# SERIES 8000 ALUMINUM WINDOW WALL SYSTEM

**THIS SYSTEM IS RATED FOR LARGE MISSILE IMPACT**
**SHUTTERS ARE NOT REQUIRED.**

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2023 (8TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

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

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

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2023 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC.
CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE. LABELING TO COMPLY WITH SECTION 1709.9.2.

## 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 SHEET 2 FOR DESIGN LOAD CAPACITY OF DESIRED GLASS SIZE.

**STEP 3** CHECK MULLION CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHARTS ON SHEETS 3 & 4 FOR WINDOW WALL MULLION AND SHEETS 6 & 7 FOR DOOR MULLION
THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.

**STEP 4** CHECK ANCHOR CAPACITY FOR WINDOW WALL SYSTEM USING CHARTS ON SHEETS 5, 5.1 & 5.2 FOR DOOR MULLION ANCHOR CAPACITY SEE CHART ON SHEET 7.
THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.

**STEP 5** THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

PRODUCT COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.

LAMINATED GLASS
LARGE MISSILE IMPACT

Sealed: 8/19/2025

FL #17897

A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.

B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER


**AL-FAROOQ CORPORATION**
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978


STORE\W17-92ES

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

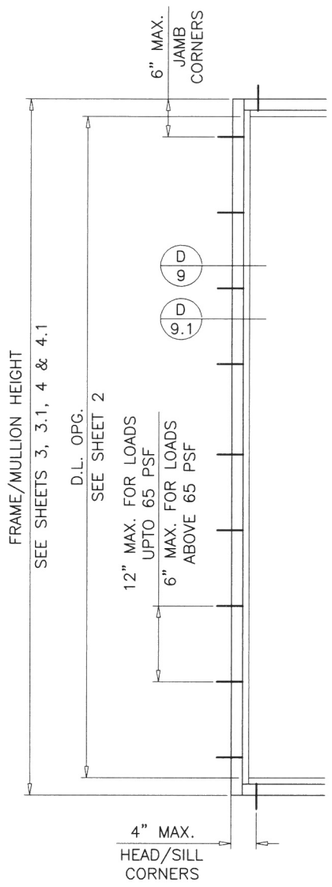
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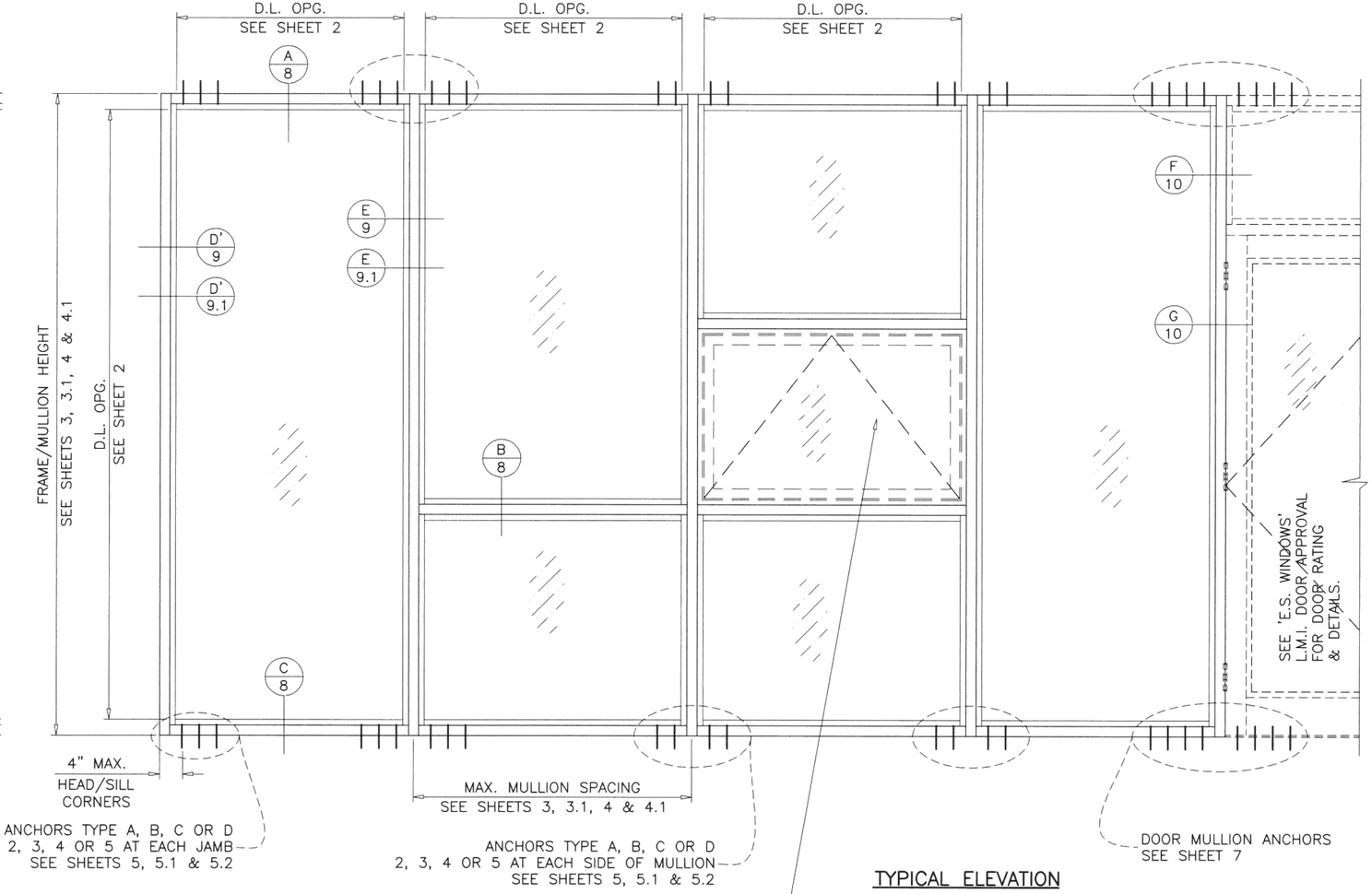
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| C | 12.21.20 | | NEW TESTS ADDED |
| D | 01.25.23 | | GLAZING SILICONE GE ADDED |
| E | 07.25.23 | | UPDATED TO 2023 FBC |
| F | 06.11.24 | | LOUVER NOTE ADDED |
| G | 07.30.25 | | WINLITE INTERLAYER ADDED |

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chk. by:

drawing no. W17-92

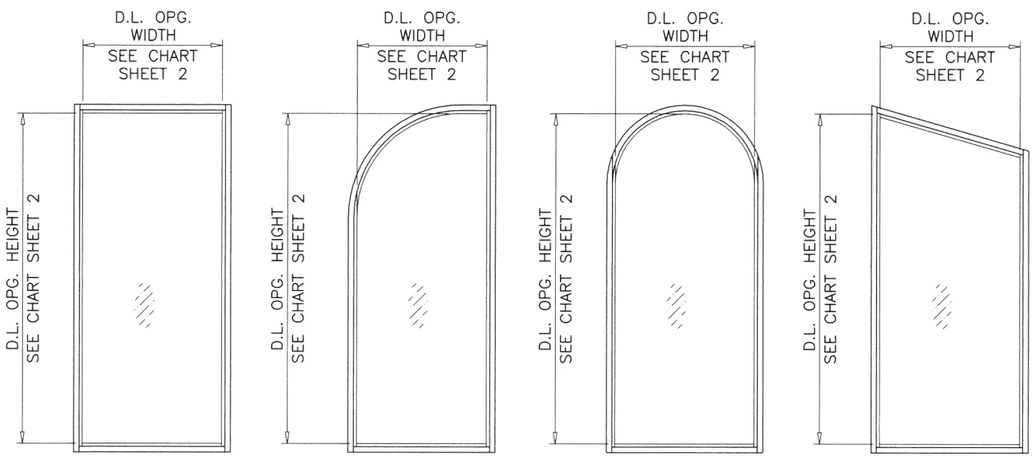
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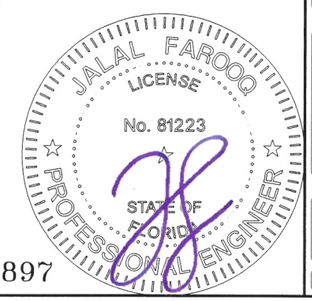

## TYPICAL ELEVATION

WINDOWS AND LOUVERS, SUPPORTED BY APPROVALS
CAN BE INSTALLED WITHIN THE DAYLIGHT OPENING
ALLOWED AREA NOT TO EXCEED THE TESTED GLASS AREA
AND MAX. MULLION SPACING PER CHARTS ON SHEETS 3, 3.1, 4 & 4.1
PROVIDED THESE ARE PROPERLY SECURED WITH SCREWS
AT PERIMETER OF OPENING.
INSTALLATION AND COMPLIANCE WITH CODE SHALL BE VERIFIED INDEPENDENTLY
PTAC UNITS USED AS WINDOW INSERT TO BE ENGINEERED SEPARATELY
FOR MULLION CAPACITY, ANCHORS, ASYMMETRICAL LOADS ETC.




ALLOWABLE LOADS FOR ALTERNATE SHAPES AS SHOWN ABOVE OR SIMILAR CAN BE VERIFIED BY INSCRIBING PICTURE WINDOW SHAPE WITHIN SQUARE OR RECTANGLE AS SHOWN IN DOTTED LINES AND OBTAINING ALLOWABLE LOADS FROM THOSE SHAPES. SINGLE LITES MAY BE INSTALLED VERTICALLY AS SHOWN ABOVE OR HORIZONTALLY. ANCHORS AT ALTERNATE SHAPES TO BE ALL AROUND SPACED AS PER JAMB ANCHORS.

Sealed: 8/19/2025




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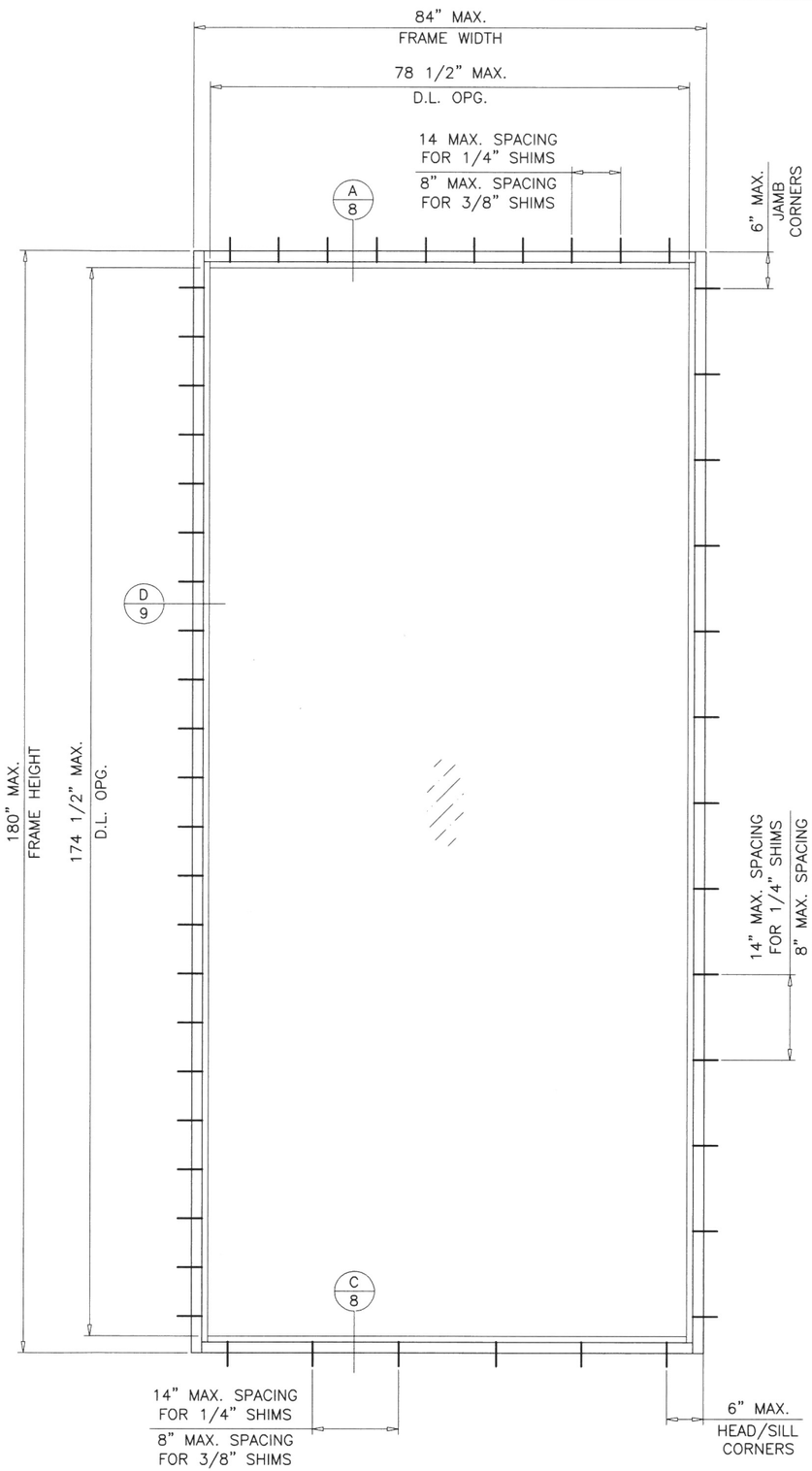
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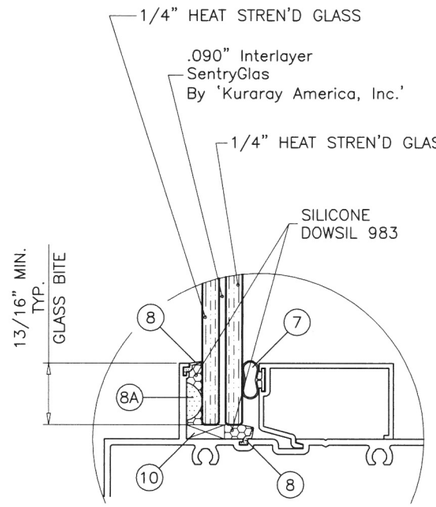
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chk. by:

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W17-92

sheet 1.1 of 12




TYPICAL ELEVATION
SINGLE (0) PANEL




GLASS TYPE 'B1'

MAXIMUM DESIGN LOAD RATING = + 70.0 PSF
– 70.0 PSF
(ONLY FOR SINGLE UNITS SHOWN IN THIS SHEET OR SMALLER)

Sealed: 8/19/2025

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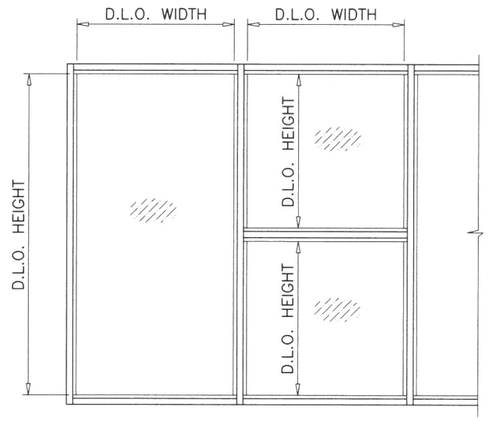
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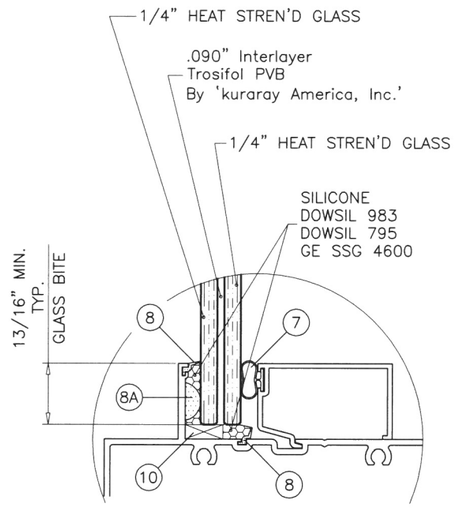
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| GLASS LOAD CAPACITY – PSF | | | |
|---|---|---|---|
| NOMINAL DIMS. | | GLASS TYPE 'A' | GLASS TYPE 'B' |
| D.L.O. WIDTH | D.L.O. HEIGHT | EXT.(+)/INT.(–) | EXT.(+)/INT.(–) |
| 28" | 84–1/2" | 80.0 | 130.0 |
| 32" | | 80.0 | 130.0 |
| 36" | | 80.0 | 130.0 |
| 40" | | 80.0 | 130.0 |
| 44–1/4" | | 80.0 | 130.0 |
| 48" | | 80.0 | 130.0 |
| 52" | | 80.0 | 130.0 |
| 56–1/4" | | 80.0 | 130.0 |
| 60–1/2" | | – | 63.6 |
| 66–1/2" | | – | 58.3 |
| 28" | 90–1/2" | 80.0 | 130.0 |
| 32" | | 80.0 | 130.0 |
| 36" | | 80.0 | 130.0 |
| 40" | | 80.0 | 130.0 |
| 44–1/4" | | 80.0 | 130.0 |
| 48" | | 80.0 | 130.0 |
| 52" | | 80.0 | 130.0 |
| 54–1/2" | | 56.0 | 70.0 |
| 60–1/2" | | – | 63.6 |
| 66–1/2" | | – | 58.3 |
| 28" | 96–1/2" | 80.0 | 130.0 |
| 32" | | 80.0 | 130.0 |
| 36" | | 80.0 | 130.0 |
| 40" | | 80.0 | 130.0 |
| 44–1/4" | | 80.0 | 130.0 |
| 48" | | 80.0 | 130.0 |
| 52" | | 80.0 | 127.2 |
| 54–1/2" | | 56.0 | 70.0 |
| 60–1/2" | | – | 63.6 |
| 66–1/2" | | – | 58.3 |
| 28" | 102–1/2" | 80.0 | 130.0 |
| 32" | | 80.0 | 130.0 |
| 36" | | 80.0 | 130.0 |
| 40" | | 80.0 | 130.0 |
| 44–1/4" | | 80.0 | 130.0 |
| 48" | | 80.0 | 128.9 |
| 54–1/2" | | 56.0 | 70.0 |
| 60–1/2" | | – | 63.6 |
| 66–1/2" | | – | 58.3 |
| 28" | 108–1/2" | 80.0 | 130.0 |
| 32" | | 80.0 | 130.0 |
| 36" | | 80.0 | 130.0 |
| 40" | | 80.0 | 130.0 |
| 44–1/4" | | 80.0 | 130.0 |
| 48" | | 62.2 | 70.0 |
| 54–1/2" | | 56.0 | 70.0 |
| 60–1/2" | | – | 63.6 |
| 66–1/2" | | – | 58.3 |

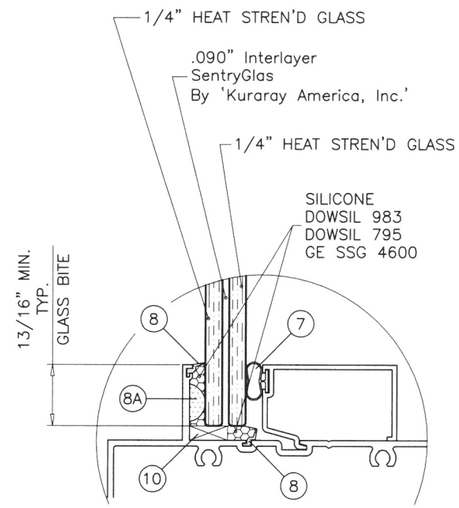
| GLASS LOAD CAPACITY – PSF | | | |
|---|---|---|---|
| NOMINAL DIMS. | | GLASS TYPE 'A' | GLASS TYPE 'B' |
| D.L.O. WIDTH | D.L.O. HEIGHT | EXT.(+)/INT.(–) | EXT.(+)/INT.(–) |
| 28" | 114–1/2" | 80.0 | 130.0 |
| 32" | | 80.0 | 130.0 |
| 36" | | 80.0 | 130.0 |
| 40" | | 80.0 | 130.0 |
| 44–1/4" | | 80.0 | 130.0 |
| 48–1/2" | | 62.2 | 90.0 |
| 51–1/2" | | – | 90.0 |
| 54–1/2" | | – | 70.0 |
| 60–1/2" | | – | 63.6 |
| 66–1/2" | | – | 58.3 |
| 44–1/4" | 120–1/2" | 70.0 | 90.0 |
| 48" | | 62.2 | 90.0 |
| 50" | | – | 90.0 |
| 54–1/2" | | – | 70.0 |
| 60–1/2" | | – | 63.6 |
| 42–1/4" | 126–1/2" | 70.0 | 90.0 |
| 44–1/4" | | – | 90.0 |
| 48" | | – | 90.0 |
| 48–1/2" | | – | 70.0 |
| 54–1/2" | | – | 70.0 |
| 40" | 132–1/2" | 70.0 | 90.0 |
| 42–1/4" | | 70.0 | 90.0 |
| 44–1/4" | | – | 90.0 |
| 46" | | – | 90.0 |
| 48–1/2" | | – | 70.0 |
| 54–1/2" | | – | 70.0 |
| 40" | 138–1/2" | 70.0 | 90.0 |
| 42–1/4" | | 70.0 | 90.0 |
| 44–1/4" | | – | 90.0 |
| 48–1/2" | | – | 70.0 |
| 54–1/2" | | – | 70.0 |

NOTE:
INTERPOLATION BETWEEN WIDTHS ALLOWED.




GLASS TYPE 'A'




GLASS TYPE 'B'

GLAZING OPTIONS

Sealed: 8/19/2025

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300–09 (3 SEC. GUSTS).

GLASS

FL #17897


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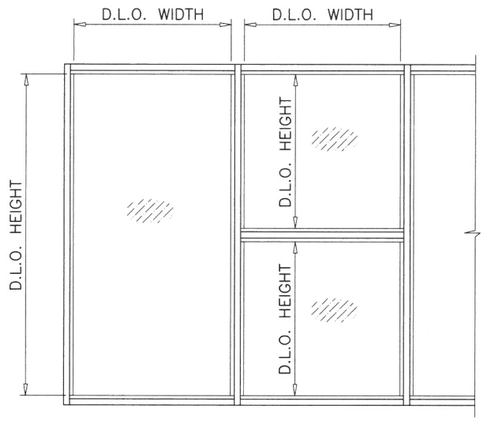
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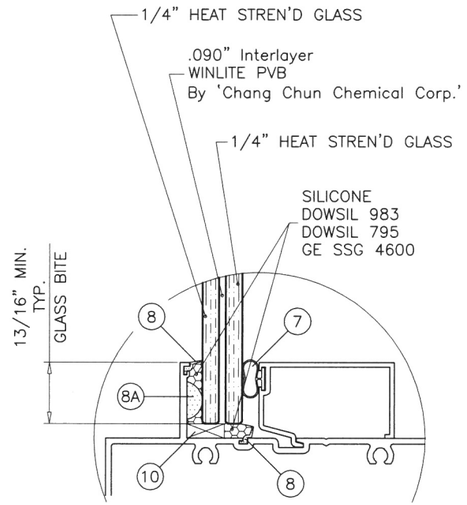
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sheet 2 of 12

| GLASS LOAD CAPACITY – PSF | | |
|---|---|---|
| NOMINAL DIMS. | | GLASS TYPE 'C' |
| D.L.O. WIDTH | D.L.O. HEIGHT | EXT.(+)/INT.(–) |
| 32" | 90–1/2" | 80.0 |
| 36" | | 80.0 |
| 40" | | 76.8 |
| 44–1/4" | | 70.0 |
| 48" | | 64.9 |
| 52" | | 60.3 |
| 56–1/4" | | 56.0 |
| 60–1/2" | | 52.3 |
| 66–1/2" | | 47.8 |
| 32" | 96–1/2" | 80.0 |
| 36" | | 80.0 |
| 40" | | 76.8 |
| 44–1/4" | | 70.0 |
| 48" | | 64.9 |
| 52" | | 60.3 |
| 56–1/4" | | 56.0 |
| 60–1/2" | | 52.3 |
| 32" | 108–1/2" | 80.0 |
| 36" | | 80.0 |
| 40" | | 76.8 |
| 44–1/4" | | 70.0 |
| 48" | | 64.9 |
| 52" | | 60.3 |
| 56–1/4" | | 56.0 |
| 32" | 114–1/2" | 80.0 |
| 36" | | 80.0 |
| 40" | | 76.8 |
| 44–1/4" | | 70.0 |
| 48" | | 64.9 |
| 52" | | 60.3 |
| 32" | 126–1/2" | 80.0 |
| 36" | | 80.0 |
| 40" | | 76.8 |
| 44–1/4" | | 70.0 |
| 48" | | 64.9 |
| 32" | 138–1/2" | 80.0 |
| 36" | | 80.0 |
| 40" | | 75.5 |
| 44–1/4" | | 70.0 |

NOTE:
INTERPOLATION BETWEEN WIDTHS ALLOWED.




GLASS TYPE 'C'

GLAZING OPTIONS

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300–09 (3 SEC. GUSTS).

GLASS

Sealed: 8/19/2025

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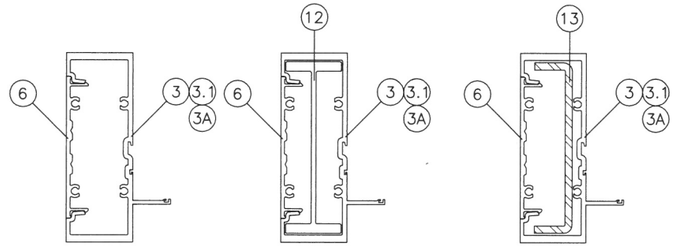
## MULLION LOAD CAPACITY – PSF
### MULLIONS WITHOUT INTERMEDIATE HORIZONTALS

| NOMINAL DIMS. | | JAMB 'J1' MULL 'M1' | JAMB 'J1' MULL 'M2' | JAMB 'J2' JAMB 'J3' MULL 'M3' | JAMB 'J3' MULL 'M4,' | UNANCHORED JAMB OPTIONS MULL OPTIONS |
|---|---|---|---|---|---|---|
| WIDTH (W) | FRAME HEIGHT | EXT. (+) INT. (–) | EXT. (+) INT. (–) | EXT. (+) INT. (–) | EXT. (+) INT. (–) | |
| 30" | 86–1/2" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 42" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 48" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 54" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 60" | | 127.3 | 130.0 | 130.0 | 130.0 | |
| 30" | 90" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 42" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 48" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 54" | | 122.9 | 130.0 | 130.0 | 130.0 | |
| 60" | | 114.9 | 130.0 | 130.0 | 130.0 | |
| 30" | 96" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 42" | | 121.1 | 130.0 | 130.0 | 130.0 | |
| 48" | | 108.6 | 130.0 | 130.0 | 130.0 | |
| 54" | | 99.4 | 130.0 | 125.6 | 130.0 | |
| 60" | | 92.4 | 130.0 | 116.3 | 130.0 | |
| 30" | 98–1/2" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 127.6 | 130.0 | 130.0 | 130.0 | |
| 42" | | 111.6 | 130.0 | 130.0 | 130.0 | |
| 48" | | 100.0 | 130.0 | 130.0 | 130.0 | |
| 54" | | 91.4 | 130.0 | 118.6 | 130.0 | |
| 58" | | 86.8 | 130.0 | 112.4 | 130.0 | |
| 30" | 102" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 114.5 | 130.0 | 130.0 | 130.0 | |
| 42" | | 100.0 | 130.0 | 130.0 | 130.0 | |
| 48" | | 89.5 | 130.0 | 120.9 | 130.0 | |
| 54" | | 81.6 | 130.0 | 109.8 | 130.0 | |
| 56" | | 79.4 | 127.7 | 106.7 | 130.0 | |
| 30" | 108" | 113.5 | 130.0 | 130.0 | 130.0 | |
| 36" | | 95.9 | 130.0 | 130.0 | 130.0 | |
| 42" | | 83.6 | 130.0 | 120.3 | 130.0 | |
| 48" | | 74.6 | 120.0 | 107.0 | 130.0 | |
| 53" | | 68.8 | 110.7 | 98.4 | 130.0 | |
| 30" | 110–1/2" | 105.9 | 130.0 | 130.0 | 130.0 | |
| 36" | | 89.4 | 130.0 | 130.0 | 130.0 | |
| 42" | | 77.8 | 125.2 | 114.7 | 130.0 | |
| 48" | | 69.4 | 111.6 | 101.9 | 130.0 | |
| 52" | | 64.9 | 104.5 | 95.1 | 130.0 | |
| 30" | 114" | 96.2 | 130.0 | 130.0 | 130.0 | |
| 36" | | 81.2 | 130.0 | 123.8 | 130.0 | |
| 42" | | 70.6 | 113.6 | 107.4 | 130.0 | |
| 48" | | 62.9 | 101.1 | 95.3 | 130.0 | |
| 50" | | 60.8 | 97.7 | 92.0 | 130.0 | |
| 30" | 120" | 82.3 | 130.0 | 130.0 | 130.0 | |
| 36" | | 69.3 | 111.5 | 111.4 | 130.0 | |
| 42" | | 60.2 | 96.9 | 96.5 | 130.0 | |
| 48" | | 53.5 | 86.1 | 85.5 | 130.0 | |

NOTE:
INTERPOLATION BETWEEN WIDTHS ALLOWED.

## MULLION LOAD CAPACITY – PSF
### MULLIONS W/O INTERMEDIATE HORIZONTALS

| NOMINAL DIMS. | | JAMB 'J2' JAMB 'J3' MULL 'M4' | JAMB 'J3' MULL 'M4' | UNANCHORED JAMB OPTIONS MULL OPTIONS |
|---|---|---|---|---|
| WIDTH (W) | FRAME HEIGHT | EXT. (+) INT. (–) | EXT. (+) INT. (–) | |
| 54" | 120" | 90.0 | 90.0 | |
| 57" | | 90.0 | 90.0 | |
| 60" | | – | 70.0 | |
| 66" | | – | 70.0 | |
| 72" | | – | 70.0 | |
| 30" | 126" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 90.0 | 90.0 | |
| 48" | | 90.0 | 90.0 | |
| 54" | | 90.0 | 90.0 | |
| 60" | | – | 70.0 | |
| 66" | | – | 70.0 | |
| 30" | 132" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 90.0 | 90.0 | |
| 48" | | 90.0 | 90.0 | |
| 52" | | 90.0 | 90.0 | |
| 54" | | – | 70.0 | |
| 60" | | – | 70.0 | |
| 30" | 138" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 90.0 | 90.0 | |
| 48" | | 90.0 | 90.0 | |
| 50" | | 86.9 | 86.9 | |
| 54" | | – | 70.0 | |
| 60" | | – | 64.9 | |
| 30" | 144" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 89.4 | 89.4 | |
| 48" | | 79.0 | 79.0 | |
| 54" | | – | 65.1 | |
| 60" | | – | 59.3 | |




JAMB 'J1'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.6509 | 2.6421 |



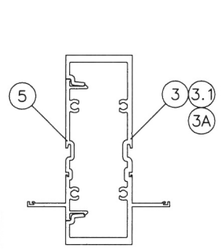

JAMB 'J2'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.6486 | 4.4452 |



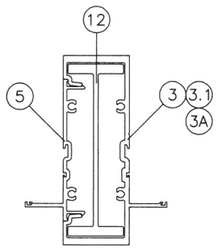

JAMB 'J3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.6509 | 2.6421 |
| STEEL | 2.7506 | 1.2225 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.6276 | |



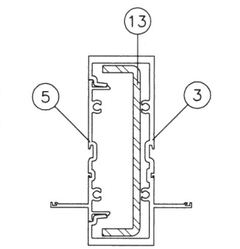

MULLION 'M1'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.7195 | 2.6757 |



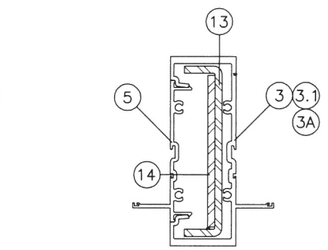

MULLION 'M2'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.8072 | 3.7590 |



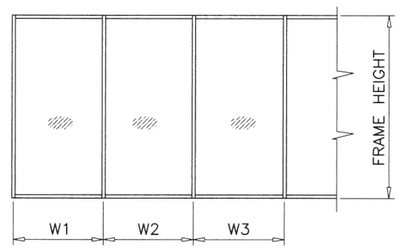

MULLION 'M3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 2.7506 | 1.2225 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.6962 | |




MULLION 'M4'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 3.7533 | 1.668 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 17.6047 | |




WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION

MULLIONS

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
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STORE\W17-92ES

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

| no | date | by | description |
|---|---|---|---|

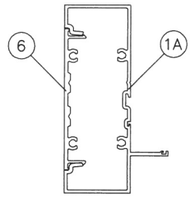
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scale: –
dr. by: TARIQ
chk. by:

drawing no. W17–92

sheet 3 of 12

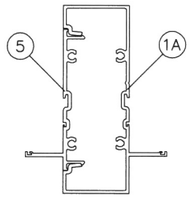
| MULLION LOAD CAPACITY – PSF<br>MULLIONS WITHOUT INTERMEDIATE HORIZONTALS | | | |
|---|---|---|---|
| NOMINAL DIMS. | | JAMB 'J1A'<br>MULL 'M1A' | JAMB 'J1A'<br>MULL 'M2A' |
| WIDTH (W) | FRAME HEIGHT | EXT. (+)<br>INT. (–) | EXT. (+)<br>INT. (–) |
| 30" | 86–1/2" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 60.0 | 70.0 |
| 54" | | 60.0 | 70.0 |
| 60" | | 60.0 | 70.0 |
| 30" | 90" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 60.0 | 70.0 |
| 54" | | 60.0 | 70.0 |
| 60" | | 60.0 | 70.0 |
| 30" | 96" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 60.0 | 70.0 |
| 54" | | 55.6 | 70.0 |
| 60" | | 51.5 | 70.0 |
| 30" | 98–1/2" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 57.6 | 70.0 |
| 54" | | 52.4 | 70.0 |
| 30" | 102" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 59.7 | 70.0 |
| 48" | | 53.2 | 70.0 |
| 54" | | 48.3 | 70.0 |
| 30" | 108" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 52.6 | 70.0 |
| 48" | | 46.8 | 70.0 |
| 54" | | – | 70.0 |
| 60" | | – | 70.0 |
| 30" | 110–1/2" | 60.0 | 70.0 |
| 36" | | 57.1 | 70.0 |
| 42" | | 49.7 | 70.0 |
| 48" | | 44.3 | 70.0 |
| 54" | | – | 70.0 |
| 60" | | – | 70.0 |
| 30" | 114" | 60.0 | 70.0 |
| 36" | | 51.8 | 70.0 |
| 42" | | 45.1 | 70.0 |
| 48" | | 40.1 | 70.0 |
| 54" | | – | 70.0 |
| 30" | 120" | 52.5 | 70.0 |
| 36" | | 44.3 | 70.0 |
| 42" | | 38.5 | 70.0 |
| 48" | | 34.2 | 66.7 |
| 54" | | – | 60.4 |
| 57" | | – | 57.8 |

| MULLION LOAD CAPACITY – PSF<br>MULLIONS WITHOUT INTERMEDIATE HORIZONTALS | | | | |
|---|---|---|---|---|
| NOMINAL DIMS. | | JAMB 'J1A'<br>MULL 'M1A' | JAMB 'J1A'<br>MULL 'M2A' | UNANCHORED<br>JAMB OPTIONS<br>MULL OPTIONS |
| WIDTH (W) | FRAME HEIGHT | EXT. (+)<br>INT. (–) | EXT. (+)<br>INT. (–) | |
| 30" | 126" | – | 70.0 | |
| 36" | | – | 70.0 | |
| 42" | | – | 64.6 | |
| 48" | | – | 57.3 | |
| 54" | | – | 51.8 | |
| 30" | 132" | – | 70.0 | |
| 36" | | – | 64.5 | |
| 42" | | – | 55.9 | |
| 48" | | – | 49.6 | |
| 52" | | – | 46.2 | |
| 30" | 138" | – | 67.1 | |
| 36" | | – | 56.3 | |
| 42" | | – | 48.8 | |
| 48" | | – | 43.2 | |
| 50" | | – | 41.6 | |
| 30" | 144" | – | 58.9 | |
| 36" | | – | 49.5 | |
| 42" | | – | 42.8 | |
| 48" | | – | 37.8 | |



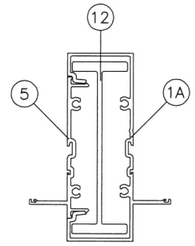

JAMB 'J1A'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 4.1316 | 1.6902 |



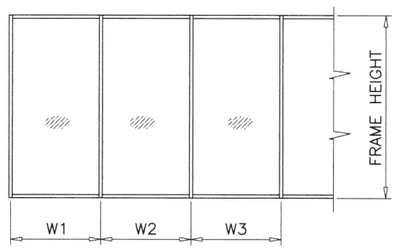

MULLION 'M1A'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 4.2902 | 1.7239 |




MULLION 'M2A'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 8.3779 | 3.527 |




WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION

NOTE:
INTERPOLATION BETWEEN WIDTHS ALLOWED.

Sealed: 8/19/2025

MULLIONS

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


afc
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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revisions:

| no | date | by | description |
|---|---|---|---|
| | | | |

date: 10-20-17
scale: –
dr. by: TARIQ
chk. by:

drawing no.
W17–92

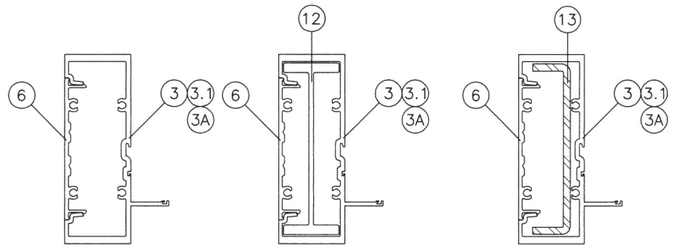
## MULLION LOAD CAPACITY – PSF
## MULLIONS WITH INTERMEDIATE HORIZONTALS

| NOMINAL DIMS. | | JAMB 'J1' MULL 'M1' | JAMB 'J1' MULL 'M2' | JAMB 'J2' JAMB 'J3' MULL 'M3' | JAMB 'J3' MULL 'M4', | UNANCHORED JAMB OPTIONS MULL OPTIONS |
|---|---|---|---|---|---|---|
| WIDTH (W) | FRAME HEIGHT | EXT. (+) INT. (–) | EXT. (+) INT. (–) | EXT. (+) INT. (–) | EXT. (+) INT. (–) | |
| 30" | 78" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 42" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 48" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 54" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 60" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 30" | 86–1/2" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 42" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 48" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 54" | | 118.9 | 130.0 | 130.0 | 130.0 | |
| 60" | | 107.0 | 130.0 | 124.8 | 130.0 | |
| 30" | 90" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 42" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 48" | | 119.2 | 130.0 | 130.0 | 130.0 | |
| 54" | | 105.9 | 130.0 | 128.1 | 130.0 | |
| 60" | | 95.3 | 130.0 | 115.3 | 130.0 | |
| 30" | 96" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 130.0 | 130.0 | 130.0 | 130.0 | |
| 42" | | 112.2 | 130.0 | 130.0 | 130.0 | |
| 48" | | 98.2 | 130.0 | 126.7 | 130.0 | |
| 54" | | 87.3 | 130.0 | 112.6 | 130.0 | |
| 60" | | 78.5 | 122.1 | 101.4 | 130.0 | |
| 30" | 98–1/2" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 121.2 | 130.0 | 130.0 | 130.0 | |
| 42" | | 103.9 | 130.0 | 130.0 | 130.0 | |
| 48" | | 90.9 | 130.0 | 120.3 | 130.0 | |
| 54" | | 80.8 | 128.9 | 107.0 | 130.0 | |
| 58" | | 75.2 | 120.0 | 99.6 | 130.0 | |
| 30" | 102" | 130.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 109.1 | 130.0 | 130.0 | 130.0 | |
| 42" | | 93.6 | 130.0 | 128.3 | 130.0 | |
| 48" | | 81.9 | 130.0 | 112.2 | 130.0 | |
| 54" | | 72.8 | 117.0 | 99.8 | 130.0 | |
| 56" | | 70.2 | 112.8 | 96.2 | 130.0 | |
| 30" | 108" | 110.3 | 130.0 | 130.0 | 130.0 | |
| 36" | | 91.9 | 130.0 | 130.0 | 130.0 | |
| 42" | | 78.8 | 126.8 | 114.4 | 130.0 | |
| 48" | | 69.0 | 110.9 | 100.1 | 130.0 | |
| 53" | | 62.5 | 100.4 | 90.7 | 130.0 | |
| 30" | 110–1/2" | 103.0 | 130.0 | 130.0 | 130.0 | |
| 36" | | 85.8 | 130.0 | 127.5 | 130.0 | |
| 42" | | 73.6 | 118.3 | 109.3 | 130.0 | |
| 48" | | 64.4 | 103.6 | 95.6 | 130.0 | |
| 52" | | 59.4 | 95.6 | 88.3 | 130.0 | |
| 30" | 114" | 93.8 | 130.0 | 130.0 | 130.0 | |
| 36" | | 78.2 | 125.7 | 119.8 | 130.0 | |
| 42" | | 67.0 | 107.8 | 102.7 | 130.0 | |
| 48" | | 58.6 | 94.3 | 89.8 | 130.0 | |
| 50" | | 56.3 | 90.5 | 86.2 | 130.0 | |
| 30" | 120" | 80.4 | 129.4 | 129.7 | 130.0 | |
| 36" | | 67.0 | 107.8 | 108.1 | 130.0 | |
| 42" | | 57.5 | 92.4 | 92.7 | 130.0 | |
| 48" | | 50.3 | 80.9 | 81.1 | 130.0 | |

## MULLION LOAD CAPACITY – PSF
## MULLIONS WITH INTERMEDIATE HORIZONTALS

| NOMINAL DIMS. | | JAMB 'J2' JAMB 'J3' MULL 'M4' | JAMB 'J3' MULL 'M4' | UNANCHORED JAMB OPTIONS MULL OPTIONS |
|---|---|---|---|---|
| WIDTH (W) | FRAME HEIGHT | EXT. (+) INT. (–) | EXT. (+) INT. (–) | |
| 54" | 120" | 90.0 | 90.0 | |
| 57" | | 90.0 | 90.0 | |
| 30" | 126" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 90.0 | 90.0 | |
| 48" | | 90.0 | 90.0 | |
| 54" | | 90.0 | 90.0 | |
| 60" | | – | 70.0 | |
| 30" | 132" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 90.0 | 90.0 | |
| 48" | | 90.0 | 90.0 | |
| 52" | | 90.0 | 90.0 | |
| 54" | | – | 70.0 | |
| 60" | | – | 66.6 | |
| 30" | 138" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 90.0 | 90.0 | |
| 48" | | 86.6 | 86.6 | |
| 50" | | 83.1 | 83.1 | |
| 54" | | – | 67.7 | |
| 60" | | – | 60.9 | |
| 30" | 144" | 90.0 | 90.0 | |
| 36" | | 90.0 | 90.0 | |
| 42" | | 87.1 | 87.1 | |
| 48" | | 76.2 | 76.2 | |
| 54" | | – | 62.2 | |
| 60" | | – | 55.9 | |

NOTE:
INTERPOLATION BETWEEN WIDTHS ALLOWED.




JAMB 'J1'

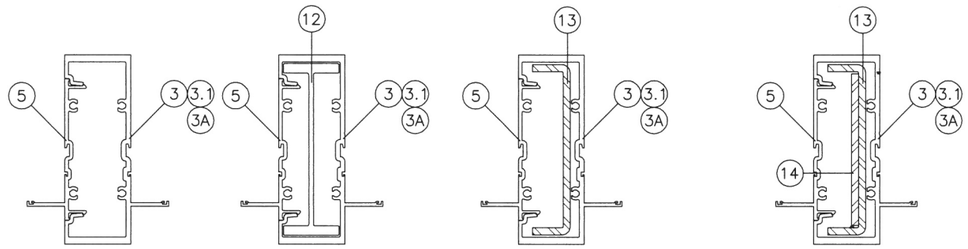
| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.6509 | 2.6421 |

JAMB 'J2'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.6486 | 4.4452 |

JAMB 'J3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.6509 | 2.6421 |
| STEEL | 2.7506 | 1.2225 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.6276 | |




MULLION 'M1'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.7195 | 2.6757 |

MULLION 'M2'

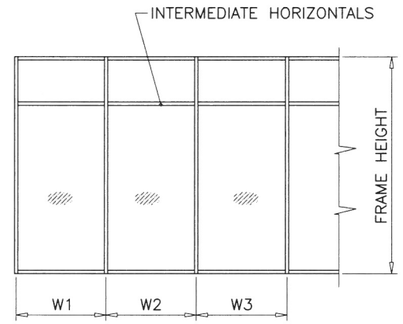
| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.8072 | 3.7590 |

MULLION 'M3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 2.7506 | 1.2225 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.6962 | |

MULLION 'M4'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 3.7533 | 1.668 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 17.6047 | |




WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION

MULLIONS

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


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STORE\W17-92ES

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revisions:

| no | date | by | description |
|---|---|---|---|
| | | | |

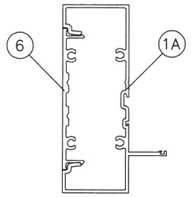
date: 10-20-17
scale: –
dr. by: TARIQ
chk. by:

drawing no. W17-92

| MULLION LOAD CAPACITY – PSF<br>MULLIONS WITH INTERMEDIATE HORIZONTALS | | | |
|---|---|---|---|
| NOMINAL DIMS. | | JAMB 'J1A'<br>MULL 'M1A' | JAMB 'J1A'<br>MULL 'M2A' |
| WIDTH (W) | FRAME HEIGHT | EXT. (+)<br>INT. (–) | EXT. (+)<br>INT. (–) |
| 30" | 86–1/2" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 60.0 | 70.0 |
| 54" | | 60.0 | 70.0 |
| 60" | | 55.9 | 70.0 |
| 30" | 90" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 60.0 | 70.0 |
| 54" | | 57.1 | 70.0 |
| 60" | | 51.4 | 70.0 |
| 30" | 96" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 56.1 | 70.0 |
| 54" | | 49.9 | 70.0 |
| 60" | | 44.9 | 70.0 |
| 30" | 98–1/2" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 60.0 | 70.0 |
| 48" | | 53.2 | 70.0 |
| 54" | | 47.2 | 70.0 |
| 30" | 102" | 60.0 | 70.0 |
| 36" | | 60.0 | 70.0 |
| 42" | | 56.4 | 70.0 |
| 48" | | 49.4 | 70.0 |
| 54" | | 43.9 | 70.0 |
| 30" | 108" | 60.0 | 70.0 |
| 36" | | 58.4 | 70.0 |
| 42" | | 50.0 | 70.0 |
| 48" | | 43.8 | 70.0 |
| 54" | | – | 70.0 |
| 60" | | – | 70.0 |
| 30" | 110–1/2" | 60.0 | 70.0 |
| 36" | | 54.8 | 70.0 |
| 42" | | 47.0 | 70.0 |
| 48" | | 41.1 | 70.0 |
| 54" | | – | 70.0 |
| 60" | | – | 70.0 |
| 30" | 114" | 59.9 | 70.0 |
| 36" | | 49.9 | 70.0 |
| 42" | | 42.8 | 70.0 |
| 48" | | 37.4 | 70.0 |
| 54" | | – | 70.0 |
| 30" | 120" | 51.4 | 70.0 |
| 36" | | 42.8 | 70.0 |
| 42" | | 36.7 | 70.0 |
| 48" | | 32.1 | 66.7 |
| 54" | | – | 60.4 |
| 57" | | – | 57.8 |

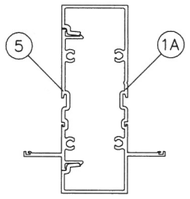
| MULLION LOAD CAPACITY – PSF<br>MULLIONS WITH INTERMEDIATE HORIZONTALS | | | | |
|---|---|---|---|---|
| NOMINAL DIMS. | | JAMB 'J1A'<br>MULL 'M1A' | JAMB 'J1A'<br>MULL 'M2A' | UNANCHORED<br>JAMB OPTIONS<br>MULL OPTIONS |
| WIDTH (W) | FRAME HEIGHT | EXT. (+)<br>INT. (–) | EXT. (+)<br>INT. (–) | |
| 30" | 126" | – | 70.0 | |
| 36" | | – | 70.0 | |
| 42" | | – | 64.6 | |
| 48" | | – | 57.3 | |
| 54" | | – | 51.8 | |
| 30" | 132" | – | 70.0 | |
| 36" | | – | 64.5 | |
| 42" | | – | 55.9 | |
| 48" | | – | 49.6 | |
| 52" | | – | 46.2 | |
| 30" | 138" | – | 67.1 | |
| 36" | | – | 56.3 | |
| 42" | | – | 48.8 | |
| 48" | | – | 43.2 | |
| 50" | | – | 41.6 | |
| 30" | 144" | – | 58.9 | |
| 36" | | – | 49.5 | |
| 42" | | – | 42.8 | |
| 48" | | – | 37.8 | |

NOTE:
INTERPOLATION BETWEEN WIDTHS ALLOWED.



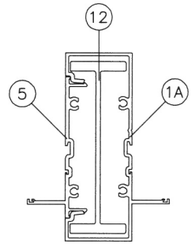

JAMB 'J1A'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 4.1316 | 1.6902 |



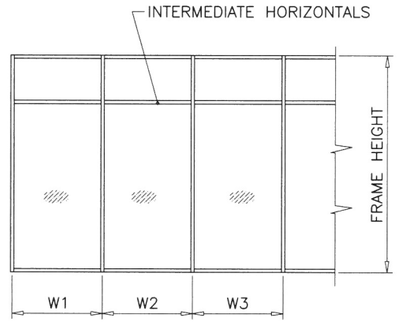

MULLION 'M1A'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 4.2902 | 1.7239 |




MULLION 'M2A'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 8.3779 | 3.527 |




WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION

MULLIONS

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978


STORE\W17-92ES

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)


E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

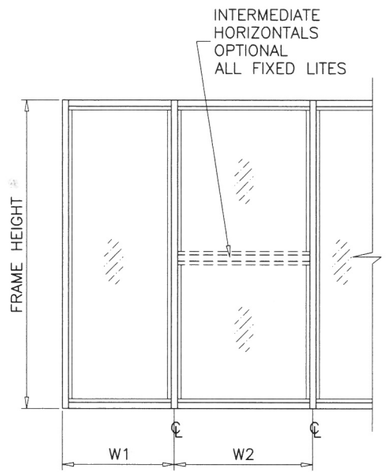

revisions:

| no | date | by | description |
|---|---|---|---|
| | | | |

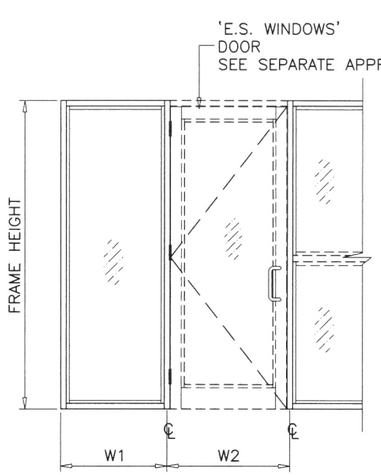
date: 10-20-17
scale: –
dr. by: TARIQ
chk. by:

drawing no.
W17-92

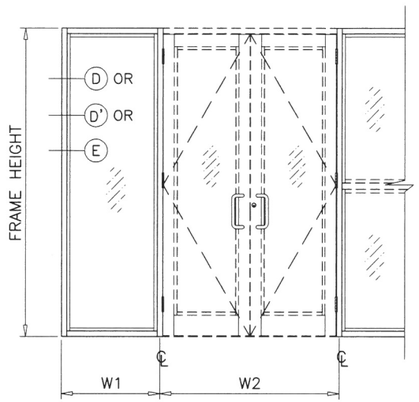
sheet 4.1 of 12



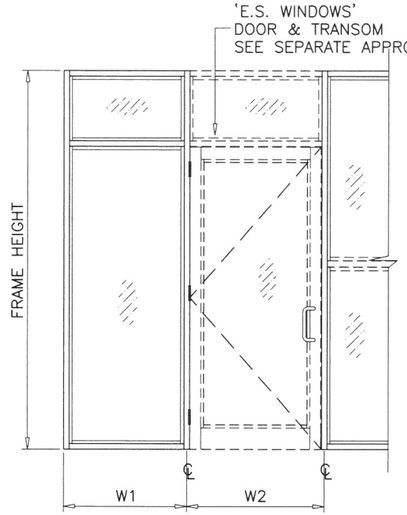

WIDTH (W) = $\frac{W1 + W2}{2}$



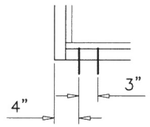

WIDTH (W) = $\frac{W1 + W2}{2}$

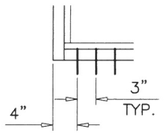


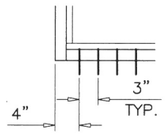

WIDTH (W) = $\frac{W1}{2} + \frac{W2}{4}$

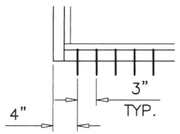


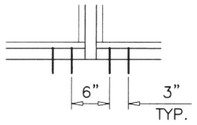

WIDTH (W) = $\frac{W1 + W2}{2}$



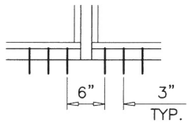



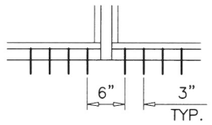



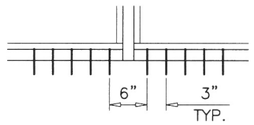

A2, B2, C2, D2




A3, B3, C3, D3




A4, B4, C4, D4




A5, B5, C5

ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION

A2 = (2) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
B2 = (2) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
C2 = (2) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
D2 = (2) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION

A3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
B3 = (3) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
C3 = (3) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
D3 = (3) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION

A4 = (4) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
B4 = (4) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
C4 = (4) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
D4 = (4) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION

A5 = (5) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
B5 = (5) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
C5 = (5) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

SEE SHEETS 5, 5.1, 5.2 & 7 FOR ANCHOR CAPACITY CHART.
SEE SHEET 8 FOR ANCHOR DESCRIPTION.

ANCHORS

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


AL-FAROOQ CORPORATION
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revisions:

| no | date | by | description |
|---|---|---|---|
| | | | |

date: 10-20-17
scale: -
dr. by: TARIQ
chk. by:

drawing no. W17-92

## ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

| NOMINAL DIMS. | | ANCHORS TYPE 'A' | | | | | | | | ANCHORS TYPE 'B' | | | | | | | | ANCHORS TYPE 'C' | | | | | | | | 1/4" MAX. SHIM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3/8" SHIM SPACE | | | | 1/2" SHIM SPACE | | | | 3/8" SHIM SPACE | | | | 1/2" SHIM SPACE | | | | 3/8" SHIM SPACE | | | | 1/2" SHIM SPACE | | | | ANCHORS TYPE 'D' |
| WIDTH (W) | FRAME HEIGHT | A2 | A3 | A4 | A5 | A2 | A3 | A4 | A5 | B2 | B3 | B4 | B5 | B2 | B3 | B4 | B5 | C2 | C3 | C4 | C5 | C2 | C3 | C4 | C5 | D2 | D3 | D4 |
| 30" | 86–1/2" | 59.1 | 88.6 | 118.2 | 130.0 | 46.1 | 69.2 | 92.2 | 115.3 | 67.9 | 101.9 | 130.0 | 130.0 | 53.3 | 79.9 | 106.5 | 130.0 | 115.9 | 130.0 | 130.0 | 130.0 | 91.4 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 49.2 | 73.9 | 98.5 | 123.1 | 38.4 | 57.7 | 76.9 | 96.1 | 56.6 | 84.9 | 113.2 | 130.0 | 44.4 | 66.6 | 88.8 | 111.0 | 96.6 | 130.0 | 130.0 | 130.0 | 76.2 | 114.3 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 42" | | 42.2 | 63.3 | 84.4 | 105.5 | 32.9 | 49.4 | 65.9 | 82.4 | 48.5 | 72.8 | 97.0 | 121.3 | 38.1 | 57.1 | 76.1 | 95.1 | 82.8 | 123.7 | 130.0 | 130.0 | 65.3 | 98.0 | 130.0 | 130.0 | 124.0 | 130.0 | 130.0 |
| 48" | | 36.9 | 55.4 | 73.9 | 92.3 | 28.8 | 43.2 | 57.7 | 72.1 | 42.5 | 63.7 | 84.9 | 106.1 | 33.3 | 49.9 | 66.6 | 83.2 | 72.4 | 108.2 | 130.0 | 130.0 | 57.2 | 85.7 | 114.3 | 130.0 | 108.5 | 130.0 | 130.0 |
| 54" | | 32.8 | 49.2 | 65.7 | 82.1 | 25.6 | 38.4 | 51.2 | 64.1 | 37.7 | 56.6 | 75.5 | 94.3 | 29.6 | 44.4 | 59.2 | 74.0 | 64.4 | 96.2 | 128.7 | 130.0 | 50.8 | 76.2 | 101.6 | 127.0 | 96.4 | 130.0 | 130.0 |
| 60" | | 29.5 | 44.3 | 59.1 | 73.9 | 23.1 | 34.6 | 46.1 | 57.7 | 34.0 | 50.9 | 67.9 | 84.9 | 26.6 | 40.0 | 53.3 | 66.6 | 57.9 | 86.6 | 115.9 | 130.0 | 45.7 | 68.6 | 91.4 | 114.3 | 86.8 | 130.0 | 130.0 |
| 66" | | 26.9 | 40.3 | 53.7 | 67.1 | 21.0 | 31.4 | 41.9 | 52.4 | 30.9 | 46.4 | 61.8 | 77.3 | 24.3 | 36.4 | 48.5 | 60.6 | 52.7 | 79.0 | 105.4 | 130.0 | 41.5 | 62.2 | 83.0 | 103.7 | 78.9 | 118.3 | 130.0 |
| 72" | | 24.6 | 36.9 | 49.2 | 61.5 | – | 28.8 | 38.4 | 48.0 | 28.3 | 42.5 | 56.7 | 70.8 | 22.2 | 33.4 | 44.5 | 55.6 | 48.3 | 72.4 | 96.6 | 120.7 | 38.0 | 57.0 | 76.1 | 95.1 | 72.3 | 108.5 | 130.0 |
| 30" | 90" | 56.8 | 85.2 | 113.6 | 130.0 | 44.3 | 66.5 | 88.7 | 110.8 | 65.3 | 97.9 | 130.0 | 130.0 | 51.2 | 76.8 | 102.4 | 128.0 | 111.4 | 130.0 | 130.0 | 130.0 | 87.9 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 47.3 | 71.0 | 94.6 | 118.3 | 36.9 | 55.4 | 73.9 | 92.4 | 54.4 | 81.6 | 108.8 | 130.0 | 42.7 | 64.0 | 85.3 | 106.7 | 92.8 | 130.0 | 130.0 | 130.0 | 73.2 | 109.9 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 42" | | 40.6 | 60.8 | 81.1 | 101.4 | 31.7 | 47.5 | 63.3 | 79.2 | 46.6 | 69.9 | 93.3 | 116.6 | 36.6 | 54.9 | 73.1 | 91.4 | 79.5 | 118.9 | 130.0 | 130.0 | 62.8 | 94.2 | 125.6 | 130.0 | 119.2 | 130.0 | 130.0 |
| 48" | | 35.5 | 53.2 | 71.0 | 88.7 | 27.7 | 41.6 | 55.4 | 69.3 | 40.8 | 61.2 | 81.6 | 102.0 | 32.0 | 48.0 | 64.0 | 80.0 | 69.6 | 104.0 | 130.0 | 130.0 | 54.9 | 82.4 | 109.9 | 130.0 | 104.3 | 130.0 | 130.0 |
| 54" | | 31.5 | 47.3 | 63.1 | 78.9 | 24.6 | 36.9 | 49.3 | 61.6 | 36.3 | 54.4 | 72.5 | 90.7 | 28.4 | 42.7 | 56.9 | 71.1 | 61.9 | 92.4 | 123.7 | 130.0 | 48.8 | 73.2 | 97.7 | 122.1 | 92.7 | 130.0 | 130.0 |
| 60" | | 28.4 | 42.6 | 56.8 | 71.0 | 22.2 | 33.2 | 44.3 | 55.4 | 32.6 | 49.0 | 65.3 | 81.6 | 25.6 | 38.4 | 51.2 | 64.0 | 55.7 | 83.2 | 111.4 | 130.0 | 43.9 | 65.9 | 87.9 | 109.9 | 83.4 | 125.1 | 130.0 |
| 66" | | 25.8 | 38.7 | 51.6 | 64.5 | 20.2 | 30.2 | 40.3 | 50.4 | 29.7 | 44.6 | 59.4 | 74.3 | 23.3 | 35.0 | 46.6 | 58.3 | 50.6 | 76.0 | 101.3 | 126.6 | 39.9 | 59.8 | 79.7 | 99.7 | 75.8 | 113.7 | 130.0 |
| 72" | | 23.7 | 35.5 | 47.3 | 59.2 | – | 27.7 | 36.9 | 46.2 | 27.2 | 40.9 | 54.5 | 68.1 | 21.4 | 32.1 | 42.7 | 53.4 | 46.4 | 69.6 | 92.8 | 116.0 | 36.6 | 54.8 | 73.1 | 91.4 | 69.5 | 104.3 | 130.0 |
| 30" | 96" | 53.2 | 79.9 | 106.5 | 130.0 | 41.6 | 62.3 | 83.1 | 103.9 | 61.2 | 91.8 | 122.4 | 130.0 | 48.0 | 72.0 | 96.0 | 120.0 | 104.4 | 130.0 | 130.0 | 130.0 | 82.4 | 123.6 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 44.4 | 66.6 | 88.7 | 110.9 | 34.6 | 52.0 | 69.3 | 86.6 | 51.0 | 76.5 | 102.0 | 127.5 | 40.0 | 60.0 | 80.0 | 100.0 | 87.0 | 130.0 | 130.0 | 130.0 | 68.7 | 103.0 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 42" | | 38.0 | 57.0 | 76.1 | 95.1 | 29.7 | 44.5 | 59.4 | 74.2 | 43.7 | 65.6 | 87.4 | 109.3 | 34.3 | 51.4 | 68.6 | 85.7 | 74.6 | 111.4 | 130.0 | 130.0 | 58.9 | 88.3 | 117.7 | 130.0 | 111.7 | 130.0 | 130.0 |
| 48" | | 33.3 | 49.9 | 66.6 | 83.2 | 26.0 | 39.0 | 52.0 | 64.9 | 38.3 | 57.4 | 76.5 | 95.6 | 30.0 | 45.0 | 60.0 | 75.0 | 65.3 | 97.5 | 130.0 | 130.0 | 51.5 | 77.3 | 103.0 | 128.8 | 97.8 | 130.0 | 130.0 |
| 54" | | 29.6 | 44.4 | 59.2 | 73.9 | 23.1 | 34.6 | 46.2 | 57.7 | 34.0 | 51.0 | 68.0 | 85.0 | 26.7 | 40.0 | 53.3 | 66.7 | 58.0 | 86.7 | 116.0 | 130.0 | 45.8 | 68.7 | 91.6 | 114.4 | 86.9 | 130.0 | 130.0 |
| 60" | | 26.6 | 39.9 | 53.2 | 66.6 | 20.8 | 31.2 | 41.6 | 52.0 | 30.6 | 45.9 | 61.2 | 76.5 | 24.0 | 36.0 | 48.0 | 60.0 | 52.2 | 78.0 | 104.4 | 130.0 | 41.2 | 61.8 | 82.4 | 103.0 | 78.2 | 117.3 | 130.0 |
| 66" | | 24.2 | 36.3 | 48.4 | 60.5 | – | 28.3 | 37.8 | 47.2 | 27.9 | 41.8 | 55.7 | 69.6 | 21.9 | 32.8 | 43.7 | 54.6 | 47.5 | 71.2 | 94.9 | 118.7 | 37.4 | 56.1 | 74.8 | 93.5 | 71.1 | 106.6 | 130.0 |
| 72" | | 22.2 | 33.3 | 44.4 | 55.5 | – | 26.0 | 34.6 | 43.3 | 25.5 | 38.3 | 51.1 | 63.8 | 20.0 | 30.1 | 40.1 | 50.1 | 43.5 | 65.3 | 87.0 | 108.8 | 34.3 | 51.4 | 68.5 | 85.7 | 65.2 | 97.8 | 130.0 |
| 30" | 98–1/2" | 51.9 | 77.8 | 103.8 | 129.7 | 40.5 | 60.8 | 81.0 | 101.3 | 59.6 | 89.5 | 119.3 | 130.0 | 46.8 | 70.2 | 93.6 | 117.0 | 101.8 | 130.0 | 130.0 | 130.0 | 80.3 | 120.5 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 43.2 | 64.9 | 86.5 | 108.1 | 33.8 | 50.6 | 67.5 | 84.4 | 49.7 | 74.6 | 99.4 | 124.3 | 39.0 | 58.5 | 78.0 | 97.5 | 84.8 | 126.7 | 130.0 | 130.0 | 66.9 | 100.4 | 130.0 | 130.0 | 127.0 | 130.0 | 130.0 |
| 42" | | 37.1 | 55.6 | 74.1 | 92.7 | 28.9 | 43.4 | 57.9 | 72.3 | 42.6 | 63.9 | 85.2 | 106.5 | 33.4 | 50.1 | 66.8 | 83.5 | 72.7 | 108.6 | 130.0 | 130.0 | 57.4 | 86.0 | 114.7 | 130.0 | 108.9 | 130.0 | 130.0 |
| 48" | | 32.4 | 48.6 | 64.9 | 81.1 | 25.3 | 38.0 | 50.6 | 63.3 | 37.3 | 55.9 | 74.6 | 93.2 | 29.2 | 43.9 | 58.5 | 73.1 | 63.6 | 95.0 | 127.2 | 130.0 | 50.2 | 75.3 | 100.4 | 125.5 | 95.3 | 130.0 | 130.0 |
| 54" | | 28.8 | 43.2 | 57.7 | 72.1 | 22.5 | 33.8 | 45.0 | 56.3 | 33.1 | 49.7 | 66.3 | 82.8 | 26.0 | 39.0 | 52.0 | 65.0 | 56.5 | 84.5 | 113.1 | 130.0 | 44.6 | 66.9 | 89.2 | 111.5 | 84.7 | 127.0 | 130.0 |
| 60" | | 25.9 | 38.9 | 51.9 | 64.9 | 20.3 | 30.4 | 40.5 | 50.6 | 29.8 | 44.7 | 59.6 | 74.6 | 23.4 | 35.1 | 46.8 | 58.5 | 50.9 | 76.0 | 101.8 | 127.2 | 40.2 | 60.2 | 80.3 | 100.4 | 76.2 | 114.3 | 130.0 |
| 66" | | 23.6 | 35.4 | 47.2 | 59.0 | – | 27.6 | 36.8 | 46.0 | 27.1 | 40.7 | 54.3 | 67.9 | 21.3 | 31.9 | 42.6 | 53.2 | 46.3 | 69.4 | 92.5 | 115.7 | 36.4 | 54.6 | 72.9 | 91.1 | 69.3 | 103.9 | 130.0 |
| 72" | | 21.6 | 32.4 | 43.2 | 54.1 | – | 25.3 | 33.8 | 42.2 | 24.9 | 37.3 | 49.8 | 62.2 | – | 29.3 | 39.0 | 48.8 | 42.4 | 63.6 | 84.8 | 106.0 | 33.4 | 50.1 | 66.8 | 83.5 | 63.5 | 95.3 | 127.0 |
| 30" | 102" | 50.1 | 75.2 | 100.2 | 125.3 | 39.1 | 58.7 | 78.2 | 97.8 | 57.6 | 86.4 | 115.2 | 130.0 | 45.2 | 67.8 | 90.4 | 112.9 | 98.3 | 130.0 | 130.0 | 130.0 | 77.6 | 116.3 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 41.8 | 62.6 | 83.5 | 104.4 | 32.6 | 48.9 | 65.2 | 81.5 | 48.0 | 72.0 | 96.0 | 120.0 | 37.6 | 56.5 | 75.3 | 94.1 | 81.9 | 122.4 | 130.0 | 130.0 | 64.6 | 96.9 | 129.3 | 130.0 | 122.7 | 130.0 | 130.0 |
| 42" | | 35.8 | 53.7 | 71.6 | 89.5 | 27.9 | 41.9 | 55.9 | 69.8 | 41.1 | 61.7 | 82.3 | 102.9 | 32.3 | 48.4 | 64.5 | 80.7 | 70.2 | 104.9 | 130.0 | 130.0 | 55.4 | 83.1 | 110.8 | 130.0 | 105.1 | 130.0 | 130.0 |
| 48" | | 31.3 | 47.0 | 62.6 | 78.3 | 24.4 | 36.7 | 48.9 | 61.1 | 36.0 | 54.0 | 72.0 | 90.0 | 28.2 | 42.4 | 56.5 | 70.6 | 61.4 | 91.8 | 122.8 | 130.0 | 48.5 | 72.7 | 96.9 | 121.2 | 92.0 | 130.0 | 130.0 |
| 54" | | 27.8 | 41.8 | 55.7 | 69.6 | 21.7 | 32.6 | 43.5 | 54.3 | 32.0 | 48.0 | 64.0 | 80.0 | 25.1 | 37.6 | 50.2 | 62.7 | 54.6 | 81.6 | 109.2 | 130.0 | 43.1 | 64.6 | 86.2 | 107.7 | 81.8 | 122.7 | 130.0 |
| 60" | | 25.1 | 37.6 | 50.1 | 62.6 | – | 29.3 | 39.1 | 48.9 | 28.8 | 43.2 | 57.6 | 72.0 | 22.6 | 33.9 | 45.2 | 56.5 | 49.1 | 73.4 | 98.3 | 122.8 | 38.8 | 58.2 | 77.6 | 96.9 | 73.6 | 110.4 | 130.0 |
| 66" | | 22.8 | 34.2 | 45.6 | 56.9 | – | 26.7 | 35.6 | 44.4 | 26.2 | 39.3 | 52.4 | 65.5 | 20.6 | 30.9 | 41.1 | 51.4 | 44.7 | 67.0 | 89.4 | 111.7 | 35.2 | 52.8 | 70.4 | 88.0 | 66.9 | 100.4 | 130.0 |
| 72" | | 20.9 | 31.3 | 41.8 | 52.2 | – | 24.4 | 32.6 | 40.7 | 24.0 | 36.0 | 48.1 | 60.1 | – | 28.3 | 37.7 | 47.1 | 41.0 | 61.4 | 81.9 | 102.4 | 32.3 | 48.4 | 64.5 | 80.6 | 61.3 | 92.0 | 122.7 |
| 30" | 108" | 47.3 | 71.0 | 94.6 | 118.3 | 36.9 | 55.4 | 73.9 | 92.4 | 54.4 | 81.6 | 108.8 | 130.0 | 42.7 | 64.0 | 85.3 | 106.7 | 92.8 | 130.0 | 130.0 | 130.0 | 73.2 | 109.9 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 39.4 | 59.2 | 78.9 | 98.6 | 30.8 | 46.2 | 61.6 | 77.0 | 45.3 | 68.0 | 90.7 | 113.3 | 35.6 | 53.3 | 71.1 | 88.9 | 77.3 | 115.6 | 130.0 | 130.0 | 61.0 | 91.6 | 122.1 | 130.0 | 115.9 | 130.0 | 130.0 |
| 42" | | 33.8 | 50.7 | 67.6 | 84.5 | 26.4 | 39.6 | 52.8 | 66.0 | 38.9 | 58.3 | 77.7 | 97.1 | 30.5 | 45.7 | 61.0 | 76.2 | 66.3 | 99.0 | 130.0 | 130.0 | 52.3 | 78.5 | 104.6 | 130.0 | 99.3 | 130.0 | 130.0 |
| 48" | | 29.6 | 44.4 | 59.2 | 73.9 | 23.1 | 34.6 | 46.2 | 57.7 | 34.0 | 51.0 | 68.0 | 85.0 | 26.7 | 40.0 | 53.3 | 66.7 | 58.0 | 86.7 | 116.0 | 130.0 | 45.8 | 68.7 | 91.6 | 114.4 | 86.9 | 130.0 | 130.0 |
| 54" | | 26.3 | 39.4 | 52.6 | 65.7 | 20.5 | 30.8 | 41.0 | 51.3 | 30.2 | 45.3 | 60.4 | 75.6 | 23.7 | 35.6 | 47.4 | 59.3 | 51.6 | 77.0 | 103.1 | 128.9 | 40.7 | 61.0 | 81.4 | 101.7 | 77.2 | 115.9 | 130.0 |
| 60" | | 23.7 | 35.5 | 47.3 | 59.2 | – | 27.7 | 36.9 | 46.2 | 27.2 | 40.8 | 54.4 | 68.0 | 21.3 | 32.0 | 42.7 | 53.3 | 46.4 | 69.3 | 92.8 | 116.0 | 36.6 | 54.9 | 73.2 | 91.6 | 69.5 | 104.3 | 130.0 |
| 66" | | 21.5 | 32.3 | 43.0 | 53.8 | – | 25.2 | 33.6 | 42.0 | 24.8 | 37.1 | 49.5 | 61.9 | – | 29.1 | 38.9 | 48.6 | 42.2 | 63.3 | 84.4 | 105.5 | 33.2 | 49.8 | 66.5 | 83.1 | 63.2 | 94.8 | 126.4 |
| 72" | | – | 29.6 | 39.4 | 49.3 | – | 23.1 | 30.8 | 38.5 | 22.7 | 34.0 | 45.4 | 56.7 | – | 26.7 | 35.6 | 44.5 | 38.7 | 58.0 | 77.4 | 96.7 | 30.5 | 45.7 | 60.9 | 76.1 | 57.9 | 86.9 | 115.9 |

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dr. by: TARIQ
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drawing no. W17–92

## ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

| NOMINAL DIMS. | | ANCHORS TYPE 'A' | | | | | | | | ANCHORS TYPE 'B' | | | | | | | | ANCHORS TYPE 'C' | | | | | | | | 1/4" MAX. SHIM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3/8" SHIM SPACE | | | | 1/2" SHIM SPACE | | | | 3/8" SHIM SPACE | | | | 1/2" SHIM SPACE | | | | 3/8" SHIM SPACE | | | | 1/2" SHIM SPACE | | | | ANCHORS TYPE 'D' | | |
| WIDTH (W) | FRAME HEIGHT | A2 | A3 | A4 | A5 | A2 | A3 | A4 | A5 | B2 | B3 | B4 | B5 | B2 | B3 | B4 | B5 | C2 | C3 | C4 | C5 | C2 | C3 | C4 | C5 | D2 | D3 | D4 |
| 30" | 110–1/2" | 46.3 | 69.4 | 92.5 | 115.6 | 36.1 | 54.2 | 72.2 | 90.3 | 53.2 | 79.8 | 106.3 | 130.0 | 41.7 | 62.6 | 83.4 | 104.3 | 90.7 | 130.0 | 130.0 | 130.0 | 71.6 | 107.4 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 38.5 | 57.8 | 77.1 | 96.4 | 30.1 | 45.1 | 60.2 | 75.2 | 44.3 | 66.5 | 88.6 | 110.8 | 34.8 | 52.1 | 69.5 | 86.9 | 75.6 | 112.9 | 130.0 | 130.0 | 59.7 | 89.5 | 119.3 | 130.0 | 113.2 | 130.0 | 130.0 |
| 42" | | 33.0 | 49.6 | 66.1 | 82.6 | 25.8 | 38.7 | 51.6 | 64.5 | 38.0 | 57.0 | 76.0 | 94.9 | 29.8 | 44.7 | 59.6 | 74.5 | 64.8 | 96.8 | 129.6 | 130.0 | 51.1 | 76.7 | 102.3 | 127.8 | 97.1 | 130.0 | 130.0 |
| 48" | | 28.9 | 43.4 | 57.8 | 72.3 | 22.6 | 33.8 | 45.1 | 56.4 | 33.2 | 49.8 | 66.5 | 83.1 | 26.1 | 39.1 | 52.1 | 65.2 | 56.7 | 84.7 | 113.4 | 130.0 | 44.7 | 67.1 | 89.5 | 111.9 | 84.9 | 127.4 | 130.0 |
| 54" | | 25.7 | 38.5 | 51.4 | 64.2 | 20.1 | 30.1 | 40.1 | 50.1 | 29.5 | 44.3 | 59.1 | 73.8 | 23.2 | 34.8 | 46.3 | 57.9 | 50.4 | 75.3 | 100.8 | 126.0 | 39.8 | 59.7 | 79.5 | 99.4 | 75.5 | 113.2 | 130.0 |
| 60" | | 23.1 | 34.7 | 46.3 | 57.8 | – | 27.1 | 36.1 | 45.1 | 26.6 | 39.9 | 53.2 | 66.5 | 20.9 | 31.3 | 41.7 | 52.1 | 45.4 | 67.8 | 90.7 | 113.4 | 35.8 | 53.7 | 71.6 | 89.5 | 67.9 | 101.9 | 130.0 |
| 66" | | 21.0 | 31.5 | 42.0 | 52.6 | – | 24.6 | 32.8 | 41.0 | 24.2 | 36.3 | 48.4 | 60.5 | – | 28.5 | 38.0 | 47.5 | 41.2 | 61.9 | 82.5 | 103.1 | 32.5 | 48.7 | 65.0 | 81.2 | 61.8 | 92.6 | 123.5 |
| 72" | | – | 28.9 | 38.5 | 48.2 | – | 22.6 | 30.1 | 37.6 | 22.2 | 33.3 | 44.4 | 55.5 | – | 26.1 | 34.8 | 43.5 | 37.8 | 56.7 | 75.6 | 94.5 | 29.8 | 44.7 | 59.5 | 74.4 | 56.6 | 84.9 | 113.2 |
| 30" | 114" | 44.8 | 67.3 | 89.7 | 112.1 | 35.0 | 52.5 | 70.0 | 87.5 | 51.5 | 77.3 | 103.1 | 128.8 | 40.4 | 60.6 | 80.8 | 101.1 | 87.9 | 130.0 | 130.0 | 130.0 | 69.4 | 104.1 | 130.0 | 130.0 | 130.0 | 130.0 | 130.0 |
| 36" | | 37.4 | 56.0 | 74.7 | 93.4 | 29.2 | 43.7 | 58.3 | 72.9 | 42.9 | 64.4 | 85.9 | 107.4 | 33.7 | 50.5 | 67.4 | 84.2 | 73.3 | 109.5 | 130.0 | 130.0 | 57.8 | 86.7 | 115.6 | 130.0 | 109.8 | 130.0 | 130.0 |
| 42" | | 32.0 | 48.0 | 64.0 | 80.1 | 25.0 | 37.5 | 50.0 | 62.5 | 36.8 | 55.2 | 73.6 | 92.0 | 28.9 | 43.3 | 57.7 | 72.2 | 62.8 | 93.8 | 125.6 | 130.0 | 49.6 | 74.3 | 99.1 | 123.9 | 94.1 | 130.0 | 130.0 |
| 48" | | 28.0 | 42.0 | 56.0 | 70.1 | 21.9 | 32.8 | 43.7 | 54.7 | 32.2 | 48.3 | 64.4 | 80.5 | 25.3 | 37.9 | 50.5 | 63.2 | 54.9 | 82.1 | 109.9 | 130.0 | 43.4 | 65.1 | 86.7 | 108.4 | 82.3 | 123.5 | 130.0 |
| 54" | | 24.9 | 37.4 | 49.8 | 62.3 | – | 29.2 | 38.9 | 48.6 | 28.6 | 42.9 | 57.3 | 71.6 | 22.5 | 33.7 | 44.9 | 56.1 | 48.8 | 73.0 | 97.7 | 122.1 | 38.5 | 57.8 | 77.1 | 96.4 | 73.2 | 109.8 | 130.0 |
| 60" | | 22.4 | 33.6 | 44.8 | 56.0 | – | 26.2 | 35.0 | 43.7 | 25.8 | 38.7 | 51.5 | 64.4 | 20.2 | 30.3 | 40.4 | 50.5 | 44.0 | 65.7 | 87.9 | 109.9 | 34.7 | 52.0 | 69.4 | 86.7 | 65.9 | 98.8 | 130.0 |
| 66" | | 20.4 | 30.6 | 40.8 | 50.9 | – | 23.9 | 31.8 | 39.8 | 23.5 | 35.2 | 46.9 | 58.6 | – | 27.6 | 36.8 | 46.0 | 40.0 | 60.0 | 80.0 | 99.9 | 31.5 | 47.2 | 63.0 | 78.7 | 59.9 | 89.8 | 119.7 |
| 72" | | – | 28.0 | 37.4 | 46.7 | – | 21.9 | 29.2 | 36.5 | 21.5 | 32.3 | 43.0 | 53.8 | – | 25.3 | 33.7 | 42.2 | 36.6 | 55.0 | 73.3 | 91.6 | 28.9 | 43.3 | 57.7 | 72.1 | 54.9 | 82.3 | 109.8 |
| 30" | 120" | 42.6 | 63.9 | 85.2 | 106.5 | 33.2 | 49.9 | 66.5 | 83.1 | 49.0 | 73.4 | 97.9 | 122.4 | 38.4 | 57.6 | 76.8 | 96.0 | 83.5 | 124.8 | 130.0 | 130.0 | 65.9 | 98.9 | 130.0 | 130.0 | 125.1 | 130.0 | 130.0 |
| 36" | | 35.5 | 53.2 | 71.0 | 88.7 | 27.7 | 41.6 | 55.4 | 69.3 | 40.8 | 61.2 | 81.6 | 102.0 | 32.0 | 48.0 | 64.0 | 80.0 | 69.6 | 104.0 | 130.0 | 130.0 | 54.9 | 82.4 | 109.9 | 130.0 | 104.3 | 130.0 | 130.0 |
| 42" | | 30.4 | 45.6 | 60.8 | 76.1 | 23.7 | 35.6 | 47.5 | 59.4 | 35.0 | 52.5 | 69.9 | 87.4 | 27.4 | 41.1 | 54.9 | 68.6 | 59.7 | 89.1 | 119.3 | 130.0 | 47.1 | 70.6 | 94.2 | 117.7 | 89.4 | 130.0 | 130.0 |
| 48" | | 26.6 | 39.9 | 53.2 | 66.6 | 20.8 | 31.2 | 41.6 | 52.0 | 30.6 | 45.9 | 61.2 | 76.5 | 24.0 | 36.0 | 48.0 | 60.0 | 52.2 | 78.0 | 104.4 | 130.0 | 41.2 | 61.8 | 82.4 | 103.0 | 78.2 | 117.3 | 130.0 |
| 54" | | 23.7 | 35.5 | 47.3 | 59.2 | – | 27.7 | 36.9 | 46.2 | 27.2 | 40.8 | 54.4 | 68.0 | 21.3 | 32.0 | 42.7 | 53.3 | 46.4 | 69.3 | 90.0 | 90.0 | 36.6 | 54.9 | 73.2 | 90.0 | 69.5 | 90.0 | 90.0 |
| 60" | | 21.3 | 31.9 | 42.6 | 53.2 | – | 24.9 | 33.2 | 41.6 | 24.5 | 36.8 | 49.0 | 61.3 | – | 28.8 | 38.5 | 48.1 | 41.8 | 62.7 | 83.6 | 90.0 | 32.9 | 49.3 | 65.8 | 82.2 | 62.6 | 90.0 | 90.0 |
| 66" | | – | 29.0 | 38.7 | 48.4 | – | 22.7 | 30.2 | 37.8 | 22.3 | 33.4 | 44.6 | 55.7 | – | 26.2 | 35.0 | 43.7 | 38.0 | 57.0 | 76.0 | 90.0 | 29.9 | 44.9 | 59.8 | 74.8 | 56.9 | 85.3 | 90.0 |
| 72" | | – | 26.6 | 35.5 | 44.4 | – | 20.8 | 27.7 | 34.6 | 20.4 | 30.6 | 40.9 | 51.1 | – | 24.0 | 32.1 | 40.1 | 34.8 | 52.2 | 69.6 | 87.0 | 27.4 | 41.1 | 54.8 | 68.5 | 52.1 | 78.2 | 90.0 |
| 30" | 126" | 40.6 | 60.8 | 81.1 | 90.0 | 31.7 | 47.5 | 63.3 | 79.2 | 46.6 | 69.9 | 90.0 | 90.0 | 36.6 | 54.9 | 73.1 | 90.0 | 79.5 | 90.0 | 90.0 | 90.0 | 62.8 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 36" | | 33.8 | 50.7 | 67.6 | 84.5 | 26.4 | 39.6 | 52.8 | 66.0 | 38.9 | 58.3 | 77.7 | 90.0 | 30.5 | 45.7 | 61.0 | 76.2 | 66.3 | 90.0 | 90.0 | 90.0 | 52.3 | 78.5 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 42" | | 29.0 | 43.5 | 57.9 | 72.4 | 22.6 | 33.9 | 45.2 | 56.5 | 33.3 | 50.0 | 66.6 | 83.3 | 26.1 | 39.2 | 52.2 | 65.3 | 56.8 | 84.9 | 90.0 | 90.0 | 44.8 | 67.3 | 89.7 | 90.0 | 85.1 | 90.0 | 90.0 |
| 48" | | 25.4 | 38.0 | 50.7 | 63.4 | – | 29.7 | 39.6 | 49.5 | 29.1 | 43.7 | 58.3 | 72.9 | 22.9 | 34.3 | 45.7 | 57.1 | 49.7 | 74.3 | 90.0 | 90.0 | 39.2 | 58.9 | 78.5 | 90.0 | 74.5 | 90.0 | 90.0 |
| 54" | | 22.5 | 33.8 | 45.1 | 56.3 | – | 26.4 | 35.2 | 44.0 | 25.9 | 38.9 | 51.8 | 64.8 | 20.3 | 30.5 | 40.6 | 50.8 | 44.2 | 66.0 | 88.4 | 90.0 | 34.9 | 52.3 | 69.8 | 87.2 | 66.2 | 90.0 | 90.0 |
| 60" | | 20.3 | 30.4 | 40.6 | 50.7 | – | 23.7 | 31.7 | 39.6 | 23.3 | 35.0 | 46.7 | 58.4 | – | 27.5 | 36.6 | 45.8 | 39.8 | 59.7 | 79.6 | 90.0 | 31.3 | 47.0 | 62.7 | 78.3 | 59.6 | 89.4 | 90.0 |
| 30" | 132" | 38.7 | 58.1 | 77.4 | 90.0 | 30.2 | 45.3 | 60.5 | 75.6 | 44.5 | 66.8 | 89.0 | 90.0 | 34.9 | 52.4 | 69.8 | 87.3 | 75.9 | 90.0 | 90.0 | 90.0 | 59.9 | 89.9 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 36" | | 32.3 | 48.4 | 64.5 | 80.7 | 25.2 | 37.8 | 50.4 | 63.0 | 37.1 | 55.6 | 74.2 | 90.0 | 29.1 | 43.6 | 58.2 | 72.7 | 63.3 | 90.0 | 90.0 | 90.0 | 49.9 | 74.9 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 42" | | 27.7 | 41.5 | 55.3 | 69.1 | 21.6 | 32.4 | 43.2 | 54.0 | 31.8 | 47.7 | 63.6 | 79.5 | 24.9 | 37.4 | 49.9 | 62.3 | 54.2 | 81.0 | 90.0 | 90.0 | 42.8 | 64.2 | 85.6 | 90.0 | 81.2 | 90.0 | 90.0 |
| 48" | | 24.2 | 36.3 | 48.4 | 60.5 | – | 28.3 | 37.8 | 47.2 | 27.8 | 41.7 | 55.6 | 69.5 | 21.8 | 32.7 | 43.6 | 54.5 | 47.5 | 70.9 | 90.0 | 90.0 | 37.5 | 56.2 | 74.9 | 90.0 | 71.1 | 90.0 | 90.0 |
| 54" | | 21.5 | 32.3 | 43.0 | 53.8 | – | 25.2 | 33.6 | 42.0 | 24.8 | 37.1 | 49.5 | 61.9 | – | 29.1 | 38.9 | 48.6 | 42.2 | 53.3 | 84.4 | 90.0 | 33.2 | 49.8 | 66.5 | 83.1 | 63.2 | 90.0 | 90.0 |
| 60" | | – | 29.0 | 38.7 | 48.4 | – | 22.7 | 30.2 | 37.8 | 22.3 | 33.4 | 44.6 | 55.7 | – | 26.2 | 35.0 | 43.7 | 38.0 | 57.0 | 76.0 | 90.0 | 29.9 | 44.9 | 59.8 | 74.8 | 56.9 | 85.3 | 90.0 |
| 30" | 138" | 37.0 | 55.6 | 74.1 | 92.6 | 28.9 | 43.4 | 57.8 | 72.3 | 42.6 | 63.9 | 85.1 | 90.0 | 33.4 | 50.1 | 66.8 | 83.5 | 72.6 | 90.0 | 90.0 | 90.0 | 57.3 | 86.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 36" | | 30.9 | 46.3 | 61.7 | 77.2 | 24.1 | 36.1 | 48.2 | 60.2 | 35.5 | 53.2 | 71.0 | 88.7 | 27.8 | 41.7 | 55.7 | 69.6 | 60.5 | 90.0 | 90.0 | 90.0 | 47.8 | 71.7 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 42" | | 26.5 | 39.7 | 52.9 | 66.1 | 20.7 | 31.0 | 41.3 | 51.6 | 30.4 | 45.6 | 60.8 | 76.0 | 23.9 | 35.8 | 47.7 | 59.6 | 51.9 | 77.5 | 90.0 | 90.0 | 40.9 | 61.4 | 81.9 | 90.0 | 77.7 | 90.0 | 90.0 |
| 48" | | 23.1 | 34.7 | 46.3 | 57.9 | – | 27.1 | 36.1 | 45.2 | 26.6 | 39.9 | 53.2 | 66.5 | 20.9 | 31.3 | 41.7 | 52.2 | 45.4 | 67.8 | 90.0 | 90.0 | 35.8 | 53.7 | 71.7 | 89.6 | 68.0 | 90.0 | 90.0 |
| 54" | | 20.6 | 30.9 | 41.2 | 51.4 | – | 24.1 | 32.1 | 40.2 | 23.7 | 35.5 | 47.4 | 59.2 | – | 27.9 | 37.2 | 46.5 | 40.4 | 60.5 | 80.7 | 90.0 | 31.8 | 47.7 | 63.6 | 79.5 | 60.4 | 90.0 | 90.0 |
| 60" | | – | 27.8 | 37.0 | 46.3 | – | 21.7 | 28.9 | 36.1 | 21.3 | 32.0 | 42.6 | 53.3 | – | 25.1 | 33.4 | 41.8 | 36.3 | 54.5 | 72.7 | 90.0 | 28.6 | 42.9 | 57.2 | 71.5 | 54.4 | 81.6 | 90.0 |
| 30" | 144" | 35.5 | 53.2 | 71.0 | 88.7 | 27.7 | 41.6 | 55.4 | 69.3 | 40.8 | 61.2 | 81.6 | 90.0 | 32.0 | 48.0 | 64.0 | 80.0 | 69.6 | 90.0 | 90.0 | 90.0 | 54.9 | 82.4 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 36" | | 29.6 | 44.4 | 59.2 | 73.9 | 23.1 | 34.6 | 46.2 | 57.7 | 34.0 | 51.0 | 68.0 | 85.0 | 26.7 | 40.0 | 53.3 | 66.7 | 58.0 | 86.7 | 90.0 | 90.0 | 45.8 | 68.7 | 90.0 | 90.0 | 86.9 | 90.0 | 90.0 |
| 42" | | 25.4 | 38.0 | 50.7 | 63.4 | – | 29.7 | 39.6 | 49.5 | 29.1 | 43.7 | 58.3 | 72.9 | 22.9 | 34.3 | 45.7 | 57.1 | 49.7 | 74.3 | 90.0 | 90.0 | 39.2 | 58.9 | 78.5 | 90.0 | 74.5 | 90.0 | 90.0 |
| 48" | | 22.2 | 33.3 | 44.4 | 55.5 | – | 26.0 | 34.6 | 43.3 | 25.5 | 38.3 | 51.0 | 63.8 | 20.0 | 30.0 | 40.0 | 50.0 | 43.5 | 65.0 | 87.0 | 90.0 | 34.3 | 51.5 | 68.7 | 85.8 | 65.2 | 90.0 | 90.0 |
| 54" | | – | 29.6 | 39.4 | 49.3 | – | 23.1 | 30.8 | 38.5 | 22.7 | 34.0 | 45.4 | 56.7 | – | 26.7 | 35.6 | 44.5 | 38.7 | 58.0 | 77.4 | 90.0 | 30.5 | 45.7 | 60.9 | 76.1 | 57.9 | 86.9 | 90.0 |
| 60" | | – | 26.6 | 35.5 | 44.4 | – | 20.8 | 27.7 | 34.6 | 20.4 | 30.6 | 40.9 | 51.1 | – | 24.0 | 32.1 | 40.1 | 34.8 | 52.2 | 69.6 | 87.0 | 27.4 | 41.1 | 54.8 | 68.5 | 52.1 | 78.2 | 90.0 |

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.
SEE SHEET 5 FOR ANCHOR TYPES.

Sealed: 8/19/2025

FL #17897

ANCHORS

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978


STORE\W17-92ES

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)


E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158


revisions:

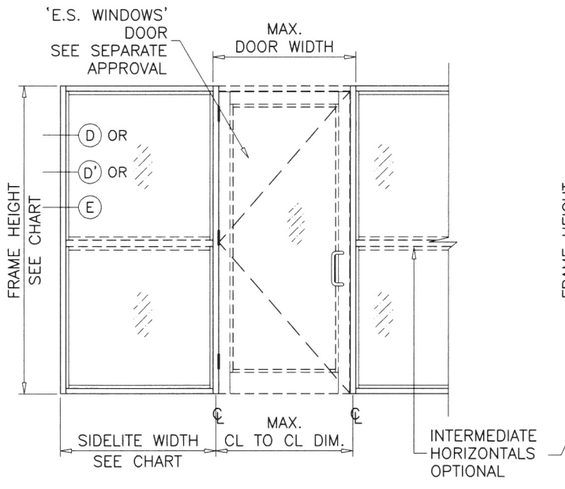
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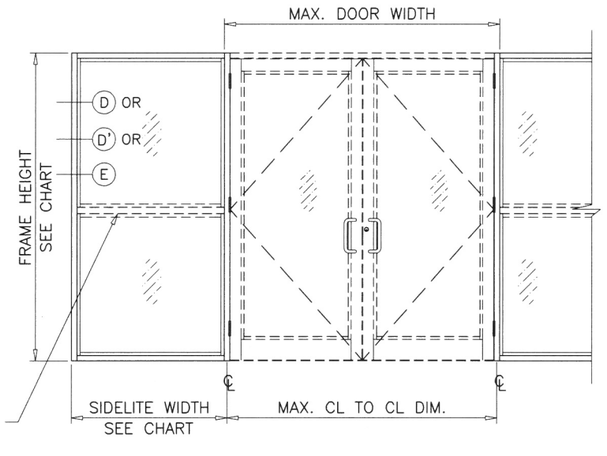
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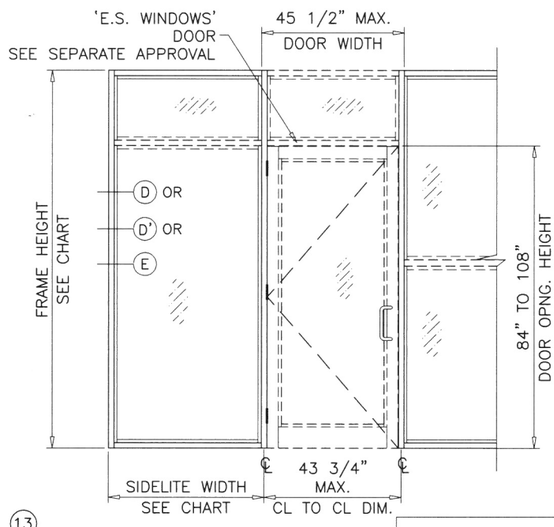
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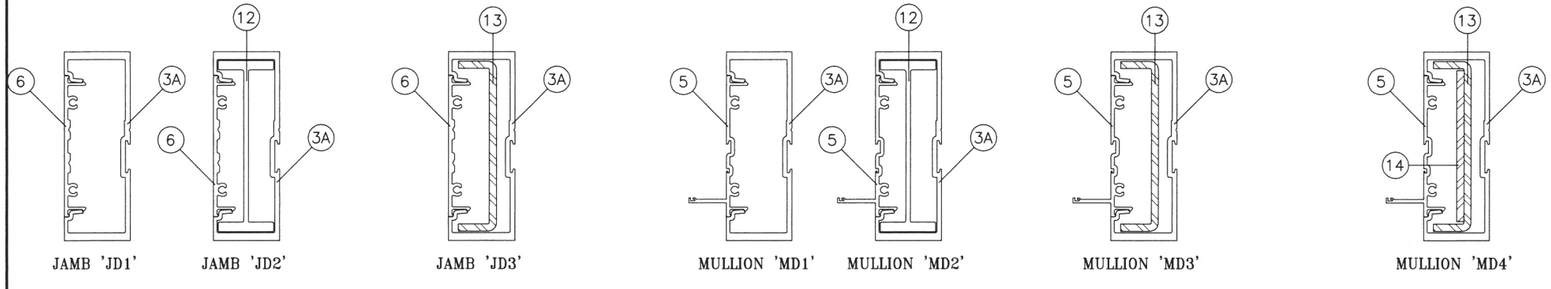
| DOOR MULLION LOAD CAPACITY–PSF | | | | | | |
|---|---|---|---|---|---|---|
| SIDELITE WIDTH INCHES | FRAME HEIGHT INCHES | JAMB 'JD1' MULL 'MD1' EXT. (+) INT. (–) | JAMB 'JD1' MULL 'MD2' EXT. (+) INT. (–) | JAMB 'JD2' JAMB 'JD3' MULL 'MD3' EXT. (+) INT. (–) | JAMB 'JD3' MULL 'MD4' EXT. (+) INT. (–) | |
| 32 | 86–1/2 | 120.0 | 120.0 | 120.0 | 120.0 | |
| 36 | | 120.0 | 120.0 | 120.0 | 120.0 | |
| 42 | | 120.0 | 120.0 | 120.0 | 120.0 | |
| 48 | | 120.0 | 120.0 | 120.0 | 120.0 | |
| 54 | | 120.0 | 120.0 | 120.0 | 120.0 | |
| 60 | | 120.0 | 120.0 | 120.0 | 120.0 | |
| 32 | 98–1/2 | 112.6 | 120.0 | 120.0 | 120.0 | MAX. DOOR WIDTH = 45–1/2" (X) 87–1/2" (XX) |
| 36 | | 107.1 | 120.0 | 120.0 | 120.0 | |
| 42 | | 99.7 | 120.0 | 120.0 | 120.0 | MAX. CL TO CL DIM. = 43–3/4" (X) 85–3/4" (XX) |
| 48 | | 93.3 | 120.0 | 120.0 | 120.0 | |
| 54 | | 87.7 | 120.0 | 116.1 | 120.0 | |
| 32 | 110–1/2 | 79.8 | 120.0 | 118.5 | 120.0 | |
| 36 | | 75.8 | 120.0 | 112.6 | 120.0 | |
| 42 | | 70.6 | 113.6 | 104.9 | 120.0 | |
| 48 | | 66.1 | 106.3 | 98.2 | 120.0 | |
| 32 | 120 | – | – | – | 90.0 | MAX. DOOR WIDTH = 49–3/4" (X) 97–3/4" (XX) |
| 36 | | – | – | – | 90.0 | |
| 42 | | – | – | – | 90.0 | MAX. CL TO CL DIM. = 48" (X) 96" (XX) |
| 48 | | – | – | – | 85.1 | |




| DOOR MULLION LOAD CAPACITY–PSF | | | | | |
|---|---|---|---|---|---|
| SIDELITE WIDTH INCHES | FRAME HEIGHT INCHES | JAMB 'JD1' MULL 'MD1' EXT. (+) INT. (–) | JAMB 'JD1' MULL 'MD2' EXT. (+) INT. (–) | JAMB 'JD2' JAMB 'JD3' MULL 'MD3' EXT. (+) INT. (–) | JAMB 'JD3' MULL 'MD4' EXT. (+) INT. (–) |
| 32 | 98–1/2 | 90.0 | 90.0 | 90.0 | 90.0 |
| 36 | | 90.0 | 90.0 | 90.0 | 90.0 |
| 42 | | 90.0 | 90.0 | 90.0 | 90.0 |
| 48 | | 90.0 | 90.0 | 90.0 | 90.0 |
| 54 | | 87.7 | 90.0 | 90.0 | 90.0 |
| 32 | 110–1/2 | 79.8 | 90.0 | 90.0 | 90.0 |
| 36 | | 75.8 | 90.0 | 90.0 | 90.0 |
| 42 | | 70.6 | 90.0 | 90.0 | 90.0 |
| 48 | | 66.1 | 90.0 | 90.0 | 90.0 |
| 32 | 114 | 72.6 | 90.0 | 90.0 | 90.0 |
| 36 | | 69.1 | 90.0 | 90.0 | 90.0 |
| 42 | | 64.3 | 90.0 | 90.0 | 90.0 |
| 48 | | 60.2 | 90.0 | 90.0 | 90.0 |
| 32 | 120 | 62.3 | 90.0 | 90.0 | 90.0 |
| 36 | | 59.2 | 90.0 | 90.0 | 90.0 |
| 42 | | 55.2 | 88.7 | 89.1 | 90.0 |
| 48 | | 51.6 | 83.0 | 83.4 | 90.0 |
| 32 | 144 | – | – | – | 90.0 |
| 36 | | – | – | – | 89.8 |
| 42 | | – | – | – | 83.6 |
| 48 | | – | – | – | 78.3 |




JAMB 'JD1'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.570 | 2.7226 |

JAMB 'JD2'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.6577 | 3.8057 |

JAMB 'JD3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.570 | 2.7226 |
| STEEL | 2.7506 | 1.2224 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.5467 | |

MULLION 'MD1'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.7195 | 2.6757 |

MULLION 'MD2'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.8072 | 4.4788 |

MULLION 'MD3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 2.7506 | 1.224 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.6962 | |

MULLION 'MD4'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 3.7533 | 1.668 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 17.6041 | |

# DOOR–WINDOWALL TRANSITION MULLION

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220 (C.A.N. 3538)
MIAMI, FLORIDA 33173
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STORE\W17–92ES

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)

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TEL. (305) 638–5158 FAX. (305) 638–5151

| revisions: | | | |
|---|---|---|---|
| no | date | by | description |

date: 10–20–17
scale: –
dr. by: TARIQ
chk. by:

drawing no. W17–92

sheet 6 of 12

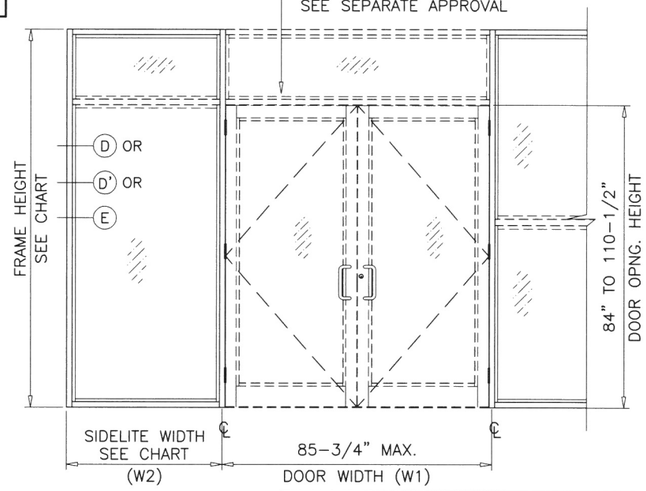
## DOOR MULLION LOAD CAPACITY – PSF

| NOMINAL DIMS. | | | | JAMB 'JD1' MULL 'MD1' | JAMB 'JD1' MULL 'MD2' | JAMB 'JD2' JAMB 'JD3' MULL 'MD3' | JAMB 'JD3' MULL 'MD4' |
|---|---|---|---|---|---|---|---|
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) |
| 85–3/4 | 30 | 96 | 84 | 90.0 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 90.0 | 90.0 | 90.0 | 90.0 |
| | 42 | | | 90.0 | 90.0 | 90.0 | 90.0 |
| | 48 | | | 90.0 | 90.0 | 90.0 | 90.0 |
| | 54 | | | 90.0 | 90.0 | 90.0 | 90.0 |
| | 60 | | | 85.7 | 90.0 | 90.0 | 90.0 |
| | 30 | 102 | | 90.0 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 86.9 | 90.0 | 90.0 | 90.0 |
| | 42 | | | 81.5 | 90.0 | 90.0 | 90.0 |
| | 48 | | | 76.7 | 90.0 | 90.0 | 90.0 |
| | 54 | | | 72.5 | 90.0 | 89.0 | 90.0 |
| | 30 | 108 | | 74.2 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 69.5 | 90.0 | 89.1 | 90.0 |
| | 42 | | | 65.4 | 90.0 | 84.4 | 90.0 |
| | 48 | | | 61.7 | 90.0 | 80.2 | 90.0 |
| | 30 | 114 | | 60.2 | 90.0 | 81.7 | 90.0 |
| | 36 | | | 56.6 | 90.0 | 77.4 | 90.0 |
| | 42 | | | 53.3 | 85.8 | 73.4 | 87.8 |
| | 48 | | | 50.5 | 81.2 | 69.9 | 83.5 |
| | 30 | 120 | | 49.7 | 80.0 | 71.9 | 85.9 |
| | 36 | | | 46.8 | 75.3 | 68.1 | 81.5 |
| | 42 | | | 44.2 | 71.2 | 64.8 | 77.4 |
| | 48 | | | 41.9 | 67.5 | 61.7 | 73.8 |
| 85–3/4 | 30 | 102 | 90 | 90.0 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 90.0 | 90.0 | 90.0 | 90.0 |
| | 42 | | | 86.6 | 90.0 | 90.0 | 90.0 |
| | 48 | | | 81.2 | 90.0 | 90.0 | 90.0 |
| | 54 | | | 76.5 | 90.0 | 90.0 | 90.0 |
| | 30 | 108 | | 79.3 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 74.0 | 90.0 | 90.0 | 90.0 |
| | 42 | | | 69.3 | 90.0 | 88.9 | 90.0 |
| | 48 | | | 65.2 | 90.0 | 84.3 | 90.0 |
| | 30 | 114 | | 63.9 | 90.0 | 85.6 | 90.0 |
| | 36 | | | 59.9 | 90.0 | 80.8 | 90.0 |
| | 42 | | | 56.3 | 90.0 | 76.5 | 90.0 |
| | 48 | | | 53.1 | 85.4 | 72.7 | 86.9 |
| | 30 | 120 | | 52.4 | 84.2 | 74.5 | 89.1 |
| | 36 | | | 49.2 | 79.1 | 70.5 | 84.3 |
| | 42 | | | 46.3 | 74.5 | 66.9 | 80.0 |
| | 48 | | | 43.8 | 70.5 | 63.6 | 76.1 |

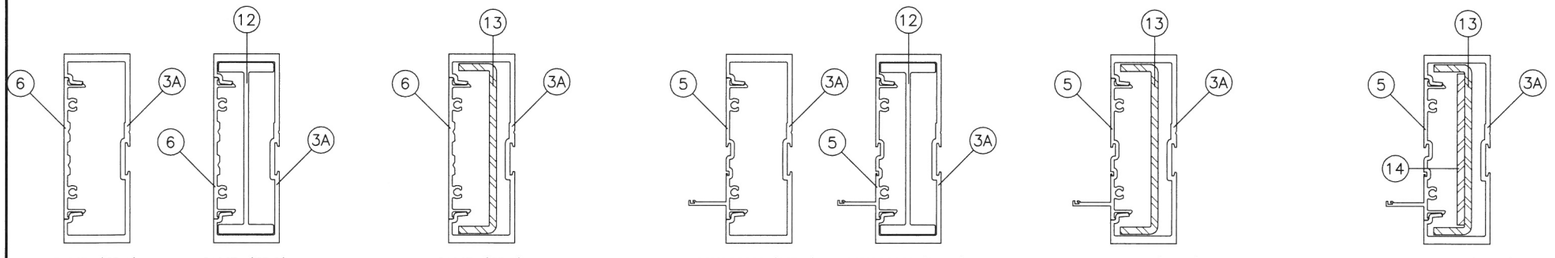
## DOOR MULLION LOAD CAPACITY – PSF

| NOMINAL DIMS. | | | | JAMB 'JD1' MULL 'MD1' | JAMB 'JD1' MULL 'MD2' | JAMB 'JD2' JAMB 'JD3' MULL 'MD3' | JAMB 'JD3' MULL 'MD4' |
|---|---|---|---|---|---|---|---|
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) |
| 85–3/4 | 30 | 108 | 96 | 84.6 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 78.6 | 90.0 | 90.0 | 90.0 |
| | 42 | | | 73.4 | 90.0 | 90.0 | 90.0 |
| | 48 | | | 68.8 | 90.0 | 89.7 | 90.0 |
| | 30 | 114 | | 68.2 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 63.5 | 90.0 | 85.3 | 90.0 |
| | 42 | | | 59.5 | 90.0 | 80.6 | 90.0 |
| | 48 | | | 56.0 | 90.0 | 76.3 | 90.0 |
| | 30 | 120 | | 55.5 | 89.3 | 78.0 | 90.0 |
| | 36 | | | 51.9 | 83.5 | 73.6 | 88.0 |
| | 42 | | | 48.8 | 78.5 | 69.7 | 83.3 |
| | 48 | | | 46.0 | 74.0 | 66.2 | 79.1 |
| 85–3/4 | 30 | 114 | 102 | 72.4 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 67.2 | 90.0 | 90.0 | 90.0 |
| | 42 | | | 62.7 | 90.0 | 85.9 | 90.0 |
| | 48 | | | 58.8 | 90.0 | 81.1 | 90.0 |
| | 30 | 120 | | 59.0 | 90.0 | 82.6 | 90.0 |
| | 36 | | | 55.0 | 88.4 | 77.7 | 90.0 |
| | 42 | | | 51.5 | 82.8 | 73.3 | 87.7 |
| | 48 | | | 48.4 | 77.8 | 69.4 | 83.0 |
| 85–3/4 | 30 | 120 | 110–1/2 | 63.7 | 90.0 | 90.0 | 90.0 |
| | 36 | | | 59.0 | 90.0 | 85.7 | 90.0 |
| | 42 | | | 55.0 | 88.4 | 80.4 | 90.0 |
| | 48 | | | 51.5 | 82.8 | 75.7 | 90.0 |

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.




DOOR–WINDOWALL TRANSITION MULLION




JAMB 'JD1'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.570 | 2.7226 |

JAMB 'JD2'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.6577 | 3.8057 |

JAMB 'JD3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.570 | 2.7226 |
| STEEL | 2.7506 | 1.2224 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.5467 | |

MULLION 'MD1'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 6.7195 | 2.6757 |

MULLION 'MD2'

| Ix IN^4 | Sx IN^3 |
|---|---|
| 10.8072 | 4.4788 |

MULLION 'MD3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 2.7506 | 1.224 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.6962 | |

MULLION 'MD4'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 3.7533 | 1.668 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 17.6041 | |

Sealed: 8/19/2025

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FL #17897


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revisions:

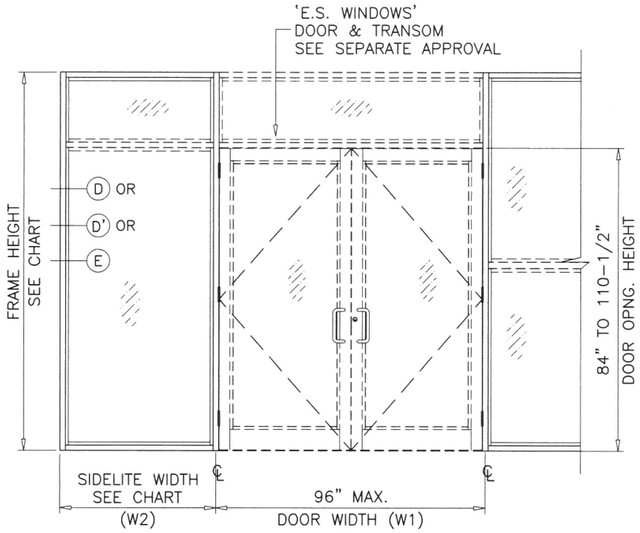
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scale: –
dr. by: TARIQ
chk. by:

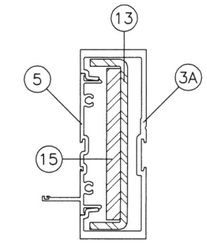
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| DOOR MULLION LOAD CAPACITY – PSF | | | | |
|---|---|---|---|---|
| NOMINAL DIMS. | | | | JAMB 'JD3' MULL 'MD4' |
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) |
| 96 | 30 | 96 | 84 | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 90.0 |
| | 54 | | | 90.0 |
| | 60 | | | 90.0 |
| | 30 | 102 | | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 90.0 |
| | 54 | | | 90.0 |
| | 30 | 108 | | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 89.4 |
| | 30 | 114 | | 90.0 |
| | 36 | | | 85.5 |
| | 42 | | | 81.5 |
| | 48 | | | 77.8 |
| | 30 | 120 | | 79.1 |
| | 36 | | | 75.3 |
| | 42 | | | 71.8 |
| | 48 | | | 68.7 |
| 96 | 30 | 102 | 90 | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 90.0 |
| | 54 | | | 90.0 |
| | 30 | 108 | | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 90.0 |
| | 30 | 114 | | 90.0 |
| | 36 | | | 89.5 |
| | 42 | | | 85.1 |
| | 48 | | | 81.1 |
| | 30 | 120 | | 82.1 |
| | 36 | | | 78.0 |
| | 42 | | | 74.3 |
| | 48 | | | 70.9 |

| DOOR MULLION LOAD CAPACITY – PSF | | | | |
|---|---|---|---|---|
| NOMINAL DIMS. | | | | JAMB 'JD3' MULL 'MD4' |
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) |
| 96 | 30 | 108 | 96 | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 90.0 |
| | 30 | 114 | | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 89.8 |
| | 48 | | | 85.3 |
| | 30 | 120 | | 86.1 |
| | 36 | | | 81.6 |
| | 42 | | | 77.5 |
| | 48 | | | 73.9 |
| 96 | 30 | 114 | 102 | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 90.0 |
| | 30 | 120 | | 90.0 |
| | 36 | | | 86.3 |
| | 42 | | | 81.8 |
| | 48 | | | 77.7 |
| 96 | 30 | 120 | 110–1/2 | 90.0 |
| | 36 | | | 90.0 |
| | 42 | | | 90.0 |
| | 48 | | | 85.1 |
| 96 | 30 | 144 | 108 | 57.0 |
| | 36 | | | 54.2 |
| | 42 | | | 51.6 |
| | 48 | | | 49.2 |

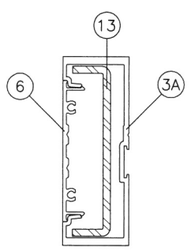



| DOOR MULLION LOAD CAPACITY – PSF | | | | |
|---|---|---|---|---|
| NOMINAL DIMS. | | | | JAMB 'JD3' MULL 'MD5' |
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) |
| 76 | 30 | 144 | 108 | 78.4 |
| | 36 | | | 73.8 |
| | 42 | | | 69.7 |
| | 48 | | | 66.1 |
| 84 | 30 | | | 73.1 |
| | 36 | | | 69.1 |
| | 42 | | | 65.5 |
| | 48 | | | 62.3 |
| 96 | 30 | | | 66.3 |
| | 36 | | | 63.0 |
| | 42 | | | 60.0 |
| | 48 | | | 57.3 |



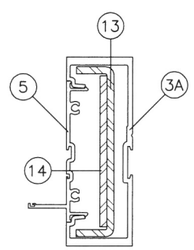

MULLION 'MD5'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 4.7506 | 2.1114 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 20.3598 | |




JAMB 'JD3'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.570 | 2.7226 |
| STEEL | 2.7506 | 1.2224 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 14.5467 | |




MULLION 'MD4'

| | Ix IN^4 | Sx IN^3 |
|---|---|---|
| ALUMINUM | 6.7195 | 2.6757 |
| STEEL | 3.7533 | 1.668 |
| TOTAL Ix ALUM + Ix STL X 2.9 | 17.6041 | |

DOOR–WINDOWALL
TRANSITION MULLION

Sealed: 8/19/2025

FL #17897


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978
STORE\W17-92ES


SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)


E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158


| revisions: | | | |
|---|---|---|---|
| no | date | by | description |

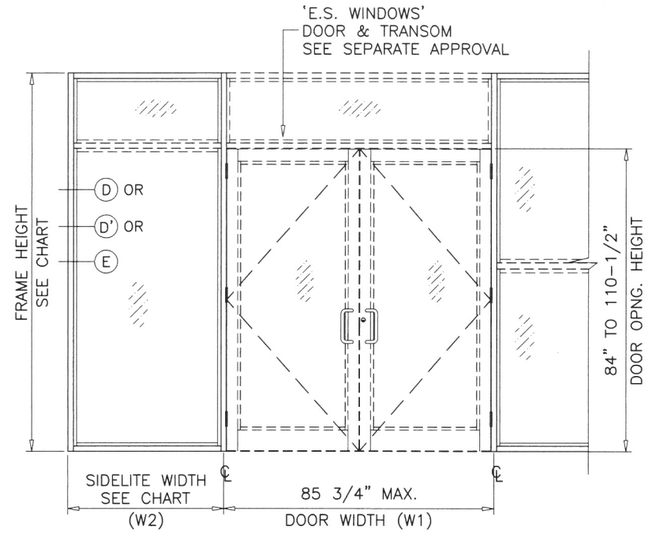
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dr. by: TARIQ
chk. by:

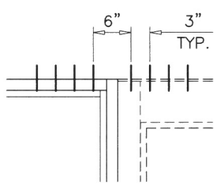
drawing no. W17–92

| DOOR MULLION HEAD ANCHOR LOAD CAPACITY – PSF | | | | | | |
|---|---|---|---|---|---|---|
| NOMINAL DIMS. | | | | 'C4' | 'C5' | 'C6' |
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) |
| 85–3/4 | 30 | 96 | 84 | 89.6 | 90.0 | 90.0 |
| | 36 | | | 85.0 | 90.0 | 90.0 |
| | 42 | | | 80.8 | 90.0 | 90.0 |
| | 48 | | | 77.0 | 90.0 | 90.0 |
| | 54 | | | 73.6 | 90.0 | 90.0 |
| | 60 | | | 70.4 | 88.0 | 90.0 |
| | 30 | 102 | | 86.0 | 90.0 | 90.0 |
| | 36 | | | 81.5 | 90.0 | 90.0 |
| | 42 | | | 77.4 | 90.0 | 90.0 |
| | 48 | | | 73.8 | 90.0 | 90.0 |
| | 54 | | | 70.4 | 88.0 | 90.0 |
| | 30 | 108 | | 82.7 | 90.0 | 90.0 |
| | 36 | | | 78.3 | 90.0 | 90.0 |
| | 42 | | | 74.3 | 90.0 | 90.0 |
| | 48 | | | 70.8 | 88.4 | 90.0 |
| | 30 | 114 | | 79.7 | 90.0 | 90.0 |
| | 36 | | | 75.4 | 90.0 | 90.0 |
| | 42 | | | 71.5 | 89.4 | 90.0 |
| | 48 | | | 68.0 | 85.0 | 90.0 |
| | 30 | 120 | | 76.9 | 90.0 | 90.0 |
| | 36 | | | 72.6 | 90.0 | 90.0 |
| | 42 | | | 68.9 | 86.1 | 90.0 |
| | 48 | | | 65.4 | 81.8 | 90.0 |
| 85–3/4 | 30 | 102 | 90 | 84.1 | 90.0 | 90.0 |
| | 36 | | | 79.7 | 90.0 | 90.0 |
| | 42 | | | 75.8 | 90.0 | 90.0 |
| | 48 | | | 72.3 | 90.0 | 90.0 |
| | 54 | | | 69.1 | 86.4 | 90.0 |
| | 30 | 108 | | 80.9 | 90.0 | 90.0 |
| | 36 | | | 76.7 | 90.0 | 90.0 |
| | 42 | | | 72.9 | 90.0 | 90.0 |
| | 48 | | | 69.4 | 86.8 | 90.0 |
| | 30 | 114 | | 78.0 | 90.0 | 90.0 |
| | 36 | | | 73.9 | 90.0 | 90.0 |
| | 42 | | | 70.1 | 87.7 | 90.0 |
| | 48 | | | 66.8 | 83.5 | 90.0 |
| | 30 | 120 | | 75.3 | 90.0 | 90.0 |
| | 36 | | | 71.2 | 89.1 | 90.0 |
| | 42 | | | 67.6 | 84.5 | 90.0 |
| | 48 | | | 64.3 | 80.4 | 90.0 |

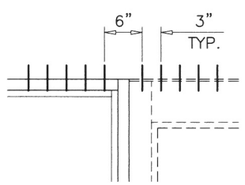
| DOOR MULLION HEAD ANCHOR LOAD CAPACITY – PSF | | | | | | |
|---|---|---|---|---|---|---|
| NOMINAL DIMS. | | | | 'C4' | 'C5' | 'C6' |
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) |
| 85–3/4 | 30 | 108 | 96 | 79.2 | 90.0 | 90.0 |
| | 36 | | | 75.1 | 90.0 | 90.0 |
| | 42 | | | 71.5 | 89.3 | 90.0 |
| | 48 | | | 68.1 | 85.2 | 90.0 |
| | 30 | 114 | | 76.4 | 90.0 | 90.0 |
| | 36 | | | 72.4 | 90.0 | 90.0 |
| | 42 | | | 68.8 | 86.0 | 90.0 |
| | 48 | | | 65.6 | 82.0 | 90.0 |
| | 30 | 120 | | 73.8 | 90.0 | 90.0 |
| | 36 | | | 69.9 | 87.4 | 90.0 |
| | 42 | | | 66.4 | 83.0 | 90.0 |
| | 48 | | | 63.2 | 79.0 | 90.0 |
| 85–3/4 | 30 | 114 | 102 | 74.9 | 90.0 | 90.0 |
| | 36 | | | 71.0 | 88.8 | 90.0 |
| | 42 | | | 67.6 | 84.5 | 90.0 |
| | 48 | | | 64.4 | 80.5 | 90.0 |
| | 30 | 120 | | 72.4 | 90.0 | 90.0 |
| | 36 | | | 68.6 | 85.7 | 90.0 |
| | 42 | | | 65.2 | 81.5 | 90.0 |
| | 48 | | | 62.1 | 77.7 | 90.0 |
| 85–3/4 | 30 | 120 | 110–1/2 | 70.4 | 88.0 | 90.0 |
| | 36 | | | 66.8 | 83.5 | 90.0 |
| | 42 | | | 63.6 | 79.5 | 90.0 |
| | 48 | | | 60.7 | 75.9 | 90.0 |

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

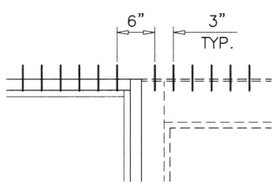


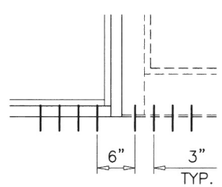
'C4'



'C5'



'C6'



'C4' AT SILL ALL CASES

ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION

C4 = (4) ANCHORS TYPE 'C' AT EACH SIDE OF DOOR MULLION

C5 = (5) ANCHORS TYPE 'C' AT EACH SIDE OF DOOR MULLION

C6 = (6) ANCHORS TYPE 'C' AT EACH SIDE OF DOOR MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

TRANSITION MULLION ANCHORS

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


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revisions:

| no | date | by | description |
|---|---|---|---|

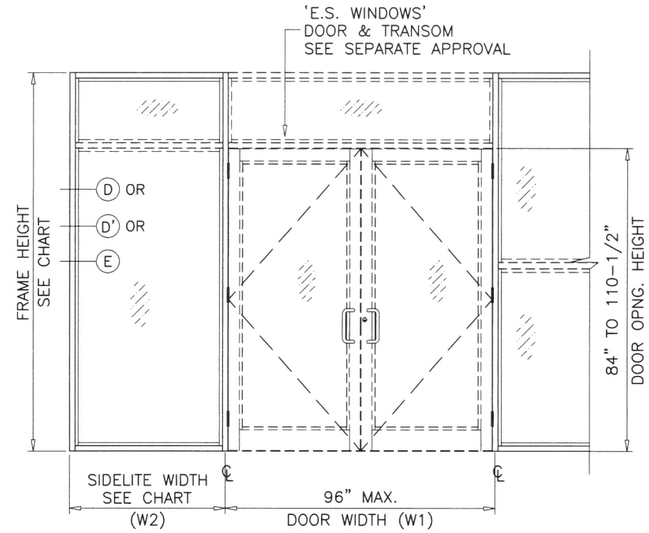
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dr. by: TARIQ
chk. by:

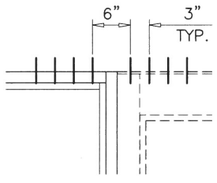
drawing no. W17–92

| DOOR MULLION HEAD ANCHOR LOAD CAPACITY – PSF | | | | | | |
|---|---|---|---|---|---|---|
| NOMINAL DIMS. | | | | 'C4' | 'C5' | 'C6' |
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) |
| 96 | 30 | 96 | 84 | 82.4 | 90.0 | 90.0 |
| | 36 | | | 78.5 | 90.0 | 90.0 |
| | 42 | | | 74.9 | 90.0 | 90.0 |
| | 48 | | | 71.7 | 89.6 | 90.0 |
| | 54 | | | 68.7 | 85.8 | 90.0 |
| | 60 | | | 65.9 | 82.4 | 90.0 |
| | 30 | 102 | | 79.2 | 90.0 | 90.0 |
| | 36 | | | 75.3 | 90.0 | 90.0 |
| | 42 | | | 71.8 | 89.8 | 90.0 |
| | 48 | | | 68.7 | 85.8 | 90.0 |
| | 54 | | | 65.8 | 82.2 | 90.0 |
| | 30 | 108 | | 76.2 | 90.0 | 90.0 |
| | 36 | | | 72.4 | 90.0 | 90.0 |
| | 42 | | | 69.0 | 86.3 | 90.0 |
| | 48 | | | 65.9 | 82.4 | 90.0 |
| | 30 | 114 | | 73.4 | 90.0 | 90.0 |
| | 36 | | | 69.8 | 87.2 | 90.0 |
| | 42 | | | 66.4 | 83.0 | 90.0 |
| | 48 | | | 63.4 | 79.2 | 90.0 |
| | 30 | 120 | | 70.9 | 88.6 | 90.0 |
| | 36 | | | 67.3 | 84.1 | 90.0 |
| | 42 | | | 64.0 | 80.0 | 90.0 |
| | 48 | | | 61.0 | 76.3 | 90.0 |
| 96 | 30 | 102 | 90 | 77.3 | 90.0 | 90.0 |
| | 36 | | | 73.7 | 90.0 | 90.0 |
| | 42 | | | 70.3 | 87.9 | 90.0 |
| | 48 | | | 67.3 | 84.1 | 90.0 |
| | 54 | | | 64.5 | 80.6 | 90.0 |
| | 30 | 108 | | 74.5 | 90.0 | 90.0 |
| | 36 | | | 70.9 | 88.6 | 90.0 |
| | 42 | | | 67.6 | 84.5 | 90.0 |
| | 48 | | | 64.6 | 80.8 | 90.0 |
| | 30 | 114 | | 71.8 | 89.8 | 90.0 |
| | 36 | | | 68.3 | 85.4 | 90.0 |
| | 42 | | | 65.1 | 81.4 | 90.0 |
| | 48 | | | 62.2 | 77.7 | 90.0 |
| | 30 | 120 | | 69.4 | 86.7 | 90.0 |
| | 36 | | | 65.9 | 82.4 | 90.0 |
| | 42 | | | 62.8 | 78.5 | 90.0 |
| | 48 | | | 59.9 | 74.9 | 89.9 |

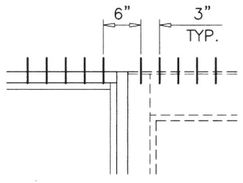
| DOOR MULLION HEAD ANCHOR LOAD CAPACITY – PSF | | | | | | |
|---|---|---|---|---|---|---|
| NOMINAL DIMS. | | | | 'C4' | 'C5' | 'C6' |
| WIDTH (W1) INCHES | WIDTH (W2) INCHES | FRAME HEIGHT INCHES | DOOR HEIGHT INCHES | EXT.(+) INT.(–) | EXT.(+) INT.(–) | EXT.(+) INT.(–) |
| 96 | 30 | 108 | 96 | 72.8 | 90.0 | 90.0 |
| | 36 | | | 69.4 | 86.7 | 90.0 |
| | 42 | | | 66.3 | 82.8 | 90.0 |
| | 48 | | | 63.4 | 79.2 | 90.0 |
| | 30 | 114 | | 70.3 | 87.9 | 90.0 |
| | 36 | | | 66.9 | 83.7 | 90.0 |
| | 42 | | | 63.8 | 79.8 | 90.0 |
| | 48 | | | 61.0 | 76.3 | 90.0 |
| | 30 | 120 | | 68.0 | 84.9 | 90.0 |
| | 36 | | | 64.6 | 80.8 | 90.0 |
| | 42 | | | 61.6 | 77.0 | 90.0 |
| | 48 | | | 58.9 | 73.6 | 88.3 |
| 96 | 30 | 114 | 102 | 68.8 | 86.1 | 90.0 |
| | 36 | | | 65.6 | 82.0 | 90.0 |
| | 42 | | | 62.6 | 78.3 | 90.0 |
| | 48 | | | 59.9 | 74.9 | 89.9 |
| | 30 | 120 | | 66.6 | 83.2 | 90.0 |
| | 36 | | | 63.4 | 79.2 | 90.0 |
| | 42 | | | 60.5 | 75.6 | 90.0 |
| | 48 | | | 57.8 | 72.3 | 86.7 |
| 96 | 30 | 120 | 110–1/2 | 64.7 | 80.9 | 90.0 |
| | 36 | | | 61.7 | 77.1 | 90.0 |
| | 42 | | | 58.9 | 73.7 | 88.4 |
| | 48 | | | 56.4 | 70.5 | 84.6 |
| 96 | 30 | 144 | 108 | 57.8 | 72.3 | 86.7 |
| | 36 | | | 54.9 | 68.7 | 82.4 |
| | 42 | | | 52.3 | 65.4 | 78.5 |
| | 48 | | | 49.9 | 62.4 | 74.9 |

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

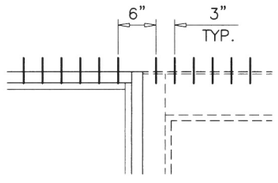


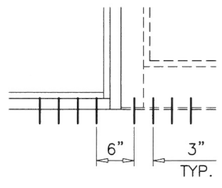
'C4'



'C5'



'C6'



'C4' AT SILL ALL CASES

ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION

C4 = (4) ANCHORS TYPE 'C' AT EACH SIDE OF DOOR MULLION

C5 = (5) ANCHORS TYPE 'C' AT EACH SIDE OF DOOR MULLION

C6 = (6) ANCHORS TYPE 'C' AT EACH SIDE OF DOOR MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

## TRANSITION MULLION ANCHORS

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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TEL. (305) 264-8100 FAX. (305) 262-6978
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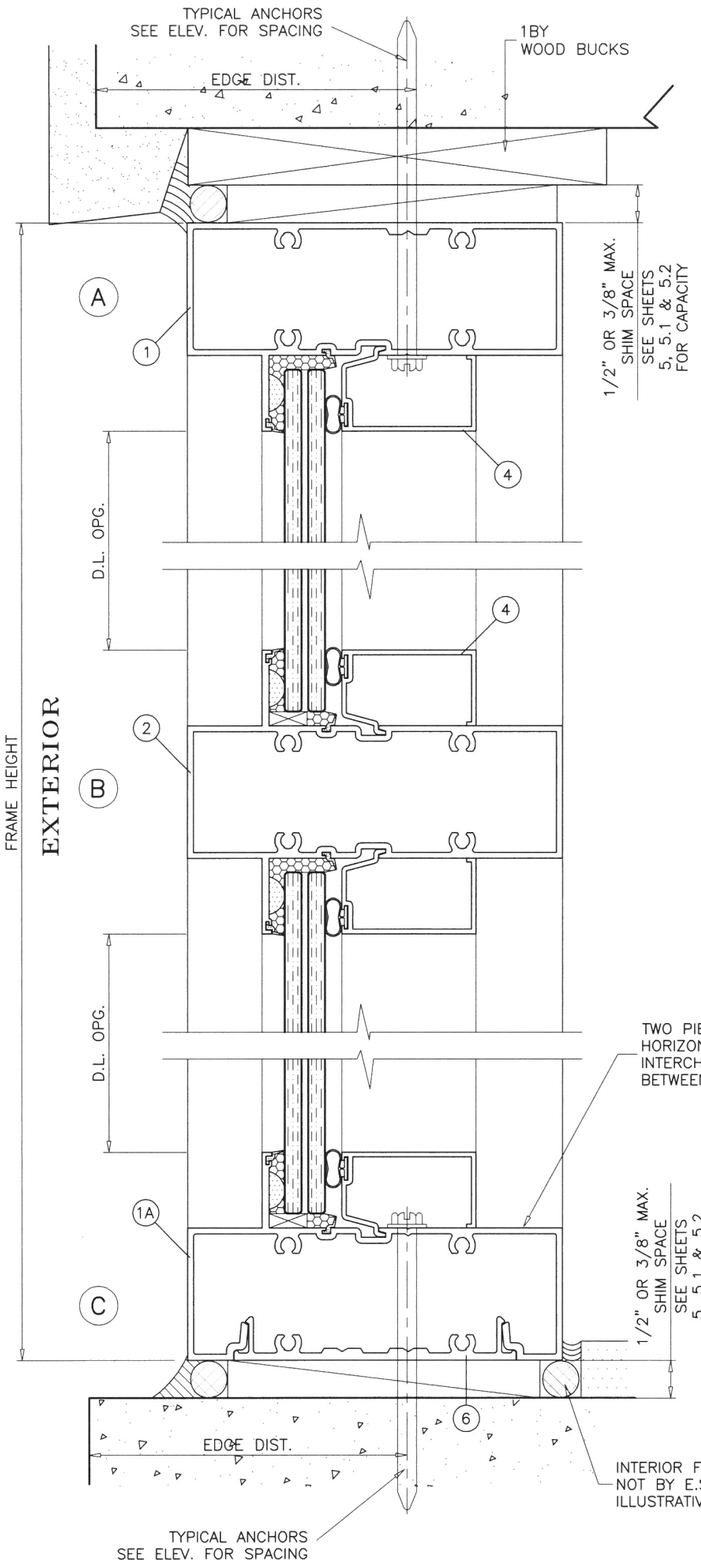

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)

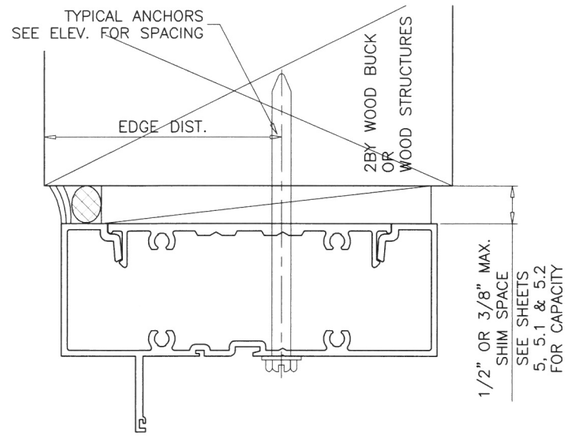
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

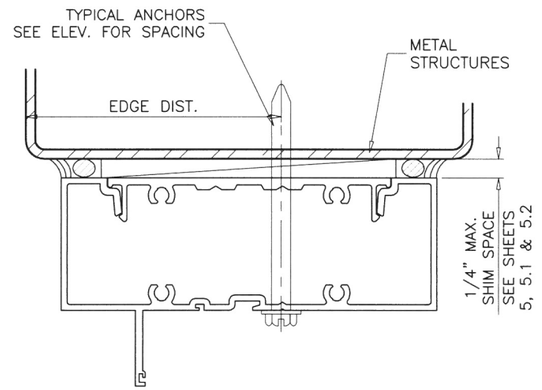
| revisions: | | |
|---|---|---|
| no | date | by description |

date: 10-20-17
scale: –
dr. by: TARIQ
chk. by:

drawing no. W17–92




## TYPICAL ANCHORS: SEE ELEV. FOR SPACING

TYPE 'A'– 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
WITH 1–1/2" MIN. PENETRATION INTO WOOD

THRU 1BY WOOD BUCKS INTO CONCRETE
WITH 1–1/4" MIN. EMBED INTO CONCRETE

DIRECTLY INTO CONCRETE
WITH 1–1/4" MIN. EMBED INTO CONC.

ANCHOR EDGE DISTANCES
INTO CONCRETE AND MASONRY = 2–1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.

TYPE 'B'– 1/4" DIA. KWIK–CON II+ BY 'HILTI' (Fu=138 KSI, Fy=137 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
WITH 1–1/2" MIN. PENETRATION INTO WOOD

THRU 1BY WOOD BUCKS INTO CONCRETE
WITH 1–1/4" MIN. EMBED INTO CONCRETE

DIRECTLY INTO CONCRETE
WITH 1–1/4" MIN. EMBED INTO CONC.

ANCHOR EDGE DISTANCES
INTO CONCRETE AND MASONRY = 3" MIN.
INTO WOOD STRUCTURE = 1" MIN.

TYPE 'C'– 5/16" DIA ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
WITH 1–1/2" MIN. PENETRATION INTO WOOD

THRU 1BY WOOD BUCKS INTO CONCRETE
WITH 1–1/4" MIN. EMBED INTO CONCRETE

DIRECTLY INTO CONCRETE
WITH 1–1/4" MIN. EMBED INTO CONC.

ANCHOR EDGE DISTANCES
INTO CONCRETE AND MASONRY = 3" MIN.
INTO WOOD STRUCTURE = 1–1/4" MIN.

TYPE 'D'– 1/4" DIA. TEKS OR SELF DRILLING SCREWS ST/ST (GRADE 5 CRS)
INTO METAL STRUCTURES
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE
ALUMINUM: 1/8" THK. MIN. (6063–T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

ANCHOR EDGE DISTANCES
INTO METAL STRUCTURE = 1/2" MIN.

**WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.**
**CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.**
**C–90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.**

## SEALANTS:

ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER OF GLAZING BEAD TO FRAME SEALED WITH SILICONE SEALANT.

WOOD BUCKS AND METAL STRUCTURES NOT BY 'E.S. WDW.' MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

Sealed: 8/19/2025

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

FL #17897


AL-FAROOQ CORPORATION
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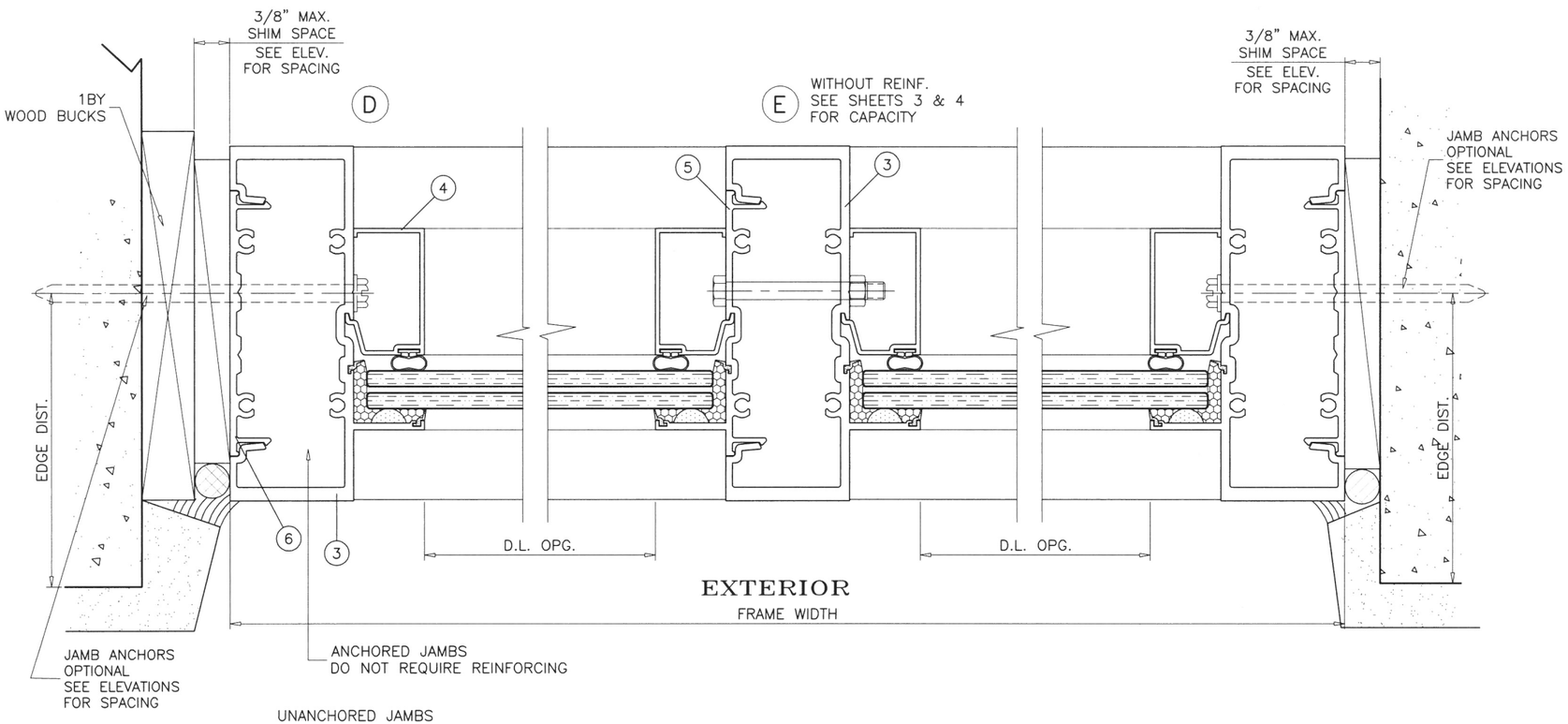

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)

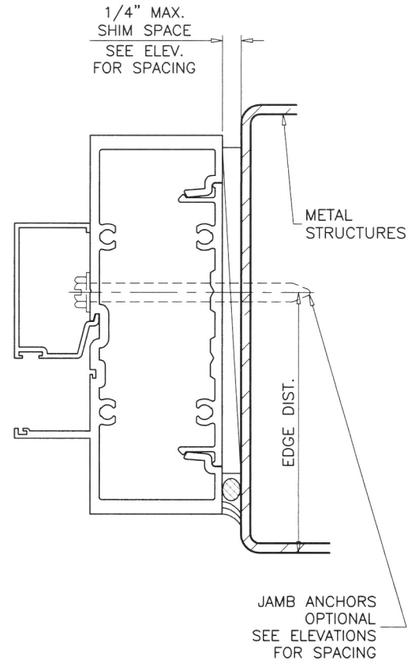

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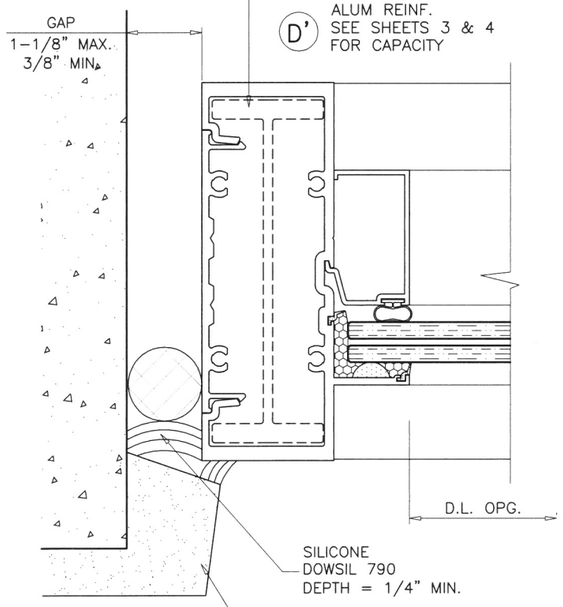

| revisions: | | | |
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| no | date | by | description |

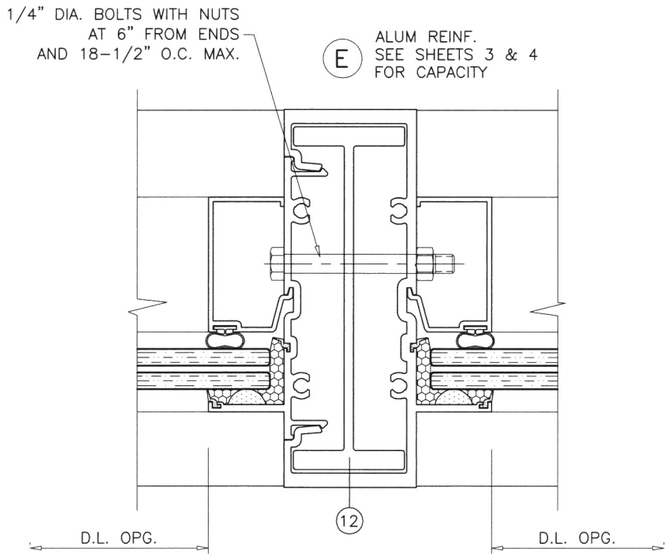
date: 10-20-17
scale: 1/2" = 1"
dr. by: TARIQ
chk. by:

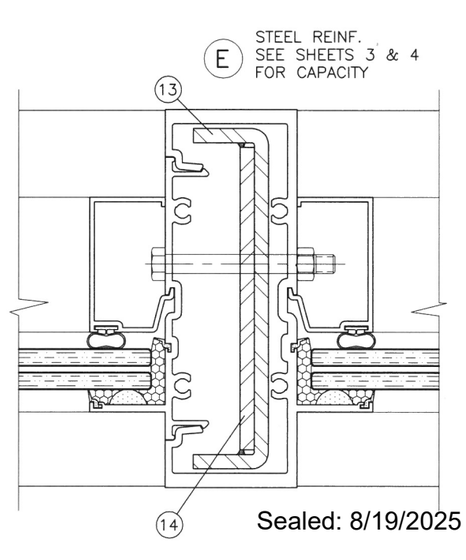
drawing no. W17-92




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FL #17897


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978


STORE\W17-92ES

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

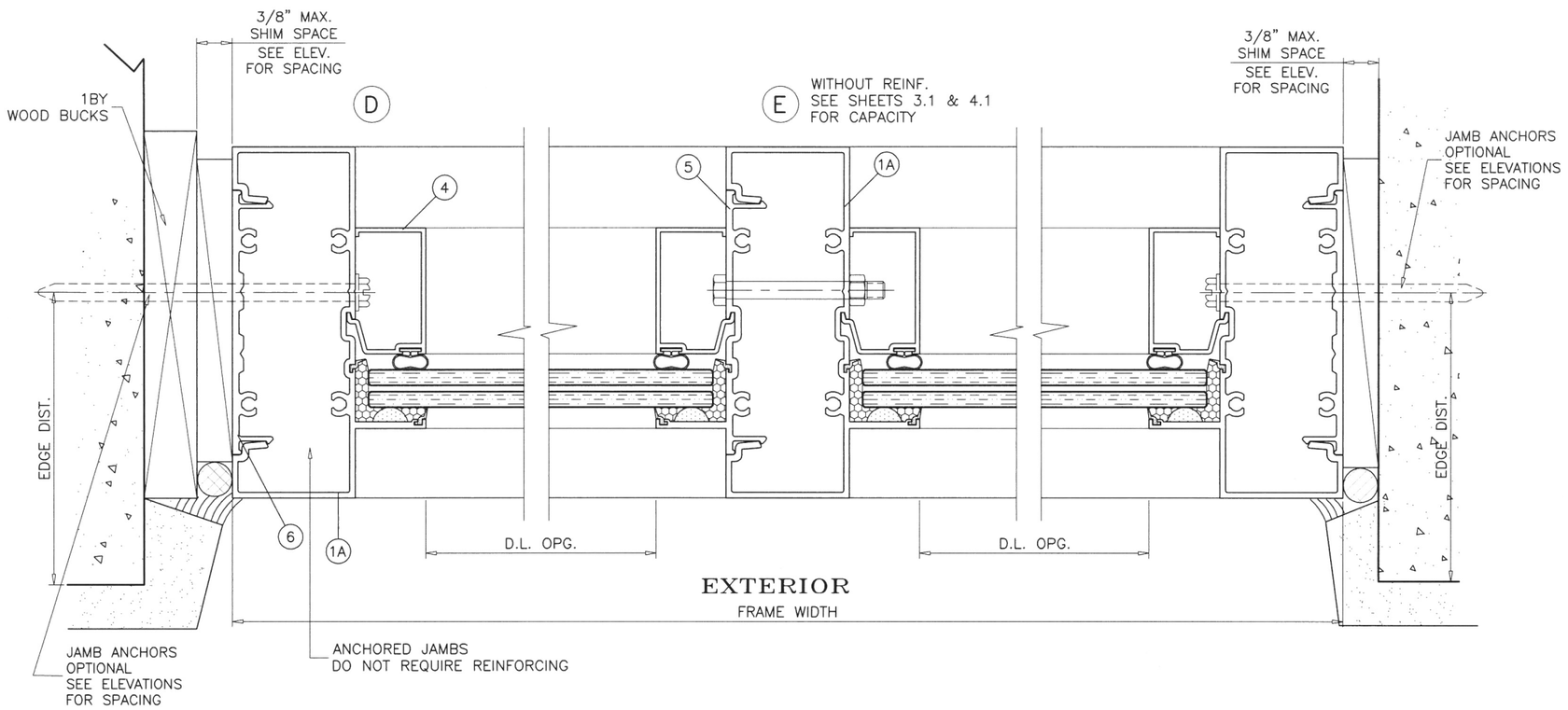
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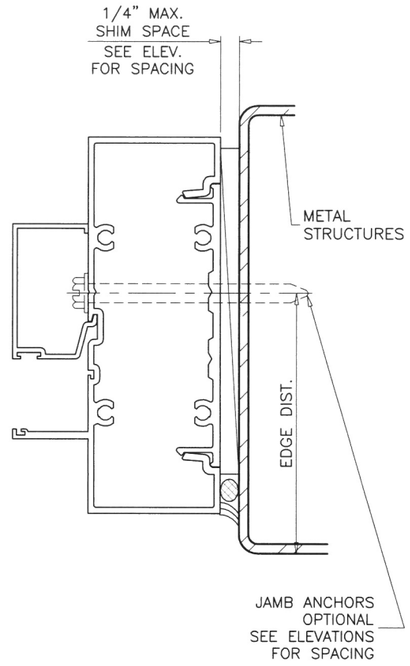
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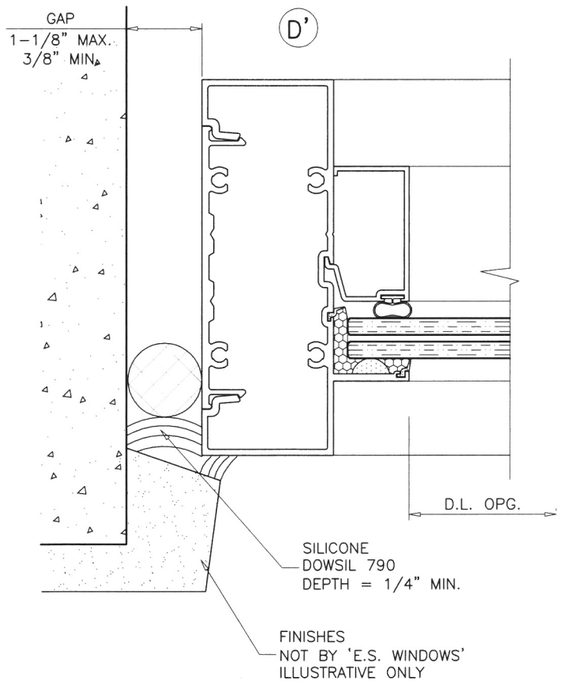
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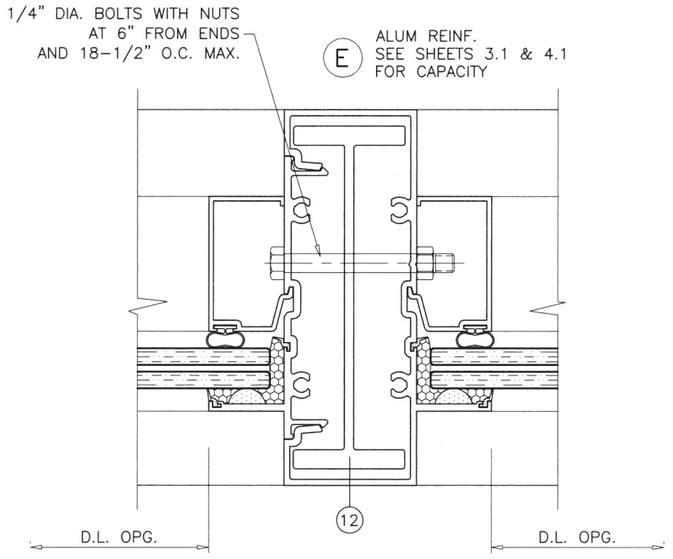
drawing no.
W17-92

sheet 9 of 12




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JALAL FAROOQ
LICENSE
No. 81223
STATE OF FLORIDA
PROFESSIONAL ENGINEER

FL #17897


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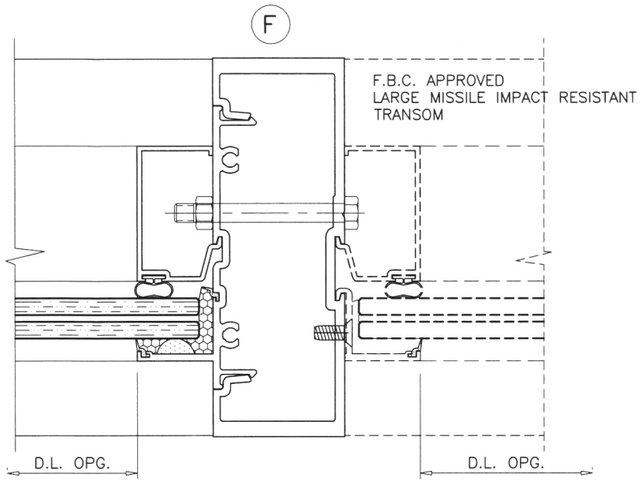

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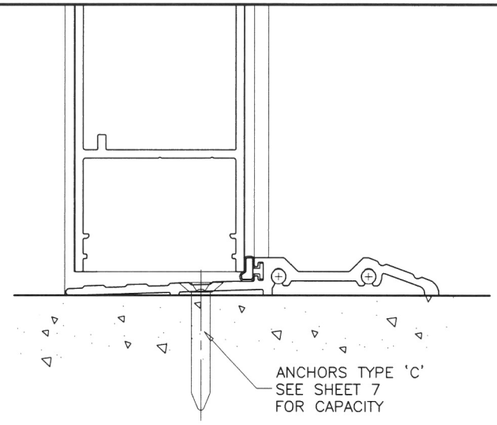

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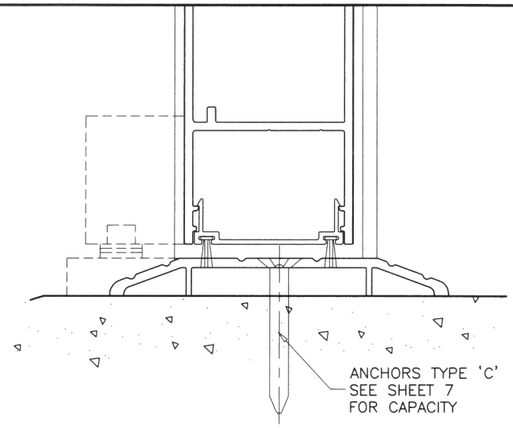

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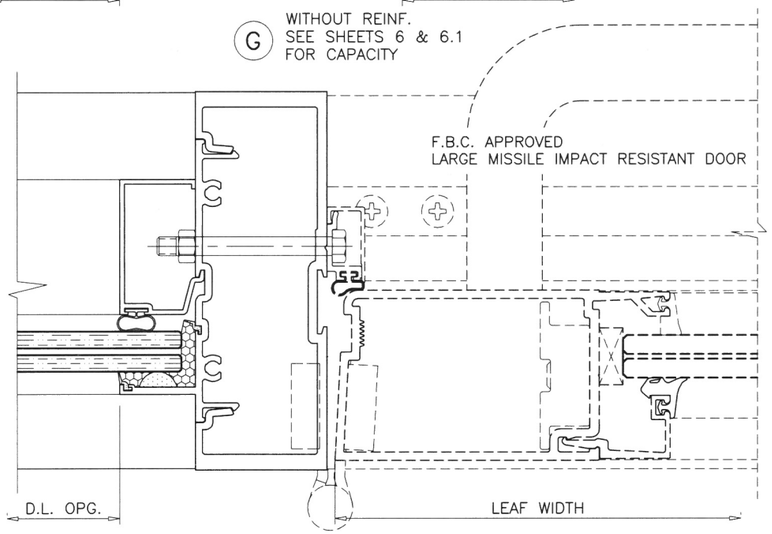
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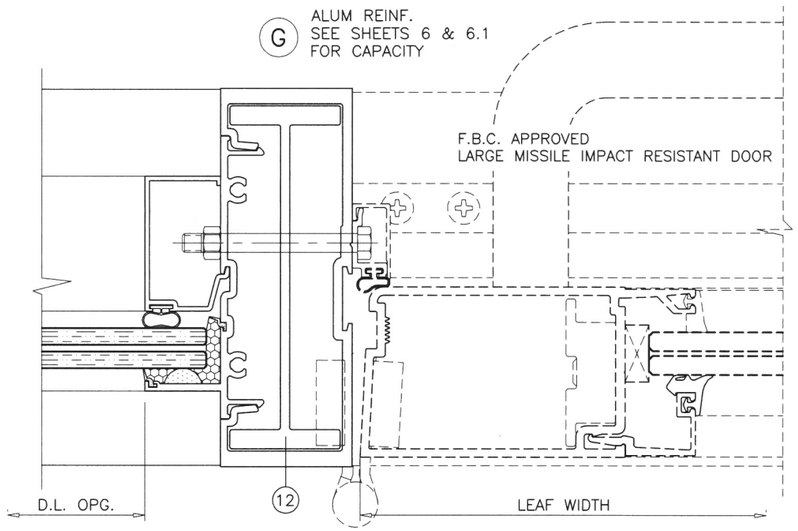
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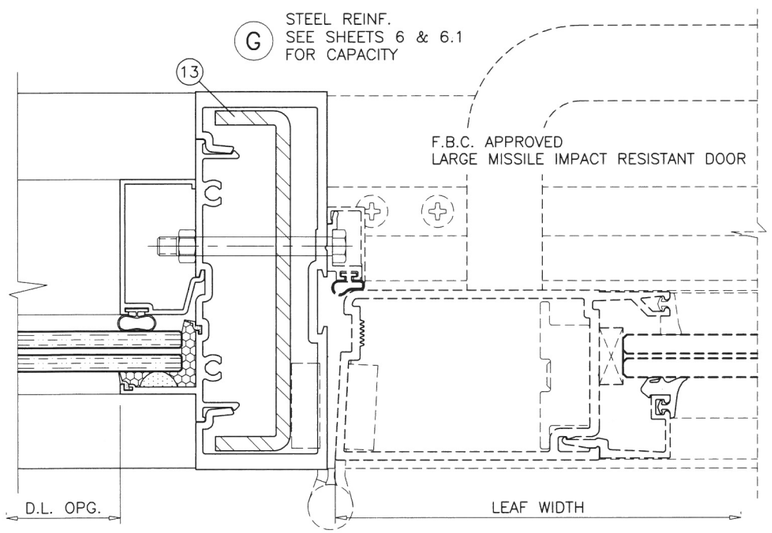


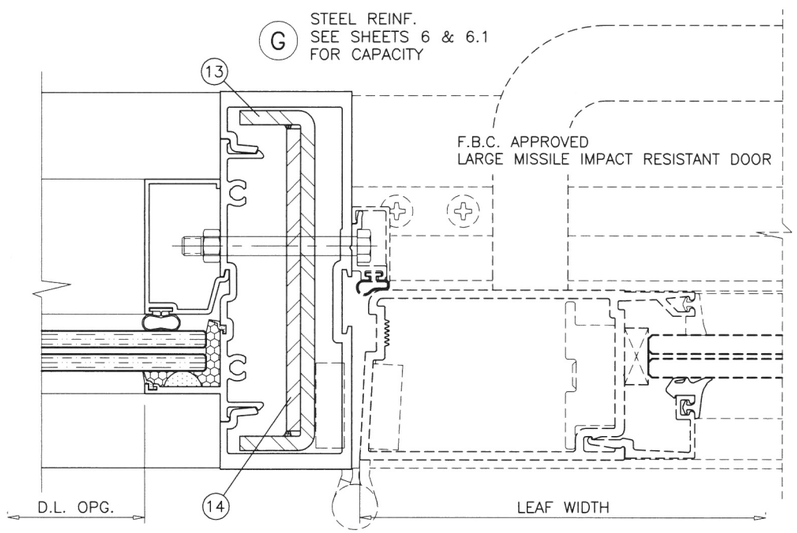




SEE SEPARATE APPROVAL FOR DESIGN LOAD CAPACITY OF DOORS AND DOOR ANCHORS.

LOWER VALUES FROM DOORS APPROVAL OR STOREFRONT SYSTEM CAPACITY CHARTS WILL APPLY TO ENTIRE SYSTEM.

Sealed: 8/19/2025

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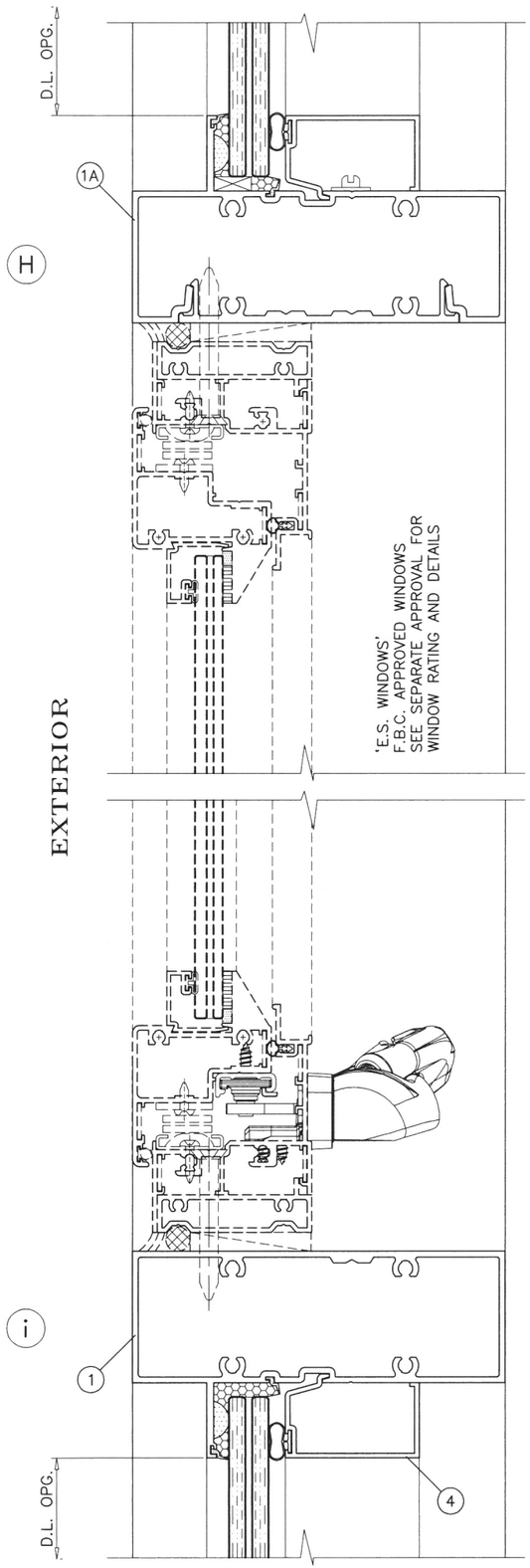

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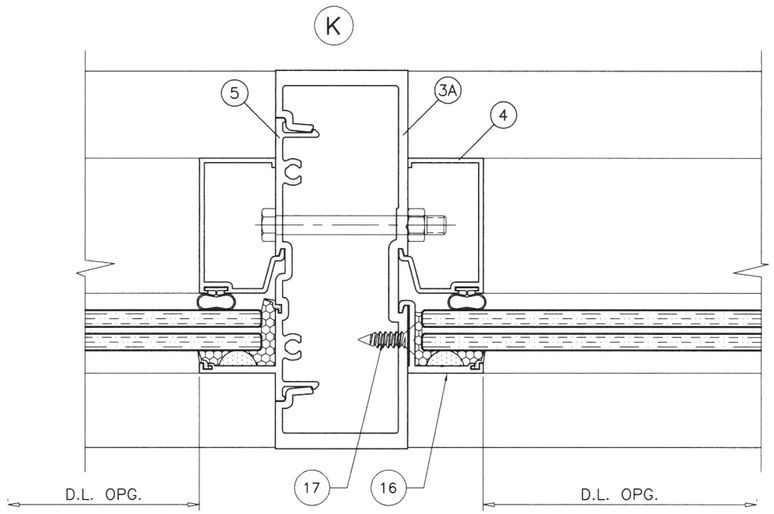

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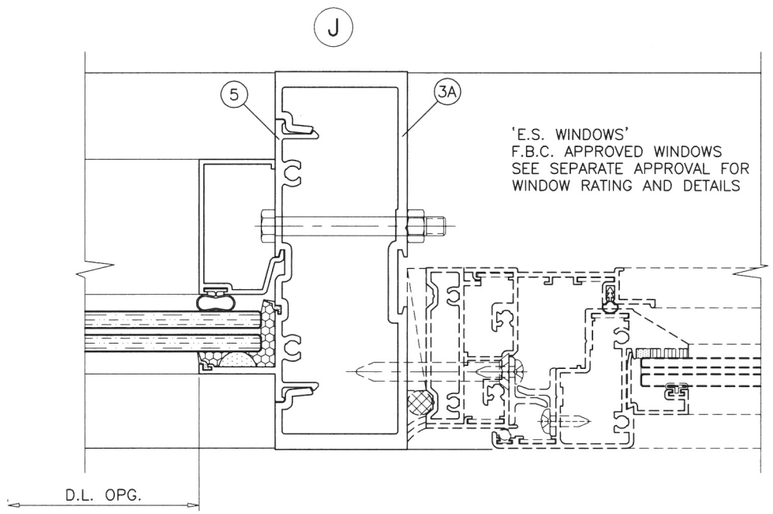
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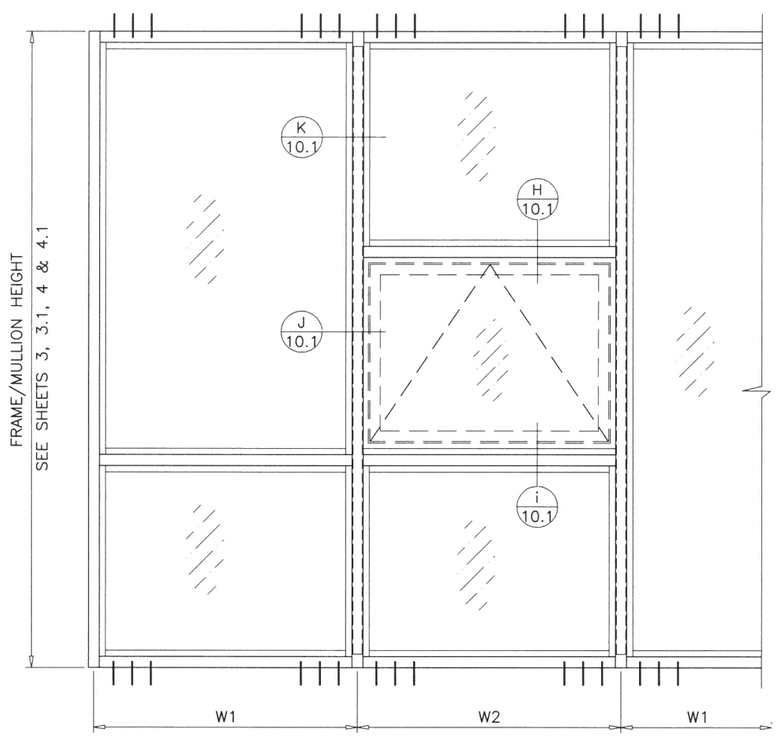
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chk. by:

drawing no.
W17-92




TYPICAL INSTALLATION OF WINDOWS IN THE WINDOW WALL SYSTEM

USE WINDOWS HOLDING CURRENT APPROVAL
REFER TO NOTES ON SHEET 2

$$\text{WIDTH (W) AT FRAME MULLION} = \frac{W1 + W2}{2}$$

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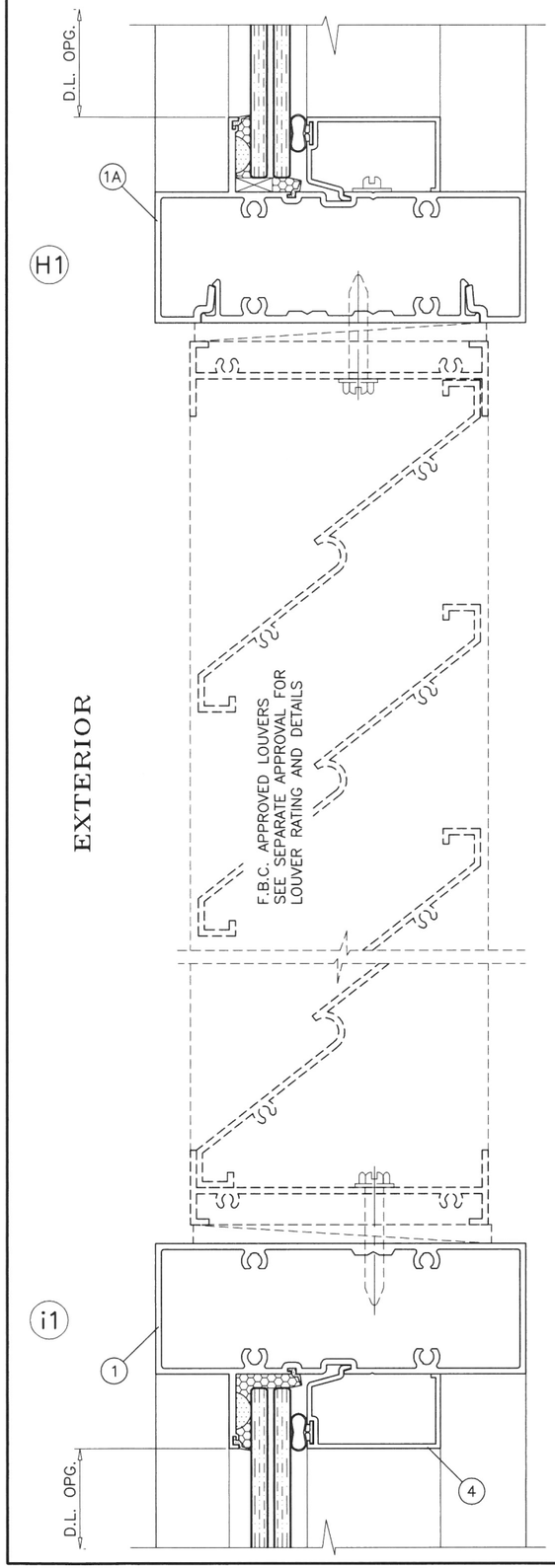
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chk. by:

drawing no.
W17-92

sheet 10.1 of 12

EXTERIOR

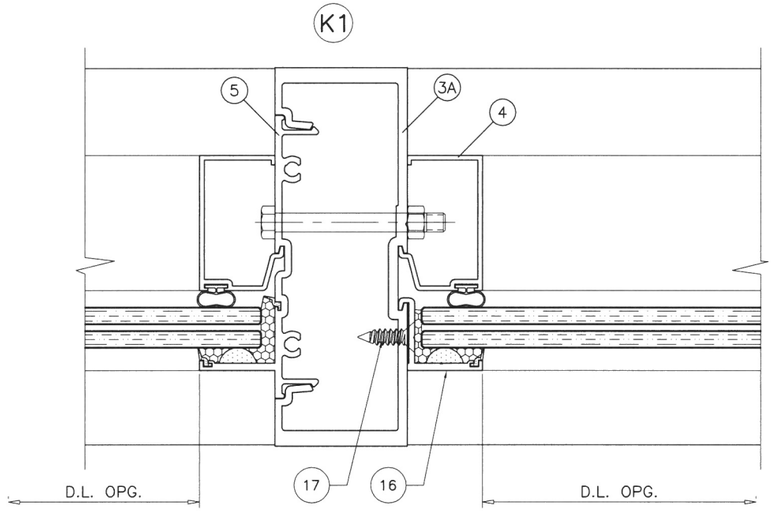
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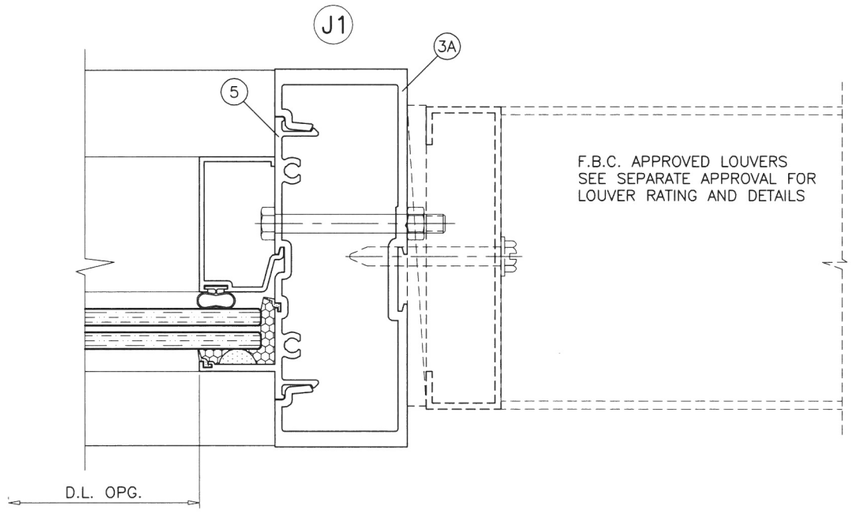

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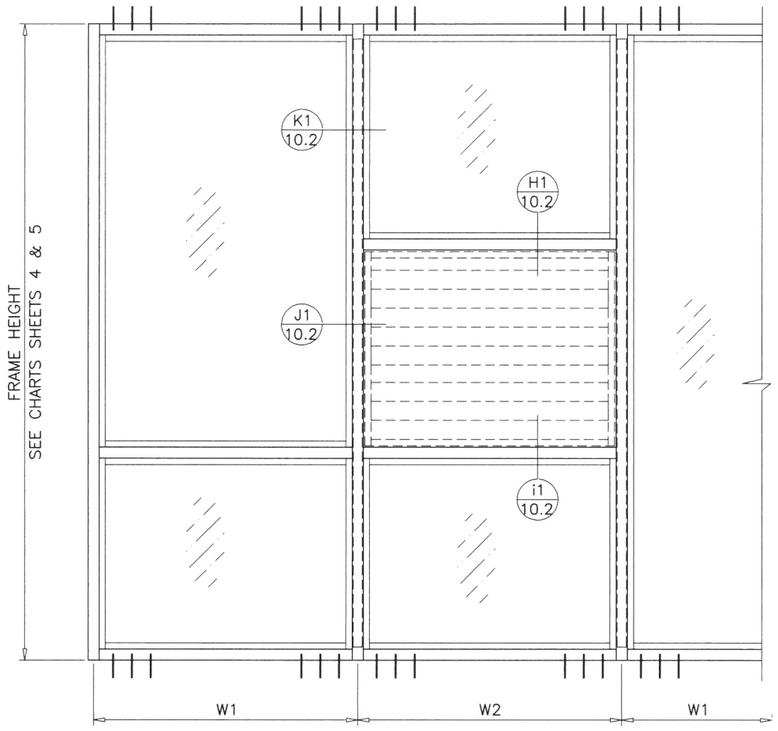



K1




J1




TYPICAL INSTALLATION OF LOUVERS IN THE WINDOW WALL SYSTEM

USE LOUVERS HOLDING CURRENT APPROVAL
REFER TO NOTES ON SHEET 2

WIDTH (W) = $\frac{W1 + W2}{2}$
AT FRAME MULLION

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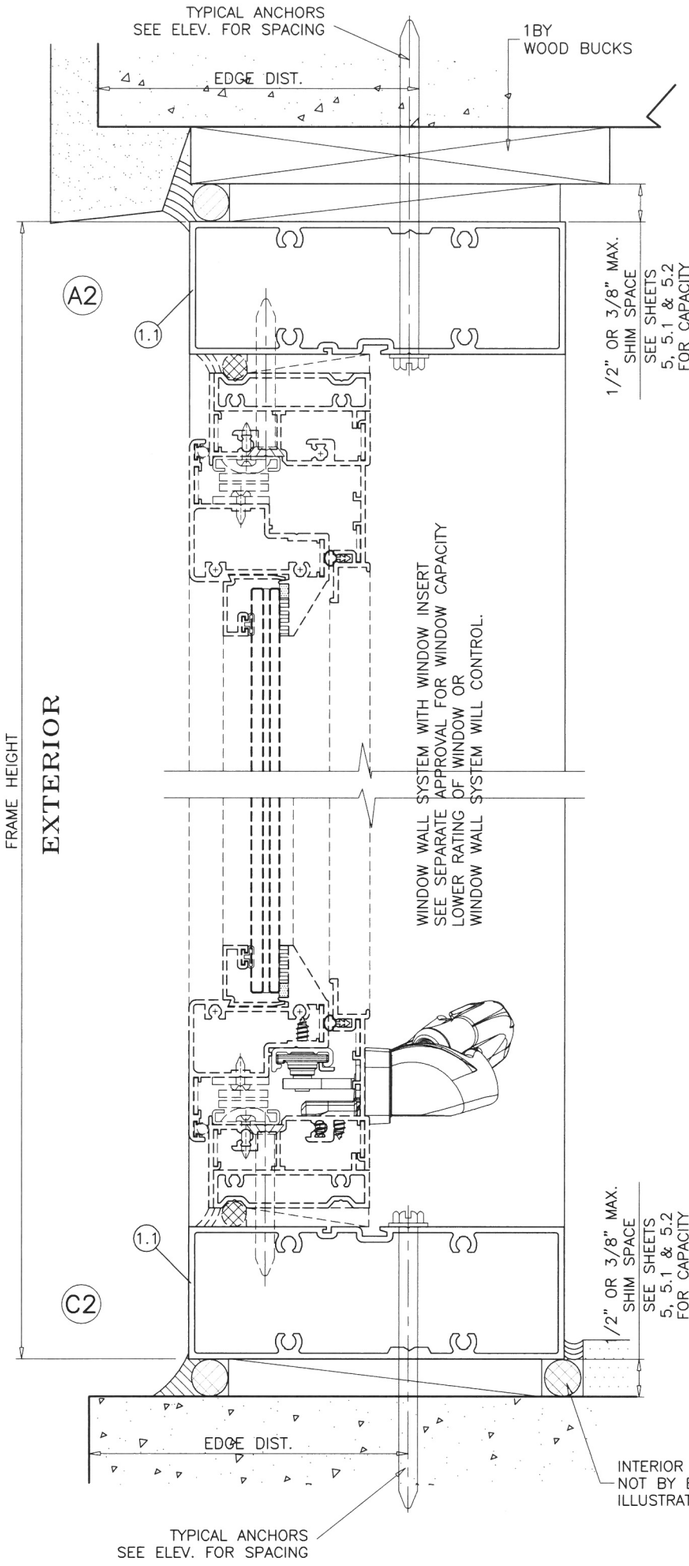
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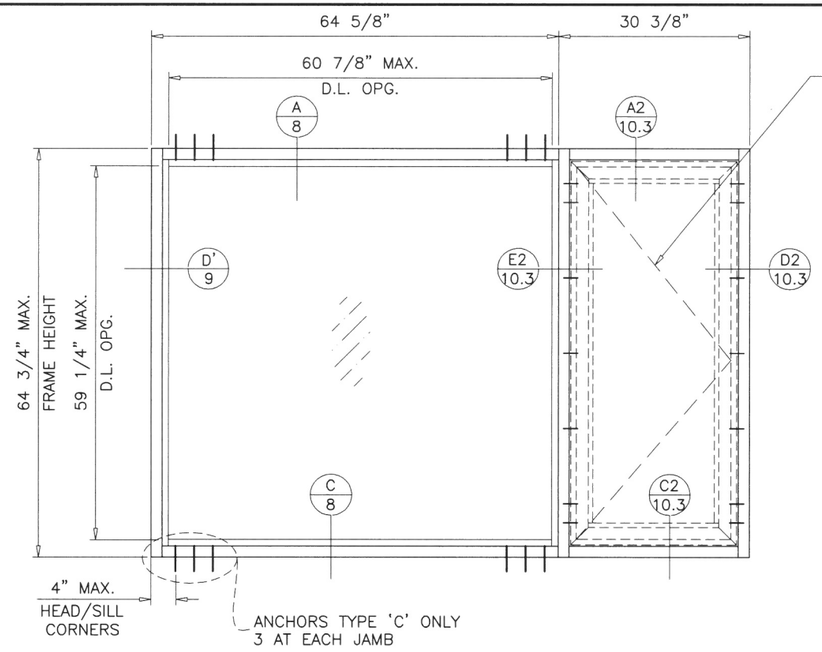
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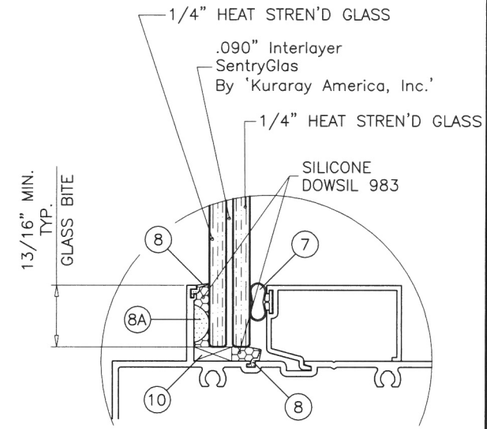
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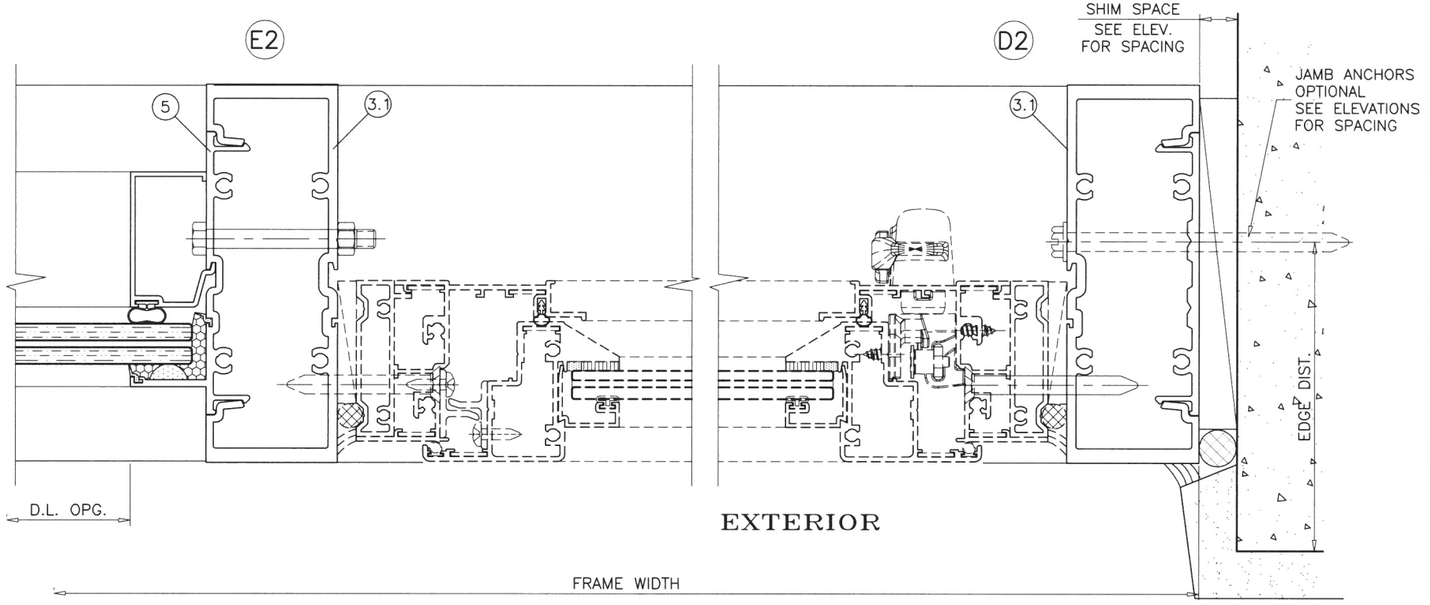
sheet 10.2 of 12




GLASS TYPE 'B1'




MAXIMUM DESIGN LOAD RATING = + 78.0 PSF
– 114.0 PSF
(ONLY FOR SINGLE UNITS SHOWN IN THIS SHEET)

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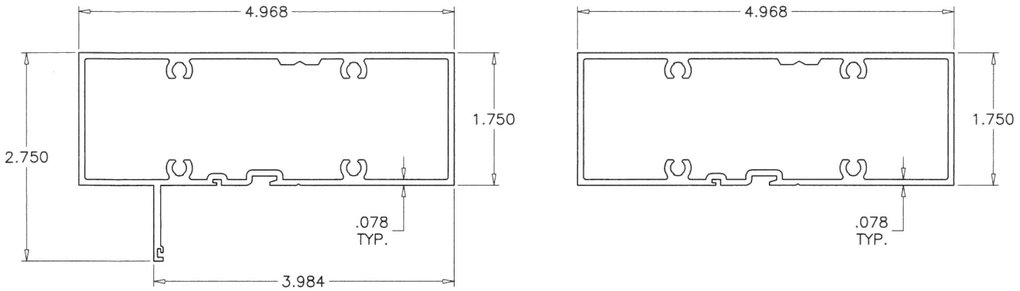

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revisions:

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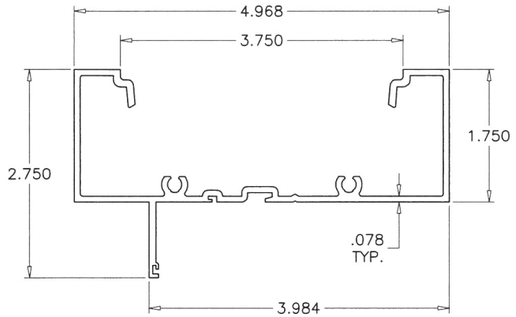
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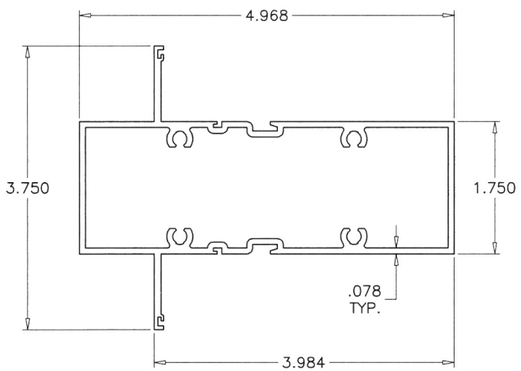

1 HOLLOW FRAME HEAD/SILL



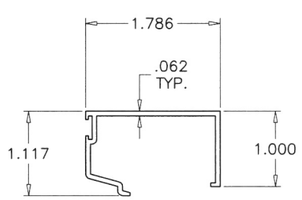

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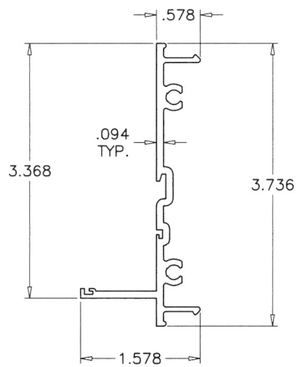

1A FRAME HEAD/SILL/JAMB/MULLION



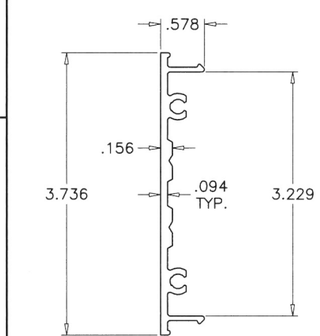

2 INTERMEDIATE HORIZONTAL



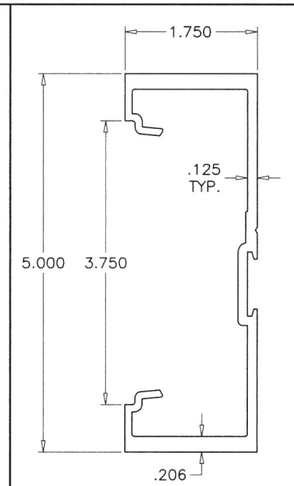

4 GLASS STOP



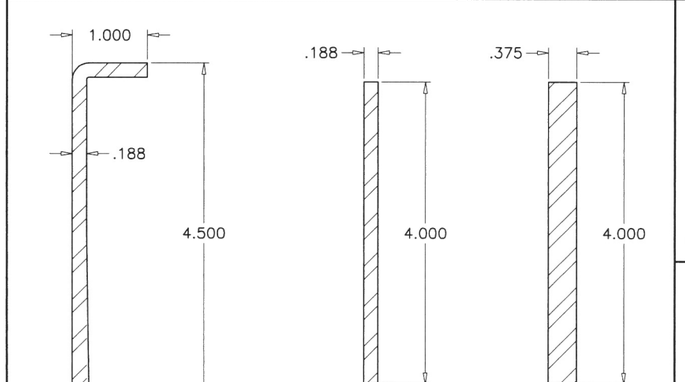

5 MULLION SNAP–IN MATE




6



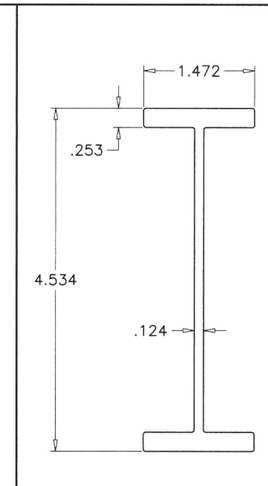

3A FRAME JAMB/MULLION DOOR MULLION



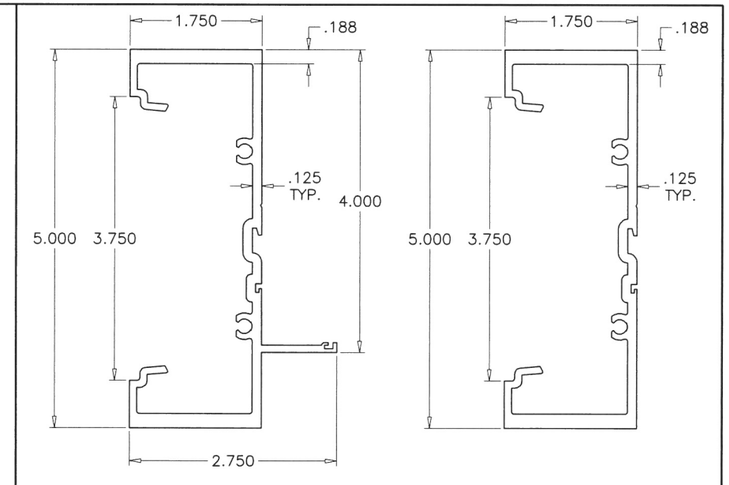

13 STEEL REINFORCING 36 KSI MIN.

14

15

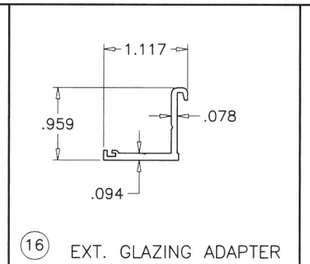



12 STIFFENER




3 FRAME JAMB/MULLION

3.1




16 EXT. GLAZING ADAPTER

| ITEM NO. | PART NUMBER | QUANTITY | DESCRIPTION | MATERIAL | MANF./SUPPLIER/REMARKS |
|---|---|---|---|---|---|
| 1 | ES8005 | AS REQD. | HOLLOW FRAME HEAD/SILL | 6005–T5 | – |
| 1A | ES8007 | AS REQD. | FRAME HEAD/SILL/JAMB/MULLION | 6063–T6 | – |
| 2 | ES8004 | AS REQD. | INTERMEDIATE HORIZONTAL | 6063–T6 | – |
| 3 | ES8001 | AS REQD. | FRAME JAMB/MULLION | 6005–T5 | – |
| 3A | ES8012 | AS REQD. | FRAME JAMB/MULLION, DOOR MULLION | 6005–T5 | – |
| 4 | ES8006 | AS REQD. | GLASS STOP | 6063–T5 | – |
| 5 | ES8002 | AS REQD. | MULLION SNAP–IN MATE | 6005–T5 | – |
| 6 | ES8003 | AS REQD. | SHEAR CLIP | 6005–T5 | – |
| 7 | ES8010A | AS REQD. | INTERIOR BULB GASKET | SILICONE | DUROMETER 70±3 SHORE A |
| 8 | ES8009 | AS REQD. | SILICONE STOP | VINYL | – |
| 8A | ES–8011A | AS REQD. | 1/4" BUTTON BUMPER SPACER | SILICONE | DUROMETER 85±5 SHORE A |
| 9 | – | – | FRAME JAMB/MULLION | – | – |
| 10 | – | 2/ LITE | 3/16" X 1/2" X 2" LONG SETTING BLOCK, AT 1/4" POINTS | EPDM | DUROMETER 85±5 SHORE A |
| 11 | #12 X 1–1/2" | 4/ CORNER | ASSEMBLY SCREWS PHSMS | STEEL | – |
| 12 | – | AS REQD. | MULLION STIFFENER | 6005–T5 | – |
| 13 | – | AS REQD. | MULLION REINFORCING CHANNEL | STEEL | – |
| 14 | – | AS REQD. | MULLION REINFORCING BAR (3/16" X 4") | STEEL | – |
| 15 | – | AS REQD. | MULLION REINFORCING BAR (3/8" X 4") | STEEL | – |
| 16 | ES8014 | AS REQD. | EXTERIOR GLAZING ADAPTER | 6063–T6 | – |
| 17 | #12 X 3/4" | AS REQD. | ADAPTER FASTENERS, AT 3" FROM ENDS & 12" O.C. | ST. STEEL | FH SMS |

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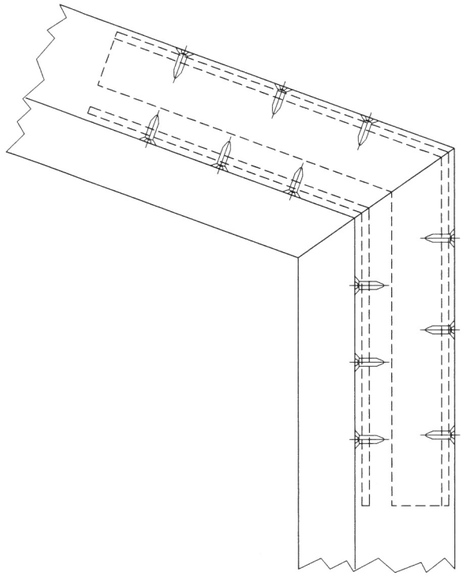

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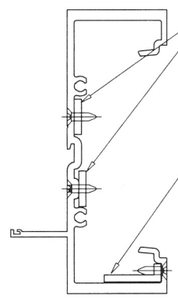
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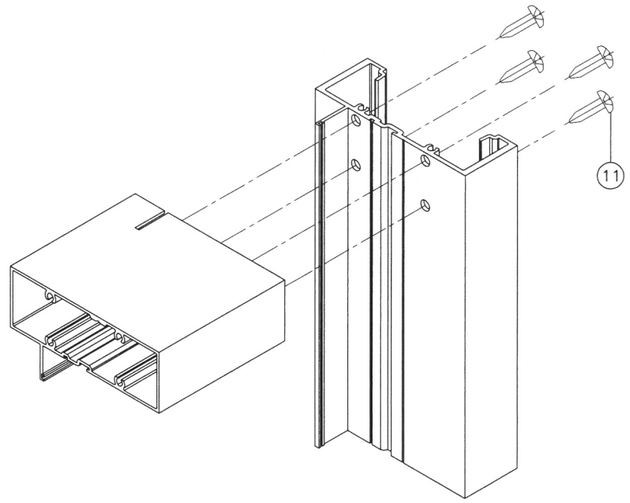
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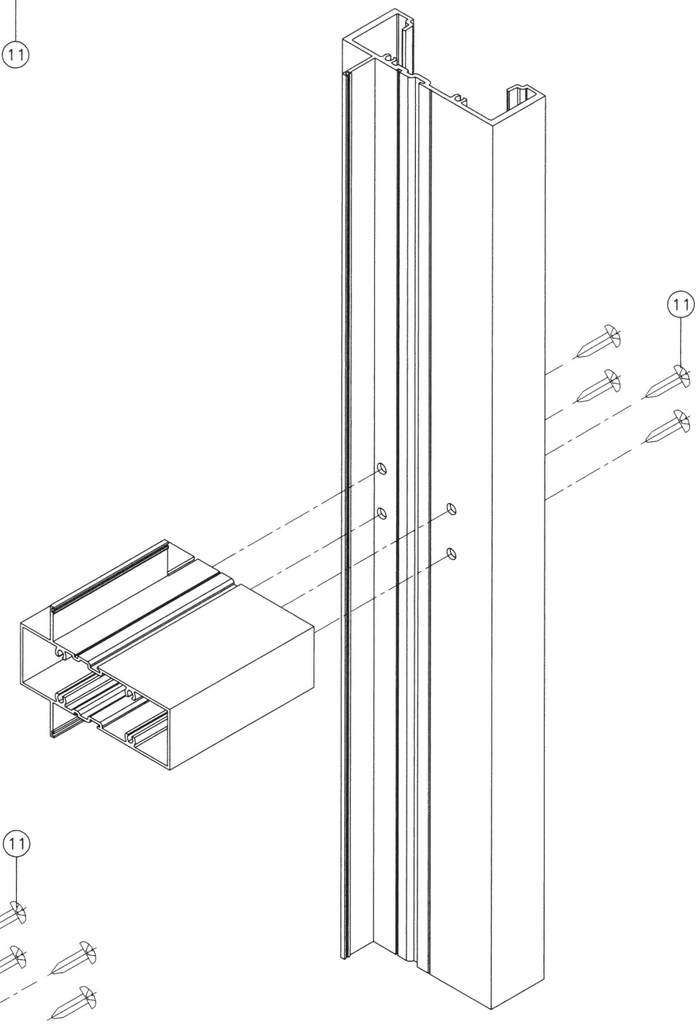
sheet 11 of 12



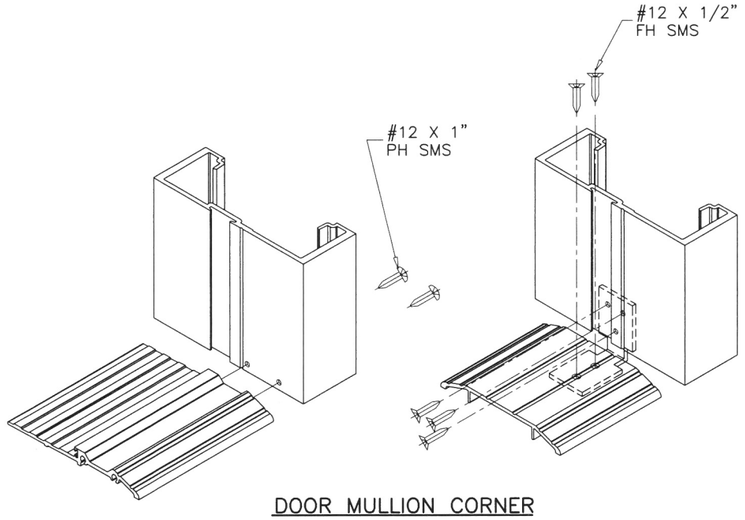



CIRCULAR OR ANGLED CORNERS

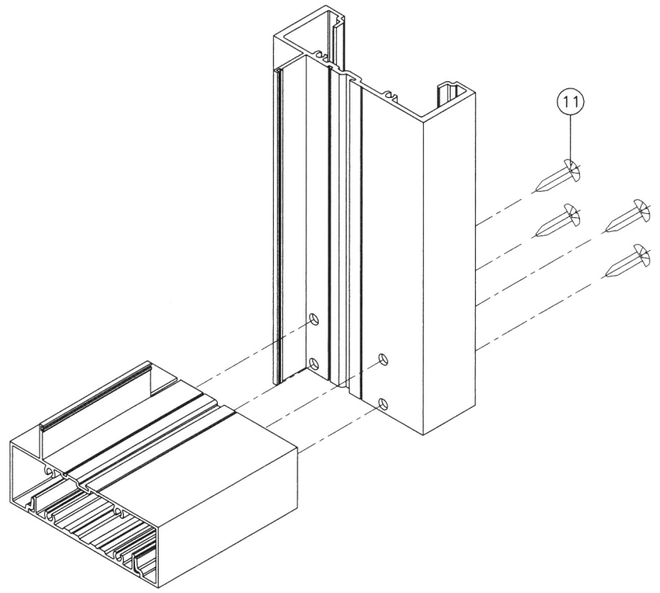



HORIZONTAL CORNER




DOOR MULLION CORNER




RECT. OR SQUARE CORNERS

Sealed: 8/19/2025

JALAL FAROOQ
LICENSE
No. 81223
STATE OF FLORIDA
PROFESSIONAL ENGINEER

FL #17897


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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STORE\W17-92ES

SERIES 8000 ALUM WINDOW WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

| no | date | by | description |
|---|---|---|---|
| | | | |

date: 10-20-17
scale: -
dr. by: TARIQ
chk. by:

drawing no.
W17-92

sheet 12 of 12