

8501 SW 124th Ave. Ste. 205A Miami, FL. 33183 P: 305 271-0117 F: 305 279-6818

PRODUCT APPROVAL EVALUATION REPORT

Product Manufacturer:	Product Name/Model & Description:		
Mr. Glass Doors and Windows	Series MRG-400 Fixed Window		
8120 NW 84 TH ST	Fixed Window – large missile impact		
Miami, FL 33166			

Scope: This product has been evaluated by the below-signed Florida Professional Engineer for compliance with the Code noted herein and is, for the purpose intended, at least equivalent to that required by the Code, in accordance with section 553.842 F.S. & chapter 61G20-3.005 F.A.C. Re-evaluation of this product shall be required following applicable Code modifications or revisions.

Code: 6th Edition Florida Building Code (2017), inclusive of all Supplements effective as of this report date.

Compliance Method: 61G20-3.005 (1)(d) – Evaluation Report from a licensed Professional Engineer

Product Description: Product Approval **Drawing #AD18-01**, prepared by MCY Engineering, Inc., signed and sealed by Yiping Wang, P.E., is an integral part of this Evaluation Report.

Limitations & Conditions of Use:

- This product has been evaluated for use **inside and outside of the HVHZ** (High Velocity Hurricane Zone)
- Impact Resistance: Large Missile Impact
- Refer to Product Approval Drawing noted above for:
 - Maximum allowable wind loads at related maximum allowable size(s).
 - Other load limitations applicable to the product, if any.
 - Overall dimensions and material/grade of main product components, accessories, etc.
 - o Illustrated diagrams of the attachment of the product to the structure.
 - Anchor type(s), size(s), substrate(s), embedment, edge distance, and spacing/locations.



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Test Reports:

Mandatory Tests (Tested in accordance with AAMA 501)

Test Lab	Report Number	Test Report Date	Test Standard & Description
Fenestration Testing Lab. – Medley, FL	FTL-9147, signed and sealed by Idalmis Ortega, PE, FL #76905	01/24/2017	TAS 201 (large missile impact) TAS 202 (uniform static test) TAS 203 (cyclic wind pressure loading) ASTM E283 (air infiltration test) ASTM E331 (water infiltration test)

Engineering Analysis: The following engineering analyses and/or calculations have been performed:

- No comparative analysis has been performed for conditions other than those tested.
- No rational analysis has been performed.
- Anchor calculations are based on manufacturer's published anchor capacity, anchor Notice of Acceptance by Miami Dade County.





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February 9, 2018

Product Approval Administrator
Codes & Standards Section
Florida Department of Business and Professional Regulation
2601 Blair Stone Road
Tallahassee, FL 32399

Ref: Series MRG-400 Fixed Window – L.M.I.

Certificate of Independence

Dear Sirs,

As the structural design engineer retained by Mr. Glass Doors and Windows on the product referenced above, I do hereby declare that I do not have and will not have any financial interest in any company manufacturing or distributing the above referenced product, nor do I have or will have any financial interest with any other entity involved in the approval process of the product and also that my company is not owned, operated, or controlled by Mr. Glass Doors and Windows in any way.



MR. GLASS DOORS AND WINDOWS, INC. SERIES MRG-400 FIXED WINDOW LARGE & SMALL MISSILE IMPACT

DRAWINGS INDEX						
SHEET	TITLE	CONTENT	REV.	DATE		
01	COVER	GENERAL NOTES AND INSTRUCTIONS				
02	ΕI	WINDOW ELEVATION				
03	GI	GLASS CAPACITY CHARTS				
04	DI	WINDOW DETAILS				
05	ΑΙ	ANCHOR OPTIONS				
06	A2	ANCHOR OPTIONS				
07	ВОМ	BILL OF MATERIALS				
08	150	ASSEMBLE DRAWINGS				

GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 6TH EDITION FLORIDA BUILDING CODE (2017) INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- WINDOWS RATED FOR LARGE MISSILE IMPACT. IMPACT SHUTTERS ARE NOT REQUIRED.
- THESE WINDOWS ARE APPROVED FOR AIR AND WATER INFILTRATION.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- MATERIALS INCLUDING, BUT NOT LIMITED TO, STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 6TH EDITION FLORIDA BUILDING CODE (2017) SECTION AS APPLICABLE.
- METAL STRUCTURES NOT BY MR. GLASS DOOR \$ WINDOWS, INK. TO BE DESIGNED TO SUPPORT THE LOADS IMPOSED BY THIS GLAZING SYSTEM AND TO TRANSFER SUCH LOADS TO THE BUILDING MAIN STRUCTURE.
- ULTIMATE LOAD OBTAINED FROM ASCE 7-10, MULTIPLIED BY 0.6 SHALL BE LESS THAN OR EQUAL TO THE MAX. DESIGN LOAD IN THIS DOCUMENT. THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND STEP 1: VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-10 STANDARD BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT.

SEE SHEET GI FOR GLASS OPTIONS AND CHART FOR APPROVED LOAD OF DESIRED FRAME SIZE WITH GLASS OPTIONS.

APPROVED ANCHOR OPTIONS SHEETS A 1 \$ A2. STEP 3: ANCHOR SPACING SEE SHEET EI.

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

D.L.O. - DAYLITE OPENING

- ON CENTER

F.H. - FRAME HEIGHT

F.W. - FRAME WIDTH

- WITH

W/O - WITHOUT

W/

ABBREVIATIONS AND SYMBOLS

SECTION NUMBER

SHEET NUMBER

- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e .WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- TIONS DETAILED ON THIS
- WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPIUSE OF THE P.E.D.

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

WINDOWS, 1 FL 33166 . GLASS DOORS AND V 8120 NW 84TH STREET, MIAMI, F TEL ??? FAX ??? M. R.

C1

02/06/18

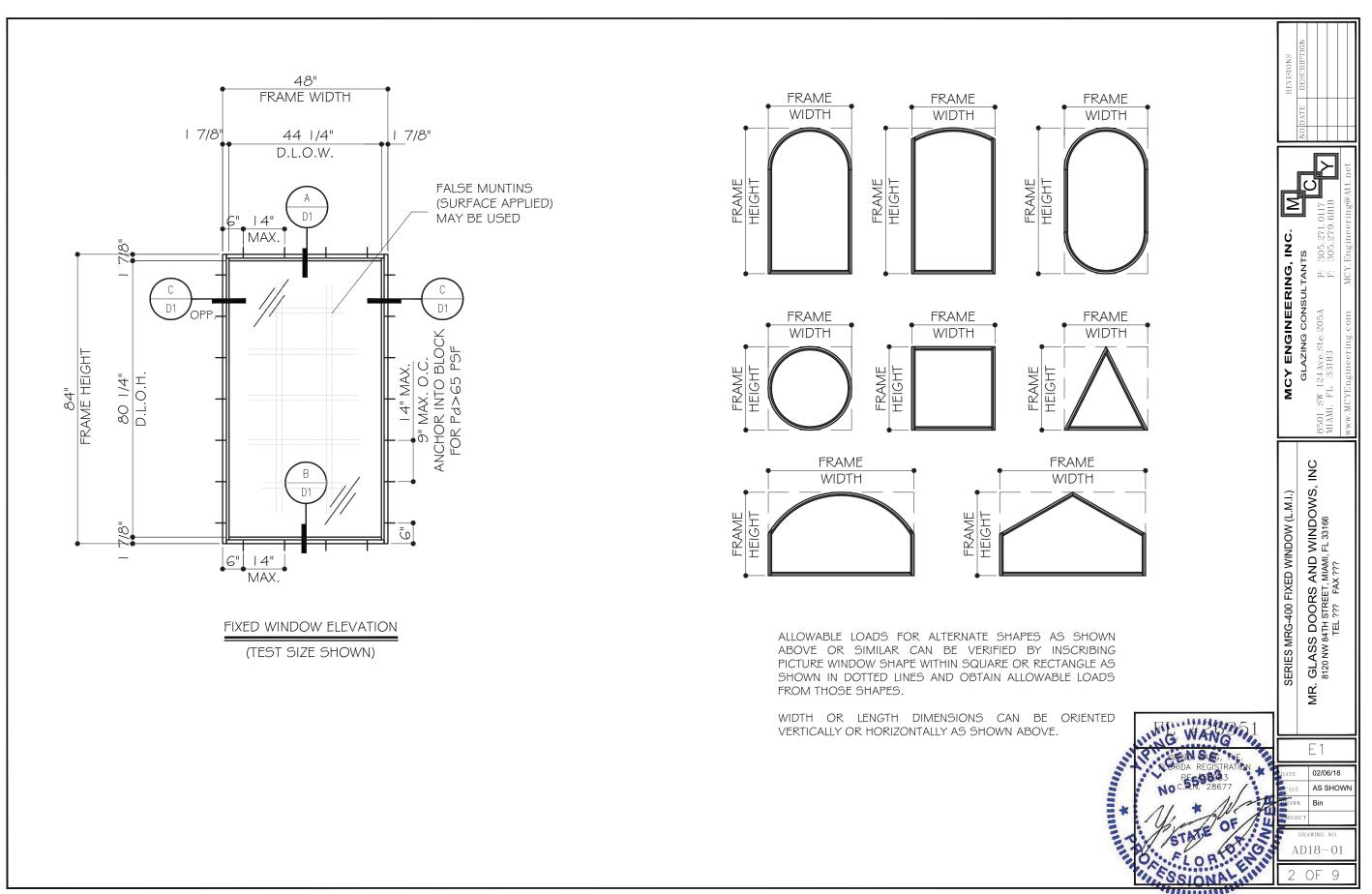
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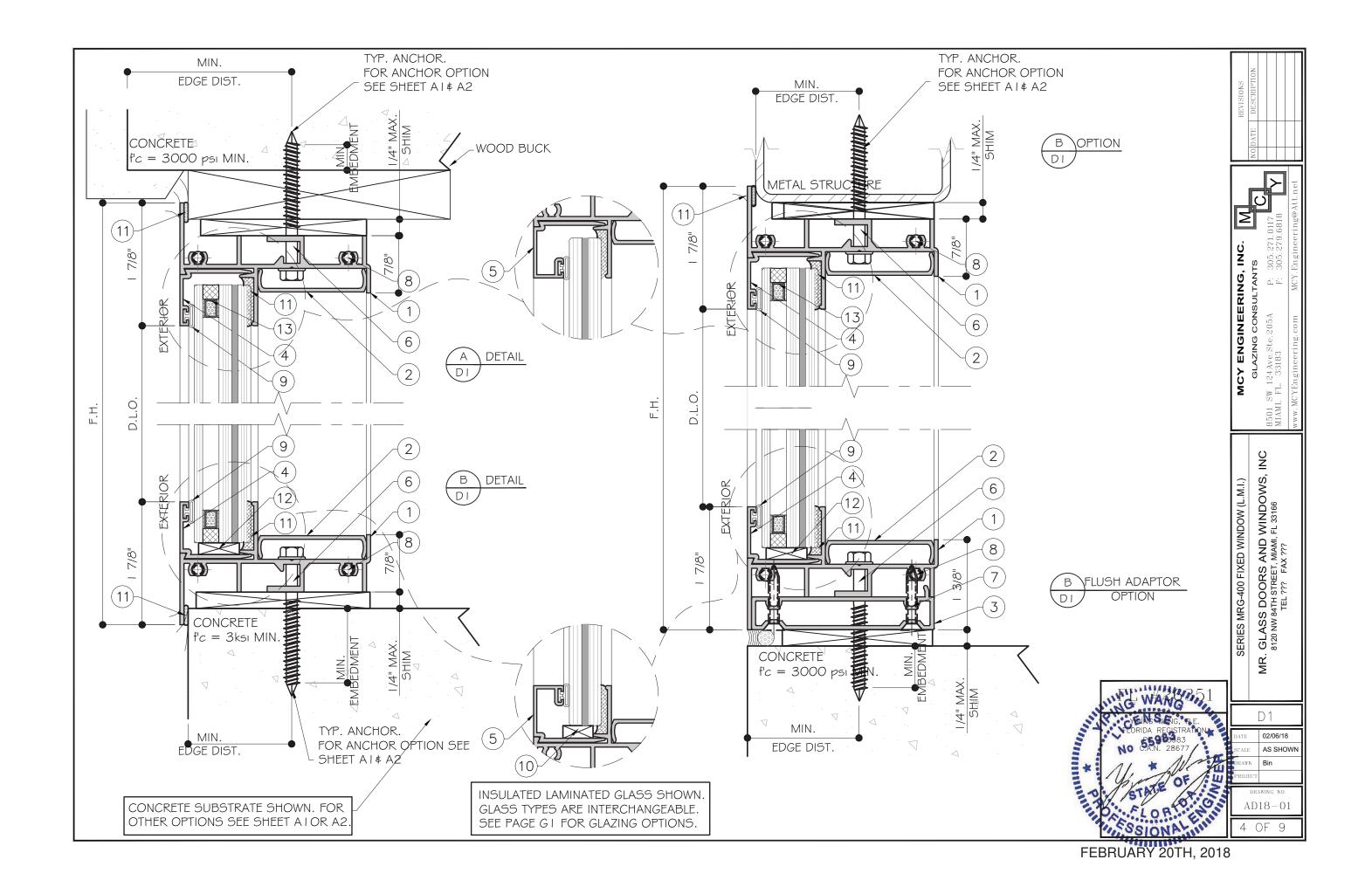
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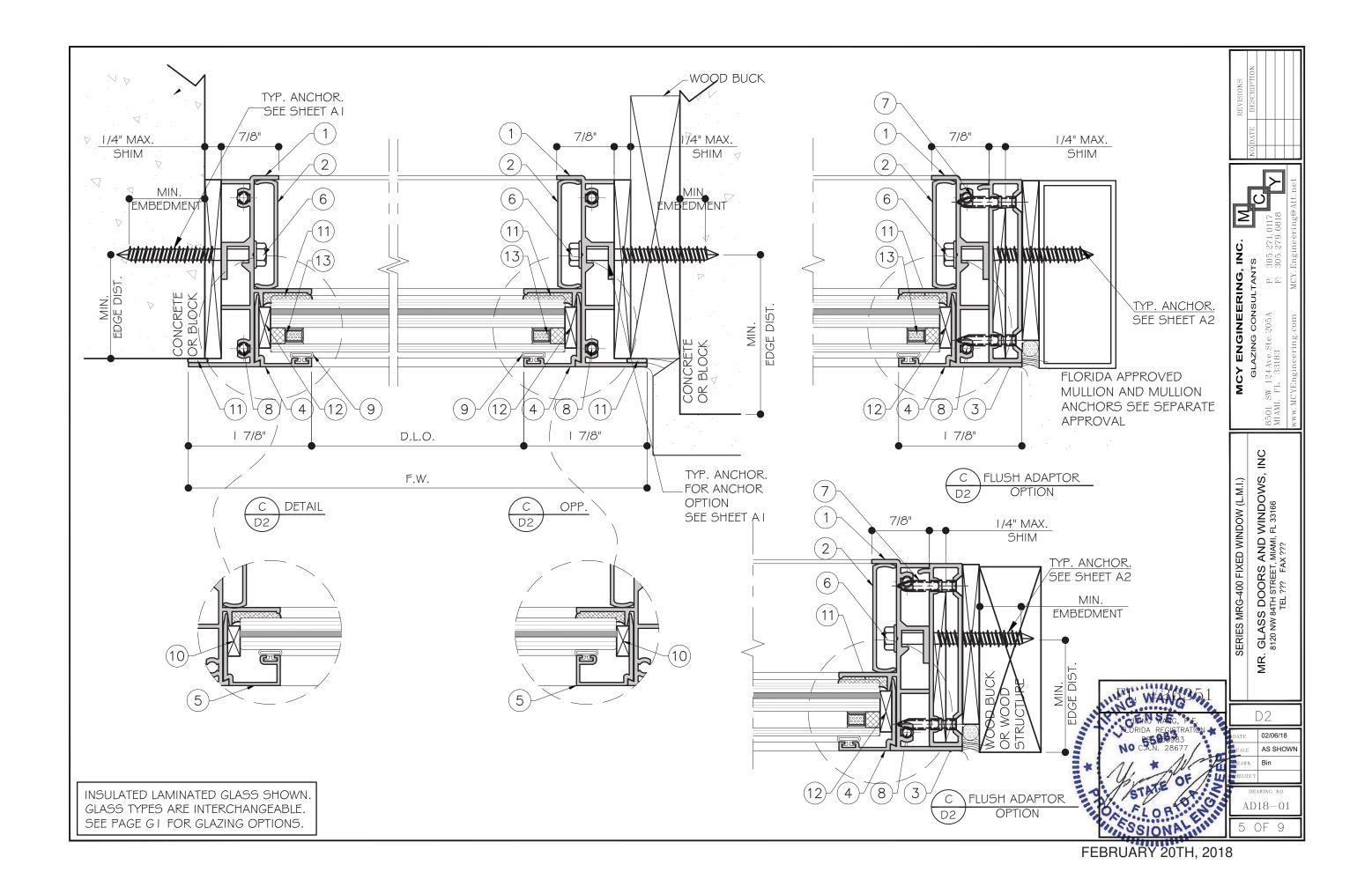
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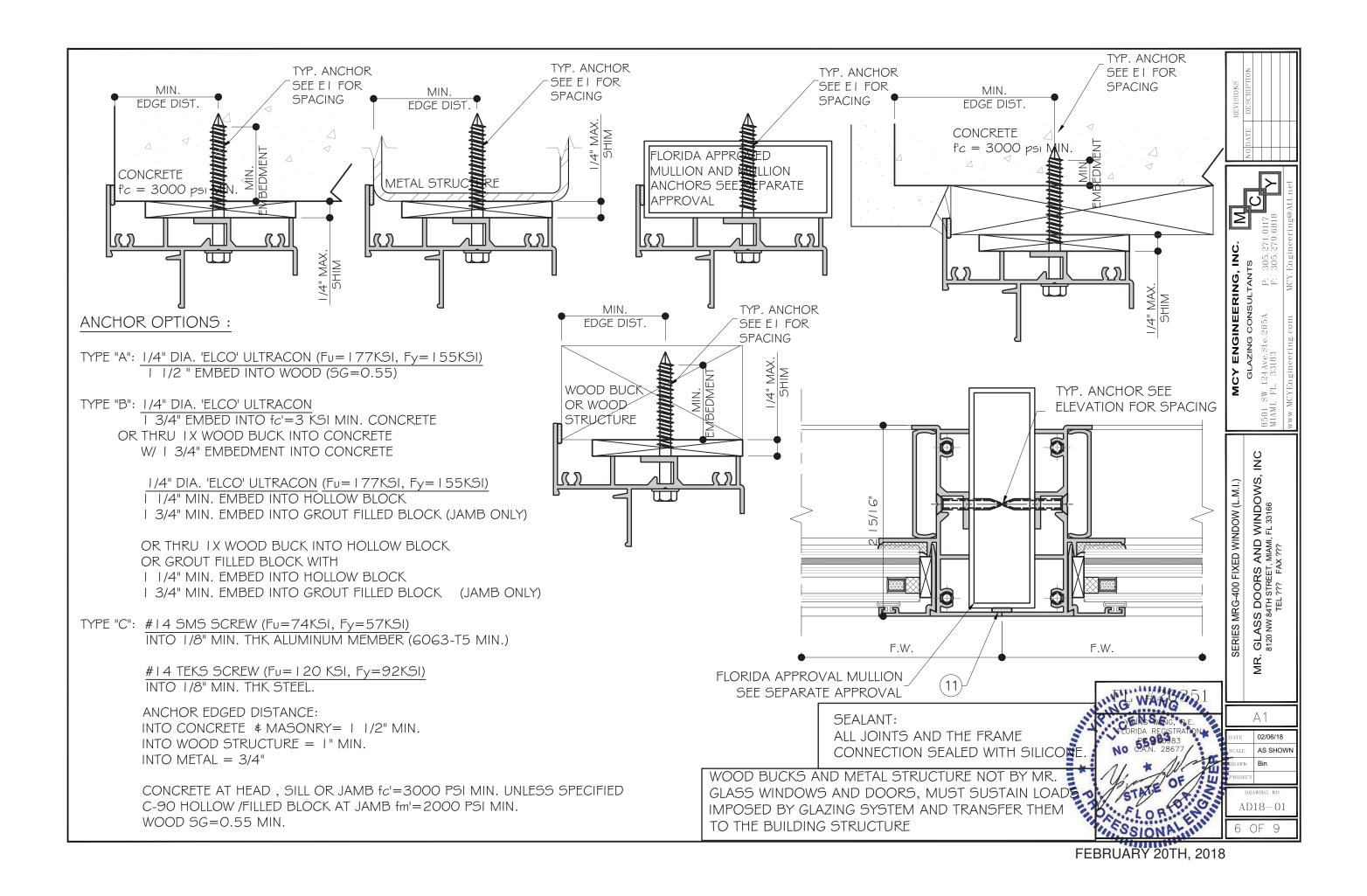
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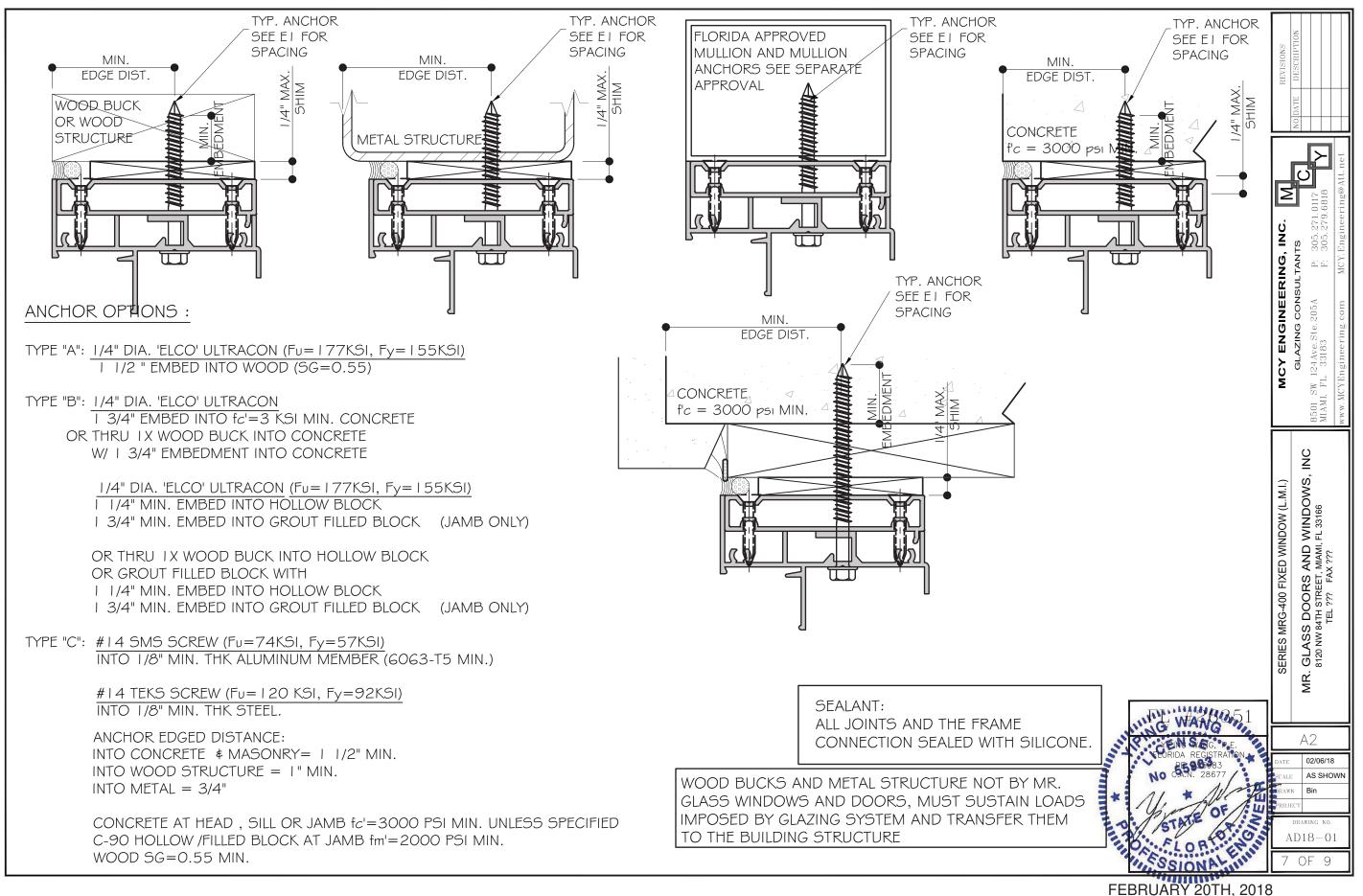


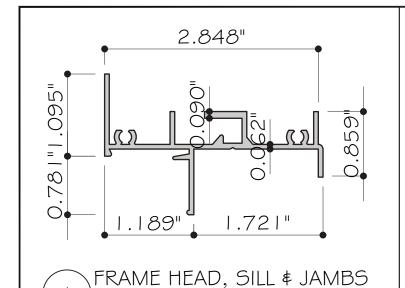
DESIGN LOAD CAPACITY - PSF (GLASS)		DESIGN LOAD CAPACITY - PSF (GLASS)		Y - PSF		NO			
FRAME SIZES GLASS TYPES			FRAME	E SIZES	GLASS .	TYPES		RIPTI	
FRAME	FRAME	GI# GIA	G2	WIDTH	HEIGHT	GI & GIA	G2		DESC
WIDTH (IN)	HEIGHT (IN)	+/- PSF	+/- PSF	(IN)	(IN)	+/- PSF	+/- PSF		E E
30	(114)	65.0	100.0	19 1/8	(111)	65.0	100.0		DAT
36		65.0	100.0	26 1/2	26	65.0	100.0	ZUCH HEAT GERENID CLAGG	N(
42	54	65.0	100.0	37	26	65.0	100.0		—
48	54	65.0	100.0	53 1/8		65.0	100.0	BY 'KURARAY AMERICA, INC.' BY 'KURARAY AMERICA, INC.'	M C 0117 6818 ring@Att.net
54		58.0	89.0	19 1/8		65.0	100.0		2.8 2.8 2.8
60 30		58.0 65.0	89.0 100.0	26 1/2 37	38 3/8	65.0 65.0	100.0		.0117 .6818 ring@
36		65.0	100.0	53 1/8		65.0	100.0	$-\frac{1}{2}$	6. 271 279. inee
42	0.0	65.0	100.0	19 1/8		65.0	100.0		305. 305. Engi
48	60	65.0	100.0	26 1/2	50 5/8	65.0	100.0		6
54		58.0	89.0	37	37	65.0	100.0		
60		52.0	80.0	53 1/8		62.0	95.0		DNS SA
30 36		65.0 65.0	100.0	19 1/8		65.0 65.0	100.0		ENGINEERING, INC AZING CONSULTANTS ve.Ste.205A P: 305.2' 183 F: 305.2' eering.com MCY.Engin
42		65.0	100.0	37	63	65.0	100.0	9 7	ZING ZING E. Ste. 33
48	——————————————————————————————————————	65.0	100.0	53 1/8		59.0	90.0		4 Ave
54		58.0	89.0	19 1/8		65.0	100.0	$\frac{1}{10}$ $\frac{\text{GLASS TYPE 'GT'}}{10}$ $\frac{1}{10}$ GLASS TYPE 'G2'	M 12, W 12, YEng
60		52.0	80.0	26 1/2	76	65.0	100.0	7/16" NOMINAL OVERALL 7/16" NOMINAL OVERALL	SW II, F
30		65.0	100.0	37		65.0	100.0		MCY ENG GLAZING GLAZING SW 124Ave Ste. MIAMI, FL 33183 www.MCYEngineering
36 42	72	65.0 65.0	100.0					1/4" AIR SPACE —	
48	1 2	65.0	100.0				1/8	/8" TEMP. GLASS - / O.090" PVB INTERLAYER 1/8" TEMP. GLASS / O.090" SENTRYGLAS INTERLAYER BY 'KURARAY AMERICA, INC.'	< ບ
54		58.0	89.0						NO .
30		65.0	100.0					3/16" HEAT STREN'D GLASS	WS WS
36	78	65.0	100.0					ALUMINUM SPACER (13)	/ (L.I DO)
42	, 0	65.0	100.0					ALUMINUM SPACER (13) O O O O O O O O O O O O O O O O O O O	NDOW (L.M.I.) WINDOWS,
48 30		65.0 65.0	100.0						ED WINDOW (L.M.I.) AND WINDOWS MAAMI, FL 33166 X ???
36		65.0	100.0						ED WIN AND '
42	84	65.0	100.0						
48		65.0	100.0						300 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 -
30		65.0	100.0						SERIES MRG-400 FIXE . GLASS DOORS / 8120 NW 84TH STREET, TEL ??? FA
36	90	65.0	100.0					GLASS TYPE 'G I A' (12) GLASS TYPE 'G2A' (12)	ASS ASS NW
42 30		65.0 65.0	100.0					GLASS TYPE 'G A' GLASS TYPE 'G2A' GLAS	ERIE GL, 8120
36	96	65.0	100.0					13/16" NOMINAL OVERALL 13/16" NOMINAL OVERALL	MR.
42		65.0	100.0					<u> </u>	2
30	102	65.0	100.0					WELL WHEE 1851	
36	102	65.0	100.0						G1
30	108	65.0	100.0					YEING WANG, R.E. FLORIDA REGISTRATION	DATE 02/06/18
36 30	114	65.0 65.0	100.0					55985983 No 5.A.N. 28677	SCALE AS SHOWN
50	114	63.0	100.0					* 11. * W. T.	DRAWN Bin
								NOTE:	DRAWING NO.
								GLASS COMPLIES WITH ASTM E 300-09	AD18-01
								(3 SEC. GUSTS).	3 OF 9



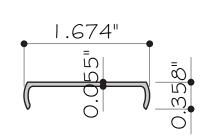


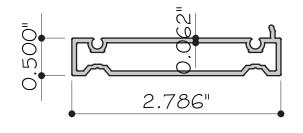


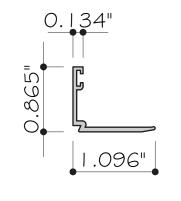




6063-T6

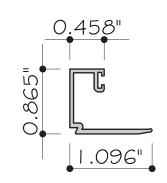






PERIMETER COVER MRG-215 6063-T6

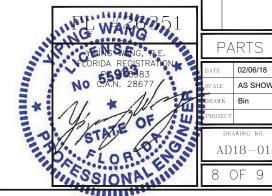
FLUSH FRAME ADAPTER 3 MGR-212 6063-T6 GLASS STOP MGR-209 6063-T6



MGR-201

GLASS STOP MGR-210 6063-T6

	BILL OF MATERIALS									
	ITEM	PART	DESCRIPTION	MATERIAL	MANUF. / REMARKS					
Ì	1	MGR-201	FRAME HEAD	6063-T6	TECNOGLASS					
	2	MGR-215	PERIMETER COVER	6063-T6	TECNOGLASS					
ı	3	MGR-212	FLUSH ANCHOR ADAPTOR	6063-T6	TECNOGLASS					
İ	4	MGR-209	GLASS STOP (INSULATED LAMINATED GLASS)	6063-T6	TECNOGLASS					
İ	5	MGR-210	GLASS STOP (LAMINATED GLASS)	6063-T6	TECNOGLASS					
İ	6	-	I/4" HH TAPCON	AS REQUIRED	-					
	7	-	8-18 PH FH SS300 L=1" ASSY SCREW	ST/ST	-					
	8	-	10-16 SMS PH FH L=1" SS300	ST/ST	-					
Ì	9	-	BULB GASKET ULTRAFAB E20 I	VINYL	-					
.	10	-	SETTING BLOCK 3/16" THK X 1/2" X1" SANTOPRENE	-	-					
;	1.1	DC975	DOW CORNING 795	SILICONE	DOW					
İ	12	-	1/2" X 5/8" SETTING BLOCK LAMINATED GLASS	SANTOPRENE	-					
\neg	13	-	GLASS SPACER	ALUMINUM	TECNOGLASS					



MCY ENGINEERING, INC.
GLAZING CONSULTANTS
8501 SW 124Ave.Ste.205A P: 305.279
MIAMI, FL. 33183

MR. GLASS DOORS AND WINDOWS, INC 8120 NW 84TH STREET, MIAMI, FL 33166 TEL ??? FAX ???

02/06/18 AS SHOWN

SERIES MRG-400 FIXED WINDOW (L.M.I.)

FEBRUARY 20TH, 2018

