MIAMI-DADE COUNTY
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

# NOTICE OF ACCEPTANCE (NOA)

**CGI Windows and Doors, Inc.**
**10100 NW 25 Street**
**Miami, Fl. 33172**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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 "238" Outswing Aluminum Casement Window - L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. **W98-100**, titled "Series-238 Alum Outswing Casement Wdw. (L.M.I.)", sheets 1, 1.1, 2, 3, 4, 5, 5.1, 6 and 7 of 7, dated 12/04/98, with revision **J** dated 04/10/15, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, 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 Section.

**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, model/series, 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# 14-0506.01** and consists of this page 1 and evidence pages E-1, E-2, E-3 and E-4, as well as approval document mentioned above.

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

MIAMI-DADE COUNTY APPROVED

9/9/15

**NOA No. 15-0512.19**
**Expiration Date: October 26, 2018**
**Approval Date: September 17, 2015**

**CGI Windows and Doors, Inc.**

## NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

### A. DRAWINGS

1. Manufacturer's die drawings and sections.
   ***(Submitted under NOA's # 96-0417.03 and # 01-1002.03)***
2. Drawing No. **W98-100**, titled "Series-238 Alum Outswing Casement Wdw. (L.M.I.)", sheets 1, 1.1, 2, 3, 4, 5, 5.1, 6 and 7 of 7, dated 12/04/98, with revision **J** dated 04/10/15, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

### B. TESTS

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with marked-up drawings and installation diagram of a series 7500 PVC fixed window, to qualify DuPont "Butacite" PVB interlayer, Duraseal® and Super Spacer® insulating glass spacer, prepared by Certified Test Laboratories, Test Report No. **CTLA-3056 WA**, dated 03/03/15, signed and sealed by Ramesh C. Patel, P.E.
2. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with marked-up drawings and installation diagram of a series 7400 PVC project out window, to qualify DuPont "Butacite" PVB interlayer, Duraseal® and Super Spacer® insulating glass spacer, prepared by Certified Test Laboratories, Test Report No. **CTLA-3056 WB**, dated 03/03/15, signed and sealed by Ramesh C. Patel, P.E.
3. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with marked-up drawings and installation diagram of a series 238 aluminum fixed window, to qualify DuPont "Butacite" PVB interlayer, Duraseal® and Super Spacer® insulating glass spacer, prepared by Certified Test Laboratories, Test Report No. **CTLA-3056 WC**, dated 04/16/15, signed and sealed by Ramesh C. Patel, P.E.
4. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   3) Water Resistance Test, per FBC, TAS 202-94
   4) Large Missile Impact Test per FBC, TAS 201-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
   along with marked-up drawings and installation diagram of a series 318 outswing aluminum casement window, prepared by Certified Testing Laboratories, Test Report No. **CTL-3009WB**, dated 03/24/14, signed and sealed by Ramesh C. Patel, P.E.
   ***(Submitted under previous NOA # 14-0506.01)***

Manuel Perez, P.E.
Product Control Examiner
NOA No. 15-0512.19
Expiration Date: October 26, 2018
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**B. TESTS** (CONTINUED)

**5.** Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked–up drawings and installation diagram of an aluminum casement window, prepared by American Test Lab of South Florida, Inc., Test Report No. **ATLSF-1109.01-12**, dated 11/20/12, signed and sealed by Henry Hattem, P.E.
***(Submitted under NOA # 12-1220.14)***

**6.** Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked–up drawings and installation diagram of an aluminum casement window, prepared by Hurricane Testing Lab., Inc., Test Reports No. **HTL-0080-0301–07** for specimen **A** and **B,** and **HTL-0080-0905-07** for specimen **B** and **C**, dated 09/21/07 and 10/12/06, both signed and sealed by Vinu J. Abraham, P.E.
***(Submitted under NOA # 08-1010.02)***

**7.** Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of an aluminum outswing casement window, prepared by Hurricane Engineering & Testing, Inc., Test Reports No. **HETI-08-2143**, **HETI-08-2144**, **HETI-08-4287** and **HETI-07-4298**, dated 06/27/08 and 07/17/08, all signed and sealed by Candido F. Font, P.E
***(Submitted under NOA # 08-1010.02)***

**8.** Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of an aluminum casement window, prepared by Hurricane Test Laboratory, Inc., Test Reports No. **HTL-0080-0303-96** and **HTL-0080-1107-98**, dated 03/06/96 and 11/10/98, both signed and sealed by Timothy S. Marshall, P.E.
***(Submitted under NOA's # 96-0417.03 and # 01-1002.03)***

**Manuel Perez, P.E.**
**Product Control Examiner**
**NOA No. 15-0512.19**
**Expiration Date: October 26, 2018**
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## NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**B. TESTS** (CONTINUED)

**9.** Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked-up drawings and installation diagram of an aluminum casement window, prepared by Fenestration Testing Laboratory, Inc., Test Reports No. **FTL-1003** and **FTL-1041**, dated 10/14/94, both signed and sealed by Yamil Kuri, P.E.
***(Submitted under NOA # 96-0417.03)***

**C. CALCULATIONS**

**1.** Anchor verification calculations and structural analysis, complying with **FBC–2010**, dated 4/24/14, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
***(Submitted under previous NOA # 14-0506.01)***

**2.** Glazing complies with **ASTM E1300-09**

**D. QUALITY ASSURANCE**

**1.** Miami-Dade Department of Regulatory and Economic Resources (RER)

**E. MATERIAL CERTIFICATIONS**

**1.** Notice of Acceptance No. **14-0916.11** issued to **Kuraray America, Inc.** for their **"SentryGlas® (Clear and White) Glass Interlayers"** dated 06/25/15, expiring on 07/04/18.

**2.** Notice of Acceptance No. **14-0916.10** issued to **Kuraray America, Inc.** for their **"Butacite® PVB Glass Interlayer"** dated 04/25/15, expiring on 12/11/16.

**3.** Notice of Acceptance No. **14-0423.15** issued to **Eastman Chemical Company (MA)** for their "**Saflex CP - Saflex and Saflex HP Composite Glass Interlayers with PET Core"** dated 06/19/14, expiring on 12/11/18.

**4.** Notice of Acceptance No. **14-0423.17** issued to **Eastman Chemical Company (MA)** for their "**Saflex Clear and Color Glass Interlayers**" dated 06/19/14, expiring on 05/21/16.

Manuel Perez, P.E.
Product Control Examiner
NOA No. 15-0512.19
Expiration Date: October 26, 2018
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**F. STATEMENTS**

1. Statement letter of conformance, complying with **FBC- 5th Edition (2014)**, dated April 11, 2014, issued by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E. ***(Submitted under previous NOA # 14-0506.01)***
2. Proposal No. **13-1098** issued by the Product Control Section, dated October 02, 2013 and revised on February 24, 2014, signed by Manuel Perez, P.E. ***(Submitted under previous NOA # 14-0506.01)***
3. Laboratory compliance letters for Test Reports No. **HTL-0080-0301-07** for specimen A and B and **HTL-0080-0905-07** for specimen B and C, issued by Hurricane Test Laboratory, Inc., dated 09/21/07 and 10/12/06, both signed and sealed by Vinu J. Abraham, P.E. ***(Submitted under NOA # 08-1010.02)***
4. Laboratory compliances letters for Test Reports No. **HETI-08-2143, HETI–08–2144, HETI-08-4287** and **HETI-07-4298**, issued by Hurricane Engineering & Testing, Inc., dated 06/27/08 and 07/17/08, all signed and sealed by Candido F. Font, P.E. ***(Submitted under NOA # 08-1010.02)***
5. Laboratory compliance letters for Test Reports No. **HTL-0080-0303-96** and **HTL-0080-1107-98**, issued by Hurricane Test Laboratory, Inc., dated 03/06/96 and 11/10/98, both signed and sealed by Timothy S. Marshall, P.E. ***(Submitted under NOA # 96-0417.03 and 01-1002.03)***
6. Laboratory compliance letters for Test Reports No. **FTL-1003** and **FTL-1041**, issued by Fenestration Testing Laboratory, Inc., dated 10/14/94, both signed and sealed by Yamil Kuri, P.E. ***(Submitted under NOA # 96-0417.03)***
7. Test Proposal for the qualification of ***Butacite®*** PVB glass interlayer by Kuraray America, Inc., as well as ***Duraseal®*** and ***Super Spacer® Standard*** warm-edge flexible insulating glass spacers, dated December 16, 2014, issued by RER, Product Control Section, signed by Jaime Gascon, P.E., Supervisor, Product Control Section.

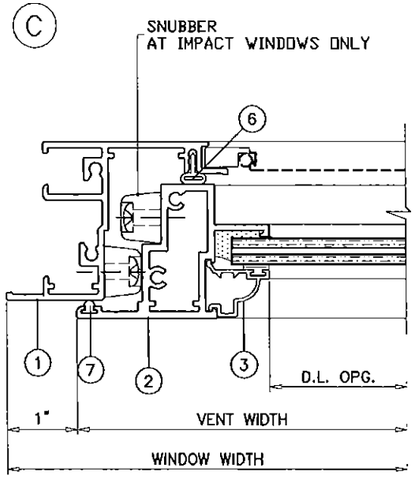
**G. OTHERS**

1. Notice of Acceptance No. **14-0506.01**, issued to CGI Windows & Doors, Inc. for their Series "238" Outswing Aluminum Casement Window - L.M.I., approved on 06/26/14 and expiring on 10/26/18.

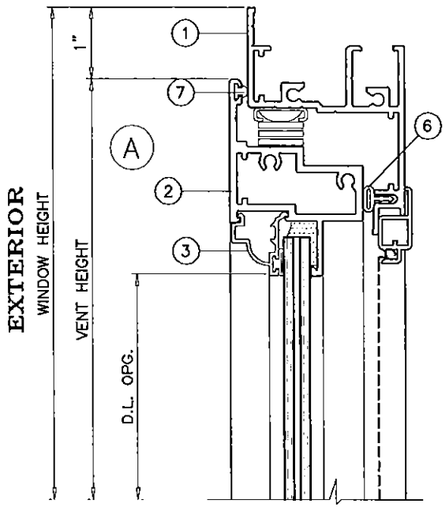
Manuel Perez

**Manuel Perez, P.E.**
**Product Control Examiner**
**NOA No. 15-0512.19**
**Expiration Date: October 26, 2018**
**Approval Date: September 17, 2015**

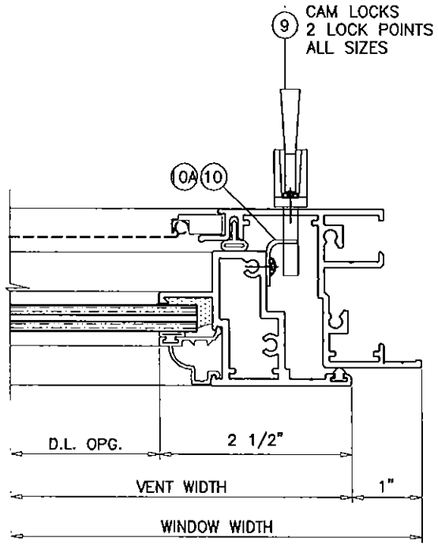
# GENERAL WINDOW SECTIONS
## FLANGE FRAME

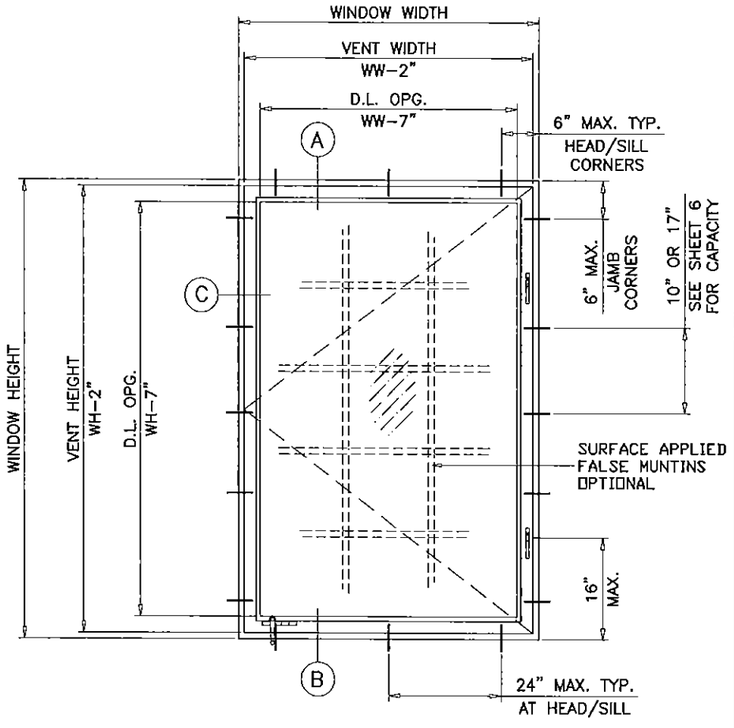



EXTERIOR

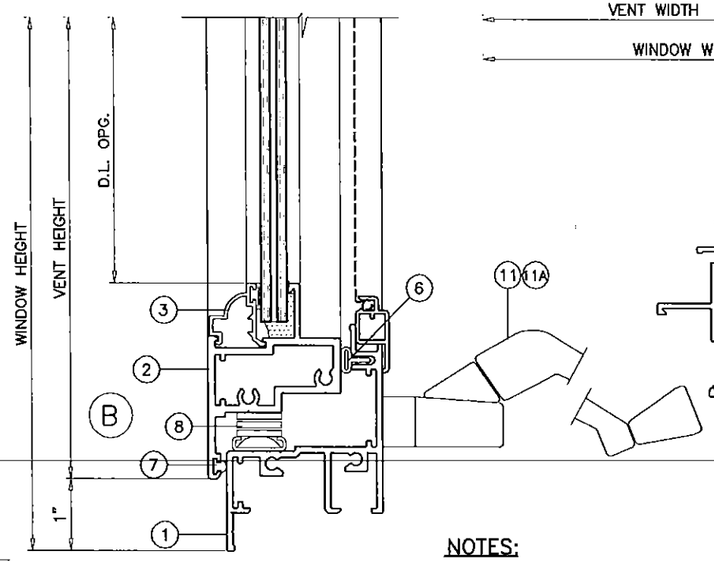


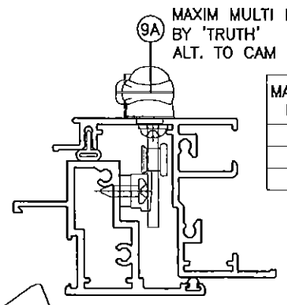

FOR GLASS TYPES,
REFER TO
SHEETS 3 AND 4.



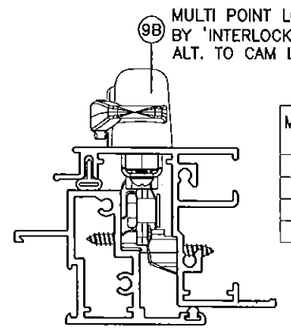




TYPICAL ELEVATION
(FLANGE FRAME)




| MAX. WDW. HEIGHT | LOCK POINTS |
|---|---|
| 42" | 2 |
| 63" | 3 |
| 84" | 4 |




| MAX. WDW. HEIGHT | LOCK POINTS |
|---|---|
| 38" | 2 |
| 56" | 3 |
| 74" | 4 |
| 84" | 5 |

THESE WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.

## INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1 DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2 SEE CHARTS ON SHEETS 3 AND 4 FOR DESIGN LOAD CAPACITY OF DESIRED GLASS SIZE/TYPE.
- STEP 3 USING CHART ON SHEET 6 SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4 IF ALUMINUM BUCK SYSTEM IS USED USE CHART ON SHEET 7 TO DETERMINE CAPACITY.
- STEP 5 THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

## NOTES:

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

FOR MULLION/MULTIPLE UNITS, REFER TO SEPARATE CGI MULLION N.O.A.

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538
MAY 04 2015

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0512.19
Expiration Date Oct. 26, 2018
By Manuel Perez
Miami-Dade Product Control


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978


COMP-ANL\W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)


CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6592 FAX. (305) 593-6592


revisions:

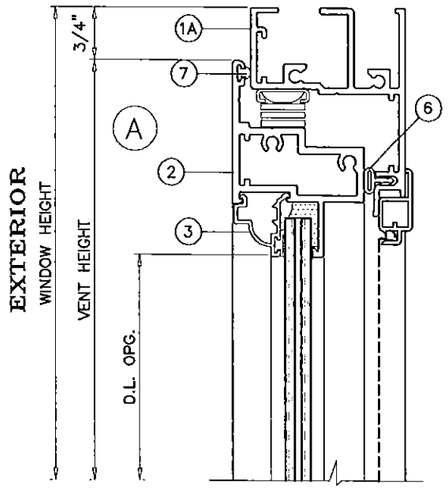
| no | date | by | description |
|---|---|---|---|
| F | 02.21.12 | | UPDATED TO 2010 FBC |
| G | 12.06.12 | | LOCK OPTION ADDED |
| H | 02.28.13 | | REV. PER RER COMMENTS |
| I | 04.25.14 | | GENERAL REVISION |
| J | 04.10.15 | | NO CHANGE THIS SHEET |

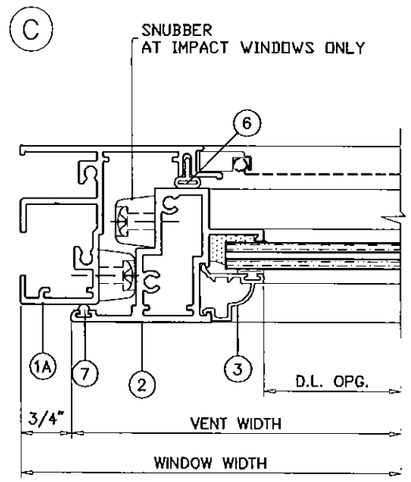
date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98-100

sheet 1 of 7

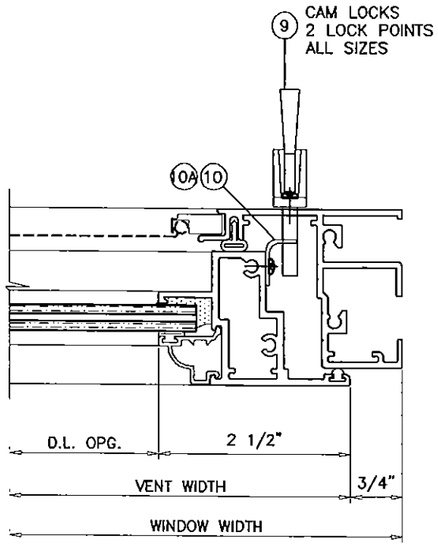
# GENERAL WINDOW SECTIONS
## EQUAL LEG FRAME

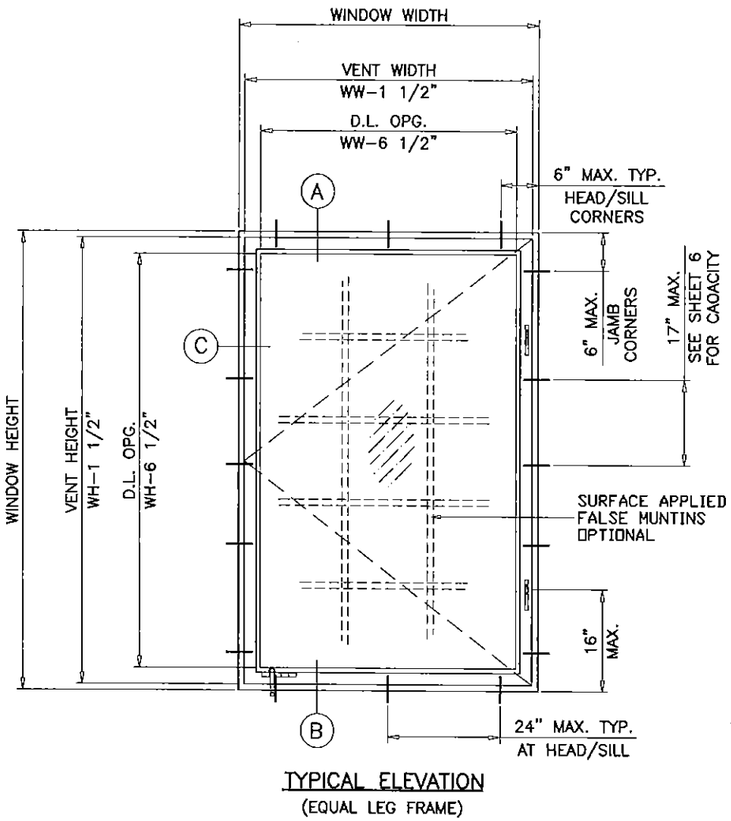


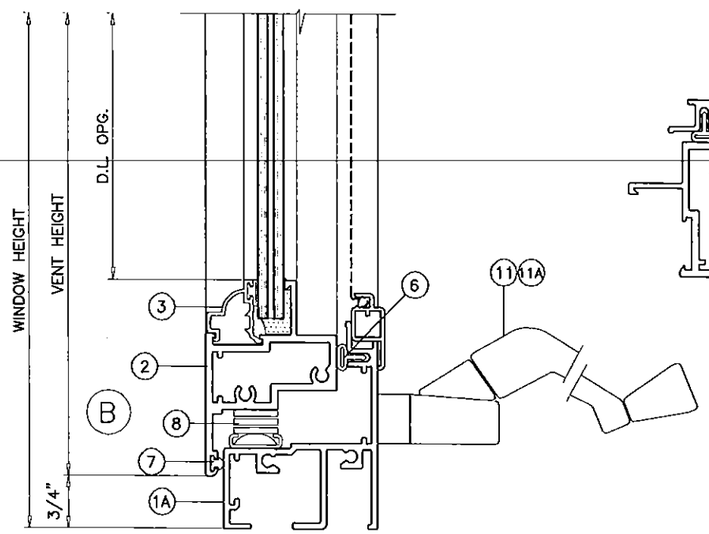

EXTERIOR

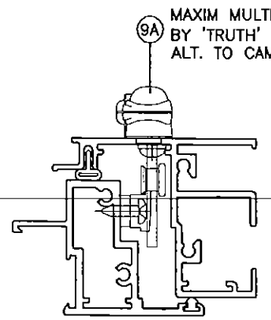
FOR GLASS TYPES,
REFER TO
SHEETS 3 AND 4.



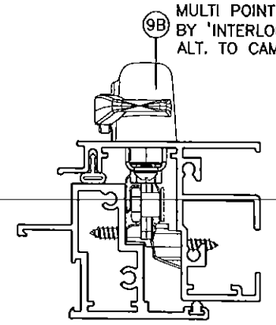




TYPICAL ELEVATION
(EQUAL LEG FRAME)




| MAX. WDW. HEIGHT | LOCK POINTS |
|---|---|
| 42" | 2 |
| 63" | 3 |
| 84" | 4 |

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Engr: JAVAD AHMAD
CIVIL
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MAY 04 2015

PRODUCT REVISED
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Acceptance No 15-0512.19
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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978


COMP-ANL\W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

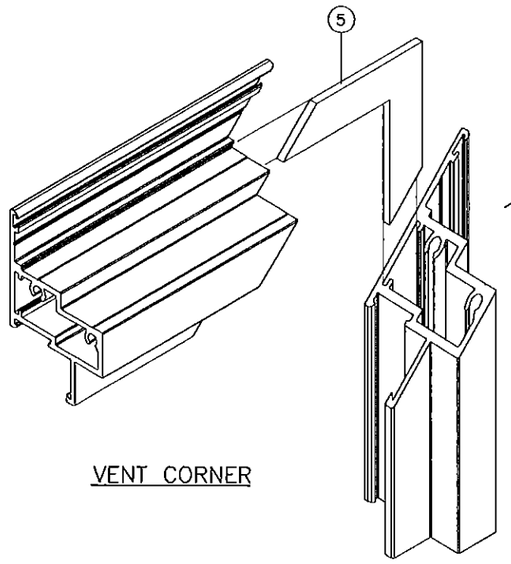

CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592


| revisions: | | | |
|---|---|---|---|
| no | date | by | description |
| F | 02.21.12 | | NO CHANGE THIS SHEET |
| G | 12.06.12 | | LOCK OPTION ADDED |
| H | 02.28.13 | | REV. PER RER COMMENTS |
| I | 04.25.14 | | NO CHANGE THIS SHEET |
| J | 04.10.15 | | NO CHANGE THIS SHEET |

date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

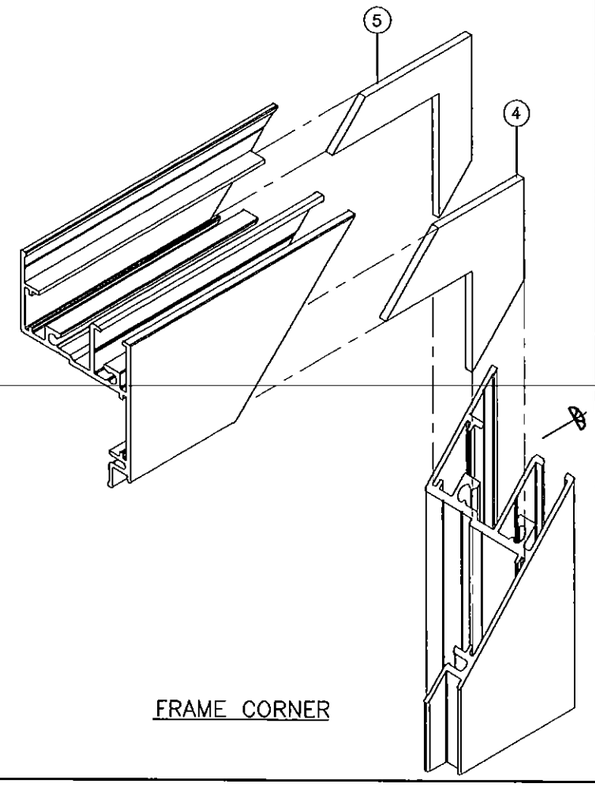
drawing no.
W98-100

sheet 1.1 of 7

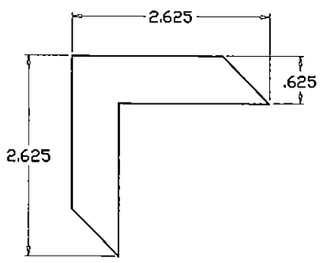



VENT CORNER

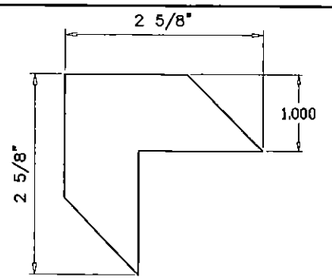
ALL FRAME AND VENT CORNERS TO BE SEALED WITH GE SILPRUF OR EQUIV.



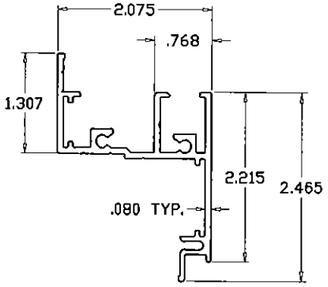

FRAME CORNER



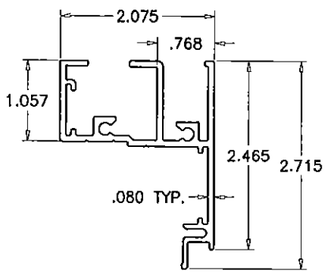

(5) CORNER KEY
.060 THICK ST. STEEL



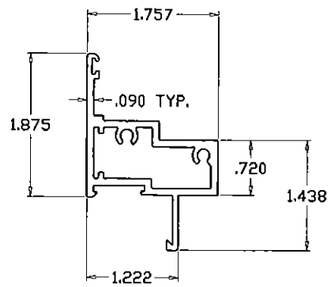

(4) CORNER KEY
.062 THICK ALUMINUM



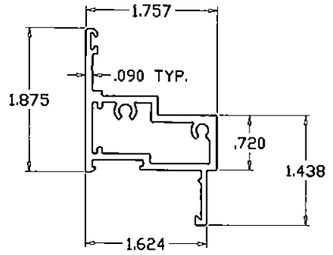

(1) FLANGE FRAME



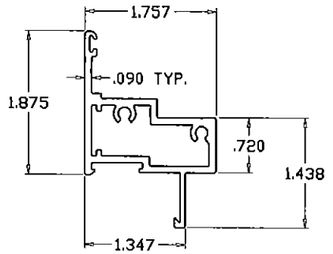

(1A) EQUAL LEG FRAME




(2) VENT (5/16" LAM. GLASS)

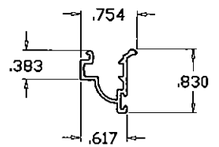



(2B) VENT (INSUL. LAM. GLASS)

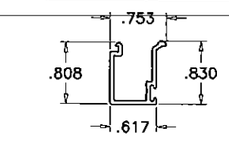



(2C) VENT (7/16" LAM. GLASS)

| ITEM | PART # | QUANTITY | DESCRIPTION | MATERIAL | MANF./SUPPLIER/REMARKS |
|---|---|---|---|---|---|
| 1 | CGI-373 | 4 | FLANGE FRAME | 6063-T6 | INDALEX OR EQUIV. |
| 1A | CGI-397 | 4 | EQUAL LEG FRAME | 6063-T6 | INDALEX OR EQUIV. |
| 2 | CGI-378 | 4 | VENT (5/16" LAM. GLASS) | 6063-T6 | INDALEX OR EQUIV. |
| 2B | CGI-381 | 4 | VENT (INSUL. LAM. GLASS) | 6063-T6 | INDALEX OR EQUIV. |
| 2C | CGI-385 | 4 | VENT (7/16" LAM. GLASS) | 6063-T6 | INDALEX OR EQUIV. |
| 3 | CGI-375 | 4 | OGEE GLAZING BEAD | 6063-T5 | INDALEX OR EQUIV. |
| 3A | CGI-396 | 4 | SQUARE GLAZING BEAD | 6063-T5 | INDALEX OR EQUIV. |
| 4 | – | 4 | .060 THICK CORNER KEY | ALUMINUM | – |
| 5 | – | 8 | .060 THICK CORNER KEY | ST. STEEL | – |
| 6 | AP-425 | AS REQD. | FRAME WEATHERSTRIPPING | – | SCHLEGEL APTUS |
| 7 | Q250-K-190 | AS REQD. | VENT WEATHERSTRIPPING | – | SCHLEGEL Q-LON |
| 8 | 35-10-00-101 | 2/ VENT | 4 BAR HINGE, AT TOP AND BOTTOM | STEEL | TRUTH, ATTACHED W/ (6) #8 X 3/8" SS SMS |
| 9 | 24-13-00-202 | 2/ VENT | FACE MOUNT LOCK | STEEL | TRUTH, ATTACHED W/ (2) #8 X 3/8" SMS |
| 9A | – | 1/ VENT | MULTI POINT LOCK | – | TRUTH |
| 9B | – | 1/ VENT | MULTI POINT LOCK | – | INTERLOCK |
| 10 | – | 2/ VENT | .110 THICK LOCK KEEPER, AT FRAME JAMB FACING LOCK | STEEL | CGI, ATTACHED W/ (2) #10 X 3/8" SS SMS |
| 11 | – | 1 | OPERATOR (OPTIONAL) | STEEL | TRUTH, ATTACHED W/ (2) #8 X 3/8" SS SMS |
| 11A | – | 1 | OPERATOR (OPTIONAL) | STEEL | INTERLOCK |
| 12 | 30175 | 1 | OPERATOR TRACK | STEEL | TRUTH, ATTACHED W/ (2) #8 X 3/8" SS SMS |
| 13 | – | 2/ CORNER | FRAME AND VENT ASSEMBLY SCREWS | – | #10 X 1-1/4" SS SMS |




(3) CGI-375: OGEE GLAZING STOP




(3A) CGI-396: SQUARE GLAZING STOP

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538
MAY 0 4 2015

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0512.19
Expiration Date Oct. 26, 2018
By Manuel Perez
Miami-Dade Product Control


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978


COMP-ANL\W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

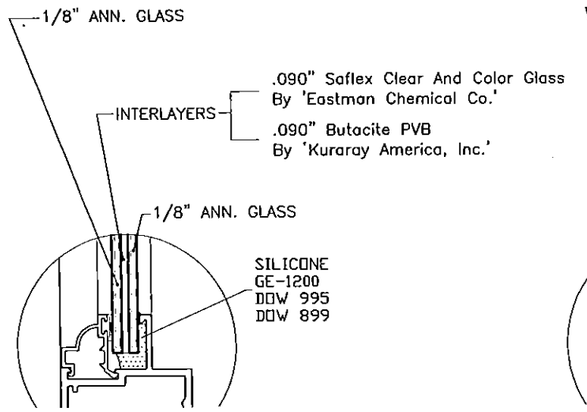

CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592


| revisions: | no | date | by | description |
|---|---|---|---|---|
| | F | 02.21.12 | | NO CHANGE THIS SHEET |
| | G | 12.06.12 | | LOCK OPTION ADDED |
| | H | 02.28.13 | | REV. PER RER COMMENTS |
| | I | 04.25.14 | | NO CHANGE THIS SHEET |
| | J | 04.10.15 | | NO CHANGE THIS SHEET |

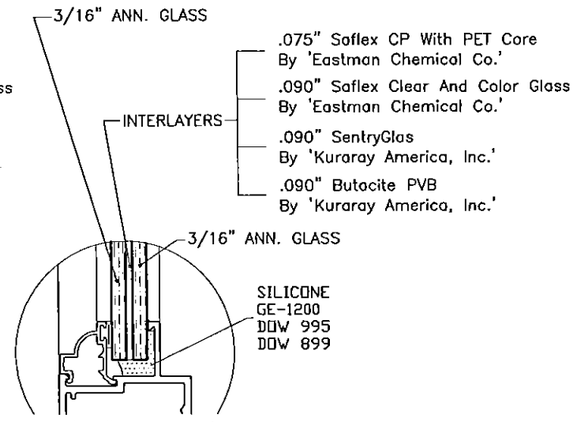
date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98-100

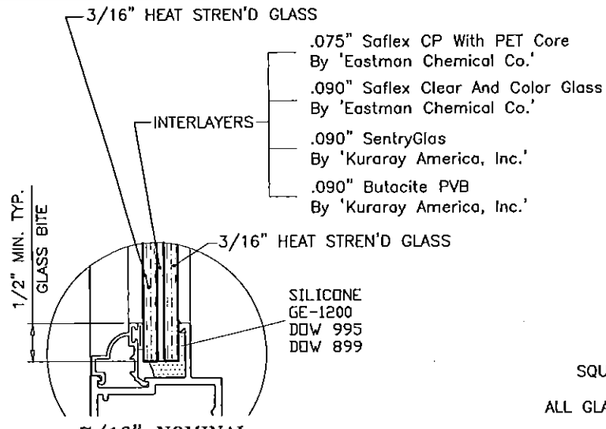
sheet 2 of 7



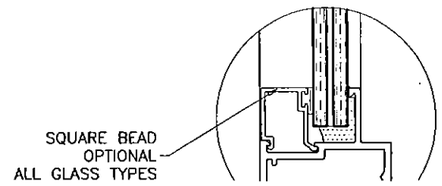

5/16" NOMINAL
GLASS TYPE '2'




7/16" NOMINAL
GLASS TYPE '3'




7/16" NOMINAL
GLASS TYPE '6'




**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**
NO SHUTTERS REQUIRED
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

| WINDOW DIMS. | | GLASS TYPE '2' | | GLASS TYPE '3' | | GLASS TYPE '6' | |
|---|---|---|---|---|---|---|---|
| WIDTH | HEIGHT | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) |
| 20" | 36" | 110.0 | 194.3 | 110.0 | 195.0 | 110.0 | 195.0 |
| 24" | | 110.0 | 161.9 | 110.0 | 195.0 | 110.0 | 195.0 |
| 28" | | 110.0 | 138.8 | 110.0 | 195.0 | 110.0 | 195.0 |
| 30" | | 110.0 | 129.5 | 110.0 | 195.0 | 110.0 | 195.0 |
| 32" | | 110.0 | 121.4 | 110.0 | 195.0 | 110.0 | 195.0 |
| 36" | | 107.9 | 107.9 | 110.0 | 195.0 | 110.0 | 195.0 |
| 40" | | 97.1 | 97.1 | 110.0 | 195.0 | 110.0 | 120.0 |
| 42" | | 92.5 | 92.5 | 110.0 | 120.0 | 60.0 | 60.0 |
| 20" | 42" | 110.0 | 166.5 | 110.0 | 195.0 | 110.0 | 195.0 |
| 24" | | 110.0 | 138.8 | 110.0 | 195.0 | 110.0 | 195.0 |
| 28" | | 110.0 | 118.9 | 110.0 | 195.0 | 110.0 | 195.0 |
| 30" | | 110.0 | 111.0 | 110.0 | 195.0 | 110.0 | 195.0 |
| 32" | | 104.1 | 104.1 | 110.0 | 195.0 | 110.0 | 120.0 |
| 36" | | 92.5 | 92.5 | 110.0 | 120.0 | 110.0 | 120.0 |
| 40" | | 83.3 | 83.3 | 110.0 | 120.0 | 110.0 | 120.0 |
| 42" | | 79.3 | 79.3 | 110.0 | 120.0 | 60.0 | 60.0 |
| 20" | 48" | 110.0 | 145.7 | 110.0 | 195.0 | 110.0 | 195.0 |
| 24" | | 110.0 | 121.4 | 110.0 | 195.0 | 110.0 | 195.0 |
| 28" | | 103.8 | 104.1 | 110.0 | 195.0 | 110.0 | 120.0 |
| 30" | | 97.1 | 97.1 | 110.0 | 195.0 | 110.0 | 120.0 |
| 32" | | 91.1 | 91.1 | 110.0 | 120.0 | 110.0 | 120.0 |
| 36" | | 80.9 | 80.9 | 110.0 | 120.0 | 110.0 | 120.0 |
| 40" | | 72.8 | 72.8 | 110.0 | 120.0 | 110.0 | 120.0 |
| 42" | | 69.4 | 69.4 | 110.0 | 120.0 | 60.0 | 60.0 |
| 20" | 54" | 110.0 | 129.5 | 110.0 | 195.0 | 110.0 | 195.0 |
| 24" | | 98.0 | 107.9 | 110.0 | 195.0 | 110.0 | 195.0 |
| 28" | | 88.2 | 92.5 | 110.0 | 120.0 | 110.0 | 120.0 |
| 30" | | 84.4 | 86.3 | 110.0 | 120.0 | 110.0 | 120.0 |
| 32" | | 80.9 | 80.9 | 110.0 | 120.0 | 110.0 | 120.0 |
| 36" | | 71.9 | 71.9 | 110.0 | 120.0 | 110.0 | 120.0 |
| 40" | | 64.8 | 64.8 | 110.0 | 120.0 | 110.0 | 120.0 |
| 42" | | 61.7 | 61.7 | 110.0 | 120.0 | 60.0 | 60.0 |

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300−09 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05−DEC−219

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**
NO SHUTTERS REQUIRED
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

| WINDOW DIMS. | | GLASS TYPE '2' | | GLASS TYPE '3' | | GLASS TYPE '6' | |
|---|---|---|---|---|---|---|---|
| WIDTH | HEIGHT | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) |
| 20" | 60" | 98.8 | 112.6 | 110.0 | 195.0 | 110.0 | 195.0 |
| 24" | | 85.8 | 95.4 | 110.0 | 195.0 | 110.0 | 120.0 |
| 28" | | 76.7 | 83.3 | 110.0 | 120.0 | 110.0 | 120.0 |
| 30" | | 73.2 | 77.7 | 110.0 | 120.0 | 110.0 | 120.0 |
| 32" | | 70.2 | 72.8 | 110.0 | 120.0 | 110.0 | 120.0 |
| 36" | | 64.8 | 64.8 | 110.0 | 120.0 | 110.0 | 120.0 |
| 40" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 42" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 20" | 66" | 86.7 | 86.7 | 110.0 | 195.0 | 110.0 | 195.0 |
| 24" | | 73.4 | 73.4 | 110.0 | 120.0 | 110.0 | 120.0 |
| 28" | | 64.2 | 64.2 | 110.0 | 120.0 | 110.0 | 120.0 |
| 30" | | 60.6 | 60.6 | 110.0 | 120.0 | 110.0 | 120.0 |
| 32" | | 57.5 | 57.5 | 110.0 | 120.0 | 110.0 | 120.0 |
| 36" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 40" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 20" | 72" | 66.4 | 66.4 | 110.0 | 195.0 | 110.0 | 120.0 |
| 24" | | 56.1 | 56.1 | 110.0 | 120.0 | 110.0 | 120.0 |
| 28" | | 48.9 | 48.9 | 110.0 | 120.0 | 110.0 | 120.0 |
| 30" | | 46.0 | 46.0 | 110.0 | 120.0 | 110.0 | 120.0 |
| 32" | | 43.6 | 43.6 | 110.0 | 120.0 | 110.0 | 120.0 |
| 36" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 32" | 76" | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 36" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 20" | 78" | 52.0 | 52.0 | 110.0 | 120.0 | 110.0 | 120.0 |
| 24" | | 43.8 | 43.8 | 110.0 | 120.0 | 110.0 | 120.0 |
| 28" | | 38.1 | 38.1 | 110.0 | 120.0 | 110.0 | 120.0 |
| 30" | | – | – | 110.0 | 120.0 | 60.0 | 60.0 |
| 32" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 20" | 84" | 41.5 | 41.5 | 110.0 | 120.0 | 110.0 | 120.0 |
| 24" | | 34.9 | 34.9 | 110.0 | 120.0 | 110.0 | 120.0 |
| 28" | | – | – | 110.0 | 120.0 | 54.5 | 54.5 |
| 30" | | – | – | 51.2 | 51.2 | 51.2 | 51.2 |
| 32" | | – | – | 48.3 | 48.3 | 48.3 | 48.3 |

NOTE:
LOAD/AREA LIMITS
FOR +110.0, −120.0 PSF = 16.34 SQ. FT.
+110.0, −195.0 PSF = 10.00 SQ. FT.

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**
NO SHUTTERS REQUIRED
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

| WINDOW DIMS. | | GLASS TYPE '2' | | GLASS TYPE '3' | | GLASS TYPE '6' | |
|---|---|---|---|---|---|---|---|
| WIDTH | HEIGHT | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) |
| 19−1/8" | 26" | 110.0 | 195.0 | 110.0 | 195.0 | 110.0 | 195.0 |
| 26−1/2" | | 110.0 | 195.0 | 110.0 | 195.0 | 110.0 | 195.0 |
| 37" | | 110.0 | 145.4 | 110.0 | 195.0 | 110.0 | 195.0 |
| 42" | | 110.0 | 128.1 | 110.0 | 195.0 * | 110.0 | 195.0 * |
| 19−1/8" | 38−3/8" | 110.0 | 190.6 | 110.0 | 195.0 | 110.0 | 195.0 |
| 26−1/2" | | 110.0 | 137.5 | 110.0 | 195.0 | 110.0 | 195.0 |
| 37" | | 98.5 | 98.5 | 110.0 | 194.5 | 110.0 | 120.0 |
| 42" | | 86.8 | 86.8 | 110.0 | 120.0 | 110.0 | 120.0 |
| 19−1/8" | 50−5/8" | 110.0 | 144.5 | 110.0 | 195.0 | 110.0 | 195.0 |
| 26−1/2" | | 99.7 | 104.3 | 110.0 | 195.0 | 110.0 | 195.0 |
| 37" | | 74.7 | 74.7 | 110.0 | 120.0 | 110.0 | 120.0 |
| 42" | | 65.8 | 65.8 | 110.0 | 120.0 | 110.0 | 120.0 |
| 19−1/8" | 63" | 96.7 | 104.2 | 110.0 | 195.0 | 110.0 | 195.0 |
| 26−1/2" | | 74.9 | 77.9 | 110.0 | 120.0 | 110.0 | 120.0 |
| 37" | | 60.0 | 60.0 | 110.0 | 120.0 | 110.0 | 120.0 |
| 42" | | – | – | 60.0 | 60.0 | 60.0 | 60.0 |
| 19−1/8" | 74−1/4" | 63.0 | 63.0 | 110.0 | 195.0 | 110.0 | 120.0 |
| 26−1/2" | | 46.6 | 46.6 | 110.0 | 120.0 | 110.0 | 120.0 |
| 37" | | – | – | 59.8 | 59.8 | 59.8 | 59.8 |
| 37" | 77" | – | – | 56.3 | 56.3 | 56.3 | 56.3 ** |

* LIMIT MAX. LOADS TO 171.0 PSF
WHEN MULTI POINT LOCK BY 'INETRLOCK' (98)
IS USED

** SIZE 37" X 77" APPLICABLE TO FLANGE FRAMES ONLY
SEE SHEET 1

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

MAY 04 2015

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0512.19
Expiration Date Oct. 26, 2018
By Manuel Perez
Miami Dade Product Control


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978


COMP-ANL\W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

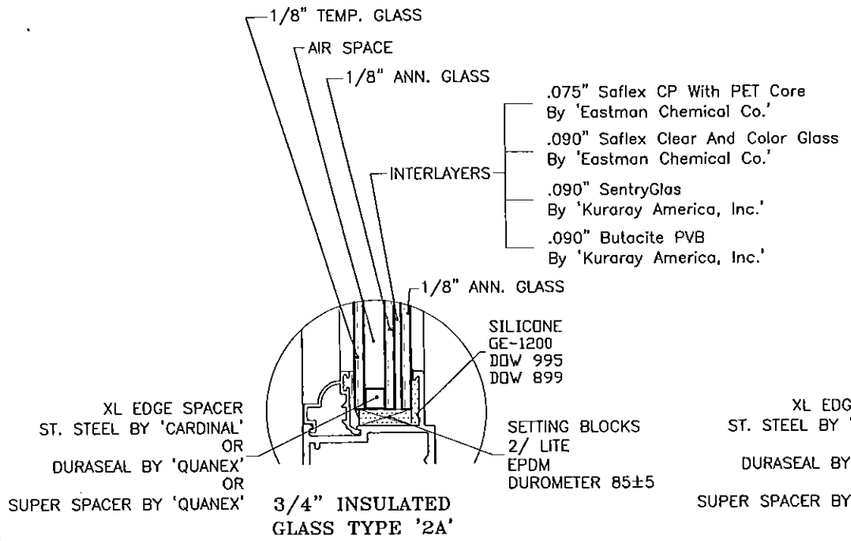
CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592

revisions:

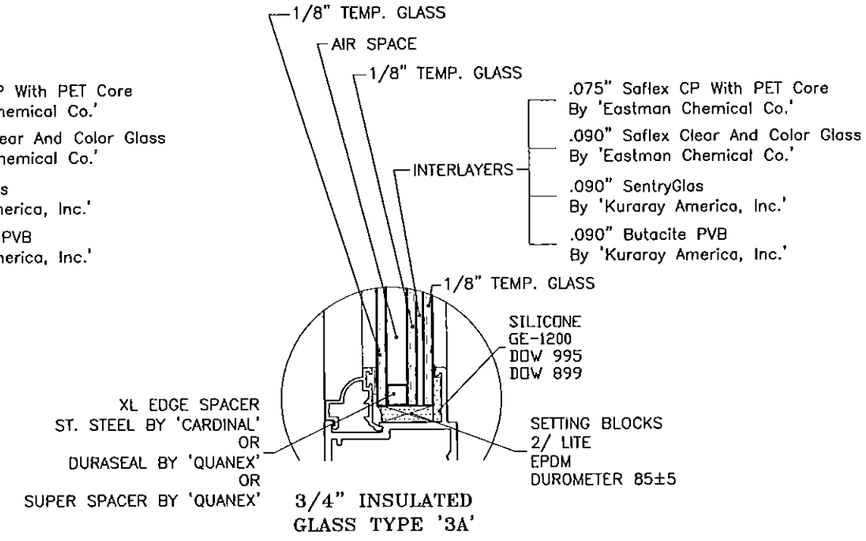
| no | date | by | description |
|---|---|---|---|
| F | 02.21.12 | | UPDATED TO 2010 FBC |
| G | 12.06.12 | | LOCK OPTION ADDED |
| H | 02.28.13 | | REV. PER RER COMMENTS |
| I | 04.25.14 | | GENERAL REVISION |
| J | 04.10.15 | | INTERLAYER REV. |

date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

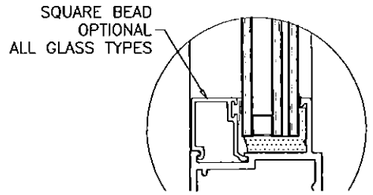
drawing no.
W98-100




3/4" INSULATED
GLASS TYPE '2A'




3/4" INSULATED
GLASS TYPE '3A'




**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**
NO SHUTTERS REQUIRED
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

| WINDOW DIMS. | | GLASS TYPE '2A' | | GLASS TYPE '3A' | |
|---|---|---|---|---|---|
| WIDTH | HEIGHT | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) |
| 20" | 36" | 110.0 | 194.3 | 110.0 | 195.0 |
| 24" | | 110.0 | 161.9 | 110.0 | 195.0 |
| 28" | | 110.0 | 138.8 | 110.0 | 195.0 |
| 30" | | 110.0 | 129.5 | 110.0 | 195.0 |
| 32" | | 110.0 | 121.4 | 110.0 | 195.0 |
| 36" | | 107.9 | 107.9 | 110.0 | 195.0 |
| 40" | | 97.1 | 97.1 | 110.0 | 120.0 |
| 42" | | 92.5 | 92.5 | 110.0 | 120.0 |
| 20" | 42" | 110.0 | 166.5 | 110.0 | 195.0 |
| 24" | | 110.0 | 138.8 | 110.0 | 195.0 |
| 28" | | 110.0 | 118.9 | 110.0 | 195.0 |
| 30" | | 110.0 | 111.0 | 110.0 | 195.0 |
| 32" | | 104.1 | 104.1 | 110.0 | 120.0 |
| 36" | | 92.5 | 92.5 | 110.0 | 120.0 |
| 40" | | 83.3 | 83.3 | 110.0 | 120.0 |
| 42" | | 79.3 | 79.3 | 110.0 | 120.0 |
| 20" | 48" | 110.0 | 145.7 | 110.0 | 195.0 |
| 24" | | 110.0 | 121.4 | 110.0 | 195.0 |
| 28" | | 104.1 | 104.1 | 110.0 | 120.0 |
| 30" | | 97.1 | 97.1 | 110.0 | 120.0 |
| 32" | | 91.1 | 91.1 | 110.0 | 120.0 |
| 36" | | 80.9 | 80.9 | 110.0 | 120.0 |
| 40" | | 72.8 | 72.8 | 110.0 | 120.0 |
| 42" | | 69.4 | 69.4 | 110.0 | 120.0 |
| 20" | 54" | 110.0 | 129.5 | 110.0 | 195.0 |
| 24" | | 98.0 | 107.9 | 110.0 | 195.0 |
| 28" | | 92.5 | 92.5 | 110.0 | 120.0 |
| 30" | | 84.4 | 86.3 | 110.0 | 120.0 |
| 32" | | 80.9 | 80.9 | 110.0 | 120.0 |
| 36" | | 71.9 | 71.9 | 110.0 | 120.0 |
| 40" | | 64.8 | 64.8 | 110.0 | 120.0 |
| 42" | | 61.7 | 61.7 | 110.0 | 120.0 |

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**
NO SHUTTERS REQUIRED
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

| WINDOW DIMS. | | GLASS TYPE '2A' | | GLASS TYPE '3A' | |
|---|---|---|---|---|---|
| WIDTH | HEIGHT | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) |
| 20" | 60" | 98.8 | 112.6 | 110.0 | 195.0 |
| 24" | | 85.8 | 95.4 | 110.0 | 120.0 |
| 28" | | 76.7 | 83.3 | 110.0 | 120.0 |
| 30" | | 73.2 | 77.7 | 110.0 | 120.0 |
| 32" | | 70.2 | 72.8 | 110.0 | 120.0 |
| 36" | | 64.8 | 64.8 | 110.0 | 120.0 |
| 40" | | 60.0 | 60.0 | – | – |
| 42" | | 60.0 | 60.0 | – | – |
| 20" | 66" | 86.7 | 86.7 | 110.0 | 169.0 |
| 24" | | 73.4 | 73.4 | 110.0 | 120.0 |
| 28" | | 64.2 | 64.2 | 110.0 | 120.0 |
| 30" | | 60.6 | 60.6 | 110.0 | 118.2 |
| 32" | | 57.5 | 57.5 | 110.0 | 112.2 |
| 36" | | 60.0 | 60.0 | – | – |
| 40" | | 60.0 | 60.0 | – | – |
| 20" | 72" | 66.4 | 66.4 | 110.0 | 120.0 |
| 24" | | 56.1 | 56.1 | 109.3 | 109.3 |
| 28" | | 48.9 | 48.9 | 95.3 | 95.3 |
| 30" | | 46.0 | 46.0 | 89.8 | 89.8 |
| 32" | | 43.6 | 43.6 | 85.0 | 85.0 |
| 36" | | 60.0 | 60.0 | – | – |
| 32" | 76" | 60.0 | 60.0 | – | – |
| 36" | | 60.0 | 60.0 | – | – |
| 20" | 78" | 52.0 | 52.0 | 101.3 | 101.3 |
| 24" | | 43.8 | 43.8 | 85.4 | 85.4 |
| 28" | | 38.1 | 38.1 | 74.3 | 74.3 |
| 32" | | 60.0 | 60.0 | – | – |
| 20" | 84" | 41.5 | 41.5 | 80.8 | 80.8 |
| 24" | | 34.9 | 34.9 | 68.0 | 68.0 |
| 28" | | 54.5 | 54.5 | – | – |
| 30" | | 51.2 | 51.2 | – | – |
| 32" | | 48.3 | 48.3 | – | – |

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**
NO SHUTTERS REQUIRED
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

| WINDOW DIMS. | | GLASS TYPE '2A' | | GLASS TYPE '3A' | |
|---|---|---|---|---|---|
| WIDTH | HEIGHT | EXT. (+) | INT. (−) | EXT. (+) | INT. (−) |
| 19−1/8" | 26" | 110.0 | 195.0 | 110.0 | 195.0 |
| 26−1/2" | | 110.0 | 203.0 | 110.0 | 195.0 |
| 37" | | 110.0 | 145.4 | 110.0 | 195.0 |
| 42" | | 110.0 | 128.1 | 110.0 | 195.0 * |
| 19−1/8" | 38−3/8" | 110.0 | 190.6 | 110.0 | 195.0 |
| 26−1/2" | | 110.0 | 137.5 | 110.0 | 195.0 |
| 37" | | 98.5 | 98.5 | 110.0 | 120.0 |
| 42" | | 86.8 | 86.8 | 110.0 | 120.0 |
| 19−1/8" | 50−5/8" | 110.0 | 144.5 | 110.0 | 195.0 |
| 26−1/2" | | 99.7 | 104.3 | 110.0 | 195.0 |
| 37" | | 74.7 | 74.7 | 110.0 | 120.0 |
| 42" | | 65.8 | 65.8 | 110.0 | 120.0 |
| 19−1/8" | 63" | 96.7 | 104.2 | 110.0 | 195.0 |
| 26−1/2" | | 74.9 | 77.9 | 110.0 | 120.0 |
| 37" | | 60.0 | 60.0 | 110.0 | 117.0 |
| 42" | | 60.0 | 60.0 | – | – |
| 19−1/8" | 74−1/4" | 63.0 | 63.0 | 110.0 | 120.0 |
| 26−1/2" | | 46.6 | 46.6 | 90.9 | 90.9 |
| 37" | | 59.8 | 59.8 | – | – |
| 37" | 77" | 56.3 | 56.3 | – | – |

* LIMIT MAX. LOADS TO 171.0 PSF
WHEN MULTI POINT LOCK BY 'INETRLOCK' (98)
IS USED

** SIZE 37" X 77" APPLICABLE TO FLANGE FRAMES ONLY
SEE SHEET 1

NOTE:
LOAD/AREA LIMITS
FOR +110.0, −120.0 PSF = 16.34 SQ. FT.
+110.0, −195.0 PSF = 10.00 SQ. FT.

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300−09 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05−DEC−219

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538
MAY 04 2015

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0512.19
Expiration Date Oct. 26, 2018
By Manuel Perez
Miami Dade Product Control

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592

| revisions: | | | |
|---|---|---|---|
| no | date | by | description |
| F | 02.21.12 | | UPDATED TO 2010 FBC |
| G | 12.06.12 | | LOCK OPTION ADDED |
| H | 02.28.13 | | REV. PER RER COMMENTS |
| I | 04.25.14 | | GENERAL REVISION |
| J | 04.10.15 | | INTERLAYER & SPACER REV. |

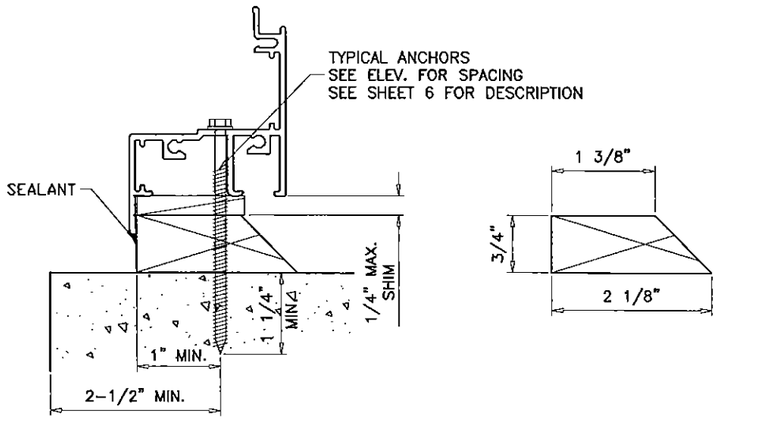
date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98-100

sheet 4 of 7

# INSTALLATION CONDITIONS FLANGE FRAME (APPLIES TO ALL FOUR SIDES)

FOR ANCHOR PERFORMANCE VALUES SEE SHEET 6



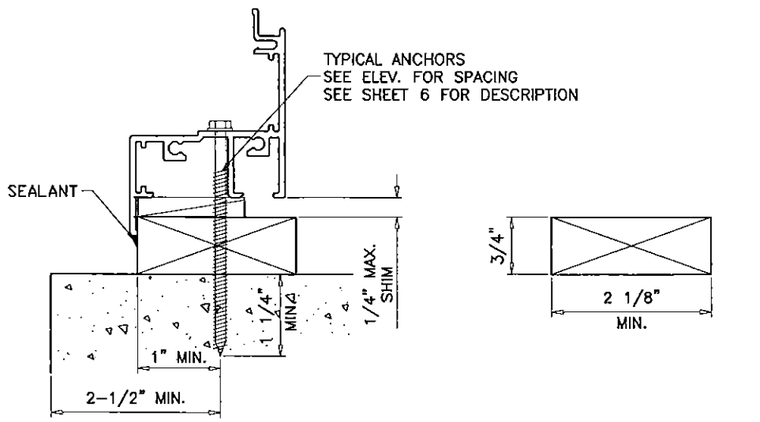

INSTALLATION TYPE '1'




WOOD BUCK TYPE '1'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



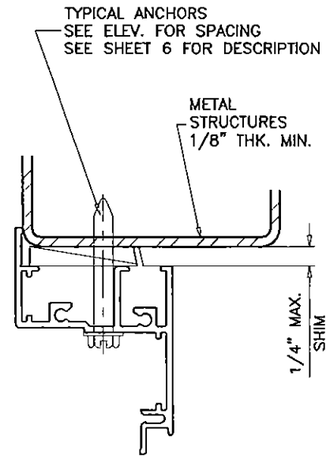

INSTALLATION TYPE '2'



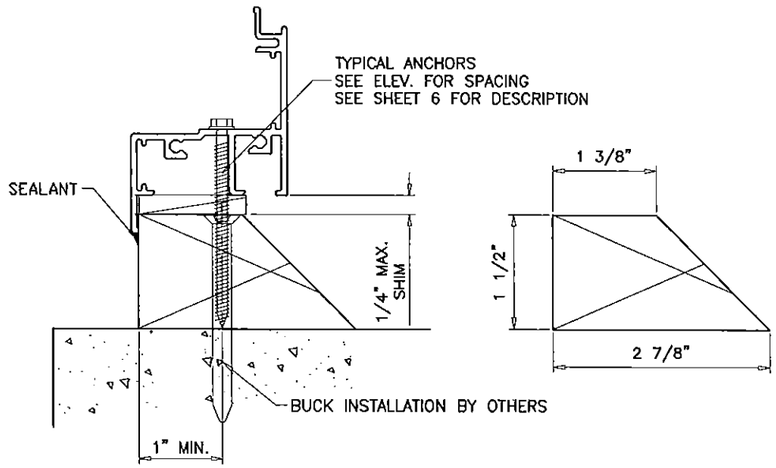

WOOD BUCK TYPE '2'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD




ATTACHMENT TO
METAL STRUCTURES

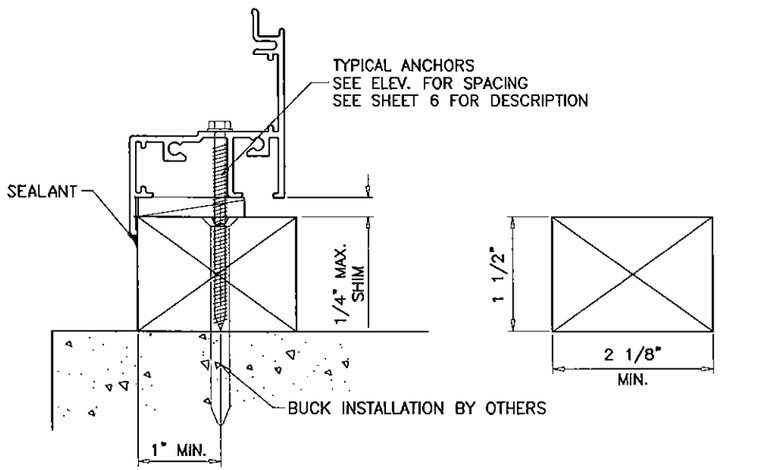



INSTALLATION TYPE '3'

WOOD BUCK TYPE '3'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD

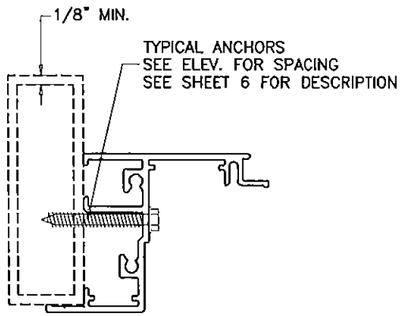



INSTALLATION TYPE '4'

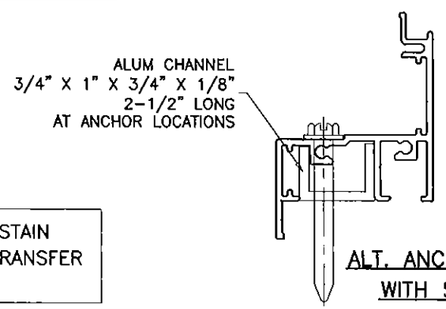
WOOD BUCK TYPE '4'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD




ATTACHMENT TO
APPROVED MULLIONS




ALT. ANCHOR LOCATION
WITH SHEAR CLIP

WOOD BUCKS NOT BY CGI CORP., MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

MAY 01 2015

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0512.19
Expiration Date Oct. 26, 2018
By Manuel Perez
Miami-Dade Product Control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revisions:

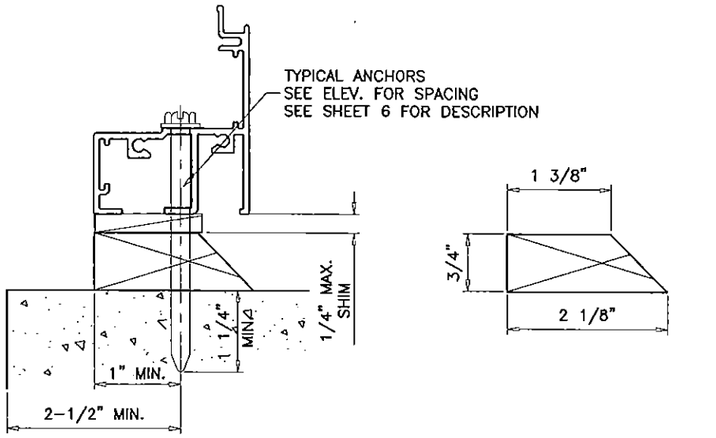
| no | date | by | description |
|---|---|---|---|
| F | 02.21.12 | | NO CHANGE THIS SHEET |
| G | 12.06.12 | | NO CHANGE THIS SHEET |
| H | 02.28.13 | | REV. PER RER COMMENTS |
| I | 04.25.14 | | NO CHANGE THIS SHEET |
| J | 04.10.15 | | NO CHANGE THIS SHEET |

date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98-100

# INSTALLATION CONDITIONS EQUAL LEG FRAME (APPLIES TO ALL FOUR SIDES)

FOR ANCHOR PERFORMANCE VALUES SEE SHEET 6



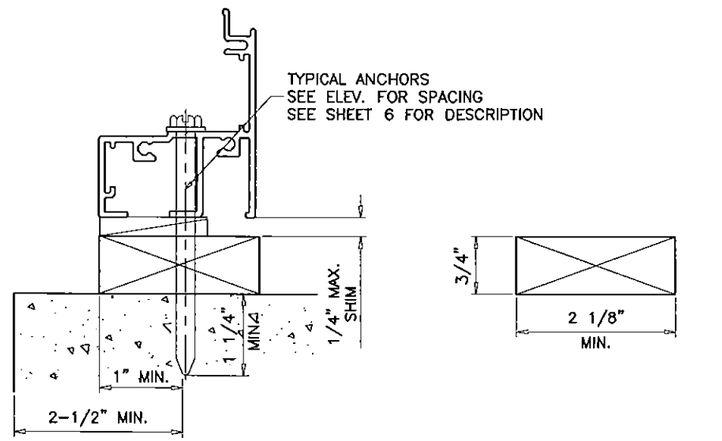

INSTALLATION TYPE '1'




WOOD BUCK TYPE '1'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



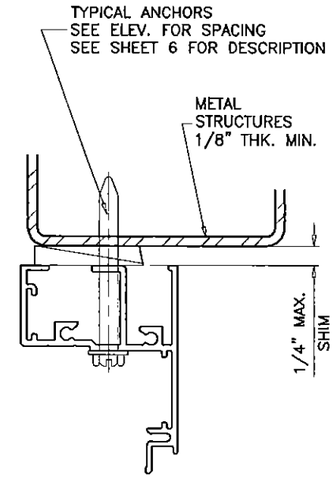

INSTALLATION TYPE '2'



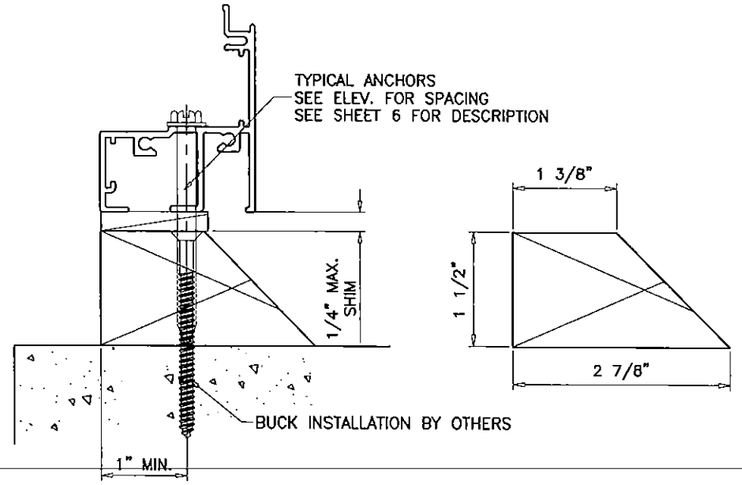

WOOD BUCK TYPE '2'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD




ATTACHMENT TO
METAL STRUCTURES



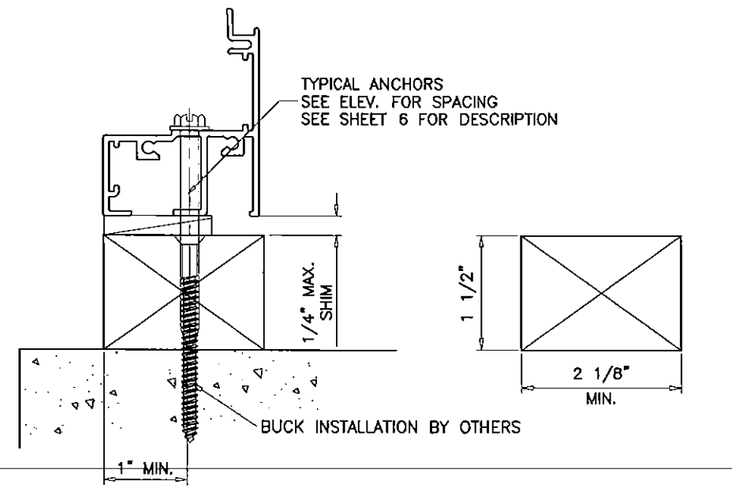

INSTALLATION TYPE '3'




WOOD BUCK TYPE '3'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



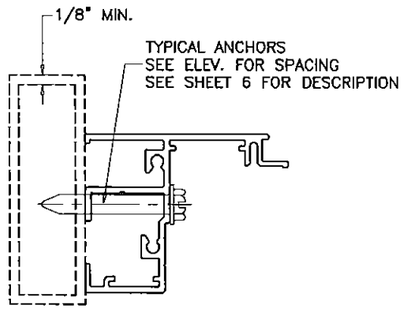

INSTALLATION TYPE '4'




WOOD BUCK TYPE '4'

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD




ATTACHMENT TO
APPROVED MULLIONS

WOOD BUCKS NOT BY CGI CORP., MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

MAY 04 2015

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0512.19
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Miami Dade Product Control

afc

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SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

CGI WINDOWS & DOORS INC.
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| revisions: | | | |
|---|---|---|---|
| no | date | by | description |
| F | 02.21.12 | | NO CHANGE THIS SHEET |
| G | 12.06.12 | | NO CHANGE THIS SHEET |
| H | 02.28.13 | | REV. PER RER COMMENTS |
| I | 04.25.14 | | NO CHANGE THIS SHEET |
| J | 04.10.15 | | NO CHANGE THIS SHEET |

date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98-100

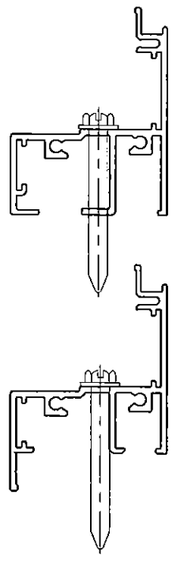
sheet 5.1 of 7

PERFORMANCE VALUES OF INSTALLATION ANCHORS
REFER TO SHEET 5 FOR DETAILS

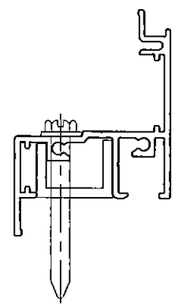
| WINDOW DIMS. | | ANCHORS W/O SHEAR CLIP | | ANCHORS WITH SHEAR CLIP | |
|---|---|---|---|---|---|
| | | AT 17" O.C. | AT 10" O.C. | AT 17" O.C. | AT 10" O.C. |
| WIDTH | HEIGHT | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) |
| 20" | 36" | 195.0 | 195.0 | 154.8 | 195.0 |
| 24" | | 195.0 | 195.0 | 129.0 | 172.0 |
| 28" | | 192.9 | 195.0 | 110.6 | 147.4 |
| 30" | | 180.0 | 195.0 | 103.2 | 137.6 |
| 32" | | 168.8 | 195.0 | 96.8 | 129.0 |
| 36" | | 150.0 | 195.0 | 86.0 | 114.7 |
| 40" | | 135.0 | 180.0 | 77.4 | 103.2 |
| 42" | | 128.6 | 171.4 | 73.7 | 98.3 |
| 20" | 42" | 195.0 | 195.0 | 132.7 | 176.9 |
| 24" | | 192.9 | 195.0 | 110.6 | 147.4 |
| 28" | | 165.3 | 195.0 | 94.8 | 126.4 |
| 30" | | 154.3 | 195.0 | 88.5 | 117.9 |
| 32" | | 144.6 | 192.9 | 82.9 | 110.6 |
| 36" | | 128.6 | 171.4 | 73.7 | 98.3 |
| 40" | | 115.7 | 154.3 | 66.3 | 88.5 |
| 42" | | 110.2 | 146.9 | 63.2 | 84.2 |
| 20" | 48" | 195.0 | 195.0 | 154.8 | 193.5 |
| 24" | | 195.0 | 195.0 | 129.0 | 161.3 |
| 28" | | 192.9 | 195.0 | 110.6 | 138.2 |
| 30" | | 180.0 | 195.0 | 103.2 | 129.0 |
| 32" | | 168.8 | 195.0 | 96.8 | 120.9 |
| 36" | | 150.0 | 187.5 | 86.0 | 107.5 |
| 40" | | 135.0 | 168.8 | 77.4 | 96.8 |
| 42" | | 128.6 | 160.7 | 73.7 | 92.1 |
| 20" | 54" | 195.0 | 195.0 | 137.6 | 195.0 |
| 24" | | 195.0 | 195.0 | 114.7 | 172.0 |
| 28" | | 171.4 | 195.0 | 98.3 | 147.4 |
| 30" | | 160.0 | 195.0 | 91.7 | 137.6 |
| 32" | | 150.0 | 195.0 | 86.0 | 129.0 |
| 36" | | 133.3 | 195.0 | 76.4 | 114.7 |
| 40" | | 120.0 | 180.0 | 68.8 | 103.2 |
| 42" | | 114.3 | 171.4 | 65.5 | 98.3 |
| 20" | 60" | 195.0 | 195.0 | 123.8 | 185.8 |
| 24" | | 180.0 | 195.0 | 103.2 | 154.8 |
| 28" | | 154.3 | 195.0 | 88.5 | 132.7 |
| 30" | | 144.0 | 195.0 | 82.6 | 123.8 |
| 32" | | 135.0 | 195.0 | 77.4 | 116.1 |
| 36" | | 120.0 | 180.0 | 68.8 | 103.2 |
| 40" | | 108.0 | 162.0 | 61.9 | 92.9 |
| 42" | | 102.9 | 154.3 | 59.0 | 88.5 |
| 20" | 66" | 195.0 | 195.0 | 140.7 | 195.0 |
| 24" | | 195.0 | 195.0 | 117.3 | 164.2 |
| 28" | | 175.3 | 195.0 | 100.5 | 140.7 |
| 30" | | 163.6 | 195.0 | 93.8 | 131.3 |
| 32" | | 153.4 | 195.0 | 88.0 | 123.1 |
| 36" | | 136.4 | 190.9 | 78.2 | 109.5 |
| 40" | | 122.7 | 171.8 | 70.4 | 98.5 |
| 20" | 72" | 195.0 | 195.0 | 129.0 | 180.6 |
| 24" | | 187.5 | 195.0 | 107.5 | 150.5 |
| 28" | | 160.7 | 195.0 | 92.1 | 129.0 |
| 30" | | 150.0 | 195.0 | 86.0 | 120.4 |
| 32" | | 140.6 | 195.0 | 80.6 | 112.9 |
| 36" | | 125.0 | 175.0 | 71.7 | 100.3 |

PERFORMANCE VALUES OF INSTALLATION ANCHORS
REFER TO SHEET 5 FOR DETAILS

| WINDOW DIMS. | | ANCHORS W/O SHEAR CLIP | | ANCHORS WITH SHEAR CLIP | |
|---|---|---|---|---|---|
| | | AT 17" O.C. | AT 10" O.C. | AT 17" O.C. | AT 10" O.C. |
| WIDTH | HEIGHT | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) |
| 32" | 76" | 133.2 | 195.0 | 76.4 | 122.2 |
| 36" | | 118.4 | 189.5 | 67.9 | 108.6 |
| 20" | 78" | 195.0 | 195.0 | 119.1 | 190.5 |
| 24" | | 173.1 | 195.0 | 99.2 | 158.8 |
| 28" | | 148.4 | 195.0 | 85.1 | 136.1 |
| 30" | | 138.5 | 195.0 | 79.4 | 127.0 |
| 32" | | 129.8 | 195.0 | 74.4 | 119.1 |
| 20" | 84" | 195.0 | 195.0 | 132.7 | 195.0 |
| 24" | | 195.0 | 195.0 | 110.6 | 165.9 |
| 28" | | 165.3 | 195.0 | 94.8 | 142.2 |
| 32" | | 154.3 | 195.0 | 88.5 | 132.7 |



ANCHORS W/O SHEAR CLIP



ANCHORS WITH SHEAR CLIP

PERFORMANCE VALUES OF INSTALLATION ANCHORS
REFER TO SHEET 5 FOR DETAILS

| WINDOW DIMS. | | ANCHORS W/O SHEAR CLIP | | ANCHORS WITH SHEAR CLIP | |
|---|---|---|---|---|---|
| | | AT 17" O.C. | AT 10" O.C. | AT 17" O.C. | AT 10" O.C. |
| WIDTH | HEIGHT | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) | EXT.(+)/INT.(−) |
| 19−1/8" | 26" | 195.0 | 195.0 | 149.4 | 195.0 |
| 26−1/2" | | 195.0 | 195.0 | 107.8 | 161.8 |
| 37" | | 195.0 | 195.0 | 77.2 | 115.9 |
| 19−1/8" | 38−3/8" | 195.0 | 195.0 | 151.9 | 195.0 |
| 26−1/2" | | 191.2 | 195.0 | 109.6 | 146.1 |
| 37" | | 136.9 | 182.6 | 78.5 | 104.7 |
| 19−1/8" | 50−5/8" | 195.0 | 195.0 | 153.5 | 191.9 |
| 26−1/2" | | 193.2 | 195.0 | 110.8 | 138.5 |
| 37" | | 138.4 | 173.0 | 79.3 | 99.2 |
| 19−1/8" | 63" | 195.0 | 195.0 | 123.3 | 195.0 |
| 26−1/2" | | 155.3 | 195.0 | 89.0 | 155.8 |
| 37" | | 111.2 | 194.6 | 63.8 | 111.6 |
| 42" | | 98.0 | 171.4 | 56.2 | 98.3 |
| 19−1/8" | 74−1/4" | 195.0 | 195.0 | 130.8 | 195.0 |
| 26−1/2" | | 164.7 | 195.0 | 94.4 | 151.1 |
| 37" | | 117.9 | 188.6 | 67.6 | 108.1 |

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

1/4" DIA. KWIK−CON II BY 'HILTI' (Fu=163 KSI, Fy=157 KSI)

1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1−1/2" MIN. PENETRATION INTO WOOD

THRU 1BY BUCKS INTO CONC. OR MASONRY
1−1/4" MIN. EMBED INTO CONC. OR MASONRY

DIRECTLY INTO CONC. OR MASONRY
1−1/4" MIN. EMBED INTO CONC. OR MASONRY

#14 SMS OR SELF DRILLING SCREWS (GRADE 2 CRS)
INTO MIAMI−DADE COUNTY APPROVED MULLIONS (MIN. THK. = .090")
INTO METAL STRUCTURES

STEEL : 1/8" THK. MIN. (Fy = 36 KSI MIN.)
ALUMINUM : 1/8" THK. MIN. (6063−T5 MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND MASONRY = 2−1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C−90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

Engr: JAVAD AHMAD
CMI
FLA. PE # 70592
C.A.N. 3538

MAY 04 2015

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0512.19
Expiration Date Oct. 26, 2018
By Manuel Perez
Miami-Dade Product Control


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978


COMP−ANL\W98−100CGI

SERIES−238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593−6590 FAX. (305) 593−6592

| revisions: | | | |
|---|---|---|---|
| no | date | by | description |
| F | 02.21.12 | | NO CHANGE THIS SHEET |
| G | 12.06.12 | | CHART REV. |
| H | 02.28.13 | | REV. PER RER COMMENTS |
| I | 04.25.14 | | GENERAL REVISION |
| J | 04.10.15 | | NO CHANGE THIS SHEET |

date: 12−04−98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98−100

sheet 6 of 7

# ALUMINUM BUCK FRAMING DETAILS

REFER TO SHEETS 3 THRU 6 FOR WINDOW CAPACITIES
USE LOWER APPLICABLE VALUES.

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS

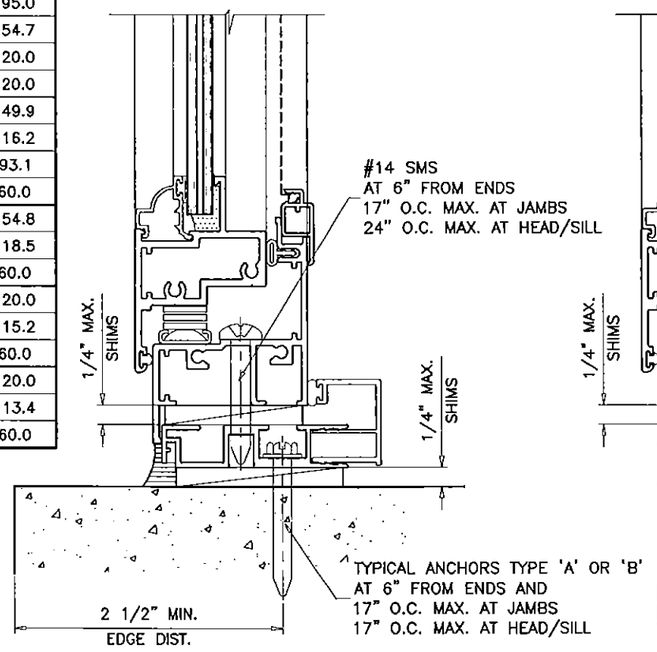
| WINDOW DIMS. | | | |
|---|---|---|---|
| WIDTH | HEIGHT | EXT.(+) | INT.(−) |
| 20" | 36" | 110.0 | 195.0 |
| 24" | | 110.0 | 195.0 |
| 28" | | 110.0 | 186.5 |
| 30" | | 110.0 | 182.4 |
| 32" | | 110.0 | 179.5 |
| 36" | | 110.0 | 177.3 |
| 40" | | 105.8 | 145.1 |
| 42" | | 97.0 | 120.0 |
| 20" | 42" | 110.0 | 179.5 |
| 24" | | 110.0 | 159.6 |
| 28" | | 106.9 | 146.6 |
| 30" | | 103.5 | 141.9 |
| 32" | | 100.7 | 138.1 |
| 36" | | 97.0 | 120.0 |
| 40" | | 95.2 | 120.0 |
| 42" | | 95.0 | 120.0 |
| 20" | 48" | 110.0 | 195.0 |
| 24" | | 110.0 | 177.3 |
| 28" | | 110.0 | 160.9 |
| 30" | | 110.0 | 154.8 |
| 32" | | 109.1 | 120.0 |
| 36" | | 103.5 | 120.0 |
| 40" | | 99.8 | 120.0 |
| 42" | | 95.0 | 120.0 |
| 20" | 54" | 110.0 | 174.1 |
| 24" | | 110.0 | 152.0 |
| 28" | | 99.8 | 120.0 |
| 30" | | 95.5 | 120.0 |
| 32" | | 91.9 | 120.0 |
| 36" | | 86.2 | 118.2 |
| 40" | | 82.2 | 112.7 |
| 42" | | 80.6 | 110.5 |
| 20" | 60" | 110.0 | 153.2 |
| 24" | | 97.0 | 133.0 |
| 28" | | 86.8 | 119.0 |
| 30" | | 82.8 | 113.5 |
| 32" | | 79.4 | 108.8 |
| 36" | | 73.9 | 101.3 |
| 40" | | 60.0 | 60.0 |
| 42" | | 60.0 | 60.0 |
| 20" | 66" | 110.0 | 171.0 |
| 24" | | 107.8 | 120.0 |
| 28" | | 95.9 | 120.0 |
| 30" | | 91.3 | 120.0 |
| 32" | | 87.3 | 119.7 |
| 36" | | 60.0 | 60.0 |
| 40" | | 60.0 | 60.0 |
| 20" | 72" | 110.0 | 154.5 |
| 24" | | 97.0 | 120.0 |
| 28" | | 86.0 | 117.9 |
| 30" | | 81.7 | 112.0 |
| 32" | | 77.9 | 106.9 |
| 36" | | 60.0 | 60.0 |

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS

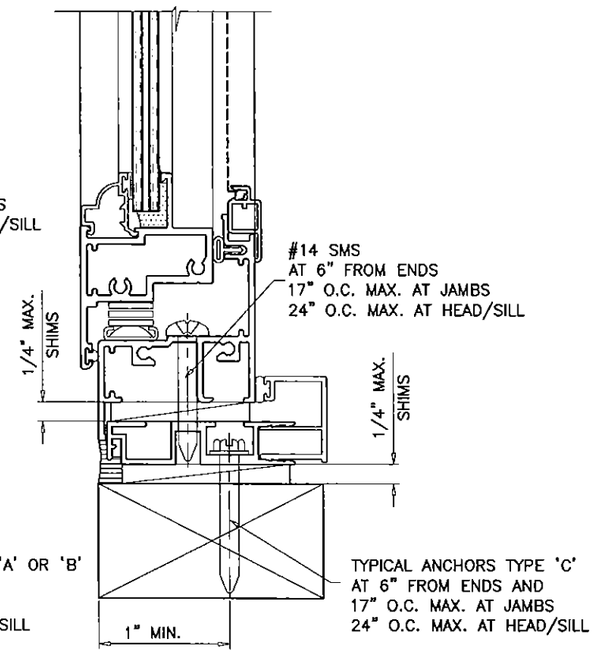
| WINDOW DIMS. | | | |
|---|---|---|---|
| WIDTH | HEIGHT | EXT.(+) | INT.(−) |
| 20" | 76" | 105.8 | 120.0 |
| 24" | | 90.9 | 120.0 |
| 28" | | 80.5 | 110.3 |
| 30" | | 76.3 | 104.7 |
| 32" | | 60.0 | 60.0 |
| 36" | | 60.0 | 60.0 |
| 20" | 78" | 102.7 | 120.0 |
| 24" | | 88.2 | 120.0 |
| 28" | | 77.9 | 120.0 |
| 30" | | 73.9 | 101.3 |
| 32" | | 60.0 | 60.0 |
| 20" | 84" | 110.0 | 120.0 |
| 24" | | 97.0 | 120.0 |
| 28" | | 85.5 | 117.3 |
| 30" | | 60.0 | 60.0 |
| 32" | | 60.0 | 60.0 |

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS

| WINDOW DIMS. | | | |
|---|---|---|---|
| WIDTH | HEIGHT | EXT.(+) | INT.(−) |
| 19−1/8" | 26" | 110.0 | 195.0 |
| 26−1/2" | | 110.0 | 195.0 |
| 37" | | 110.0 | 184.2 |
| 42" | | 110.0 | 152.4 |
| 19−1/8" | 38−3/8" | 110.0 | 195.0 |
| 26−1/2" | | 110.0 | 172.6 |
| 37" | | 110.0 | 156.3 |
| 42" | | 95.7 | 120.0 |
| 19−1/8" | 50−5/8" | 110.0 | 195.0 |
| 26−1/2" | | 110.0 | 154.7 |
| 37" | | 94.0 | 120.0 |
| 42" | | 89.8 | 120.0 |
| 19−1/8" | 63" | 109.3 | 149.9 |
| 26−1/2" | | 84.8 | 116.2 |
| 37" | | 67.9 | 93.1 |
| 42" | | 60.0 | 60.0 |
| 19−1/8" | 74−1/4" | 110.0 | 154.8 |
| 26−1/2" | | 86.4 | 118.5 |
| 37" | | 60.0 | 60.0 |
| 19−1/8" | 76" | 109.9 | 120.0 |
| 26−1/2" | | 84.0 | 115.2 |
| 37" | | 60.0 | 60.0 |
| 19−1/8" | 77" | 108.3 | 120.0 |
| 26−1/2" | | 82.7 | 113.4 |
| 37" | | 60.0 | 60.0 |




INSTALLATION TYPE '5'




INSTALLATION TYPE '6'
2BY WOOD BUCK OR WOOD STRUCTURES

## TYPICAL INSTALLATION DETAIL ON ALL FOUR SIDES/USING ALUMINUM BUCK SYSTEM

## TYPICAL ANCHORS: SEE ELEV. FOR SPACING

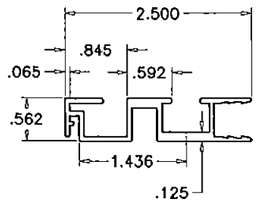
A − 1/4" DIA. KWIK−CON II BY 'HILTI' (Fu=163 KSI, Fy=157 KSI)
DIRECTLY INTO CONC. OR MASONRY
1−1/4" MIN. EMBED INTO CONC. OR MASONRY

B − 1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONC. OR FILLED BLOCK
1−1/4" MIN. EMBED INTO CONCRETE
2−1/4" MIN. EMBED INTO GROUT FILLED BLOCKS

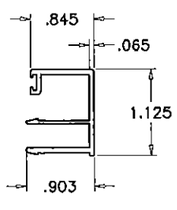
C − #14 SMS (GRADE 2 CRS)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1−1/2" MIN. PENETRATION INTO WOOD

TYPICAL EDGE DISTANCE
INTO CONCRETE AND MASONRY = 2−1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.

CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C−90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.




ALUMINUM BUCK
6063−T6




OPTIONAL COVER
6063−T6

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