



**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**

**Kawneer Company, Inc.  
555 Guthridge Court  
Norcross, GA 30092**

**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 "1600 System 1" Aluminum Curtain Wall System – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. **T162-951**, titled "1600 System 1 Curtain Wall – Large Missile Impact – Multiple Infills", sheets 1 through 23 of 23, dated 02/20/03 with revision "**# 3**" dated 04/07/09 prepared by manufacturer, signed and sealed by Ballard L. Argus, 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 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 and renews NOA # 07-0727.07** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Manuel Perez, P.E.**



**NOA No. 08-1104.03  
Expiration Date: January 08, 2014  
Approval Date: May 20, 2009  
Page 1**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No **T162-951**, Sheets 1 through 23 of 23, titled "1600 System 1 Curtain Wall Large Missile Impact – Multiple Infills", dated 02/20/03 with revision "# 3" dated 04/07/09 prepared by manufacturer, signed and sealed by Ballard L. Argus, P.E.

**B. TESTS**

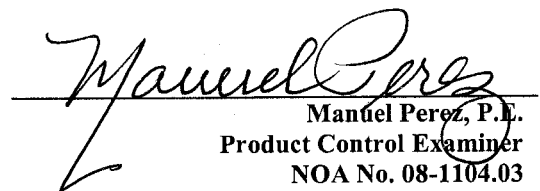
1. Test reports on:
  - 1) Air Infiltration Test, per PA 202-94
  - 2) Uniform Static Air Pressure Test, Loading per PA 202-94
  - 3) Water Resistance Test, per PA 202-94
  - 4) Large Missile Impact Test, PA 201-94
  - 5) Cyclic Loading Test, per PA 203-94along with marked-up drawings and installation diagram of aluminum curtain wall system prepared by Hurricane Testing Lab., Test Report No. **HTL 0049-1106.00**, dated 10/30/00 & 11/03/00, revised with addendum letters dated April 25, 2002 and September 15, 2003, all signed and sealed by Vinu J. Abraham, P.E.  
*(Submitted under previous NOA #07-0727.07)*
2. Test reports on:
  - 1) Large Missile Impact Test, PA 201-94
  - 2) Cyclic Loading Test, per PA 203-94along with marked-up drawings and installation diagram of aluminum glazed curtain wall system prepared by Hurricane Testing Lab., Test Report No. **HTL 0049-0406.01**, dated 04-05-01 and revised with addendum letter dated April 25, 2002, all signed and sealed by Vinu J. Abraham, P. E.  
*(Submitted under previous NOA #03-0515.07)*

**C. CALCULATIONS**

1. Revised Anchor Calculations, and Structural Analysis, complying with FBC2007, dated 04/07/09, prepared, signed and sealed by Ballard L. Argus, P.E.  
**Complies with ASTM E1300-98/02**

**D. QUALITY ASSURANCE**

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

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 08-1104.03  
Expiration Date: January 08, 2014  
Approval Date: May 20, 2009

**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. **07-1116.11** issued to Saf-Glas, LLC for their "**SAF-GLAS Polycarbonate Laminate**", dated 12/27/07, expiring on 12/16/12.
3. Notice of Acceptance No. **09-0210.05** issued to Viracon, Inc. for their "**Viracon HRG-2 Glass Interlayers**", dated 03/25/09, expiring on 02/12/10.
4. Notice of Acceptance No. **08-0508.02** issued to Viracon, Inc. for their "**StormGuard Glass Interlayer**", dated 07/03/08, expiring on 04/14/13.

**F. STATEMENTS**

1. Statement letter of conformance, dated April 8<sup>th</sup>, 2009, signed and sealed by Ballard L. Argus, P.E.
2. Statement letter of no financial interest, dated October 30<sup>th</sup>, 2008, signed and sealed by Ballard L. Argus, P.E.

**G. OTHERS**

1. Notice of Acceptance No. **07-0727.07**, issued to Kawneer Company, Inc. for their **Series 1600 System 1 Aluminum Glazed Curtain Wall System – LMI** approved on 09/13/07 and expiring on 01/08/09.

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 08-1104.03

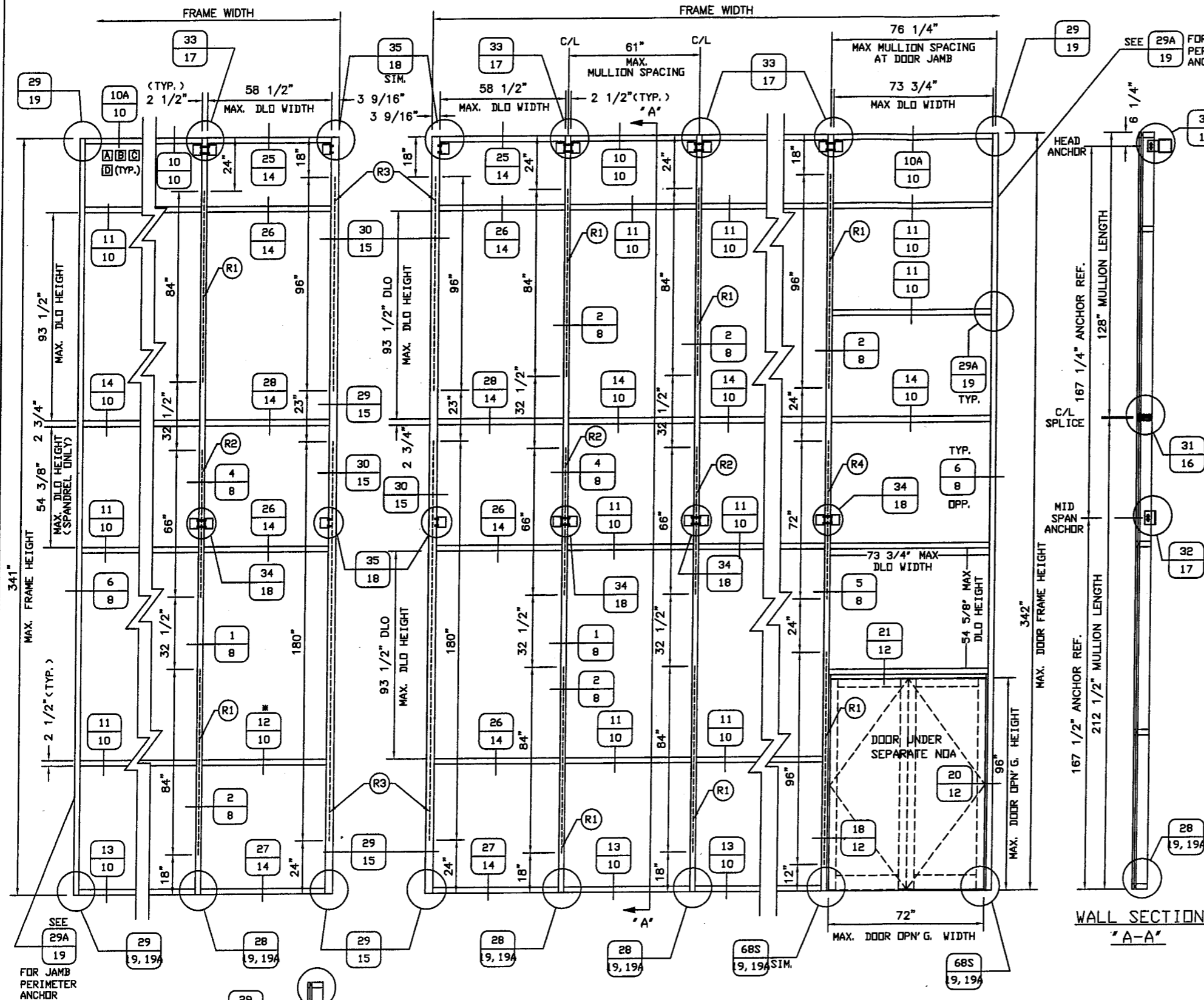
Expiration Date: January 08, 2014  
Approval Date: May 20, 2009

\* SEE NOTE AT DETAIL 12/10

DADE COUNTY PRODUCT APPROVAL DRAWINGS  
 KAWNEER CO.  
 1600 SYSTEM1 CURTAIN WALL  
 LARGE MISSILE IMPACT  
 MULTIPLE INFILLS

DESIGN PRESSURE = +/- 90 PSF

TYPICAL ELEVATION  
 TWIN SPAN W/ CORNER  
 STANDARD HEAVY MULLIONS  
 (162-016) W/REINFORCEMENT



NOTES:

- SEE SHEET 4 OF 23 FOR GLAZING OPTIONS. A B C D
- SEE SHEET 19 OF 23 FOR PERIMETER FASTENER AND PERIMETER ANCHOR FASTENER INFORMATION.
- HORIZONTAL MULLION (DETAIL 11/10) IS OPTIONAL AT ANY LOCATION IN ANY BAY UP TO MAX. DLO HEIGHT OF 93-1/2" X 58-1/2" MAX. DLO WIDTH OR MAX. DLO HEIGHT 54-5/8" X 73-3/4" MAX. DLO WIDTH AT DOOR BAY. ALSO SEE NOTE ON SHEET 10 OF 23.
- THIS PRODUCT CONFIGURATION IS TO BE USED UP TO 30'-0" ABOVE GRADE.
- STD. INSTALLATION INSTRUCTIONS ARE TO BE USED IN CONJUNCTION WITH THESE PRODUCT DRAWINGS.
- ALUMINUM ALLOY 6063-T6.
- DLO = DAYLIGHT OPENING.
- PROPER REINFORCEMENT AT MID SPAN ANCHOR MUST BE PROVIDED.

**REINFORCEMENT SCHEDULE:**  
 <SEE ELEVATION FOR REINFORCEMENT LENGTHS AND LOCATIONS>  
 (R1) 162-301 STEEL REINFORCEMENT  
 (R2) 162-301, 162-302 AND 162-303 STEEL REINFORCEMENT CENTERED ON ANCHOR  
 (R3) 2" X 4-1/2" STEEL BAR REINFORCEMENT  
 (R4) 162-301, 162-302, 162-303 AND 3/8" X 4-1/2" STEEL BAR REINFORCEMENT CENTERED ON ANCHOR

**HURRICANE PROTECTION SYSTEM (SHUTTERS):**  
 THE INSTALLATION OF THIS UNIT UP TO 30' ABOVE GRADE WILL NOT REQUIRE A HURRICANE PROTECTION SYSTEM.

EC 95502-11	6/30/07
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
 Product Engineering & Development  
 555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
 PHONE (770) 449-5555  
 FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203  
 SCALE: 1/2" = 1'

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 08-1104-03  
 Expiration Date January 8, 2014  
 By *Manuel Perez*  
 Miami Dade Product Control  
 Division

THIS DRAWING IS FOR  
 DADE COUNTY  
 PRODUCT APPROVAL  
 ONLY

BALLARD L ARGUS, P. E.  
 530 West Pine Street  
 Suite 5  
 Ponchatoula, LA 70454  
 Phone (985) 386-4599

4/17/09  
 FLA REG - 35686/CIVIL

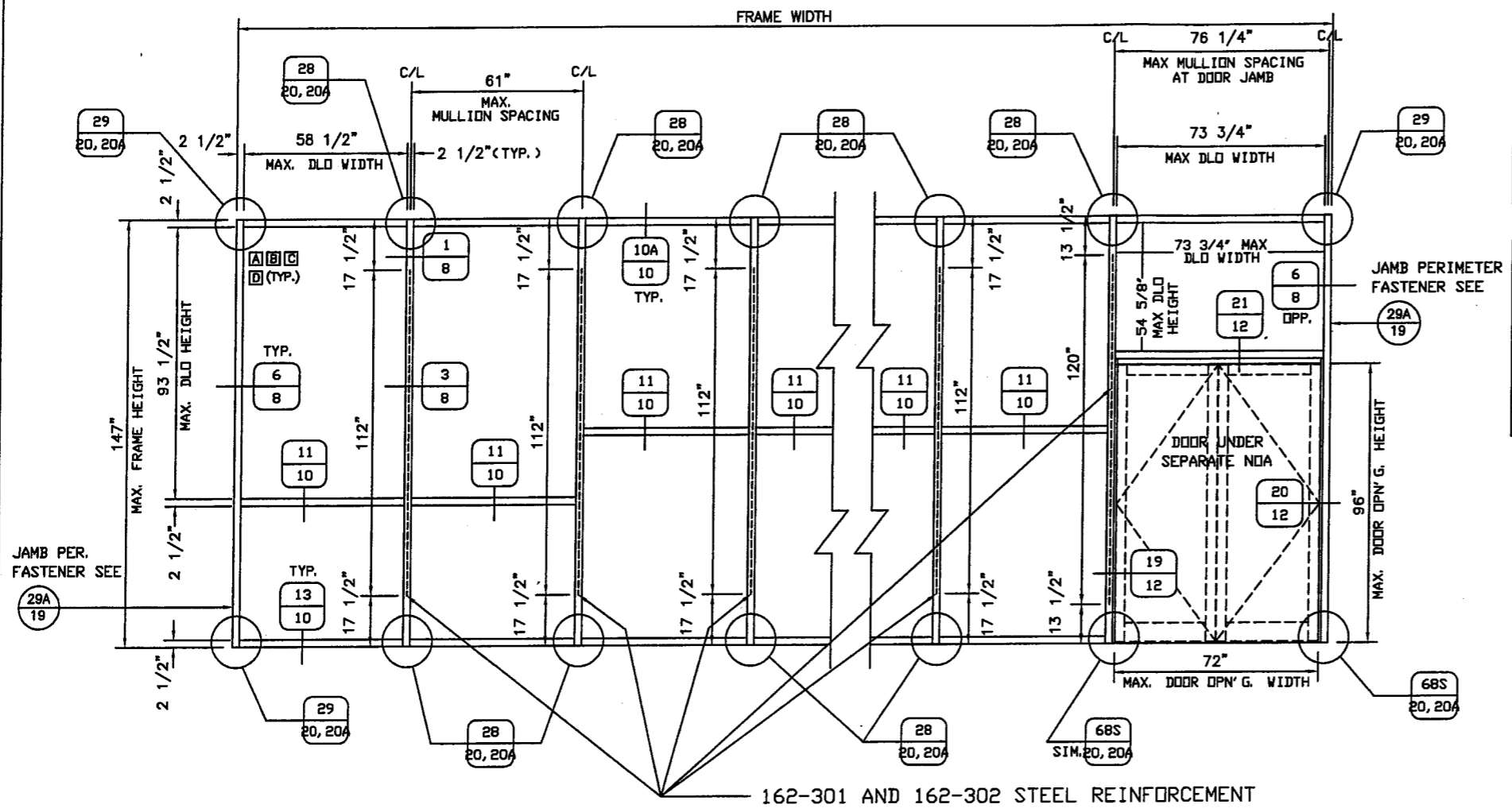
DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	1 of 23		
	T162-951-1.DWG		

TAB	REVISION	DATE	DESCRIPTION
3	04/07/09	REVISED FOR FBC, 2007 EDITION	
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	
E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION

DADE COUNTY PRODUCT APPROVAL DRAWINGS  
 KAWNEER CO.  
 1600 SYSTEM1 CURTAIN WALL  
 LARGE MISSILE IMPACT  
 MULTIPLE INFILLS

DESIGN PRESSURE = +/- 90 PSF

TYPICAL ELEVATION  
 SINGLE SPAN  
 STANDARD HEAVY MULLIONS  
 (162-016) W/ REINFORCEMENT



162-301 AND 162-302 STEEL REINFORCEMENT

**NOTES:**

1. SEE SHEET 4 OF 23 FOR GLAZING/MULLION OPTIONS. A B C D
2. SEE SHEET 19 OF 23 FOR PERIMETER FASTENER AND PERIMETER ANCHOR FASTENER INFORMATION.
3. HORIZONTAL MULLION OPTIONAL AT ANY LOCATION IN ANY BAY UP TO MAX. DLO HEIGHT OF 93-1/2" X 58-1/2" MAX. DLO WIDTH OR MAX. DLO HEIGHT OF 54-5/8" X 73-3/4" MAX. DLO WIDTH AT DOOR BAY.
4. THIS PRODUCT CONFIGURATION IS TO BE USED UP TO 30'-0" ABOVE GRADE.
5. STD. INSTALLATION INSTRUCTIONS ARE TO BE USED IN CONJUNCTION WITH THESE PRODUCT DRAWINGS.
6. ALUMINUM ALLOY 6063-T6.
7. DLO = DAYLIGHT OPENING.

REV.	DATE	DESCRIPTION OF REVISION	BY
3	04/07/09	REVISED FOR FCC, 2007 EDITION	TAD
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	DEH
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	DEH

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 08-1104-03  
 Expiration Date August 8, 2014  
 By *Manuel Pava*  
 Miami Dade Product Control  
 Division

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 DADE COUNTY  
 PRODUCT APPROVAL  
 ONLY

BALLARD L ARGUS, P. E.  
 530 West Pine Street  
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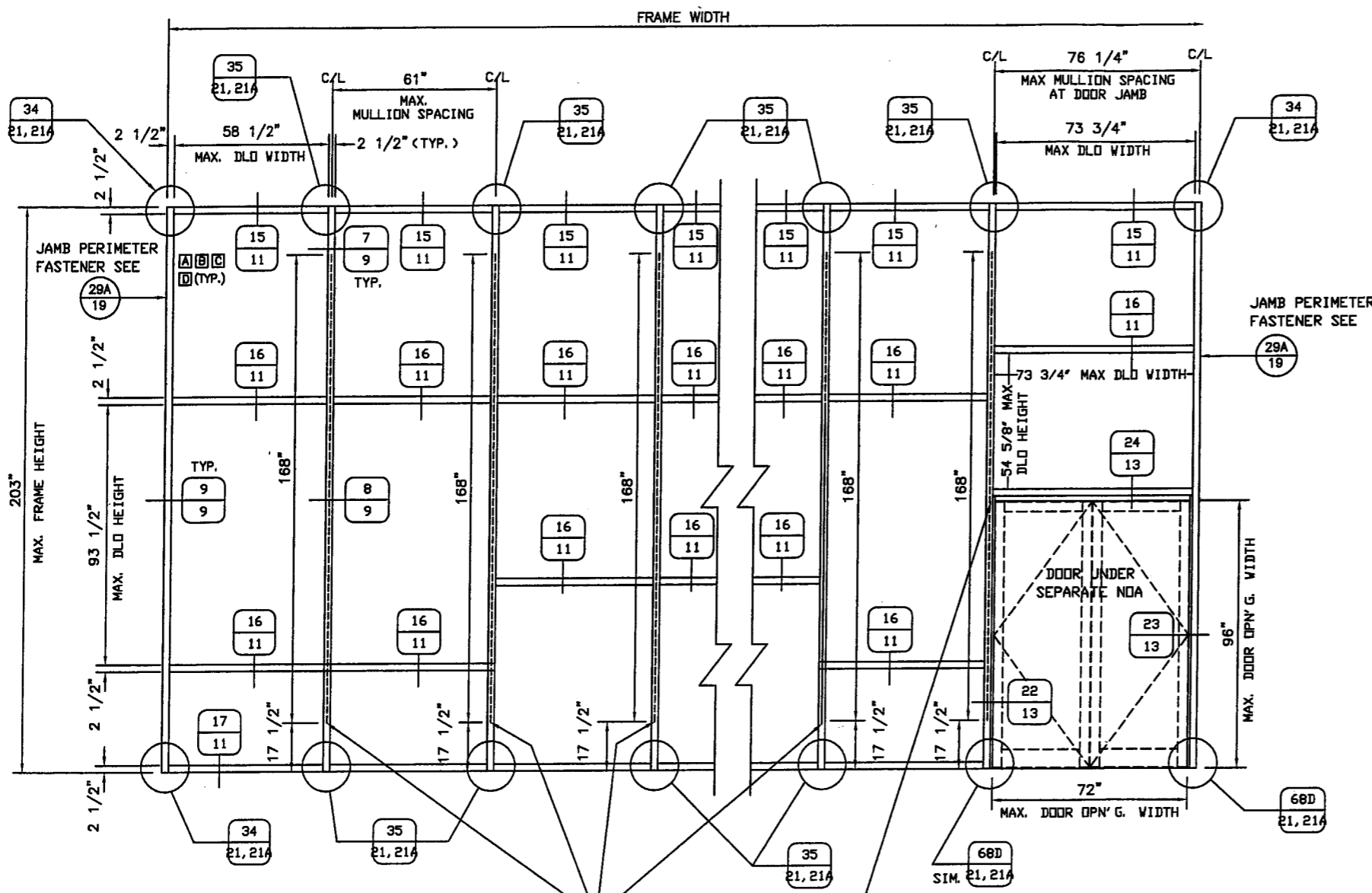
EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
 Product Engineering & Development  
 555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
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PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203  
 SCALE: 1/2" = 1'

FLA REG - 35686/CIVIL	DATE	02/20/03
DRAWN BY	JME	
DRVG. NO.	T162-951	
SHEET	2 of 23	
	T162-951-2.DWG	

*[Signature]*  
 4/17/09



162-363 STEEL REINFORCEMENT  
168" LONG - CENTERED IN ALL  
INTERMEDIATE VERTICAL MULLIONS (TYP.)

162-363 & 162-364 STEEL REINFORCEMENT  
168" LONG - CENTERED IN DOOR JAMBS (TYP.)

**NOTES:**

1. SEE SHEET 4 OF 23 FOR GLAZING/MULLION OPTIONS. A B C D
2. SEE SHEET 19 OF 23 FOR PERIMETER FASTENER AND PERIMETER ANCHOR FASTENER INFORMATION.
3. HORIZONTAL MULLION OPTIONAL AT ANY LOCATION IN ANY BAY UP TO MAX. DLO HEIGHT OF 93-1/2" X 58 1/2" MAX. DLO WIDTH OR MAX. DLO HEIGHT 54-5/8" X 73-3/4" MAX. DLO WIDTH AT DOOR BAY.
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6. ALUMINUM ALLOY 6063-T6
7. DLO = DAYLIGHT OPENING.

DADE COUNTY PRODUCT  
APPROVAL DRAWINGS  
KAWNEER CO.  
1600 SYSTEM1 CURTAIN WALL  
LARGE MISSILE IMPACT  
MULTIPLE INFILLS

DESIGN PRESSURE = +/- 90 PSF

TYPICAL ELEVATION  
SINGLE SPAN  
STANDARD HEAVY MULLIONS  
(162-213) W/ REINFORCEMENT

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 08.1104.03  
Expiration Date January 8, 2014  
By Manuel Perez  
Miami Dade Product Control  
Division

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530 West Pine Street  
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*[Signature]*  
4/17/09

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

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FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: 1/2" = 1'

FLA REG - 35686/CIVIL
DRAWN BY JME DATE 02/20/03
DRWG. NO. T162-951
SHEET 3 of 23 T162-951-3.DWG

TAD	DEH	DEH	BY
REVISOR <td>DATE <td>DESCRIPTION <td>OF REVISION </td></td></td>	DATE <td>DESCRIPTION <td>OF REVISION </td></td>	DESCRIPTION <td>OF REVISION </td>	OF REVISION
3	04/07/09	REVISED FOR FBC, 2007 EDITION	
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1	10/06/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	

GLAZING OPTIONS		
GLASS TYPE	STANDARD MULLION	DEEP MULLION
<b>A</b> = 9/16" LAMINATED STORMGUARD <sup>®</sup> GLASS BY VIRACON: 1/4" HEAT STRENGTHENED OUTBOARD LITE / 0.100 SOLUTIA SAFLEX <sup>®</sup> INTERLAYER / 1/4" HEAT STRENGTHENED INBOARD LITE	162-016	162-213
<b>B</b> = 9/16" LAMINATED SENTRYGLAS <sup>®</sup> GLASS PLUS BY VIRACON: 1/4" HEAT STRENGTHENED OUTBOARD LITE / 0.090 DUPONT SGP INTERLAYER / 1/4" HEAT STRENGTHENED INBOARD LITE	162-016	162-213
<b>C</b> = 9/16" LAMINATED SAF-GLAS GLASS BY SECURITY IMPACT GLASS: 1/4" HEAT STRENGTHENED OUTBOARD LITE / 0.015 ADHESIVE / 0.070 POLYCARBONATE / 0.015 ADHESIVE / 1/4" HEAT STRENGTHENED INBOARD LITE	162-016	162-213
<b>D</b> = 5/8" LAMINATED HRG-2 GLASS BY VIRACON: 1/4" HEAT STRENGTHENED OUTBOARD LITE / 0.050 URETHANE / 0.080 POLYCARBONATE / 0.050 URETHANE / 1/4" HEAT STRENGTHENED INBOARD LITE	162-016	162-213
TYPICAL LARGE MISSILE GLASS SIZE = DLO + 1-1/2"		

**NOTES:**

- CERAMIC FRIT APPROVED ON #4 SURFACE (INTERIOR SIDE OF LAMINATED UNIT) FOR ALL GLASS TYPES FOR SPANDREL APPLICATIONS
- SOLUTIA SAFLEX<sup>®</sup> HP PER CURRENT NOA  
 DUPONT SENTRYGLAS<sup>®</sup> PLUS PER CURRENT NOA  
 SECURITY IMPACT SAF-GLAS PER CURRENT NOA  
 VIRACON HRG-2 PER CURRENT NOA

TAB	REVISED FOR FBC, 2007 EDITION	DATE
DEH	REVISED BALLARD L ARGUS ADDRESS	06/01/07
DEH	REVISED PER DADE COUNTY THIRD REQUEST LETTER	10/30/03
BY	DESCRIPTION OF REVISION	
REV.		
E. C. NO.		

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 08-1104-03  
 Expiration Date JANUARY 8, 2014  
 By *M. P. [Signature]*  
 Miami Dade Product Control  
 Division

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 PRODUCT APPROVAL  
 ONLY

BALLARD L ARGUS, P. E.  
 530 West Pine Street  
 Suite 5  
 Ponchatoula, LA 70454  
 Phone (985) 386-4599

*[Signature]*  
 4/17/09

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

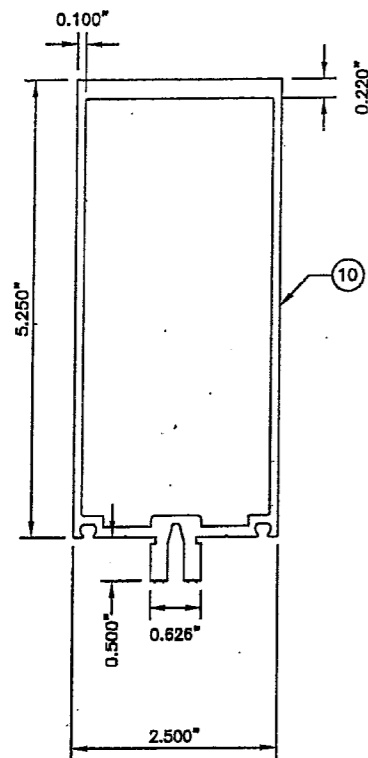
**KAWNEER**  
 Product Engineering & Development  
 555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
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 FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203

SCALE: NONE

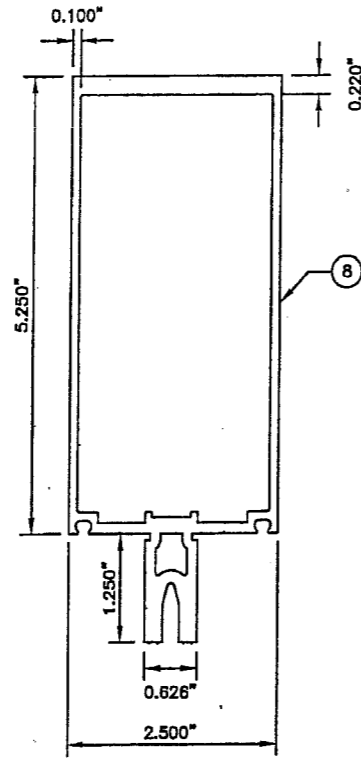
DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	4 of 23		
	T162-951-4.DWG		

FLA REG - 35686/CIVIL



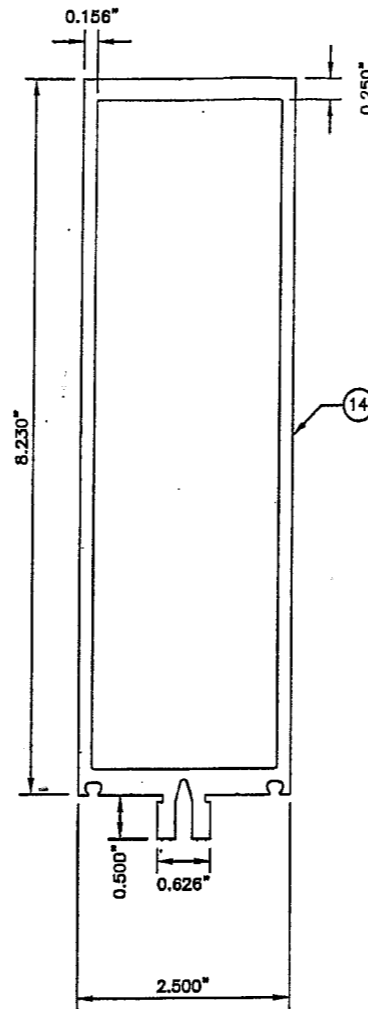
162-016

$I = 9.594 \text{ IN}^4$   
 $S = 3.163 \text{ IN}^3$



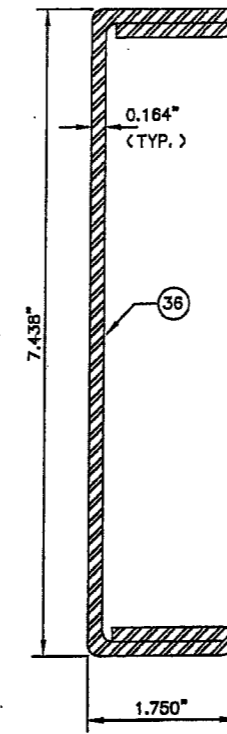
162-004  
 USED AT 90° CORNER

$I = 12.736 \text{ IN}^4$   
 $S = 3.791 \text{ IN}^3$



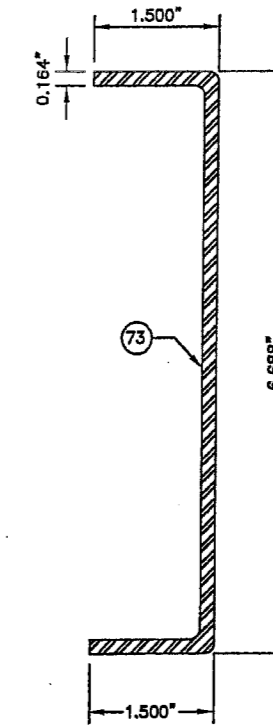
162-213

$I = 36.451 \text{ IN}^4$   
 $S = 8.279 \text{ IN}^3$



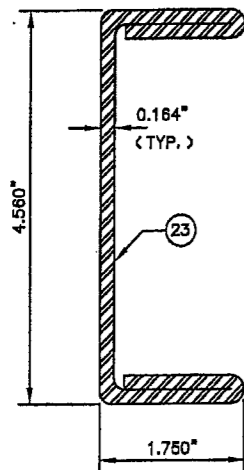
162-363

STEEL REINFORCEMENT  
 ASTM A-653/A-04A,  
 GRADE 50 STEEL  
 $I = 17.987 \text{ IN}^4$   
 $S = 4.837 \text{ IN}^3$



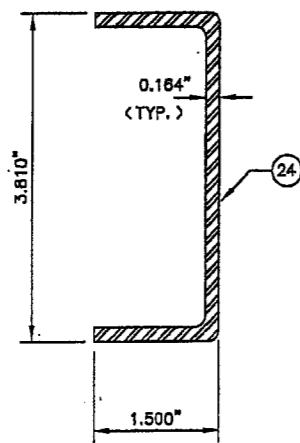
162-364

STEEL REINFORCEMENT  
 ASTM A-653/A-04A,  
 GRADE 50 STEEL  
 $I = 8.745 \text{ IN}^4$   
 $S = 2.615 \text{ IN}^3$



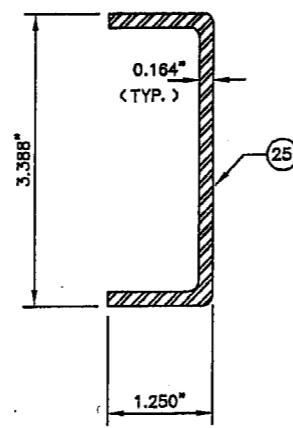
162-301

STEEL REINFORCEMENT  
 ASTM A-653/A-04A,  
 GRADE 50 STEEL  
 $I = 5.684 \text{ IN}^4$   
 $S = 2.493 \text{ IN}^3$



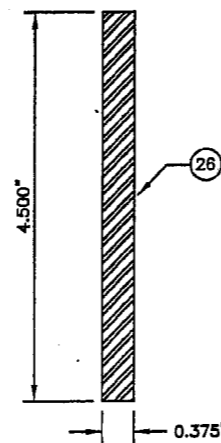
162-302

STEEL REINFORCEMENT  
 ASTM A-653/A-04A,  
 GRADE 50 STEEL  
 $I = 2.209 \text{ IN}^4$   
 $S = 1.160 \text{ IN}^3$



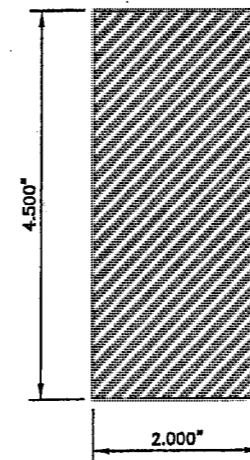
162-303

STEEL REINFORCEMENT  
 ASTM A-653/A-04A,  
 GRADE 50 STEEL  
 $I = 1.454 \text{ IN}^4$   
 $S = 0.858 \text{ IN}^3$



STEEL-1600SMULL

STEEL REINFORCEMENT  
 ASTM A-572/A-04,  
 GRADE 50 STEEL  
 $I = 2.848 \text{ IN}^4$   
 $S = 1.266 \text{ IN}^3$



CORNER STEEL BAR  
 REINFORCEMENT  
 ASTM A-572/A-04,  
 GRADE 50 STEEL

$I = 15.188 \text{ IN}^4$   
 $S = 6.750 \text{ IN}^3$

- PROVIDE DIS-SIMILAR METAL PROTECTION AS FOLLOWS:
1. BRAKE FORMED SECTIONS X .164" GALVANIZE TO CONFORM TO ASTM A924, WITH MINIMUM G30 COATING AS DEFINED IN ASTM A653.
  2. SOLID RECTANGULAR SECTIONS: GALVANIZE TO CONFORM TO ASTM A924, WITH MINIMUM G30 COATING.

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
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PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

PRODUCT REVISED  
 as complying with the Florida  
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 By *Manuel Perez*  
 Miami Dade Product Control  
 Division

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 PRODUCT APPROVAL  
 ONLY

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 530 West Pine Street  
 Suite 5  
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 Phone (985) 386-4599

*BL*  
 4/17/09

FLA REG - 35686/CIVIL

DRAWN BY JME DATE 02/20/03

DRWG. NO. T162-951

SHEET 5 of 23 T162-951-5.DWG.

TAD	DEH	DEH	BY
04/07/09	REVISOR FOR FBC, 2007 EDITION		
06/01/07	REVISOR BALLARD L. ARGUS ADDRESS		
10/30/03	REVISOR PER DADE COUNTY THIRD REQUEST LETTER		
E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION



#	PART/EXTR. NO.	DESCRIPTION	DIMENSIONS	MATERIAL
1	27-342	SETTING BLOCK	.188 x .563 x 4.125	NEOPRENE
2	27-845	.250 x .312 GLAZING TAPE/SPACER	.250 SPACE	POLYURETHANE FOAM
3	27-850	FIXED GASKET	.250 SPACE	EPDM
4	27-857	FIXED GASKET	.250 SPACE	EPDM
5	27-920	FIXED GASKET	.188 SPACE	EPDM
6	27-081	SETTING BLOCK	.188 x 1.250 x 4.125	EPDM
7	162-310	THERMAL BREAK	-	EPDM
8	162-004	STD. HEAVY MULLION	2.500 x 6.500 x .100	6063-T6 ALUMINUM
9	162-006	EXTERIOR COVER	2.500 x .504 x .050	6063-T6 ALUMINUM
10	162-016	STD. HEAVY MULLION - 9/16" INFILL	2.500 x 5.750 x .100	6063-T6 ALUMINUM
11	162-097	OPEN BACK HEAD/SILL - 9/16" INFILL	2.500 x 5.750 x .100	6063-T6 ALUMINUM
12	162-124	90° OUTSIDE CORNER EXTERIOR COVER	3.208 x .504 x .050	6063-T6 ALUMINUM
13	162-176	F PERIMETER - 9/16" INFILL	1.125 x 3.250 x .125	6063-T6 ALUMINUM
14	162-213	DEEP HEAVY MULLION - 9/16" INFILL	2.500 x 8.750 x .156	6063-T6 ALUMINUM
15	162-214	JAMB OFFSET PRESSURE PLATE	2.500 x .847 x .100	6063-T6 ALUMINUM
16	162-215	OFFSET PRESSURE PLATE	2.500 x .847 x .100	6063-T6 ALUMINUM
17	162-216	PERIMETER OFFSET PRESSURE PLATE	2.500 x 1.347 x .100	6063-T6 ALUMINUM
18	162-217	POCKET FILLER - 9/16" INFILL	.804 x .997 x .060	6063-T6 ALUMINUM
19	162-218	FEMALE EXPANSION HORIZONTAL HALF	1.125 x 6.848 x .110	6063-T6 ALUMINUM
20	162-219	MALE EXPANSION HORIZONTAL HALF	2.328 x 6.912 x .110	6063-T6 ALUMINUM
21	162-220	EXPANSION HORIZONTAL EXTERIOR COVER	2.750 x .504 x .050	6063-T6 ALUMINUM
22	162-222	90° CORNER ADAPTER	2.500 x 3.745 x .100	6063-T6 ALUMINUM
23	162-301	STEEL REINFORCEMENT FOR STD. HEAVY MULLION	1.750 x 4.560 x .164	ASTM A-653/A-04A, GRADE 50
24	162-302	STEEL REINFORCEMENT FOR STD. HEAVY MULLION	1.500 x 3.810 x .164	ASTM A-653/A-04A, GRADE 50
25	162-303	STEEL REINFORCEMENT FOR STD. HEAVY MULLION	1.250 x 3.388 x .164	ASTM A-653/A-04A, GRADE 50
26	STEEL-1600SMULL.	STEEL REINFORCEMENT FOR STD. HEAVY MULLION	.375 x 4.500	ASTM A-572/A-04, GRADE 50
27	162-307	STD. HEAVY MULLION SLEEVE	2.260 x 4.750 x .125 x 6.500	6063-T6 ALUMINUM
28	162-311	F JAMB ANCHOR FOR STD. HEAVY MULLION	8.000 x 3.250 x .250 x 4.875	6063-T6 ALUMINUM
29	162-312	T ANCHOR FOR STD. HEAVY MULLION	8.500 x 3.250 x .250 x 4.875	6063-T6 ALUMINUM
30	162-313	EXTERIOR COVER SLEEVE	.187 x 2.281 x .031 x 2.500	5005 H32 ALUMINUM
31	162-317	OPEN BACK FILLER	.434 x 4.973 x .080 x 4.000	6063-T6 ALUMINUM
32	162-332	HEAD/SILL SHEAR BLOCK - STD. HEAVY MULLION	2.115 x 4.520 x .125 x 1.562	6063-T6 ALUMINUM
33	162-543	HORIZONTAL SHEAR BLOCK - DEEP HEAVY MULLION	2.158 x 1.250 x .125 x 7.625	6063-T6 ALUMINUM
34	162-354	F JAMB ANCHOR FOR DEEP HEAVY MULLION	8.000 x 3.250 x .250 x 7.656	6063-T6 ALUMINUM
35	162-355	T ANCHOR FOR DEEP HEAVY MULLION	8.500 x 3.250 x .250 x 7.656	6063-T6 ALUMINUM
36	162-363	STEEL REINFORCEMENT FOR DEEP HEAVY MULLION	1.750 x 7.438 x .164	ASTM A-653/A-04A, GRADE 50
37	162-378	INTERM. SHEAR BLOCK - 7-1/2" SYSTEM	2.270 x 4.520 x .125 x 1.562	6063-T6 ALUMINUM
38	162-405	CORNER SHEAR BLOCK	2.270 x 1.460 x .125 x 3.125	6063-T6 ALUMINUM
39	162-519	SHEAR BLOCK	2.158 x 1.250 x .125 x 4.750	6063-T6 ALUMINUM
40	162-521	SHEAR BLOCK	.877 x 4.350 x .125 x 1.562	6063-T6 ALUMINUM
41	162-522/523	EXPANSION HORIZONTAL JOINT PLUGS (L/R)	1.000 x 1.000 x .062 x 1.031	6063-T6 ALUMINUM

# MATERIAL LIST

REV.	DATE	DESCRIPTION OF REVISION
3	04/07/09	REVISED FOR FBC, 2007 EDITION
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 06-1104-03  
Expiration Date JANUARY 8, 2014  
By Manuel  
Miami Dade Product Control  
Division

THIS DRAWING IS FOR  
DADE COUNTY  
PRODUCT APPROVAL  
ONLY

BALLARD L ARGUS, P. E.  
530 West Pine Street  
Ponchatoula, LA 70454  
Phone (985) 386-4599

[Signature]  
4/11/09

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

FLA REG - 35686/CIVIL

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

DRAWN BY: JME DATE: 02/20/03

BRWG. NO. T162-951

SHEET 6 of 23 T162-951-6.DWG

SCALE: NONE

#	PART/EXTR. NO.	DESCRIPTION	DIMENSIONS	MATERIAL
42	28-400	SHEAR BLOCK ATTACHMENT SCREW	#10 X 1-19/32" PHTFS	SAE GRADE 5 STEEL
43	28-536	MISCELLANEOUS SCREW	#10 X 3/8" FHTFS	SAE GRADE 5 STEEL
44	28-778	ANCHOR BOLT	3/8-16 X 1-1/2" HCMS	SAE GRADE 5 STEEL
45	28-843	HORIZONTAL ATTACHMENT SCREW	#12 X 1/2" FHTFS	SAE GRADE 5 STEEL
46	128-267	MULLION SLEEVE/F ANCHOR SCREW	#12 X 1" PHTFS	SAE GRADE 5 STEEL
47	128-284	SHEAR BLOCK ATTACHMENT SCREW	#12 X 1-1/2" FHTFS	SAE GRADE 5 STEEL
48	128-348	MULLION SLEEVE ATTACHMENT SCREW	#10-16 X 1-1/4" FHSDS	SAE GRADE 5 STEEL
49	-	ANCHOR BOLT	1/2-13 X 4-1/2" HHMS	SAE GRADE 5 STEEL
50	128-393	ANCHOR BOLT	1/2-13 X 2" HCMS	SAE GRADE 5 STEEL
51	128-394	SHEAR BLOCK ATTACHMENT SCREW	#12 X 1-7/8" PHTFS	SAE GRADE 5 STEEL
52	128-396	SHEAR BLOCK ATTACHMENT SCREW	#12 X 7/16" PHTFS	SAE GRADE 5 STEEL
53	128-405	SHEAR BLOCK ATTACHMENT SCREW	#12 X 7/8" FHTFS	SAE GRADE 5 STEEL
54	128-406	PRESSURE PLATE SCREW	1/4" X 1" HWHTFS	SAE GRADE 5 STEEL
56	904-208	STEEL ATTACHMENT SCREW	1/4-20 X 2" FHTCS	SAE GRADE 5 STEEL
57	977-108	MISCELLANEOUS SCREW	#10 X 1/2" PHTFS	SAE GRADE 5 STEEL
58	27-477	ALUMINUM TO STEEL SEPARATOR	4.500 x 2.000 x .031	THERMO-TORK TN-9004
59	-	NARROW PLAIN WASHER	1/2" DIA.	SAE GRADE 5 STEEL
60	-	HEX TORQUE NUT W/ NYLON LOCK RING	1/2-13	SAE GRADE 5 STEEL
61	25-596	NARROW PLAIN WASHER	3/8" DIA.	SAE GRADE 5 STEEL
62	128-392	HEX TORQUE NUT W/ NYLON LOCK RING	3/8-16	SAE GRADE 5 STEEL
63	127-048	FIXED GASKET	.312 SPACE	EPDM
64	162-022	PERIMETER FILLER	.997 x 1.380 x .080	6063-T6 ALUMINUM
65	809-281	FEMALE EXPANSION MULLION HALF INS. GL.	1.125 x 6.848 x .110	6063-T6 ALUMINUM
65	809-281	FEMALE EXPANSION MULLION HALF INS. GL.	1.125 x 6.848 x .110	6063-T6 ALUMINUM
67	162-516	JAMB OFFSET PRESSURE PLATE	2.500 x 0.847 x .100	6063-T6 ALUMINUM
69	128-910	JAMB ANCHOR SCREW	#10 X 1/2" FHTFS	SAE GRADE 5 STEEL
70	162-545	SHEAR BLOCK JAMB ANCHOR STD MULLION	4.750 x 2.270 x 1.460 x .250	6063-T6 ALUMINUM
71	162-546	SHEAR BLOCK JAMB ANCHOR DEEP MULLION	7.625 x 2.158 x 1.460 x .250	6063-T6 ALUMINUM
72	-	STRUCTURAL SILICONE	VARIABLE	DOW CORNING 995/983
73	162-364	STEEL REINFORCEMENT FOR DEEP HEAVY MULLION	1.500 x 6.688 x .164	ASTM A-653/A-04A, GRADE 50

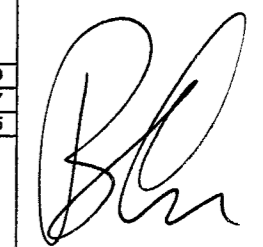
# MATERIAL LIST

REV.	DATE	DESCRIPTION OF REVISION	BY
3	04/07/09	REVISED FOR FBC, 2007 EDITION	
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 08-1104-03  
Expiration Date January 8, 2014  
By *Manuel Siles*  
Miami Dade Product Control  
Division

THIS DRAWING IS FOR  
DADE COUNTY  
PRODUCT APPROVAL  
ONLY

BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599



4/17/09  
FLA REG - 35686/CIVIL

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

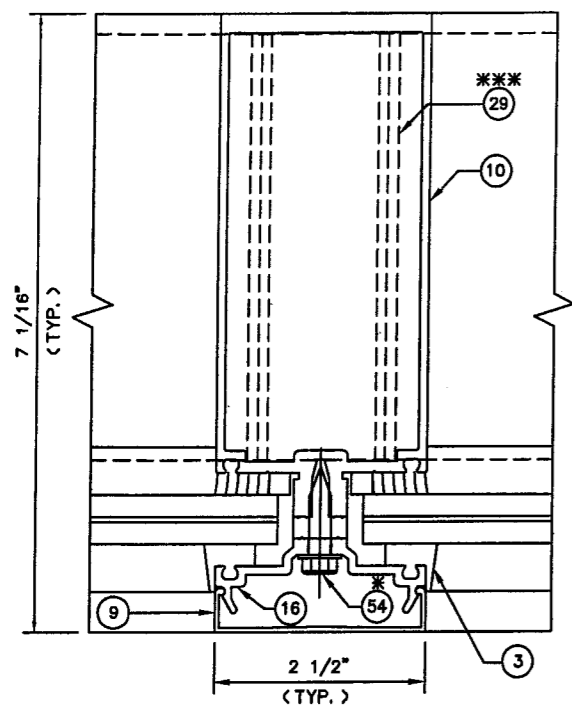
**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: NONE

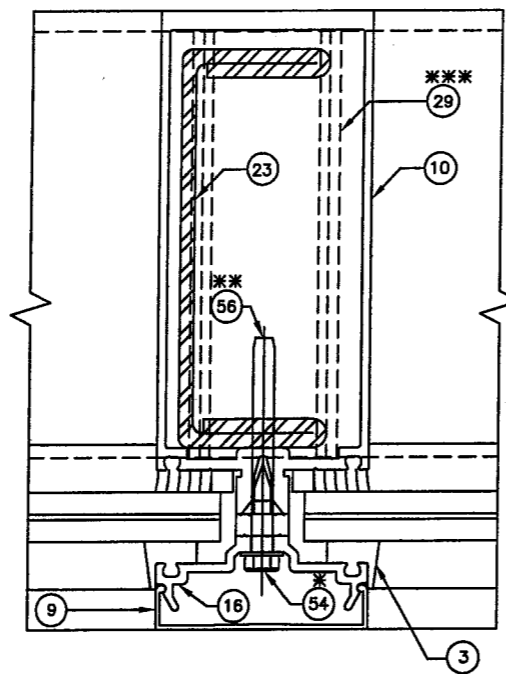
DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	7 of 23	T162-951-7.DWG	



1 EXTERIOR

STANDARD HEAVY (162-016)  
VERTICAL MULLION  
(NON-REINFORCED SECTION)

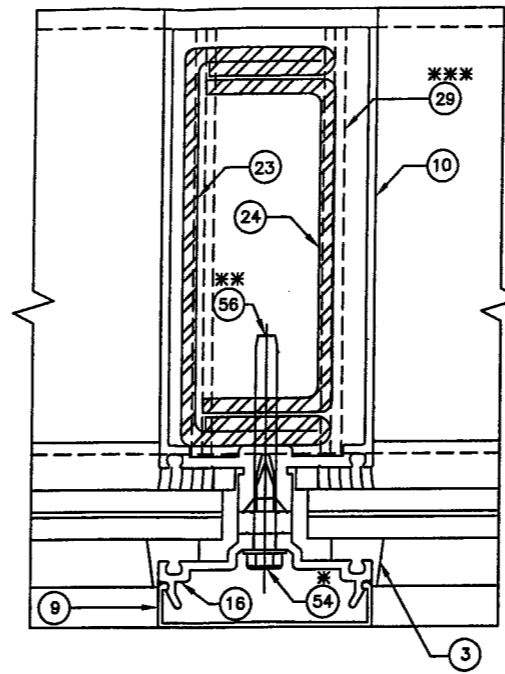
$I = 9.594 \text{ IN.}^4$   
 $S = 3.163 \text{ IN.}^3$



2 EXTERIOR

STANDARD HEAVY (162-016)  
VERTICAL MULLION  
W/ 162-301 STEEL

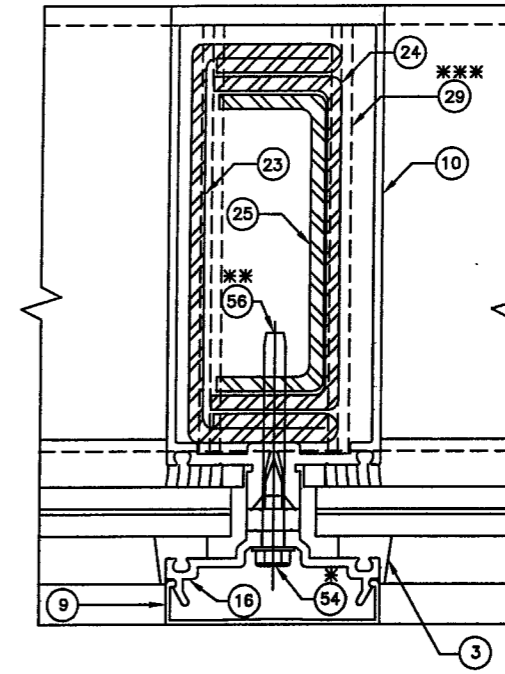
$I = 26.078 \text{ IN.}^4$  (R1) RFT  
(TRANSFORMED SECTION  
PROPERTIES IN TERMS  
OF ALUMINUM)



3 EXTERIOR

STANDARD HEAVY (162-016)  
VERTICAL MULLION  
W/ 162-301/302 STEEL

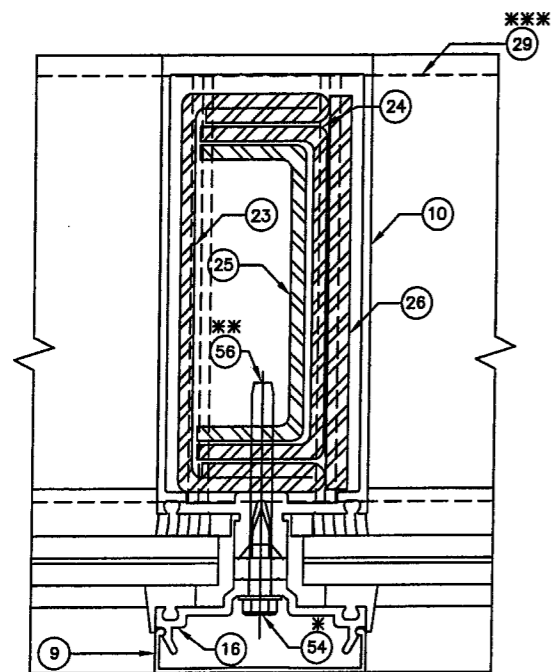
$I = 32.484 \text{ IN.}^4$   
(TRANSFORMED SECTION  
PROPERTIES IN TERMS  
OF ALUMINUM)



4 EXTERIOR

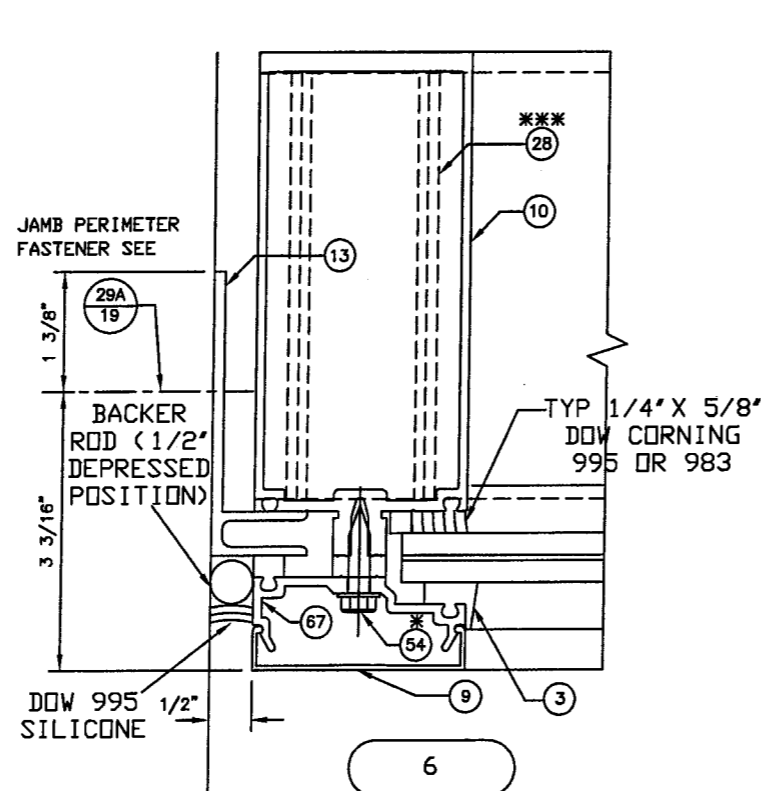
STANDARD HEAVY (162-016)  
VERTICAL MULLION  
W/ 162-301/302/303 STEEL

$I = 36.701 \text{ IN.}^4$  (R2) RFT  
(TRANSFORMED SECTION  
PROPERTIES IN TERMS  
OF ALUMINUM)



5

VERTICAL MULLION  
W/ 162-301/302/303 AND  
3/8\" X 4-1/2\" STEEL (R4) RFT  
 $I = 44.960 \text{ IN.}^4$   
(TRANSFORMED SECTION  
PROPERTIES IN TERMS  
OF ALUMINUM)



6

JAMB

## LARGE MISSILE IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23 FOR SPECIFIC  
INFORMATION REGARDING GLAZING MATERIALS AND GLASS BITE

- \* SPACED MAX. 3\" O. C.
- \*\* SPACED MAX. 12\" O. C.
- \*\*\* SEE SHEET 19, 19A, 20, 20A, 21, & 21A FOR ANCHORAGE OPTIONS

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: 5-1/2\" = 1'

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104.03  
Expiration Date JANUARY 5 2014  
By Macmillan  
Miami Dade Product Control  
Division

THIS DRAWING IS FOR  
DADE COUNTY  
PRODUCT APPROVAL  
ONLY

BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

*[Signature]*  
4/17/09

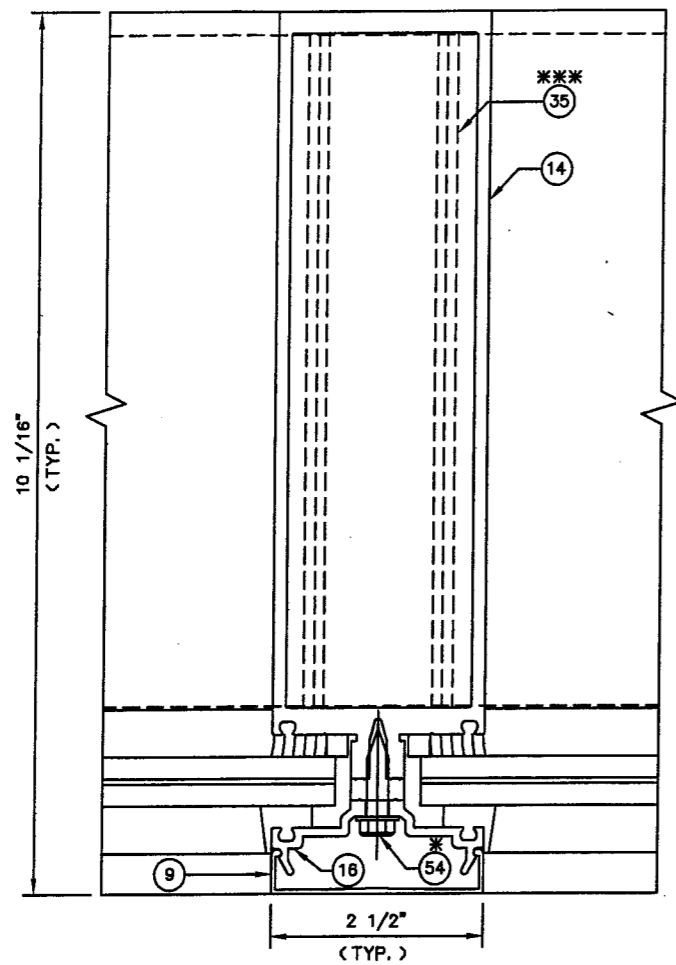
FLA REG - 35686/CIVIL

DRAWN BY JME DATE 02/20/03

DRWG. NO. T162-951

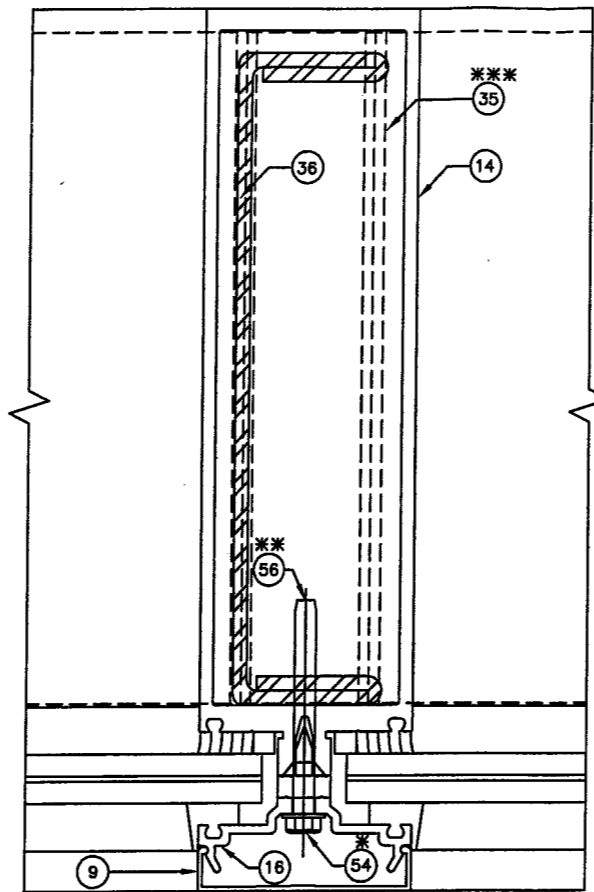
SHEET 8 of 23 T162-951-8.DWG

E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION
3	04/07/09	REVISOR FOR FBC, 2007 EDITION	TAB
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	DEH
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	DEH



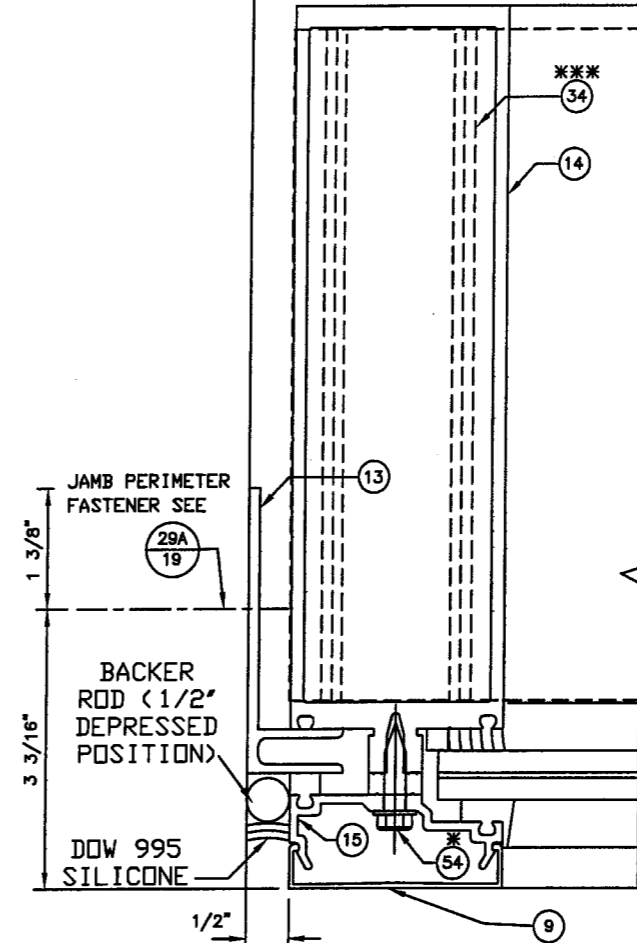
7 EXTERIOR

DEEP HEAVY (162-213)  
 VERTICAL MULLION  
 (NON-REINFORCED SECTION)  
 $I = 36.451 \text{ IN.}^4$   
 $S = 8.279 \text{ IN.}^3$



8 EXTERIOR

DEEP HEAVY (162-213)  
 VERTICAL MULLION  
 W/ 162-363 STEEL  
 $I = 88.613 \text{ IN.}^4$   
 (TRANSFORMED SECTION  
 PROPERTIES IN TERMS  
 OF ALUMINUM)



9 EXTERIOR

DEEP HEAVY (162-213)  
 JAMB MULLION

LARGE MISSILE  
 IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23 FOR SPECIFIC  
 INFORMATION REGARDING GLAZING MATERIALS AND GLASS BITE

- \* SPACED MAX. 3" O. C.
- \*\* SPACED MAX. 12" O. C.
- \*\*\* SEE SHEET 21 & 21A FOR ANCHORAGE OPTIONS

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
 Product Engineering & Development

555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
 PHONE (770) 449-5555  
 FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	9 of 23	T162-951-9.DWG	

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No 08-1104-03  
 Expiration Date January 6, 2014  
 By *Manuel Perez*  
 Miami Dade Product Control  
 Division

THIS DRAWING IS FOR  
 DADE COUNTY  
 PRODUCT APPROVAL  
 ONLY

BALLARD L ARGUS, P. E.  
 530 West Pine Street  
 Suite 5  
 Ponchatoula, LA 70454  
 Phone (985) 386-4599

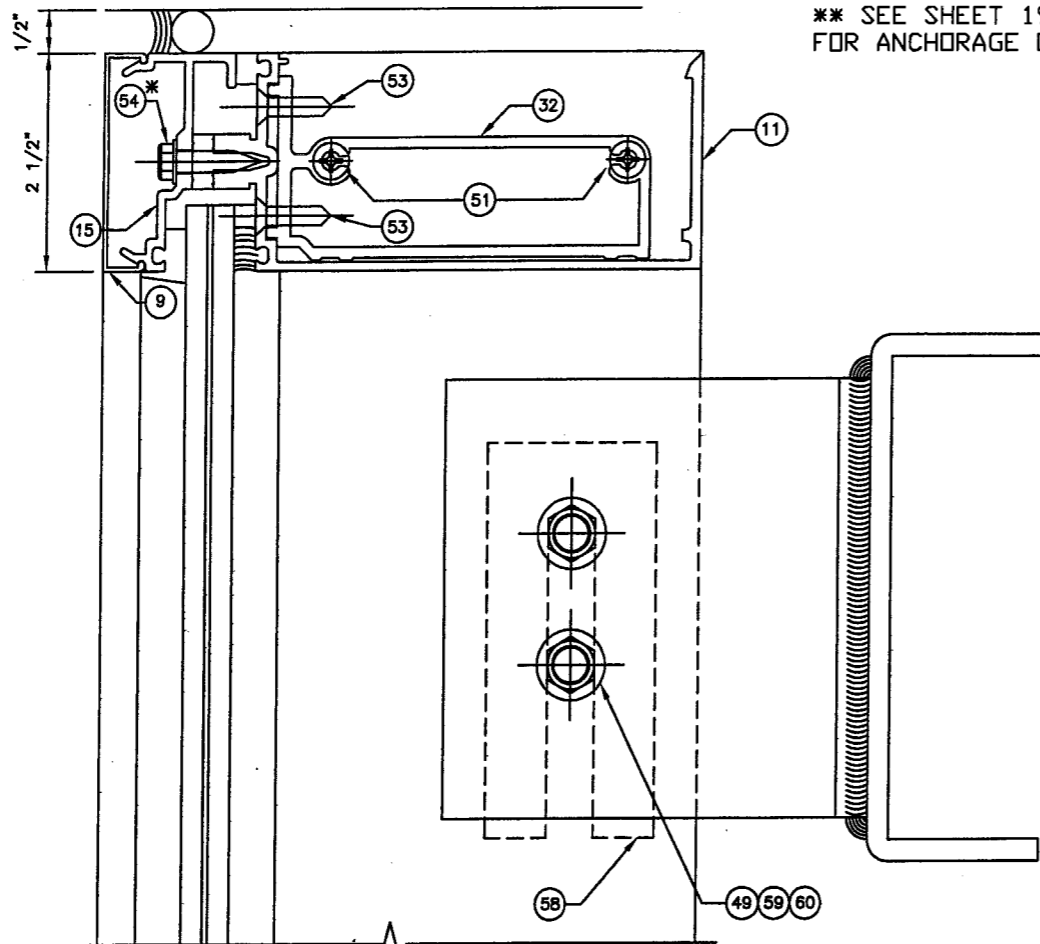
*[Signature]*  
 4/11/09  
 FLA REG - 35686/CIVIL

TAD	DEH	DEH	BY
3	04/07/09	REVISED FOR FBC, 2007 EDITION	
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	
E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION

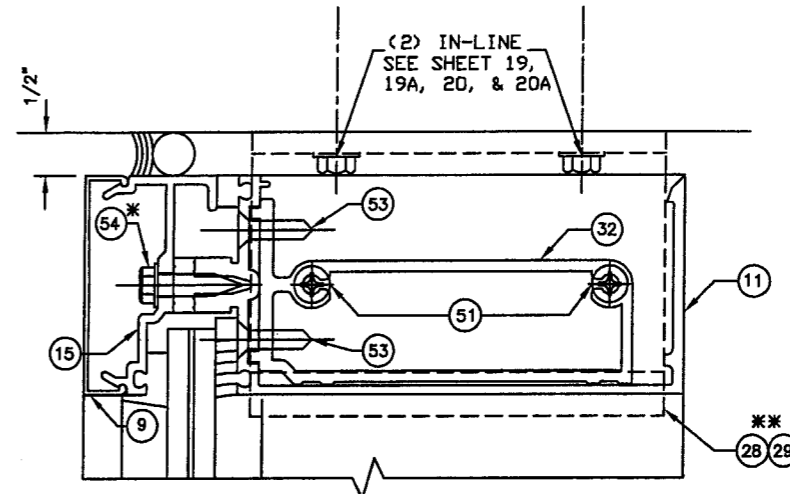
CANTILEVER HEAD CONDITION SEE SHEET 17  
 DETAIL 33 FOR HEAD ANCHOR DETAIL

\* SPACED MAX. 3" O. C.  
 \*\* SEE SHEET 19, 19A, 20, 20A, 21, & 21A  
 FOR ANCHORAGE OPTIONS

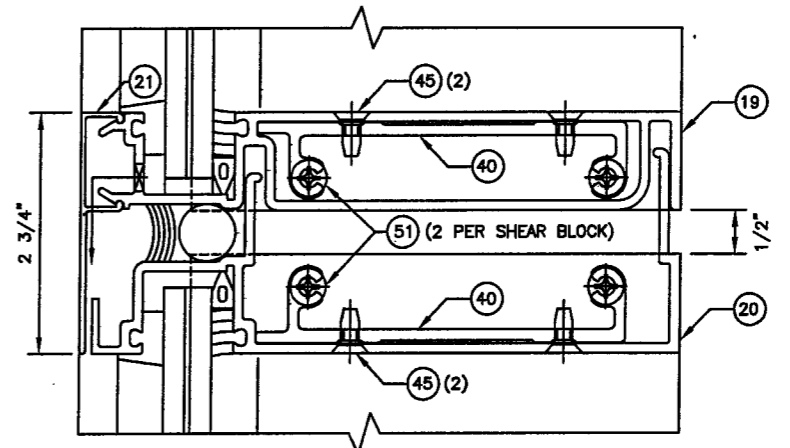
EXTERIOR  
 10  
 CANTILEVER  
 HEAD



EXTERIOR  
 10A  
 JAMB CORNER  
 HEAD

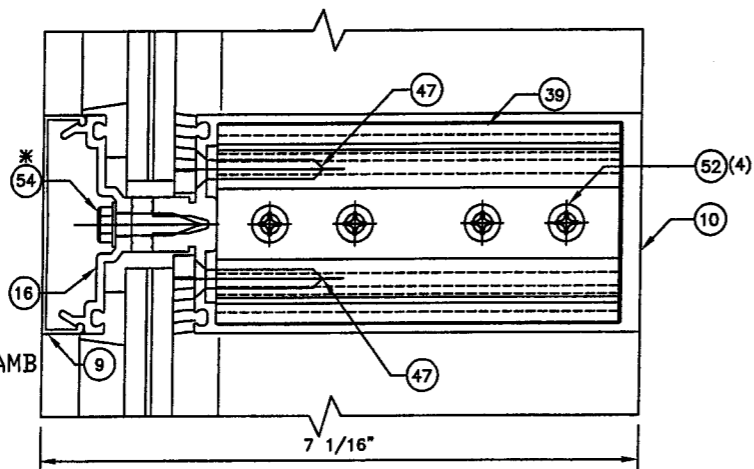


EXTERIOR  
 14  
 EXPANSION  
 HORIZONTAL

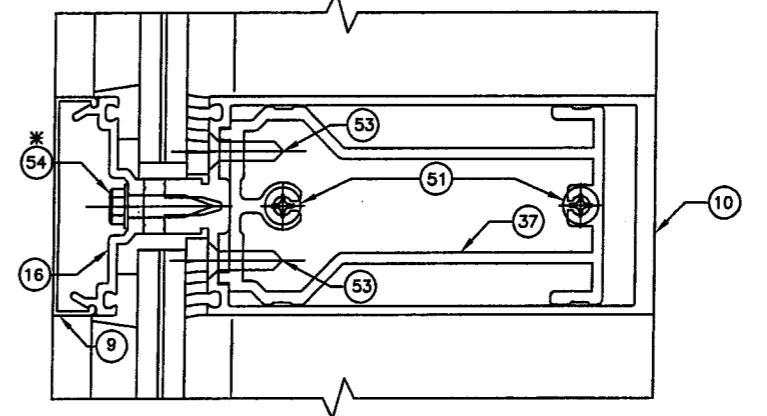


NOTE: IF END LOAD OF HORIZONTAL IS > 643#'S USE SHEAR BLOCK AT DETAIL 12, IF LOAD IS <OR= 643#'S USE STANDARD SHEAR BLOCK DETAILS 10, 11, AND 13.

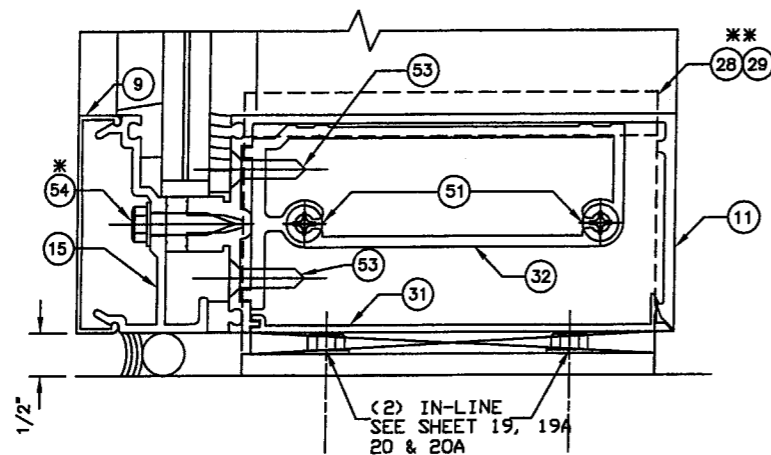
EXTERIOR  
 12  
 INT. HORIZONTAL  
 (ATTACHMENT OF INT.  
 HORIZONTAL TO FIXED JAMB  
 WHEN ADJACENT TO A  
 90° OUTSIDE CORNER)



EXTERIOR  
 11  
 INT. HORIZONTAL



EXTERIOR  
 13  
 SILL



LARGE MISSILE  
 IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23  
 FOR SPECIFIC INFORMATION REGARDING GLAZING  
 MATERIALS AND GLASS BITE

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No 08-1104-03  
 Expiration Date JANUARY 9, 2014  
 By *Manuel Argus*  
 Miami Dade Product Control  
 Division

THIS DRAWING IS FOR  
 DADE COUNTY  
 PRODUCT APPROVAL  
 ONLY

BALLARD L. ARGUS, P. E.  
 530 West Pine Street  
 Suite 5  
 Ponchatoula, LA 70454  
 Phone (985) 386-4599

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
 Product Engineering & Development  
 555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
 PHONE (770) 449-5555  
 FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

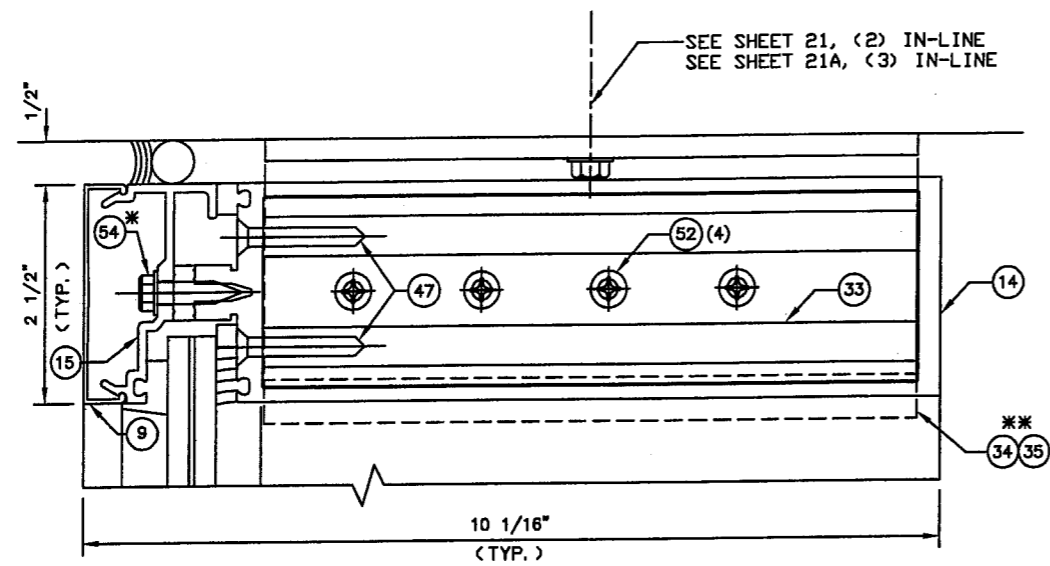
FLA REG - 35686/CIVIL	
DRAWN BY JME	DATE 02/20/03
DRWG. NO. T162-951	
SHEET 10 of 23	T162-951-10.DWG

REV.	DATE	DESCRIPTION OF REVISION
3	04/07/09	REVISED FOR FBC, 2007 EDITION
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS
1	10/30/03	REVISED PER DADE COUNTY THRID REQUEST LETTER

E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION
3	04/07/09		REVISED FOR FBC, 2007 EDITION
2	06/01/07		REVISED BALLARD L ARGUS ADDRESS
1	10/30/03		REVISED PER DADE COUNTY THRID REQUEST LETTER

EXTERIOR

15  
HEAD



SEE SHEET 21, (2) IN-LINE  
SEE SHEET 21A, (3) IN-LINE

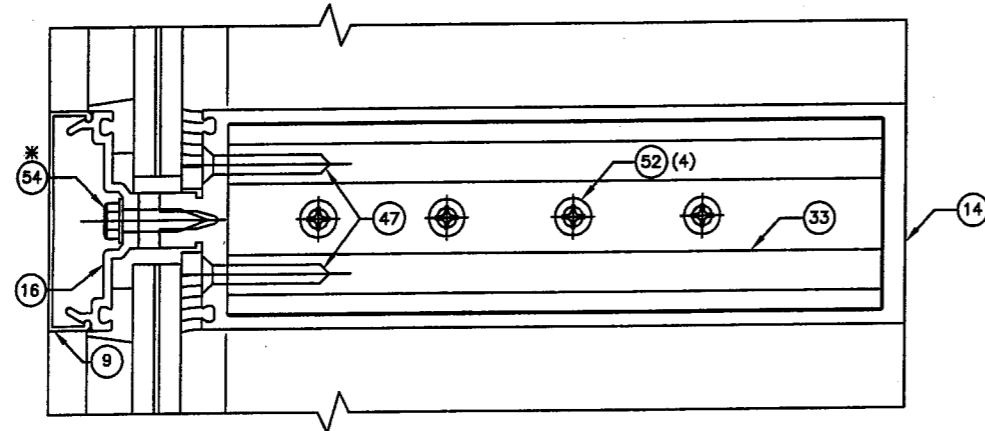
# LARGE MISSILE IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23 FOR SPECIFIC INFORMATION REGARDING GLAZING MATERIALS AND GLASS BITE

- \* SPACED MAX. 3' O. C.
- \*\* SEE SHEET 21 & 21A FOR ANCHORAGE OPTIONS

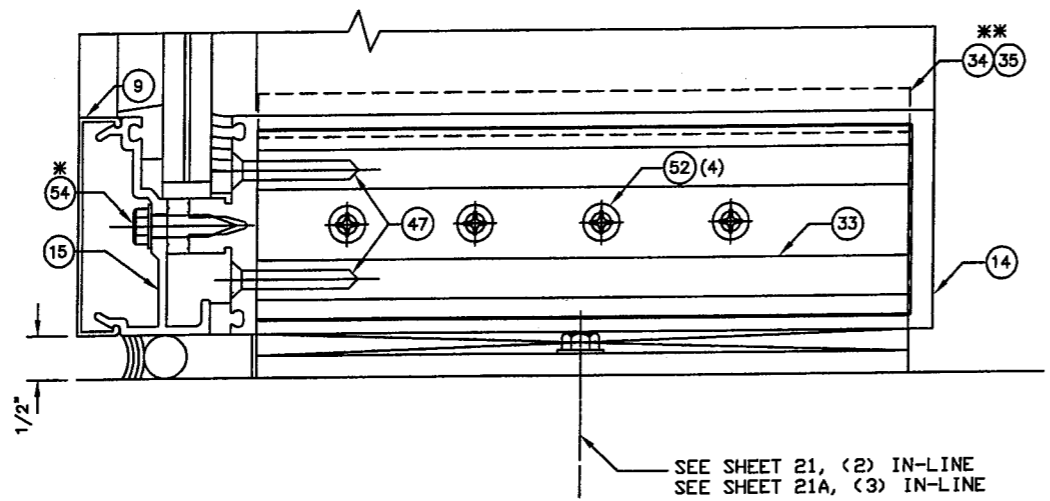
EXTERIOR

16  
INT. HORIZONTAL



EXTERIOR

17  
SILL



SEE SHEET 21, (2) IN-LINE  
SEE SHEET 21A, (3) IN-LINE

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No 08-1104-03  
Expiration Date January 8, 2014  
By Manuel J...  
Miami Dade Product Control Division

**THIS DRAWING IS FOR  
DADE COUNTY  
PRODUCT APPROVAL  
ONLY**

**BALLARD L ARGUS, P. E.**  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

*[Signature]*  
4/17/09  
FLA REG - 35686/CIVIL

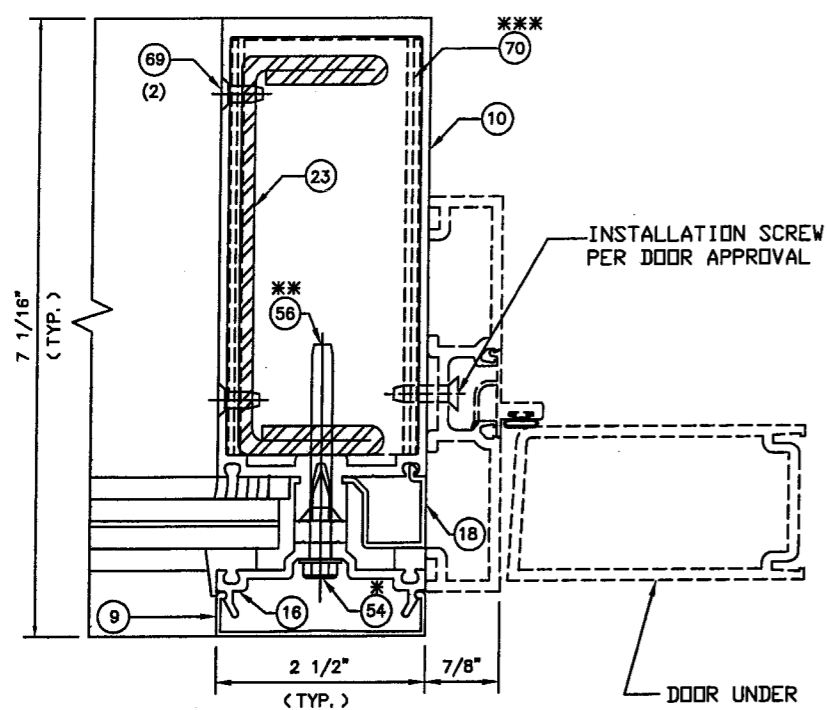
EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

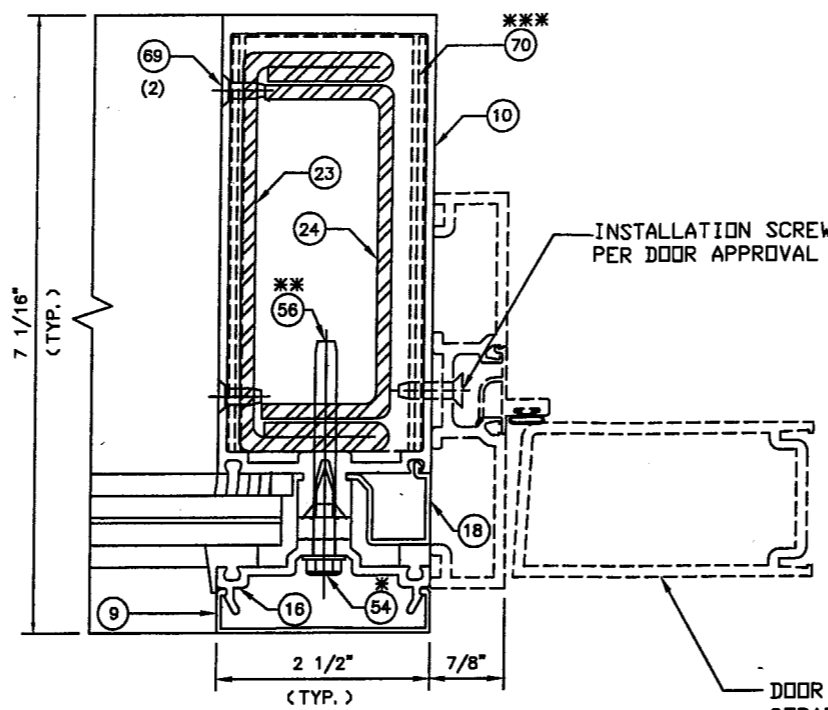
SCALE: 5-1/2" = 1'

DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	11 of 23	T162-951-11.DWG	



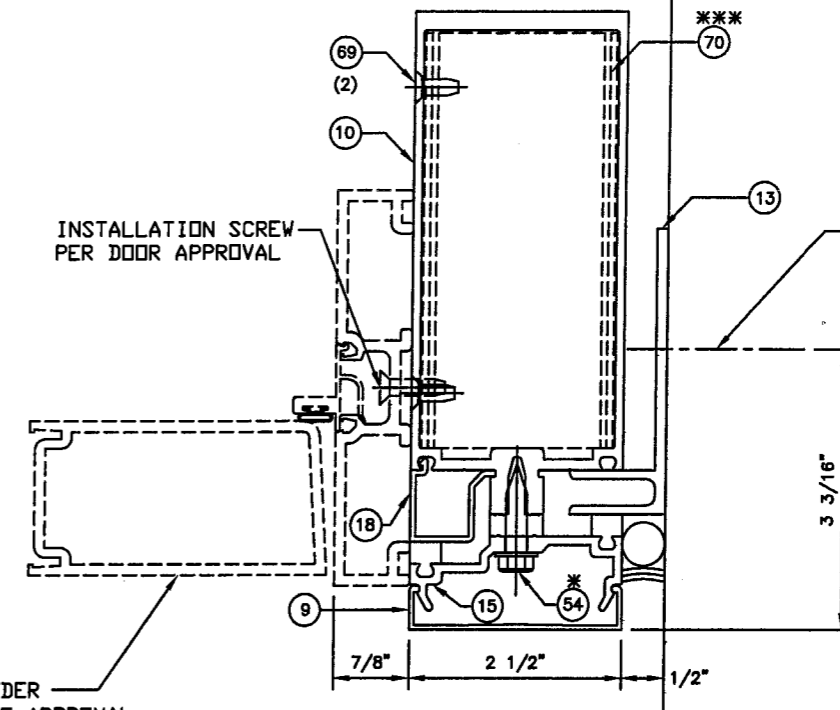
18 EXTERIOR

DOOR JAMB @  
INT. MULLION  
W/ 162-301 STEEL  
 $I = 26.078 \text{ IN.}^4$   
(TRANSFORMED SECTION  
PROPERTIES IN TERMS  
OF ALUMINUM)



19 EXTERIOR

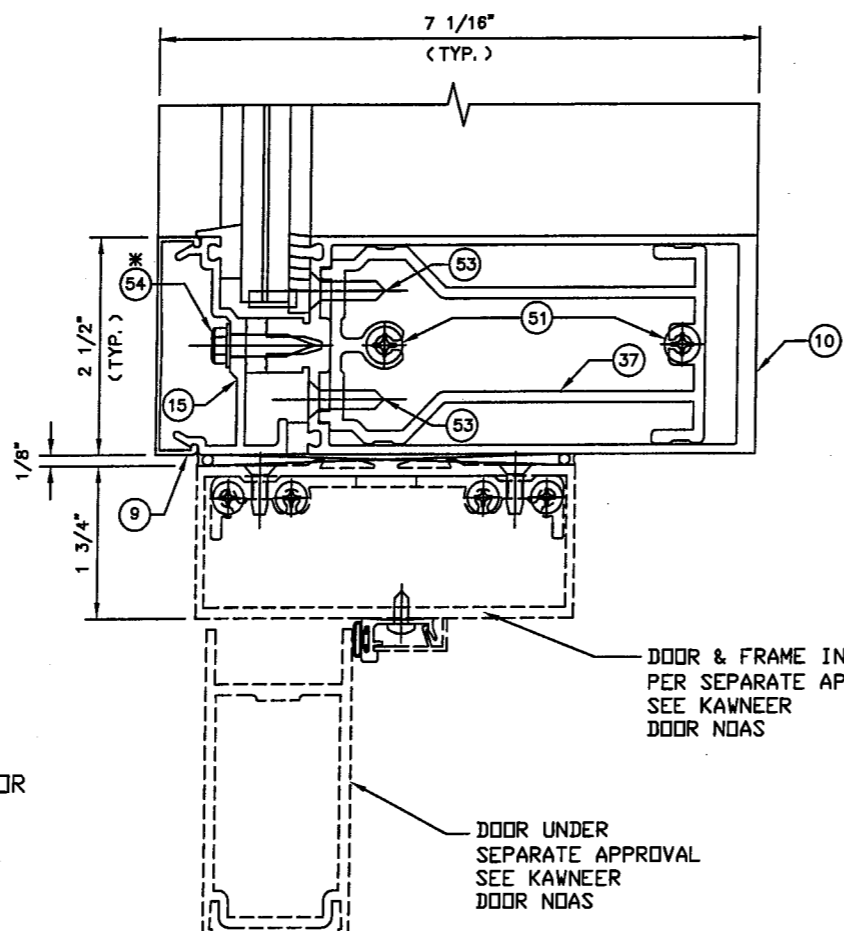
DOOR JAMB @  
INT. MULLION  
W/ 162-301/302 STEEL  
 $I = 32.484 \text{ IN.}^4$  (TRANSFORMED SECTION  
PROPERTIES IN TERMS  
OF ALUMINUM)



EXTERIOR 20

DOOR JAMB @  
SUBSTRATE  
 $I = 9.594 \text{ IN.}^4$   
 $S = 3.163 \text{ IN.}^3$

SEE  
29A  
19  
FOR JAMB  
PERIMETER  
ANCHOR



21  
TRANSOM

EXTERIOR

DOOR & FRAME INSTALLATION  
PER SEPARATE APPROVAL  
SEE KAWNEER  
DOOR NOAS

DOOR UNDER  
SEPARATE APPROVAL  
SEE KAWNEER  
DOOR NOAS

## LARGE MISSILE IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23 FOR SPECIFIC  
INFORMATION REGARDING GLAZING MATERIALS AND GLASS BITE

- \* SPACED MAX. 3" O. C.
- \*\* SPACED MAX. 12" O. C.
- \*\*\* SEE SHEET 19, 19A, 20, 20A, 21,  
21A FOR ANCHORAGE OPTIONS

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

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4/17/09

DRAWN BY JME DATE 02/20/03  
DRWG. NO. T162-951  
SHEET 12 of 23 T162-951-12.DWG

TAD	DEH	DEH	BY
3	04/07/09	REVISED FOR FBC, 2007 EDITION	
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	
E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION

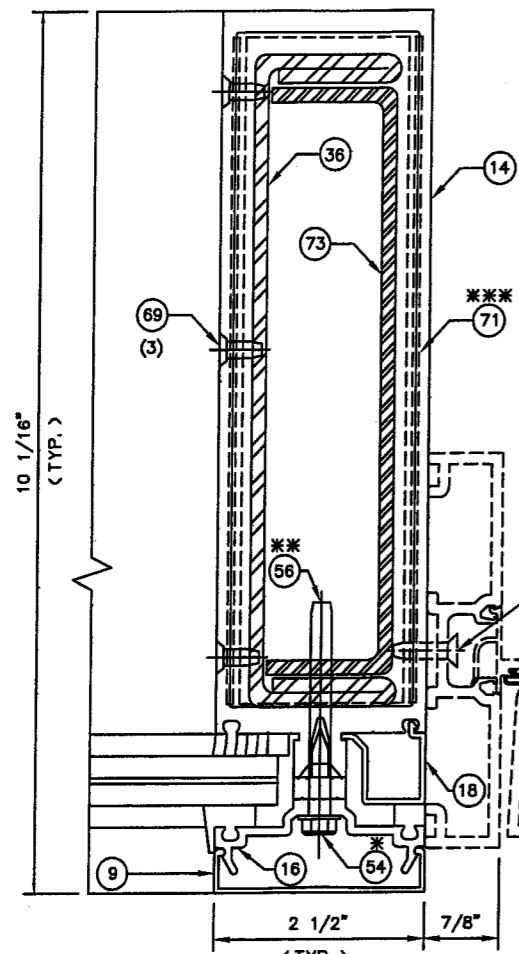
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. ~~08-1104-03~~  
Expiration Date ~~JANUARY 8, 2014~~  
By *Manuel Sosa*  
Miami Dade Product Control  
Division

THIS DRAWING IS FOR  
DADE COUNTY  
PRODUCT APPROVAL  
ONLY

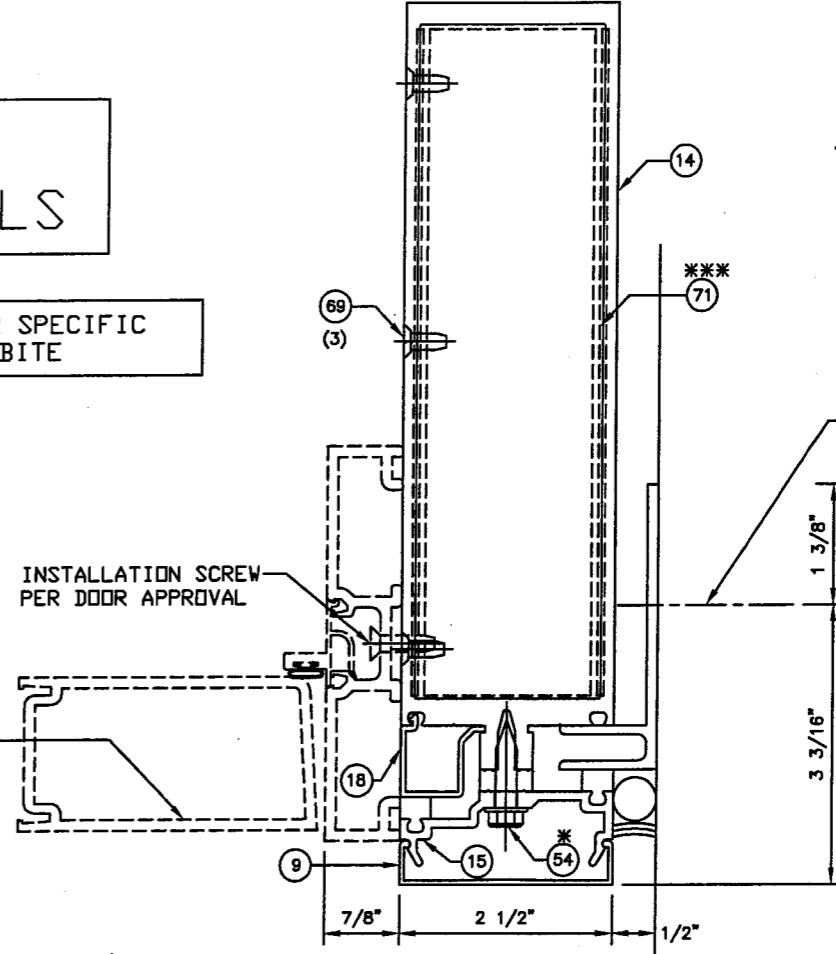
# LARGE MISSILE IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23 FOR SPECIFIC INFORMATION REGARDING GLAZING MATERIALS AND GLASS BITE

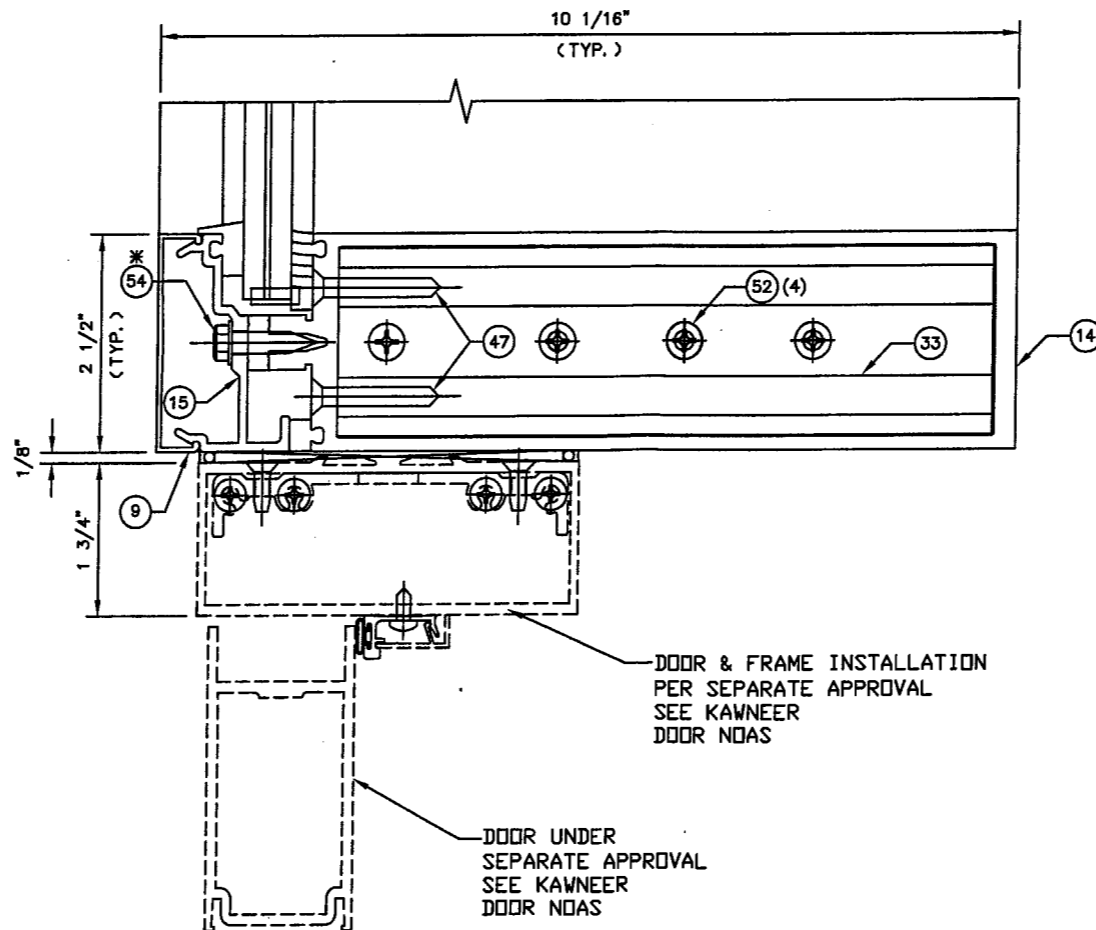
- \* SPACED MAX. 3' O. C.
- \*\* SPACED MAX. 12' O. C.
- \*\*\* SEE SHEET 21 & 21A FOR ANCHORAGE OPTIONS



**22** EXTERIOR  
 DOOR JAMB @  
 INT. MULLION  
 W/ 162-363 AND  
 162-364 STEEL  
 $I = 113.974 \text{ IN.}^4$   
 (TRANSFORMED SECTION  
 PROPERTIES IN TERMS  
 OF ALUMINUM)



**23** EXTERIOR  
 DOOR JAMB @  
 SUBSTRATE  
 $I = 36.451 \text{ IN.}^4$   
 $S = 8.279 \text{ IN.}^3$



**24** TRANSOM  
 EXTERIOR

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No 08-1104.03  
 Expiration Date JANUARY 8, 2014  
 By *[Signature]*  
 Miami/Dade Product Control  
 Division

THIS DRAWING IS FOR  
 DADE COUNTY  
 PRODUCT APPROVAL  
 ONLY

BALLARD L ARGUS, P. E.  
 530 West Pine Street  
 Suite 5  
 Ponchatoula, LA 70454  
 Phone (985) 386-4599

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
 Product Engineering & Development  
 555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
 PHONE (770) 449-5555  
 FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

*[Signature]*  
 4/17/09  
 FLA REG - 35686/CIVIL

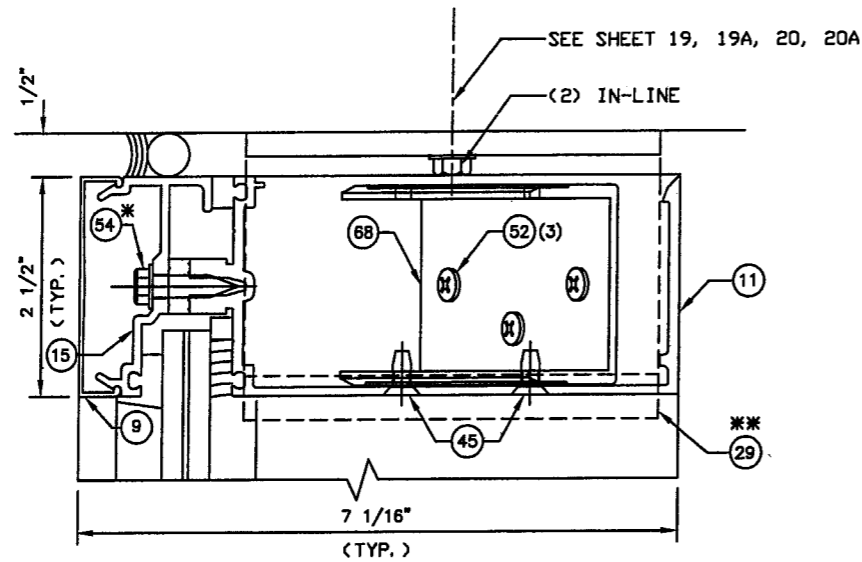
DRAWN BY	JME	DATE	02/20/03
DRVG. NO.	T162-951		
SHEET	13 of 23		
	T162-951-13.DWG		

TAD	DEH	DEH	BY
04/07/09	06/01/07	10/30/03	
3	2	1	
REVISOR	REVISION	DATE	DESCRIPTION OF REVISION
REVISOR	REVISION	DATE	DESCRIPTION OF REVISION
REVISOR	REVISION	DATE	DESCRIPTION OF REVISION



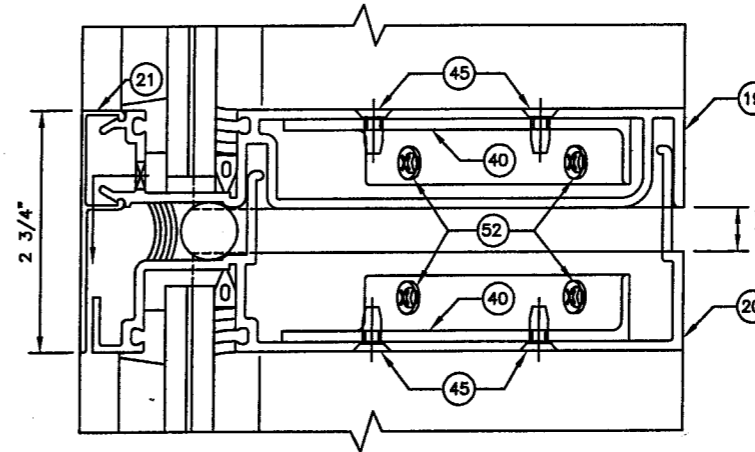
EXTERIOR

25  
JAMB HEAD  
AT CORNER



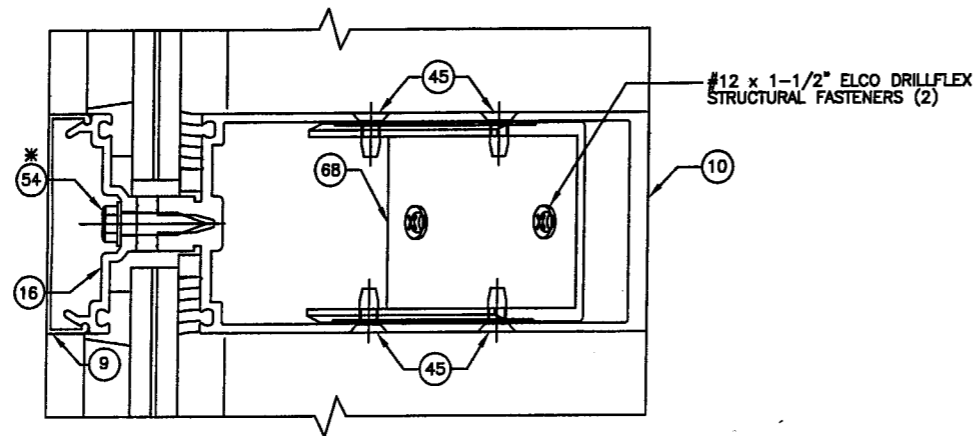
EXTERIOR

28  
EXPANSION  
HORIZONTAL



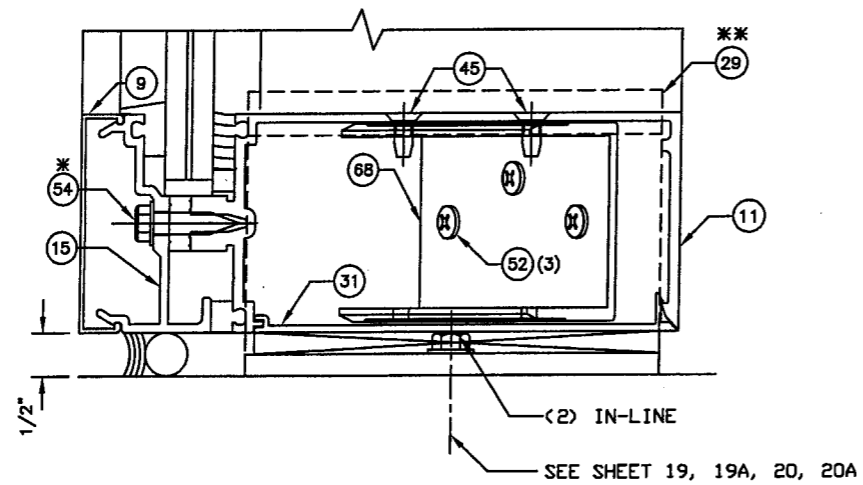
EXTERIOR

26  
INT. HORIZONTAL  
AT CORNER



EXTERIOR

27  
JAMB SILL  
AT CORNER



# LARGE MISSILE IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23 FOR SPECIFIC  
INFORMATION REGARDING GLAZING MATERIALS AND GLASS BITE

\* SPACED MAX. 3' O. C.  
\*\* SEE SHEET 19, 19A, 20, 20A, 21, 21A  
FOR ANCHORAGE OPTIONS

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

FLA REG - 35686/CIVIL  
DRAWN BY JME DATE 02/20/03

DRVG. NO. T162-951

SHEET 14 of 23 T162-951-14.DWG

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104.03  
Expiration Date JANUARY 8, 2014  
By *Manuel Perez*  
Miami Dade Product Control  
Division

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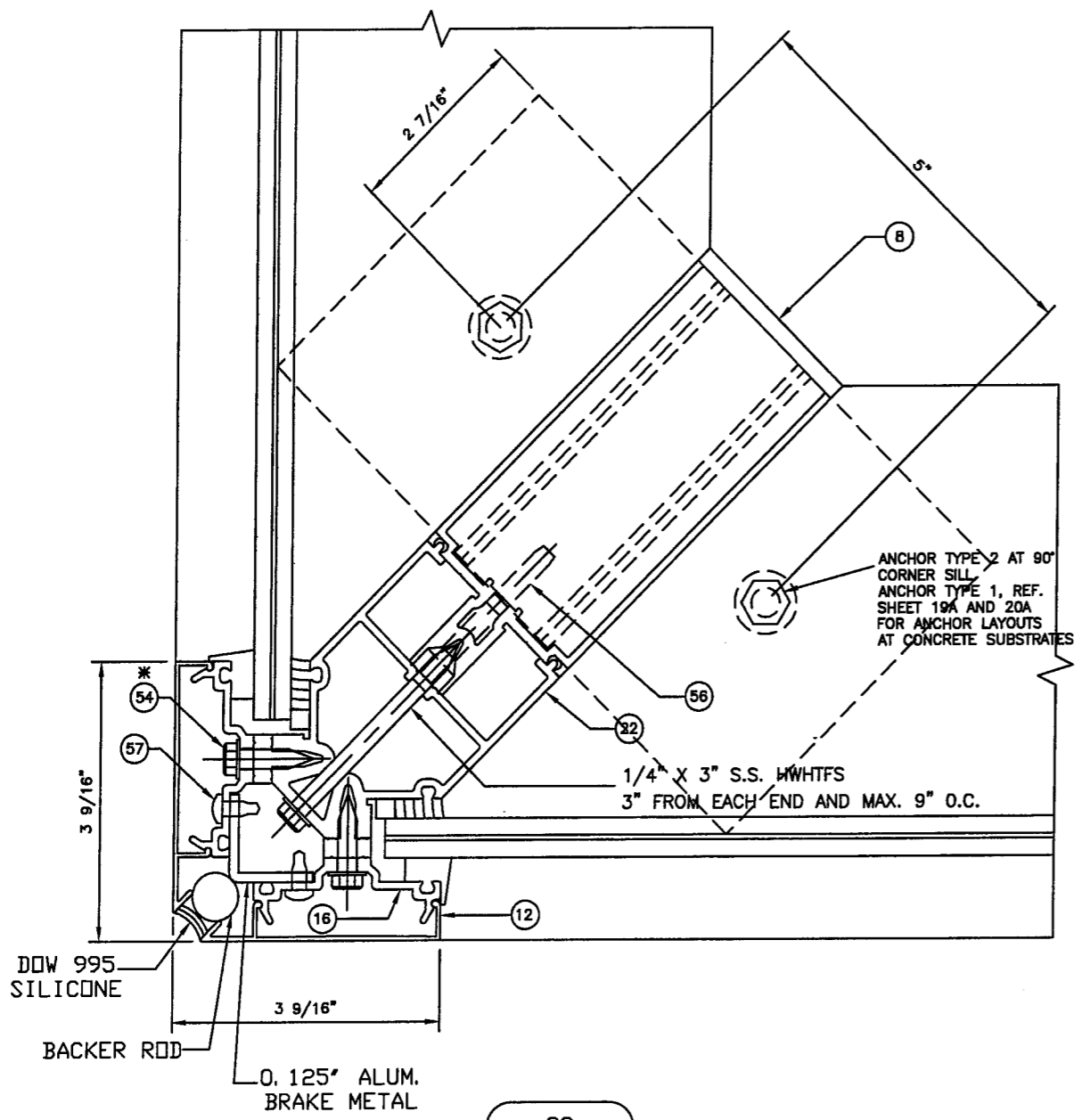
BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

*Bl*  
4/17/09

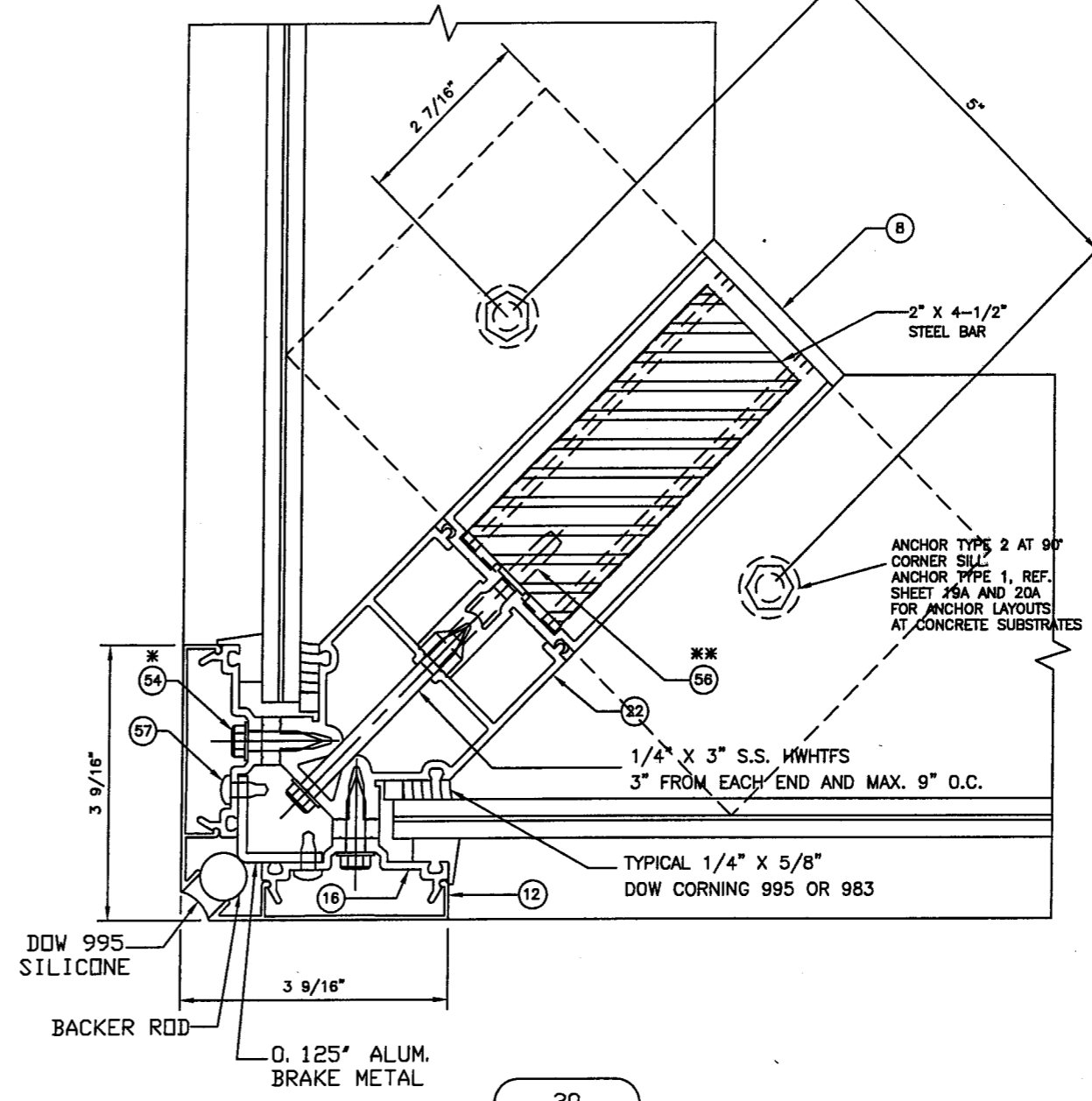
E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION	BY
3		04/07/09	REVISED FOR FBC, 2007 EDITION	TAD
2		06/01/07	REVISED BALLARD L ARGUS ADDRESS	DEH
1		10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER	DEH

NOTE:  
SEE SHEET 5 FOR DISIMILAR  
METAL COATING FOR STEEL

REV.	DATE	DESCRIPTION OF REVISION
3	04/07/09	REVISED FOR FBC, 2007 EDITION
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS
1	10/30/03	REVISED PER DADE COUNTY THRID REQUEST LETTER



29  
TWIN SPAN  
CORNER MULLION  
(NON-REINFORCED SECTION)



30  
TWIN SPAN  
CORNER MULLION  
(REINFORCED SECTION)  
W/ 2\"/>

LARGE MISSILE  
IMPACT RESISTANT DETAILS

REFER TO GLAZING DETAILS ON SHEETS 22, 23, OF 23 FOR SPECIFIC  
INFORMATION REGARDING GLAZING MATERIALS AND GLASS BITE

- \* SPACED MAX. 3\"/>
- \* SPACED MAX. 12\"/>

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104-03  
Expiration Date JANUARY 8 2014  
By *Marcus Pera*  
Miami/Dade Product Control  
Division

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PRODUCT APPROVAL  
ONLY

BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

*Ballard L Argus*  
4/17/09

FLA REG - 35686/CIVIL

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

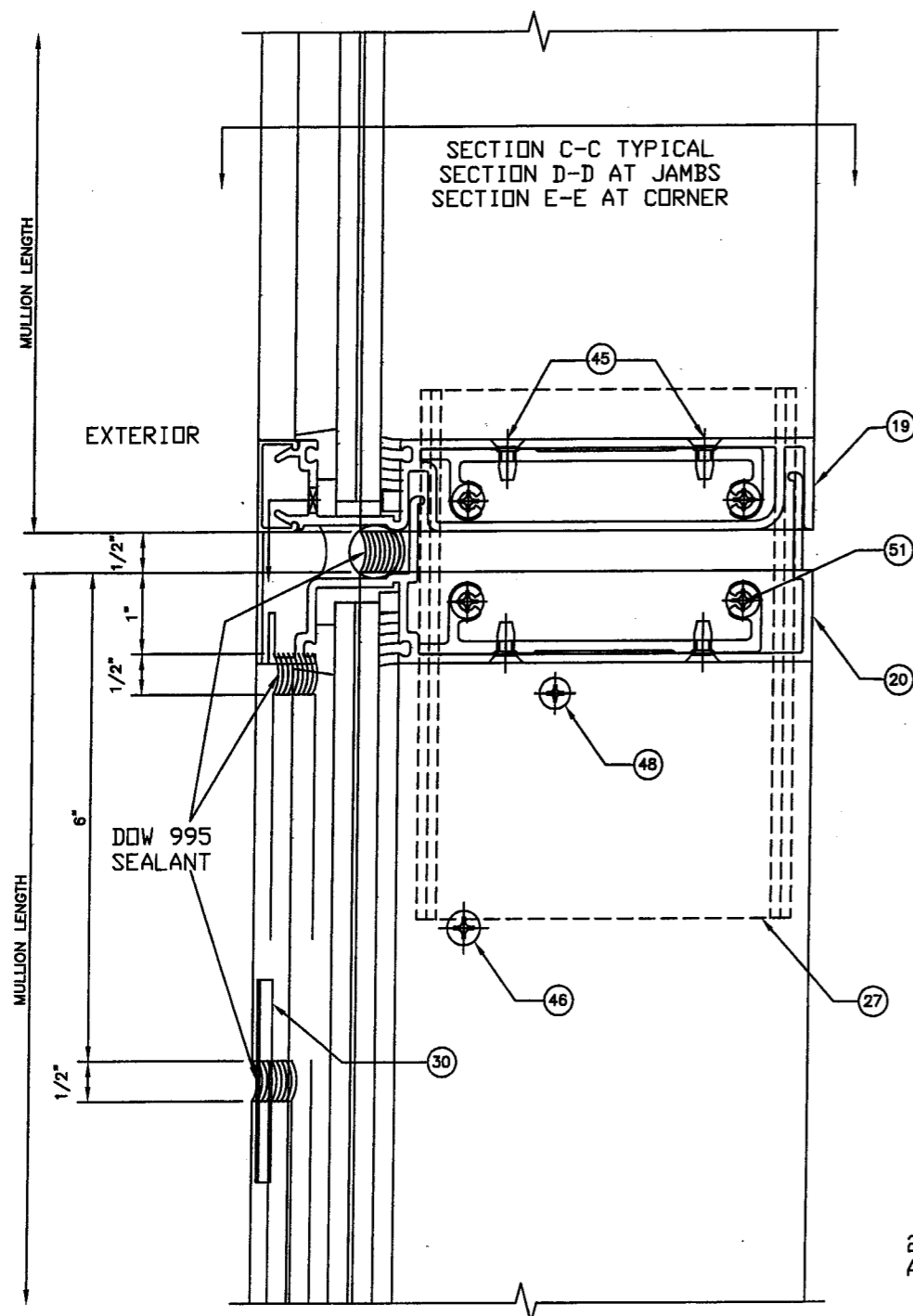
**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

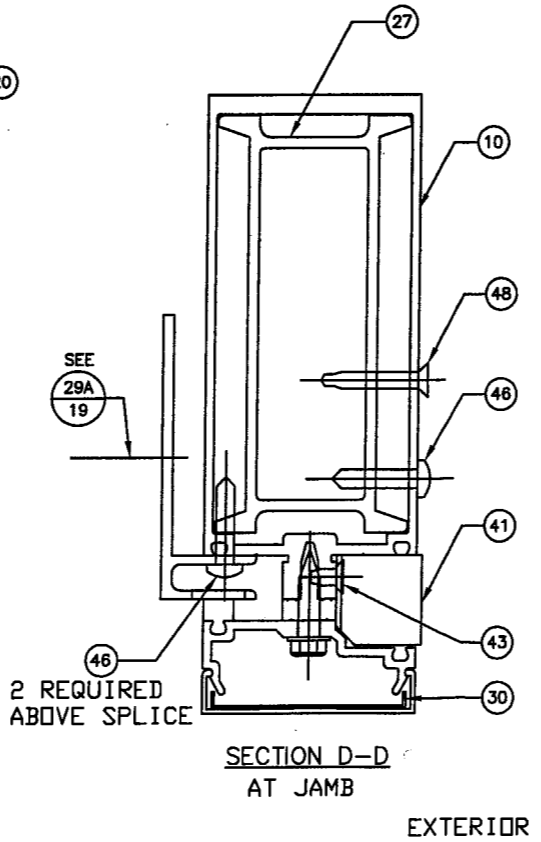
PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: 5-1/2\"/>

DRAWN BY JME	DATE 02/20/03
DRWG. NO. T162-951	
SHEET 15 of 23	T162-951-15.DWG

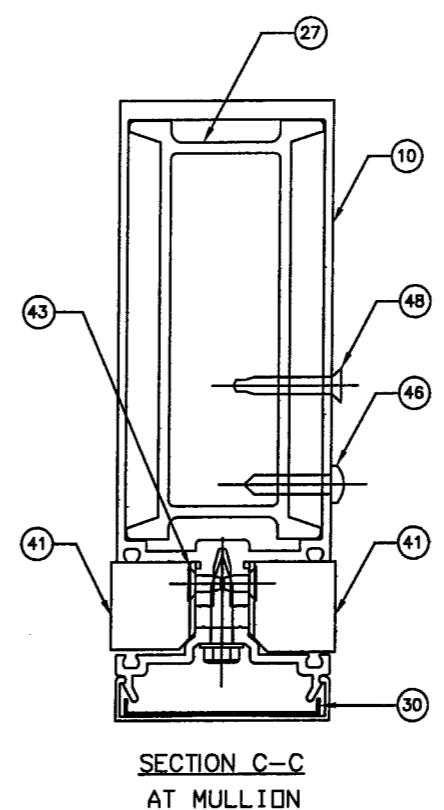


31  
SPLICE JOINT

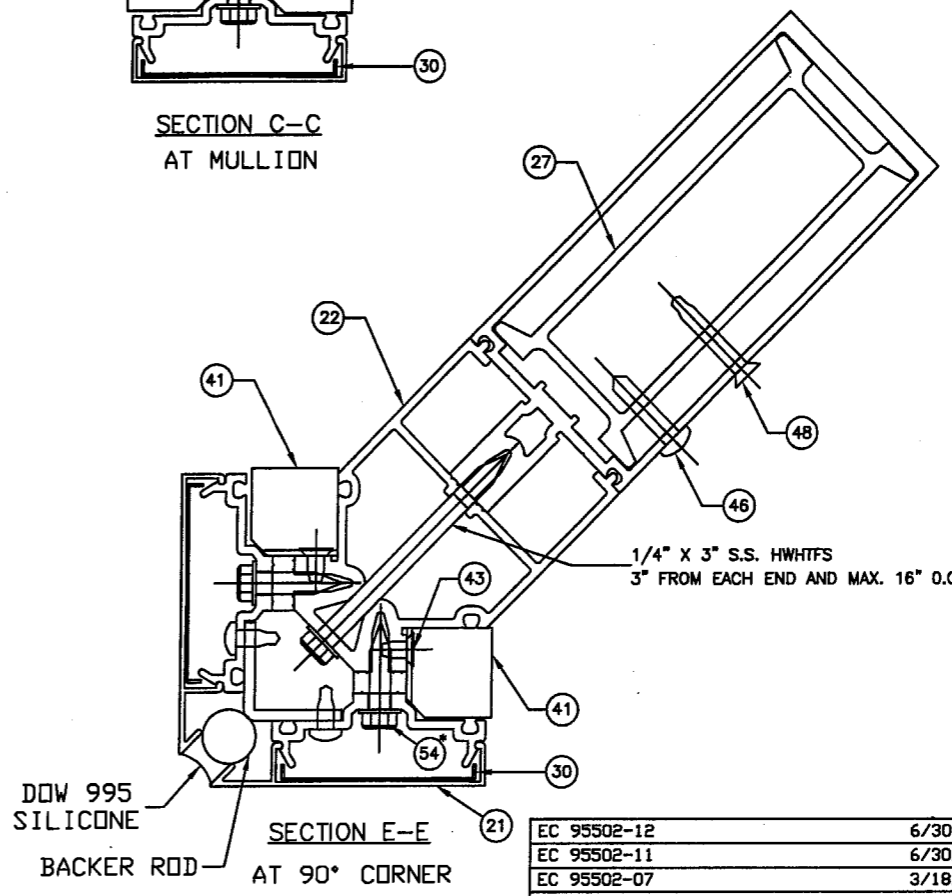


EXTERIOR

\* 3' O. C. SPACING



SECTION C-C  
AT MULLION



EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104.03  
Expiration Date JANUARY 8, 2014  
By *Manuel Diaz*  
Miami Dade Product Control  
Division

THIS DRAWING IS FOR  
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PRODUCT APPROVAL  
ONLY

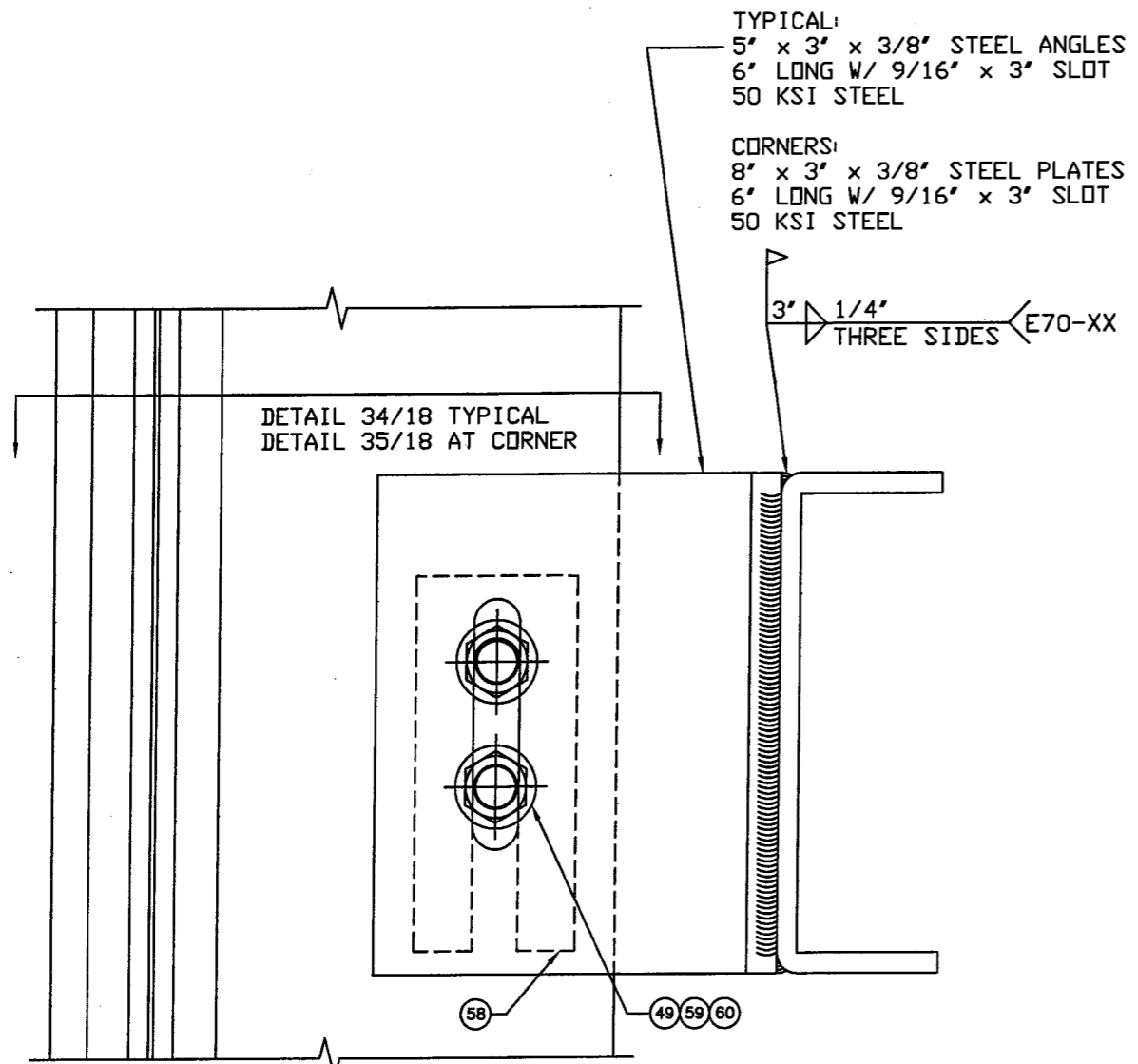
BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4399

*Bl*

4/12/09  
FLA REG - 35686/CIVIL

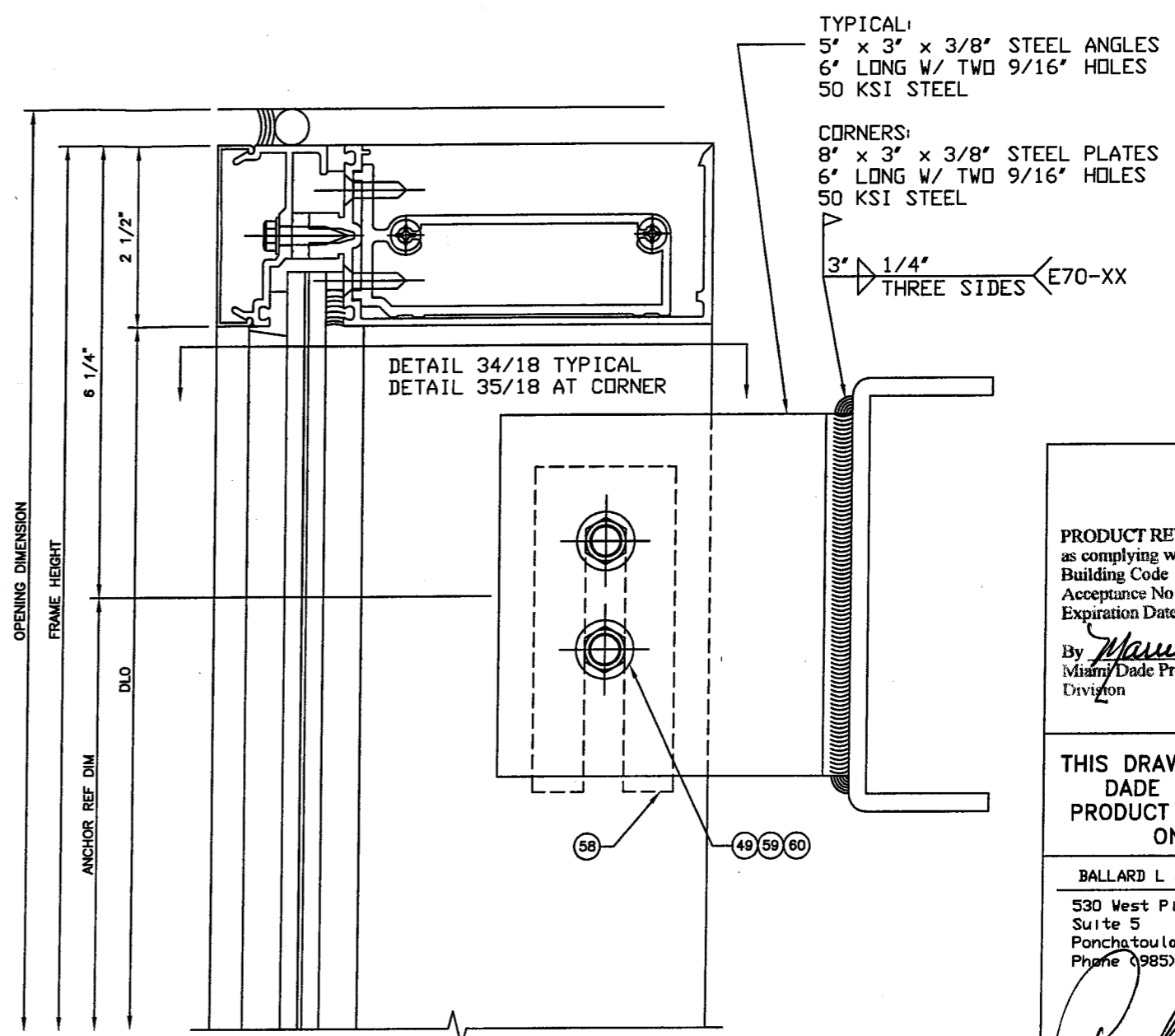
DRAWN BY JME	DATE 02/20/03
DRWG. NO. T162-951	
SHEET 16 of 23	T162-951-16.DWG

E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION	BY
3		04/07/09	REVISED FOR FBC, 2007 EDITION	TAD
2		06/01/07	REVISED BALLARD L ARGUS ADDRESS	DEH
1		10/30/03	REVISED PER DADE COUNTY THRID REQUEST LETTER	DEH



32

MID-SPAN ANCHOR  
(DEAD LOAD & WIND LOAD ANCHOR)



33

HEAD ANCHOR  
(DEAD LOAD & WIND LOAD ANCHOR)

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104-03  
Expiration Date JANUARY 8, 2014  
By Manuel Pina  
Miami/Dade Product Control  
Division

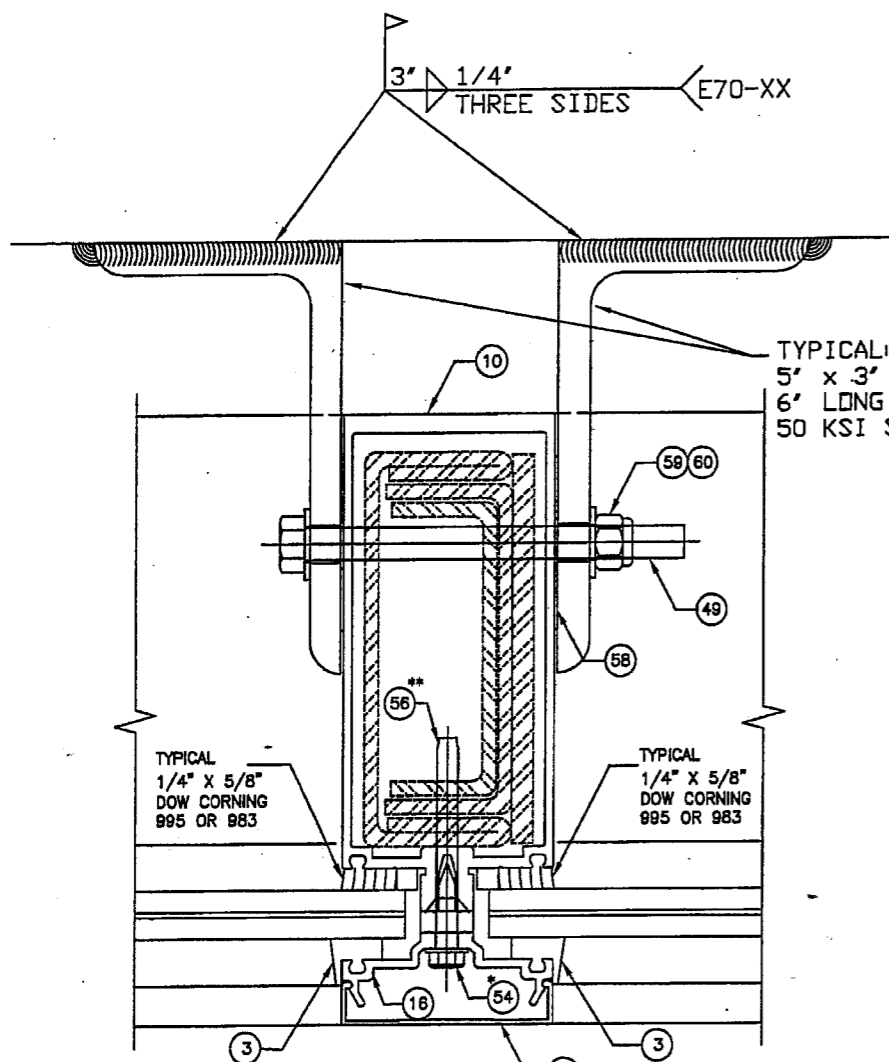
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PRODUCT APPROVAL  
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530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

*[Signature]*  
4/17/09  
FLA REG - 35686/CIVIL

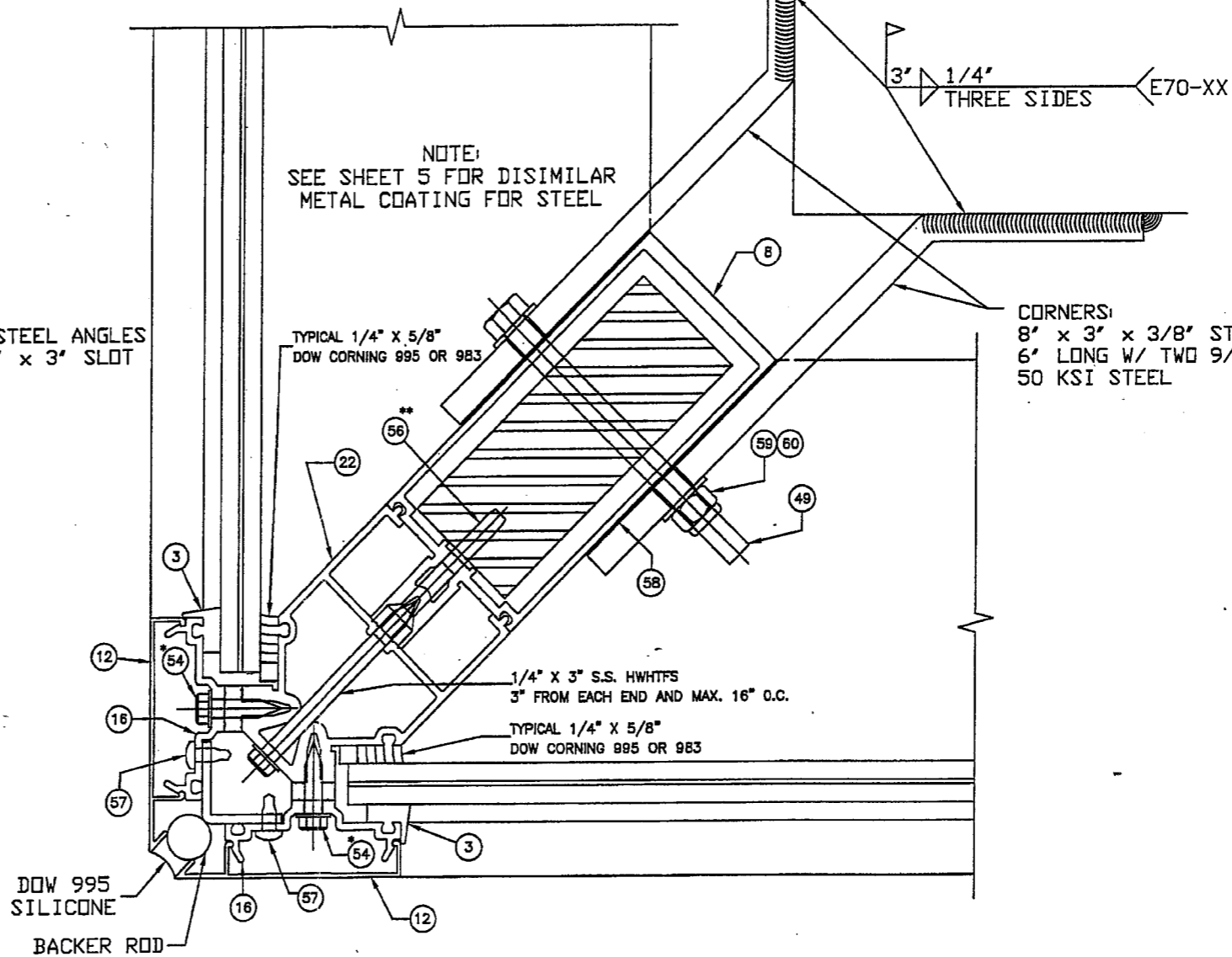
DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	17 of 23	T162-951-17.DWG	

E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION
3	04/07/09	REVISOR FOR FBC, 2007 EDITION	TAD
2	06/01/07	REVISOR BALLARD L ARGUS ADDRESS	DEH
1	10/30/03	REVISOR PER DADE COUNTY THIRD REQUEST LETTER	DEH
			BY



34  
EXTERIOR  
TWIN SPAN  
VERTICAL MULLION

\* 3' O.C. SPACING  
\*\* 12' O.C. SPACING



35  
EXTERIOR  
TWIN SPAN  
90° CORNER MULLION  
W/ 2" x 4-1/2" STEEL BAR

TAD	DEH	DEH	DEH	BY

PRODUCT REVISED as complying with the Florida Building Code  
 Acceptance No. 08-1104.03  
 Expiration Date: JANUARY 8, 2014  
 By: *Manuel...*  
 Miami Dade Product Control Division

THIS DRAWING IS FOR  
 DADE COUNTY  
 PRODUCT APPROVAL  
 ONLY

BALLARD L ARGUS, P.E.  
 530 West Pine Street  
 Suite 5  
 Ponchatoula, LA 70454  
 Phone (985) 386-4599

*[Signature]*

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

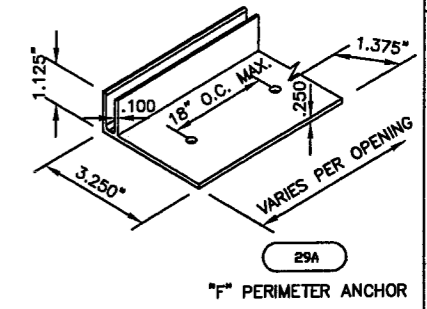
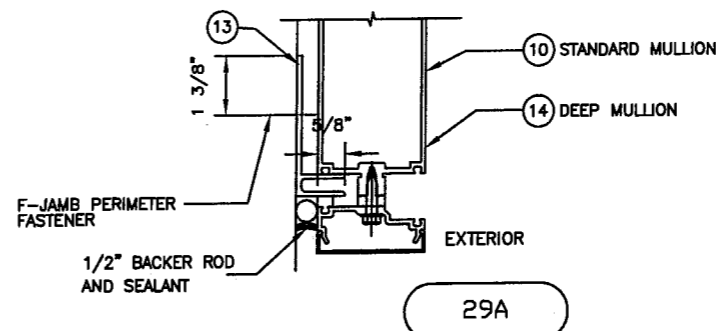
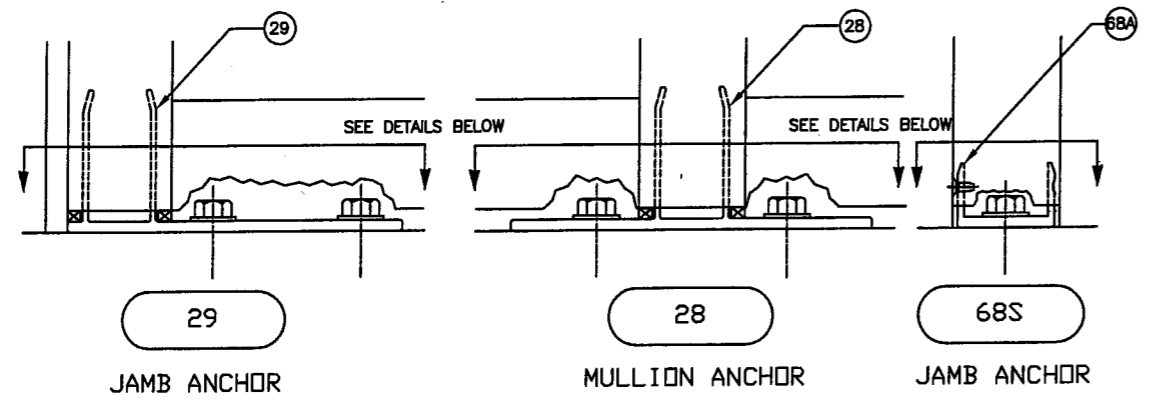
**KAWNEER**  
 Product Engineering & Development

555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
 PHONE (770) 449-5555  
 FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203

SCALE: 5-1/2" = 1'

4/17/09	FLA REG - 35686/CIVIL
DRAWN BY JME	DATE 02/20/03
DRWG. NO. T162-951	
SHEET 18 of 23	T162-951-18.DWG

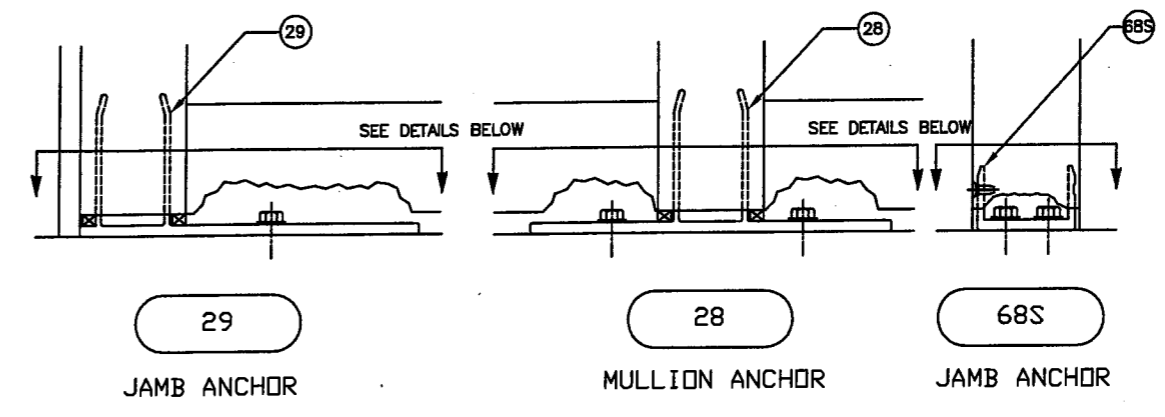


F JAMB PERIMETER FASTENER SCHEDULE

DESCRIPTION	MATERIAL	SUBSTRATE	MIN. EMBEDMENT	TYPICAL SPACING BETWEEN HORIZONTALS	SPACING AT HORIZONTAL CTR. LINE	
					V <sub>max</sub> (lbs)	QUANTITY AND SPACING
1/4-20 x 1-1/2" ELCO DRILLFLEX	SAE GRADE 5 STEEL	STEEL	1/8"	MAX. 18" O.C.	< OR = 650	1 ● HORIZ CTR LINE
					650 TO 1300	2 ● 3" O.C. MIN.
3/8" x 3" TITEN HD SCREW AN.	-	2500 PSI CONG.	2-1/2"	MAX. 18" O.C.	< OR = 712	1 ● HORIZ. C/L
					712 TO 894	2 ● 3" O.C. MIN.

TAD	DEH	DEH	BY
04/07/09	06/01/07	10/30/03	DATE
3	2	1	REV.
			E. C. NO.
			DESCRIPTION OF REVISION

SEE SHEET 19A FOR ANCHOR LAYOUTS AT CONCRETE SUBSTRATE



PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 08-1104-03 Expiration Date: January 2, 2014  
By: *Manuel Perez*  
Miami Dade Product Control Division

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BALLARD L ARGUS, P. E.  
530 West Pine Street Suite 5  
Ponchartraine, LA 70454  
Phone (985) 386-4599

*[Signature]*

4/17/09

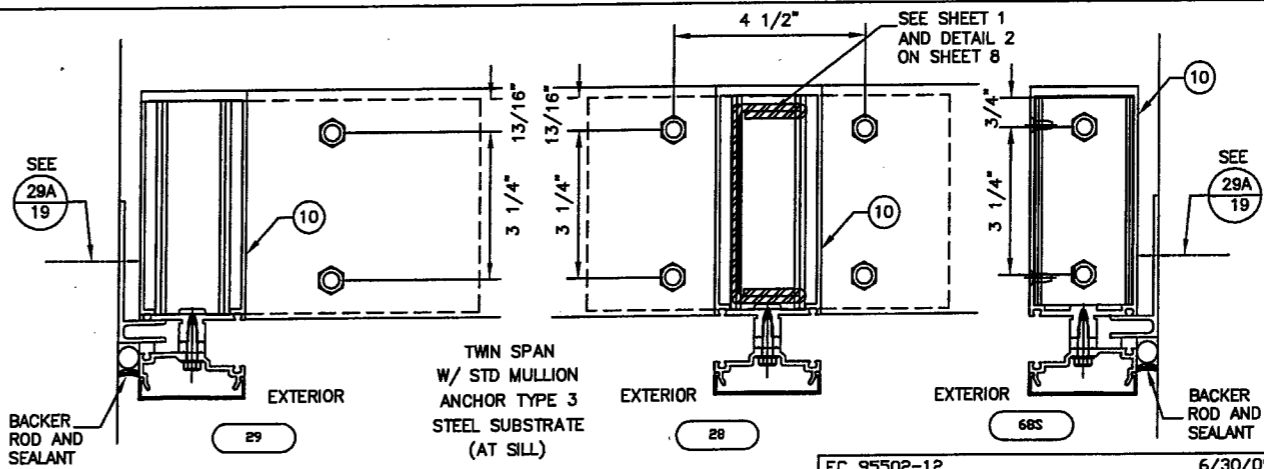
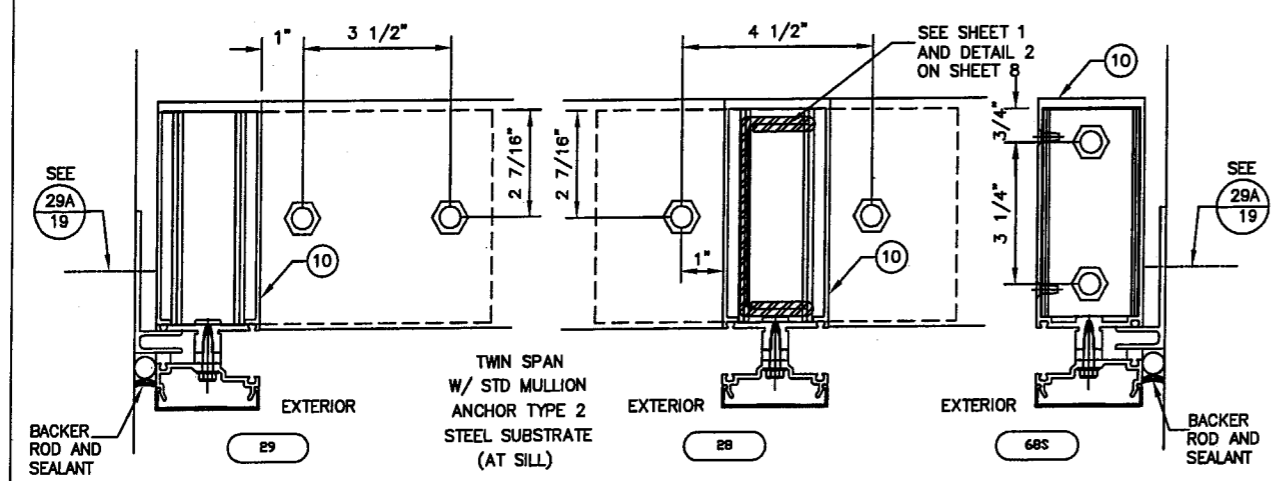
FLA REG - 35686/CIVIL

DRAWN BY JME DATE 02/20/03

DRWG NO. T162-951

SHEET T162-951-19.DWG

19 of 23



ANCHOR SCHEDULE

ANCHOR TYPE	NUMBER	DESCRIPTION	MATERIAL	SUBSTRATE	MIN. EMBEDMENT
2	-	1/2"-13 HEX CAP TEK SCREW	SAE GRADE 5 STEEL	1/2" - A36 STEEL	1/2"
3	-	3/8"-16 HEX CAP TEK SCREW	SAE GRADE 5 STEEL	1/4" - A36 STEEL	1/4"

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

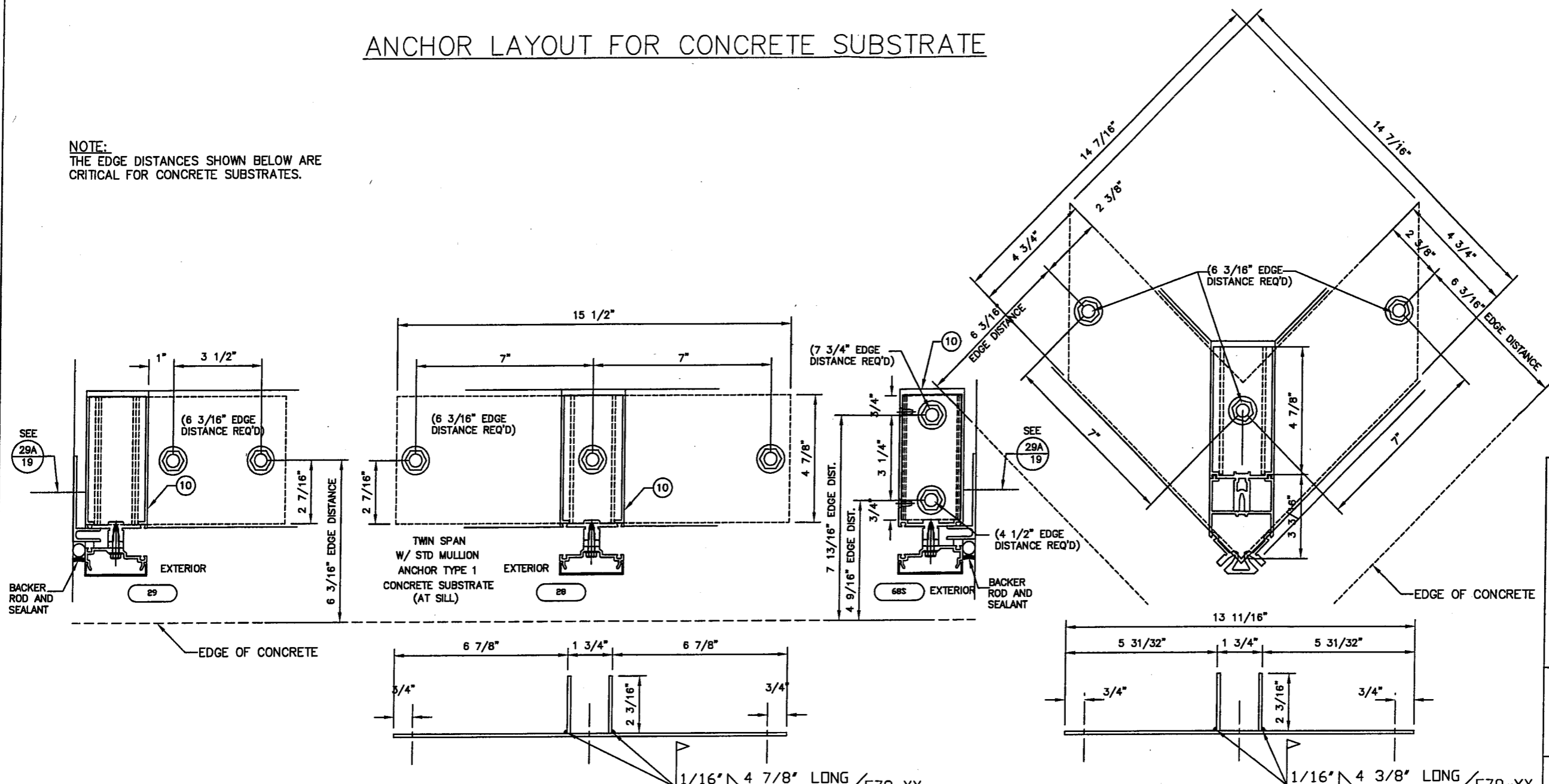
**KAWNEER**  
Product Engineering & Development  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: NOT TO SCALE

# ANCHOR LAYOUT FOR CONCRETE SUBSTRATE

NOTE:  
THE EDGE DISTANCES SHOWN BELOW ARE  
CRITICAL FOR CONCRETE SUBSTRATES.



## ANCHOR SCHEDULE

ANCHOR TYPE	NUMBER	DESCRIPTION	MATERIAL	SUBSTRATE	MIN. EMBEDMENT
1	-	1/2" X 5" TITEN HD SCREW ANCHOR	HEAT-TREATED CARBON STEEL, SAE J403, GRADE 10B21. ZINC PLATED, ASTM B633 S01, TYPE III	CONCRETE - MIN. 4000 PSI 9" SLAB THICKNESS REQ'D	4"

- (1) 1/8" X 15 1/2" X 4 7/8" STEEL PLATE W/ (3) THREE 9/16" HOLES, Fy = 50 KSI
- (2) 1/8" X 2 3/16" X 4 7/8" STEEL PLATES, WELDED TO STEEL BASE PLATE, Fy = 50 KSI

- (1) 1/8" X 14 7/16" X 14 7/16" STEEL PLATE W/ (3) THREE 9/16" HOLES, FORESHORTENED VIEW
- (2) 1/8" X 2 3/16" X 4 7/8" STEEL PLATES, WELDED TO STEEL BASE PLATE, LOCATED AS SHOWN

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203  
SCALE: NOT TO SCALE

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 08-1104-03  
Expiration Date January 8, 2014  
By Manuel Perez  
Miami Dade Product Control  
Division

THIS DRAWING IS FOR  
DADE COUNTY  
PRODUCT APPROVAL  
ONLY

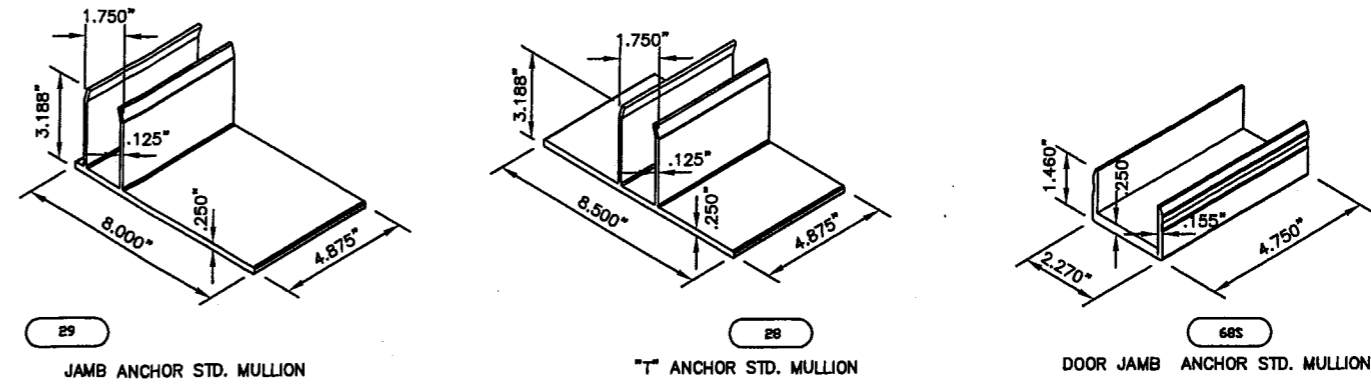
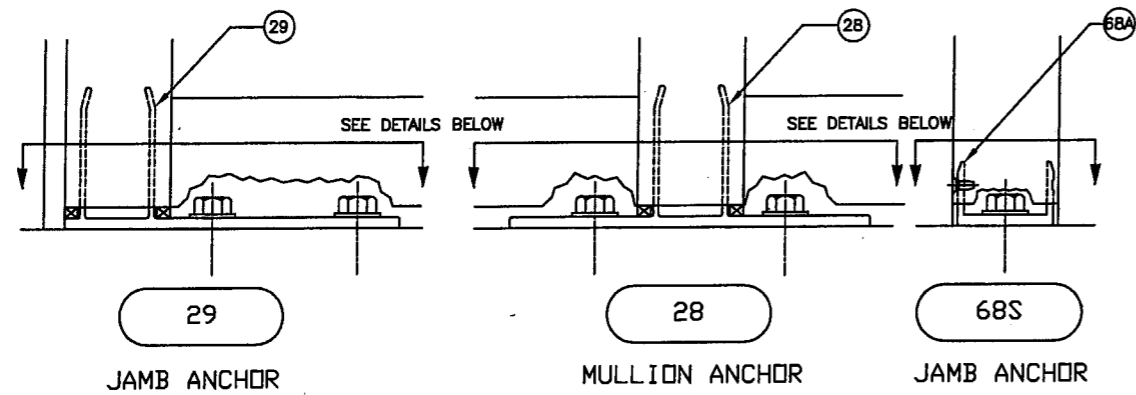
BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

*[Signature]*  
4/17/09

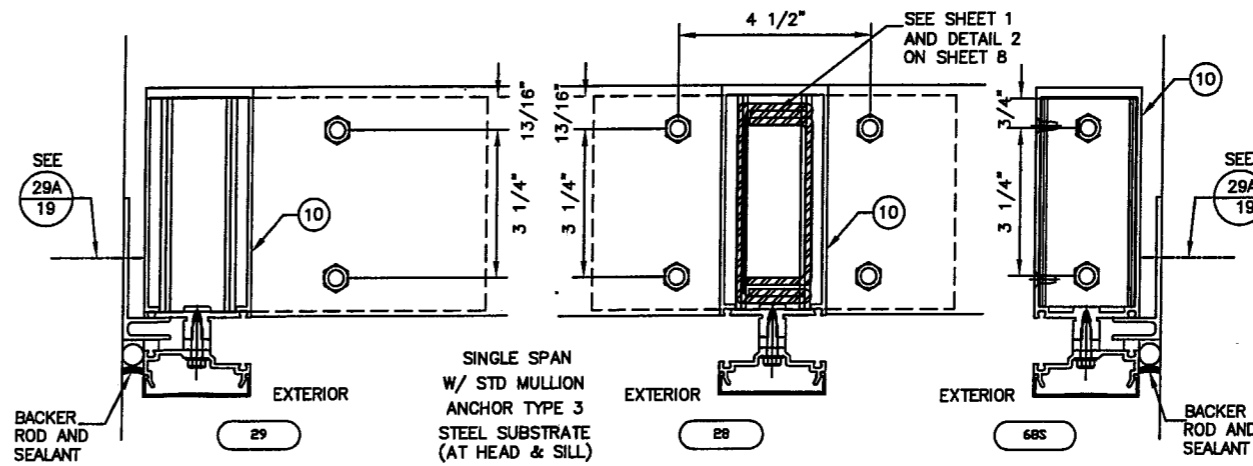
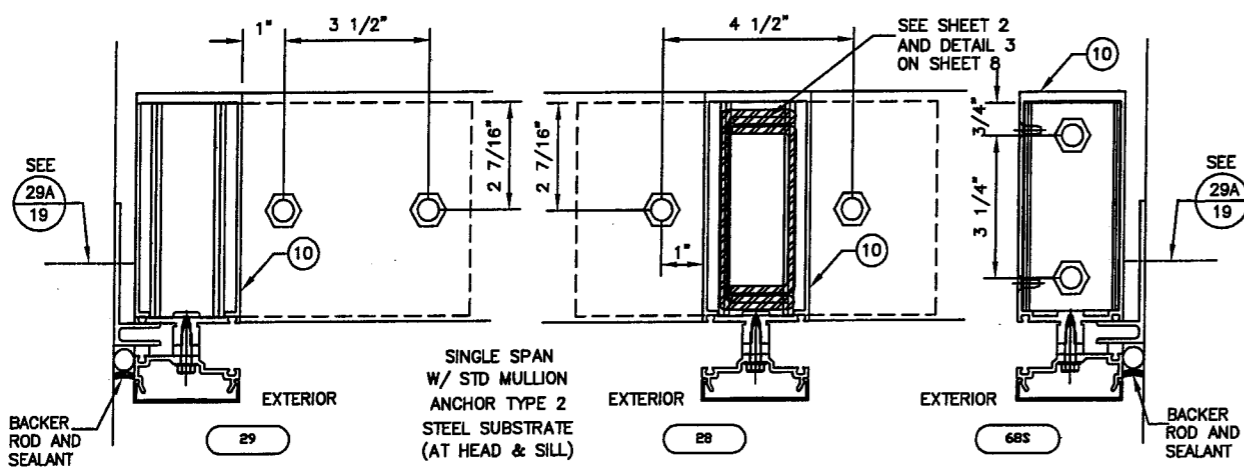
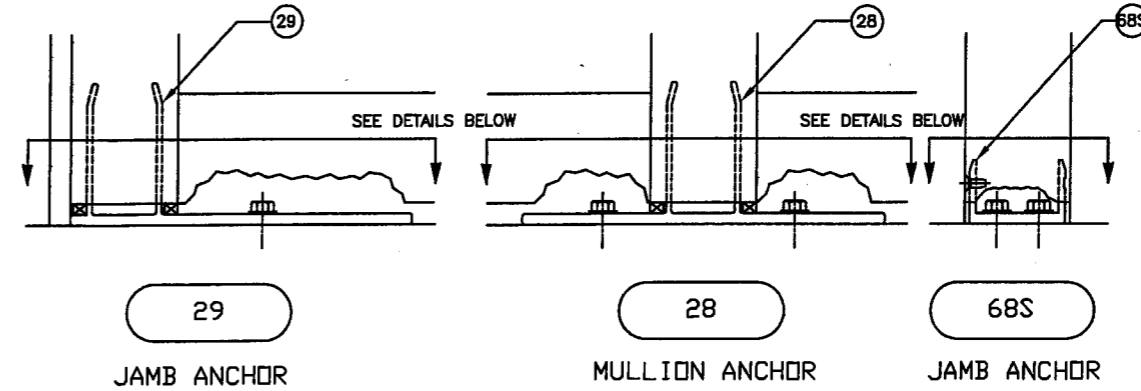
FLA REG - 35686/CIVIL

DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	19A of 23	DATE	T162-951-19.DWG

REV.	DATE	DESCRIPTION OF REVISION
3	04/07/09	REVISED FOR FBC, 2007 EDITION
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS
1	10/30/03	REVISED PER DADE COUNTY THIRD REQUEST LETTER



SEE SHEET 20A FOR ANCHOR LAYOUTS AT CONCRETE SUBSTRATE



### ANCHOR SCHEDULE

ANCHOR TYPE	NUMBER	DESCRIPTION	MATERIAL	SUBSTRATE	MIN. EMBEDMENT
2	-	1/2"-13 HEX CAP TEK SCREW	SAE GRADE 5 STEEL	1/2" - A36 STEEL	1/2"
3	-	3/8"-16 HEX CAP TEK SCREW	SAE GRADE 5 STEEL	1/4" - A36 STEEL	1/4"

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: NOT TO SCALE

FLA REG - 35686/CIVIL  
DRAWN BY JME DATE 02/20/03  
DRWG. NO.

T162-951

SHEET 20 of 23 T162-951-20.DWG

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 08-1104.03 Expiration Date January 8, 2014  
By *M. Argus*  
Miami/Dade Product Control Division

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BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

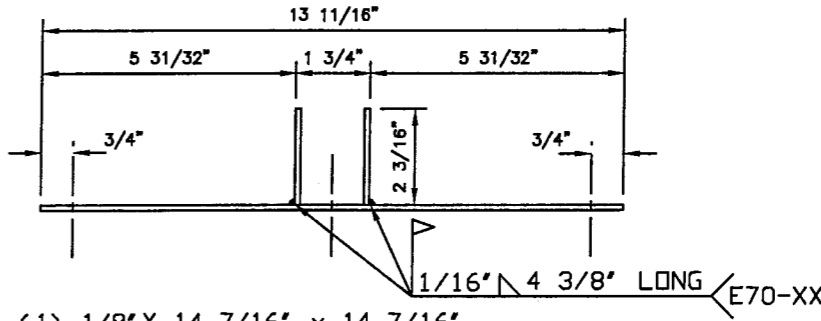
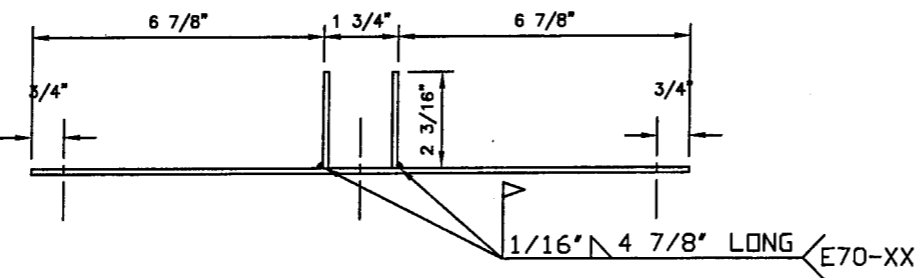
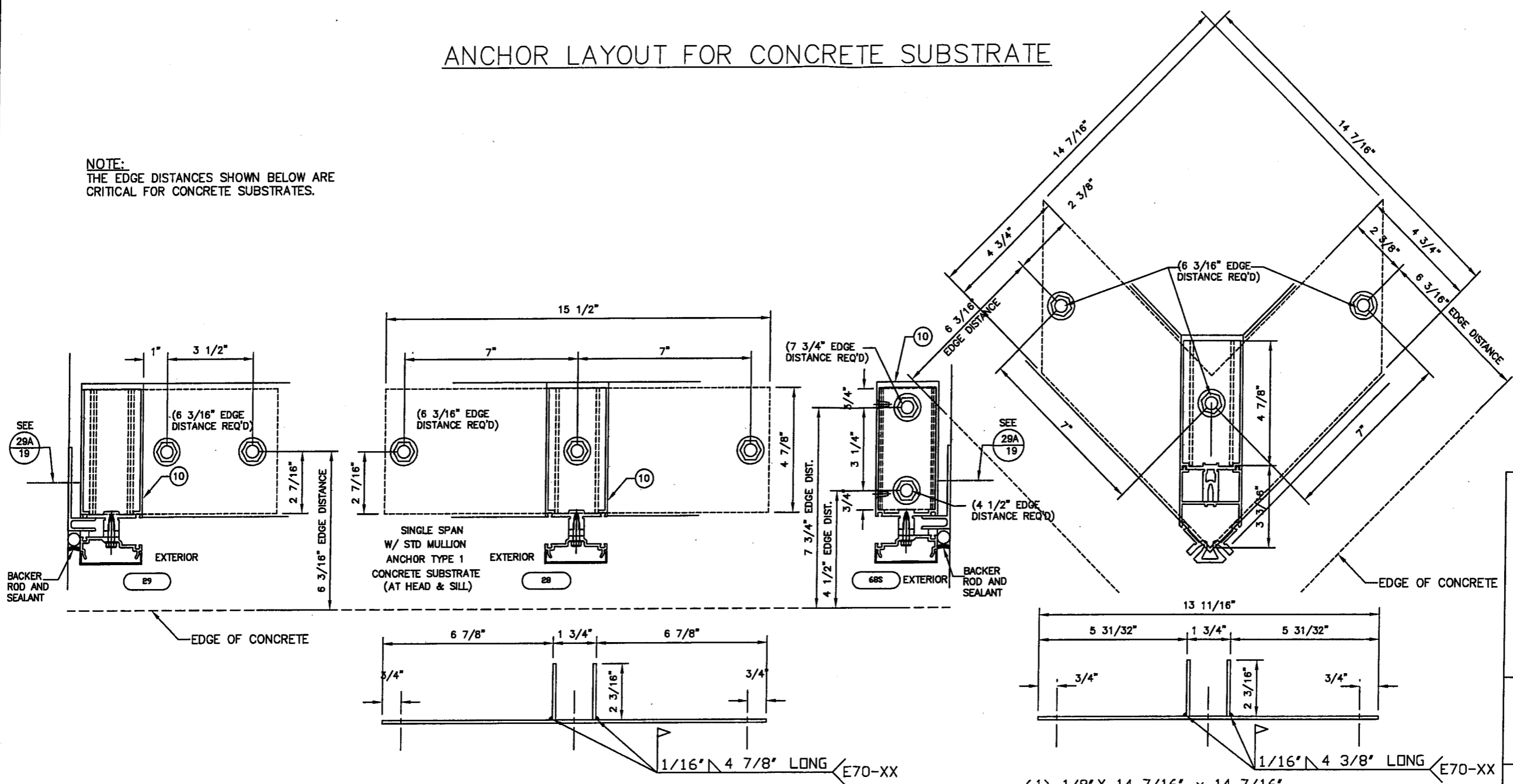
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4/17/09

TAD	DEH	DEH	DEH	BY
3	04/07/09	REV.	DATE	DESCRIPTION OF REVISION
2	06/01/07	REV.	DATE	REVISED BALLARD L ARGUS ADDRESS
1	10/30/03	REV.	DATE	REVISED PER DADE COUNTY THIRD REQUEST LETTER



# ANCHOR LAYOUT FOR CONCRETE SUBSTRATE

**NOTE:**  
THE EDGE DISTANCES SHOWN BELOW ARE CRITICAL FOR CONCRETE SUBSTRATES.



(1) 1/8" X 15 1/2" X 4 7/8"  
STEEL PLATE W/ (3) THREE  
9/16" HOLES, Fy = 50 KSI

(2) 1/8" X 2 3/16" X 4 7/8"  
STEEL PLATES, WELDED TO STEEL  
BASE PLATE, Fy = 50 KSI

(1) 1/8" X 14 7/16" x 14 7/16"  
STEEL PLATE W/ (3) THREE  
9/16" HOLES, FORESHORTENED VIEW

(2) 1/8" X 2 3/16" X 4 7/8"  
STEEL PLATES, WELDED TO STEEL  
BASE PLATE, LOCATED AS SHOWN

## ANCHOR SCHEDULE

ANCHOR TYPE	NUMBER	DESCRIPTION	MATERIAL	SUBSTRATE	MIN. EMBEDMENT
1	-	1/2" X 5" TITEN HD SCREW ANCHOR	HEAT-TREATED CARBON STEEL, SAE J403, GRADE 10B21. ZINC PLATED, ASTM B633 SC1, TYPE III	CONCRETE - MIN. 4000 PSI 9" SLAB THICKNESS REQ'D	4"

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development

555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE: NOT TO SCALE

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104-03  
Expiration Date JANUARY 8, 2014

By Maurice Perea  
Miami/Dade Product Control  
Division

**THIS DRAWING IS FOR  
DADE COUNTY  
PRODUCT APPROVAL  
ONLY**

BALLARD L. ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

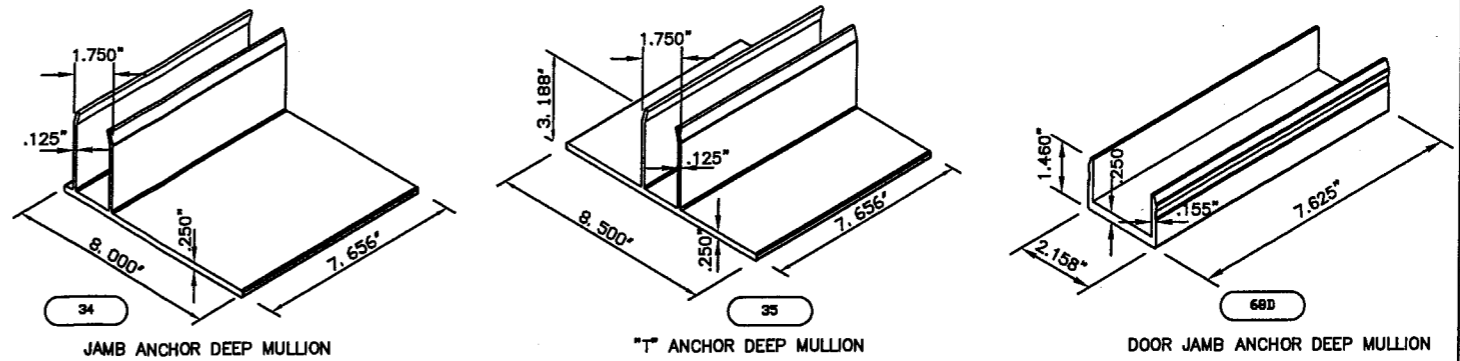
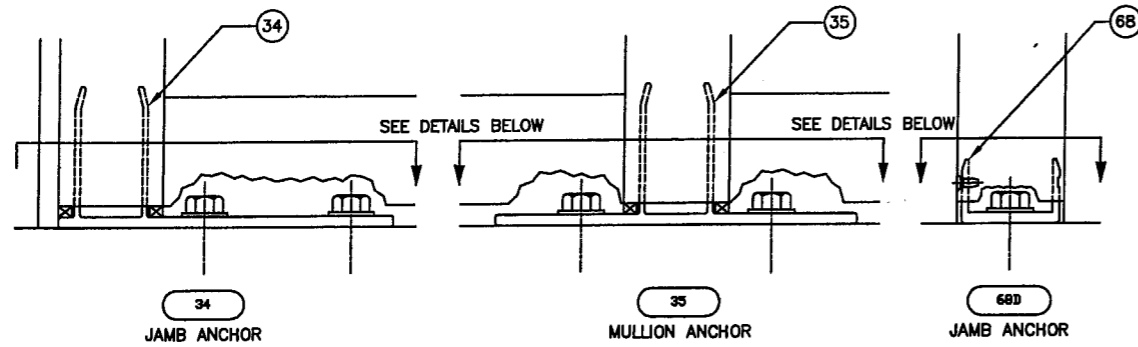
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4/17/09

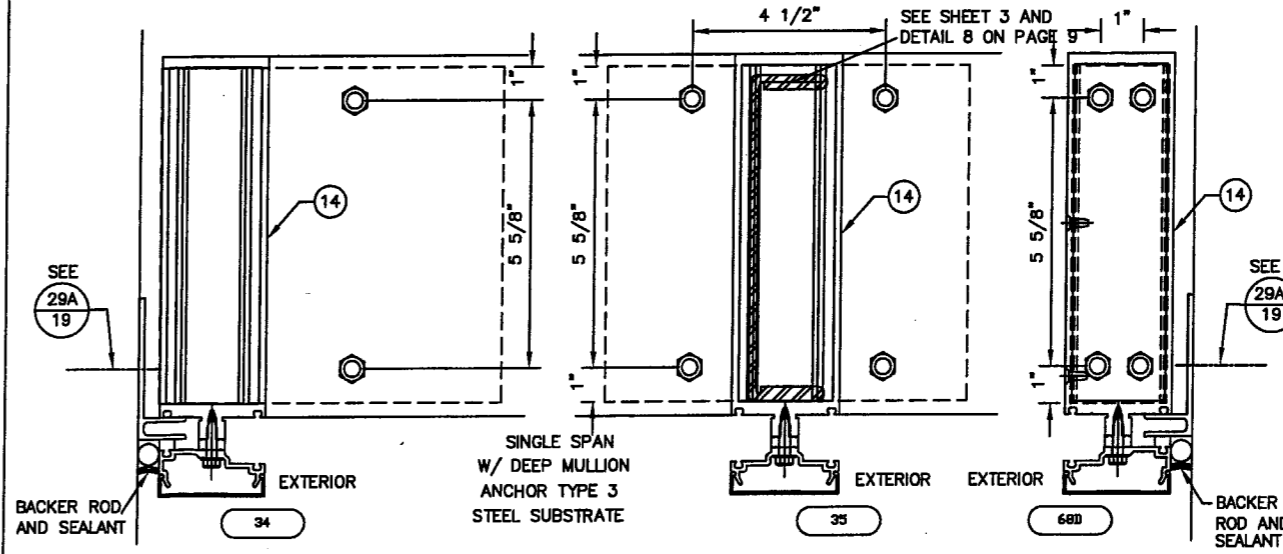
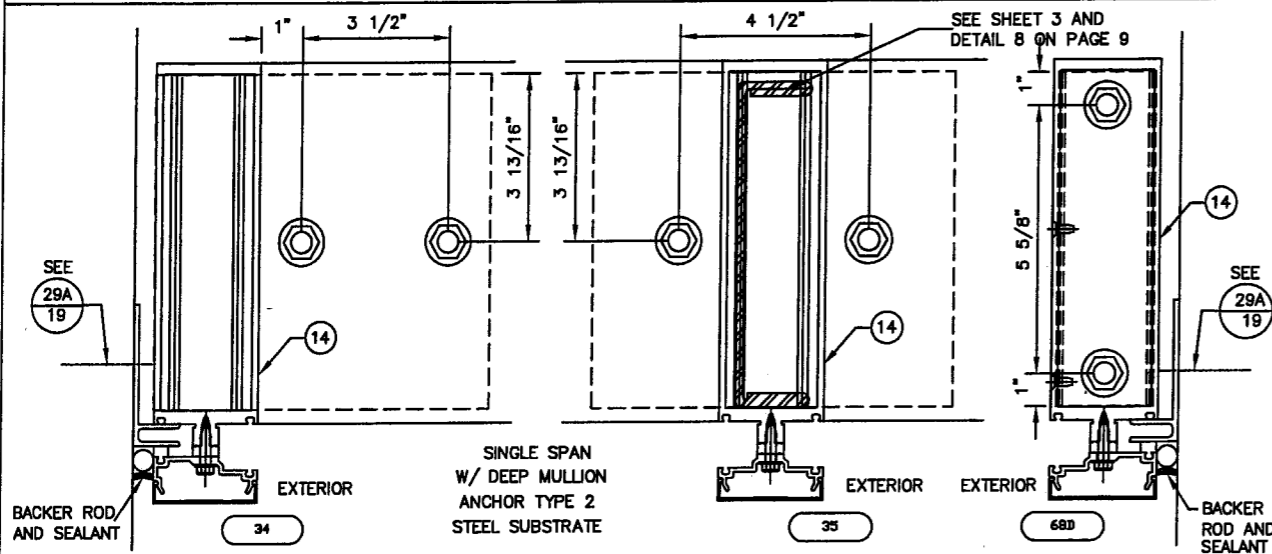
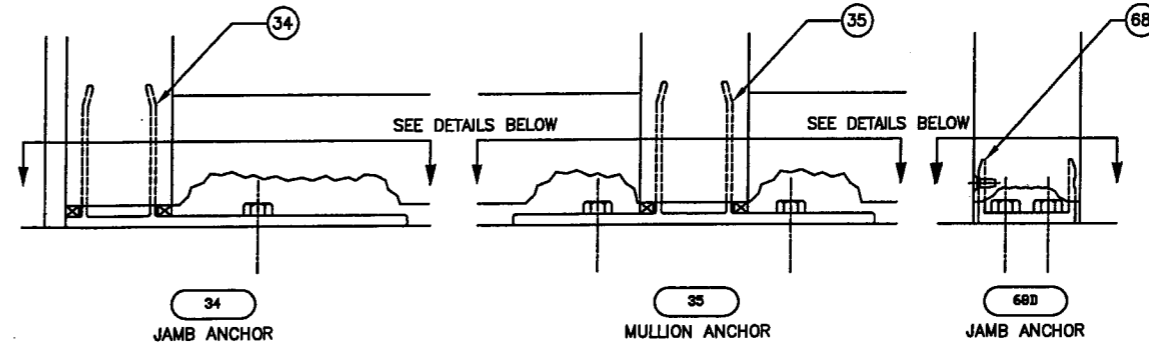
FLA REG - 35686/CIVIL

DRAWN BY JME	DATE 02/20/03
DRWG. NO. <b>T162-951</b>	
SHEET 20A of 23	
T162-951-20A.DWG	

REV.	DATE	E. C. NO.	DESCRIPTION OF REVISION
3	04/07/09		REVISED FOR FBC, 2007 EDITION
2	06/01/07		REVISED BALLARD L ARGUS ADDRESS
1	10/30/03		REVISED PER DADE COUNTY THRID REQUEST LETTER
			BY
			DEH
			DEH
			TAD



SEE SHEET 21A FOR ANCHOR LAYOUTS AT CONCRETE SUBSTRATE



**ANCHOR SCHEDULE**

ANCHOR TYPE	NUMBER	DESCRIPTION	MATERIAL	SUBSTRATE	MIN. EMBEDMENT
2	-	1/2"-13 HEX CAP TEK SCREW	SAE GRADE 5 STEEL	1/2" - A36 STEEL	1/2"
3	-	3/8"-16 HEX CAP TEK SCREW	SAE GRADE 5 STEEL	1/4" - A36 STEEL	1/4"

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 08-1104-03 Expiration Date 12/31/2014  
 By *Manuel Diaz*  
 Miami Dade Product Control Division

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BALLARD L ARGUS, P. E.  
 530 West Pine Street Suite 5  
 Ponchartroula, LA 70454  
 Phone (985) 386-4599

*[Signature]*

4/12/09

FLA REG - 35686/CIVIL

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
 Product Engineering & Development  
 555 GUTHRIDGE COURT  
 NORCROSS, GEORGIA 30092  
 PHONE (770) 449-5555  
 FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
 1600 SYSTEM1 - LARGE MISSILE  
 MULTIPLE INFILLS  
 PROTOCOLS PA 201/202/203

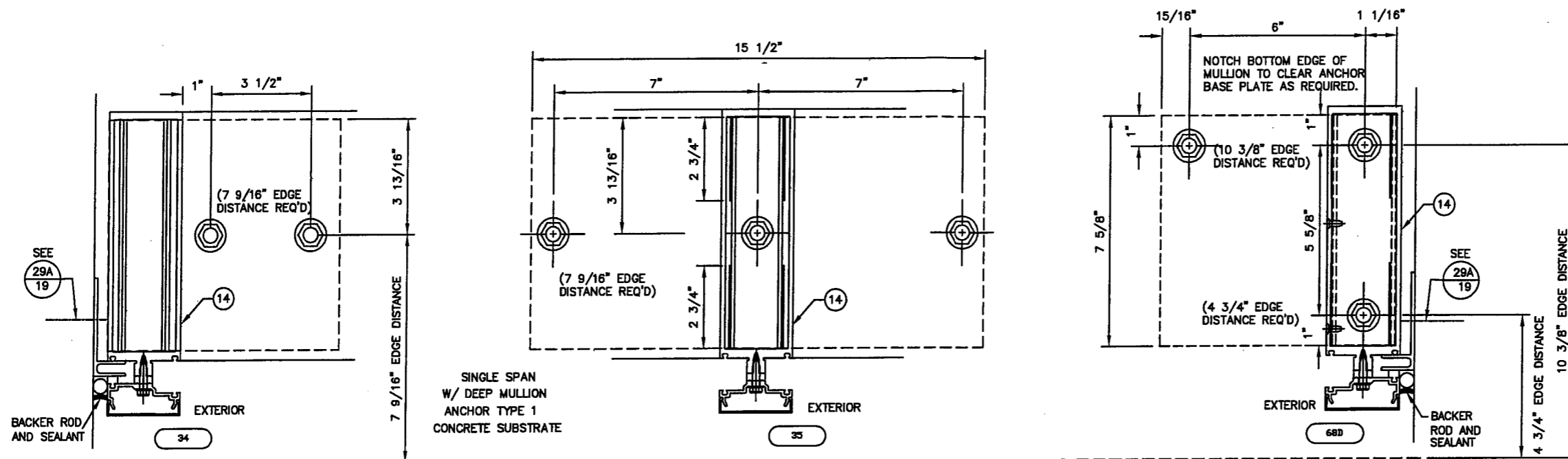
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DRAWN BY	JME	DATE	02/20/03
DRWG. NO.	T162-951		
SHEET	21 of 23		
	T162-951-21.DWG		

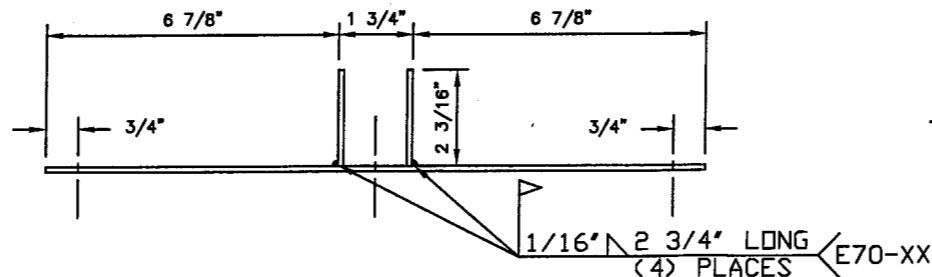
3	04/07/09	REVISED FOR FBC, 2007 EDITION	TAD
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	DEH
1	10/30/03	REVISED PER DADE COUNTY THRID REQUEST LETTER	DEH
E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION
			BY

# ANCHOR LAYOUT FOR CONCRETE SUBSTRATE

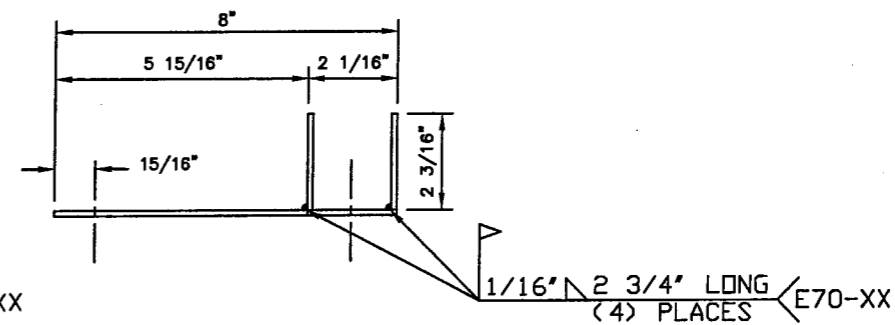
NOTE:  
THE EDGE DISTANCES SHOWN BELOW ARE  
CRITICAL FOR CONCRETE SUBSTRATES.



EDGE OF CONCRETE



- (1) 1/8" X 15 1/2" X 7 5/8" STEEL PLATE W/ (3) THREE 9/16" HOLES, Fy = 50 KSI
- (2) 1/8" X 2 3/16" X 7 5/8" STEEL PLATES, WELDED TO STEEL BASE PLATE, Fy = 50 KSI



- (1) 1/8" X 8" X 7 5/8" STEEL PLATE W/ (3) THREE 9/16" HOLES, Fy = 50 KSI
- (2) 1/8" X 2 3/16" X 7 5/8" STEEL PLATES, WELDED TO STEEL BASE PLATE, Fy = 50 KSI

## ANCHOR SCHEDULE

ANCHOR TYPE	NUMBER	DESCRIPTION	MATERIAL	SUBSTRATE	MIN. EMBEDMENT
1	-	1/2" X 5" TITEN HD SCREW ANCHOR	HEAT-TREATED CARBON STEEL, SAE J403, GRADE 10B21. ZINC PLATED, ASTM B633 SC1, TYPE III	CONCRETE - MIN. 4000 PSI 9" SLAB THICKNESS REQ'D	4"

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 08-1104.03 Expiration Date January 8, 2017  
By *Manuel Pera*  
Miami Dade Product Control Division

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BALLARD L ARGUS, P.E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

*BLA*

4/12/09

FLA REG - 35686/CIVIL

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

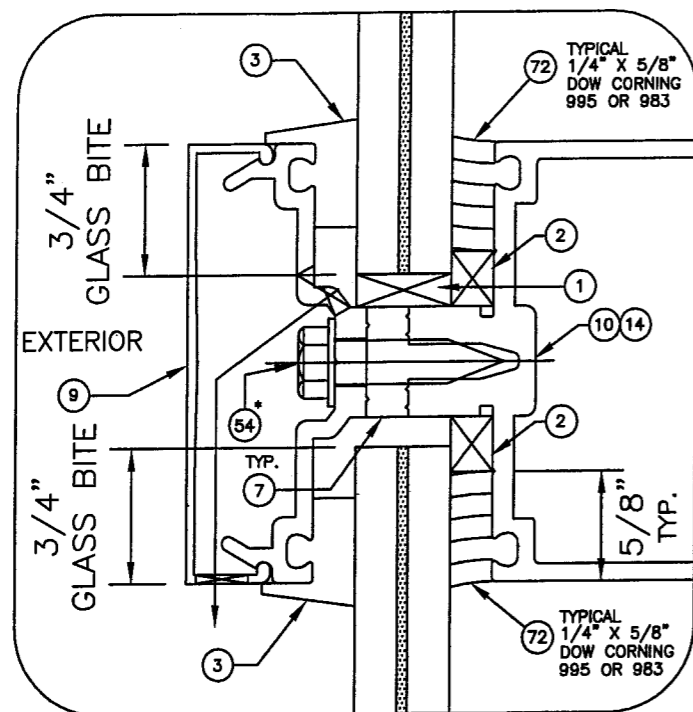
SCALE: NTS

DRAWN BY JME DATE 02/20/03

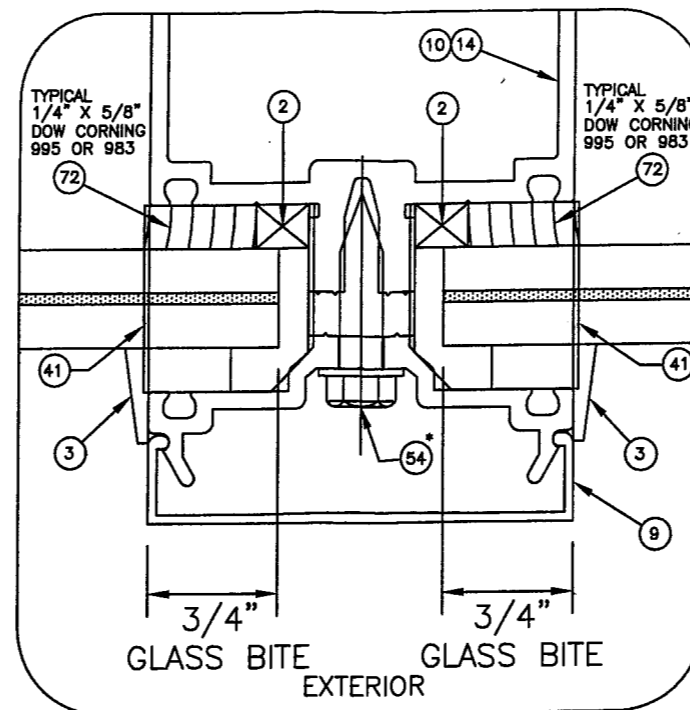
DRWG. NO. T162-951

SHEET 21A of 23 T162-951-21A.DWG

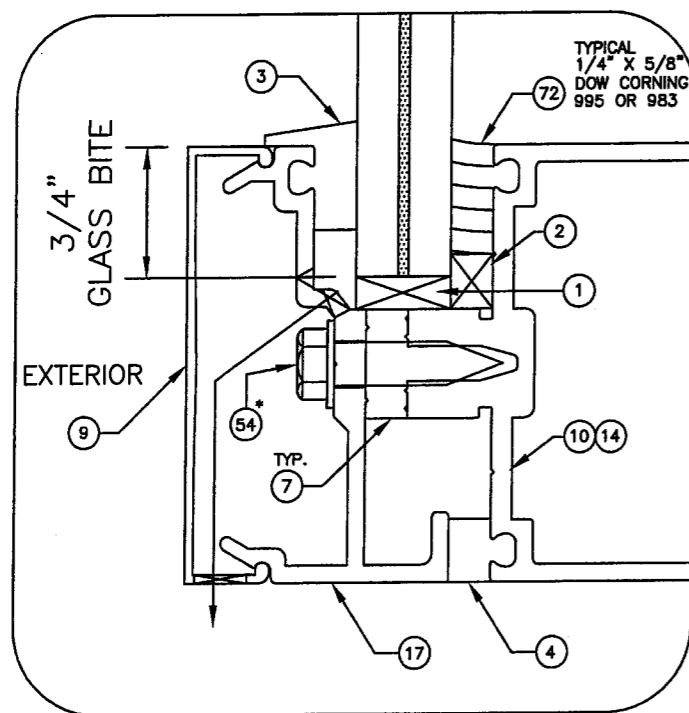
TAD	REVISION	DATE	DESCRIPTION OF REVISION
3	04/07/09	REVISED FOR FBC, 2007 EDITION	
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	
1	10/30/03	REVISED PER DADE COUNTY THRID REQUEST LETTER	
E.C. NO.	REV.	DATE	DESCRIPTION OF REVISION



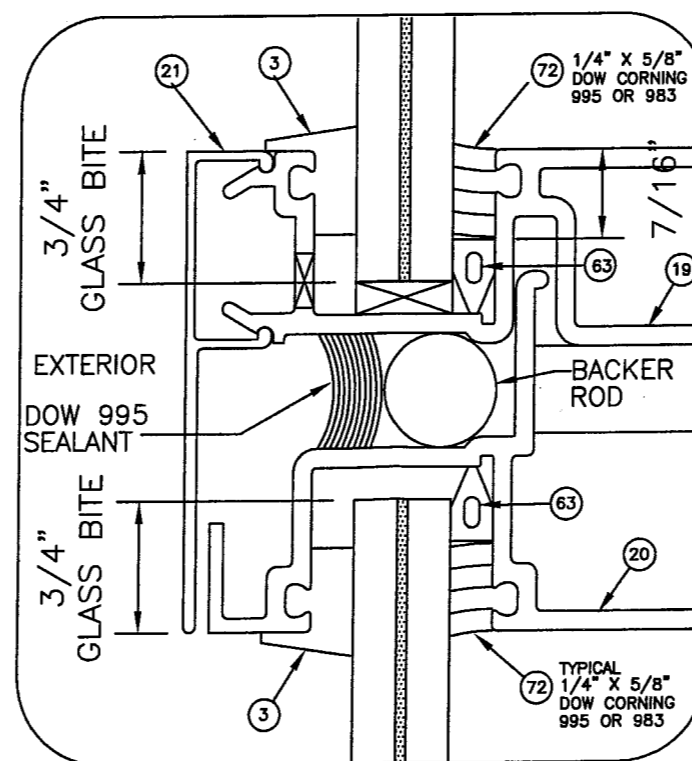
TYPICAL HORIZONTAL GLAZING DETAIL  
9/16" OVERALL LAMINATED H.S. GLASS (SEE SHEET 4)



TYPICAL VERTICAL GLAZING DETAIL  
9/16" OVERALL LAMINATED H.S. GLASS (SEE SHEET 4)



TYPICAL SILL/HEAD GLAZING DETAIL  
9/16" OVERALL LAMINATED H.S. GLASS



TYPICAL EXPANSION HORIZONTAL GLAZING DETAIL  
9/16" OVERALL LAMINATED H.S. GLASS (SEE SHEET 4)

\* SPACING MAX 3" O.C.

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SHEET 22 of 23  
SCALE:

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104-03  
Expiration Date JANUARY 8, 2014  
By [Signature]  
Miami Dade Product Control  
Division

THIS DRAWING IS FOR  
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PRODUCT APPROVAL  
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BALLARD L ARGUS, P. E.

530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

[Signature]  
4/17/09

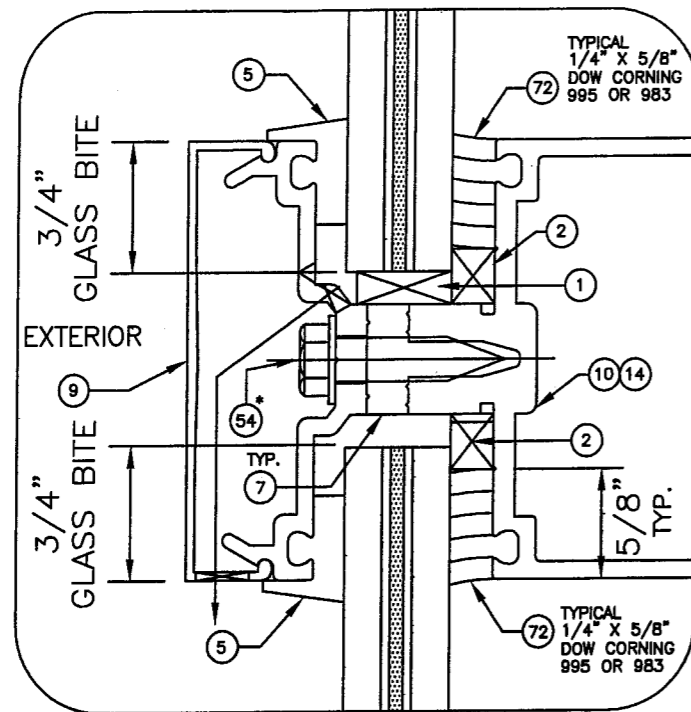
FLA REG - 35686/CIVIL

DRAWN BY JME DATE 02/20/03

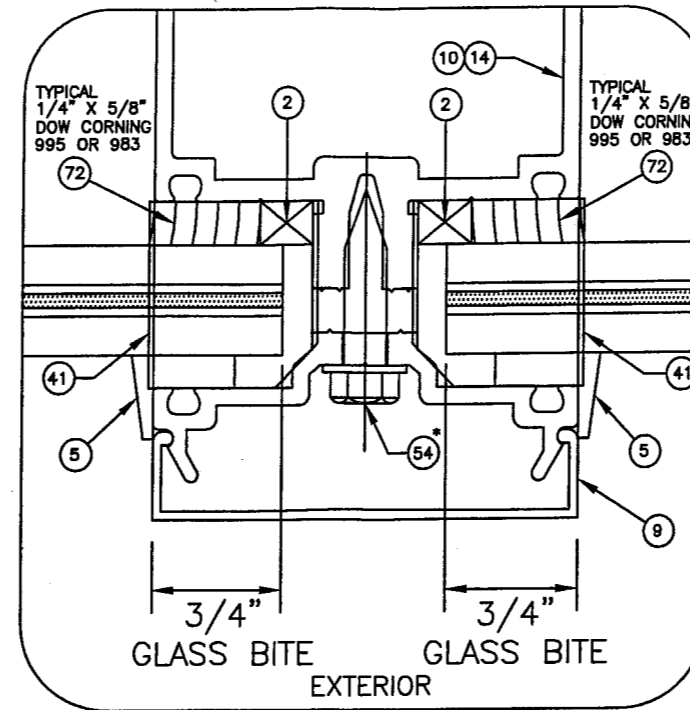
DRWG. NO. T162-951

SHEET T162-951-22.DWG

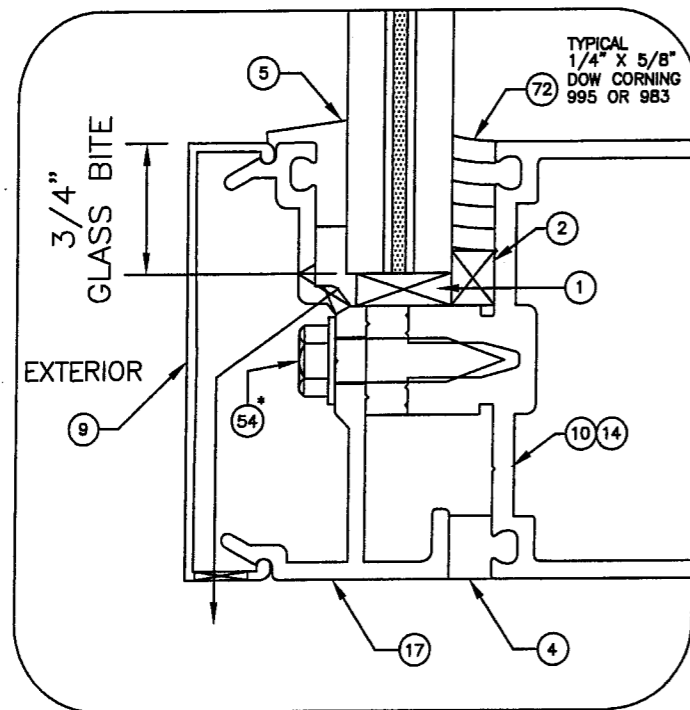
TAD	DEH	DEH	BY
3	04/07/09	REVISED FOR FBC, 2007 EDITION	
2	06/01/07	REVISED BALLARD L ARGUS ADDRESS	
1	10/30/03	REVISED PER DADE COUNTY THRID REQUEST LETTER	
E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION



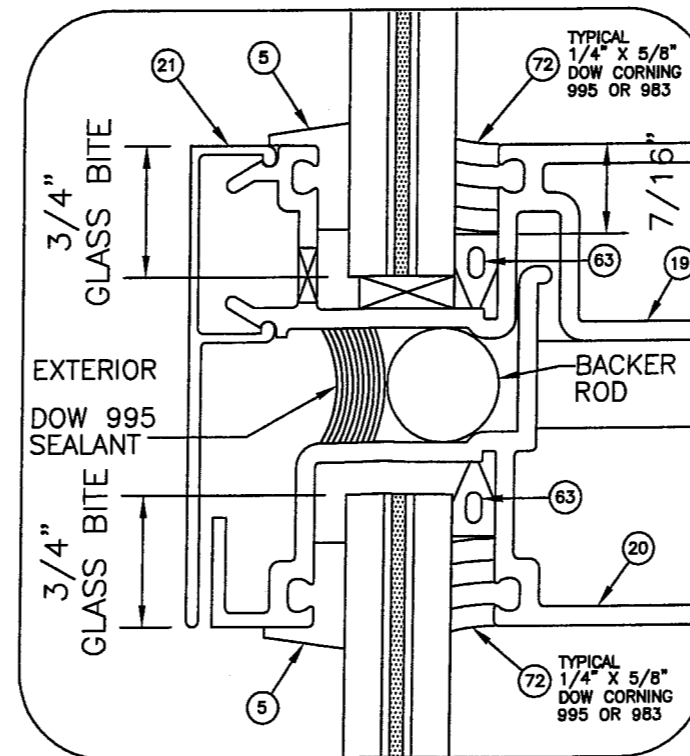
TYPICAL HORIZONTAL GLAZING DETAIL  
5/8" OVERALL LAMINATED H.S. GLASS (SEE SHEET 4)



TYPICAL VERTICAL GLAZING DETAIL  
5/8" OVERALL LAMINATED H.S. GLASS (SEE SHEET 4)



TYPICAL SILL/HEAD GLAZING DETAIL  
5/8" OVERALL LAMINATED H.S. GLASS



TYPICAL EXPANSION HORIZONTAL GLAZING DETAIL  
5/8" OVERALL LAMINATED H.S. GLASS (SEE SHEET 4)

\* SPACING MAX 3" O.C.

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-1104-03  
Expiration Date JANUARY 9, 2014  
By Manuel Perez  
Miami Dade Product Control  
Division

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PRODUCT APPROVAL  
ONLY

BALLARD L ARGUS, P. E.  
530 West Pine Street  
Suite 5  
Ponchatoula, LA 70454  
Phone (985) 386-4599

4/11/09

FLA REG - 35686/CIVIL

EC 95502-12	6/30/09
EC 95502-11	6/30/07
EC 95502-07	3/18/05

**KAWNEER**  
Product Engineering & Development  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PHONE (770) 449-5555  
FAX (770) 734-1560

PRODUCT APPROVAL DRAWINGS  
1600 SYSTEM1 - LARGE MISSILE  
MULTIPLE INFILLS  
PROTOCOLS PA 201/202/203

SCALE:

DRAWN BY	DATE
JME	02/20/03

DRWG. NO. T162-951

SHEET 23 of 23 T162-951-23.DWG

E. C. NO.	REV.	DATE	DESCRIPTION OF REVISION	BY
3		04/07/09	REVISED FOR FBC, 2007 EDITION	TAD
2		06/01/07	REVISED BALLARD L ARGUS ADDRESS	DEH
1		10/30/03	REVISED PER DADE COUNTY THRID REQUEST LETTER	DEH