



**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)**

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**Bruna Enclosures  
631 N.E. 45 Street  
Oakland, Fl 33334**

**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:** 0.062 “ Aluminum Storm Panels Shutter”

**APPROVAL DOCUMENT:** Drawing No.MDS, titled “Bruna Screen Enclosures “, sheets 1 and 2 of 2, prepared by Twenty First Century, Eng., Corp., signed and sealed by John Carroll, P.E., dated 10/24/94, revision No. 3 dated 12/04/95, 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:** Large & Small Missile Impact

**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.

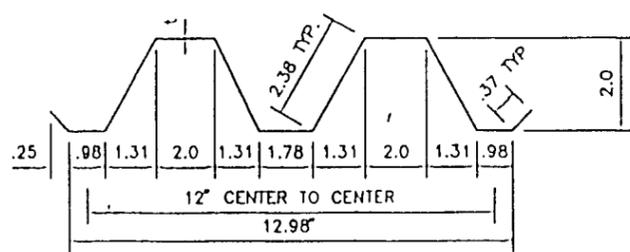
**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**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.

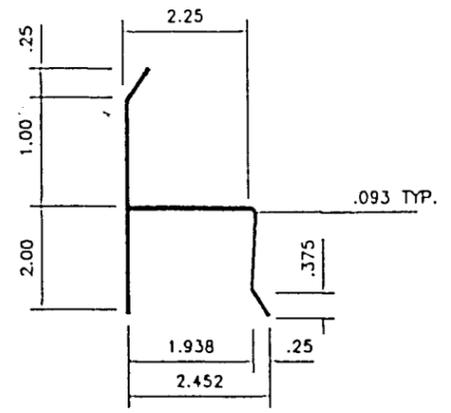
This NOA **renews NOA # 99-0406.02** and, consists of this page 1 as well as approval document mentioned above. The submitted documentation was reviewed by **Raul Rodriguez**.



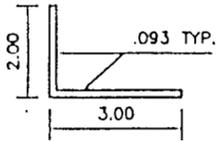
**NOA No 02-0201.02  
Expiration Date: February 12, 2007  
Approval Date: March 28, 2002  
Page 1**



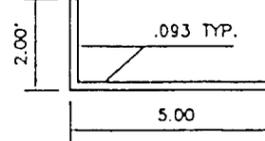
A TYPICAL PANEL



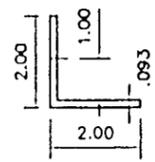
B "H" HEADER



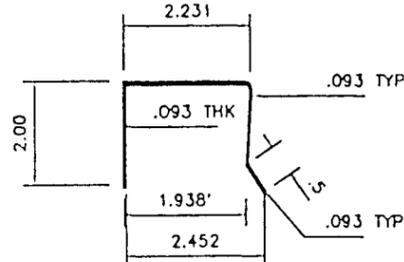
C 3" ANGLE



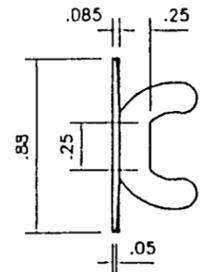
D 5" ANGLE



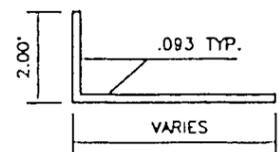
E BASE ANGLE



F "U" HEADERS



G WING NUT



H CLOSURE STRIP

DEFLECTION SCHEDULE

POSITIVE DESIGN LOAD	MIN. SEPARATION FROM GLASS
65	3"
70	3"

NOTE: ACTUAL IMPACT DEFLECTION = 3" SEE DESIGN LOAD FOR SEPARATION REQUIRED. TEST PANEL WIDTH 48".

REMOVABLE SHUTTER DESIGN

DESIGN CRITERIA

WIND LOAD:	DESIGN LOAD	TEST LOAD
PRESSURE INWARD	65.0 CYCLIC	105.0
PRESSURE OUTWARD	85.0	127.5

FASTENERS (4X DESIGN LOAD)  
 MINIMUM RECOVERY FROM TEST LOAD: 80%  
 ALLOWABLE ALUMINUM ALLOY-EXTRUSIONS 6063-T6; PANELS 5052-H32  
 ALLOWABLE STEEL ALLOY - ASTM - A-445  
 MAXIMUM DEFLECTION - SPAN/80

- GENERAL NOTES
- THIS SHUTTER SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH:
    - SOUTH FLORIDA BUILDING CODE, 1994 EDITION
    - SOUTH FLORIDA BUILDING CODE, 1994 BROWARD COUNTY EDITION
    - STANDARD BUILDING CODE, 1991 EDITION, WITH PALM BEACH COUNTY AMENDMENTS
    - STANDARD BUILDING CODE, 1993 EDITION, WITH MONROE COUNTY AMENDMENTS
  - POSITIVE AND NEGATIVE DESIGN PRESSURE CALCULATIONS SHALL BE PERFORMED IN ACCORDANCE WITH ASCE 7-88 'MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES'
  - THE STRUCTURE SHALL COMPLY WITH REQUIRED BUILDING SETBACK LINES.
  - SHUTTERS MOUNTED HORIZONTALLY, AS WELL AS VERTICALLY, SHALL OBSERVE THE MAXIMUM ALLOWABLE SPAN.
  - MINIMUM MECHANICAL PROPERTIES SHALL BE IN ACCORDANCE WITH THE ALUMINUM ASSOCIATION HANDBOOK.
  - MAKE ALL ANGLES FROM .062" ALUMINUM.
  - STORM PANELS SHALL BE .062 5052-H32 ALUMINUM ALLOY WITH A MINIMUM Fy= 17KSI BEFORE ROLLING. ALUMINUM EXTRUSIONS SHALL BE 6063-T6 U.O.N.
  - PRODUCT MARKINGS SHALL BE 24" INTERVALS ON EACH PANEL PER ORDINANCE No. 93-141 AND PROTOCOL PA 203-94 SEC. 14.2.1 (SEE TYPICAL PANEL SECTION FOR LOCATION), AND SHALL BE LABELED AS FOLLOWS:
 

BRUNIA STRM PNL OKL PRK FL

- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI IN 28 DAYS.
- ALL BOLTS AND WASHERS SHALL BE PLATED STEEL WITH A MINIMUM Fy = 33 KSI. WASHERS TO BE INTEGRAL WITH WINGNUT PER DETAIL.
- FOR OPENINGS GREATER THAN 24" IN HEIGHT, PANELS SHALL BE FASTENED AT MIDSPAN OF EVERY LAP JOINT WITH ONE ROW (FOR PANELS UP TO 48" HIGH) OR FROM TWO TO THREE ROWS (FOR PANELS OVER 48") SPACED AT NOT MORE THAN 24" o.c. OF 1/4" - 20x1" MACHINE BOLTS WITH DIE CAST ALUMINUM WING NUT AND WASHER. LAST PANEL HAS BOLT HELD WITH PERMANENTLY MOUNTED NUT AND PERMANENTLY LABELED "LAST PANEL TO BE INSTALLED".
  - POSITIVE DESIGN LOAD 65.0 PSF CYCLIC
  - NEGATIVE DESIGN LOAD 85.0 PSF
- THE DETAILS AND SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS PROPOSED FOR IMPACT, CYCLIC AND UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH DADE COUNTY PROTOCOLS PA 201, 202 AND 203 WITH DESIGN LOADS AS FOLLOWS:
  - ATL OF POMPANO, THE DADE COUNTY CERTIFIED TESTING LABORATORY PERFORMING THESE TESTS ACKNOWLEDGED THE SATISFACTORY COMPLETION OF SUCH TESTS AND VERIFIED THE PRODUCTS TESTED ARE AS NOTED HEREIN.
- ANCHORS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS OR EQUIVALENT DESIGN DATA.
  - WOOD----- 1/4" LAG SCREWS ----- FULL PENETRATION -- MIN. SPACING 9" O.C. --- MAX SPACING ----- 24" O.C.
  - CONCRETE AND BLOCK -- 1/4" U.S. ANCHOR CONCRETE SCREW - MIN. EMBEDMENT 1-1/8"
  - WOOD ----- 150 LB TENSION
  - BLOCK ----- 200 LB TENSION/SHEAR
  - CONCRETE ----- 300 LB TENSION/SHEAR
- CLOSURE STRIP FOR BUILD-OUT MOUNT SHALL BE AN ANGLE (SEE PLAN VIEW) OF SUFFICIENT SIZE TO FULLY COVER BOTH OPEN SIDES OF STORM PANEL INSTALLATION. CLOSURE STRIP SHALL BE ATTACHED TO WALL WITH APPROPRIATE FASTENERS @ 24" O.C. - TYPE TO BE DETERMINED FROM ANCHOR SCHEDULE. PANEL NEED NOT BE ATTACHED TO CLOSURE STRIP. OPENING TO BE FULLY SEALED.
- THE FOLLOWING WARNING NOTE SHALL BE PERMANENTLY MOUNTED AT THE SILL FRAME OF SPECIMENS AS PER SEC. 14.2 OF PA 203.94, ADVISING THE HOME OWNER OR TENANT THAT THE STORM PANEL SYSTEM WILL NOT OFFER PROPER HURRICANE PROTECTION UNLESS ALL COMPONENTS ARE INSTALLED AS DIRECTED.
  - WARNING - FOR OPENINGS GREATER THAN 57" IN HEIGHT, PANELS MUST BE FASTENED AT 24" O.C. WITH 1/4"-20 X 1" MACHINE BOLTS WITH PLATED STEEL ALUMINUM WINGNUT WASHERS. THIS STORM PANEL SYSTEM WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL COMPONENTS ARE INSTALLED AS DIRECTED.

**PRODUCT RENEWED**

ACCEPTANCE No. 02-0201.02

EXPIRATION DATE FEBRUARY 12, 2007

By [Signature]

PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE

**PRODUCT RENEWED**

ACCEPTANCE No. 99-0406.02

EXPIRATION DATE FEBRUARY 12, 2002

By [Signature]

PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE

DATE FEBRUARY 13, 1996

By [Signature]

PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE

ACCEPTANCE NO. 95-0418.04

JOHN CARROLL  
P.E. #41810

Revisions:

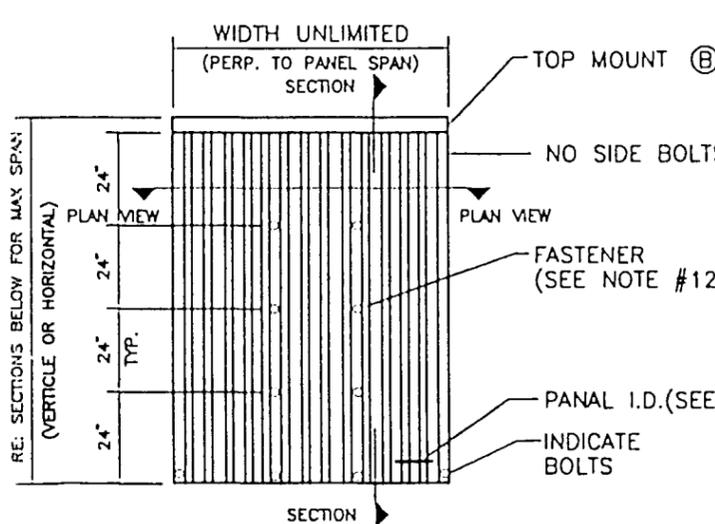
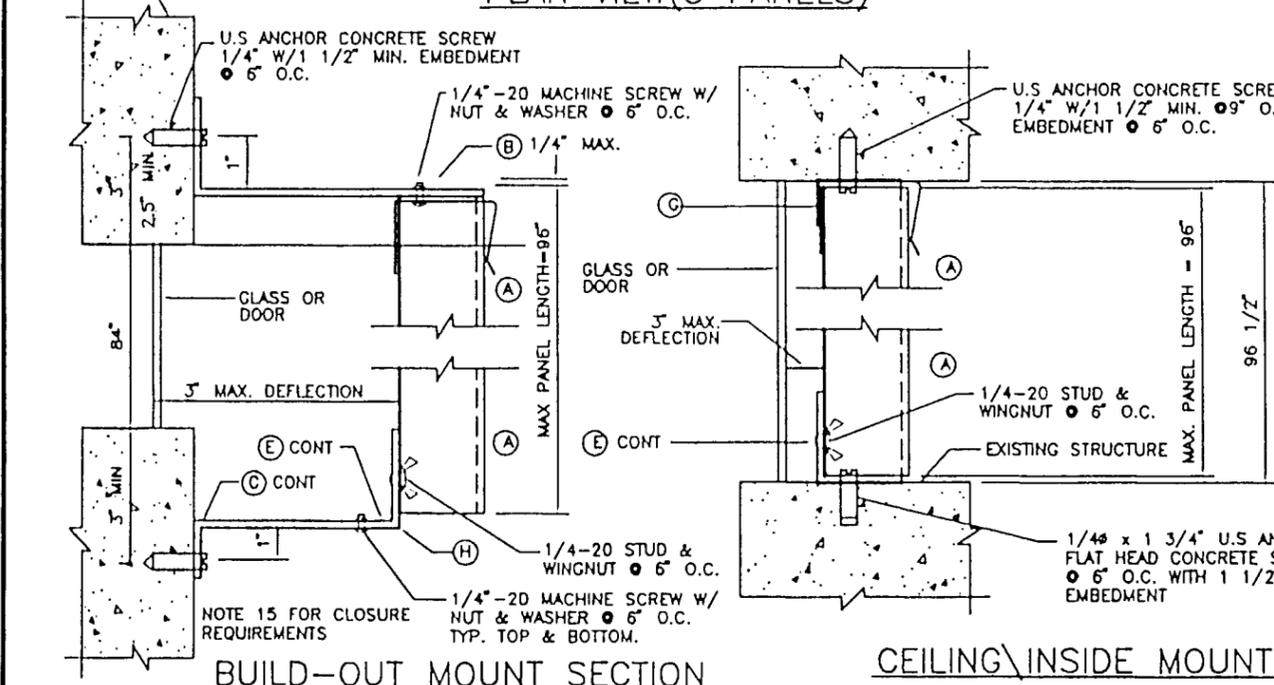
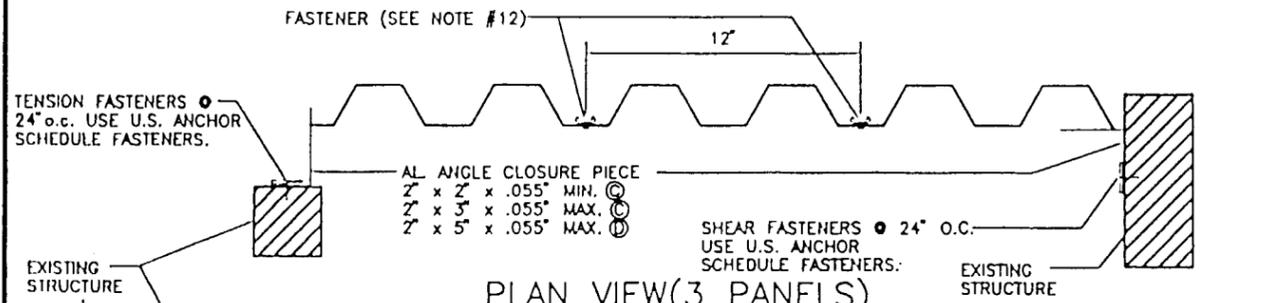
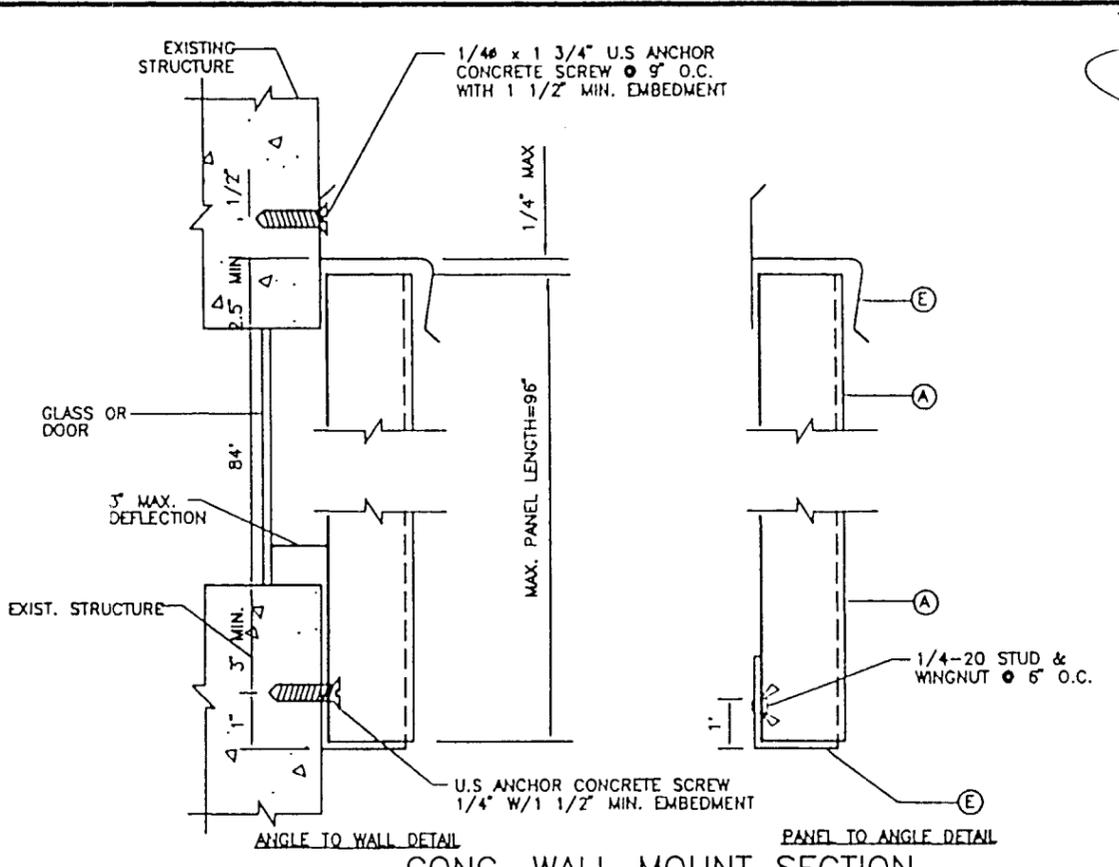
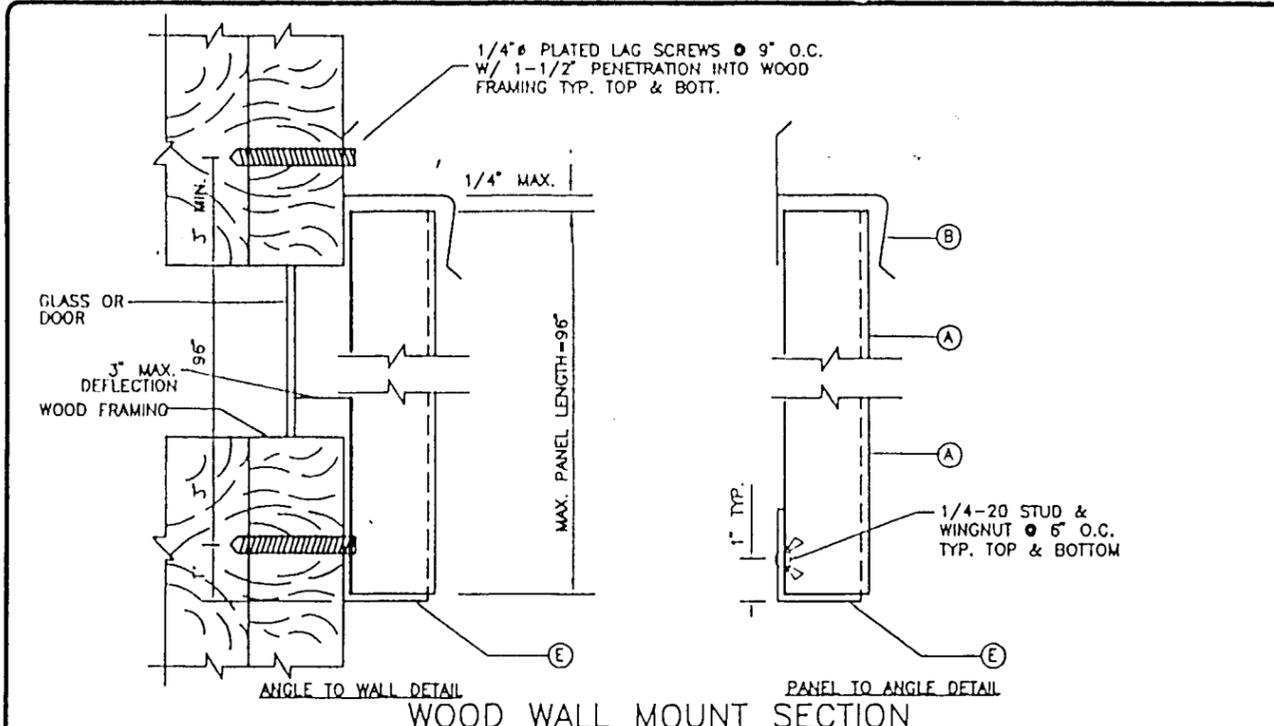
1.	8/24/95
2.	11/6/95
3.	12/4/95
4.	
5.	
6.	
7.	

Name: \_\_\_\_\_ Job No.: \_\_\_\_\_

Bruna Screen Enclosures  
831 N.E. 45th Street Ft. Lauderdale, FL 33334 772-4852

**TWENTY FIRST CENTURY**  
Engineering Corp.  
2455 East Sunrise Blvd. Suite 1203 Office: (305)561-2100  
FL Lauderdale, FL 33304 Fax: (305)561-2137

DRWN. JMS	CHK. J.C.
JOB NO. 2122	DWG. NO. 001
SCALE: N.T.S.	
DATE: 10/24/94	
SHEET 1 of 2	



**TYPICAL ELEVATION**  
**PRODUCT RENEWED**

ACCEPTANCE No. 99-0406-02  
EXPIRATION DATE FEBRUARY 12-2002  
By Helmut A. Mahr  
PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE  
SOUTH FLORIDA BUILDING CODE  
DATE FEBRUARY 13 1996  
By Mammela  
PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE  
ACCEPTANCE NO. 95-0418-04

JOHN CARROLL  
P.E. #41910

Revisions:

1.	3/23/95	MS
2.	8/24/95	MS
3.	11/6/95	MS
4.	12/4/95	MS
5.		
6.		
7.		

Name: \_\_\_\_\_  
Job No.: \_\_\_\_\_

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**TWENTY FIRST CENTURY**  
Engineering Corp.  
2455 East Sunrise Blvd., Suite 1203 Office (305)561-2100  
Ft. Lauderdale, FL 33304 Fax (305)561-2137

DRWN.	CHK.
MS	J.P.
JOB NO.	DWG. NO.
2122	002
SCALE	H.T.S.
DATE	10/24/14
SHEET 2 of 2	