



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE
SECRETARY

FL # FL40673-R3
Application Type Revision
Code Version 2023
Application Status Approved

Comments

Archived ☐

Product Manufacturer Mr-Glass Doors & Windows Manufacturing, LLC
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ulises@mrglasswindows.com

Authorized Signature Ulises Senaris
ulises@mrglasswindows.com

Technical Representative Augusto Arias
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Medley, FL 33166
(305) 470-8284
aarias@mrglasswindows.com

Quality Assurance Representative
Address/Phone/Email

Category Windows
Subcategory Mullions

Compliance Method Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer
☐ Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the Evaluation Report Jalal Farooq
Florida License PE-81223
Quality Assurance Entity Keystone Certifications, Inc.
Quality Assurance Contract Expiration Date 04/30/2035
Validated By Abel Carrasco, PE
☒ Validation Checklist - Hardcopy Received

Certificate of Independence [FL40673-R3 COI SS - Certificate of Independence 2022.pdf](#)

Referenced Standard and Year (of Standard)	Standard	Year
	TAS 201	1994
	TAS 202	1994
	TAS 203	1994

Equivalence of Product Standards
Certified By

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

07/25/2023

Date Validated

07/25/2023

Date Pending FBC Approval

08/02/2023

Date Approved

10/18/2023

Summary of Products

FL #	Model, Number or Name	Description
40673.1	Extruded Aluminum Clipped Mullions	Large missile impact resistant clipped aluminum tube mullions.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +150/-150 Other: See drawing 21-75F for span vs load combination and installation details.		Installation Instructions FL40673 R3 II SS - Alum Clipped Mullions DWG 21-75F 2023.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL40673 R3 AE SS - Clipped Tube Mullion (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes
40673.2	Series MG150 Extruded Aluminum Unclipped Mullions	Large missile impact resistant extruded aluminum unclipped mullions.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +90/-120 Other: See drawing 22-08F for span vs load combination and installation details.		Installation Instructions FL40673 R3 II SS - Alum Un-clipped Mullions DWG 22-08F 2023.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL40673 R3 AE SS - Unclipped Tube Mullion (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes

[Back](#)

[Next](#)

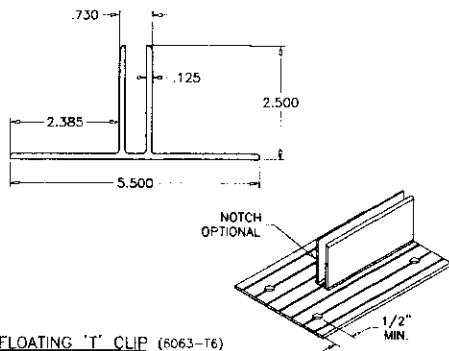
Contact Us :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

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Product Approval Accepts:

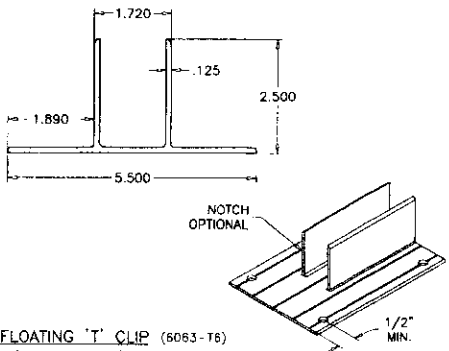




FLOATING 'T' CLIP (6063-T6)

(ALT. TO ANGLES)

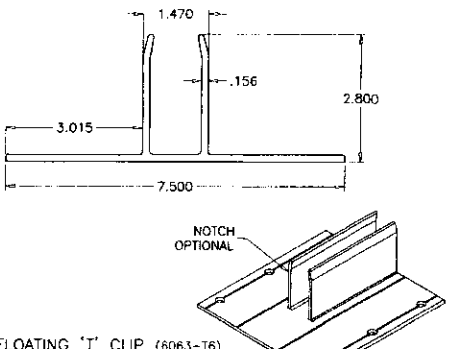
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 1BY TUBE MULLIONS.



FLOATING 'T' CLIP (6063-T6)

(ALT. TO ANGLES)

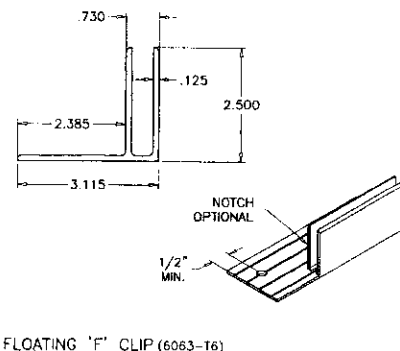
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 2BY TUBE MULLIONS.



FLOATING 'T' CLIP (6063-T6)

(ALT. TO ANGLES)

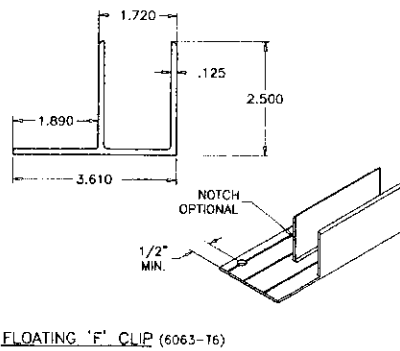
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 2BY TUBE MULLIONS.



FLOATING 'F' CLIP (6063-T6)

(ALT. TO ANGLES)

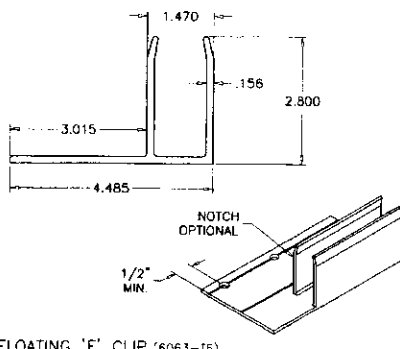
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 1BY TUBE MULLIONS.



FLOATING 'F' CLIP (6063-T6)

(ALT. TO ANGLES)

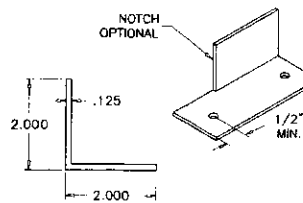
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 2BY TUBE MULLIONS.



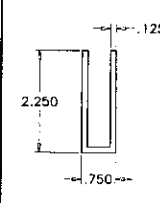
FLOATING 'F' CLIP (6063-T6)

(ALT. TO ANGLES)

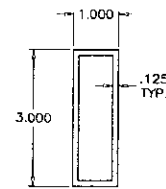
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 2BY TUBE MULLIONS.



ANGLE CLIP (6063-T6)

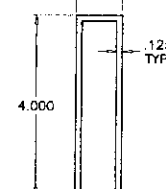


'U' CLIP (6063-T6)



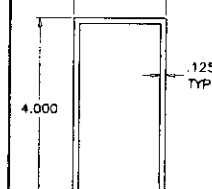
$I_x = .950 \text{ IN}^4$
 $S_x = .633 \text{ IN}^3$

**1 X 3
TUBE MULLION
6063-T6**



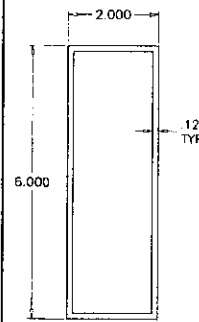
$I_x = 2.040 \text{ IN}^4$
 $S_x = 1.020 \text{ IN}^3$

**1 X 4
TUBE MULLION
6063-T6**



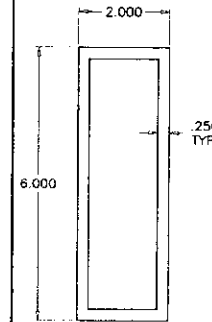
$I_x = 2.980 \text{ IN}^4$
 $S_x = 1.490 \text{ IN}^3$

**2 X 4
TUBE MULLION
6063-T6**



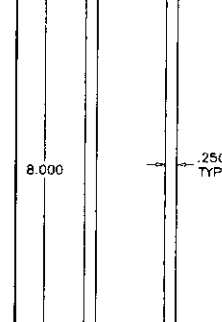
$I_x = 8.280 \text{ IN}^4$
 $S_x = 2.760 \text{ IN}^3$

**2 X 6
STD. MULLION
6063-T6**



$I_x = 15.200 \text{ IN}^4$
 $S_x = 5.070 \text{ IN}^3$

**2 X 6
HEAVY MULLION
6063-T6**

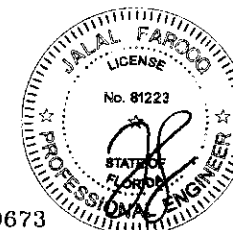


$I_x = 32.599 \text{ IN}^4$
 $S_x = 8.150 \text{ IN}^3$

**2 X 8
TUBE MULLION
6063-T6**

Sealed: 7/21/2023

FL #40673



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 284-8100
WWW.AFCENG.COM
PBP/E #8558
MULLION 21-75F-MG

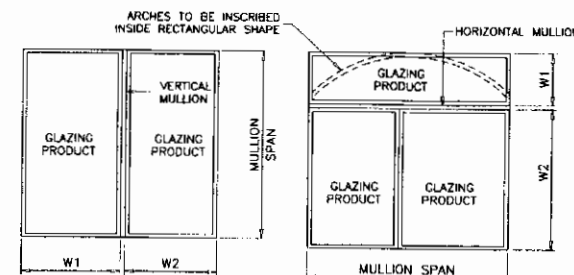
EXTRUDED ALUMINUM CLIPPED MULLIONS
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
www.mrglasswindows.com

Revisions:
no. date by description
date: 12-21-21
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:
drawing no. 21-75F
sheet 2 of 17

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)							
WINDOW DIMS.		1 X 3	1 X 4	2 X 4	2 X 6	2 X 6	2 X 8
WIDTH (W)	MULL SPAN	TUBE	TUBE	TUBE	STD.	HEAVY	TUBE
19-1/8"	38-5/8"	150.0	150.0	150.0	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0	150.0	150.0
30"		150.0	150.0	150.0	150.0	150.0	150.0
37"		150.0	150.0	150.0	150.0	150.0	150.0
42"		150.0	150.0	150.0	150.0	150.0	150.0
48"		140.6	150.0	150.0	150.0	150.0	150.0
54"		124.9	150.0	150.0	150.0	150.0	150.0
60"		112.5	150.0	150.0	150.0	150.0	150.0
66"	50-5/8"	102.2	150.0	150.0	150.0	150.0	150.0
72"		93.7	149.6	150.0	150.0	150.0	150.0
19-1/8"		150.0	150.0	150.0	150.0	150.0	150.0
26-1/2"		143.9	150.0	150.0	150.0	150.0	150.0
30"		127.1	150.0	150.0	150.0	150.0	150.0
37"		103.0	150.0	150.0	150.0	150.0	150.0
42"		90.8	144.7	150.0	150.0	150.0	150.0
48"		79.4	126.6	150.0	150.0	150.0	150.0
54"	63"	70.6	112.5	150.0	150.0	150.0	150.0
60"		63.5	101.3	150.0	150.0	150.0	150.0
66"		57.8	92.1	142.6	150.0	150.0	150.0
72"		53.0	84.4	130.7	150.0	150.0	150.0
19-1/8"		123.3	150.0	150.0	150.0	150.0	150.0
26-1/2"		89.0	145.6	150.0	150.0	150.0	150.0
30"		78.6	128.6	150.0	150.0	150.0	150.0
37"		63.7	104.3	150.0	150.0	150.0	150.0
42"	74-1/4"	56.1	91.9	143.3	150.0	150.0	150.0
48"		49.1	80.4	125.4	150.0	150.0	150.0
54"		43.7	71.5	111.5	150.0	150.0	150.0
60"		39.3	64.3	100.3	150.0	150.0	150.0
66"		35.7	58.5	91.2	150.0	150.0	150.0
72"		32.7	53.6	83.6	150.0	150.0	150.0
19-1/8"		75.3	143.2	150.0	150.0	150.0	150.0
26-1/2"		54.4	103.4	150.0	150.0	150.0	150.0
30"	76"	48.0	91.3	143.4	150.0	150.0	150.0
37"		38.9	74.0	116.3	150.0	150.0	150.0
42"		34.3	65.2	102.4	150.0	150.0	150.0
48"		30.0	57.1	89.6	150.0	150.0	150.0
54"		26.7	50.7	79.7	146.3	150.0	150.0
60"		24.0	45.7	71.7	131.7	150.0	150.0
66"		21.8	41.5	65.2	119.7	150.0	150.0
72"		20.0	38.0	59.7	109.7	150.0	150.0
19-1/8"	76"	70.2	136.4	150.0	150.0	150.0	150.0
26-1/2"		50.7	98.5	150.0	150.0	150.0	150.0
30"		44.8	87.0	136.7	150.0	150.0	150.0
37"		36.3	70.5	110.8	150.0	150.0	150.0
42"		32.0	62.1	97.6	150.0	150.0	150.0
48"		28.0	54.4	85.4	150.0	150.0	150.0
54"		24.9	48.3	75.9	139.5	150.0	150.0
60"		22.4	43.5	68.4	125.5	150.0	150.0
66"	72"	20.3	39.5	62.1	114.1	150.0	150.0
72"		-	36.2	57.0	104.6	150.0	150.0

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)							
WINDOW DIMS.		1 X 3	1 X 4	2 X 4	2 X 6	2 X 6	2 X 8
WIDTH (W)	MULL SPAN	TUBE	TUBE	TUBE	STD.	HEAVY	TUBE
19-1/8"	84"	52.0	110.6	150.0	150.0	150.0	150.0
26-1/2"		37.5	79.8	117.7	150.0	150.0	150.0
30"		33.2	70.5	104.0	150.0	150.0	150.0
37"		26.9	57.2	84.3	150.0	150.0	150.0
42"		23.7	50.4	74.3	146.0	150.0	150.0
48"		20.7	44.1	65.0	127.7	150.0	150.0
54"		-	39.2	57.8	113.5	150.0	150.0
60"		-	35.3	52.0	102.2	150.0	150.0
66"	96"	-	32.1	47.3	92.9	150.0	150.0
72"		-	29.4	43.3	85.2	150.0	150.0
19-1/8"		34.8	74.8	109.3	150.0	150.0	150.0
26-1/2"		25.1	54.0	78.9	150.0	150.0	150.0
30"		22.2	47.7	69.7	150.0	150.0	150.0
37"		-	38.7	56.5	125.9	150.0	150.0
42"		-	34.1	49.8	110.9	150.0	150.0
48"		-	29.6	43.5	97.0	150.0	150.0
54"	108"	-	26.5	38.7	86.2	150.0	150.0
60"		-	23.8	34.8	77.6	142.0	150.0
66"		-	21.7	31.7	70.6	129.1	150.0
72"		-	-	29.0	64.7	118.3	150.0
19-1/8"		24.5	52.5	76.8	150.0	150.0	150.0
26-1/2"		-	37.9	55.4	137.8	150.0	150.0
30"		-	33.5	48.9	121.8	150.0	150.0
37"		-	27.2	39.7	98.7	150.0	150.0
42"	120"	-	23.9	35.0	87.0	150.0	150.0
48"		-	20.9	30.6	76.1	139.2	150.0
54"		-	-	27.2	67.6	123.7	150.0
60"		-	-	24.5	60.9	111.3	150.0
66"		-	-	22.2	55.3	101.2	150.0
72"		-	-	20.4	50.7	92.8	147.7
19-1/8"		-	38.3	56.0	150.0	150.0	150.0
26-1/2"		-	27.6	40.4	110.9	150.0	150.0
30"	132"	-	24.4	35.7	97.9	150.0	150.0
37"		-	-	28.9	79.4	145.2	150.0
42"		-	-	25.5	69.9	127.9	150.0
48"		-	-	22.3	61.2	111.9	150.0
54"		-	-	-	54.4	99.5	150.0
60"		-	-	-	49.0	89.5	142.4
66"		-	-	-	44.5	81.4	129.4
72"		-	-	-	40.8	74.6	118.7
19-1/8"	132"	-	28.8	42.0	116.8	150.0	150.0
26-1/2"		-	20.8	30.3	84.3	150.0	150.0
30"		-	-	26.8	74.5	136.7	150.0
37"		-	-	21.7	60.4	110.8	150.0
42"		-	-	-	53.2	97.6	150.0
48"		-	-	-	46.5	85.4	146.0
54"		-	-	-	41.4	75.9	129.8
60"		-	-	-	37.2	68.4	116.8
66"	72"	-	-	-	33.8	62.1	106.2
72"		-	-	-	31.0	57.0	97.3

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)							
WINDOW DIMS.		1 X 3	1 X 4	2 X 4	2 X 6	2 X 6	2 X 8
WIDTH (W)	MULL SPAN	TUBE	TUBE	TUBE	STD.	HEAVY	TUBE
19-1/8"	144"	-	22.2	32.4	90.0	150.0	150.0
26-1/2"		-	-	23.4	64.9	119.2	150.0
30"		-	-	20.6	57.4	105.3	150.0
37"		-	-	-	46.5	85.4	150.0
42"		-	-	-	41.0	75.2	139.2
48"		-	-	-	35.8	65.8	121.8
54"		-	-	-	31.9	58.5	108.2
60"		-	-	-	28.7	52.6	97.4
66"	156"	-	-	-	26.1	47.9	86.6
72"		-	-	-	23.9	43.9	81.2
19-1/8"		-	-	-	70.8	129.9	150.0
26-1/2"		-	-	-	51.1	93.6	150.0
30"		-	-	-	45.1	82.8	150.0
37"		-	-	-	36.6	67.1	133.6
42"		-	-	-	32.2	59.2	117.7
48"		-	-	-	28.2	51.8	103.0
54"	168"	-	-	-	25.1	46.0	91.6
60"		-	-	-	22.6	41.4	82.4
66"		-	-	-	20.5	37.6	74.9
72"		-	-	-	-	34.5	68.7
19-1/8"		-	-	-	57.7	105.9	150.0
26-1/2"		-	-	-	41.6	76.4	150.0
30"		-	-	-	36.8	67.5	141.1
37"		-	-	-	29.8	54.7	114.4
42"	180"	-	-	-	26.3	48.2	100.8
48"		-	-	-	23.0	42.2	88.2
54"		-	-	-	20.4	37.5	78.4
60"		-	-	-	-	33.7	70.6
66"		-	-	-	-	30.7	64.2
72"		-	-	-	-	28.1	58.8

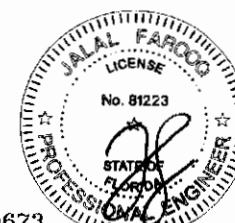


TYPICAL MULLION ARRANGEMENTS

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

NOTE:
MULLIONS RATED IN THESE CHARTS MAY BE ORIENTED
VERTICALLY OR HORIZONTALLY.
(INTERPOLATION BETWEEN WIDTHS ALLOWED)

Sealed: 7/21/2023



ALL LOADS ARE EXT.(+)/INT.(-).

FL #40673

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100 WWW.AFCORP.COM

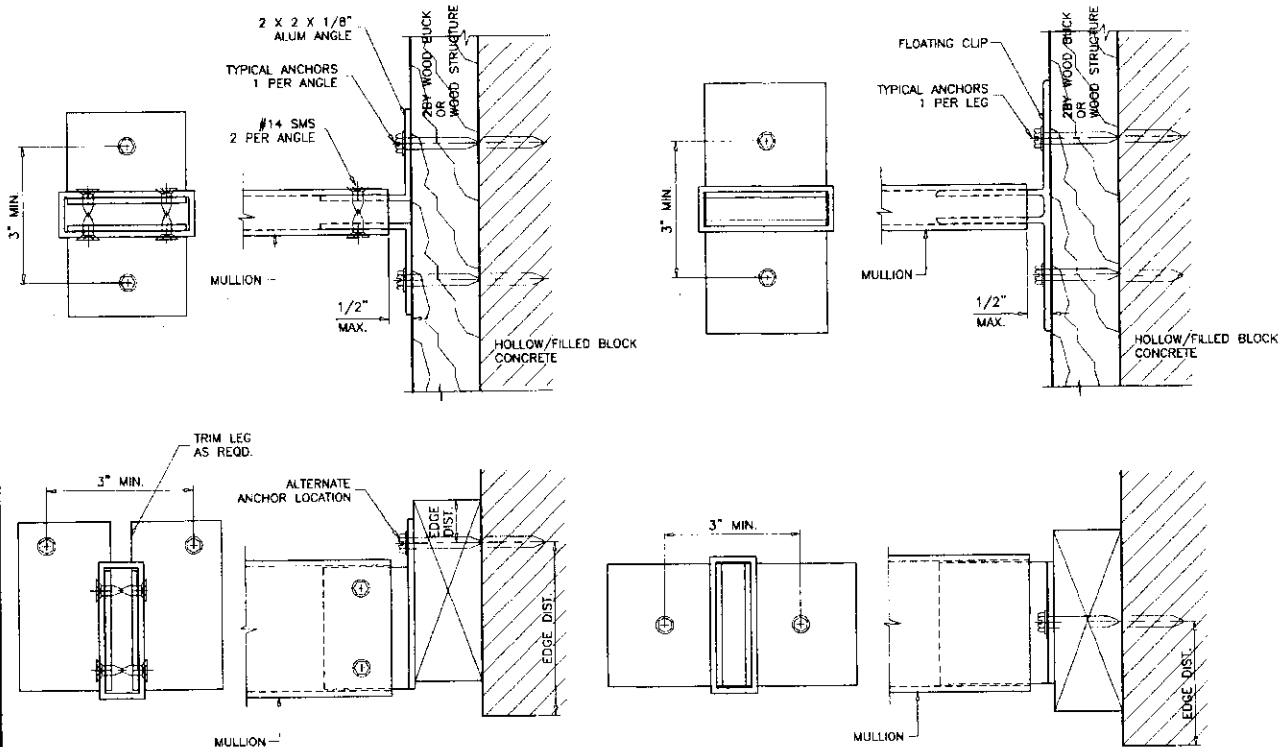
MR. GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3983 www.mrglasswindows.com

EXTRUDED ALUMINUM CLIPPED MULLIONS

Revisions:
no. date by description

date: 12-21-21
scale: -
dr. by: FAROOQ
chk. by: -

drawing no. 21-75F
sheet 3 of 17



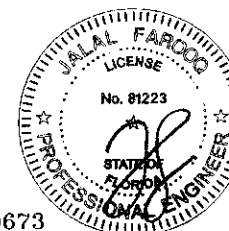
TYPICAL ANCHORS TYPE 'W2'

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
THRU 1BY BUCKS INTO CONC. OR MASONRY

SEE SHEET 6 FOR 'T' CLIP ANCHOR CAPACITIES

Sealed: 7/21/2023

FL #40673



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100
WWW.AFCORP.COM
FPE #5538
MULLION 21-75F-MC

EXTRUDED ALUMINUM CLIPPED MULLIONS
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
WWW.MRGGLASSWINDOWS.COM

Revisions:	No.	Date	Description
	1	12-21-21	1"
	2		3/8"
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drawing no.
21-75F
sheet 4 of 17

		a f c	
		AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 284-9300 WWW.AFCENG.COM FBPK # 855K	
		MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL 33166 Tel. (305) 764-3963 www.mrglasswindows.com	
(revisions:		EXTENDED ALUMINUM CLIPPED MULLIONS	
no.	date	by	description
drawing no.		21 - 75F	
sheet	5 of 17		

DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF							
WINDOW DIMS.		ANCHORS TYPE				WINDOW DIMS.		ANCHORS TYPE				WINDOW DIMS.		ANCHORS TYPE					
WIDTH (W)	MULL SPAN	W2T	B2T	C2T	M2T	WIDTH (W)	MULL SPAN	W2T	B2T	C2T	M2T	WIDTH (W)	MULL SPAN	W2T	B2T	C2T	M2T		
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0	19-1/8"	84"	94.7	104.0	150.0	140.2	19-1/8"	144"	55.2	60.7	89.3	81.8		
26-1/2"		149.5	150.0	150.0	150.0	26-1/2"		68.3	75.0	110.5	101.2	26-1/2"		39.8	43.8	64.5	59.0		
30"		132.1	145.1	150.0	150.0	30"		60.3	66.3	97.6	89.4	30"		35.2	38.7	56.9	52.1		
37"		107.1	117.6	150.0	150.0	37"		48.9	53.7	79.1	72.5	37"		28.5	31.4	46.2	42.3		
42"		94.3	103.6	150.0	139.7	42"		43.1	47.3	69.7	63.8	42"		25.1	27.6	40.7	37.2		
48"		82.6	90.7	133.5	122.3	48"		37.7	41.4	61.0	55.9	48"		22.0	24.2	35.6	32.6		
54"		73.4	80.6	118.7	108.7	54"		33.5	36.8	54.2	49.7	54"		-	21.5	31.6	29.0		
60"		66.0	72.5	106.8	97.8	60"		30.2	33.1	48.8	44.7	60"		-	-	28.5	26.1		
66"	50-5/8"	60.0	66.0	97.1	88.9	66"	96"	27.4	30.1	44.4	40.6	66"	-	-	25.9	23.7			
72"		55.0	60.5	89.0	81.5	72"		25.1	27.6	40.7	37.2	72"	-	-	23.7	21.7			
19-1/8"		150.0	150.0	150.0	150.0	19-1/8"		82.8	91.0	134.0	122.7	19-1/8"	51.0	56.0	82.4	75.5			
26-1/2"		113.3	124.5	150.0	150.0	26-1/2"		59.8	65.7	96.7	88.5	26-1/2"	36.8	40.4	59.5	54.5			
30"		100.1	110.0	150.0	148.3	30"		52.8	58.0	85.4	78.2	30"	32.5	35.7	52.6	48.1			
37"		81.2	89.2	131.3	120.2	37"		42.8	47.0	69.2	63.4	37"	26.3	28.9	42.6	39.0			
42"		71.5	78.6	115.7	105.9	42"		37.7	41.4	61.0	55.9	42"	23.2	25.5	37.5	34.4			
48"		62.6	68.7	101.2	92.7	48"		33.0	36.3	53.4	48.9	48"	20.3	22.3	32.8	30.1			
54"	63"	55.6	61.1	90.0	82.4	54"	108"	29.3	32.2	47.4	43.4	54"	-	-	29.2	26.7			
60"		50.1	55.0	81.0	74.1	60"		26.4	29.0	42.7	39.1	60"	-	-	26.3	24.1			
66"		45.5	50.0	73.6	67.4	66"		24.0	26.4	38.8	35.5	66"	-	-	23.9	21.9			
72"		41.7	45.8	67.5	61.8	72"		22.0	24.2	35.6	32.6	72"	-	-	21.9	20.1			
19-1/8"		126.2	138.6	150.0	150.0	19-1/8"		73.6	80.9	119.1	109.0	19-1/8"	47.3	52.0	76.5	70.1			
26-1/2"		91.1	100.1	147.3	134.9	26-1/2"		53.1	58.4	85.9	78.7	26-1/2"	34.2	37.5	55.2	50.6			
30"		80.5	88.4	130.1	119.2	30"		46.9	51.6	75.9	69.5	30"	30.2	33.1	48.8	44.7			
37"		65.2	71.7	105.5	96.6	37"		38.1	41.8	61.5	56.4	37"	24.5	26.9	39.6	36.2			
42"	74-1/4"	57.5	63.1	93.0	85.1	42"	120"	33.5	36.8	54.2	49.7	42"	21.6	23.7	34.9	31.9			
48"		50.3	55.2	81.3	74.5	48"		29.3	32.2	47.4	43.4	48"	-	20.7	30.5	27.9			
54"		44.7	49.1	72.3	66.2	54"		26.1	28.6	42.2	38.6	54"	-	-	27.1	24.8			
60"		40.2	44.2	65.1	59.6	60"		23.5	25.8	38.0	34.8	60"	-	-	24.2	22.3			
66"		36.6	40.2	59.2	54.2	66"		21.3	23.4	34.5	31.6	66"	-	-	22.2	20.3			
72"		33.5	36.8	54.2	49.7	72"		-	21.5	31.6	29.0	72"	-	-	20.3	-			
19-1/8"		76"	107.1	117.6	150.0	150.0		19-1/8"	132"	66.3	72.8	107.2	98.1	19-1/8"					
26-1/2"			77.3	84.9	125.0	114.5		26-1/2"		47.8	52.5	77.3	70.8	26-1/2"					
30"	68.3		75.0	110.4	101.1	30"	42.2	46.4		68.3	62.6	30"							
37"	55.4		60.8	89.5	82.0	37"	34.2	37.6		55.4	50.7	37"							
42"	48.8		53.6	78.9	72.2	42"	30.2	33.1		48.8	44.7	42"							
48"	42.7		46.9	69.0	63.2	48"	26.4	29.0		42.7	39.1	48"							
54"	37.9		41.7	61.3	56.2	54"	23.5	25.8		38.0	34.8	54"							
60"	34.1		37.5	55.2	50.6	60"	21.1	23.2		34.2	31.3	60"							
66"	76"	31.0	34.1	50.2	46.0	66"		-	21.1	31.1	28.4	66"							
72"		28.4	31.2	46.0	42.1	72"		-	-	28.5	26.1	72"							
19-1/8"		104.6	114.9	150.0	150.0	19-1/8"		50.2	66.2	97.4	89.2	19-1/8"							
26-1/2"		75.5	82.9	122.1	111.8	26-1/2"		43.5	47.8	70.3	64.4	26-1/2"							
30"		66.7	73.3	107.9	98.8	30"		38.4	42.2	62.1	56.9	30"							
37"		54.1	59.4	87.5	80.1	37"		31.1	34.2	50.4	46.1	37"							
42"		47.6	52.3	77.1	70.6	42"		27.4	30.1	44.4	40.6	42"							
48"		41.7	45.8	67.4	61.7	48"		24.0	26.4	38.8	35.5	48"							
54"	76"	37.1	40.7	59.9	54.9	54"		21.3	23.4	34.5	31.6	54"							
60"		33.3	36.6	53.9	49.4	60"		-	-	31.1	28.4	60"							
66"		30.3	33.3	49.0	44.9	66"		-	-	28.2	25.9	66"							
72"		27.8	30.5	44.9	41.2	72"		-	-	25.9	23.7	72"							

MULLION ANCHORS

VERTICAL MULLION

GLAZING PRODUCT

GLAZING PRODUCT

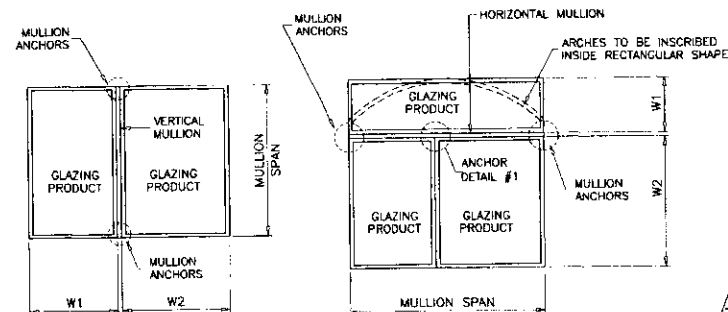
MULLION ANCHORS

W1

W2

MULLION SPAN

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

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

TYPICAL ANCHORS AT 'T' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (F_u=164 KSI, F_y=148 KSI)

W2T: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD

W2T: THRU 1BY BUCKS INTO CONCRETE OR BLOCKS
1-1/4" MIN. EMBED INTO CONCRETE OR BLOCKS

B2T: DIRECTLY INTO HOLLOW/FILLED BLOCKS
1-1/4" MIN. EMBED INTO BLOCKS

C2T: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M2T: INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (F_y = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" 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 NORMAL WEIGHT BLOCK AT JAMBS f'm = 2000 PSI MIN.

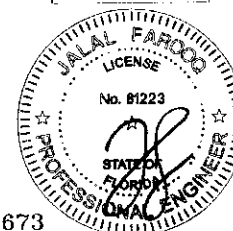
ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEETS 4 & 5 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

Sealed: 7/21/2023

FL #40673

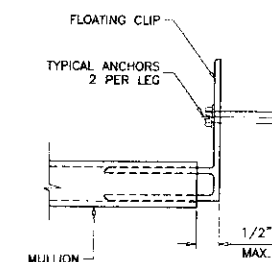
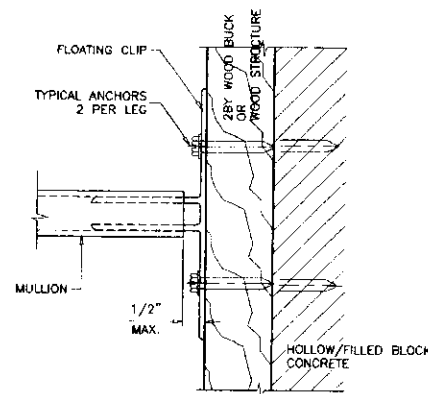
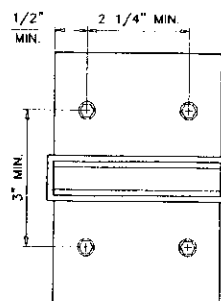
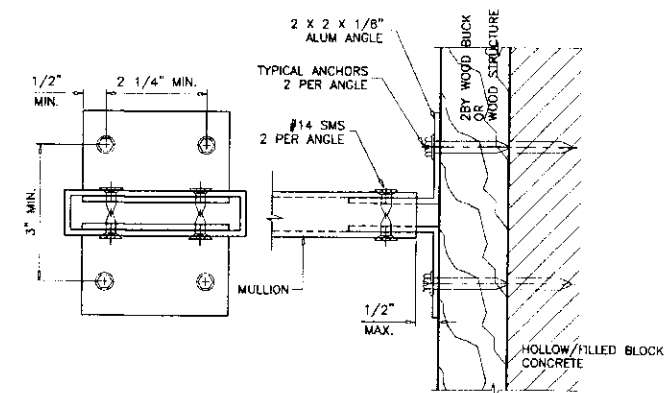


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100
WWW.AFCORP.COM
FBI #9598

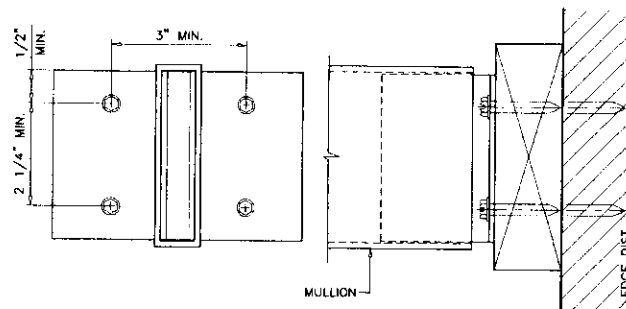
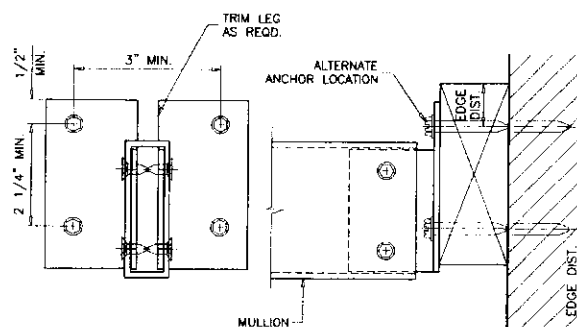
EXTRUDED ALUMINUM CLIPPED MULLIONS

MR. GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
www.mrglasswindows.com

Revisions:
date: 12-21-21
no: 1
description: no date by description
scale: -
dr: JARQ
chk: by:
drawing no: 21-75F
sheet 6 of 17



'F' CLIP DETAIL
APPLICABLE TO ALL SUBSTRATES
SHOWN FOR 'T' CLIP



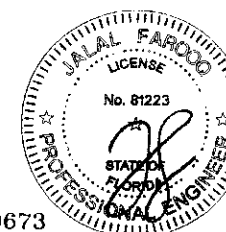
TYPICAL ANCHORS TYPE 'W4'

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
THRU 1BY BUCKS INTO CONC. OR MASONRY

SEE SHEET 9 FOR 'T' CLIP ANCHOR CAPACITIES
SEE SHEET 9.1 FOR 'F' CLIP ANCHOR CAPACITIES

Sealed: 7/21/2023

FL #40673



afC
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100
WWW.AFCENG.COM
P/E #3538

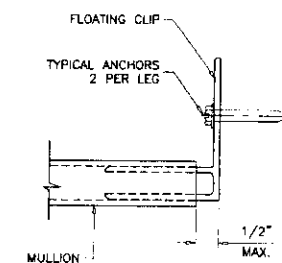
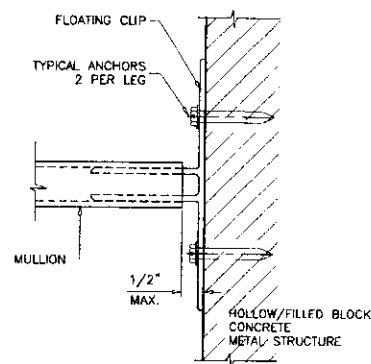
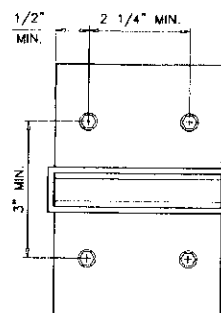
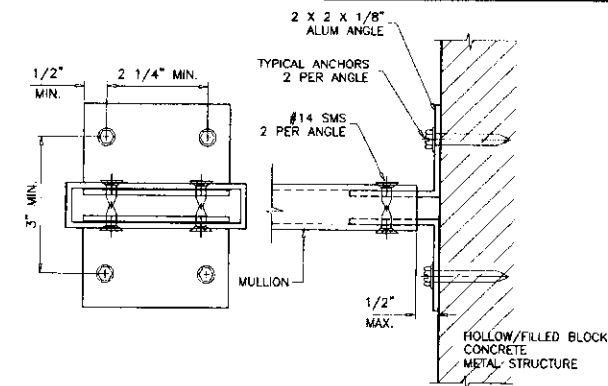
EXTRUDED ALUMINUM CLIPPED MULLIONS
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
WWW.MRGSSWINDOWS.COM

NO.	DATE	BY	DESCRIPTION
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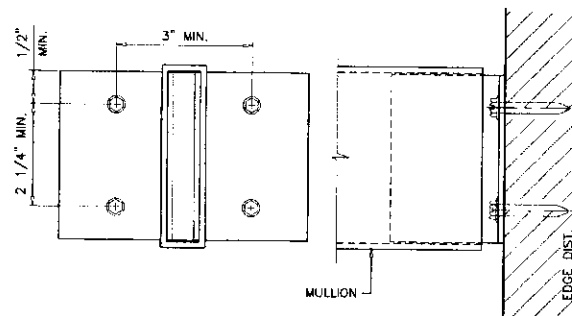
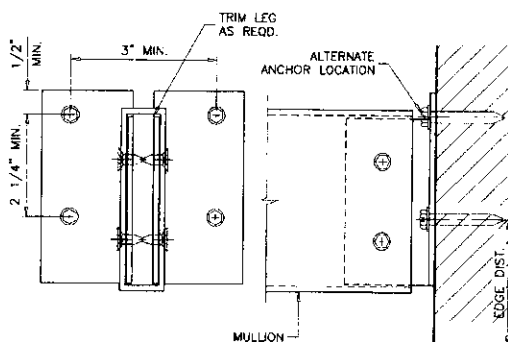
date: 12-21-21
scale: 3/8" = 1"
dr. by: TAPQ
chk. by:

drawing no.
21-75F

sheet 7 of 17



'F' CLIP DETAIL
APPLICABLE TO ALL SUBSTRATES
SHOWN FOR 'T' CLIP



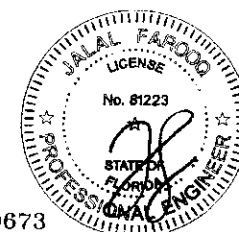
TYPICAL ANCHORS TYPE 'B4', 'C4', 'M4'

DIRECTLY INTO HOLLOW/FILLED BLOCK
DIRECTLY INTO CONCRETE
INTO METAL STRUCTURES

SEE SHEET 9 FOR 'T' CLIP ANCHOR CAPACITIES
SEE SHEET 9.1 FOR 'F' CLIP ANCHOR CAPACITIES

Sealed: 7/21/2023

FL #40673



AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 WWW.AFCENG.COM FBPE #8538		MULLION 21-75F-MG	
EXTRUDED ALUMINUM CLIPPED MULLIONS MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL 33166 Tel. (305) 764-3963 WWW.MRGLOSSWINDOWS.COM			
date: 12-21-21 scale: 3/8" = 1" dr. by: TABIQ chg. by:	revisions: no. date description 1 12-21-21	drawing no. 21-75F	sheet 8 of 17

DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF																																									
WINDOW DIMS.		ANCHORS TYPE				WINDOW DIMS.		ANCHORS TYPE				WINDOW DIMS.		ANCHORS TYPE																																							
WIDTH (W)	MULL SPAN	W4T	B4T	C4T	M4T	WIDTH (W)	MULL SPAN	W4T	B4T	C4T	M4T	WIDTH (W)	MULL SPAN	W4T	B4T	C4T	M4T																																				
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0	19-1/8"	84"	150.0	150.0	150.0	150.0	19-1/8"	144"	110.4	110.8	150.0	150.0																																				
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		136.6	137.1	150.0	150.0	26-1/2"		79.7	80.0	127.7	118.0																																				
30"		150.0	150.0	150.0	150.0	30"		120.7	121.1	150.0	150.0	30"		70.4	70.7	112.8	104.3																																				
37"		150.0	150.0	150.0	150.0	37"		97.9	98.2	150.0	144.9	37"		57.1	57.3	91.5	84.5																																				
42"		150.0	150.0	150.0	150.0	42"		86.2	86.5	138.1	127.7	42"		50.3	50.5	80.6	74.5																																				
48"		150.0	150.0	150.0	150.0	48"		75.4	75.7	120.9	111.7	48"		44.0	44.2	70.5	65.2																																				
54"		146.8	147.3	150.0	150.0	54"		67.0	67.3	107.4	99.3	54"		39.1	39.3	62.7	57.9																																				
60"		132.1	132.6	150.0	150.0	60"		60.3	60.6	96.7	89.4	60"		35.2	35.3	56.4	52.1																																				
66"	50-5/8"	120.1	120.5	150.0	150.0	66"	96"	54.9	55.1	87.9	81.2	66"	156"	32.0	32.1	51.3	47.4																																				
72"		110.1	110.5	150.0	150.0	72"		50.3	50.5	80.6	74.5	72"		29.3	29.4	47.0	43.4																																				
19-1/8"		150.0	150.0	150.0	150.0	19-1/8"		150.0	150.0	150.0	150.0	19-1/8"		101.9	102.3	150.0	150.0																																				
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		119.5	120.0	150.0	150.0	26-1/2"		73.6	73.8	117.9	109.0																																				
30"		150.0	150.0	150.0	150.0	30"		105.6	106.0	150.0	150.0	30"		65.0	65.2	104.1	96.2																																				
37"		150.0	150.0	150.0	150.0	37"		85.6	85.9	137.2	126.8	37"		52.7	52.9	84.4	78.0																																				
42"		143.0	143.6	150.0	150.0	42"		75.4	75.7	120.9	111.7	42"		46.4	46.6	74.4	68.7																																				
48"		125.2	125.6	150.0	150.0	48"		66.0	66.3	105.8	97.8	48"		40.6	40.8	46.5	60.2																																				
54"	63"	111.2	111.7	150.0	150.0	54"	108"	58.7	58.9	94.0	86.9	54"	168"	36.1	36.2	57.8	53.5																																				
60"		100.1	100.5	150.0	148.3	60"		52.8	53.0	84.6	78.2	60"		32.5	32.6	52.1	48.1																																				
66"		91.0	91.4	145.8	134.8	66"		48.0	48.2	76.9	71.1	66"		29.5	29.7	47.3	43.7																																				
72"		83.4	83.8	133.7	123.6	72"		44.0	44.2	50.3	65.2	72"		27.1	27.2	43.4	40.1																																				
19-1/8"		150.0	150.0	150.0	150.0	19-1/8"		147.2	147.8	150.0	150.0	19-1/8"		94.7	95.0	150.0	140.2																																				
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		106.3	106.7	150.0	150.0	26-1/2"		68.3	68.6	109.5	101.2																																				
30"		150.0	150.0	150.0	150.0	30"		93.9	94.2	150.0	139.0	30"		60.3	60.6	96.7	89.4																																				
37"		130.5	131.0	150.0	150.0	37"		76.1	76.4	121.9	112.7	37"		48.9	49.1	78.4	72.5																																				
42"	74-1/4"	114.9	115.4	150.0	150.0	42"	120"	67.0	67.3	107.4	99.3	42"	168"	43.1	43.3	69.1	63.8																																				
48"		100.6	101.0	150.0	149.0	48"		58.7	58.9	94.0	86.9	48"		37.7	37.9	60.4	55.9																																				
54"		89.4	89.7	143.2	132.4	54"		52.1	52.3	83.6	77.2	54"		33.5	33.7	53.7	49.7																																				
60"		80.5	80.8	128.9	119.2	60"		46.9	47.1	75.2	69.5	60"		30.2	30.3	48.3	44.7																																				
66"		73.1	73.4	117.2	108.3	66"		42.7	42.8	68.4	63.2	66"		27.4	27.5	43.9	40.6																																				
72"		67.0	67.3	107.4	99.3	72"		39.1	39.3	62.7	57.9	72"		25.1	25.2	40.3	37.2																																				
19-1/8"		150.0	150.0	150.0	150.0	19-1/8"		132.5	133.0	150.0	150.0	19-1/8"		132"																																							
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		95.6	96.0	150.0	141.6	26-1/2"																																									
30"	136.5	137.1	150.0	150.0	30"	84.5	84.8	135.4	125.1	30"																																											
37"	110.7	111.1	150.0	150.0	37"	68.5	68.8	109.8	101.4	37"																																											
42"	97.5	97.9	150.0	144.4	42"	60.3	60.6	96.7	89.4	42"																																											
48"	85.3	85.7	136.7	126.4	48"	52.8	53.0	84.6	78.2	48"																																											
54"	75.9	76.1	121.5	112.3	54"	46.9	47.1	75.2	69.5	54"																																											
60"	68.3	68.5	109.4	101.1	60"	42.2	42.4	67.7	62.6	60"																																											
66"	62.1	62.3	99.4	91.9	66"	38.4	38.5	61.5	56.9	66"																																											
72"	56.9	57.1	91.2	84.3	72"	35.2	35.3	56.4	52.1	72"																																											
19-1/8"	76"	150.0	150.0	150.0	150.0	19-1/8"	132"	120.5	120.9	150.0	150.0	19-1/8"																																									
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		86.9	87.3	139.3	128.8	26-1/2"																																									
30"		133.4	133.9	150.0	150.0	30"		76.8	77.1	123.1	113.7	30"																																									
37"		108.2	108.6	150.0	150.0	37"		62.3	62.5	99.8	92.2	37"																																									
42"		95.3	95.6	150.0	141.1	42"		54.9	55.1	87.9	81.2	42"																																									
48"		83.4	83.7	133.6	123.5	48"		48.0	48.2	76.9	71.1	48"																																									
54"		74.1	74.4	118.7	109.8	54"		42.7	42.8	68.4	63.2	54"																																									
60"		66.7	66.9	106.9	98.8	60"		38.4	38.5	61.5	56.9	60"																																									
66"	60.6	60.9	97.1	89.8	66"	34.9	35.0	55.9	51.7	66"																																											
72"	55.6	55.8	89.1	82.3	72"	32.0	32.1	51.3	47.4	72"																																											

MULLION ANCHORS

VERTICAL MULLION

GLAZING PRODUCT

GLAZING PRODUCT

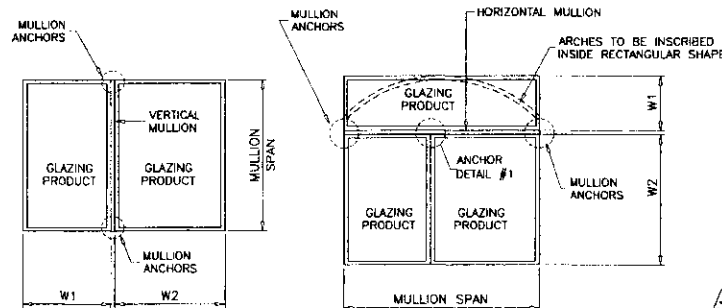
MULLION ANCHORS

W1

W2

MULLION SPAN

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

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

TYPICAL ANCHORS AT 'T' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

W4T: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD

W4T: THRU 1BY BUCKS INTO CONCRETE OR BLOCKS
1-1/4" MIN. EMBED INTO CONCRETE OR BLOCKS

B4T: DIRECTLY INTO HOLLOW/FILLED BLOCKS
1-1/4" MIN. EMBED INTO BLOCK

C4T: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M4T: INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.

INTO WOOD STRUCTURE = 1" MIN.

INTO METAL STRUCTURE = 3/4" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.

CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.

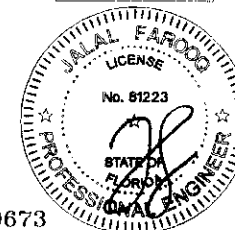
C-90 HOLLOW/FILLED NORMAL WEIGHT BLOCK AT JAMBS f'm = 2000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEETS 7 & 8 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

'T' CLIP
ANCHOR CHART



Sealed: 7/21/2023

FL #40673

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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MIAMI, FLORIDA 33173
TEL (305) 264-8100
WWW.AFCENG.COM
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EXTRUDED ALUMINUM CLIPPED MULLIONS

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Medley, FL 33166
Tel. (305) 784-3963
www.mrglasswindows.com

Revisions:
no. date by description

date: 12-21-21
scale: -
dr. by: "ARIQ"
chk. by: -

drawing no.
21-75F

sheet 9 of 17

DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF					
WINDOW DIMS.		ANCHORS TYPE				WINDOW DIMS.		ANCHORS TYPE				WINDOW DIMS.		ANCHORS TYPE			
WIDTH (W)	MULL SPAN	W2F	B2F	C2F	M2F	WIDTH (W)	MULL SPAN	W2F	B2F	C2F	M2F	WIDTH (W)	MULL SPAN	W2F	B2F	C2F	M2F
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0	19-1/8"	84"	94.7	95.0	150.0	140.2	19-1/8"	144"	55.2	55.4	88.5	81.8
26-1/2"		149.5	150.0	150.0	150.0	26-1/2"		68.3	68.6	109.5	101.2	26-1/2"		39.8	40.0	63.8	59.0
30"		132.1	132.6	150.0	150.0	30"		60.3	60.6	96.7	89.4	30"		35.2	35.3	56.4	52.1
37"		107.1	107.5	150.0	150.0	37"		48.9	49.1	78.4	72.5	37"		28.5	28.6	45.7	42.3
42"		94.3	94.7	150.0	139.7	42"		43.1	43.3	69.1	63.8	42"		25.1	25.2	40.3	37.2
48"		82.6	82.9	132.3	122.3	48"		37.7	37.9	60.4	55.9	48"		22.0	22.1	35.3	32.6
54"		73.4	73.7	117.6	108.7	54"		33.5	33.7	53.7	49.7	54"		-	-	31.3	29.0
60"		66.0	66.3	105.8	97.8	60"		30.2	30.3	48.3	44.7	60"		-	-	28.2	26.1
66"		60.0	60.3	96.2	88.9	66"		27.4	27.5	43.9	40.6	66"		-	-	25.6	23.7
72"	55.0	55.2	88.2	81.5	72"	25.1	25.2	40.3	37.2	72"	-	-	23.5	21.7			
19-1/8"	50-5/8"	150.0	150.0	150.0	150.0	19-1/8"	96"	82.8	83.1	132.7	122.7	19-1/8"	156"	51.0	51.2	81.7	75.5
26-1/2"		113.3	113.8	150.0	150.0	26-1/2"		59.8	60.0	95.8	88.5	26-1/2"		36.8	36.9	58.9	54.5
30"		100.1	100.5	150.0	148.3	30"		52.8	53.0	84.6	78.2	30"		32.5	32.6	52.1	48.1
37"		81.2	81.5	130.1	120.2	37"		42.8	43.0	68.6	63.4	37"		26.3	26.4	42.2	39.0
42"		71.5	71.8	114.6	105.9	42"		37.7	37.9	60.4	55.9	42"		23.2	23.3	37.2	34.4
48"		62.6	62.8	100.3	92.7	48"		33.0	33.1	52.9	48.9	48"		20.3	20.4	32.5	30.1
54"		55.6	55.8	89.1	82.4	54"		29.3	29.4	47.0	43.4	54"		-	-	28.9	26.7
60"		50.1	50.3	80.2	74.1	60"		26.4	26.5	42.3	39.1	60"		-	-	26.0	24.1
66"		45.5	45.7	72.9	67.4	66"		24.0	24.1	38.5	35.5	66"		-	-	23.7	21.9
72"	41.7	41.9	66.8	61.8	72"	22.0	22.1	35.3	32.6	72"	-	-	21.7	20.1			
19-1/8"	63"	126.2	126.7	150.0	150.0	19-1/8"	108"	73.6	73.9	118.0	109.0	19-1/8"	168"	47.3	47.5	75.8	70.1
26-1/2"		91.1	91.4	145.9	134.9	26-1/2"		53.1	53.3	85.1	78.7	26-1/2"		34.2	34.3	54.7	50.6
30"		80.5	80.8	128.9	119.2	30"		46.9	47.1	75.2	69.5	30"		30.2	30.3	48.3	44.7
37"		65.2	65.5	104.5	96.6	37"		38.1	38.2	61.0	56.4	37"		24.5	24.6	39.2	36.2
42"		57.5	57.7	92.1	85.1	42"		33.5	33.7	53.7	49.7	42"		21.6	21.6	34.5	31.9
48"		50.3	50.5	80.6	74.5	48"		29.3	29.4	47.0	43.4	48"		-	-	30.2	27.9
54"		44.7	44.9	71.6	66.2	54"		26.1	26.2	41.8	38.6	54"		-	-	26.9	24.8
60"		40.2	40.4	64.5	59.6	60"		23.5	23.6	37.6	34.8	60"		-	-	24.2	22.3
66"		36.6	36.7	58.6	54.2	66"		21.3	21.4	34.2	31.6	66"		-	-	22.0	20.3
72"	33.5	33.7	53.7	49.7	72"	-	-	31.3	29.0	72"	-	-	20.1	-			
19-1/8"	74-1/4"	107.1	107.5	150.0	150.0	19-1/8"	120"	66.3	66.5	106.2	98.1	19-1/8"	192"	47.3	47.5	75.8	70.1
26-1/2"		77.3	77.6	123.8	114.5	26-1/2"		47.8	48.0	76.6	70.8	26-1/2"		34.2	34.3	54.7	50.6
30"		68.3	68.5	109.4	101.1	30"		42.2	42.4	67.7	62.6	30"		30.2	30.3	48.3	44.7
37"		55.4	55.6	88.7	82.0	37"		34.2	34.4	54.9	50.7	37"		24.5	24.6	39.2	36.2
42"		48.8	48.9	78.1	72.2	42"		30.2	30.3	48.3	44.7	42"		21.6	21.6	34.5	31.9
48"		42.7	42.8	68.4	63.2	48"		26.4	26.5	42.3	39.1	48"		-	-	30.2	27.9
54"		37.9	38.1	60.8	56.2	54"		23.5	23.6	37.6	34.8	54"		-	-	26.9	24.8
60"		34.1	34.3	54.7	50.6	60"		21.1	21.2	33.8	31.3	60"		-	-	24.2	22.3
66"		31.0	31.1	49.7	46.0	66"		-	-	30.8	28.4	66"		-	-	22.0	20.3
72"	28.4	28.6	45.6	42.1	72"	-	-	28.2	26.1	72"	-	-	20.1	-			
19-1/8"	76"	104.6	105.0	150.0	150.0	19-1/8"	132"	60.2	60.5	96.5	89.2	19-1/8"	204"	47.3	47.5	75.8	70.1
26-1/2"		75.5	75.8	121.0	111.8	26-1/2"		43.5	43.6	69.7	64.4	26-1/2"		34.2	34.3	54.7	50.6
30"		66.7	66.9	106.9	98.8	30"		38.4	38.5	61.5	56.9	30"		30.2	30.3	48.3	44.7
37"		54.1	54.3	86.6	80.1	37"		31.1	31.3	49.9	46.1	37"		24.5	24.6	39.2	36.2
42"		47.6	47.8	76.3	70.6	42"		27.4	27.5	43.9	40.6	42"		21.6	21.6	34.5	31.9
48"		41.7	41.8	66.8	61.7	48"		24.0	24.1	38.5	35.5	48"		-	-	30.2	27.9
54"		37.1	37.2	59.4	54.9	54"		21.3	21.4	34.2	31.6	54"		-	-	26.9	24.8
60"		33.3	33.5	53.4	49.4	60"		-	-	30.8	28.4	60"		-	-	24.2	22.3
66"		30.3	30.4	48.6	44.9	66"		-	-	28.0	25.9	66"		-	-	22.0	20.3
72"	27.8	27.9	44.5	41.2	72"	-	-	25.6	23.7	72"	-	-	20.1	-			

MULLION ANCHORS

GLAZING PRODUCT

GLAZING PRODUCT

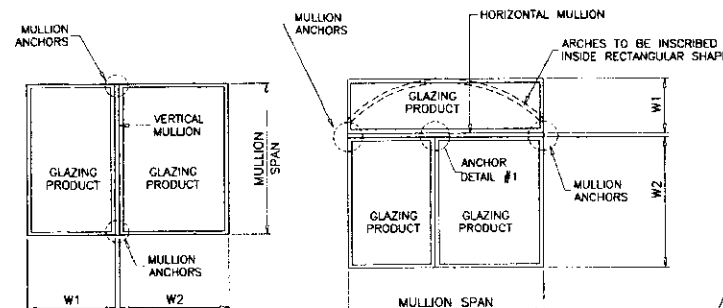
VERTICAL MULLION

MULLION SPAN

W1

W2

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

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

TYPICAL ANCHORS AT 'F' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

W2F: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD

W2F: THRU 1BY BUCKS INTO CONCRETE OR BLOCKS
1-1/4" MIN. EMBED INTO CONCRETE OR BLOCKS

B2F: DIRECTLY INTO HOLLOW/FILLED BLOCKS
1-1/4" MIN. EMBED INTO BLOCK

C2F: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M2F: INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

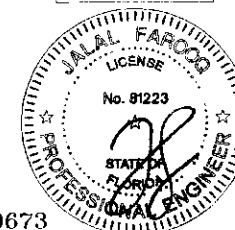
WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 HOLLOW/FILLED NORMAL WEIGHT BLOCK AT JAMBS f'm = 2000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEETS 7 & 8 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

'F' CLIP
ANCHOR CHART



Sealed: 7/21/2023

FL #40673

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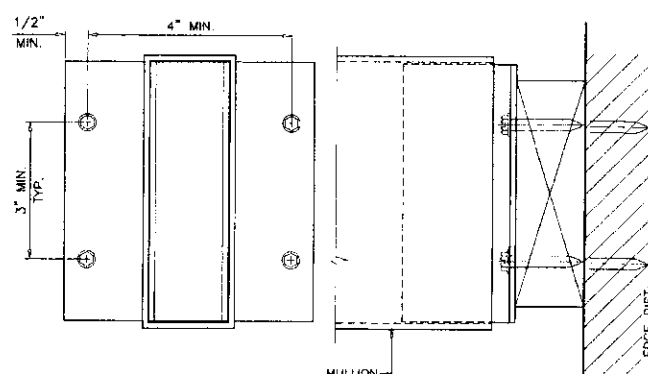
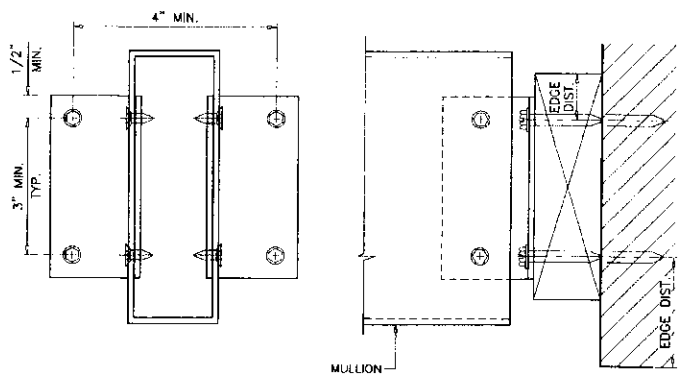
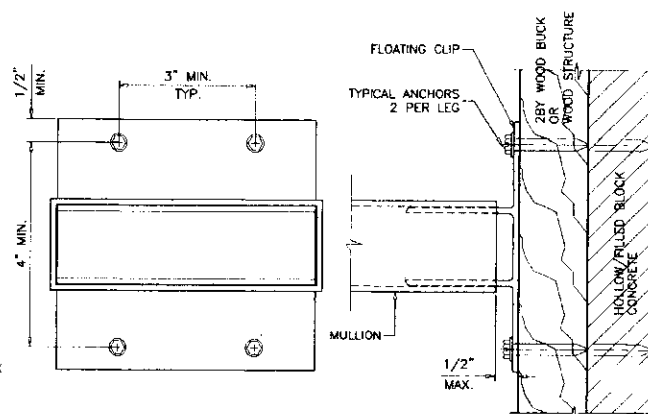
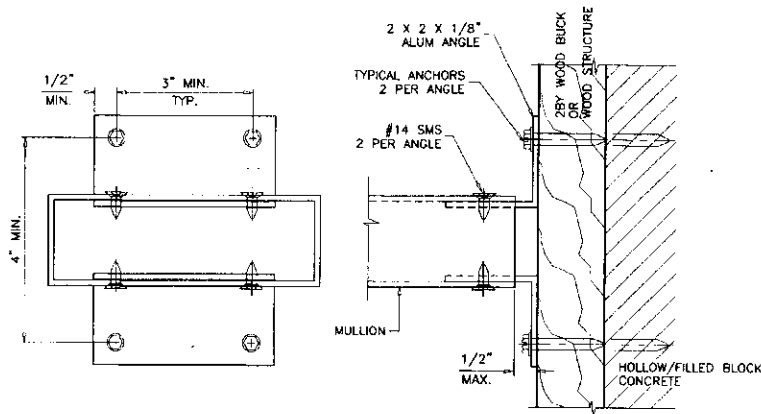
Revisions:

no.	date	by	description
12-21-21			

Scale: -
Dr. by: TARIQ
CHK. by:

drawing no.
21-75F

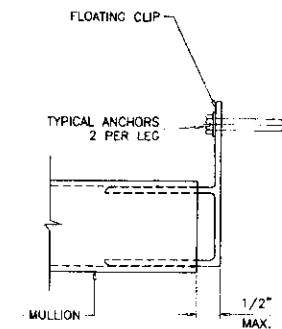
sheet 9 of 17



TYPICAL ANCHORS TYPE 'W4A'

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
THRU 1BY BUCKS INTO CONC. OR MASONRY

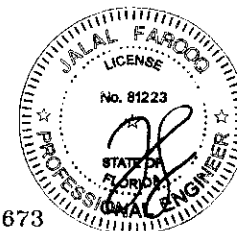
SEE SHEET 12 FOR 'T' CLIP ANCHOR CAPACITIES
SEE SHEET 12.1 FOR 'F' CLIP ANCHOR CAPACITIES



'F' CLIP DETAIL
APPLICABLE TO ALL SUBSTRATES
SHOWN FOR 'T' CLIP

Sealed: 7/21/2023

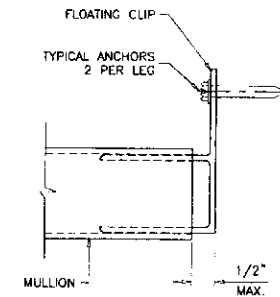
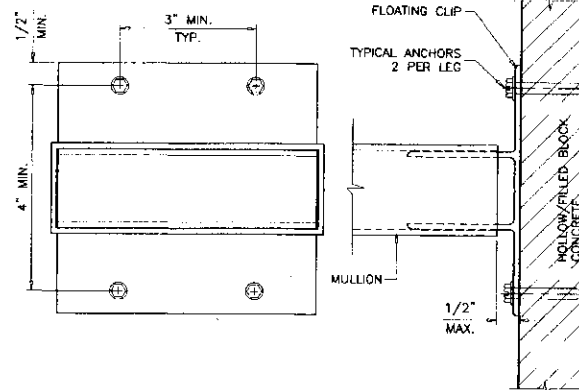
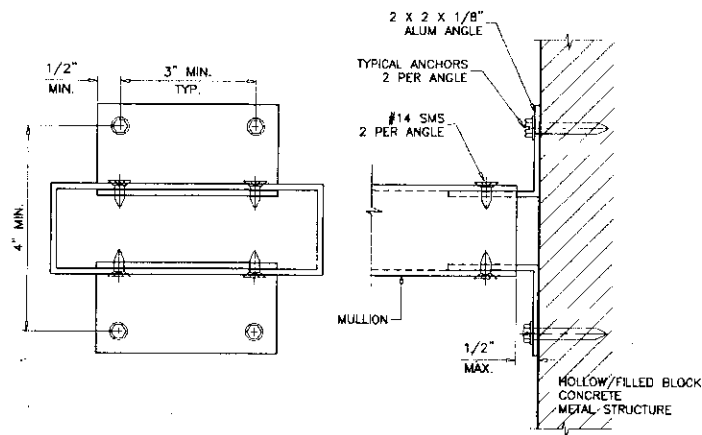
FL #40673



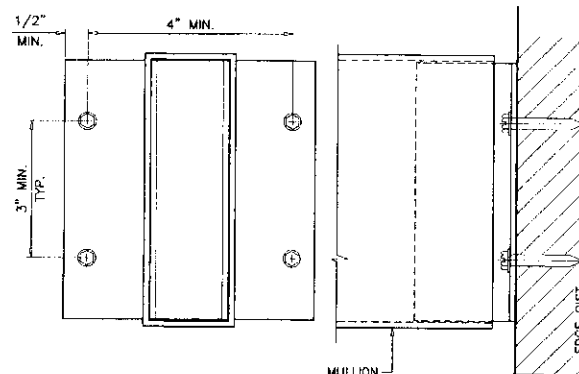
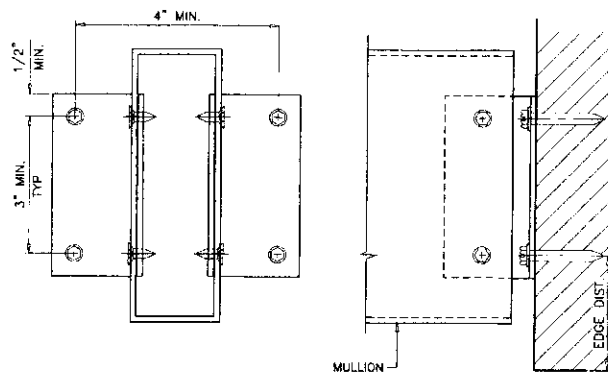
AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL: (305) 264-8100 WWW.AFCORP.COM FBPE #3538			
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL 33166 Tel: (305) 764-3963 WWW.MRGGLASSWINDOWS.COM			
REVISIONS: NO. DATE BY DESCRIPTION	EXTRUDED ALUMINUM CLIPPED MULLIONS		
date: 12-21-21 scale: 3/8" = 1" dr. by: FAROQ chk. by:	drawing no. 21-75F sheet 10 of 17		

af c

MULLION 21-75F-WG



'F' CLIP DETAIL
APPLICABLE TO ALL SUBSTRATES
SHOWN FOR 'T' CLIP



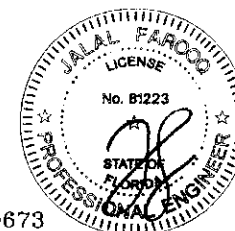
TYPICAL ANCHORS TYPE 'B4A', 'C4A', 'M4A'

DIRECTLY INTO HOLLOW/FILLED BLOCK
DIRECTLY INTO CONCRETE
INTO METAL STRUCTURES

SEE SHEET 12 FOR 'T' CLIP ANCHOR CAPACITIES
SEE SHEET 12.1 FOR 'F' CLIP ANCHOR CAPACITIES

Sealed: 7/21/2023

FL #40673



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33179
TEL (305) 284-8100
WWW.AFCENG.COM
FBPE #3538

EXTRUDED ALUMINUM CLIPPED MULLIONS

MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
WWW.MRGSSWINDOWS.COM

revisions:	no.	date	by	description
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date: 12-21-21

scale: 3/8" = 1"

dr. by: JAF

chk. by:

drawing no. 21-75F

sheet 11 of 17

DESIGN LOAD CAPACITY - PSF					DESIGN LOAD CAPACITY - PSF					DESIGN LOAD CAPACITY - PSF							
WINDOW DIMS.		ANCHORS TYPE			WINDOW DIMS.		ANCHORS TYPE			WINDOW DIMS.		ANCHORS TYPE					
WIDTH (W)	MULL SPAN	W4AT	B4AT	C4AT	M4AT	WIDTH (W)	MULL SPAN	W4AT	B4AT	C4AT	M4AT	WIDTH (W)	MULL SPAN	W4AT	B4AT	C4AT	M4AT
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0	19-1/8"	84"	150.0	150.0	150.0	150.0	19-1/8"	144"	110.4	121.3	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		136.6	150.0	150.0	150.0	26-1/2"		79.7	87.5	128.9	118.0
30"		150.0	150.0	150.0	150.0	30"		120.7	132.6	150.0	150.0	30"		70.4	77.3	113.9	104.3
37"		150.0	150.0	150.0	150.0	37"		97.9	107.5	150.0	144.9	37"		57.1	62.7	92.3	84.5
42"		150.0	150.0	150.0	150.0	42"		86.2	94.7	139.4	127.7	42"		50.3	55.2	81.3	74.5
48"		150.0	150.0	150.0	150.0	48"		75.4	82.9	122.0	111.7	48"		44.0	48.3	71.2	65.2
54"		146.8	150.0	150.0	150.0	54"		67.0	73.7	108.4	99.3	54"		39.1	43.0	63.3	57.9
60"		132.1	145.1	150.0	150.0	60"		60.3	66.3	97.6	89.4	60"		35.2	38.7	56.9	52.1
66"		120.1	131.9	150.0	150.0	66"		54.9	60.3	88.7	81.2	66"		32.0	35.2	51.8	47.4
72"	110.1	120.9	150.0	150.0	72"	50.3	55.2	81.3	74.5	72"	29.3	32.2	44.7	43.4			
19-1/8"	50-5/8"	150.0	150.0	150.0	150.0	19-1/8"	96"	150.0	150.0	150.0	150.0	19-1/8"	156"	101.9	112.0	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		119.5	131.3	150.0	150.0	26-1/2"		73.6	80.8	119.0	109.0
30"		150.0	150.0	150.0	150.0	30"		105.6	116.0	150.0	150.0	30"		65.0	71.4	105.1	96.2
37"		150.0	150.0	150.0	150.0	37"		85.6	94.1	138.5	126.8	37"		52.7	57.9	85.2	78.0
42"		143.0	150.0	150.0	150.0	42"		75.4	82.9	122.0	111.7	42"		46.4	51.0	75.1	68.7
48"		125.2	137.5	150.0	150.0	48"		66.0	72.5	106.8	97.8	48"		40.6	44.6	65.7	60.2
54"		111.2	122.2	150.0	150.0	54"		58.7	64.4	94.9	86.9	54"		35.1	39.7	58.4	53.5
60"		100.1	110.0	150.0	148.3	60"		52.8	58.0	85.4	78.2	60"		32.5	35.7	52.6	48.1
66"		91.0	100.0	147.2	134.8	66"		48.0	52.7	77.6	71.1	66"		29.5	32.4	47.8	43.7
72"	83.4	91.7	135.0	123.6	72"	44.0	48.3	71.2	65.2	72"	27.1	29.7	43.8	40.1			
19-1/8"	63"	150.0	150.0	150.0	150.0	19-1/8"	108"	147.2	150.0	150.0	150.0	19-1/8"	168"	94.7	104.0	150.0	140.2
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		108.3	116.7	150.0	150.0	26-1/2"		68.3	75.0	110.5	101.2
30"		150.0	150.0	150.0	150.0	30"		93.9	103.1	150.0	139.0	30"		60.3	66.3	97.6	89.4
37"		130.5	143.3	150.0	150.0	37"		76.1	83.6	123.1	112.7	37"		48.9	53.7	79.1	72.5
42"		114.9	126.3	150.0	150.0	42"		67.0	73.7	108.4	99.3	42"		43.1	47.3	69.7	63.8
48"		100.6	110.5	150.0	149.0	48"		58.7	64.4	94.9	86.9	48"		37.7	41.4	61.0	55.9
54"		89.4	98.2	144.6	132.4	54"		52.1	57.3	84.3	77.2	54"		33.5	36.8	54.2	49.7
60"		80.5	88.4	130.1	119.2	60"		46.9	51.6	75.9	69.5	60"		30.2	33.1	48.8	44.7
66"		73.1	80.3	118.3	108.3	66"		42.7	46.9	69.0	63.2	66"		27.4	30.1	44.4	40.6
72"	67.0	73.7	108.4	99.3	72"	39.1	43.0	63.3	57.9	72"	25.1	27.6	40.7	37.2			
19-1/8"	74-1/4"	150.0	150.0	150.0	150.0	19-1/8"	120"	132.5	145.6	150.0	150.0	19-1/8"	192"	120.5	132.3	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		95.6	105.1	150.0	141.6	26-1/2"		86.9	95.5	140.6	128.8
30"		136.5	150.0	150.0	150.0	30"		84.5	92.8	136.6	125.1	30"		76.8	84.4	124.2	113.7
37"		110.7	121.6	150.0	150.0	37"		68.5	75.2	110.8	101.4	37"		62.3	68.4	100.7	92.2
42"		97.5	107.1	150.0	144.4	42"		60.3	66.3	97.5	89.4	42"		54.9	60.3	88.7	81.2
48"		85.3	93.7	138.0	126.4	48"		52.8	58.0	85.4	78.2	48"		48.0	52.7	77.6	71.1
54"		75.9	83.3	122.7	112.3	54"		46.9	51.6	75.9	69.5	54"		42.7	46.9	69.0	63.2
60"		68.3	75.0	110.4	101.1	60"		42.2	46.4	68.3	62.6	60"		38.4	42.2	62.1	56.9
66"		62.1	68.2	100.4	91.9	66"		38.4	42.2	62.1	56.9	66"		35.2	38.7	56.9	52.1
72"	56.9	62.5	92.0	84.3	72"	35.2	38.7	56.9	52.1	72"	32.0	35.2	51.8	47.4			
19-1/8"	76"	150.0	150.0	150.0	150.0	19-1/8"	132"	120.5	132.3	150.0	150.0	19-1/8"	208"	120.5	132.3	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0	26-1/2"		86.9	95.5	140.6	128.8	26-1/2"		86.9	95.5	140.6	128.8
30"		133.4	146.5	150.0	150.0	30"		76.8	84.4	124.2	113.7	30"		76.8	84.4	124.2	113.7
37"		108.2	118.8	150.0	150.0	37"		62.3	68.4	100.7	92.2	37"		62.3	68.4	100.7	92.2
42"		95.3	104.7	150.0	141.1	42"		54.9	60.3	88.7	81.2	42"		54.9	60.3	88.7	81.2
48"		83.4	91.6	134.8	123.5	48"		48.0	52.7	77.6	71.1	48"		48.0	52.7	77.6	71.1
54"		74.1	81.4	119.9	109.8	54"		42.7	46.9	69.0	63.2	54"		42.7	46.9	69.0	63.2
60"		66.7	73.3	107.9	98.8	60"		38.4	42.2	62.1	56.9	60"		38.4	42.2	62.1	56.9
66"		60.6	66.6	98.1	89.8	66"		34.9	38.3	56.5	51.7	66"		34.9	38.3	56.5	51.7
72"	55.6	61.1	89.9	82.3	72"	32.0	35.2	51.8	47.4	72"	32.0	35.2	51.8	47.4			

MULLION ANCHORS

MULLION

GLAZING PRODUCT

GLAZING PRODUCT

MULLION ANCHORS

W1

W2

MULLION SPAN

TYPICAL MULLION ARRANGEMENT

ALL LOADS ARE EXT.(+)/INT.(-).

TYPICAL ANCHORS AT 'T' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (F_u=164 KSI, F_y=148 KSI)

W4AT: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD

W4AT: THRU 1BY BUCKS INTO CONCRETE OR BLOCKS
1-1/4" MIN. EMBED INTO CONCRETE OR BLOCKS

B4AT: DIRECTLY INTO HOLLOW/FILLED BLOCKS
1-1/4" MIN. EMBED INTO BLOCK

C4AT: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M4AT: INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (F_y = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

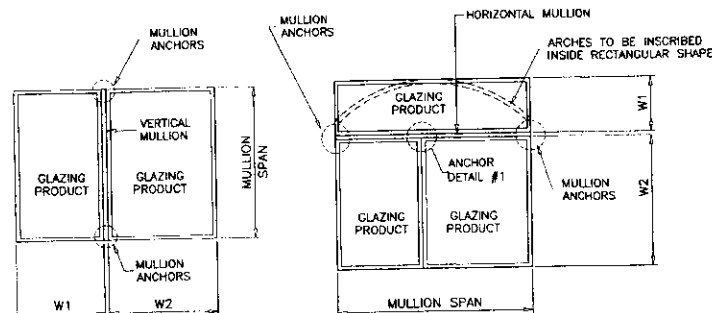
INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

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 NORMAL WEIGHT BLOCK AT JAMBS f'_m = 2000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEETS 10 & 11 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

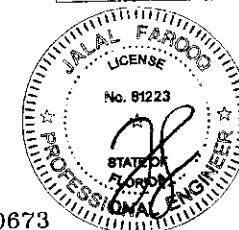


TYPICAL MULLION ARRANGEMENTS

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

Sealed: 7/21/2023

FL #40673



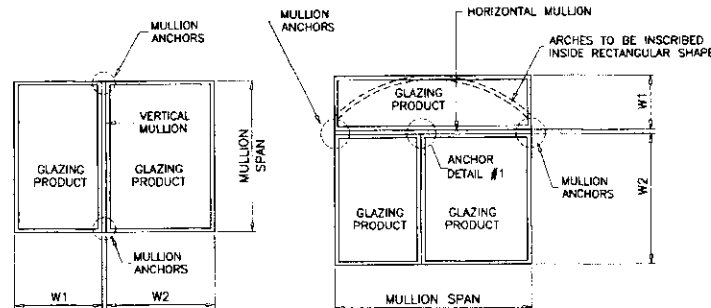
drawing no.
21-75F
sheet 12 of 17

EXTRUDED ALUMINUM CLIPPED MULLIONS
MR. GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
www.mrglasswindows.com

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 284-8100
WWW.AFCENG.COM
MULLION 21-75F-MG
PAGE #3538

DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF								
WINDOW DIMS.		ANCHORS TYPE					WINDOW DIMS.		ANCHORS TYPE					WINDOW DIMS.		ANCHORS TYPE				
WIDTH (W)	MULL SPAN	W2AF	B2AF	C2AF	M2AF		WIDTH (W)	MULL SPAN	W2AF	B2AF	C2AF	M2AF		WIDTH (W)	MULL SPAN	W2AF	B2AF	C2AF	M2AF	
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0		19-1/8"		94.7	104.0	150.0	140.2		19-1/8"		50.2	66.2	97.4	89.2	
26-1/2"		149.5	150.0	150.0	150.0		26-1/2"		68.3	75.0	110.5	101.2		26-1/2"		43.5	47.8	70.3	64.4	
30"		132.1	145.1	150.0	150.0		30"		60.3	66.3	97.6	89.4		30"		38.4	42.2	62.1	56.9	
37"		107.1	117.6	150.0	150.0		37"		48.9	53.7	79.1	72.5		37"		31.1	34.2	50.4	46.1	
42"		94.3	103.6	150.0	139.7		42"	84"	43.1	47.3	69.7	63.8		42"		27.4	30.1	44.4	40.6	
48"		82.6	90.7	133.5	122.3		48"		37.7	41.4	61.0	55.5		48"		24.0	26.4	38.8	35.5	
54"		73.4	80.6	118.7	108.7		54"		33.5	36.8	54.2	49.7		54"		21.3	23.4	34.5	31.6	
60"		66.0	72.5	106.8	97.8		60"		30.2	33.1	48.8	44.7		60"		-	21.1	31.1	28.4	
66"		60.0	66.0	97.1	88.9		66"		27.4	30.1	44.4	40.6		66"		-	-	28.2	25.9	
72"	55.0	60.5	89.0	81.5		72"		25.1	27.6	40.7	37.2		72"		-	-	25.9	23.7		
19-1/8"	50-5/8"	150.0	150.0	150.0	150.0		19-1/8"		82.8	91.0	134.0	122.7		19-1/8"		60.2	66.2	97.4	89.2	
26-1/2"		113.3	124.5	150.0	150.0		26-1/2"		59.8	65.7	96.7	88.5		26-1/2"		43.5	47.8	70.3	64.4	
30"		100.1	110.0	150.0	148.3		30"		52.8	58.0	85.4	78.2		30"		38.4	42.2	62.1	56.9	
37"		81.2	89.2	131.3	120.2		37"		42.8	47.0	69.2	63.4		37"		31.1	34.2	50.4	46.1	
42"		71.5	78.6	115.7	105.9		42"	96"	37.7	41.4	61.0	55.9		42"		27.4	30.1	44.4	40.6	
48"		62.6	68.7	101.2	92.7		48"		33.0	36.3	53.4	48.9		48"		24.0	26.4	38.8	35.5	
54"		55.6	61.1	90.0	82.4		54"		29.3	32.2	47.4	43.4		54"		21.3	23.4	34.5	31.6	
60"		50.1	55.0	81.0	74.1		60"		26.4	29.0	42.7	39.1		60"		-	21.1	31.1	28.4	
66"		45.5	50.0	73.6	67.4		66"		24.0	26.4	38.8	35.5		66"		-	-	28.2	25.9	
72"	41.7	45.8	67.5	61.8		72"		22.0	24.2	35.6	32.6		72"		-	-	25.9	23.7		
19-1/8"	63"	126.2	138.6	150.0	150.0		19-1/8"		73.6	80.9	119.1	109.0		19-1/8"		60.2	66.2	97.4	89.2	
26-1/2"		91.1	100.1	147.3	134.9		26-1/2"		53.1	58.4	85.9	78.7		26-1/2"		43.5	47.8	70.3	64.4	
30"		80.5	88.4	130.1	119.2		30"		46.9	51.6	75.9	69.5		30"		38.4	42.2	62.1	56.9	
37"		65.2	71.7	105.5	96.6		37"		38.1	41.8	61.5	56.4		37"		31.1	34.2	50.4	46.1	
42"		57.5	63.1	93.0	85.1		42"	108"	33.5	36.8	54.2	49.7		42"		27.4	30.1	44.4	40.6	
48"		50.3	55.2	81.3	74.5		48"		29.3	32.2	47.4	43.4		48"		24.0	26.4	38.8	35.5	
54"		44.7	49.1	72.3	66.2		54"		26.1	28.6	42.2	38.6		54"		21.3	23.4	34.5	31.6	
60"		40.2	44.2	65.1	59.6		60"		23.5	25.8	38.0	34.8		60"		-	21.1	31.1	28.4	
66"		36.6	40.2	59.2	54.2		66"		21.3	23.4	34.5	31.6		66"		-	-	28.2	25.9	
72"	33.5	36.8	54.2	49.7		72"		-	21.5	31.6	29.0		72"		-	-	25.9	23.7		
19-1/8"	74-1/4"	107.1	117.6	150.0	150.0		19-1/8"		68.3	72.8	107.2	98.1		19-1/8"		60.2	66.2	97.4	89.2	
26-1/2"		77.3	84.9	125.0	114.5		26-1/2"		47.8	52.5	77.3	70.8		26-1/2"		43.5	47.8	70.3	64.4	
30"		68.3	75.0	110.4	101.1		30"		42.2	46.4	68.3	62.6		30"		38.4	42.2	62.1	56.9	
37"		55.4	60.8	89.5	82.0		37"		34.2	37.6	55.4	50.7		37"		31.1	34.2	50.4	46.1	
42"		48.8	53.6	78.9	72.2		42"	120"	30.2	33.1	48.8	44.7		42"		27.4	30.1	44.4	40.6	
48"		42.7	46.9	69.0	63.2		48"		26.4	29.0	42.7	39.1		48"		24.0	26.4	38.8	35.5	
54"		37.9	41.7	61.3	56.2		54"		23.5	25.8	38.0	34.8		54"		21.3	23.4	34.5	31.6	
60"		34.1	37.5	55.2	50.6		60"		21.1	23.2	34.2	31.3		60"		-	21.1	31.1	28.4	
66"		31.0	34.1	50.2	46.0		66"		-	21.1	31.1	28.4		66"		-	-	28.2	25.9	
72"	28.4	31.2	46.0	42.1		72"		-	-	28.5	26.1		72"		-	-	25.9	23.7		
19-1/8"	76"	104.6	114.9	150.0	150.0		19-1/8"		60.2	66.2	97.4	89.2		19-1/8"		60.2	66.2	97.4	89.2	
26-1/2"		75.5	82.9	122.1	111.8		26-1/2"		43.5	47.8	70.3	64.4		26-1/2"		43.5	47.8	70.3	64.4	
30"		66.7	73.3	107.9	98.8		30"		38.4	42.2	62.1	56.9		30"		38.4	42.2	62.1	56.9	
37"		54.1	59.4	87.5	80.1		37"		31.1	34.2	50.4	46.1		37"		31.1	34.2	50.4	46.1	
42"		47.6	52.3	77.1	70.6		42"		27.4	30.1	44.4	40.6		42"		27.4	30.1	44.4	40.6	
48"		41.7	45.8	67.4	61.7		48"		24.0	26.4	38.8	35.5		48"		24.0	26.4	38.8	35.5	
54"		37.1	40.7	59.9	54.9		54"		21.3	23.4	34.5	31.6		54"		21.3	23.4	34.5	31.6	
60"		33.3	36.6	53.9	49.4		60"		-	21.1	31.1	28.4		60"		-	21.1	31.1	28.4	
66"		30.3	33.3	49.0	44.9		66"		-	-	28.2	25.9		66"		-	-	28.2	25.9	
72"	27.8	30.5	44.9	41.2		72"		-	-	25.9	23.7		72"		-	-	25.9	23.7		

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

$$\text{WIDTH (W)} = \frac{W_1 + W_2}{2}$$

TYPICAL ANCHORS AT 'F' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

W2AF: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD

W2AF: THRU 1BY BUCKS INTO CONCRETE OR BLOCKS
1-1/4" MIN. EMBED INTO CONCRETE OR BLOCKS

B2AF: DIRECTLY INTO HOLLOW/FILLED BLOCKS
1-1/4" MIN. EMBED INTO BLOCK

C2AF: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

M2AF: #14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)
INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

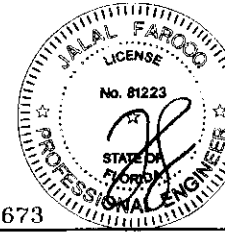
WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 HOLLOW/FILLED NORMAL WEIGHT BLOCK AT JAMBS f'm = 2000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEETS 10 & 11 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

'F' CLIP
ANCHOR CHART



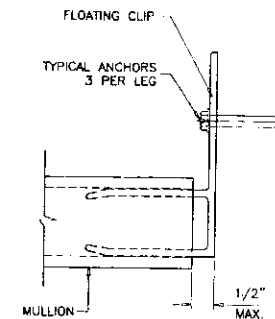
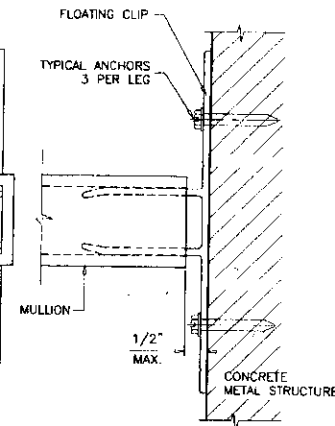
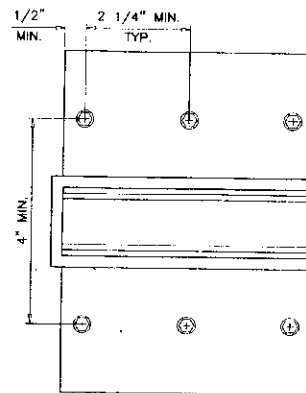
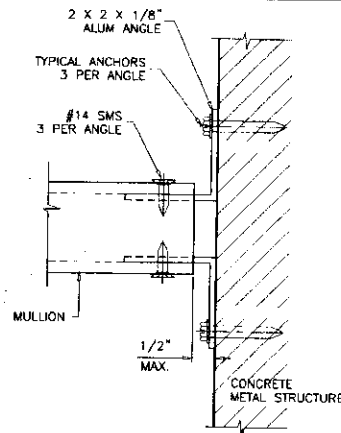
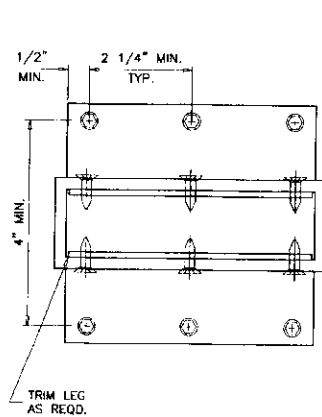
Sealed: 7/21/2023

FL #40673

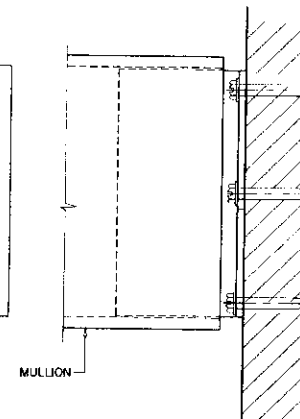
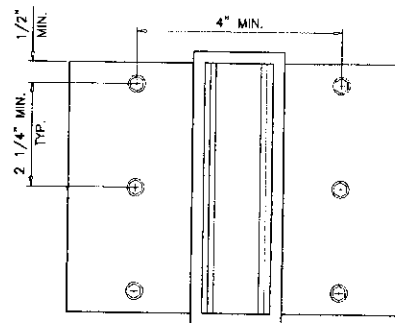
ALFAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100
WWW.ALFAROOQ.COM
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EXTRUDED ALUMINUM CLIPPED MULLIONS
UP-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel: (305) 784-3963
www.mfgglasswindows.com

revisions:
no. date by description
12-21-21
scale
dr. by: JAF
chk. by:
drawing no.
21-75F
sheet 12 of 17



'F' CLIP DETAIL
APPLICABLE TO ALL SUBSTRATES
SHOWN FOR 'T' CLIP

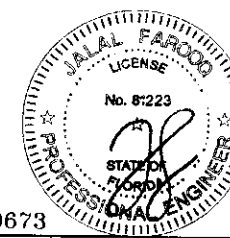


TYPICAL ANCHORS TYPE 'C6', 'M6'
DIRECTLY INTO CONCRETE
INTO METAL STRUCTURES

SEE SHEET 14 FOR 'T' CLIP ANCHOR CAPACITIES
SEE SHEET 14.1 FOR 'F' CLIP ANCHOR CAPACITIES

Sealed: 7/21/2023

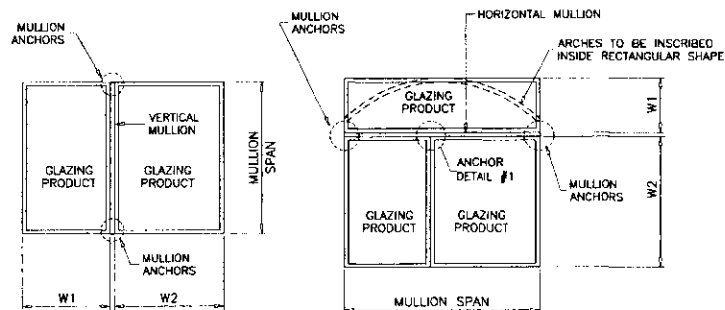
FL #40673



AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 WWW.AFCENG.COM FBP# 9558	
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL 33166 Tel. (305) 764-3963 www.mrglasswindows.com	
EXTRUDED ALUMINUM CLIPPED MULLIONS	
revisions: no. date by description	sheet 12-21-21 scale: 3/8" = 1" dr. by: JARQ chg. by:
drawing no. 21-75F	
sheet 13 of 17	

DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF			
WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	C6T	M6T	WIDTH (W)	MULL SPAN	C6T	M6T	WIDTH (W)	MULL SPAN	C6T	M6T
19-1/8"	38-3/8"	150.0	150.0	19-1/8"	84"	150.0	150.0	19-1/8"	144"	150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	150.0
37"		150.0	150.0	37"		150.0	150.0	37"		137.2	126.8
42"		150.0	150.0	42"		150.0	150.0	42"		120.9	111.7
48"		150.0	150.0	48"		150.0	150.0	48"		105.8	97.8
54"		150.0	150.0	54"		150.0	149.0	54"		94.0	86.9
60"		150.0	150.0	60"		145.0	134.1	60"		84.6	78.2
66"	50-5/8"	150.0	150.0	66"	96"	131.8	121.9	66"	156"	76.9	71.1
72"		150.0	150.0	72"		120.9	111.7	72"		70.5	65.2
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	144.4
37"		150.0	150.0	37"		150.0	150.0	37"		126.6	117.1
42"		150.0	150.0	42"		150.0	150.0	42"		111.6	103.1
48"		150.0	150.0	48"		150.0	146.6	48"		97.6	90.2
54"	63"	150.0	150.0	54"		141.0	130.3	54"		86.8	80.2
60"		150.0	150.0	60"		126.9	117.3	60"		78	72.2
66"		150.0	150.0	66"		115.4	106.6	66"		71.0	65.6
72"		150.0	150.0	72"		105.8	97.8	72"		65.1	60.2
19-1/8"	63"	150.0	150.0	19-1/8"	108"	150.0	150.0	19-1/8"	168"	150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		145.0	134.1
37"		150.0	150.0	37"		150.0	150.0	37"		117.6	108.7
42"		150.0	150.0	42"		150.0	149.0	42"		103.6	95.8
48"		150.0	150.0	48"		141.0	130.3	48"		90.6	83.8
54"		150.0	150.0	54"		125.3	115.9	54"		80.6	74.5
60"		150.0	150.0	60"		112.8	104.3	60"		72.5	67.0
66"	74-1/4"	150.0	150.0	66"	120"	102.5	94.8	66"		65.9	60.9
72"		150.0	149.0	72"		94.0	86.9	72"		60.4	55.9
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	150.0
37"		150.0	150.0	37"		150.0	150.0	37"		150.0	150.0
42"		150.0	150.0	42"		145.0	134.1	42"		149.7	138.3
48"		150.0	150.0	48"		126.9	117.3	48"		131.8	121.9
54"	76"	150.0	150.0	54"	132"	112.8	104.3	54"		115.4	106.6
60"		150.0	150.0	60"		101.5	93.8	60"		102.5	94.8
66"		149.2	137.9	66"		92.3	85.3	66"		92.3	85.3
72"		136.7	126.4	72"		84.6	78.2	72"		83.9	77.6
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	150.0
37"		150.0	150.0	37"		149.7	138.3	37"		149.7	138.3
42"	76"	150.0	150.0	42"		131.8	121.9	42"		131.8	121.9
48"		150.0	150.0	48"		115.4	106.6	48"		115.4	106.6
54"		150.0	150.0	54"		102.5	94.8	54"		102.5	94.8
60"		150.0	148.2	60"		92.3	85.3	60"		92.3	85.3
66"		145.7	134.7	66"		83.9	77.6	66"		83.9	77.6
72"		133.6	123.5	72"		76.9	71.1	72"		76.9	71.1

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

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

TYPICAL ANCHORS AT 'T' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

C6T: DIRECTLY INTO CONCRETE

1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M6T: INTO METAL STRUCTURES

(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS

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)

TYPICAL EDGE DISTANCE

INTO CONCRETE = 2-1/2" MIN.

INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.

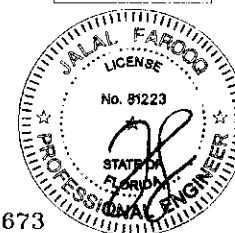
ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:

ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS. SEE SHEET 13 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

'T' CLIP
ANCHOR CHART



Sealed: 7/21/2023

FL #40673

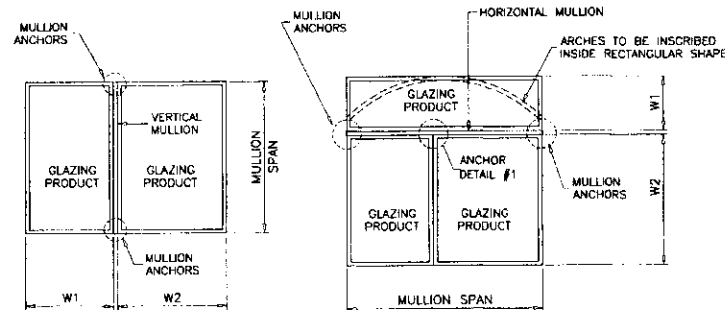
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ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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WWW.MRGLASSWINDOWS.COM

Revisions:
no. date by description
12-21-21
scale: -
dr. by: TARIQ
chk. by:
drawing no.
21-75F
sheet 14 of 17

DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF			
WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	C3F	M3F	WIDTH (W)	MULL SPAN	C3F	M3F	WIDTH (W)	MULL SPAN	C3F	M3F
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		132.7	122.7
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		95.8	88.5
30"		150.0	150.0	30"		145.0	134.1	30"		84.5	78.2
37"		150.0	150.0	37"		117.6	108.7	37"		68.6	63.4
42"		150.0	150.0	42"		103.6	95.8	42"		60.4	55.9
48"	38-3/8"	150.0	150.0	48"	84"	90.6	83.8	48"	144"	52.9	48.9
54"		150.0	150.0	54"		80.6	74.5	54"		47.0	43.4
60"		150.0	146.7	60"		72.5	67.0	60"		42.3	39.1
66"		144.3	133.4	66"		65.9	60.9	66"		38.5	35.5
72"		132.3	122.3	72"		60.4	55.9	72"		35.3	32.6
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		122.5	113.2
26-1/2"		150.0	150.0	26-1/2"		143.7	132.8	26-1/2"		88.4	81.7
30"		150.0	150.0	30"		126.9	117.3	30"		78.1	72.2
37"		150.0	150.0	37"		102.9	95.1	37"		63.3	58.5
42"		150.0	150.0	42"		90.6	83.8	42"		55.8	51.6
48"	50-5/8"	150.0	139.0	48"	95"	79.3	73.3	48"		48.8	45.1
54"		133.7	123.6	54"		70.5	65.2	54"		43.4	40.1
60"		120.3	111.2	60"		63.5	58.7	60"		39.0	36.1
66"		109.4	101.1	66"		57.7	53.3	66"		35.5	32.8
72"		100.3	92.7	72"		52.9	48.9	72"		32.5	30.1
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		113.7	105.1
26-1/2"		150.0	150.0	26-1/2"		127.7	118.0	26-1/2"		82.1	75.9
30"		150.0	150.0	30"		112.8	104.3	30"		72.5	67.0
37"		150.0	144.9	37"		91.5	84.5	37"		58.8	54.3
42"		138.1	127.7	42"		80.6	74.5	42"		51.8	47.9
48"	63"	120.9	111.7	48"	108"	70.5	65.2	48"		45.3	41.9
54"		107.4	99.3	54"		62.7	57.9	54"		40.3	37.2
60"		96.7	89.4	60"		56.4	52.1	60"		36.3	33.5
66"		87.9	81.2	66"		51.3	47.4	66"		33.0	30.5
72"		80.6	74.5	72"		47.0	43.4	72"		30.2	27.9
19-1/8"		150.0	150.0	19-1/8"		150.0	147.2	19-1/8"		144.8	133.8
26-1/2"		150.0	150.0	26-1/2"		114.9	106.2	26-1/2"		104.5	96.6
30"		150.0	150.0	30"		101.5	93.8	30"		92.3	85.3
37"		133.0	123.0	37"		82.3	76.1	37"		74.8	69.2
42"		117.2	108.3	42"		72.5	67.0	42"		65.9	60.9
48"	74-1/4"	102.5	94.8	48"	120"	63.5	58.7	48"		57.7	53.3
54"		91.2	84.3	54"		56.4	52.1	54"		51.3	47.4
60"		82.0	75.8	60"		50.8	46.9	60"		46.1	42.7
66"		74.6	68.9	66"		46.1	42.7	66"		42.0	39.1
72"		68.4	63.2	72"		42.3	39.1	72"		38.5	35.5
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	148.2	30"		130.0	120.1	30"		130.0	120.1
37"		114.5	105.8	37"		100.2	92.6	37"		89.1	82.3
42"		80.1	74.1	42"		72.9	67.3	42"		66.8	61.7
48"	76"	100.2	92.6	48"		89.1	82.3	48"		80.1	74.1
54"		89.1	82.3	54"		72.9	67.3	54"		66.8	61.7
60"		80.1	74.1	60"		72.9	67.3	60"		66.8	61.7
66"		72.9	67.3	66"		66.8	61.7	66"		66.8	61.7
72"		66.8	61.7	72"		66.8	61.7	72"		66.8	61.7

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

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

TYPICAL ANCHORS AT 'F' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

C3F: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M3F: INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

TYPICAL EDGE DISTANCE

INTO CONCRETE = 2-1/2" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

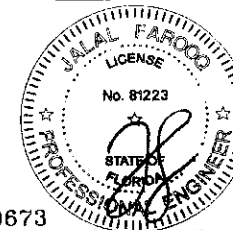
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEET 13 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

'F' CLIP
ANCHOR CHART



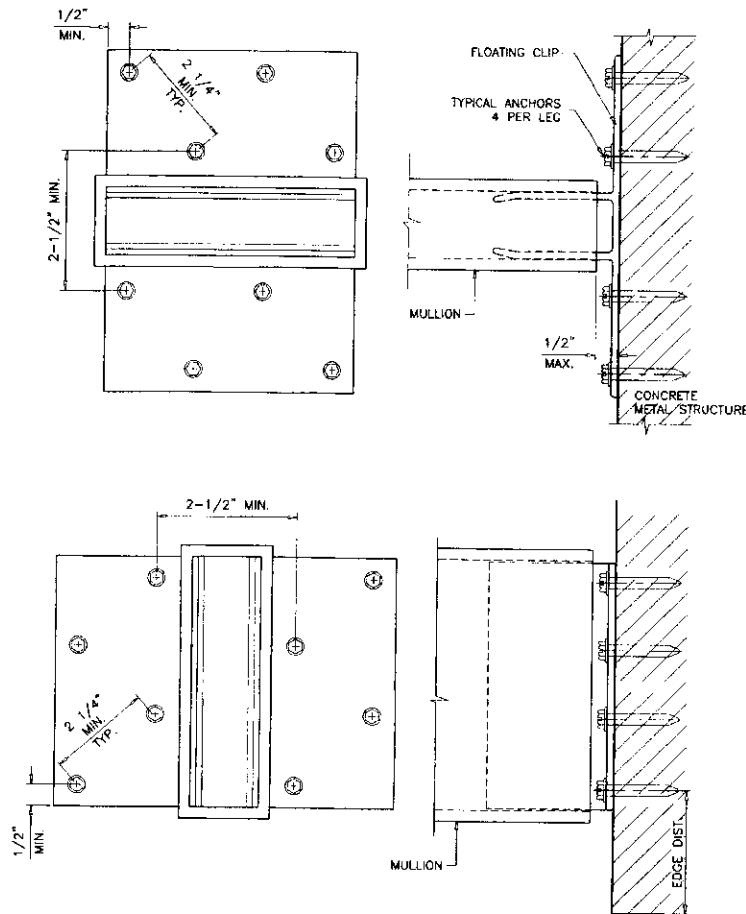
Sealed: 7/21/2023

FL #40673

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL: (305) 264-8100
WWW.AFCEING.COM
MULLION 21-75F-MG

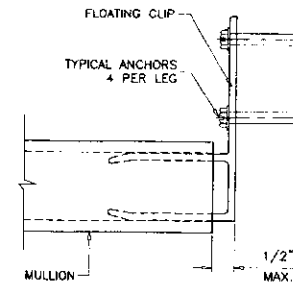
EXTRUDED ALUMINUM CLIPPED MULLIONS
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel: (305) 764-3963
www.mrglasswindows.com

Revisions:
no. date by description
12-21-21
drawing no. 21-75F
sheet 14 of 17



TYPICAL ANCHORS TYPE 'CB' 'M8'
DIRECTLY INTO CONCRETE
INTO METAL STRUCTURES

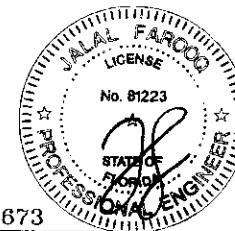
SEE SHEET 16 FOR 'T' CLIP ANCHOR CAPACITIES
SEE SHEET 16.1 FOR 'F' CLIP ANCHOR CAPACITIES



'F' CLIP DETAIL
APPLICABLE TO ALL SUBSTRATES
SHOWN FOR 'T' CLIP

Sealed: 7/21/2023

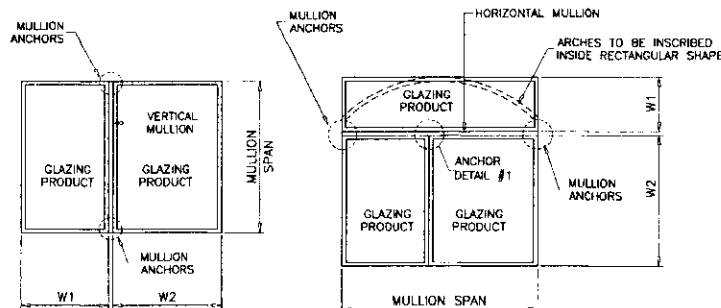
FL #40673



AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL (305) 264-8100 WWW.AFCENG.COM P&PE #3538	
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL 33166 Tel. (305) 764-3963 www.mrglsswindows.com	
Revisions: No. date by description	date: 12-21-21 scale: 3/8" = 1" dr. by: TABIQ chg. by:
drawing no. 21-75F	
sheet 15 of 17	

DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF			
WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	CBT	MBT	WIDTH (W)	MULL SPAN	CBT	MBT	WIDTH (W)	MULL SPAN	CBT	MBT
19-1/8"	38-3/8"	150.0	150.0	19-1/8"	84"	150.0	150.0	19-1/8"	144"	150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	150.0
37"		150.0	150.0	37"		150.0	150.0	37"		150.0	150.0
42"		150.0	150.0	42"		150.0	150.0	42"		150.0	149.0
48"		150.0	150.0	48"		150.0	150.0	48"		141.0	130.3
54"		150.0	150.0	54"		150.0	150.0	54"		125.3	115.9
60"	50-5/8"	150.0	150.0	60"	96"	150.0	150.0	60"	156"	112.8	104.3
66"		150.0	150.0	66"		150.0	150.0	66"		102.5	94.8
72"		150.0	150.0	72"		150.0	149.0	72"		94.0	86.9
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	150.0
37"		150.0	150.0	37"		150.0	150.0	37"		150.0	150.0
42"	63"	150.0	150.0	42"	108"	150.0	150.0	42"	168"	148.7	137.5
48"		150.0	150.0	48"		150.0	150.0	48"		130.2	120.3
54"		150.0	150.0	54"		150.0	150.0	54"		115.7	106.9
60"		150.0	150.0	60"		150.0	150.0	60"		104.1	96.2
66"		150.0	150.0	66"		150.0	142.2	66"		94.7	87.5
72"		150.0	150.0	72"		141.0	130.3	72"		86.8	80.2
19-1/8"	74-1/4"	150.0	150.0	19-1/8"	120"	150.0	150.0	19-1/8"	168"	150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	150.0
37"		150.0	150.0	37"		150.0	150.0	37"		150.0	144.9
42"		150.0	150.0	42"		150.0	150.0	42"		138.1	127.7
48"		150.0	150.0	48"		150.0	150.0	48"		120.9	111.7
54"		150.0	150.0	54"		150.0	139.0	54"		107.4	99.3
60"	76"	150.0	150.0	60"	132"	135.4	125.1	60"		96.7	89.4
66"		150.0	150.0	66"		123.1	113.7	66"		87.9	81.2
72"		150.0	150.0	72"		112.8	104.3	72"		80.6	74.5
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		150.0	150.0
30"		150.0	150.0	30"		150.0	150.0	30"		150.0	150.0
37"		150.0	150.0	37"		150.0	150.0	37"		150.0	150.0
42"	76"	150.0	150.0	42"	132"	150.0	150.0	42"		150.0	150.0
48"		150.0	150.0	48"		150.0	142.2	48"		150.0	142.2
54"		150.0	150.0	54"		136.7	126.4	54"		136.7	126.4
60"		150.0	150.0	60"		123.1	113.7	60"		123.1	113.7
66"		150.0	150.0	66"		111.9	103.4	66"		111.9	103.4
72"		150.0	150.0	72"		102.5	94.8	72"		102.5	94.8

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

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

TYPICAL ANCHORS AT 'T' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

CBT: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

MBT: INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

TYPICAL EDGE DISTANCE

INTO CONCRETE = 2-1/2" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

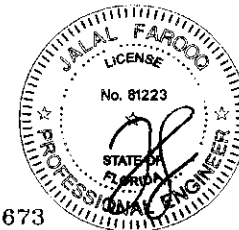
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEET 15 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

'T' CLIP
ANCHOR CHART



Sealed: 7/21/2023

FL #40673

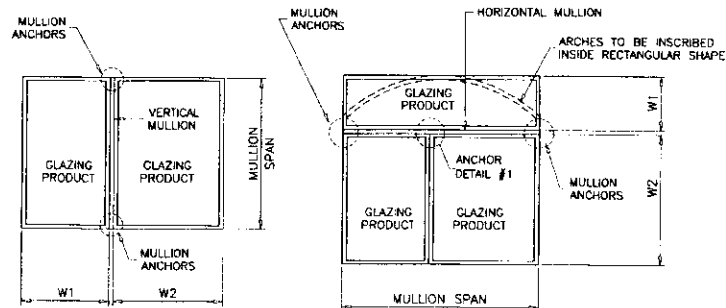
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100
WWW.AFCENG.COM
FBIPE #5538

EXTRUDED ALUMINUM CLIPPED MULLIONS
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
www.mrglasswindows.com

REVISIONS:
no. date by description
12-21-21
scale: -
dr. by TARIQ
chk. by:
drawing no.
21-75F
sheet 16 of 17

DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF			
WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	C4F	M4F	WIDTH (W)	MULL SPAN	C4F	M4F	WIDTH (W)	MULL SPAN	C4F	M4F
19-1/8"	38-3/8"	150.0	150.0	19-1/8"	84"	150.0	150.0	19-1/8"	144"	150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		127.7	118.0
30"		150.0	150.0	30"		150.0	150.0	30"		112.8	104.3
37"		150.0	150.0	37"		150.0	144.9	37"		91.5	84.5
42"		150.0	150.0	42"		138.1	127.7	42"		80.6	74.5
48"		150.0	150.0	48"		120.9	111.7	48"		70.5	65.2
54"		150.0	150.0	54"		107.4	99.3	54"		62.7	57.9
60"		150.0	150.0	60"		96.7	89.4	60"		56.4	52.1
66"	50-5/8"	150.0	150.0	66"	96"	87.9	81.2	66"	156"	51.3	47.4
72"		150.0	150.0	72"		80.6	74.5	72"		47.0	43.4
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		150.0	150.0	26-1/2"		117.9	109.0
30"		150.0	150.0	30"		150.0	150.0	30"		104.1	96.2
37"		150.0	150.0	37"		137.2	126.8	37"		84.4	78.0
42"		150.0	150.0	42"		120.9	111.7	42"		74.4	68.2
48"		150.0	150.0	48"		105.8	97.8	48"		65.1	60.7
54"	63"	150.0	150.0	54"		94.0	85.9	54"	168"	57.8	53.5
60"		150.0	148.3	60"		84.6	78.2	60"		52.1	48.1
66"		145.8	134.8	66"		76.9	71.1	66"		47.3	43.7
72"		133.7	123.6	72"		70.5	65.2	72"		43.4	40.1
19-1/8"	63"	150.0	150.0	19-1/8"	108"	150.0	150.0	19-1/8"	168"	150.0	140.2
26-1/2"		150.0	150.0	26-1/2"		150.0	139.0	26-1/2"		109.5	101.2
30"		150.0	150.0	30"		121.9	112.7	30"		96.7	89.4
37"		150.0	150.0	37"		107.4	99.3	37"		78.4	72.5
42"		150.0	150.0	42"		94.0	86.9	42"		69.1	63.8
48"		143.2	132.4	48"		83.6	77.2	48"		60.4	55.9
54"		128.9	119.2	54"		75.2	69.5	54"		53.7	49.7
60"		117.2	108.3	60"		68.4	63.2	60"		48.3	44.7
66"	74-1/4"	107.4	99.3	66"	120"	62.7	57.9	66"		43.9	40.6
72"		150.0	150.0	72"		150.0	150.0	72"		40.3	37.2
19-1/8"		150.0	150.0	19-1/8"		150.0	141.6	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		135.4	125.1	26-1/2"		123.1	113.7
30"		150.0	150.0	30"		109.8	101.4	30"		99.8	92.2
37"		150.0	144.4	37"		96.7	89.4	37"		87.9	81.2
42"		136.7	126.4	42"		84.6	78.2	42"		76.9	71.1
48"		121.5	112.3	48"		75.2	69.5	48"		68.4	63.2
54"	76"	109.4	101.1	54"	132"	67.7	62.6	54"		61.5	56.9
60"		99.4	91.9	60"		61.5	56.9	60"		56.4	52.1
66"		91.2	84.3	66"		150.0	150.0	66"		139.3	128.8
72"		150.0	150.0	72"		123.1	113.7	72"		99.8	92.2
19-1/8"		150.0	150.0	19-1/8"		150.0	150.0	19-1/8"		150.0	150.0
26-1/2"		150.0	150.0	26-1/2"		139.3	128.8	26-1/2"		123.1	113.7
30"		150.0	150.0	30"		123.1	113.7	30"		99.8	92.2
37"		150.0	150.0	37"		99.8	92.2	37"		87.9	81.2
42"	76"	150.0	150.0	42"		87.9	81.2	42"		76.9	71.1
48"		133.6	123.5	48"		76.9	71.1	48"		68.4	63.2
54"		118.7	109.8	54"		68.4	63.2	54"		61.5	56.9
60"		106.9	98.8	60"		61.5	56.9	60"		55.9	51.7
66"		97.1	89.5	66"		55.9	51.7	66"		51.3	47.4
72"		89.1	82.3	72"		51.3	47.4	72"		47.0	43.4

ALL LOADS ARE EXT.(+)/INT.(-).



TYPICAL MULLION ARRANGEMENTS

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

TYPICAL ANCHORS AT 'F' CLIP:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

C4F: DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M4F: INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

TYPICAL EDGE DISTANCE

INTO CONCRETE = 2-1/2" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

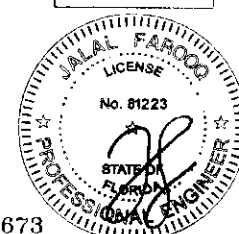
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEET 15 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

'F' CLIP
ANCHOR CHART



Sealed: 7/21/2023

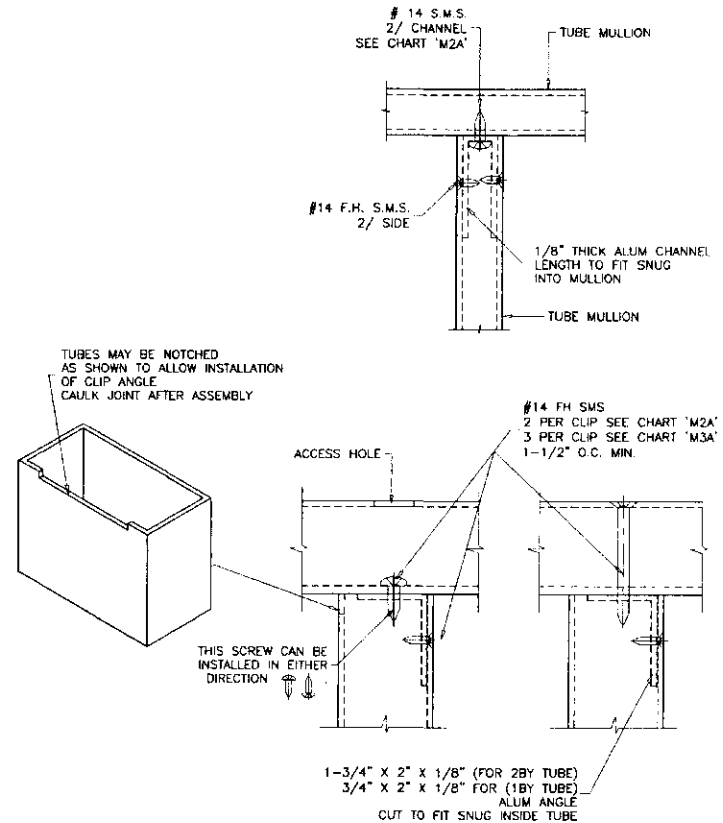
FL #40673

AL-FAROOQ CORPORATION
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9380 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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FBI #9538

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8051 N.W. 79th Place
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WWW.MRGGLASSWINDOWS.COM

REVISIONS:
NO. DATE BY DESCRIPTION
1 12-21-21
2 01-11-22
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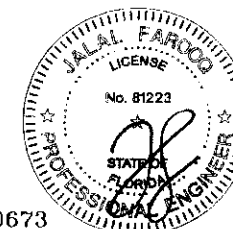
DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF			
WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE		WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	M2A	M3A	WIDTH (W)	MULL SPAN	M2A	M3A	WIDTH (W)	MULL SPAN	M2A	M3A
19-1/8"	36-3/8"	150.0	150.0	19-1/8"	84"	150.0	150.0	19-1/8"	144"	93.7	140.5
26-1/2"		150.0	150.0	26-1/2"		115.9	150.0	26-1/2"		67.6	101.4
30"		150.0	150.0	30"		102.4	150.0	30"		59.7	89.8
37"		150.0	150.0	37"		83.0	124.5	37"		48.4	72.6
42"		150.0	150.0	42"		73.1	109.7	42"		42.7	64.0
48"		140.1	150.0	48"		64.0	96.0	48"		37.3	56.0
54"		124.5	150.0	54"		56.9	85.3	54"		33.2	49.8
60"	50-5/8"	112.1	150.0	60"	96"	51.2	76.8	60"	156"	29.9	44.8
66"		101.9	150.0	66"		46.5	69.8	66"		27.2	40.7
72"		93.4	140.1	72"		42.7	64.0	72"		24.9	37.3
19-1/8"		150.0	150.0	19-1/8"		140.5	150.0	19-1/8"		86.5	129.7
26-1/2"		150.0	150.0	26-1/2"		101.4	150.0	26-1/2"		62.4	93.6
30"		150.0	150.0	30"		89.6	134.4	30"		55.1	82.7
37"		137.8	150.0	37"		72.6	109.0	37"		44.7	67.1
42"	53"	121.4	150.0	42"	108"	64.0	96.0	42"	168"	39.4	59.1
48"		106.2	150.0	48"		56.0	84.0	48"		34.5	51.7
54"		94.4	141.6	54"		49.8	74.7	54"		30.6	45.9
60"		85.0	127.4	60"		44.8	67.2	60"		27.6	41.4
66"		77.2	115.8	66"		40.7	61.1	66"		25.1	37.6
72"		70.8	106.2	72"		37.3	56.0	72"		23.0	34.5
19-1/8"	53"	150.0	150.0	19-1/8"	108"	124.9	150.0	19-1/8"	168"	80.3	120.5
26-1/2"		150.0	150.0	26-1/2"		90.2	135.2	26-1/2"		58.0	86.9
30"		136.5	150.0	30"		79.6	119.5	30"		51.2	76.8
37"		110.7	150.0	37"		64.6	96.9	37"		41.5	62.3
42"		97.5	146.3	42"		56.9	85.3	42"		36.6	54.9
48"		85.3	128.0	48"		49.8	74.7	48"		32.0	48.0
54"		75.9	113.8	54"		44.2	66.4	54"		28.4	42.7
60"	74-1/4"	68.3	102.4	60"	120"	39.8	59.7	60"		25.6	38.4
66"		62.1	93.1	66"		36.2	54.3	66"		23.3	34.9
72"		56.9	85.3	72"		33.2	49.6	72"		21.3	32.0
19-1/8"		150.0	150.0	19-1/8"		112.4	150.0				
26-1/2"		131.1	150.0	26-1/2"		81.1	121.7				
30"		115.8	150.0	30"		71.7	107.5				
37"		93.9	140.9	37"		58.1	87.2				
42"	76"	82.7	124.1	42"	132"	51.2	76.8				
48"		72.4	108.6	48"		44.8	67.2				
54"		64.4	96.5	54"		39.8	59.7				
60"		57.9	86.9	60"		35.8	53.8				
66"		52.7	79.0	66"		32.6	48.9				
72"		48.3	72.4	72"		29.9	44.8				
19-1/8"		150.0	150.0	19-1/8"		102.2	150.0				
26-1/2"		128.1	150.0	26-1/2"		73.8	110.7				
30"		113.2	150.0	30"		65.2	97.7				
37"		91.8	137.7	37"		52.8	79.3				
42"		80.8	121.3	42"		46.5	69.8				
48"		70.7	106.1	48"		40.7	61.1				
54"		62.9	94.3	54"		36.2	54.3				
60"		56.6	84.9	60"		32.6	48.9				
66"		51.4	77.2	66"		29.6	44.4				
72"		47.2	70.7	72"		27.2	40.7				



ANCHOR DETAIL #1
METAL TO METAL CONNECTION

Sealed: 7/21/2023

FL #40673



afC

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9380 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL: (305) 264-8100
WWW.AFCENG.COM

MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel: (305) 764-3963
WWW.MRGLASSWINDOWS.COM

EXTRUDED ALUMINUM CLIPPED MULLIONS

date: 12-21-21
no: 21-75F
scale: 3/8" = 1"
dr. by: JAFQ
ch. by:

drawing no.
21-75F
(sheet 17 of 17)