



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

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

## NOTICE OF ACCEPTANCE (NOA)

**Kawneer Company, Inc.**  
**555 Guthridge Court**  
**Norcross, Georgia 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 High Velocity Hurricane Zone of the Florida Building Code.

### DESCRIPTION: Series "TRIFAB 451" Aluminum Storefront System with Entrance Door-N.I.

**APPROVAL DOCUMENT:** Drawing No. 1441, titled "Trifab 451 Non- Impact Store Front & Entrance Way System", sheets 1 through 11 of 11, dated 11/11/08 and last revised on Jan 28, 2009, prepared by W.W Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

**MISSILE IMPACT RATING: None.** Approved Hurricane Protection devices complying w/FBC are required for installation of this system.

**Limitations:** 1. When Fixed panels vertical mullion A or B used with Door jamb mullion C or D, the lower design pressures of combination governs.

**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 NOA # 07-0808.03 consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Ishaq I. Chanda, P.E.**



NOA No 08-1211.03  
Expiration Date: April 20, 2012  
Approval Date: March 18, 2009

Page 1

3/13/09

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

- A. DRAWINGS** (transferred from file # **07-0808.03**)
1. Manufacturer's die drawings and sections.
  2. Drawing No. **1441**, titled "Trifab 451 Non- Impact Store Front & Entrance Way System", sheets 1 through 11 of 11, dated 11/11/08 and last revised on Jan 28, 2009, prepared by W.W Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E
- B. TESTS** (transferred from file # **07-0808.03**)
1. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94  
2) Water Resistance Test, per FBC, TAS 202-94  
3) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94  
4) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94  
Along with installation diagram of an aluminum storefront system, prepared by Hurricane Test Laboratory, Inc., Test Report No.**HTL-0049-1117-04**, dated 12/03/04-03/04/05, signed and sealed by Vinu J. Abraham, P.E.
- C. CALCULATIONS** (transferred from file # **07-0808.03**)
1. Anchor verification calculations dated Sep. 07, 2005 and last revised on Feb 07, 2006, prepared, signed and sealed by Warren W. Schaefer, P.E.,
  2. Statement letter of anchor compliance to FBC 2007 dated April 15, 2008, prepared, signed and sealed by Warren W. Schaefer, P.E.,
  3. Glazing complies with ASTM E-1300-02 and ASTM E-1300-04
- D. QUALITY ASSURANCE BY:**
1. Miami-Dade Building Code Compliance Office (BCCO).
- E. MATERIAL CERTIFICATIONS**
1. None
- F. STATEMENTS**
1. Statement letter of conformance to FBC-2007, dated 04-15-2008, prepared, signed and sealed by Warren W. Schaefer, P. E.
  2. Statement letters of conformance to FBC 2004 and "No financial interest", both dated 09/07/05, signed and sealed by Warren W. Schaefer, P.E.
  3. Statement of compliance, issued as part of the above referenced test report issued by Hurricane Testing Laboratory.
- G. OTHER**
1. This NOA **revises** NOA # **07-0808.03**, expiring on April 20, 2012.

*Ishaq I. Chanda*

Ishaq I. Chanda, P.E.  
Product Control Examiner  
NOA No 08-1211.03  
Expiration Date: April 20, 2012  
Approval Date: March 18, 2009

**GENERAL NOTES:**

1. THESE STORE FRONT SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, FORCED ENTRY & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOL TAS-202 FOR NON-IMPACT STORE FRONTS.
5. THESE STORE FRONT SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. THESE STORE FRONT SYSTEMS ARE NON-IMPACT RATED & MUST BE SHUTTERED WITH A FLORIDA CODE APPROVED SHUTTER WHERE REQUIRED BY CODE.
7. ALL ANCHORS SECURING STORE FRONT FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  MAY BE APPLIED WHEN USED IN CONJUNCTION WITH LOAD COMBINATIONS SPECIFIED IN SECTION 2.0 OF THE ASCE 7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
11. THERE SHALL BE NO LIMIT TO THE NUMBER OF HORIZONTAL & VERTICAL PANELS USED FOR ANY JOB PROVIDING ALL RESTRICTIONS ARE MET PER THE ELEVATIONS.

**FRAME ANCHOR REQUIREMENTS TABLE**

| FRAME & SILL ANCHORS                             |   |               |                    |
|--|---|---------------|--------------------|
| OPENING TYPE (SUBSTRATE)                         | JAMB TO OPENING FASTENER TYPE               | MINIMUM EMBED | MINIMUM EDGE DIST. |
| MIN. 2X WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55) | NO. 12 SMS SCREW                            | 1 3/8"        | 3/4"               |
| MIN. 16 GA. 50 KSI METAL STUD                    | 1/4-20 SELF TAPPING SCREW                   | FULL          | 1/2"               |
| MIN. 1/8" THK A36 STEEL                          | 1/4-20 SELF TAPPING SCREW OR 1/4" THRU-BOLT | FULL          | 1/2"               |
| C-90 CMU/3000 PSI CONCRETE                       | (1) 1/4" CONCRETE SCREW                     | 1 1/4"        | 2"                 |

(1) CONCRETE SCREWS SHALL BE ELCO OR ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).

**CORNER & FRAME END CONSTRUCTION:**

**FRAME HEAD CORNER:** HEAD IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH 4 NO. 12 X 1 1/8" PPHFT TYPE AB FASTENERS THROUGH THE SIDE MEMBER INTO THE HEAD MEMBER SCREW SPLINES & SEALED WITH SILICONE.

**FRAME SILL CORNER:** SILL IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH 2 NO. 12 X 1 1/8" PPHFT TYPE AB FASTENERS THROUGH THE SIDE MEMBER INTO THE SILL MEMBER SCREW SPLINES & SEALED WITH SILICONE.

**HORIZONTAL FRAME MULLION END:** MULLION IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH 2 NO. 12 X 1 1/8" PPHFT TYPE AB FASTENERS THROUGH THE SIDE MEMBER INTO THE MULLION MEMBER SCREW SPLINES & SEALED WITH SILICONE.

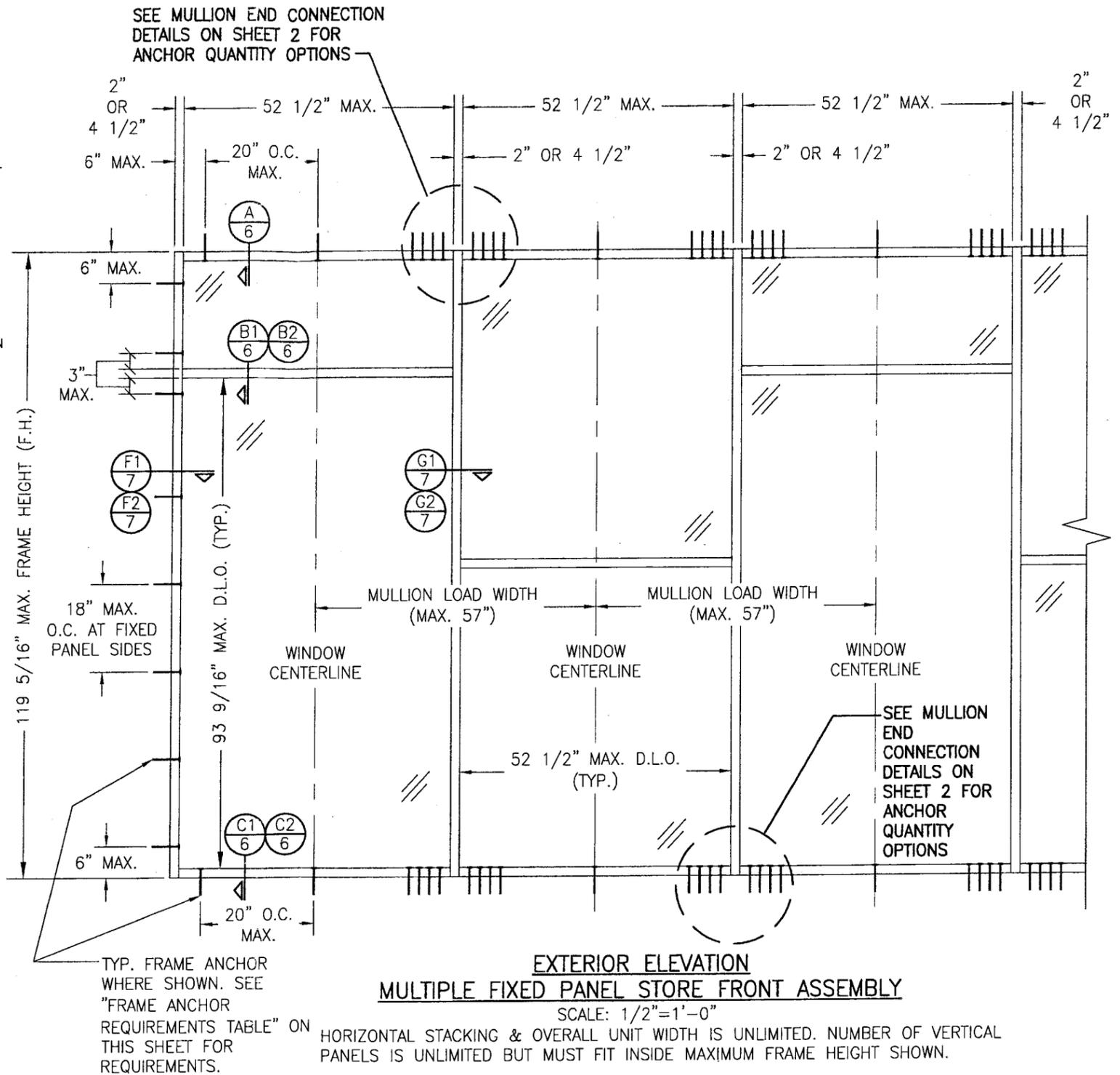
**DOOR TRANSOM MULLION END:** SEE SECTIONS E1/6, E2/6 & E3/6.

**DOOR HEAD FRAME CORNERS:** SEE SECTIONS L1/6, L2/6 & L3/6.

**DOOR SILL CORNER:** THRESHOLD WAS SQUARE CUT, BUTTED TO THE SIDE, SECURED TO THE SIDE MEMBER USING A PIVOT ASSEMBLY OR STEEL CLIP & SEALED WITH SILICONE.

**DOOR PANEL TOP RAIL CORNERS:** AT EACH TOP CORNER, THE TOP RAIL END IS SQUARE CUT, BUTTED, AND ATTACHED TO THE VERTICAL STILE BY MEANS OF A 1.094" LONG WELD CLIP (KAWNEER PART #200-450, #200-452, OR #200-453). EACH WELD CLIP IS ATTACHED TO THE VERTICAL STILE USING TWO(2) 1/4-20 X 3/4" PHMS THAT PASSED THROUGH THE DOOR STILE AND ARE THREADED INTO 3/16" THICK STEEL NUT PLATES. THE INTERSECTION OF EACH CORNER JOINT WAS WELDED USING ONE(1), 1/2" DIAMETER PLUG WELD AND ONE(1), 1/4" X 1 1/8" FILLET WELD THAT ARE APPLIED TO BOTH WEBS OF THE TOP RAIL.

**DOOR PANEL BOTTOM RAIL CORNERS:** AT EACH BOTTOM CORNER, THE BOTTOM RAIL END IS SQUARE CUT, BUTTED, AND ATTACHED TO THE VERTICAL STILE BY MEANS OF A 1.094" LONG WELD CLIP (KAWNEER PART #200-451 OR #200-459). EACH WELD CLIP IS ATTACHED TO THE VERTICAL STILE USING TWO(2) 1/4-20 X 3/4" PHMS THAT PASSED THROUGH THE DOOR STILE AND ARE THREADED INTO 3/16" THICK STEEL NUT PLATES. THE INTERSECTION OF EACH CORNER JOINT WAS WELDED USING ONE(1), 1/2" DIAMETER PLUG WELD AND ONE(1), 1/4" X 1 1/8" FILLET WELD THAT ARE APPLIED TO BOTH WEBS OF THE TOP RAIL.



**EXTERIOR ELEVATION  
MULTIPLE FIXED PANEL STORE FRONT ASSEMBLY**

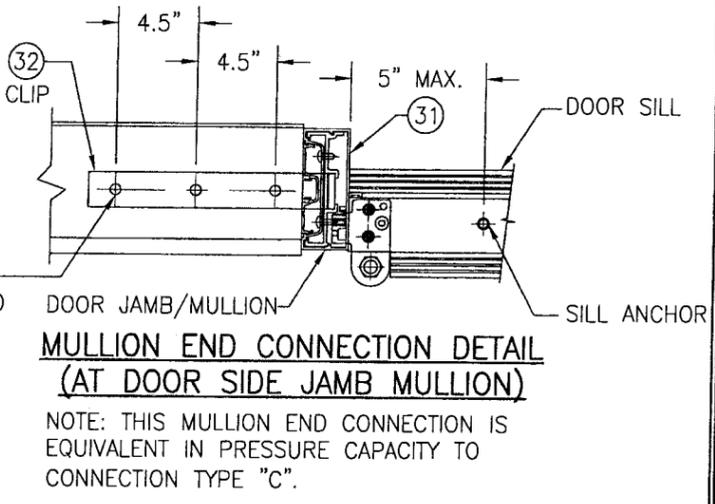
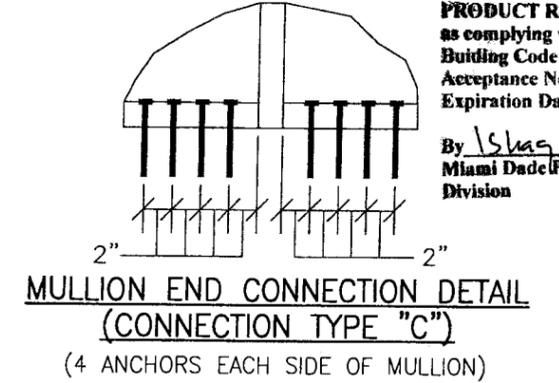
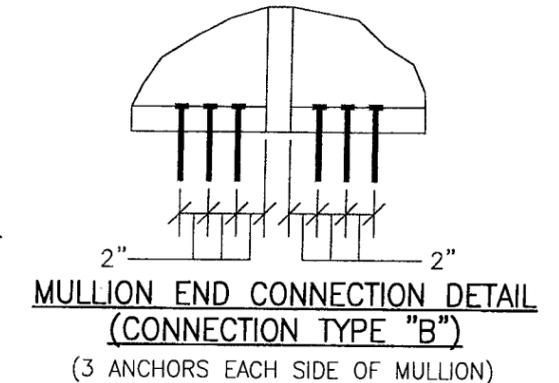
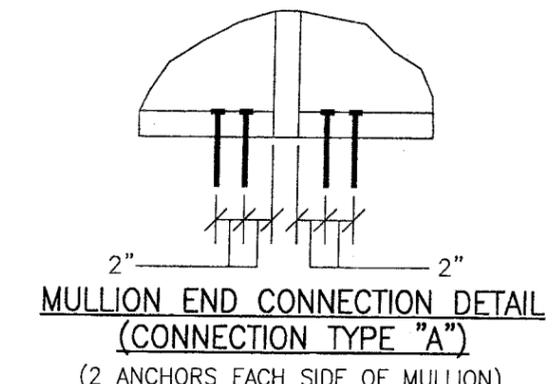
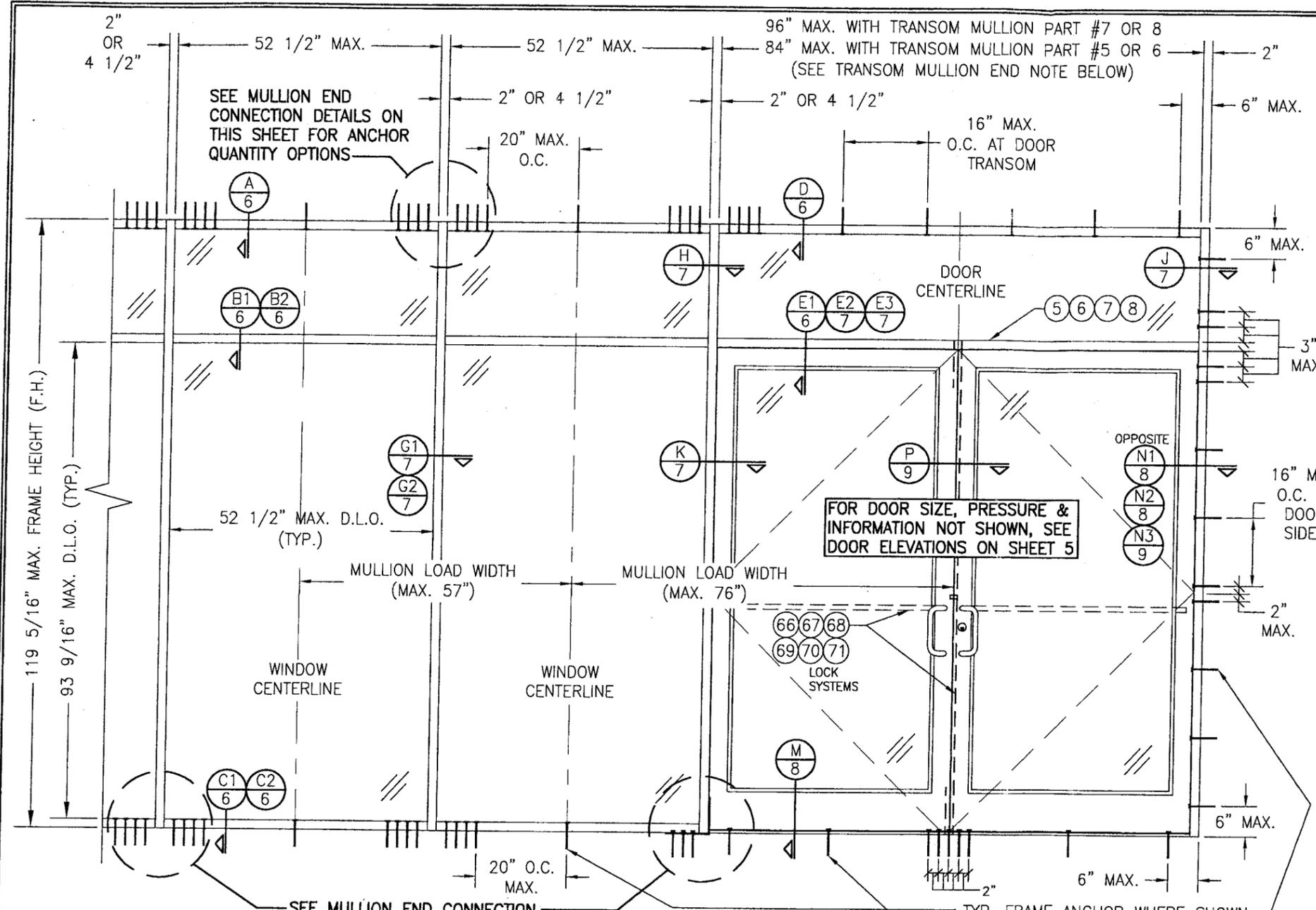
SCALE: 1/2"=1'-0"

HORIZONTAL STACKING & OVERALL UNIT WIDTH IS UNLIMITED. NUMBER OF VERTICAL PANELS IS UNLIMITED BUT MUST FIT INSIDE MAXIMUM FRAME HEIGHT SHOWN.

**ALLOWABLE DESIGN PRESSURE  
SEE LOAD TABLES ON SHEET 5**

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No. 08-1211-03  
Expiration Date: APR 20, 2012  
By: Klaus I. Chandra  
Miami Dade Product Control  
Division

|   |  |
|---|--|
| DRAWN BY:<br>K.P.S.   | CHECKED BY:<br>W.W.S.                      |
| PLOT:<br>1=24   | DATE:<br>10/17/05                          |
| DATE<br>11/11/08  | BY<br>W.W.S.                               |
| REVISION DESCRIPTION  | NO.  |
| UPDATE TO PRESENT FBC & EDIT  | A1   |
| LOCK CALL-OUTS  |  |
| DRAWING TITLE<br><b>TRIFAB 451 NON-IMPACT STORE FRONT &amp; ENTRANCE WAY SYSTEM</b>   |  |
| MANUFACTURER<br><b>KAWNEER COMPANY, INC.</b><br>555 GUTHRIDGE COURT<br>NORCROSS, GA 30092<br>770-449-5555   |  |
| CONSULTANTS<br><b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b><br>8895 N. MILITARY TRAIL, SUITE C-204<br>PALM BEACH GARDENS, FL 33410<br>PHONE: 561-775-4902 FAX: 561-775-4903 |  |
| CERTIFICATION<br><b>JAN 28 2009</b>   | WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135 |
| DRAWING NO.<br><b>1441</b>  | REV.<br><b>A</b>                           |
| SHEET NO.<br><b>1 OF 11</b>   |  |



**TRANSOM MULLION NOTE:**  
WHEN TRANSOM MULLION PART #5 OR 6 IS USED, MULLION SPAN IS LIMITED TO MAX. 84". WHEN TRANSOM MULLION PART #7 OR 8 IS USED, MULLION SPAN MAY BE UP TO MAX. 96". SEE PARTS DRAWINGS FOR MULLION PARTS.

**EXTERIOR ELEVATION  
STORE FRONT ASSEMBLY WITH DOORS & TRANSOM**  
SCALE: 1/2"=1'-0"  
NOTE: 1) FIXED PANELS MAY BE PLACED ON ONE OR BOTH SIDES OF DOORS.  
2) DOORS MAY BE SINGLE OR DOUBLE DOORS.

**ALLOWABLE DESIGN PRESSURE**  
SEE LOAD TABLES ON SHEET 5

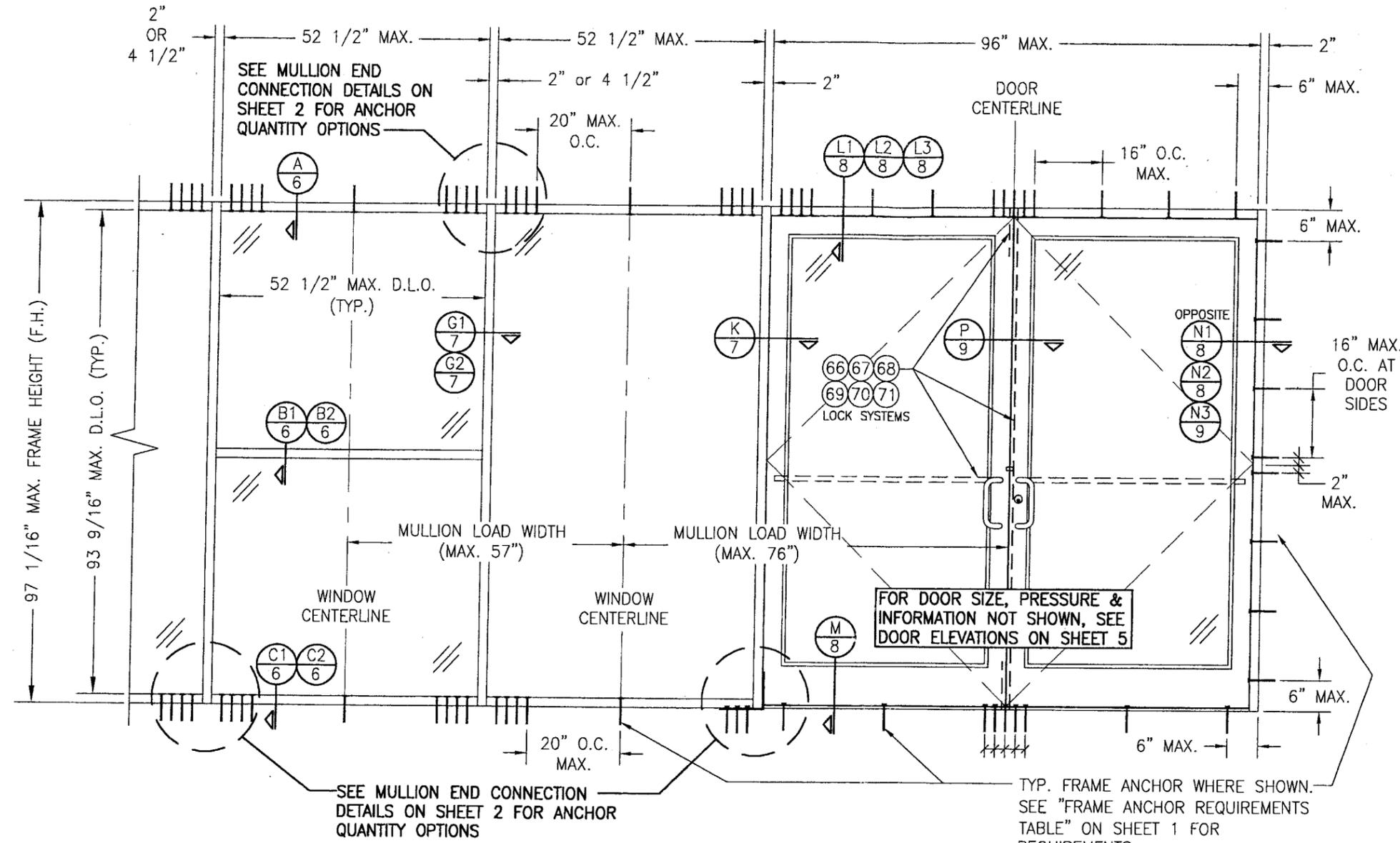
(\* THE DOORS IN THIS STORE FRONT SYSTEM ARE NOT APPROVED FOR USE WHERE WATER INFILTRATION RESISTANCE IS REQUIRED BY THE DOOR. UNLESS UNITS ARE INSTALLED IN NON-HABITABLE AREAS WHERE THE UNIT & THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION, UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG SUCH THAT THE ANGLE BETWEEN THE EDGE OF THE CANOPY OR OVERHANG TO SILL IS LESS THAN 45 DEGREES.

TYP. FRAME ANCHOR WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.  
(NOTE: DOOR SILL ANCHORS INCLUDE 9 TOTAL AT DOUBLE DOORS & 3 TOTAL AT SINGLE DOORS AS SHOWN.)

THREE(3) 3/8" WEDGE/SLEEVE ANCHORS WITH MIN. 2 1/2" EMBED AND 2 1/2" EDGE DISTANCE (GALVANIZED STEEL OR S.S. RAMSET/RED HEAD DYNABOLT, HILTI KWIK-BOLT II OR POWERS RAWL POWER BOLT)

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. 08-1211-03  
Expiration Date APR 20, 2011  
By Shag L. Chando  
Miami Dade Product Control Division

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|--|---|
| DRAWN BY:<br>K.P.S.  | CHECKED BY:<br>W.W.S.                                     |
| PLOT:<br>1-24  | DATE:<br>10/17/05   |
| NO.  | REVISION DESCRIPTION                                      |
| BY   | DATE  |
| DRAWING TITLE<br><b>TRIFAB 451 NON-IMPACT STORE FRONT &amp; ENTRANCE WAY SYSTEM</b>                          |   |
| CONSULTANTS<br><b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b>                                      | MANUFACTURER<br><b>KAWNEER COMPANY, INC.</b>              |
| 8885 N. MILITARY TRAIL, SUITE C-204<br>PALM BEACH GARDENS, FL 33410<br>PHONE: 561-775-4902 FAX: 561-775-4903 | 555 GUTHRIDGE COURT<br>NORCROSS, GA 30092<br>770-449-5555 |
| CERTIFICATION<br><b>JAN 28 2009</b>  | WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135                |
| DRAWING NO.<br><b>1441</b>   | REV.<br><b>A</b>  |
| SHEET NO.<br><b>2 OF 11</b>  |   |



**EXTERIOR ELEVATION  
STORE FRONT ASSEMBLY WITH DOORS & NO TRANSOM**

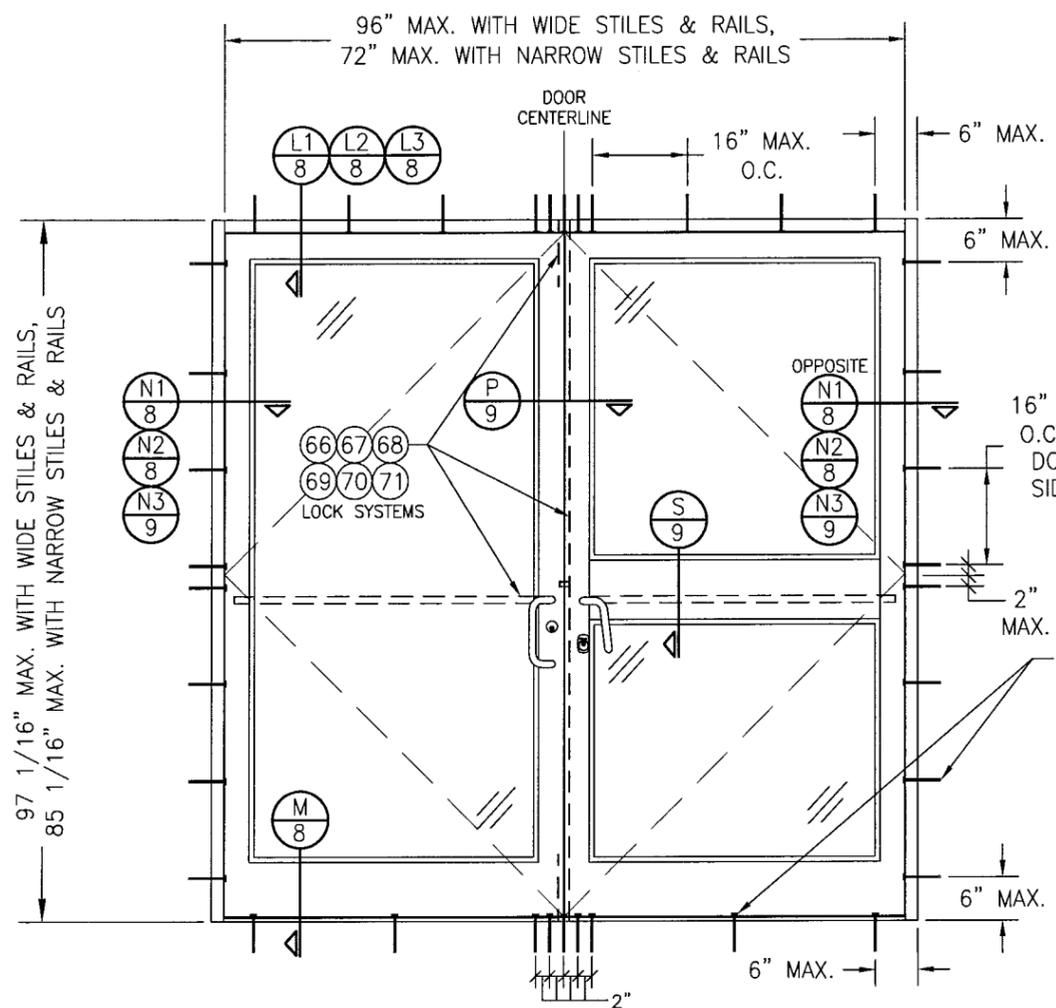
SCALE: 1/2"=1'-0"  
NOTE: 1) FIXED PANELS MAY BE PLACED ON ONE OR BOTH SIDES OF DOORS.  
2) DOORS MAY BE SINGLE OR DOUBLE DOORS.

**ALLOWABLE DESIGN PRESSURE**  
SEE LOAD TABLES ON SHEET 5

(\* THE DOORS IN THIS STORE FRONT SYSTEM ARE NOT APPROVED FOR USE WHERE WATER INFILTRATION RESISTANCE IS REQUIRED BY THE DOOR. UNLESS UNITS ARE INSTALLED IN NON-HABITABLE AREAS WHERE THE UNIT & THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION, UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG SUCH THAT THE ANGLE BETWEEN THE EDGE OF THE CANOPY OR OVERHANG TO SILL IS LESS THAN 45 DEGREES.

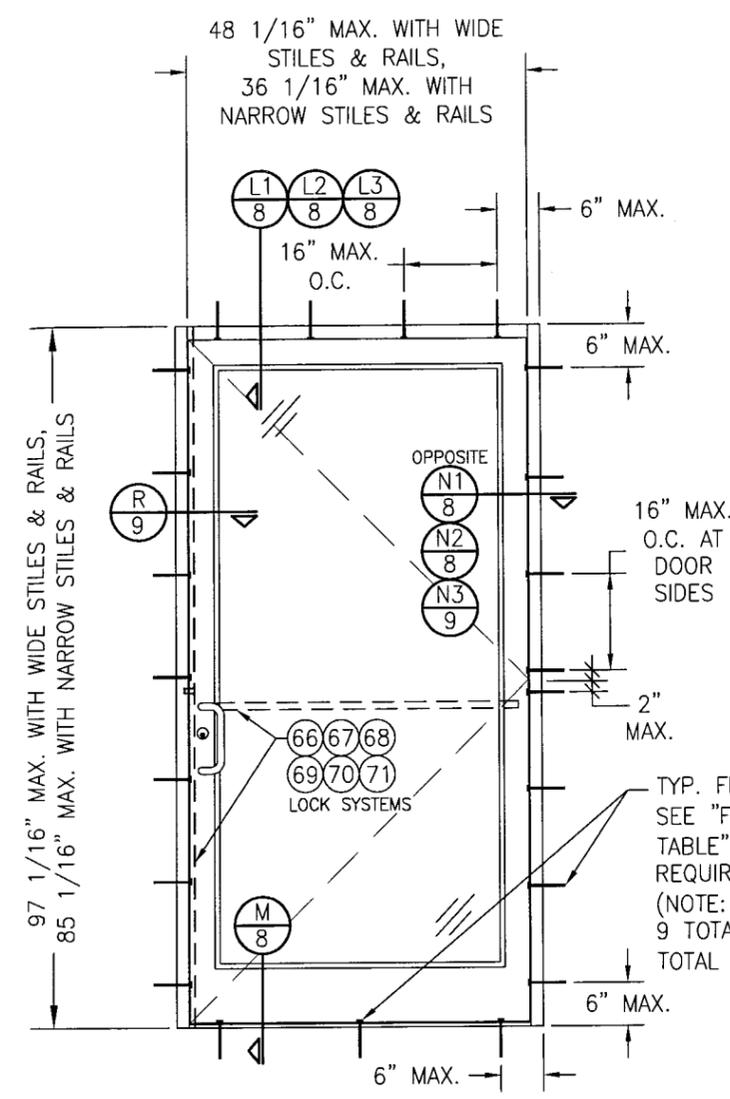
**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No. 08-1211-03  
Expiration Date APR 20, 2012  
By *Ishag I. Chant*  
Miami Dade Product Control  
Division

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|---|---|
| DRAWN BY:<br>K.P.S.   | CHECKED BY:<br>W.W.S.   |
| PLOT:<br>1=24   | DATE:<br>10/17/05   |
| NO.   | REVISION DESCRIPTION  |
| DATE  | BY  |
| DRAWING TITLE<br><b>TRIFAB 451 NON-IMPACT STORE FRONT &amp; ENTRANCE WAY SYSTEM</b>   |   |
| CONSULTANTS<br><b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b><br>8885 N. MILITARY TRAIL, SUITE C-204<br>PALM BEACH GARDENS, FL 33410<br>PHONE: 561-775-4902 FAX: 561-775-4903 | MANUFACTURER<br><b>KAWNEER COMPANY, INC.</b><br>555 GUTHRIDGE COURT<br>NORCROSS, GA 30092<br>770-449-5555 |
| CERTIFICATION<br><b>JAN 28 2009</b>   | WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135  |
| DRAWING NO.<br><b>1441</b>  | REV.<br><b>A</b>  |
| SHEET NO.<br><b>3 OF 11</b>   |   |



**EXTERIOR ELEVATION  
DOUBLE DOOR ASSEMBLY**  
SCALE: 1/2"=1'-0"

ALLOWABLE PRESSURE = +/-65 PSF



**EXTERIOR ELEVATION  
SINGLE DOOR ASSEMBLY**  
SCALE: 1/2"=1'-0"

ALLOWABLE PRESSURE = +/-65 PSF

(\* THE DOORS IN THIS STORE FRONT SYSTEM ARE NOT APPROVED FOR USE WHERE WATER INFILTRATION RESISTANCE IS REQUIRED BY THE DOOR. UNLESS UNITS ARE INSTALLED IN NON-HABITABLE AREAS WHERE THE UNIT & THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION, UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG SUCH THAT THE ANGLE BETWEEN THE EDGE OF THE CANOPY OR OVERHANG TO SILL IS LESS THAN 45 DEGREES.

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No 08-1211.03  
Expiration Date APR 20, 2012  
By Iskug I. Chand  
Miami Dade Product Control  
Division

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|---------------------|-----------------------|
| DRAWN BY:<br>K.P.S. | CHECKED BY:<br>W.W.S. |
| PLOT:<br>1=24       | DATE:<br>09/06/05     |
| NO.                 | REVISION DESCRIPTION  |
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**TRIFAB 450 NON-IMPACT STORE FRONT & ENTRANCE WAY SYSTEM**  
MANUFACTURER  
**KAWNEER COMPANY, INC.**  
555 GUTHRIE COURT  
NORCROSS, GA 30092  
770-449-5555

**CONSULTANTS**  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
8895 N. MILITARY TRAIL, SUITE C-204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902 FAX: 561-775-4903

**CERTIFICATION**  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

|                      |           |
|----------------------|-----------|
| DRAWING NO.<br>1431  | REV.<br>A |
| SHEET NO.<br>4 OF 11 |           |

| VERTICAL MULLION LOAD TABLE<br>(MULLION "A") |                                   |                              |                            |                            |
|--|-----------------------------------|------------------------------|----------------------------|----------------------------|
| UNREINFORCED FIXED PANEL<br>VERTICAL MULLION |                                   |                              |                            |                            |
| MAXIMUM<br>MULLION<br>SPAN<br>(IN.)          | MAXIMUM<br>LOAD<br>WIDTH<br>(IN.) | ALLOWABLE PRESSURE (+/- PSF) |                            |                            |
|  |                                   | CONNECTION<br>"A"<br>(PSF)   | CONNECTION<br>"B"<br>(PSF) | CONNECTION<br>"C"<br>(PSF) |
| 86   | 57                                | 42.1                         | 47.6                       | 47.6                       |
|  | 51                                | 47.0                         | 53.2                       | 53.2                       |
|  | 45                                | 53.3                         | 60.3                       | 60.3                       |
|  | 39                                | 61.5                         | 65.0                       | 65.0                       |
|  | 33                                | 65.0                         | 65.0                       | 65.0                       |
| 80   | 57                                | 45.2                         | 59.1                       | 59.1                       |
|  | 51                                | 50.5                         | 65.0                       | 65.0                       |
|  | 45                                | 57.3                         | 65.0                       | 65.0                       |
|  | 39                                | 65.0                         | 65.0                       | 65.0                       |
| 74   | 57                                | 48.9                         | 65.0                       | 65.0                       |
|  | 51                                | 54.6                         | 65.0                       | 65.0                       |
|  | 45                                | 61.9                         | 65.0                       | 65.0                       |
| 68   | 57                                | 53.2                         | 65.0                       | 65.0                       |
|  | 51                                | 59.5                         | 65.0                       | 65.0                       |
|  | 45                                | 65.0                         | 65.0                       | 65.0                       |
| 62   | 57                                | 58.3                         | 65.0                       | 65.0                       |
|  | 51                                | 65.0                         | 65.0                       | 65.0                       |
| 56   | 57                                | 64.6                         | 65.0                       | 65.0                       |

| VERTICAL MULLION LOAD TABLE<br>(MULLION "B")                   |                                   |                              |                            |                            |
|--|-----------------------------------|------------------------------|----------------------------|----------------------------|
| FIXED PANEL VERTICAL MULLION<br>REINFORCED WITH SINGLE CHANNEL |                                   |                              |                            |                            |
| MAXIMUM<br>MULLION<br>SPAN<br>(IN.)                            | MAXIMUM<br>LOAD<br>WIDTH<br>(IN.) | ALLOWABLE PRESSURE (+/- PSF) |                            |                            |
|  |                                   | CONNECTION<br>"A"<br>(PSF)   | CONNECTION<br>"B"<br>(PSF) | CONNECTION<br>"C"<br>(PSF) |
| 120  | 57                                | 30.1                         | 61.9                       | 65.0                       |
|  | 51                                | 33.7                         | 65.0                       | 65.0                       |
|  | 45                                | 38.2                         | 65.0                       | 65.0                       |
|  | 39                                | 44.1                         | 65.0                       | 65.0                       |
|  | 33                                | 52.1                         | 65.0                       | 65.0                       |
|  | 27                                | 63.6                         | 65.0                       | 65.0                       |
| 108  | 57                                | 33.5                         | 65.0                       | 65.0                       |
|  | 51                                | 37.4                         | 65.0                       | 65.0                       |
|  | 45                                | 42.4                         | 65.0                       | 65.0                       |
|  | 39                                | 49.0                         | 65.0                       | 65.0                       |
| 98   | 57                                | 36.9                         | 65.0                       | 65.0                       |
|  | 51                                | 41.3                         | 65.0                       | 65.0                       |
|  | 45                                | 46.8                         | 65.0                       | 65.0                       |
| 86   | 57                                | 42.1                         | 65.0                       | 65.0                       |
|  | 51                                | 47.0                         | 65.0                       | 65.0                       |
|  | 45                                | 53.3                         | 65.0                       | 65.0                       |
|  | 39                                | 61.5                         | 65.0                       | 65.0                       |
|  | 33                                | 65.0                         | 65.0                       | 65.0                       |
| 80   | 57                                | 45.2                         | 65.0                       | 65.0                       |
|  | 51                                | 50.5                         | 65.0                       | 65.0                       |
|  | 45                                | 57.3                         | 65.0                       | 65.0                       |
|  | 39                                | 65.0                         | 65.0                       | 65.0                       |
| 74   | 57                                | 48.9                         | 65.0                       | 65.0                       |
|  | 51                                | 54.6                         | 65.0                       | 65.0                       |
|  | 45                                | 61.9                         | 65.0                       | 65.0                       |
| 68   | 57                                | 53.2                         | 65.0                       | 65.0                       |
|  | 51                                | 59.5                         | 65.0                       | 65.0                       |
|  | 45                                | 61.9                         | 65.0                       | 65.0                       |
| 62   | 57                                | 58.3                         | 65.0                       | 65.0                       |
|  | 51                                | 65.0                         | 65.0                       | 65.0                       |
| 56   | 57                                | 64.6                         | 65.0                       | 65.0                       |

| VERTICAL MULLION LOAD TABLE<br>(MULLION "C")                 |                                   |                              |                            |                            |
|--|-----------------------------------|------------------------------|----------------------------|----------------------------|
| DOOR JAMB VERTICAL MULLION<br>REINFORCED WITH SINGLE CHANNEL |                                   |                              |                            |                            |
| MAXIMUM<br>MULLION<br>SPAN<br>(IN.)                          | MAXIMUM<br>LOAD<br>WIDTH<br>(IN.) | ALLOWABLE PRESSURE (+/- PSF) |                            |                            |
|  |                                   | CONNECTION<br>"A"<br>(PSF)   | CONNECTION<br>"B"<br>(PSF) | CONNECTION<br>"C"<br>(PSF) |
| 98   | 76                                | 27.7                         | 56.8                       | 59.9                       |
|  | 72                                | 29.2                         | 60.0                       | 63.2                       |
|  | 66                                | 31.9                         | 65.0                       | 65.0                       |
|  | 60                                | 35.1                         | 65.0                       | 65.0                       |
|  | 54                                | 39.0                         | 65.0                       | 65.0                       |
|  | 48                                | 43.8                         | 65.0                       | 65.0                       |
| 86   | 76                                | 31.5                         | 64.8                       | 65.0                       |
|  | 72                                | 33.3                         | 65.0                       | 65.0                       |
|  | 66                                | 36.3                         | 65.0                       | 65.0                       |
|  | 60                                | 40.0                         | 65.0                       | 65.0                       |
|  | 54                                | 44.4                         | 65.0                       | 65.0                       |
|  | 48                                | 50.0                         | 65.0                       | 65.0                       |
| 82   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 74   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 68   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 62   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 56   | 57                                | 64.6                         | 65.0                       | 65.0                       |

| VERTICAL MULLION LOAD TABLE<br>(MULLION "D")               |                                   |                              |                            |                            |
|--|-----------------------------------|------------------------------|----------------------------|----------------------------|
| DOOR JAMB VERTICAL MULLION<br>REINFORCED WITH TWO CHANNELS |                                   |                              |                            |                            |
| MAXIMUM<br>MULLION<br>SPAN<br>(IN.)                        | MAXIMUM<br>LOAD<br>WIDTH<br>(IN.) | ALLOWABLE PRESSURE (+/- PSF) |                            |                            |
|  |                                   | CONNECTION<br>"A"<br>(PSF)   | CONNECTION<br>"B"<br>(PSF) | CONNECTION<br>"C"<br>(PSF) |
| 120  | 76                                | 22.6                         | 46.4                       | 52.2                       |
|  | 72                                | 23.9                         | 49.0                       | 55.1                       |
|  | 66                                | 26.0                         | 53.5                       | 60.1                       |
|  | 60                                | 28.6                         | 58.8                       | 65.0                       |
|  | 54                                | 31.8                         | 65.0                       | 65.0                       |
|  | 48                                | 35.8                         | 65.0                       | 65.0                       |
| 108  | 76                                | 25.1                         | 51.6                       | 58.0                       |
|  | 72                                | 26.5                         | 54.4                       | 61.2                       |
|  | 66                                | 28.9                         | 59.4                       | 65.0                       |
|  | 60                                | 31.8                         | 65.0                       | 65.0                       |
|  | 54                                | 35.4                         | 65.0                       | 65.0                       |
|  | 48                                | 39.8                         | 65.0                       | 65.0                       |
| 98   | 76                                | 27.7                         | 56.8                       | 63.9                       |
|  | 72                                | 29.2                         | 60.0                       | 65.0                       |
|  | 66                                | 31.9                         | 65.0                       | 65.0                       |
|  | 60                                | 35.1                         | 65.0                       | 65.0                       |
|  | 54                                | 39.0                         | 65.0                       | 65.0                       |
|  | 48                                | 43.8                         | 65.0                       | 65.0                       |
| 86   | 76                                | 31.5                         | 64.8                       | 65.0                       |
|  | 72                                | 33.3                         | 65.0                       | 65.0                       |
|  | 66                                | 36.3                         | 65.0                       | 65.0                       |
|  | 60                                | 40.0                         | 65.0                       | 65.0                       |
|  | 54                                | 44.4                         | 65.0                       | 65.0                       |
|  | 48                                | 50.0                         | 65.0                       | 65.0                       |
| 82   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 74   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 68   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 62   | 76                                | 33.1                         | 65.0                       | 65.0                       |
|  | 72                                | 34.9                         | 65.0                       | 65.0                       |
|  | 66                                | 38.1                         | 65.0                       | 65.0                       |
|  | 60                                | 41.9                         | 65.0                       | 65.0                       |
|  | 54                                | 46.6                         | 65.0                       | 65.0                       |
|  | 48                                | 52.4                         | 65.0                       | 65.0                       |
| 56   | 57                                | 64.6                         | 65.0                       | 65.0                       |

| GLASS LOAD TABLE              |                                |                                    |
|-------------------------------|--------------------------------|------------------------------------|
| DAY LIGHT OPENING (D.L.O.)    |                                | ALLOWABLE<br>PRESSURE<br>(+/- PSF) |
| MAXIMUM<br>LONG SIDE<br>(IN.) | MAXIMUM<br>SHORT SIDE<br>(IN.) |                                    |
| GLASS OPTION 1                |                                |                                    |
| 93.5                          | 18.0                           | 65.0                               |
| 87.0                          | 19.5                           | 65.0                               |
| 81.0                          | 21.0                           | 65.0                               |
| 75.0                          | 23.0                           | 65.0                               |
| 69.0                          | 25.0                           | 65.0                               |
| 63.0                          | 27.0                           | 65.0                               |
| 57.0                          | 30.0                           | 65.0                               |
| 46.0                          | 37.0                           | 65.0                               |
| 43.0                          | 40.0                           | 65.0                               |
| GLASS OPTION 2                |                                |                                    |
| 96.0                          | 34.0                           | 65.0                               |
| 93.5                          | 52.5                           | 65.0                               |

GLASS OPTION 1: I.G. GLASS WITH 1/4" AN. PANES  
GLASS OPTION 2: I.G. GLASS WITH 1/4" TEMPERED PANES

NOTE: GLASS SHALL MEET ALL REQUIREMENTS OF CHAPTER 24 OF THE FLORIDA BUILDING CODE (FBC) INCLUDING SAFETY REQUIREMENTS OF SECTION 2406 OF THE FBC.

|                      |                       |
|----------------------|-----------------------|
| DRAWN BY:<br>K.P.S.  | CHECKED BY:<br>W.W.S. |
| PLOT:<br>1=1         | DATE:<br>10/17/05     |
| DATE                 |                       |
| BY                   |                       |
| REVISION DESCRIPTION |                       |
| NO.                  |                       |

DRAWING TITLE  
TRIFAB 451 NON-IMPACT STORE FRONT & ENTRANCE WAY SYSTEM

CONSULTANTS  
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.  
8895 N. MILITARY TRAIL, SUITE C-204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902 FAX: 561-775-4903

MANUFACTURER  
KAWNEER COMPANY, INC.  
555 GUTHRIDGE COURT  
NORCROSS, GA 30092  
770-449-5555

MULLION "A" = VERTICAL MULLION BETWEEN FIXED PANELS WITH NO REINFORCEMENT  
MULLION "B" = VERTICAL MULLION BETWEEN FIXED PANELS WITH ONE(1) CONTINUOUS STEEL CHANNEL FOR REINFORCEMENT  
MULLION "C" = VERTICAL MULLION BETWEEN DOORS AND FIXED PANELS WITH ONE(1) CONTINUOUS STEEL CHANNEL FOR REINFORCEMENT.  
MULLION "D" = VERTICAL MULLION BETWEEN DOORS AND FIXED PANELS WITH TWO(2) CONTINUOUS STEEL CHANNELS FOR REINFORCEMENT.

**LOAD TABLE NOTES:**

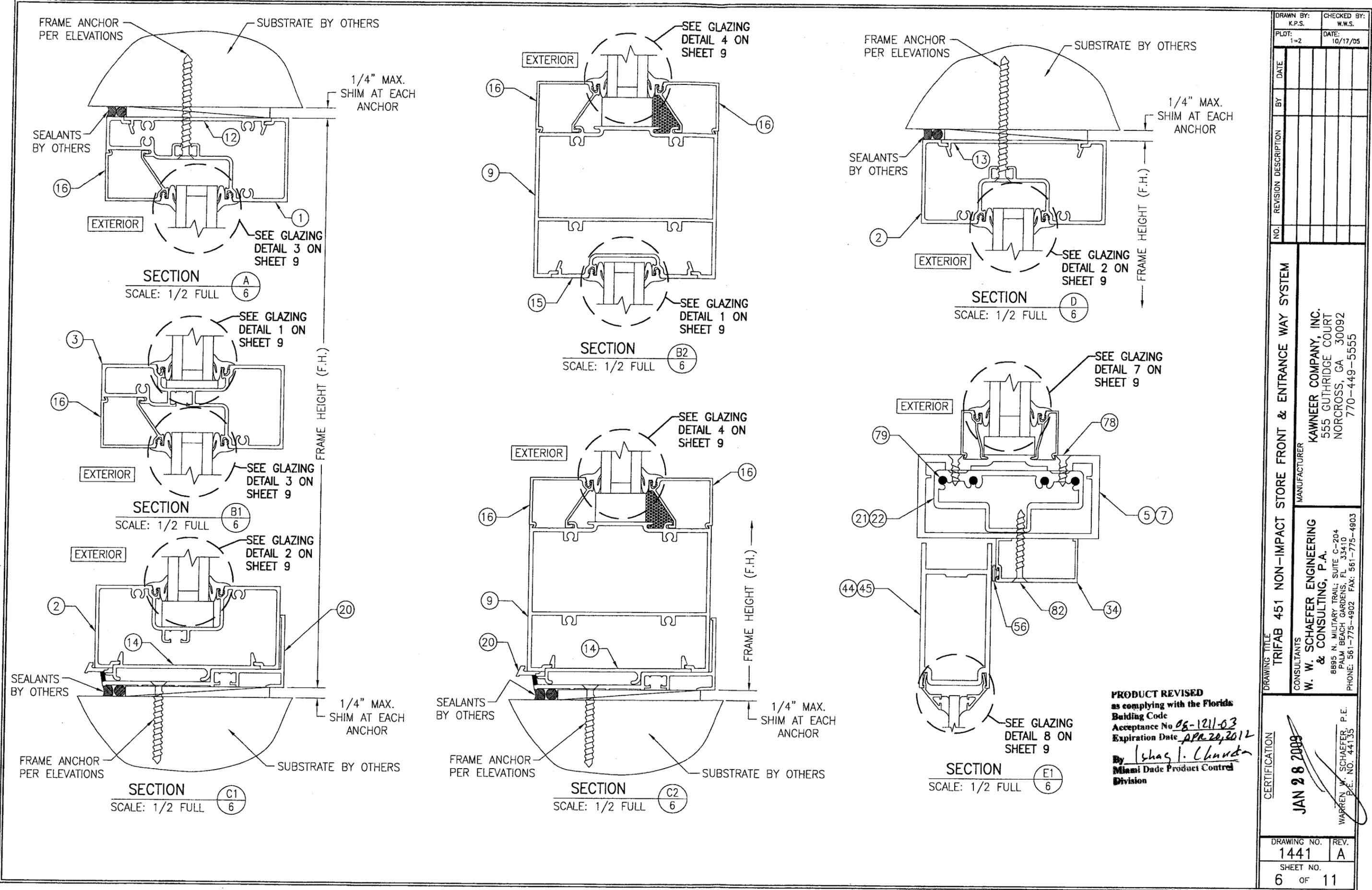
1. THE LESSER OF THE LOADS DETERMINED FROM THE MULLION LOAD TABLES AND THE GLASS LOAD TABLE SHALL CONTROL FOR THE ASSEMBLED UNIT.
2. ALL LOADS IN THE GLASS LOAD TABLE ARE AS RESTRICTED BY TESTING AND ASTM E1300-02.
3. ALL LOADS IN THE MULLION LOAD TABLES HAVE BEEN DETERMINED BASED ON THE WEAKEST CONDITION OF USING THE 1 3/4" WIDE FRAMING MEMBERS OF THE 450 SYSTEM. IT IS POSSIBLE THAT THE ALLOWABLE LOADS MAY INCREASE WITH USE OF THE 2" & 4 1/2" WIDE FRAMING MEMBERS OF THIS SYSTEM, BUT CONSIDERATION OF THIS INCREASE IS NOT APPLICABLE TO THIS APPROVAL. INCREASE IN MULLION LOADS DUE TO USE OF THE 2" OR 4 1/2" FRAMING MEMBERS IN THIS SYSTEM SHALL BE REVIEWED AND CERTIFIED BY A FLORIDA LICENSED ENGINEER UNDER A JOB SPECIFIC APPROVAL.

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No 08-1211-03  
Expiration Date APR 26, 2012  
By Ishag I. Chanda  
Miami Dade Product Control  
Division

CERTIFICATION  
JAN 28 2009

WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

|             |      |
|-------------|------|
| DRAWING NO. | REV. |
| 1441        | A    |
| SHEET NO.   |      |
| 5 OF 11     |      |



|                      |             |
|----------------------|-------------|
| DRAWN BY:            | CHECKED BY: |
| K.P.S.               | W.W.S.      |
| PLOT:                | DATE:       |
| 1-2                  | 10/17/05    |
| DATE                 |             |
| BY                   |             |
| REVISION DESCRIPTION |             |
| NO.                  |             |

DRAWING TITLE  
**TRIFAB 451 NON-IMPACT STORE FRONT & ENTRANCE WAY SYSTEM**

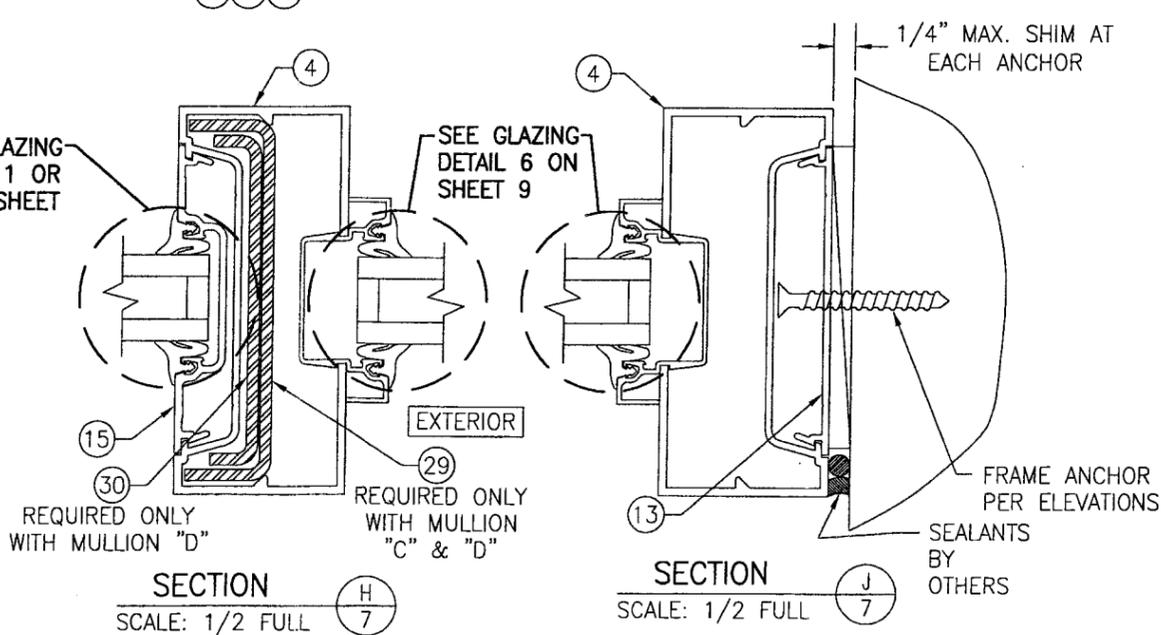
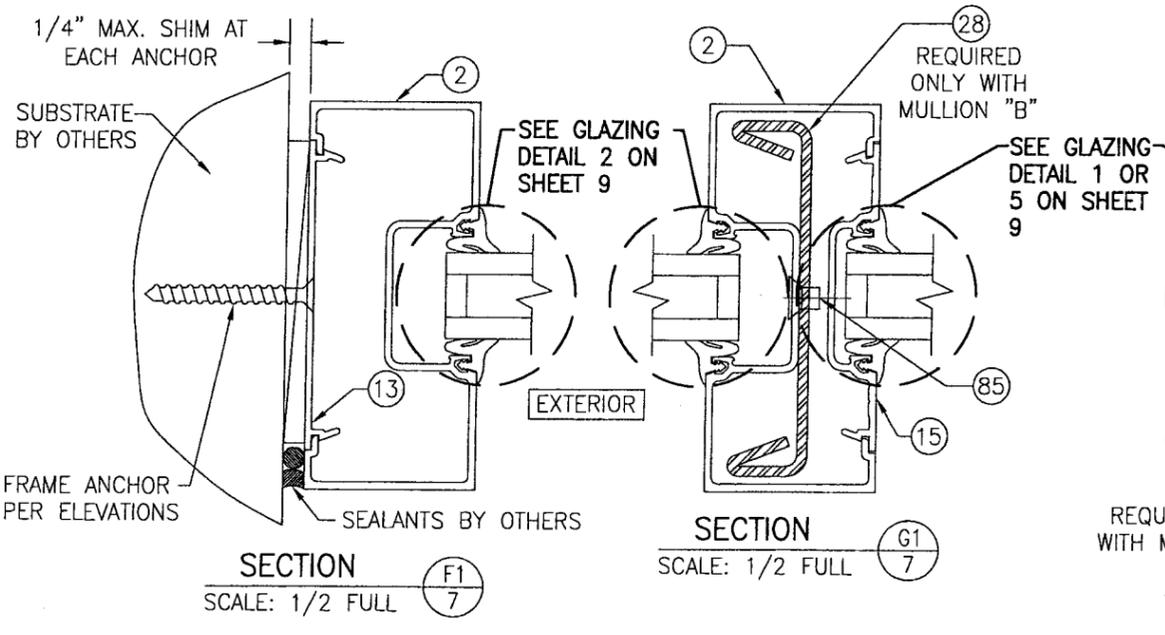
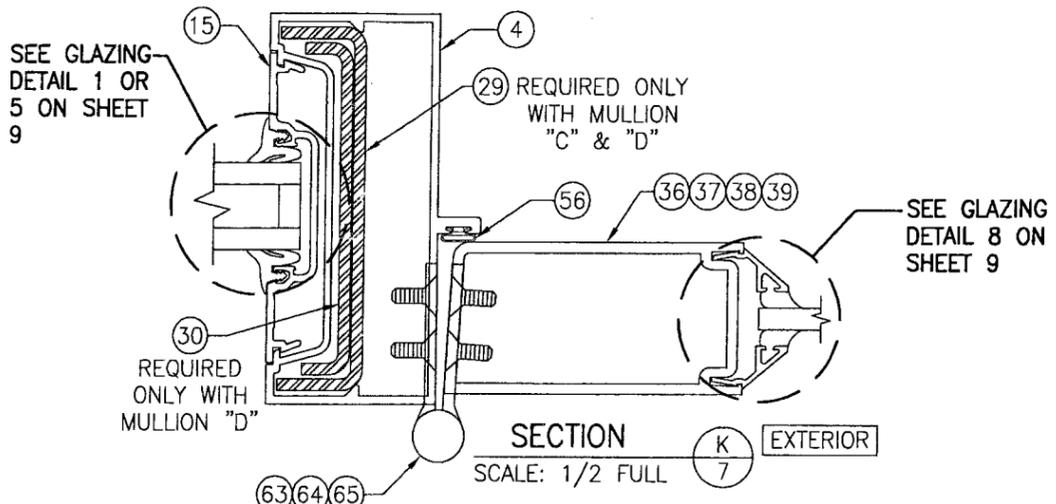
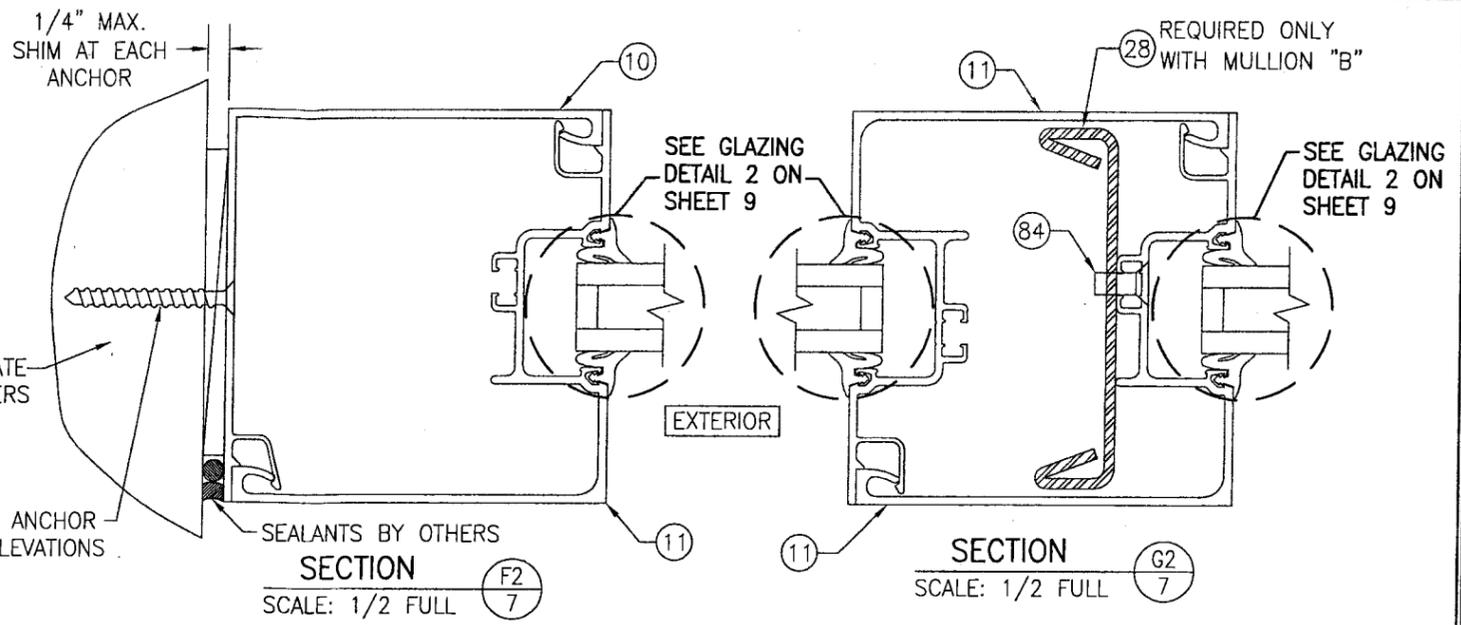
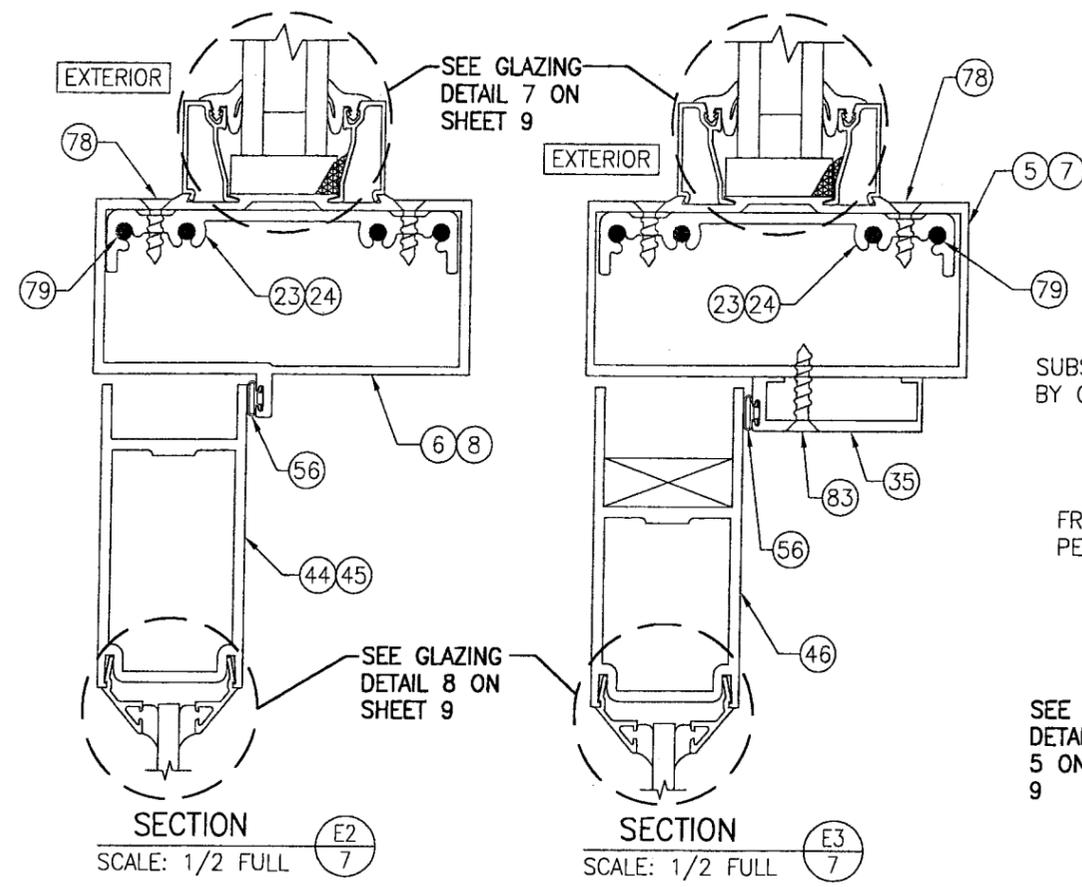
MANUFACTURER  
**KAWNEER COMPANY, INC.**  
 555 GUTHRIE COURT  
 NORCROSS, GA 30092  
 770-449-5555

CONSULTANTS  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
 8895 N. MILITARY TRAIL, SUITE C-204  
 PALM BEACH GARDENS, FL 33410  
 PHONE: 561-775-4902 FAX: 561-775-4903

PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No 08-1211-03  
 Expiration Date APR 20, 2012  
 By Ishag J. Chaudhry  
 Miami Dade Product Control  
 Division

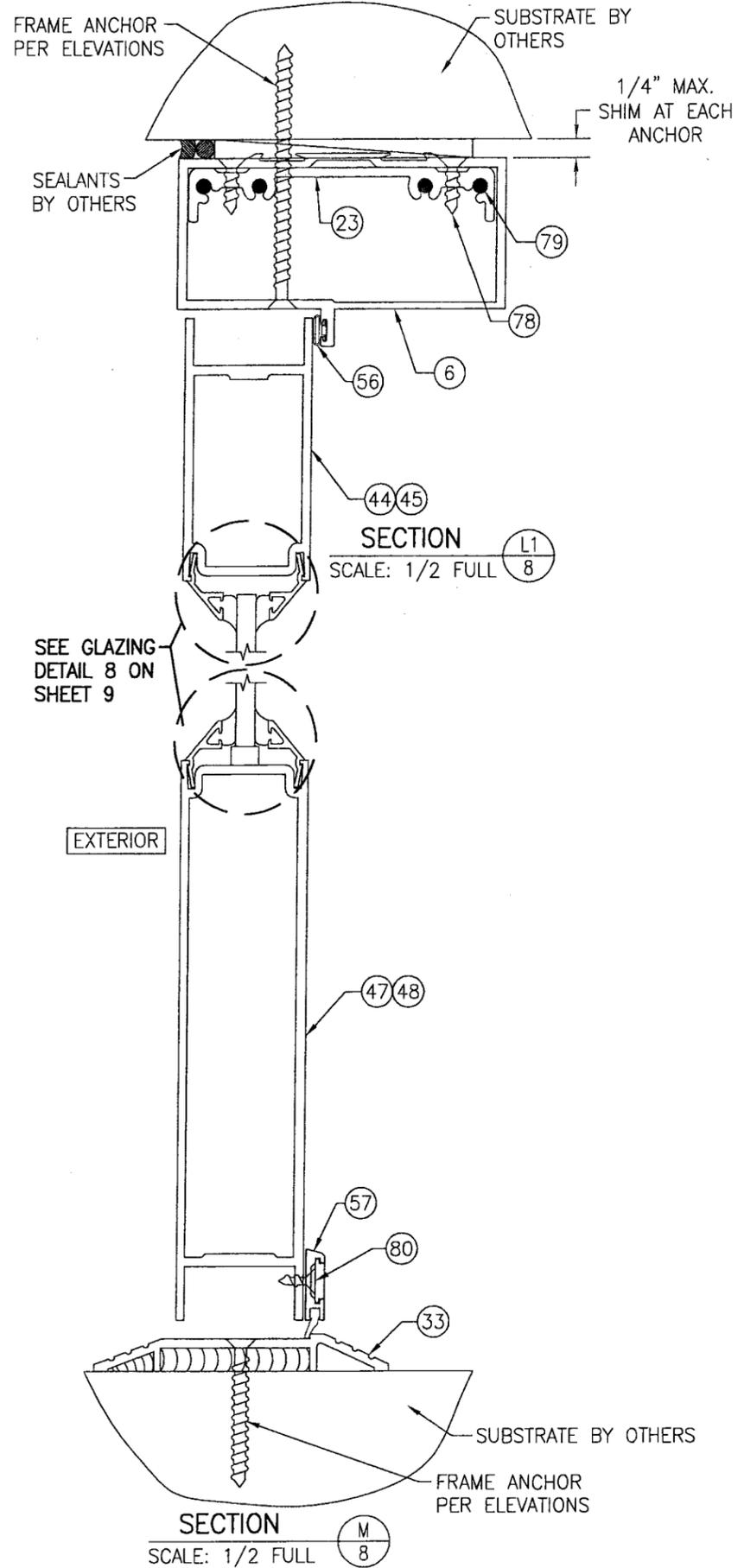
CERTIFICATION  
**JAN 28 2009**  
 WARREN W. SCHAEFER, P.E.  
 P.E. NO. 44135

|             |       |
|-------------|-------|
| DRAWING NO. | REV.  |
| 1441        | A     |
| SHEET NO.   |       |
| 6           | OF 11 |

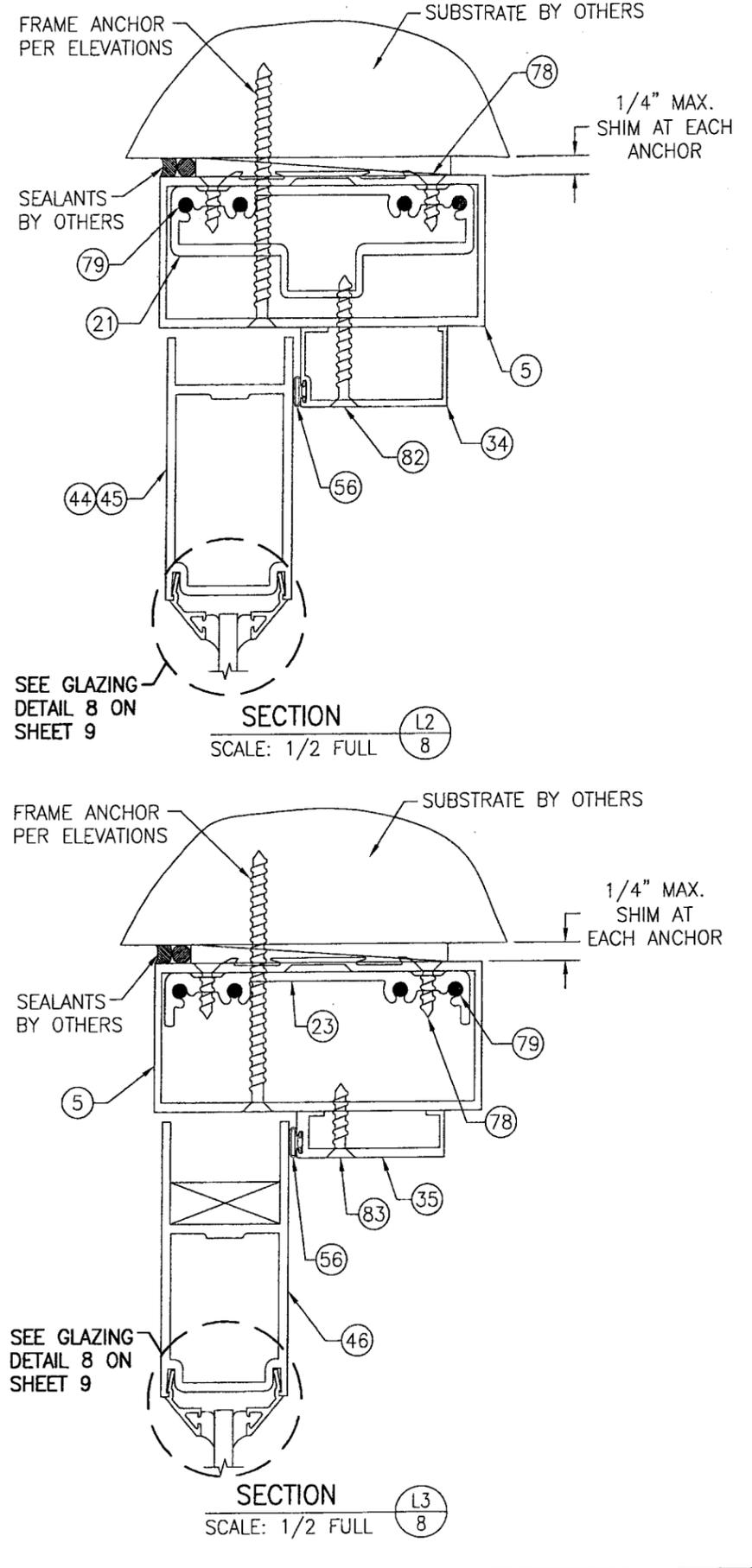


**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 Acceptance No. 08-121-03  
 Expiration Date APR 29, 2012  
 By Ishag L. Chande  
 Miami Dade Product Control Division

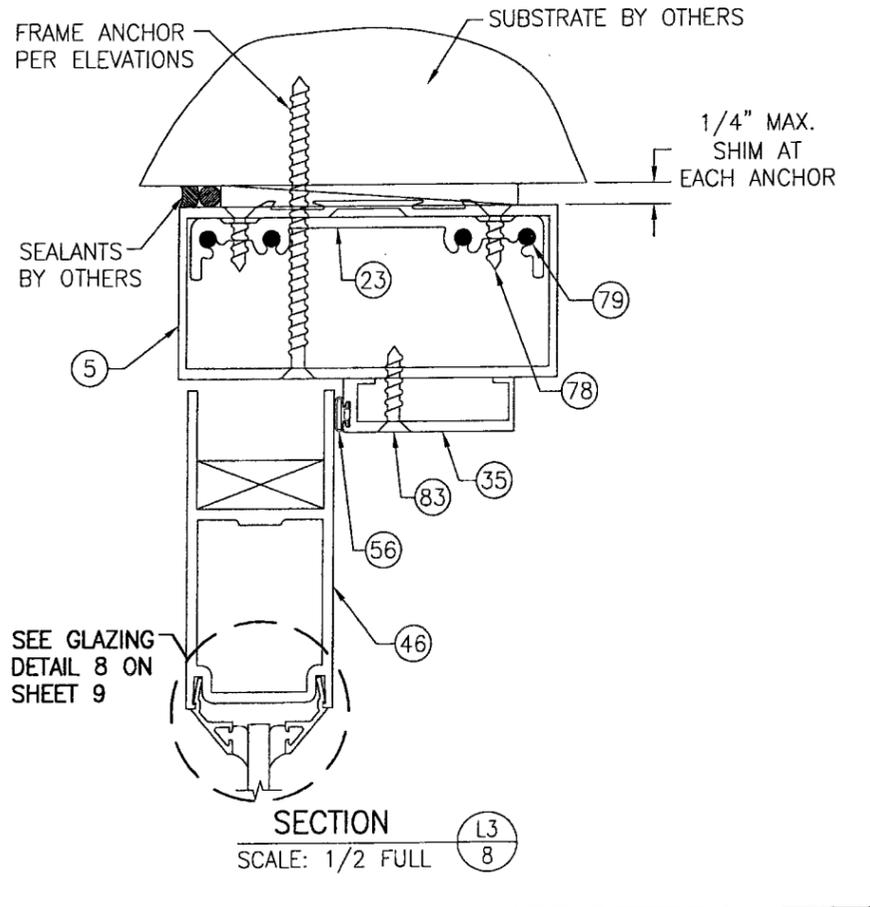
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|--|--|
| DRAWN BY:<br>K.P.S.  | CHECKED BY:<br>W.W.S.  |
| PLOT:<br>1=2   | DATE:<br>10/17/05  |
| NO.  | REVISION DESCRIPTION   |
| DATE   | BY   |
| DRAWING TITLE<br>TRIFAB 451 NON-IMPACT STORE FRONT & ENTRANCE WAY SYSTEM   |  |
| CONSULTANTS<br>W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.<br>8895 N. MILITARY TRAIL, SUITE C-204<br>PALM BEACH GARDENS, FL 33410<br>PHONE: 561-775-4902 FAX: 561-775-4903 | MANUFACTURER<br>KAWNEER COMPANY, INC.<br>555 GUTHRIDGE COURT<br>NORCROSS, GA 30092<br>770-449-5555 |
| CERTIFICATION<br>JAN 28 2009   | WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135   |
| DRAWING NO.<br>1441  | REV.<br>A  |
| SHEET NO.<br>7 OF 11   |  |



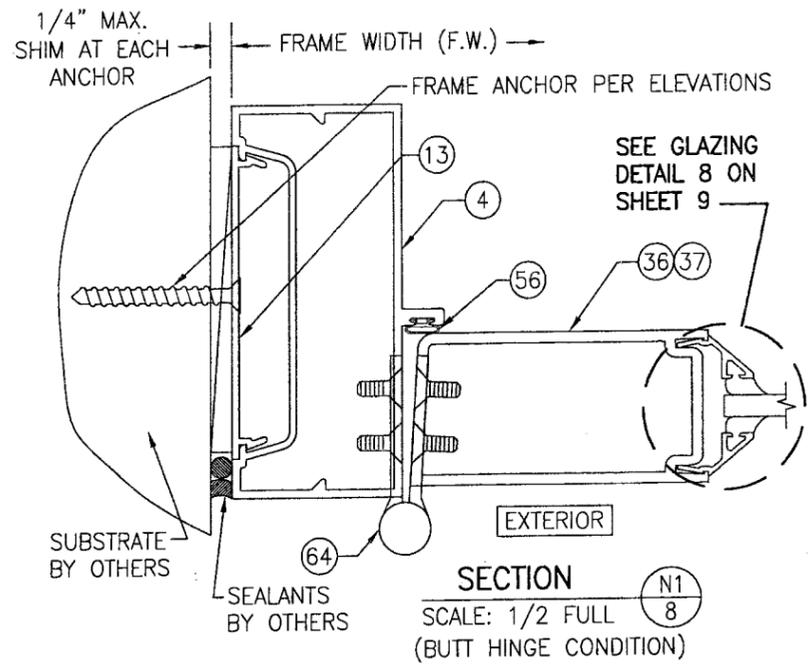
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SCALE: 1/2 FULL



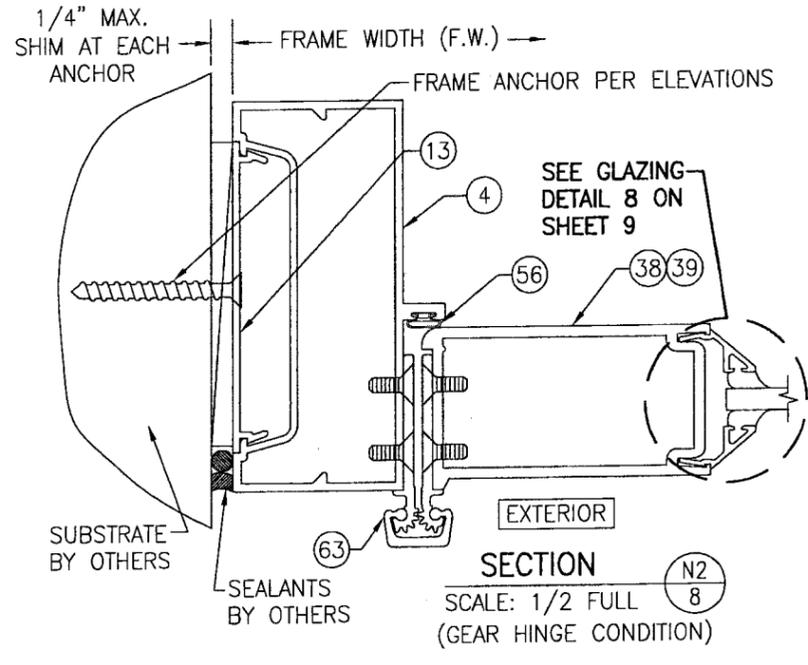
SECTION L2  
SCALE: 1/2 FULL



SECTION L3  
SCALE: 1/2 FULL



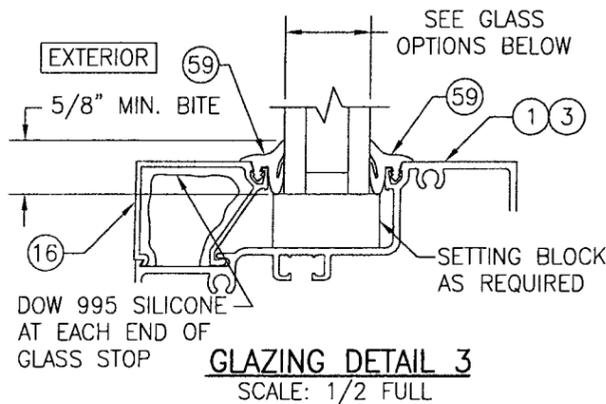
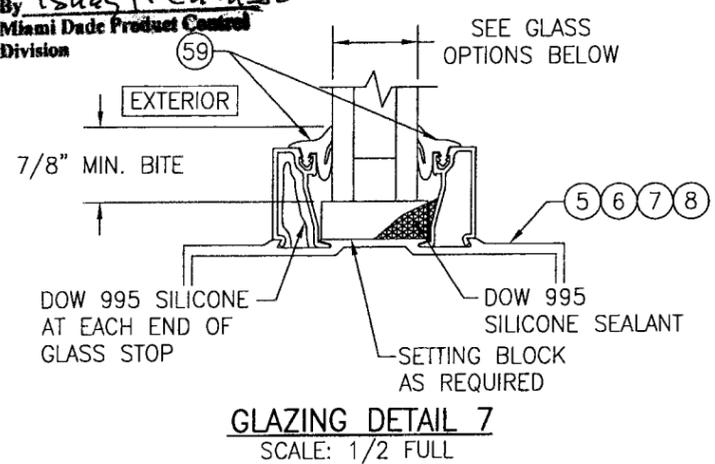
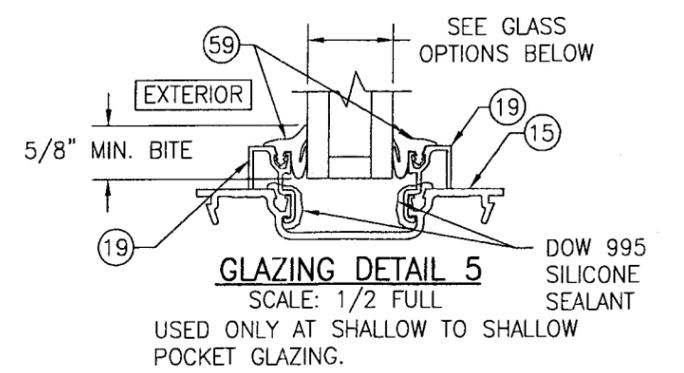
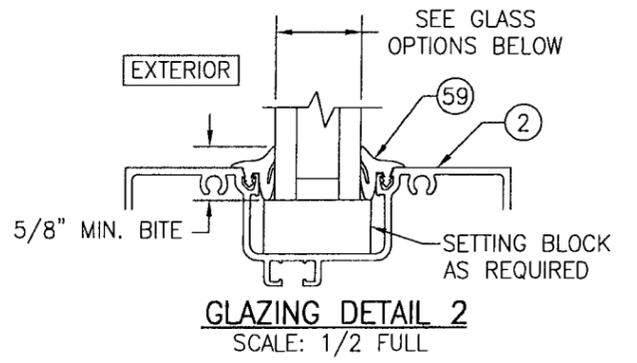
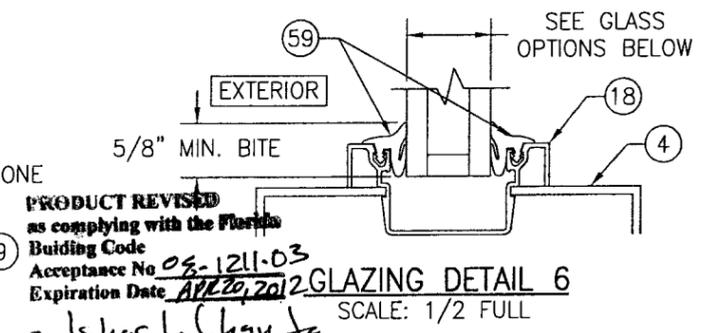
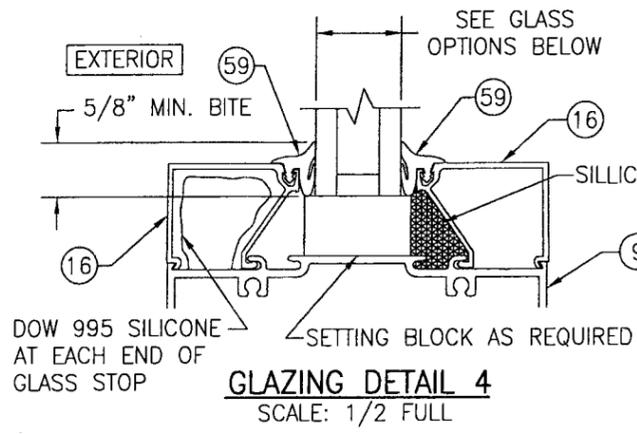
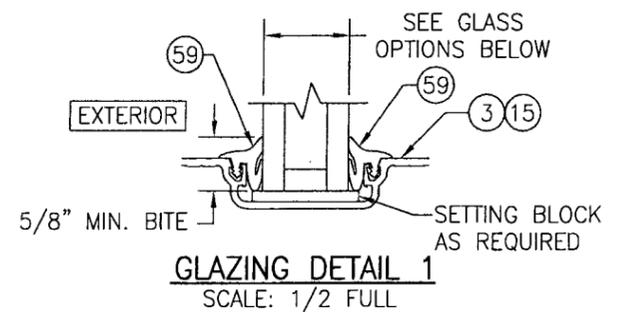
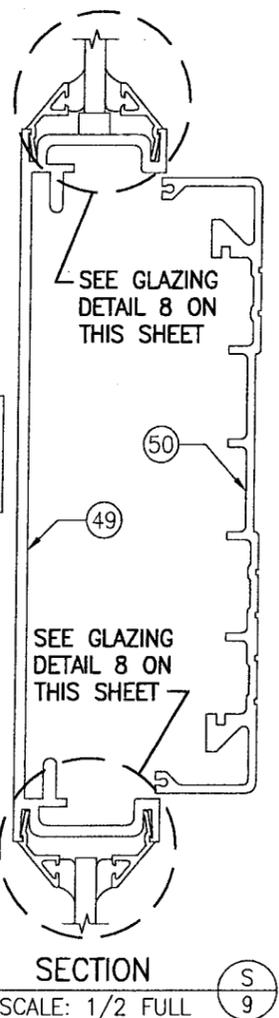
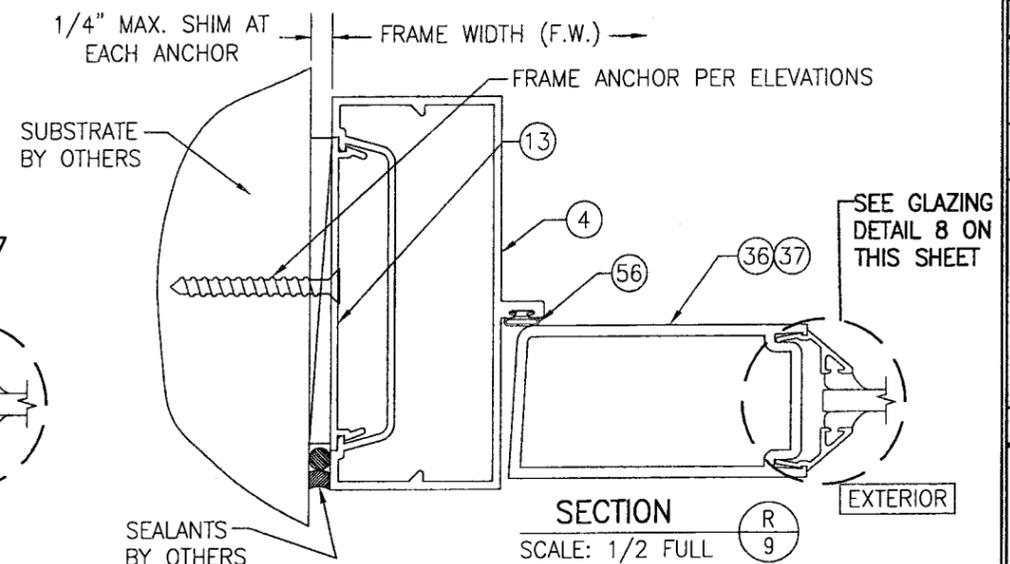
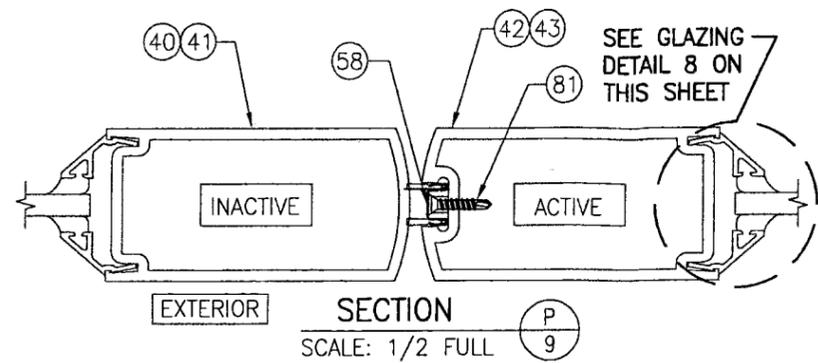
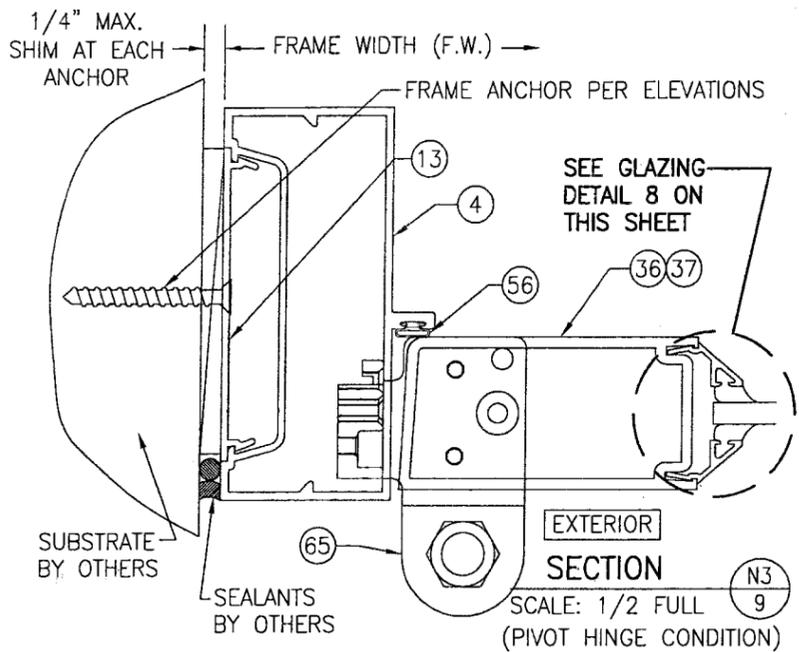
SECTION N1  
SCALE: 1/2 FULL  
(BUTT HINGE CONDITION)



SECTION N2  
SCALE: 1/2 FULL  
(GEAR HINGE CONDITION)

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No 08-1211.03  
Expiration Date APR 20, 2012  
By *Isaac I. Urrutia*  
Miami Dade Product Control  
Division

|  |                      |  |    |
|--|----------------------|--|----|
| DRAWN BY:<br>K.P.S.  |                      | CHECKED BY:<br>W.W.S.  |    |
| PLOT:<br>1=2   |                      | DATE:<br>10/17/05  |    |
| NO.  | REVISION DESCRIPTION | DATE   | BY |
|  |                      |  |    |
| DRAWING TITLE<br>TRIFAB 451 NON-IMPACT STORE FRONT & ENTRANCE WAY SYSTEM   |                      |  |    |
| CONSULTANTS<br>W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.<br>8895 N. MILITARY TRAIL, SUITE C-204<br>PALM BEACH GARDENS, FL 33410<br>PHONE: 561-775-4902 FAX: 561-775-4903 |                      | MANUFACTURER<br>KAWNEER COMPANY, INC.<br>555 GUTHRIDGE COURT<br>NORCROSS, GA 30092<br>770-449-5555 |    |
| CERTIFICATION<br>JAN 28 2009<br>WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135   |                      |  |    |
| DRAWING NO.<br>1441  | REV.<br>A            | SHEET NO.<br>8 OF 11   |    |

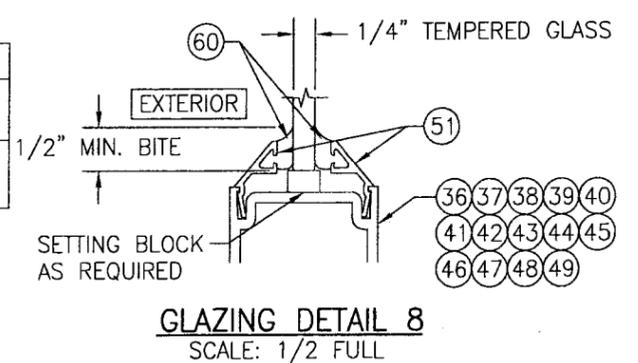


**FIXED PANEL GLASS OPTIONS**

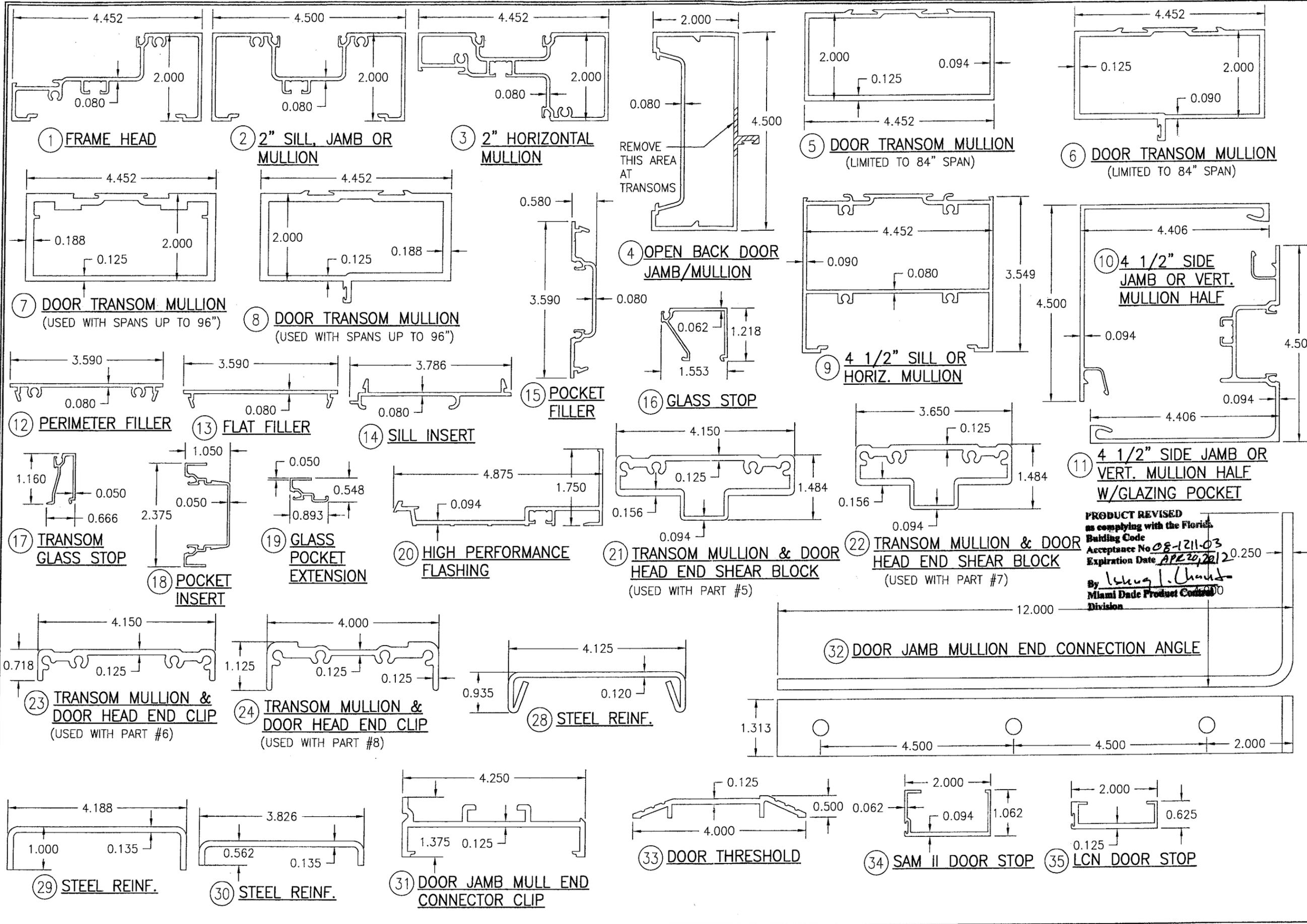
GLASS OPTION 1: 1" THICK I.G. GLASS WITH 1/4" ANNEALED PANES  
 GLASS OPTION 2: 1" THICK I.G. GLASS WITH 1/4" TEMPERED PANES

SEE "GLASS LOAD TABLE" ON SHEET 5 FOR GLASS LOAD REQUIREMENTS.

NOTE: GLASS SHALL MEET ALL REQUIREMENTS OF CHAPTER 24 OF THE 2004 FLORIDA BUILDING CODE (FBC) INCLUDING SAFETY REQUIREMENTS OF SECTION 2406 OF THE FBC.



|  |                       |      |     |                      |    |      |     |                      |    |      |  |  |
|--|-----------------------|------|-----|----------------------|----|------|-----|----------------------|----|------|--|--|
| DRAWN BY:<br>K.P.S.  | CHECKED BY:<br>W.W.S. | DATE | NO. | REVISION DESCRIPTION | BY | DATE | NO. | REVISION DESCRIPTION | BY | DATE | DRAWING TITLE<br>TRIFAB 451 NON-IMPACT STORE FRONT & ENTRANCE WAY SYSTEM | MANUFACTURER<br>KAWNEER COMPANY, INC.<br>555 GUTHRIDGE COURT<br>NORCROSS, GA 30092<br>770-449-5555 |
|  |                       |      |     |                      |    |      |     |                      |    |      |  |  |
| CONSULTANTS<br>W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.<br>8895 N. MILITARY TRAIL, SUITE C-204<br>PALM BEACH GARDENS, FL 33410<br>PHONE: 561-775-4902 FAX: 561-775-4903 |                       |      |     |                      |    |      |     |                      |    |      |  |  |
| CERTIFICATION<br>JAN 28 2009<br>WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135   |                       |      |     |                      |    |      |     |                      |    |      |  |  |
| DRAWING NO.<br>1441  |                       |      |     |                      |    |      |     |                      |    |      | REV.<br>A  |  |
| SHEET NO.<br>9   |                       |      |     |                      |    |      |     |                      |    |      | OF 11  |  |



|           |                      |             |          |
|-----------|----------------------|-------------|----------|
| DRAWN BY: | K.P.S.               | CHECKED BY: | W.W.S.   |
| PLOT:     | 1=2                  | DATE:       | 10/17/05 |
| NO.       | REVISION DESCRIPTION | BY          | DATE     |
|           |                      |             |          |

**DRAWING TITLE**  
TRIFAB 451 NON-IMPACT STORE FRONT & ENTRANCE WAY SYSTEM

**MANUFACTURER**  
KAWNEER COMPANY, INC.  
555 GUTHRIDGE COURT  
NORCROSS, GA 30092  
770-449-5555

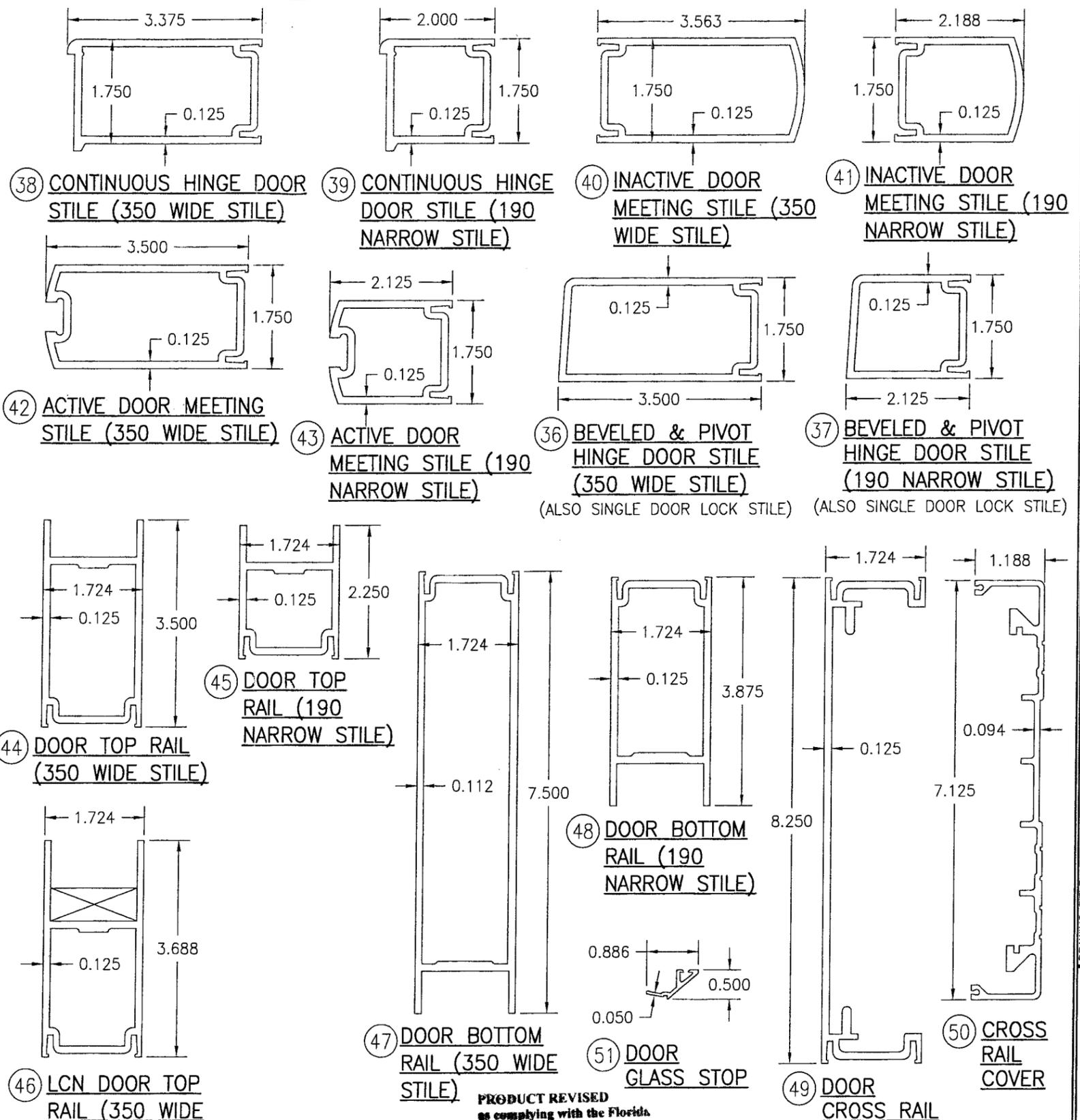
**CONSULTANTS**  
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.  
8895 N. MILITARY TRAIL, SUITE C-204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902 FAX: 561-775-4903

**CERTIFICATION**  
JAN 28 2009  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44155

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. 08-1211-03  
Expiration Date APR 20, 2012  
By: *Warren W. Schaefer*  
Miami Dade Product Control Division

**DRAWING NO.** 1441  
**REV.** A  
**SHEET NO.** 10 OF 11

| ITEM #                  | PART #      | ITEM DESCRIPTION                           | MANUFACTURER/NOTES                             |
|-------------------------|-------------|--|--|
| PARTS                   |             |  |  |
| 1                       | 451-CG-003  | FRAME HEAD                                 | 6063-T6 ALUMINUM                               |
| 2                       | 451-CG-001  | 1 3/4" SILL, JAMB OR MULLION               | 6063-T6 ALUMINUM                               |
| 3                       | 451-CG-011  | 1 3/4" HORIZONTAL MULLION                  | 6063-T6 ALUMINUM                               |
| 4                       | 575-054     | OPEN BACK DOOR JAMB/MULLION                | 6063-T6 ALUMINUM                               |
| 5                       | 451-079     | DOOR TRANSOM & TRANSOM MULLION             | 6063-T6 ALUMINUM (MULLION LIMITED TO 84" SPAN) |
| 6                       | 451-020     | DOOR TRANSOM & TRANSOM MULLION             | 6063-T6 ALUMINUM (MULLION LIMITED TO 84" SPAN) |
| 7                       | 118-081     | DOOR TRANSOM MULLION                       | 6063-T6 ALUMINUM                               |
| 8                       | 451-075     | DOOR TRANSOM MULLION                       | 6063-T6 ALUMINUM                               |
| 9                       | 450-027     | 4 1/2" SILL OR HORIZ. MULLION              | 6063-T6 ALUMINUM                               |
| 10                      | 450-017     | 4 1/2" SIDE JAMB OR VERT. MULL HALF        | 6063-T6 ALUMINUM                               |
| 11                      | 451-CG-015  | 4 1/2" SIDE JAMB OR VERT. MULL HALF        | 6063-T6 ALUMINUM                               |
| 12                      | 451-CG-163  | PERIMETER FILLER                           | 6063-T6 ALUMINUM                               |
| 13                      | 450-126     | FLAT FILLER SHIM SUPPORT                   | 6063-T6 ALUMINUM                               |
| 14                      | 451-HP-126  | SILL INSERT                                | 6063-T6 ALUMINUM                               |
| 15                      | 451-CG-002  | POCKET FILLER                              | 6063-T6 ALUMINUM                               |
| 16                      | 451-CG-004  | GLASS STOP                                 | 6063-T6 ALUMINUM                               |
| 17                      | 450-022     | TRANSOM GLASS STOP                         | 6063-T6 ALUMINUM                               |
| 18                      | 451-026     | POCKET INSERT                              | 6063-T6 ALUMINUM                               |
| 19                      | 575-056     | GLASS POCKET EXTENSION                     | 6063-T6 ALUMINUM                               |
| 20                      | 451-HP-037  | HIGH PERFORMANCE FLASHING                  | 6063-T6 ALUMINUM                               |
| 21                      | 450-548     | TRANSOM MULL & DOOR HEAD END SHEAR BLOCK   | 6063-T6 ALUMINUM (USED WITH PART #5)           |
| 22                      | 400-140/141 | TRANSOM MULL & DOOR HEAD END SHEAR BLOCK   | 6063-T6 ALUMINUM (USED WITH PART #7)           |
| 23                      | 450-506     | TRANSOM MULL & DOOR HEAD END CLIP          | 6063-T6 ALUMINUM (USED WITH PART #6)           |
| 24                      | 118-049     | TRANSOM MULL & DOOR HEAD END CLIP          | 6063-T6 ALUMINUM (USED WITH PART #8)           |
| 28                      | 450-110     | FIXED PANEL VERT. MULL STEEL REINFORCEMENT | 50 KSI STEEL                                   |
| 29                      | 575-300     | DOOR JAMB MULL STEEL REINFORCEMENT         | 50 KSI STEEL                                   |
| 30                      | 575-301     | DOOR JAMB MULL STEEL REINFORCEMENT         | 50 KSI STEEL                                   |
| 31                      | 575-298     | DOOR JAMB MULL END CONNECTOR CLIP          | 6063-T6 ALUMINUM                               |
| 32                      | 575-299     | DOOR JAMB MULL BASE END CONNECTION ANGLE   | 50 KSI STEEL                                   |
| 33                      | 069-139     | DOOR THRESHOLD                             | 6063-T6 ALUMINUM                               |
| 34                      | 041-045     | SAM II DOOR STOP                           | 6063-T6 ALUMINUM                               |
| 35                      | 069-214     | LCN DOOR STOP                              | 6063-T6 ALUMINUM                               |
| 36                      | 200-005     | BEVELED DOOR STILE "350"                   | 6063-T6 ALUMINUM                               |
| 37                      | 200-002     | BEVELED DOOR STILE "190"                   | 6063-T6 ALUMINUM                               |
| 38                      | 200-012     | CONT. HINGE DOOR STILE "350"               | 6063-T6 ALUMINUM                               |
| 39                      | 200-011     | CONT. HINGE DOOR STILE "190"               | 6063-T6 ALUMINUM                               |
| 40                      | 200-007     | INACTIVE DOOR MEETING STILE "350"          | 6063-T6 ALUMINUM                               |
| 41                      | 200-004     | INACTIVE DOOR MEETING STILE "190"          | 6063-T6 ALUMINUM                               |
| 42                      | 200-006     | ACTIVE DOOR MEETING STILE "350"            | 6063-T6 ALUMINUM                               |
| 43                      | 200-003     | ACTIVE DOOR MEETING STILE "190"            | 6063-T6 ALUMINUM                               |
| 44                      | 200-023     | DOOR TOP RAIL "350"                        | 6063-T6 ALUMINUM                               |
| 45                      | 200-020     | DOOR TOP RAIL "190"                        | 6063-T6 ALUMINUM                               |
| 46                      | 200-024     | LCN DOOR TOP RAIL "350"                    | 6063-T6 ALUMINUM                               |
| 47                      | 200-034     | DOOR BOTTOM RAIL "350"                     | 6063-T6 ALUMINUM                               |
| 48                      | 200-030     | DOOR BOTTOM RAIL "190"                     | 6063-T6 ALUMINUM                               |
| 49                      | 233-013     | DOOR CROSS RAIL                            | 6063-T6 ALUMINUM                               |
| 50                      | 033-105     | CROSS RAIL COVER                           | 6063-T6 ALUMINUM                               |
| 51                      | 200-041     | DOOR GLASS STOP                            | 6063-T6 ALUMINUM                               |
| SEALS AND SEALANTS      |             |  |  |
| 56                      | 027-078     | BULB WEATHERSTRIPPING                      | ALCRYN   |
| 57                      | 200-795     | DOOR BOTTOM SWEEP ASSEMBLY                 | VARIED   |
| 58                      | 200-496     | ASTRAGAL WEATHERSTRIPPING                  | VARIED   |
| 59                      | 027-074     | PUSH-ON GASKET                             | EPDM   |
| 60                      | 027-563     | DOOR WEATHERING                            | EPDM   |
| HARDWARE                |             |  |  |
| 63                      | 050-821     | CONTINUOUS GEAR HINGE                      | BY HAGER/ROTON                                 |
| 64                      | 037-232     | BUTT HINGE (3 PER PANEL)                   | BY HAGER                                       |
|                         | 050-322     | TOP OFFSET PIVOT                           | BY KAWNEER                                     |
| 65                      | 050-331     | INTERMEDIATE OFFSET PIVOT                  | BY KAWNEER                                     |
|                         | 050-326/327 | RH/LH BOTTOM OFFSET PIVOT                  | BY KAWNEER                                     |
| 66                      | -           | MS 1850 3-POINT LOCK                       | BY ADAMS-RITE (NOT APPLICABLE WITH 190 DOORS)  |
| 67                      | 050-079     | FLUSH BOLT LOCK                            | BY KAWNEER                                     |
| 68                      | -           | CONSEALED ROD EXIT DEVICE                  | DOROMATIC 1690                                 |
| 69                      | -           | CONSEALED ROD EXIT DEVICE                  | PANELINE CR90                                  |
| 70                      | -           | CONSEALED ROD EXIT DEVICE                  | JACKSON 2086                                   |
| 71                      | -           | CONSEALED ROD EXIT DEVICE                  | KAWNEER 1686                                   |
| 72                      | -           | OVERHEAD CONSEALED DOOR CLOSER             | BY KAWNEER OR LCN                              |
| 73                      | -           | SURFACE DOOR CLOSER                        | BY NORTON                                      |
| 74                      | CO9 OR CPN  | PUSH/PULL DEVICE                           | BY KAWNEER                                     |
| MISCELLANEOUS FASTENERS |             |  |  |
| 78                      | -           | NO. 10 X 1 1/4" S.S. SCREW                 | 2 PER CLIP                                     |
| 79                      | -           | NO. 10 X 1/2" S.S. SCREW                   | 4 PER CLIP                                     |
| 80                      | -           | NO. 6 X 3/8" S.S. SCREW                    | 7 PER DOOR SWEEP                               |
| 81                      | -           | NO. 6 X 3/4" SCREW                         | 10 PER DOOR LEAF MAX.                          |
| 82                      | -           | NO. 10 X 1 5/8" S.S. SCREW                 | 8 PER STOP                                     |
| 83                      | -           | NO. 10 X 1" S.S. SCREW                     | 5 PER STOP                                     |
| 84                      | -           | 1/4" X 5/8" S.S. SCREW                     | 6" FROM ENDS & 12" MAX. O.C.                   |
| 85                      | -           | NO 10-24 X 3/8" S.S. SCREW                 | 1 AT CENTER                                    |



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 By: *Leah I. Chen*  
 Miami Dade Product Control  
 Division

|   |                       |
|---|-----------------------|
| DRAWN BY:<br>K.P.S.   | CHECKED BY:<br>W.W.S. |
| DATE:<br>07/18/07   | DATE:<br>10/17/05     |
| BY:<br>W.W.S.   |                       |
| REVISION DESCRIPTION:<br>CHANGED ITEM NUMBER 8 TO PART #451-075   |                       |
| DRAWING TITLE<br><b>TRIFAB 451 NON-IMPACT STORE FRONT &amp; ENTRANCE WAY SYSTEM</b>   |                       |
| MANUFACTURER<br><b>KAWNEER COMPANY, INC.</b><br>555 GUTHRIE COURT<br>NORCROSS, GA 30092<br>770-449-5555   |                       |
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| CERTIFICATION<br><b>JAN 28 2009</b><br>WARREX W. SCHAEFER, P.E.<br>P.E. NO. 44135   |                       |
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| SHEET NO.<br>11 OF 11   |                       |