDOW  
 LARGE MISSILE IMPACT

Engineering:  
**EngCo Inc.**  
 CA 8116  
 6971 W. Sunrise Blvd. 104  
 Plantation, Fl. 33313  
 ENGCO@AOL.COM

AUG 24 2009

Engineer Seal  
 Pedro De Figueiredo  
 PE 52609

DRAFTING:  
**PK DRAFTING & MORE**

MIAMI-DADE BCCO:

Approved as complying with the  
 Florida Building Code  
 Date: SEPT. 23, 2009  
 NOA# 09-0402.02  
 Miami Dade Product Control  
 Division  
 By: Manuel P...

Date: 03/04/2009  
 Scale: NA  
 Design by: PPMF

Drawing Number  
**09-040**

SHEET  
 3 of 9

MANUFACTURER:

**NR**

ARCHITECTURAL PRODUCTS, INC.

4348 WESTROADS DRIVE  
WEST PALM BEACH  
FLORIDA - 33407  
WWW.NRWINDOWS.COM  
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PRODUCT:

**NRAP 2500-PO**  
PROJECT-OUT WINDOW  
LARGE MISSILE IMPACT

Engineering:

**EngCo Inc.**  
CA 8116  
6971 W. Sunrise Blvd. 104  
Plantation, Fl. 33313  
ENGCO@AOL.COM

AUG 24 2009

Engineer Seal  
Pedro De Figueiredo  
PE 52609

DRAFTING:

**PK DRAFTING & MORE**

MIAMI-DADE BCCO:

Approved as complying with the  
Florida Building Code  
Date: SEPT. 23, 2009  
NOA# 09-0402-22  
Miami Dade Product Control  
Division  
By: *Manuel Paez*

Date: 03/04/2009  
Scale: NA  
Design by: PPMF

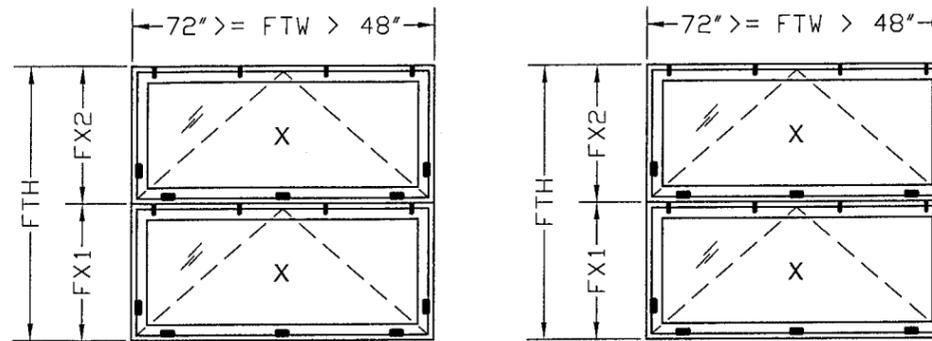
Drawing Number  
**09-040**

SHEET  
4 of 9

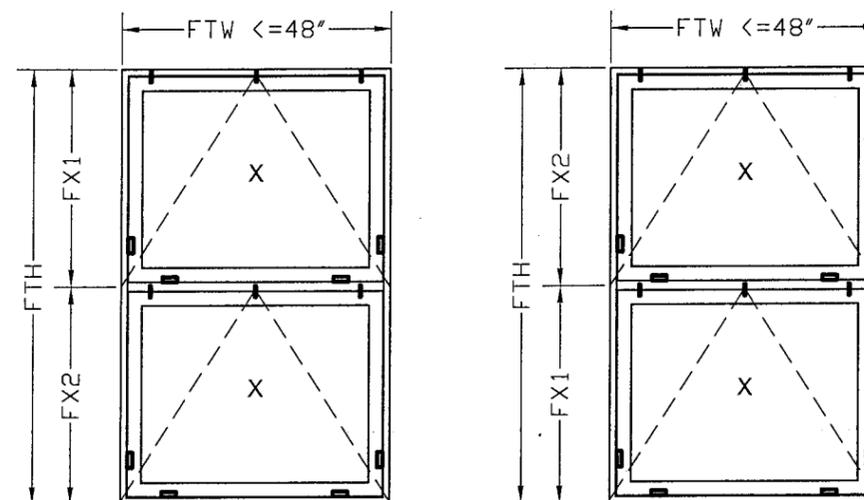
TABLE 3  
DESIGNED RATING FOR COMBINATION PROJECT-OUT AND PROJECT-OUT UNITS (PSF)

MAXIMUM FRAME DIMENSIONS				GLASS TYPE G1		GLASS TYPE G2	
FTW	FX1	FX2	FTH	EXT (+)	INT (-)	EXT (+)	INT (-)
32	48.0	48.0	96.0	75.0	75.0	120.0	120.0
	54.0	54.0	108.0	75.0	75.0	78.1	78.1
	57.5	57.5	114.9	58.0	58.0	58.0	58.0
	60.0	54.9	114.9	47.3	47.3	47.3	47.3
	64.0	50.9	114.9	35.1	35.1	35.1	35.1
	68.0	46.9	114.9	26.5	26.5	26.5	26.5
72.0	42.9	114.9	20.5	20.5	20.5	20.5	
36	48.0	48.0	96.0	75.0	75.0	120.0	120.0
	51.1	51.1	102.2	75.0	75.0	95.1	95.1
	52.0	50.2	102.2	75.0	75.0	87.0	87.0
	56.0	46.2	102.2	60.5	60.5	60.5	60.5
	60.0	42.2	102.2	43.5	43.5	43.5	43.5
	64.0	38.2	102.2	32.1	32.1	32.1	32.1
40	46.0	46.0	92.0	75.0	75.0	120.0	120.0
	48.0	44.0	92.0	75.0	75.0	120.0	120.0
	52.0	40.0	92.0	75.0	75.0	82.4	82.4
	56.0	36.0	92.0	56.9	56.9	56.9	56.9
	57.6	34.4	92.0	49.5	49.5	49.5	49.5
44	41.8	41.8	83.6	75.0	75.0	120.0	120.0
	44.0	39.6	83.6	75.0	75.0	120.0	120.0
	48.0	35.6	83.6	75.0	75.0	120.0	120.0
	52.4	31.2	83.6	75.0	75.0	76.5	76.5
48	38.3	38.3	76.6	75.0	75.0	120.0	120.0
	44.0	32.6	76.6	75.0	75.0	120.0	120.0
	48.0	28.6	76.6	75.0	75.0	120.0	120.0
52	35.4	35.4	70.7	75.0	75.0	87.2	87.2
	38.0	32.7	70.7	75.0	75.0	87.5	87.5
	40.0	30.7	70.7	75.0	75.0	88.1	88.1
	44.0	26.7	70.7	75.0	75.0	90.3	90.3
56	32.8	32.8	65.7	66.3	66.3	66.3	66.3
	36.0	29.7	65.7	66.6	66.6	66.6	66.6
	41.0	24.7	65.7	68.1	68.1	68.1	68.1
64	28.7	28.7	57.5	41.8	41.8	41.8	41.8
	36.0	21.5	57.5	42.5	42.5	42.5	42.5
72	25.5	25.5	51.1	28.5	28.5	28.5	28.5

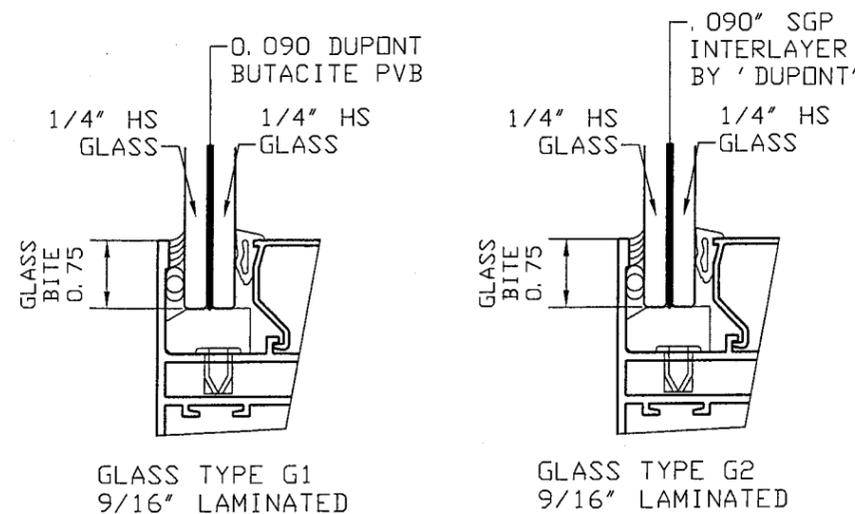
FTW- MAXIMUM FRAME TOTAL WIDTH IN INCHES  
FX1- MAXIMUM OPERABLE 1 FRAME HEIGHT IN INCHES  
FX2- MAXIMUM OPERABLE 2 FRAME HEIGHT IN INCHES  
FTH- MAXIMUM FRAME TOTAL HEIGHT IN INCHES  
PRESSURES IN PSF



UNITS WITH FRAME WIDTH GREATER THAN 48" WILL REQUIRE:  
3 SILL LOCKS AND 4 HEADER SNUBBERS  
SEE SINGLE WINDOW FOR HARDWARE LOCATION



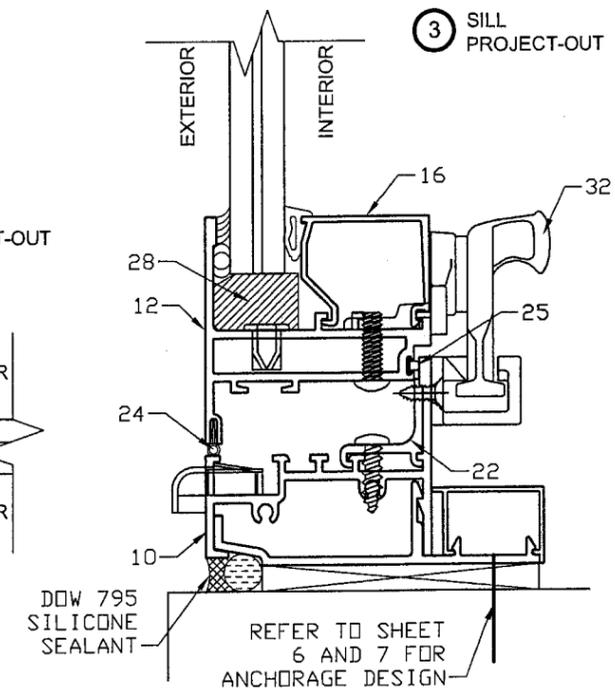
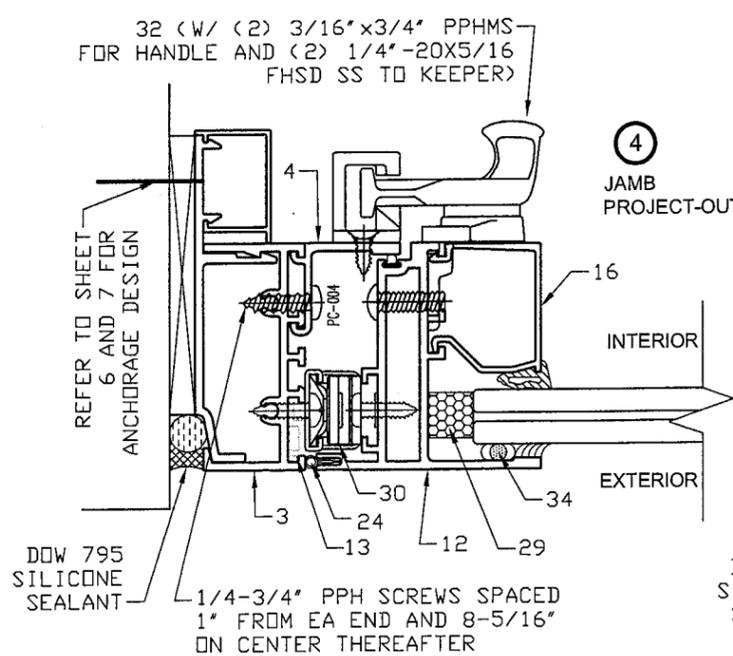
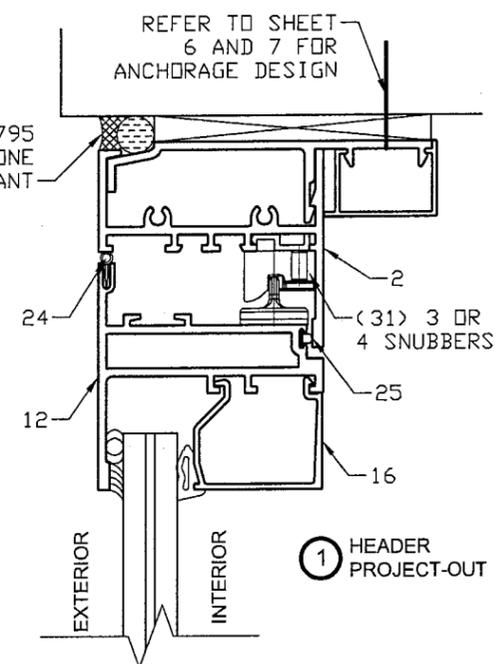
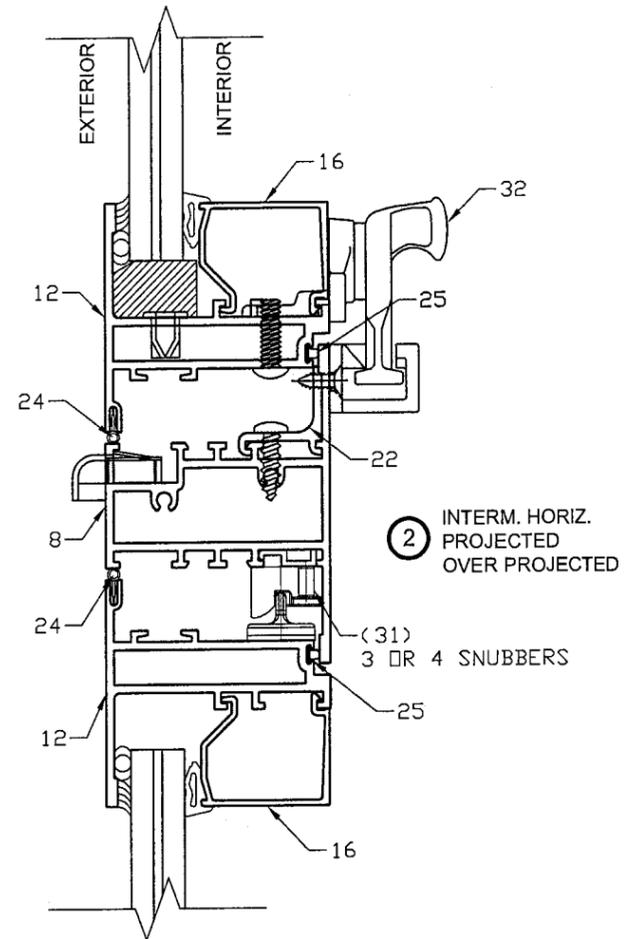
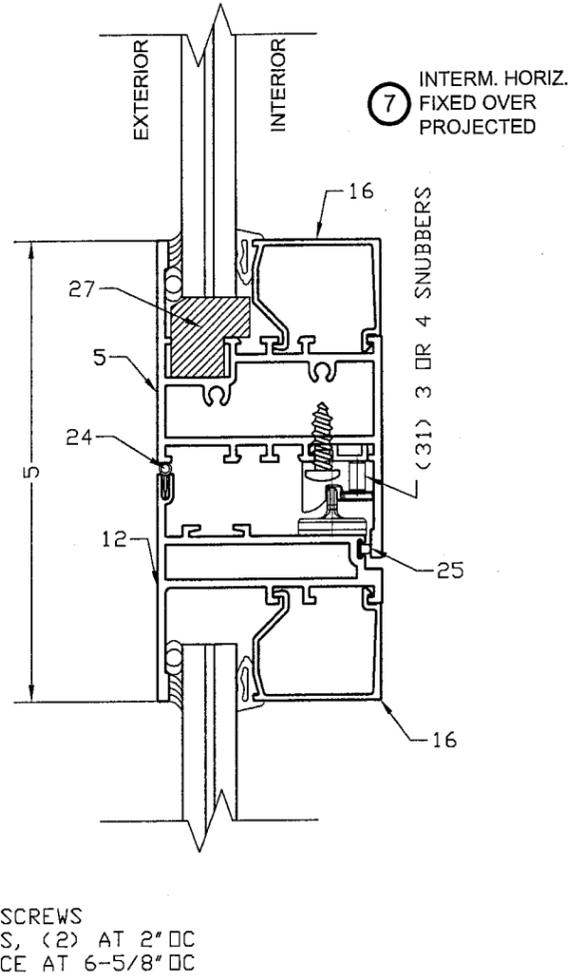
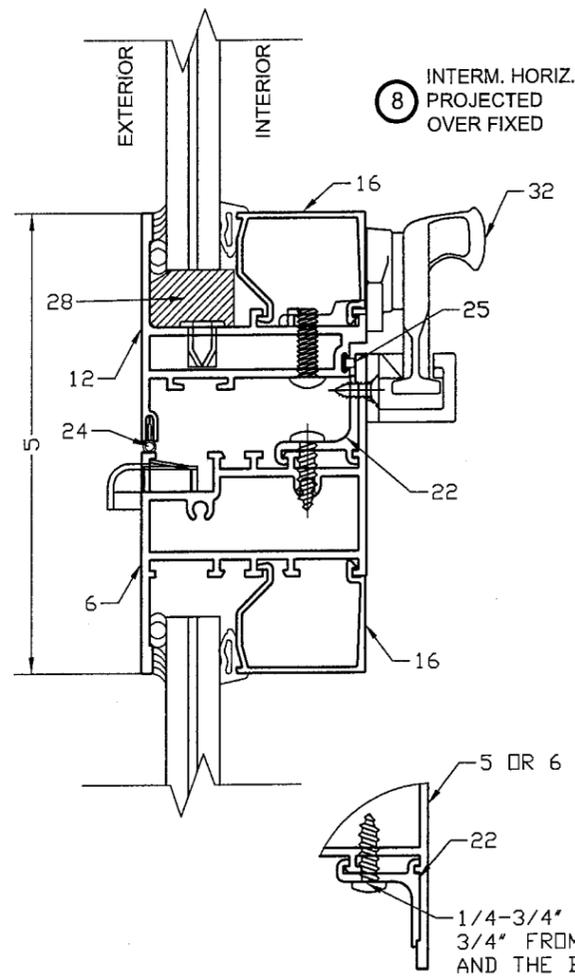
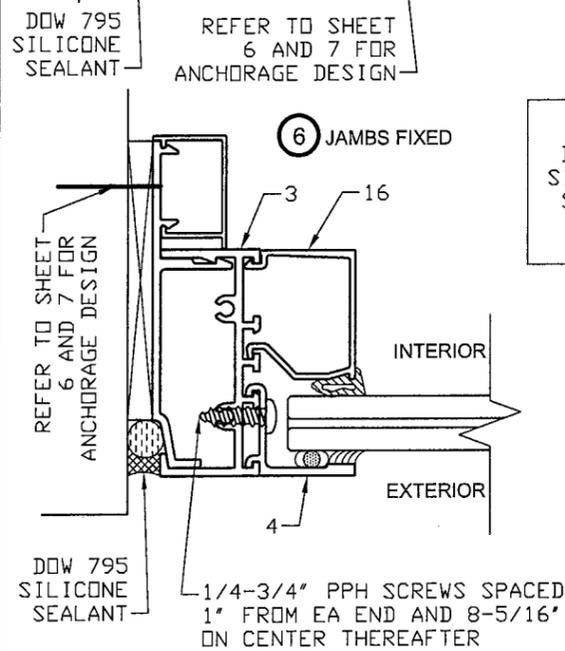
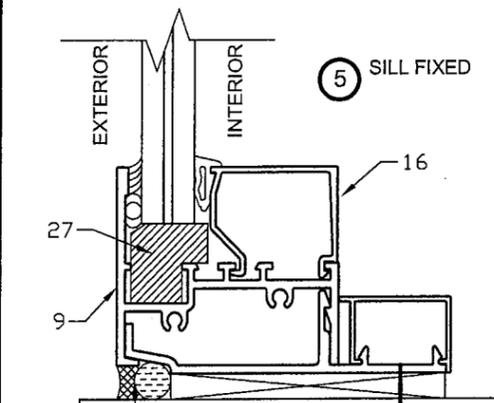
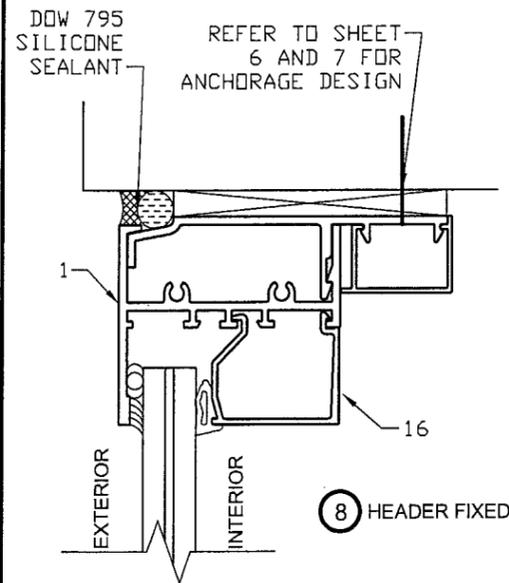
UNITS WITH WIDTH LESS OR EQUAL THAN 48" WILL REQUIRE:  
2 SILL LOCKS AND 3 HEADER SNUBBERS  
SEE SINGLE WINDOW FOR HARDWARE LOCATION



GLASS TYPE G1  
9/16" LAMINATED

GLASS TYPE G2  
9/16" LAMINATED

TYPICAL DETAILS



MANUFACTURER:

**NR**

ARCHITECTURAL PRODUCTS, INC.  
4348 WESTROADS DRIVE  
WEST PALM BEACH  
FLORIDA - 33407  
WWW.NRWINDOWS.COM  
PH.: (561) 844-1121  
FAX: (561) 844-6131

PRODUCT:  
**NRAP 2500-PO**  
PROJECT-OUT WINDOW  
LARGE MISSILE IMPACT

Engineering:  
**EngCo Inc.**  
CA 8116  
6971 W. Sunrise Blvd. 104  
Plantation, Fl. 33313  
ENGCO@AOL.COM

AUG 24 2009  
Engineer Seal  
Pedro De Figueiredo  
PE 52609

DRAFTING:  
**PK DRAFTING & MORE**

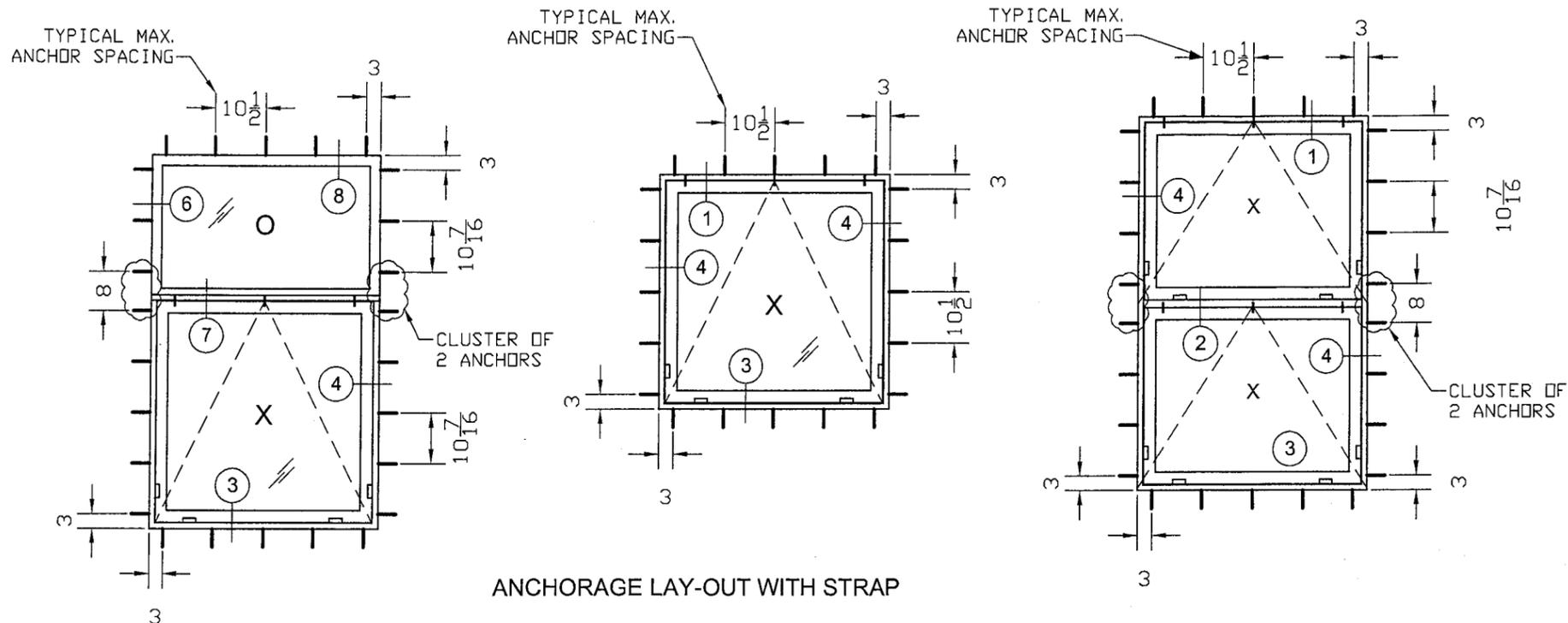
MIAMI-DADE BCCO:

Approved as complying with the  
Florida Building Code  
Date: SEPT. 23, 2009  
By: MANUEL PEREZ  
Miami Dade Product Control  
Division

Date: 03/04/2009  
Scale: NA  
Design by: PPMF

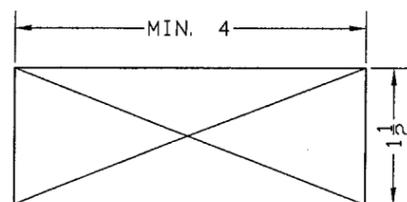
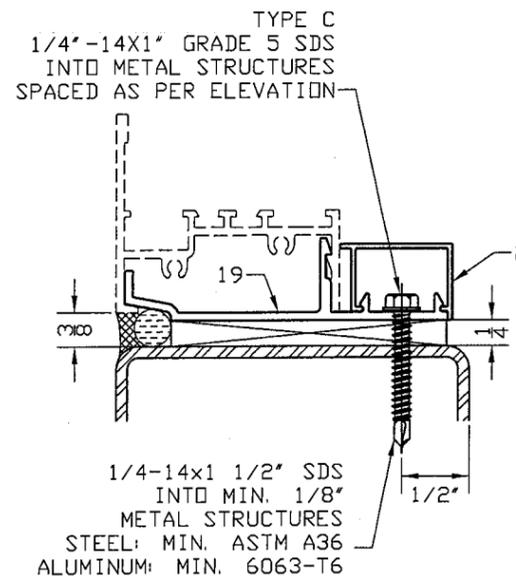
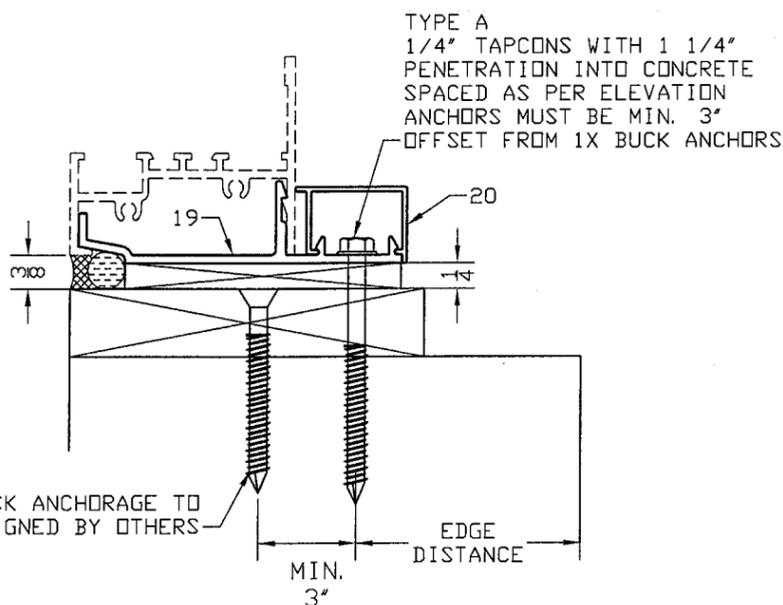
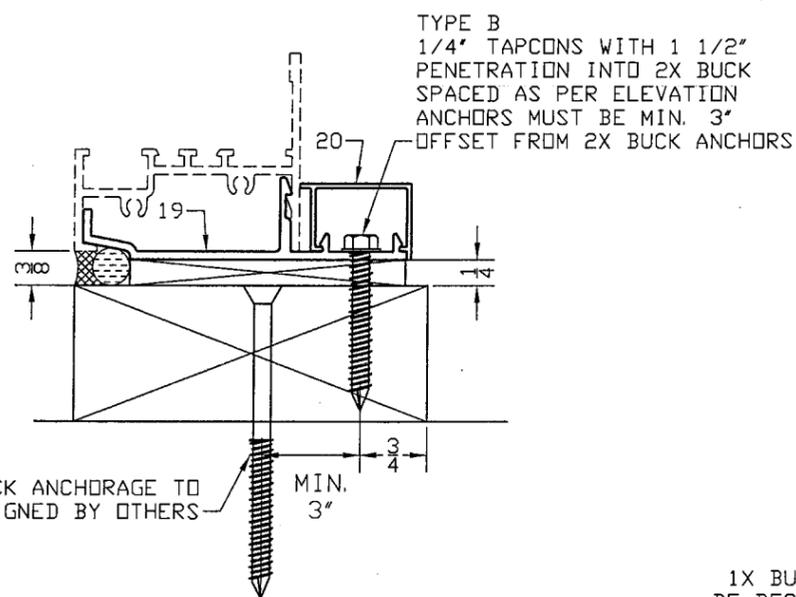
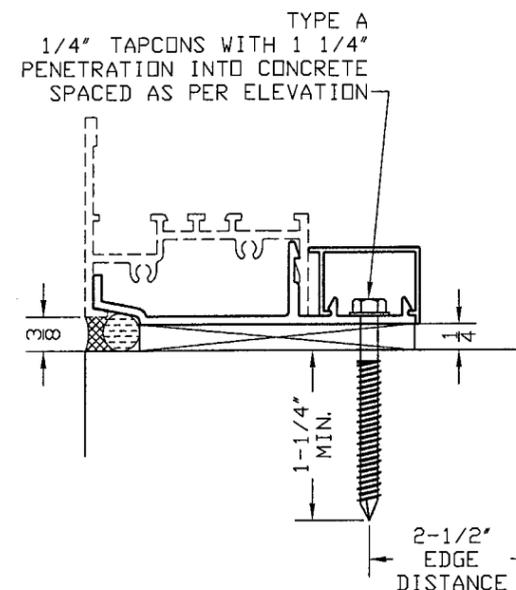
Drawing Number  
**09-040**

SHEET  
**5 of 9**



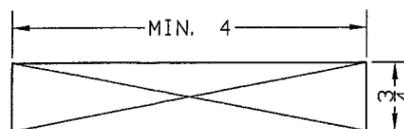
ANCHORAGE LAY-OUT WITH STRAP

TYPE	DESCRIPTION	PENETRATION	EDGE DIST.	SUBSTRATUM
A	1/4" TAPCONS	1 1/4"	2-1/2"	MASONRY OR CONCRETE
B	1/4" TAPCONS	1 1/2"	3/4"	INTO 2X BUCK (G>=0.55)
C	1/4"-14 SDS	1/8"	1/2"	6063-T6 ALUMINUM ASTM A36 STEEL



2X PRESSURE TREATED SOUTHERN PINE G>= .55

ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE TO BE PROTECTED PER FBC 2326



1X PRESSURE TREATED SOUTHERN PINE G>= .55

MANUFACTURER:

**NR**

ARCHITECTURAL PRODUCTS, INC.

4348 WESTROADS DRIVE  
WEST PALM BEACH  
FLORIDA - 33407  
WWW.NRWINDOWS.COM  
PH.: (561) 844-1121  
FAX: (561) 844-6131

PRODUCT:

**NRAP 2500-PO**  
PROJECT-OUT WINDOW  
LARGE MISSILE IMPACT

Engineering:

**EngCo Inc.**

CA 8116  
6971 W. Sunrise Blvd. 104  
Plantation, FL 33313  
ENGCO@AOL.COM

AUG 24 2009

Engineer Seal  
Pedro De Figueiredo  
PE 52609

DRAFTING:

**PK DRAFTING & MORE**

MIAMI-DADE BCCO:

Approved as complying with the  
Florida Building Code  
Date **SEPT. 23, 2009**  
NOAH **09-0402.22**  
Miami Dade Product Control  
Division  
By *Maurel Perez*

Date: 03/04/2009  
Scale: NA  
Design by: PPMF

Drawing Number  
**09-040**

SHEET  
**6 of 9**

MANUFACTURER:

**NR**

ARCHITECTURAL PRODUCTS, INC.  
 4348 WESTROADS DRIVE  
 WEST PALM BEACH  
 FLORIDA - 33407  
 WWW.NRWINDOWS.COM  
 PH.: (561) 844-1121  
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PRODUCT:  
**NRAP 2500-PO**  
 PROJECT-OUT WINDOW  
 LARGE MISSILE IMPACT

Engineering:  
**EngCo Inc.**  
 CA 8116  
 6971 W. Sunrise Blvd. 104  
 Plantation, FL 33313  
 ENGCO@AOL.COM

AUG 24 2009  
 Engineer Seal  
 Pedro De Figueiredo  
 PE 52609

DRAFTING:  
**PK DRAFTING & MORE**

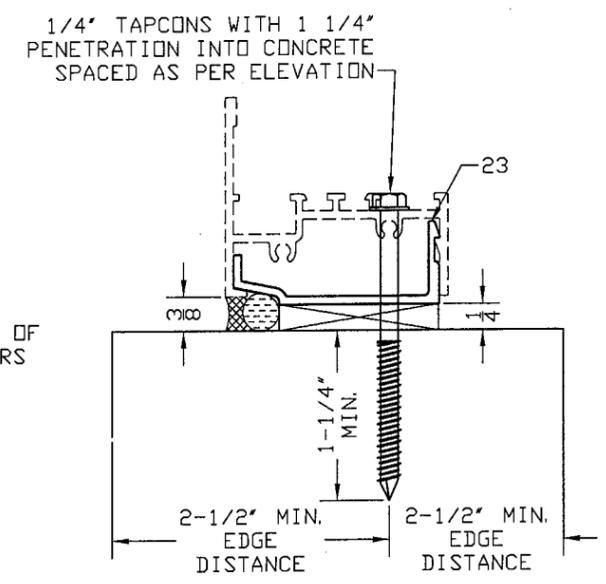
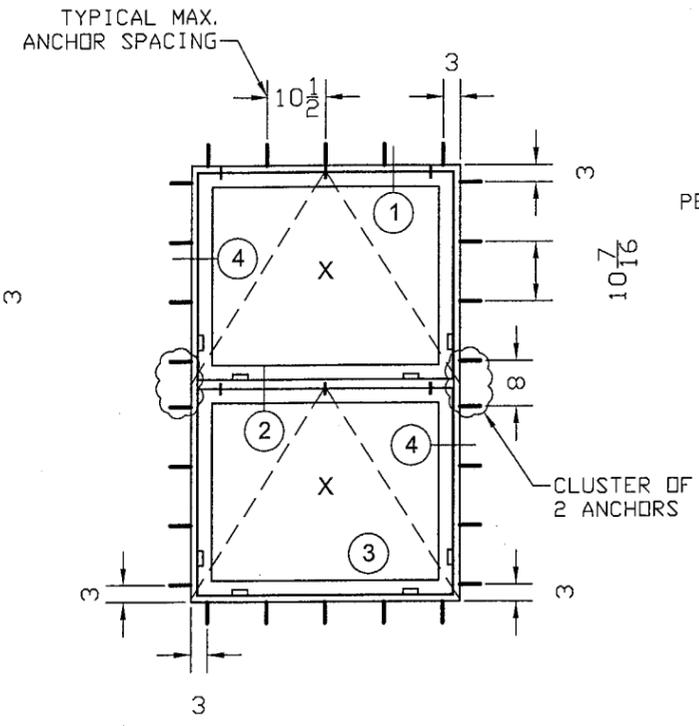
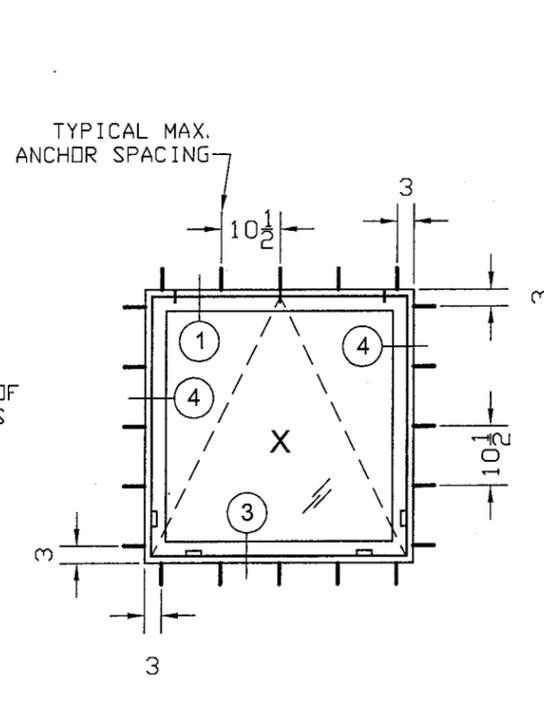
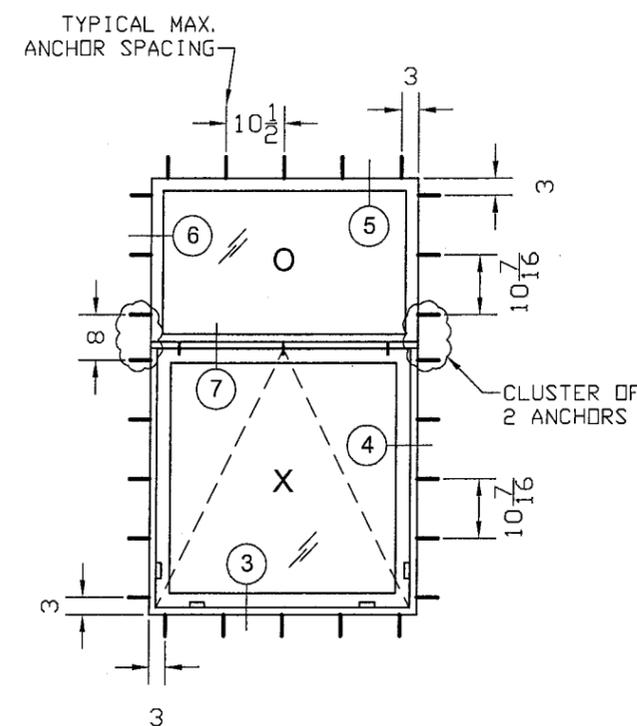
MIAMI-DADE BCCO:

Approved as complying with the  
 Florida Building Code  
 Date: **SEPT. 23, 2009**  
 N/A: **09-0402-22**  
 Miami-Dade Product Control  
 By: *Maverick Perry*

Date: 03/04/2009  
 Scale: NA  
 Design by: PPMF

Drawing Number  
**09-040**

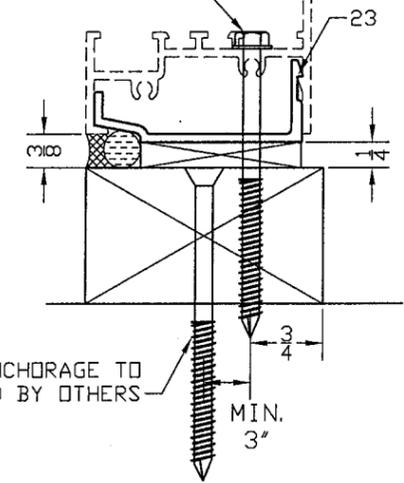
SHEET  
 7 of 9



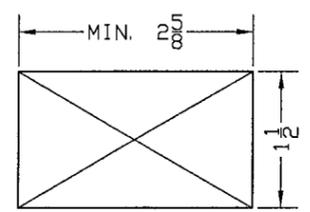
ANCHORAGE LAY-OUT WITH SHEAR CLIP

TYPE	DESCRIPTION	PENETRATION	EDGE DIST.	SUBSTRATUM
A	1/4" TAPCONS	1 1/4"	2-1/2	MASONRY OR CONCRETE
B	1/4" TAPCONS	1 1/2"	3/4"	INTO 2X BUCK (G>=0.55)
C	1/4-14 SDS	1/8"	1/2"	6063-T6 ALUMINUM ASTM A36 STEEL

TYPE B  
 1/4" TAPCONS WITH 1 1/2"  
 PENETRATION INTO 2X BUCK  
 SPACED AS PER ELEVATION  
 ANCHORS MUST BE MIN. 3"  
 OFFSET FROM 2X BUCK ANCHORS

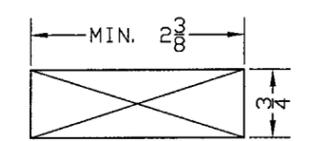
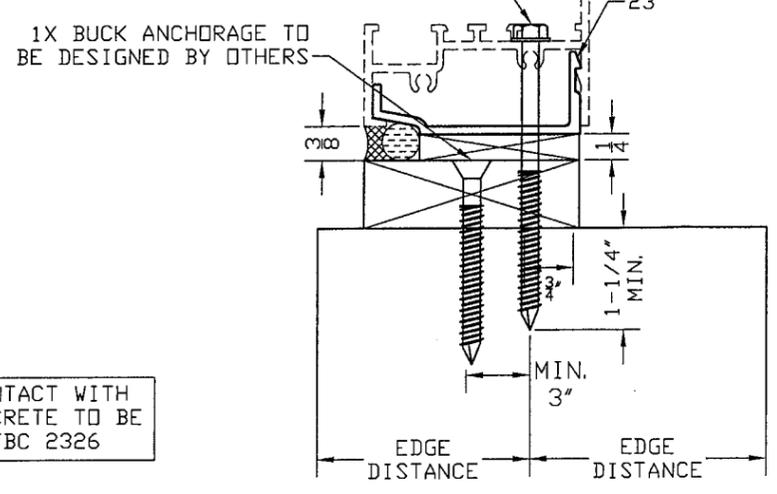


2X BUCK ANCHORAGE TO  
 BE DESIGNED BY OTHERS  
 MIN. 3"



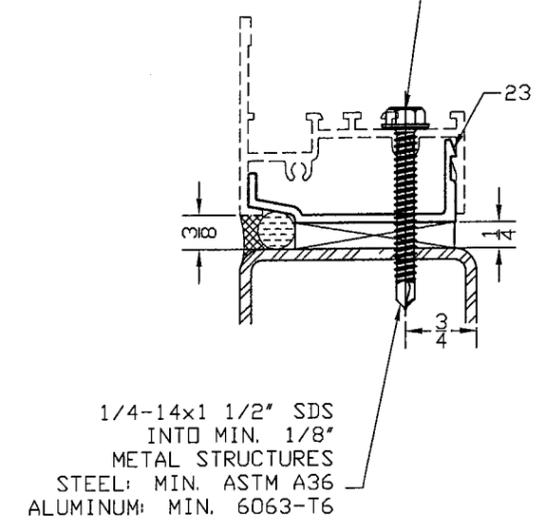
2X PRESSURE TREATED  
 SOUTHERN PINE G>=0.55

TYPE A  
 1/4" TAPCONS WITH 1 1/4"  
 PENETRATION INTO CONCRETE  
 SPACED AS PER ELEVATION  
 ANCHORS MUST BE MIN. 3"  
 OFFSET FROM 1X BUCK ANCHORS



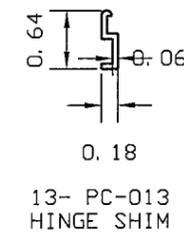
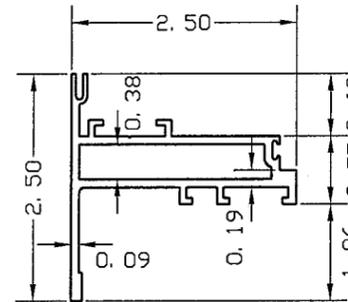
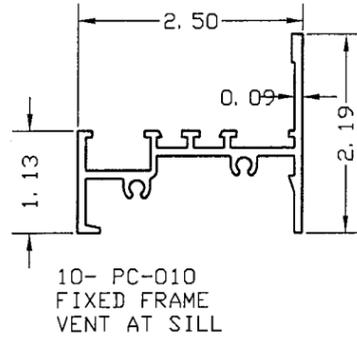
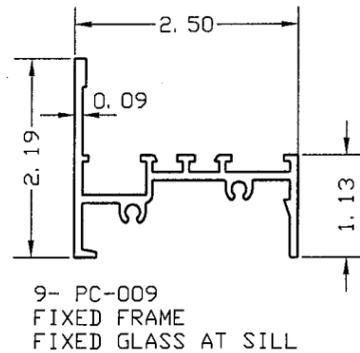
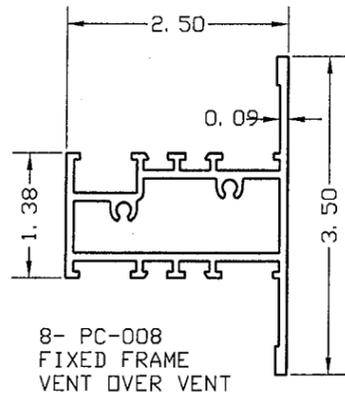
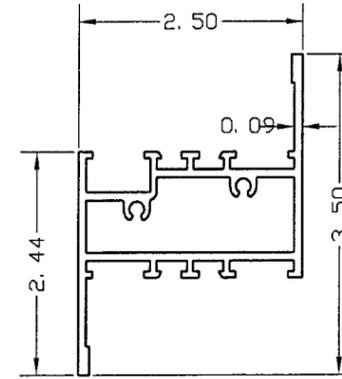
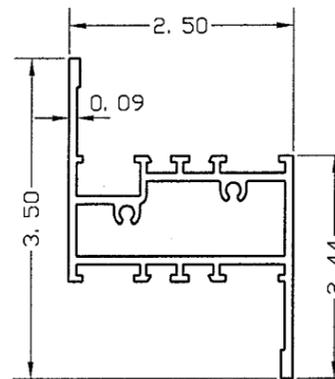
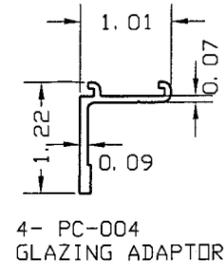
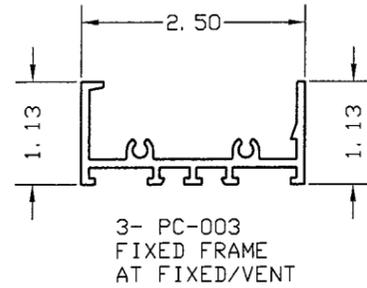
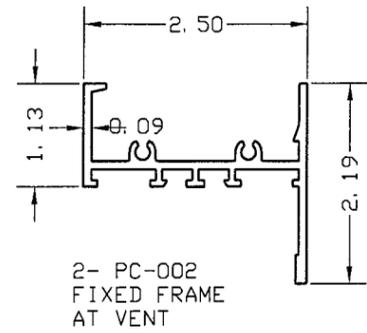
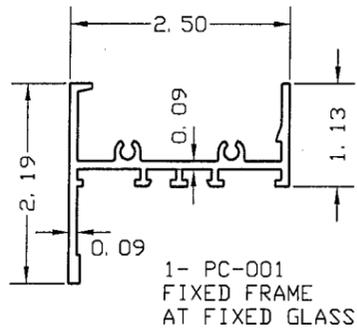
1X PRESSURE TREATED  
 SOUTHERN PINE G>=0.55

1/4"-14X2"  
 SELF DRILLING SCREWS  
 INTO METAL STRUCTURES  
 SPACED AS PER ELEVATION



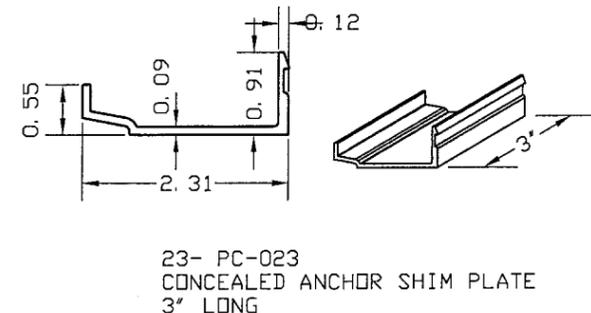
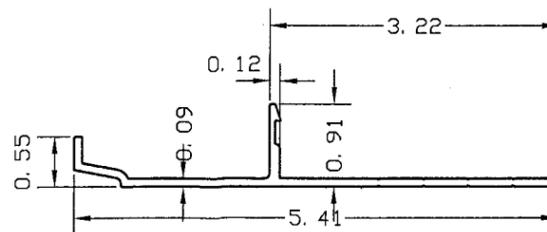
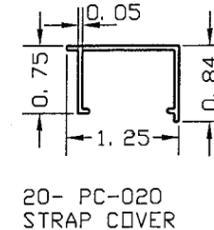
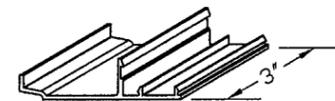
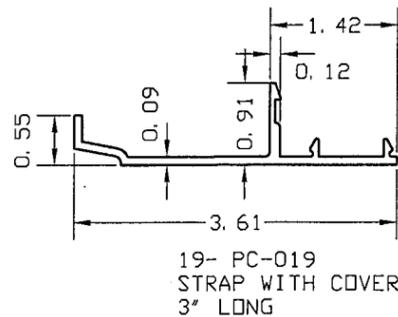
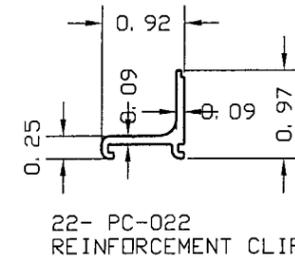
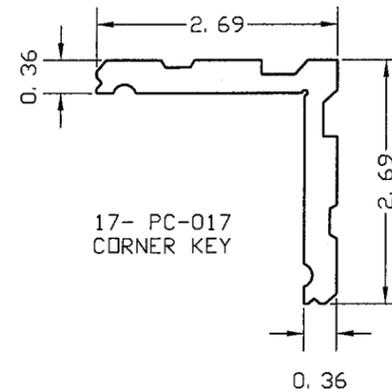
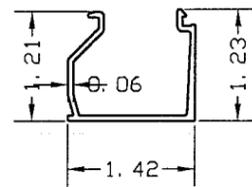
ALL WOOD IN CONTACT WITH  
 MASONRY OR CONCRETE TO BE  
 PROTECTED PER FBC 2326

WINDOW COMPONENTS



BILL OF MATERIALS

ITEM #	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	PC-001	1	FIXED FRAME AT FIXED GLASS	ALUM	-
2	PC-002	1	FIXED FRAME AT VENT	ALUM	-
3	PC-003	1	FIXED FRAME AT FIXED/VENT	ALUM	-
4	PC-004	2/ PANEL	GLAZING ADAPTOR	ALUM	-
5	PC-005	2/ PANEL	FIXED FRAME OVER FIXED VENT	ALUM	-
6	PC-006	AS REQD.	FIXED FRAME VENT OVER FIXED	ALUM	-
8	PC-008	AS REQD.	FIXED FRAME VENT OVER VENT	ALUM	-
9	PC-009	AS REQD.	FIXED FRAME FIXED GLASS AT SILL	ALUM	-
10	PC-D10	AS REQD.	FIXED FRAME VENT AT SILL	ALUM	-
12	PC-012	AS REQD.	VENT FRAME PROJECTED	ALUM	-
13	PC-013	1 / PANEL	HINGE SHIM	ALUM	-
16	PC-016	AS REQD.	GLASS STOP	ALUM	-
17	PC-017	4 PER VENT	CORNER KEY	ALUM	-
18	PC-018	AS REQD.	STRAP ANCHOR	ALUM	-
19	PC-019	AS REQD.	STRAP ANCHOR (CONCEALED)	ALUM	-
20	PC-020	AS REQD.	STRAP COVER	ALUM	-
22	PC-022	AS REQD.	REINFORCEMENT CLIP	ALUM	-
22	PC-023	AS REQD.	CONCEALED ANCHOR SHIM PLATE	ALUM	-
23	NR-G20	AS REQD.	INTERNAL POLY-WEDGE GASKET PS1126E	70 DURO EPDM	TREMCO
24	NR-G21	AS REQD.	EXTERNAL WEATHERSEAL AP150	EXTRUDED TPE	SCHLEAGAL
25	NR-G22	AS REQD.	INTERNAL WEATHERSEAL TLOCK 150	POLYETHELENE	SCHLEAGAL
26	NR-G23	-	WEEP VALVES VL 1026-107	SILICONE	VERNAY
27	NR-G24	-	FIXED GLASS SETTING BLOCK TR-1621E	EPDM	TREMCO
28	NR-G25	-	GLASS SETTING BLOCK TR-1365E	70 DURO EPDM	TREMCO
29	NR-G26	-	FIXED GLASS SETTING BLOCK TR-0214E	70 DURO EPDM	TREMCO
30	NR-A20	-	20" 4-BAR INLINE HINGE S-2000 220	ALUM	ADVANTAGE MFG. CORP
31	NR-A21	-	SNUBBER 616-625/062	SS	ADVANTAGE MFG. CORP
32	NR-A22	-	CAMLOCK 4004/420	BRONZE	BRONZE CRAFT
33	NR-A23	-	WEEP SLOT COVER	PLASTIC	NR ARCHITECTURAL PRODUCTS
34	NR-A24	-	PVC SPACER VK2526	PVC	CAPITAL TAPE
35	NR-F12	-	BASE FRAME FIXING SCREW	SS	#12 X 3/4" PPH TS
36	NR-F13	-	ADAPTOR FIXING SCREW	SS	#12 X 3/4" PPH TS



MANUFACTURER:

**NR**  
ARCHITECTURAL  
PRODUCTS, INC.  
4348 WESTROADS DRIVE  
WEST PALM BEACH  
FLORIDA - 33407  
WWW.NRWINDOWS.COM  
PH.: (561) 844-1121  
FAX: (561) 844-6131

PRODUCT:  
**NRAP 2500-PO**  
PROJECT-OUT WINDOW  
LARGE MISSILE IMPACT

Engineering:  
**EngCo Inc.**  
CA 8116  
6971 W. Sunrise Blvd. 104  
Plantation, Fl. 33313  
ENGCO@AOL.COM

AUG 24 2009

Engineer Seal  
Pedro De Figueiredo  
PE 52609

DRAFTING:  
**PK DRAFTING & MORE**

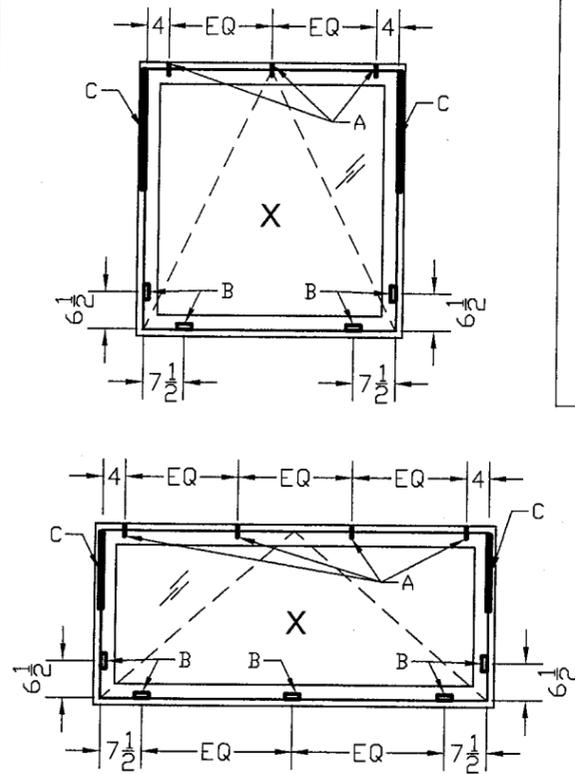
MIAMI-DADE BCCO:

Approved as complying with the  
Florida Building Code  
Date SEPT. 23, 2009  
NOA# 09-0402.22  
Miami Dade Product Control  
Division  
By *Maureen Perez*

Date: 03/04/2009  
Scale: NA  
Design by: PPMF

Drawing Number  
**09-040**

SHEET  
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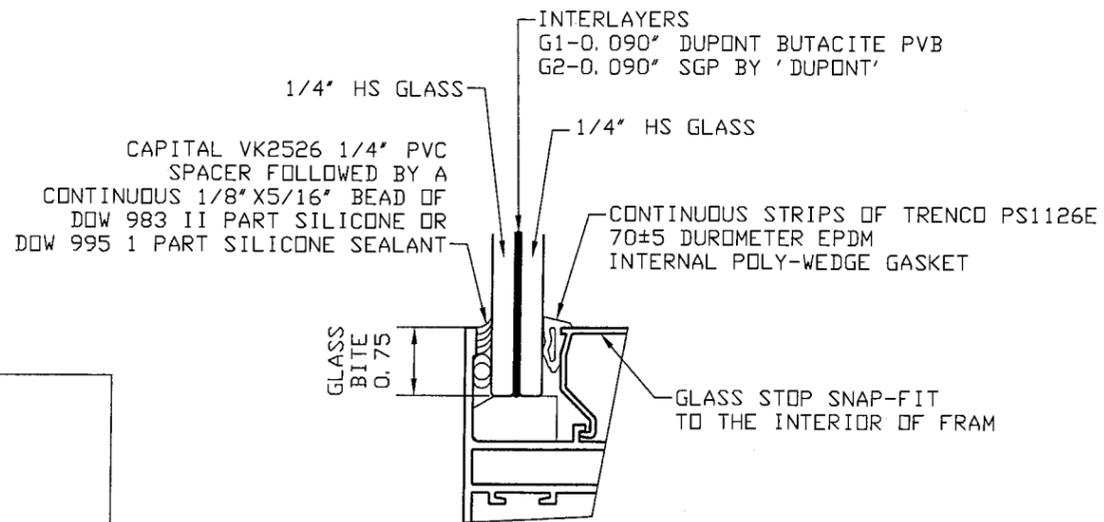
**HARDWARE SCHEDULE:**

A- AMC SNUBBER ASSEMBLY CONSISTING OF A DRIVER AND RECEIVER. 3 OR 4 SNUBBERS ASSEMBLIES WERE LOCATED AT VENT HEADER, 4" FROM EACH END AND THE OTHERS EQUALLY SPACED. THE RECEIVER WAS ATTACHED TO THE FRAME BASE USING (3) #10X3/4" PPH SELF TAPPING SS SCREWS AT EACH LOCATION. THE DRIVER WAS ATTACHED TO THE OPERABLE VENT USING (2) #10X3/4" PPH SELF TAPPING SS SCREWS AT EACH LOCATION.

B- BRONZECRAFT CAMLOCK ASSEMBLY CONSISTING OF THE HANDLE AND KEEPER. 1 LOCK PER JAMB LOCATED 6-1/2" FROM THE SILL AND 2 OR 3 LOCKS PER SILL LOCATED 7-1/2" FROM THE JAMBS AND ONE AT MIDDLE WHEN REQUIRED

C- AMC 220 20" SERIES 2000 4-BAR INLINE HINGES ATTACHED USING #10X5/8" PPH SELF TAPPING SCREWS; FOUR PER OPERABLE VENT AND EIGHT PER BASE FRAME

**GLAZING DETAIL**

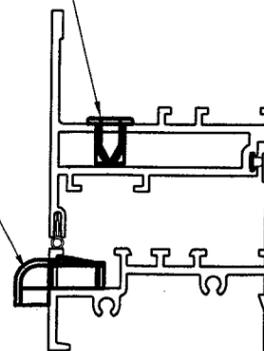


GLASS: OVERALL 9/16" LAMINATED

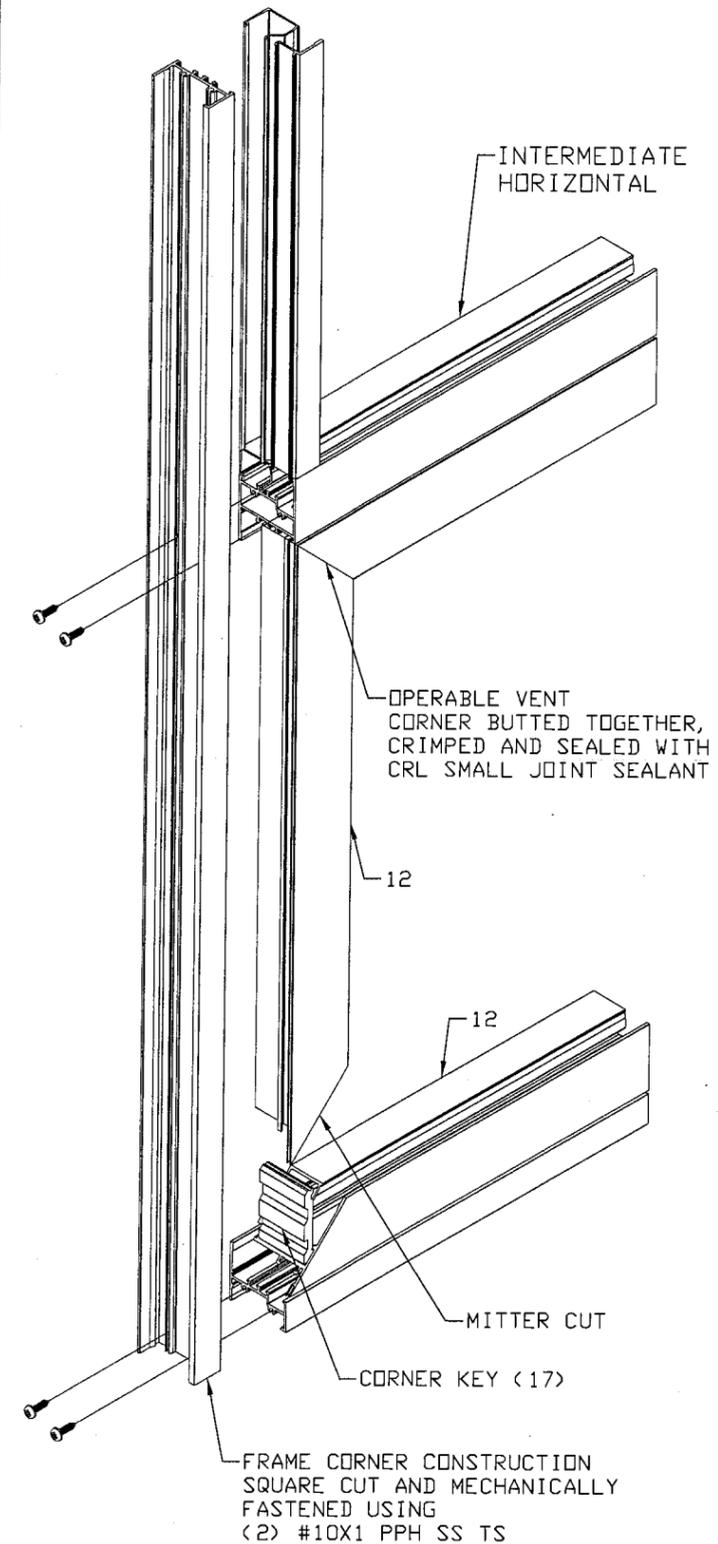
**WEEP HOLES, WATER DIVERTERS AND COVERS**

(1) VERNAY VL 1026-107 SILICONE SLIT-DUCKBILL WEEP VALVE WAS PRESENT AT MIDSPAN OF EACH SPECIMEN'S VENT BOTTOM.

(2) 5/16" X 1-3/8" WEEP HOLES (3) SPACED AT 4" FROM EACH END AND (1) LOCATED AT MID SPAN ALL WEEP HOLES UTILIZED A INJECT MOLDED WEEP HOLE COVER BY NR ARCHITECTURAL PRODUCTS



**CORNER ASSEMBLY**



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AUG 24 2009

Engineer Seal  
 Pedro De Figueiredo  
 PE 52609

DRAFTING:  
**PK DRAFTING & MORE**

MIAMI-DADE BCCO:

As prepared in compliance with the Florida Building Code  
 Date SEPT 23 2009  
 NOA# 09-0402-22  
 Miami-Dade Product Control Division  
 By Manuel Perez

Date: 03/04/2009  
 Scale: NA  
 Design by: PPMF

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**09-040**

SHEET  
 9 of 9