



Product Approval
USER: Public User

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OFFICE OF THE
SECRETARY

FL #	FL20804-R4
Application Type	Revision
Code Version	2023
Application Status	Approved
Comments	
Archived	<input type="checkbox"/>
Product Manufacturer	Sol-A-Trol Aluminum Products
Address/Phone/Email	4101 NW 132 St Miami, FL 33054 (350) 681-2020 Ext 209 Edith@SOLATROL.COM
Authorized Signature	Edith Todzey Edith@SOLATROL.COM
Technical Representative	Edith Todzey
Address/Phone/Email	4101 NW 132nd St. Miami, FL 33054 (305) 681-2020 edith@solatrol.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Windows
Subcategory	Fixed
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input type="checkbox"/> Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Christopher Stanton
Florida License	PE-69316
Quality Assurance Entity	National Accreditation and Management Institute
Quality Assurance Contract Expiration Date	12/31/2026
Validated By	Yiping Wang, P.E. <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received
Certificate of Independence	FL20804_R4_COI_Letter_535_fixed_noa_FBC_cover_2017_signed.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

11/13/2023

Date Validated

11/14/2023

Date Pending FBC Approval

11/18/2023

Date Approved

02/13/2024

Summary of Products

FL #	Model, Number or Name	Description
20804.1	Series 535 Aluminum Fixed Window-LMI	Series 535 Aluminum Fixed Window-large missile impact.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +86.7/-100 Other: For window sizes vs. design load refer to installation instructions		Installation Instructions FL20804_R4_II_535 Fd FullSet (11.6.23)_signed.pdf Verified By: Christopher Stanton PE #69316 Created by Independent Third Party: Yes Evaluation Reports FL20804_R4_AE_535 FIXED EVALUATION REPORT 2023 SIGNED.pdf FL20804_R4_AE_535 fixed FBC cover 2023 signed.pdf Created by Independent Third Party: Yes

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

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Product Approval Accepts:



STANTON ENGINEERING, INC.
2701 NW BOCA RATON BLVD. SUITE #204
BOCA RATON, FL

PHONE: (561) 393-1003
FAX: (561) 393-1008
E-MAIL: chris.stanton.eng@gmail.com

November 14, 2023

Submittal for State of Florida Product Approval

Manufacturer:

Sol-A-Trol Aluminum Products
4101 NW 132nd Street
Miami, FL 33054

Product:

Series 535 Aluminum Fixed Window - LMI
Large and Small Missile Impact

Update of existing Florida Product approval

Ref. FL 20804.1

Design Criteria:

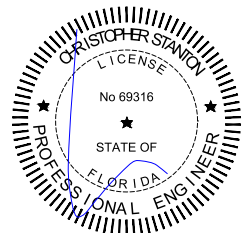
Product Approval Submittal for Series 535 Aluminum Fixed Window - LMI

Product Tested to Protocols TAS-201, TAS-202 and TAS-203

Shutters are NOT required



Digitally signed by
Christopher Stanton
Date: 2023.11.14
10:50:17 -05'00'



STANTON ENGINEERING, INC.
2701 NW BOCA RATON BLVD. SUITE #204
BOCA RATON, FL

PHONE: (561) 393-1003
FAX: (561) 393-1008
E-MAIL: chris.stanton.eng@gmail.com

November 14, 2023

Florida Building Commission

Attn: Product Approval Program Oversight Committee
1940 North Monroe Street
Tallahassee, FL 32399

Manufacturer:

Sol-A-Trol Aluminum Products
4101 NW 132nd Street
Miami, Fl. 33054

**Update of existing Florida Product approval
Ref. FL 20804.1**

Product:

Series 535 Aluminum Fixed Window - LMI
Large and Small Missile Impact

Ref: Financial Interest Letter

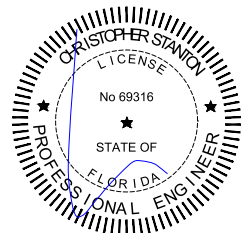
As the structural design engineer retained by Sol-A-Trol Aluminum Products for the product referenced above, I do hereby declare that I do not have any financial interest with the laboratories that have performed the tests on the above-referenced product nor do I have any financial interest with the engineers witnessing and signing/ sealing the test reports as a laboratory representative.

Sincerely,

Christopher Stanton, P.E.

PE # 69316

November 14, 2023



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Product:

Series 535 Aluminum Fixed Window -LMI
Large and Small Missile Impact

**Update of existing Florida Product approval
Ref. FL 20804.1**

Ref: Product Compliance Letter & Affirmation Letter

To the best of my knowledge, belief and professional judgment, the product referenced above is in compliance with the 2023 (8th Edition) Florida Building Code.

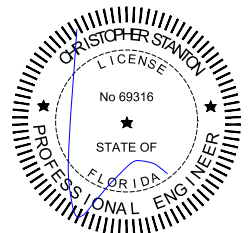
I hereby affirm that the code (ref. 2023 FBC) change(s) have not affected the compliance of this product.

Please feel free to contact this Firm if you should have any further questions or concerns.

Sincerely,

Christopher Stanton, P.E.

PE # 69316



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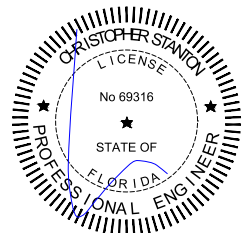
November 14, 2023

Submittal for State of Florida Product Approval

Scope of Calculations:

- 1) Review for requirements of the 2023 Florida Building Code.
- 2) Mullions checked for stress & deflection.*
- 3) Fasteners checked for Shear & Bending. Verify published anchor capacity exceeds requirements as qualified by this Florida Product Approval Submittal.*
- 4) Glass checked for compliance with ASTM E-1300. Glass size limited to tested area.*
- 5) 1/3 Stress increase is not being considered for Material Stresses, Anchor Capacities etc.*

NOTE: * All calculations were submitted previously for 2014 Compliant Product approval. There have been no code changes in the 2023 FBC that effect the supporting calculations previously submitted. Ref. FL 20804.1.



PRODUCT APPROVAL EVALUATION REPORT
RULE CHAPTER #61G20-3

MANUFACTURER

SOL-A-TROL ALUMINUM PRODUCTS
 4101 NW 132 ND. STREET MIAMI, FL

PRODUCT
SERIES 535

ALUMINUM FIXED WINDOW - LMI FL20804.1

MAX. FRAME SIZE: 53 1/8" X 80"
 DESIGN PRESSURE: (MAX.) = -100/+87 PSF

NOTE: THIS PRODUCT COMPLIES WITH THE HIGH VELOCITY HURRICANE ZONE (HVHZ) TESTING REQUIREMENTS

SEE CHARTS ON PRODUCT APPROVAL \DRAWINGS TO COORDINATE ALLOWABLE DESIGN PRESSURES FOR SPECIFIC FRAME SIZES, GLASS TYPE COMBINATIONS

COMPARATIVE ANALYSIS HAS NOT BEEN UTILIZED IN THE PREPERATION OF THIS APPROVAL

MANITORY TESTS (TESTED IN ACCORDENCE WITH AAMA 101/ I.S.2/ NAPS-02/ TAS 201/ TAS202/TAS203)

<u>TEST</u>	<u>DESCRIPTION</u>	<u>TEST LOCATION</u>	<u>TEST REPORT #</u>	<u>TEST DATE</u>	<u>ENGINEER</u>
ASTM E283	AIR INFILTRATION	HURRICANE ENGINEERING & TESTING, INC.	HETI-04-1398 HETI-05-1460 HETI-11-3217A	7/22/2004 8/05/2005 3/3/2016	IVONNE GHIA, PE IVONNE GHIA, PE CANDIDO F. FONT, PE
ASTM E331 ASTM 547 & TAS 202	WATER PENETRATION	HURRICANE ENGINEERING & TESTING, INC.	HETI-04-1398 HETI-05-1460 HETI-11-3217A	7/22/2004 8/05/2005 3/3/2016	IVONNE GHIA, PE IVONNE GHIA, PE CANDIDO F. FONT, PE
ASTM E-330 & TAS 202	UNIFORM STATIC AIR PRESSURE	HURRICANE ENGINEERING & TESTING, INC.	HETI-04-1398 HETI-05-1460 HETI-11-3217A HETI-10-3125	7/22/2004 8/05/2005 3/3/2016 10/30/2010	IVONNE GHIA, PE IVONNE GHIA, PE CANDIDO F. FONT, PE CANDIDO F. FONT, PE
SUPPLIMENTAL TESTS (TESTED IN ACCORDANCE WITH TAS 201 & TAS 203)					
FBC 1626.2 TAS 201 & TAS 203	LARGE MISSILE IMPACT & CYCLIC	HURRICANE ENGINEERING & TESTING, INC.	HETI-05-1912 HETI-05-2056 HETI-05-1966 HETI-06-2095 HETI-11-3218 HETI-11-3219 HETI-11-3220 HETI-10-3126	12/21/2005 12/14/2005 11/14/2005 5/2/2006 3/3/2011 3/3/2011 3/3/2011 10/30/3126	IVONNE GHIA, PE IVONNE GHIA, PE IVONNE GHIA, PE RAFEAL E. DROZ-SEDA, P.E. CANDIDO F. FONT, PE CANDIDO F. FONT, PE CANDIDO F. FONT, PE CANDIDO F. FONT, PE

UNDER THE LIMITATIONS OF THE ATTACHED INSTALLATION DRAWINGS, TO THE BEST OF MY KNOWLEDGE, THE ABOVE WINDOW PRODUCT CONFORMS TO THE REQUIREMENTS OF THE 2023 FLORIDA BUILDING CODE

EVALUATION REPORT ENGINEER



Digitally signed by
 Christopher Stanton
 Date: 2023.11.06
 15:08:00 -05'00'

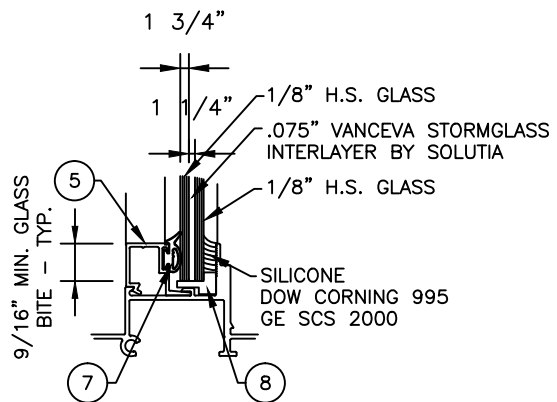
Christopher Stanton, P.E.
 Fla. P.E. #69316

STANTON ENGINEERING INC.
 CERT. OF AUTHORIZATION
 2701 BOCA RATON BLVD. SUITE #204
 BOCA RATON, FL 33431

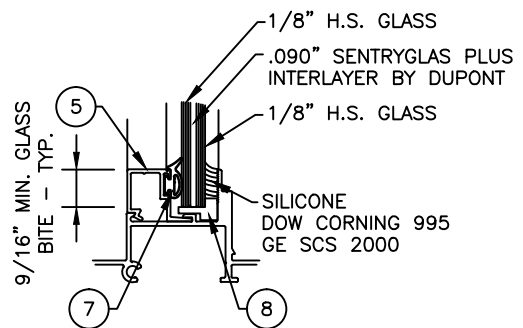


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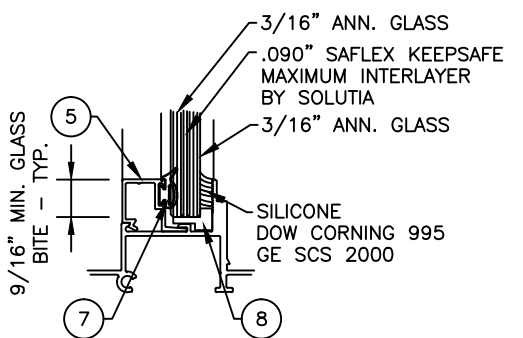
GLAZING OPTIONS



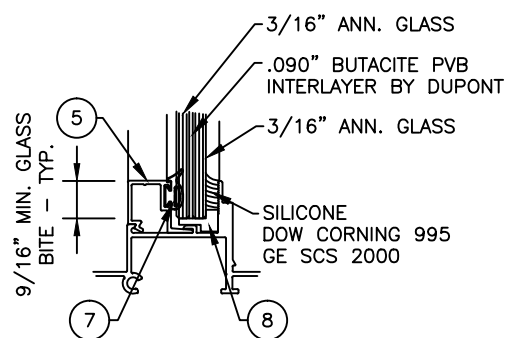
GLASS TYPE 'A'



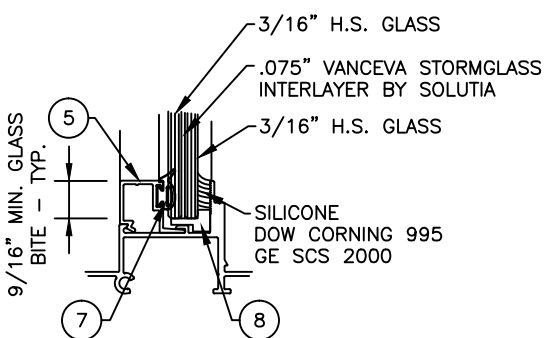
GLASS TYPE 'B'



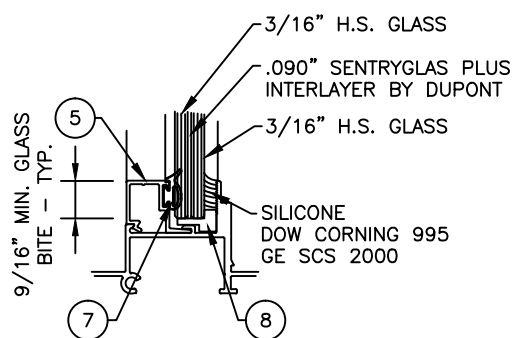
GLASS TYPE 'C'



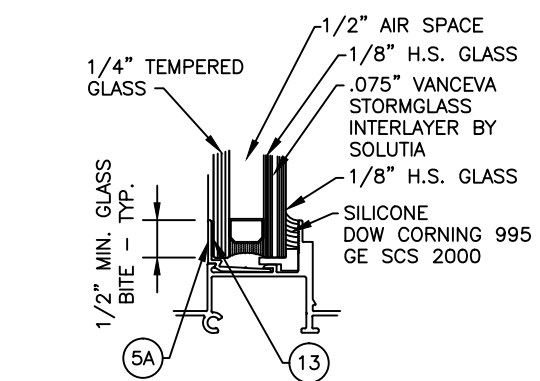
GLASS TYPE 'D'



GLASS TYPE 'E'



GLASS TYPE 'F'



GLASS TYPE 'G'

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

SERIES 535 ALUMINUM FIXED WINDOW

DESIGN LOAD RATING FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEET 5 OF 8.
APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF FIXED/FIXED OR FIXED WITH OTHER WINDOW TYPES IN MODULES OF TWO OR MORE WINDOWS USING MIAMI-DADE COUNTY/ FBC APPROVED MULLIONS IN BETWEEN. LOWER DESIGN PRESSURE FROM WINDOWS OR MULLION APPROVAL WILL APPLY TO ENTIRE SYSTEM.

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

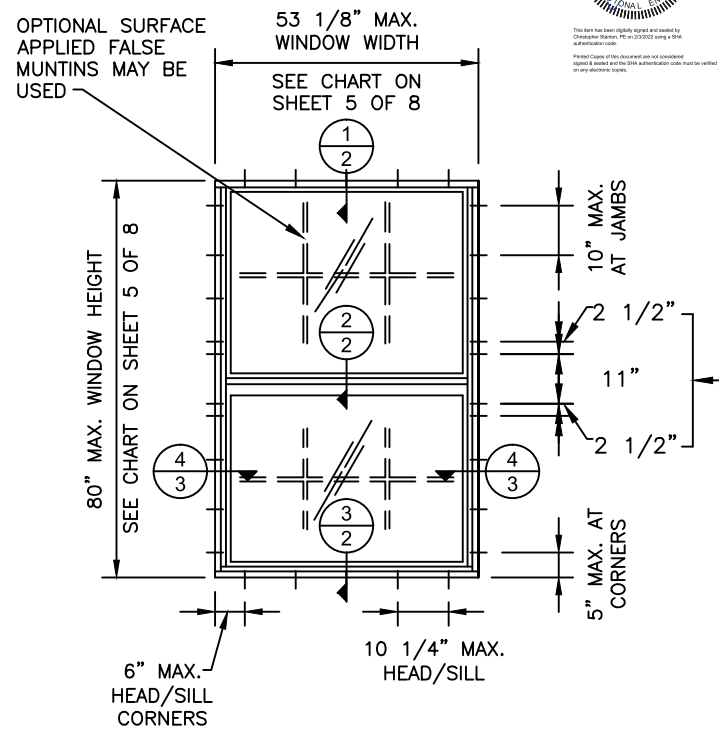
WOOD BUCKS, BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

ANCHORS SHALL BE AS LISTED AND SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT INTO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

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

A LOAD DURATION INCREASE IN ALLOWABLE STRESS WAS NOT USED IN DESIGN OF THIS SYSTEM.

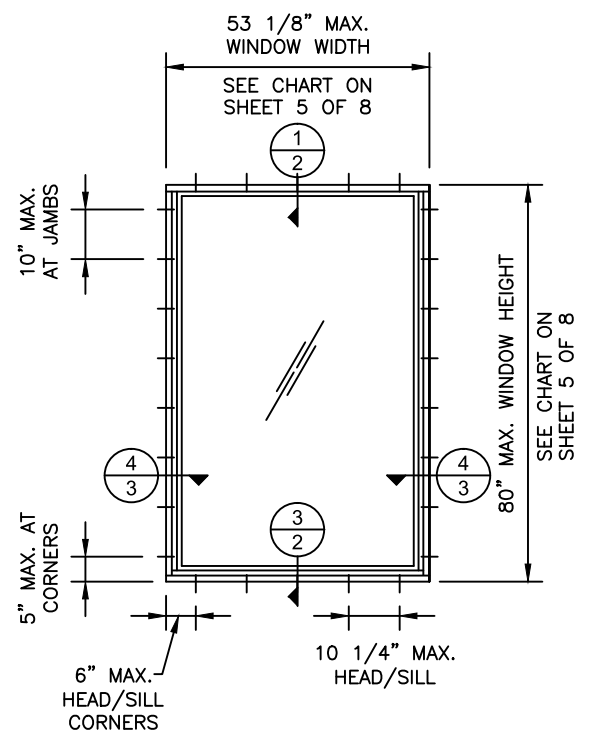
MATERIALS INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2023 FLORIDA BLDG. CODE



TYPICAL ELEVATION WITH INT. HORIZ.

TESTED UNIT

NOTE:
(1) ANCHOR REQUIRED EACH SIDE OF INTERMEDIATE HORIZONTAL. FOR ANCHOR TYPES 1, 2 & 6 WHERE D.P. EXCEEDS +/-56.0 PSF, INSTALL (2) ANCHORS EACH SIDE OF INTERMEDIATE HORIZONTAL

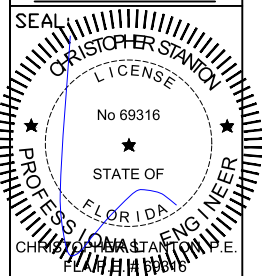


TYPICAL ELEVATION WITHOUT INT. HORIZ.

TESTED UNIT

LAMINATED GLASS
LARGE MISSILE IMPACT

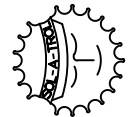
NO.	DATE	REVISIONS
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STANTON ENGINEERING, INC.
STRUCTURAL ENGINEERING SERVICES
2701 NW BOCA RATON BLVD. SUITE 204
BOCA RATON, FL 33431
TEL: (561) 393-1003 FAX: (561) 393-1008

SERIES 535 ALUMINUM FIXED WINDOW (L.M.I.)

SOL-A-TROL
aluminum products, inc.
4101 N.W. 132nd Street
Miami, Florida 33054
Phone: (305) 681-2020
Fax: (305) 681-2035

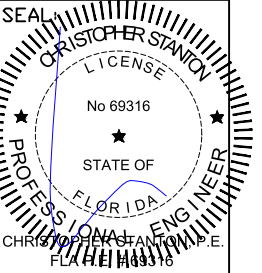


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DATE: 10/23/23
DRAWN BY: DGI
CHECKED BY: C.S.

535FW
DRAWING NO.

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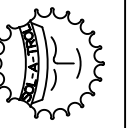
FPA FL#20804.1



STANTON ENGINEERING, INC.
STRUCTURAL ENGINEERING SERVICES
 2701 NW BECA RATON BLVD. SUITE 204
 BOCA RATON, FL 33431
 TEL: (561) 393-1003 FAX: (561) 393-1008

SERIES 535 ALUMINUM FIXED WINDOW (L.M.I.)

SOL-A-TROL
 aluminum products, inc.
 4101 N.W. 132nd Street
 Miami, Florida 33054
 Phone: (305) 681-2020
 Fax: (305) 681-2035



SCALE: NOTED
 DATE: 10/23/23
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WOOD BUCKS AND METAL STRUCTURE NOT BY SOL-A-TROL MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS:
 SEE ELEVATIONS FOR SPACING

TYPE 1 - 1/4" TAPCONS

THRU 1BY or 2 BY WOOD BUCKS INTO 3000 PSI MIN. CONC. OR C-90 GROUT FILLED BLOCK. 1 1/4" MIN. EMBED. INTO CONC. OR MASONRY

DIRECTLY INTO 3000 PSI MIN. CONCRETE OR C-90 GROUT FILLED BLOCK. 1 1/4" MIN. EMBED. INTO CONC. OR MASONRY

TYPE 2 - 1/4" TAPCONS

INTO 2BY WOOD BUCKS OR WOOD SUBSTRATES 1 1/2" MIN. PENETRATION INTO #2 SYP (G=0.55)

TYPE 3 - #14 SMS (MIN. GRADE 2 CRS)
 INTO METAL STRUCTURES

METAL STUDS: 16 GA. MIN.
 STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
 ALUMINUM: 1/8" MIN. THK. (6063-T5 MIN.)
 (STEEL IN CONTACT WITH ALUM. TO BE PLATED OR PAINTED)

TYPE 4 - 1/4" ELCO DRILL FLEX
 INTO METAL STRUCTURES

METAL STUDS: 16 GA. MIN.
 STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
 ALUMINUM: 1/8" MIN. THK. (6063-T5 MIN.)
 (STEEL IN CONTACT WITH ALUM. TO BE PLATED OR PAINTED)

TYPE 5 - #12 SMS (MIN. GRADE 2 CRS)
 INTO APPROVED MULLIONS (1/8" MIN. THK.)
 1/4" MAX. SHIM SPACE

TYPE 6 - #14 WOOD SCREWS

INTO 2BY WOOD BUCKS OR WOOD SUBSTRATES 1 3/8" MIN. PENETRATION INTO #2 SYP (G=0.55)

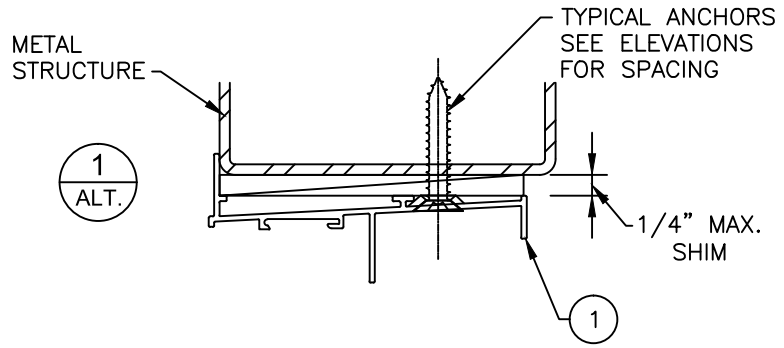
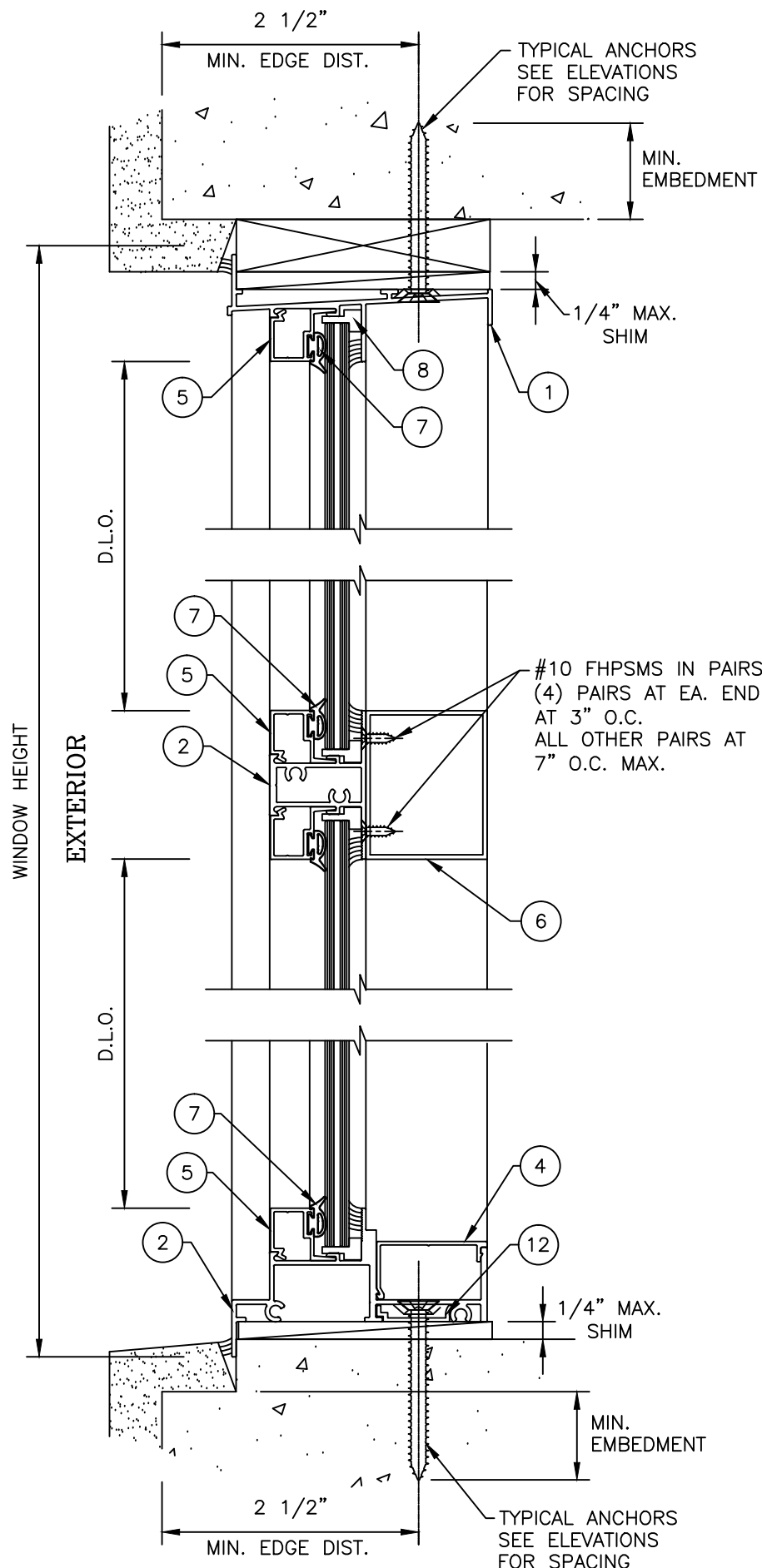
TYPICAL EDGE DISTANCE

INTO CONC. OR MASONRY = 1 1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN.
 INTO METAL STRUCTURE = 1/2" MIN.

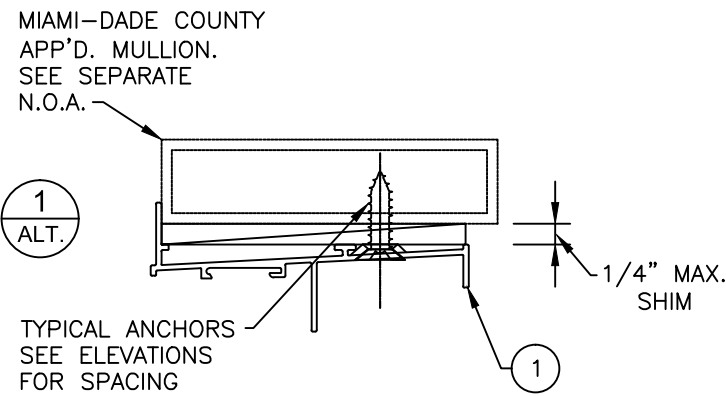
SEALANTS:

ALL FRAME AND VENT CORNERS SEALED WITH SCHNEE MOREHEAD SEAM SEALER.

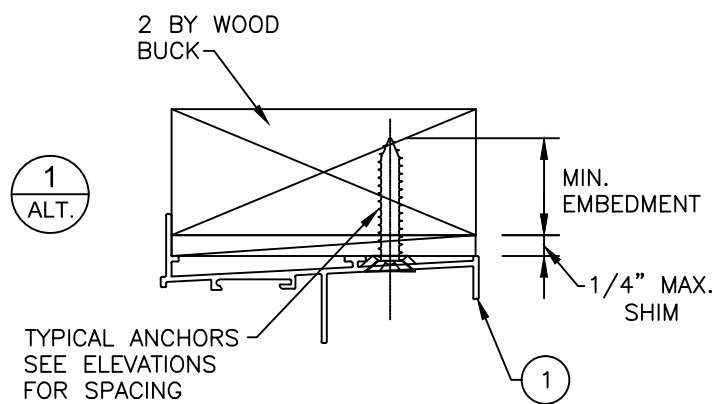
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1/2

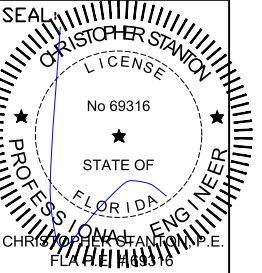


2/2



3/2

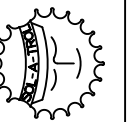
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 BECA RATON, FL 33431
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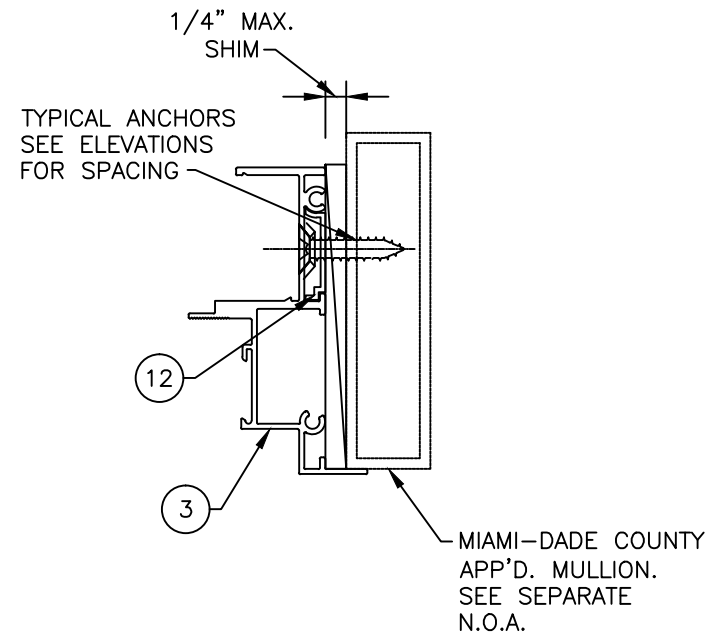
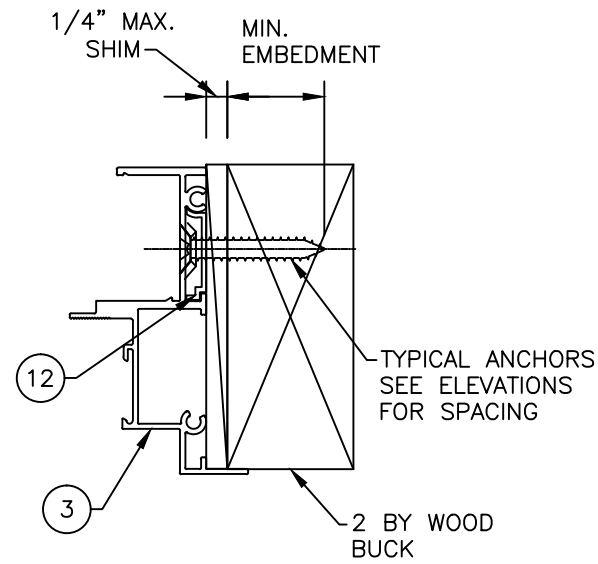
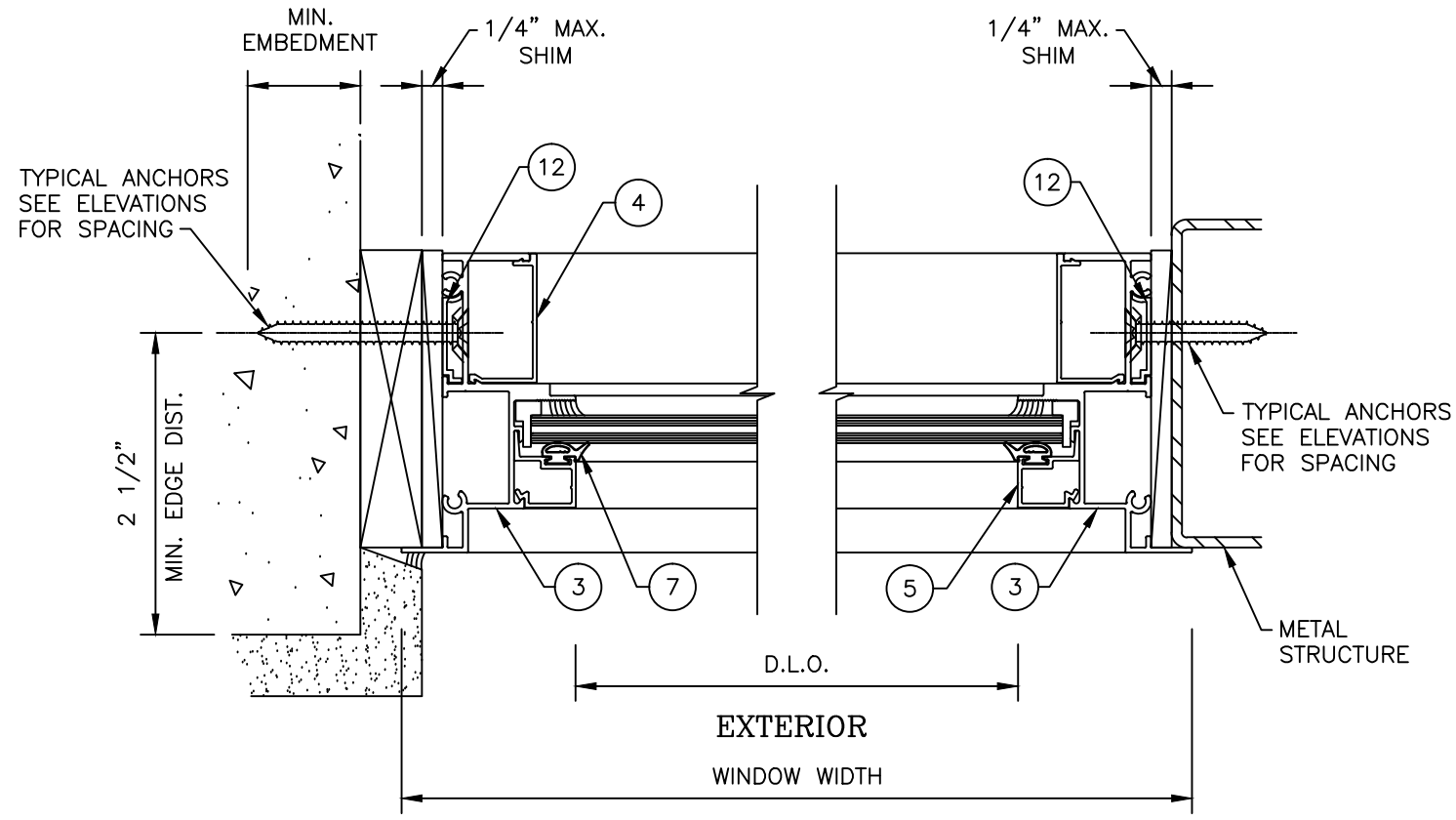
SOL-TROL
 aluminum products, inc.
 4101 N.W. 132nd Street
 Miami, Florida 33054
 Phone: (305) 681-2020
 Fax: (305) 681-2035



SCALE: NOTED
 DATE: 10/23/23
 DRAWN BY: DGI
 CHECKED BY: C.S.

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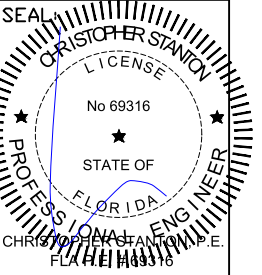
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FPA FL#20804.1

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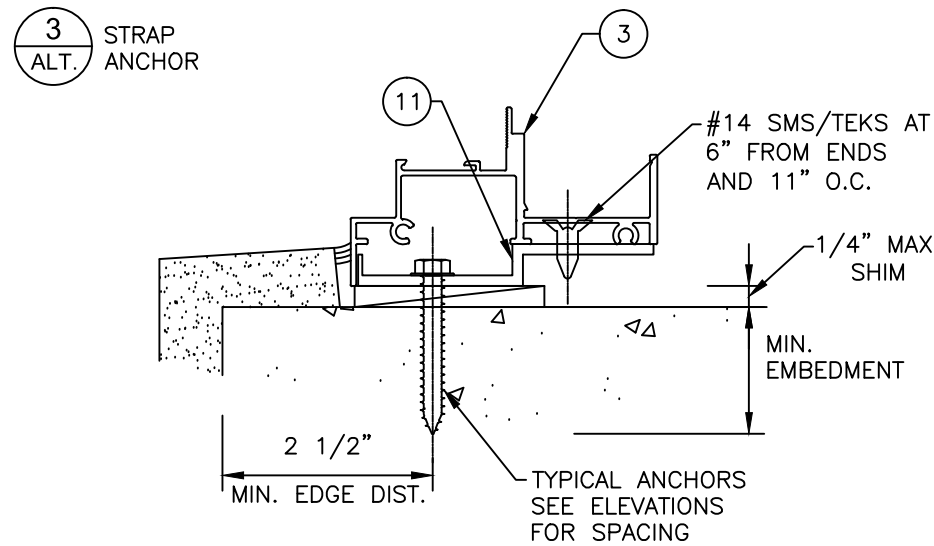
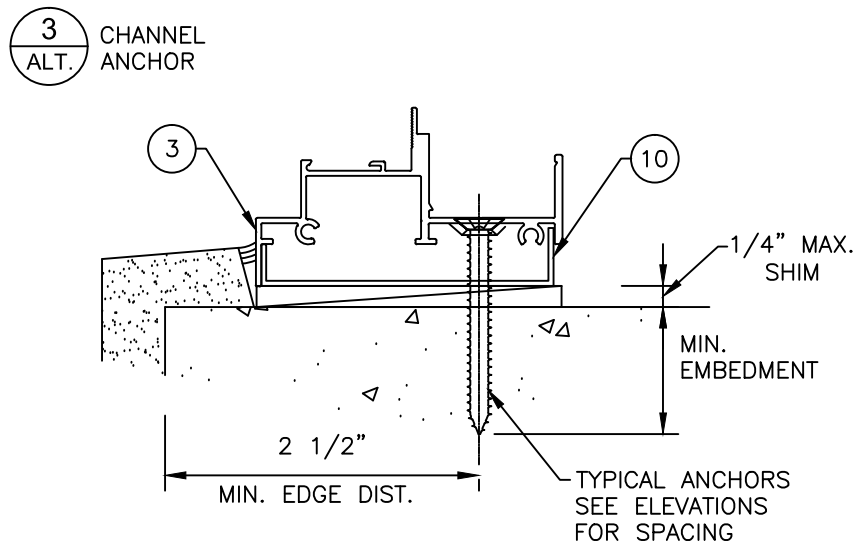
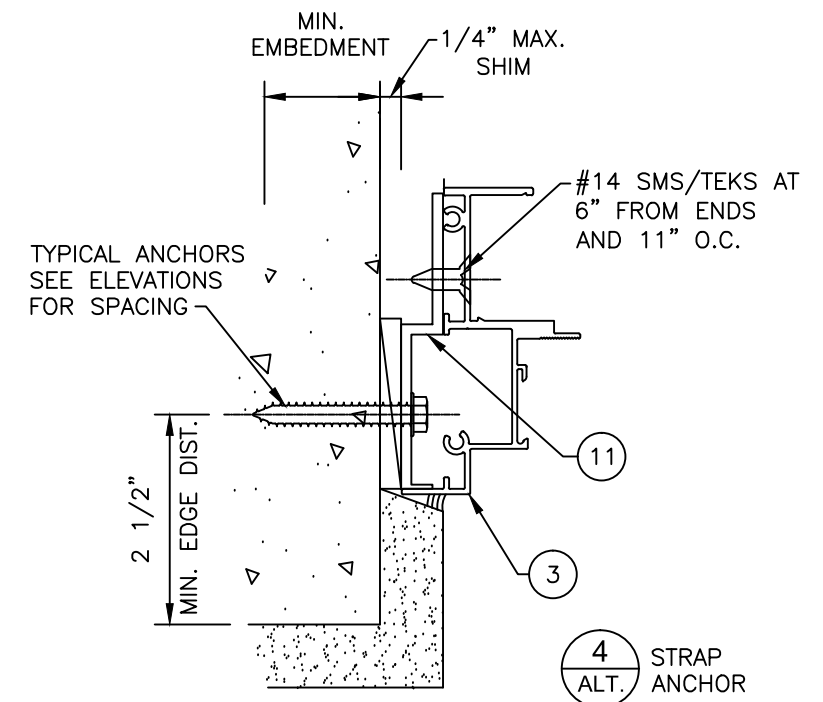
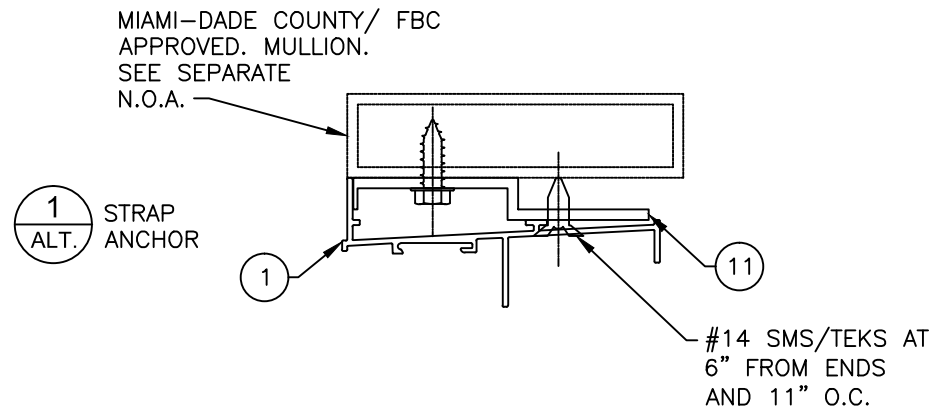
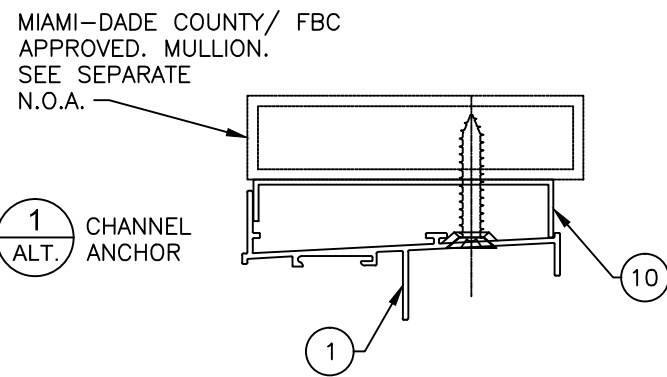
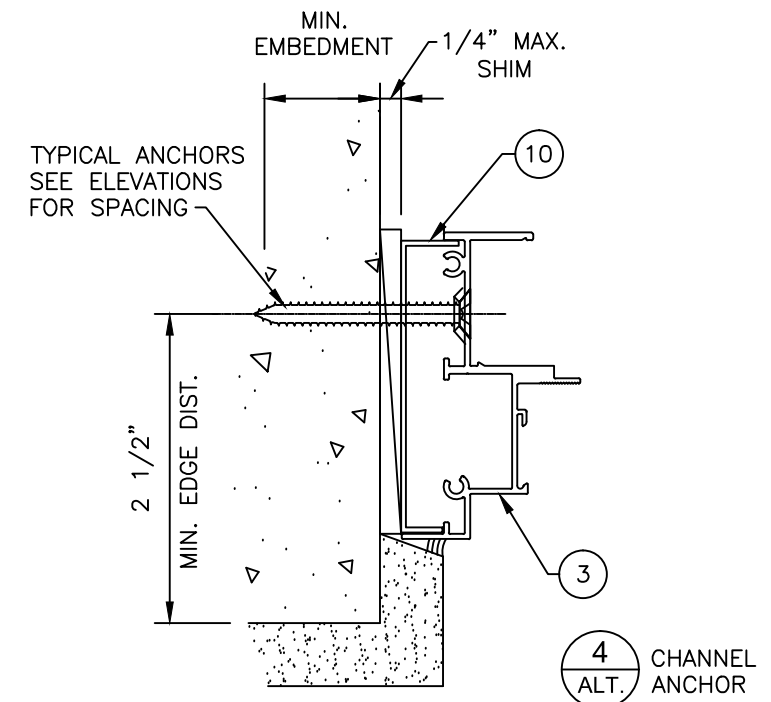
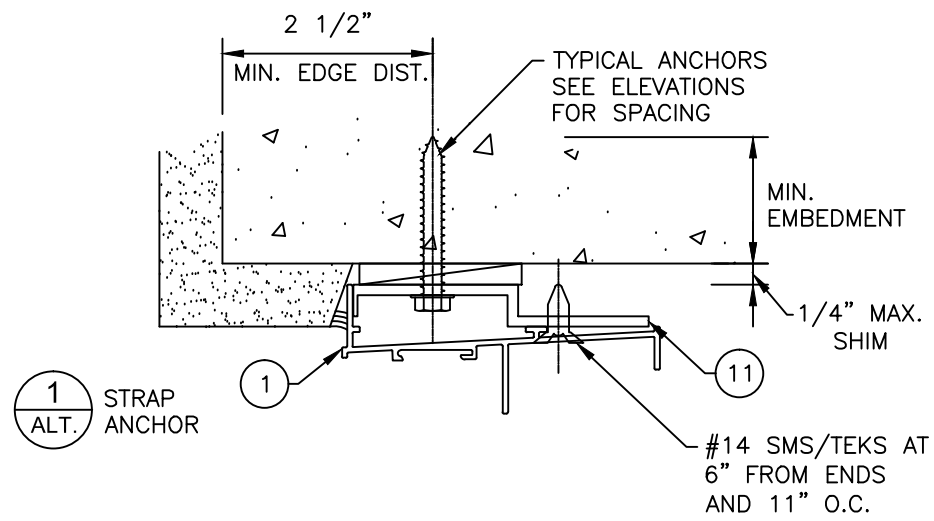
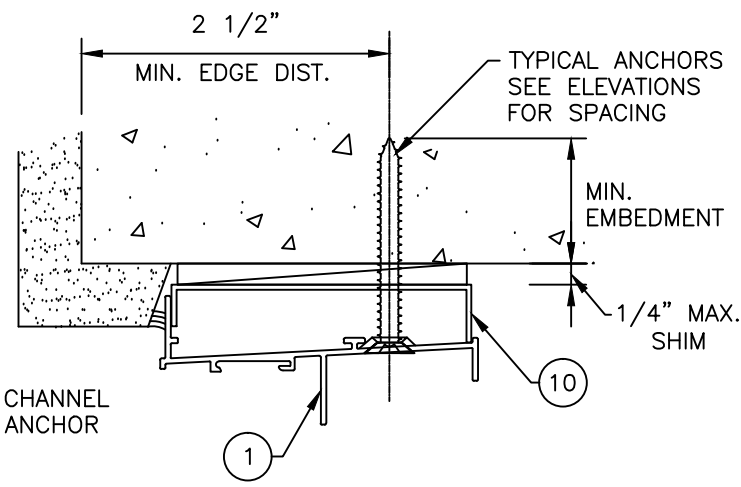
SERIES 535 ALUMINUM FIXED WINDOW (L.M.I.)

SOL-TROL
 aluminum products, inc.
 4101 N.W. 132nd Street
 Miami, Florida 33054
 Phone: (305) 681-2020
 Fax: (305) 681-2035

SCALE: NOTED
 DATE: 10/23/23
 DRAWN BY: DGI
 CHECKED BY: C.S.

535FW
 DRAWING NO.

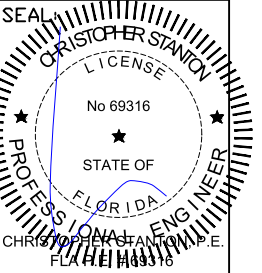
SHEET NO.



FPA FL#20804.1

NO.	DATE	REVISIONS
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INSTALLATION DETAILS FOR ALTERNATE CHANNEL AND STRAP ANCHORS



STANTON ENGINEERING, INC.
STRUCTURAL ENGINEERING SERVICES
 2701 NW BECA RATON BLVD. SUITE 204
 BOCA RATON, FL 33431
 TEL: (561) 393-1003 FAX: (561) 393-1008

SERIES 535 ALUMINUM FIXED WINDOW (L.M.I.)

SOL-A-TROL
 aluminum products, inc.
 4101 N.W. 132nd Street
 Miami, Florida 33054
 Phone: (305) 681-2020
 Fax: (305) 681-2035

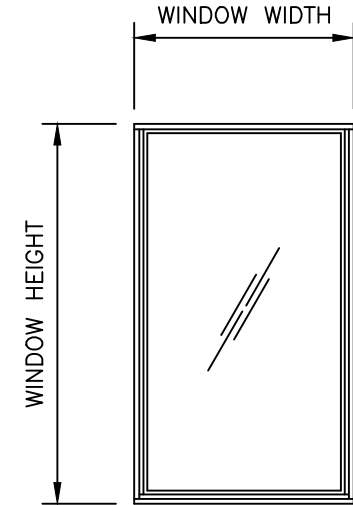
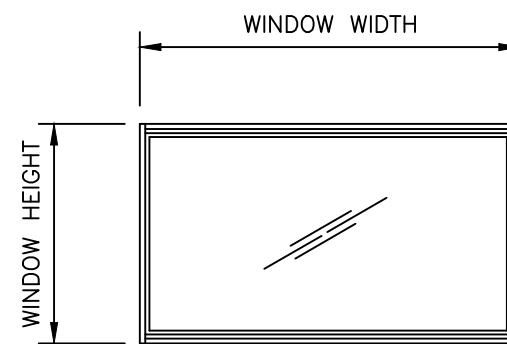
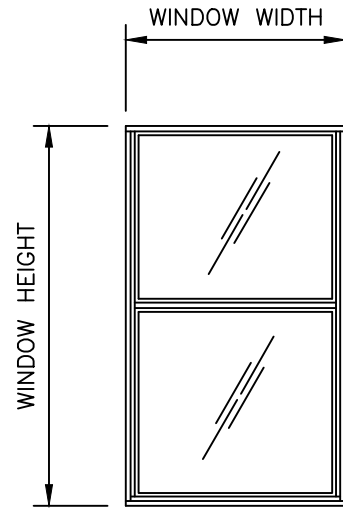
SCALE: NOTED
 DATE: 10/23/23
 DRAWN BY: DGI
 CHECKED BY: C.S.

535FW
 DRAWING NO.

SHEET NO.

DESIGN LOAD CAPACITY - PSF							
WINDOW DIMS.		GLASS TYPES 'A' & 'B'		GLASS TYPES 'C' & 'D'		GLASS TYPES 'E', 'F' & 'G'	
WIDTH	HEIGHT	EXT.(+)	1NT.(-)	EXT.(+)	1NT.(-)	EXT.(+)	1NT.(-)
26-1/2"	38-3/8"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"		86.7	100.0	80.0	80.0	86.7	100.0
26-1/2"	50-5/8"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"	86.7	100.0	80.0	80.0	86.7	100.0	
26-1/2"	60"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"	86.7	100.0	80.0	80.0	86.7	100.0	
26-1/2"	63"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"	86.7	100.0	80.0	80.0	86.7	100.0	
26-1/2"	72"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"	86.7	100.0	80.0	80.0	86.7	100.0	
26-1/2"	74-1/4"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"	86.7	100.0	-	-	86.7	100.0	
26-1/2"	80"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"	86.7	100.0	-	-	86.7	100.0	
26-1/2"	84"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	-	-	86.7	100.0
26-1/2"	90"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	-	-	86.7	100.0
26-1/2"	96"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	-	-	86.7	100.0

DESIGN LOAD CAPACITY - PSF							
WINDOW DIMS.		GLASS TYPES 'A' & 'B'		GLASS TYPES 'C' & 'D'		GLASS TYPES 'E', 'F' & 'G'	
WIDTH	HEIGHT	EXT.(+)	1NT.(-)	EXT.(+)	1NT.(-)	EXT.(+)	1NT.(-)
26-1/2"	40"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
53-1/8"		86.7	100.0	-	-	86.7	100.0
26-1/2"	45"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	80.0	80.0	86.7	100.0
48"		86.7	100.0	80.0	80.0	86.7	100.0
26-1/2"	48"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	-	-	86.7	100.0
26-1/2"	50-5/8"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
37"		86.7	100.0	80.0	80.0	86.7	100.0
42"		86.7	100.0	-	-	86.7	100.0
26-1/2"	60"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
26-1/2"	63"	86.7	100.0	80.0	80.0	86.7	100.0
32"		86.7	100.0	80.0	80.0	86.7	100.0
26-1/2"	74-1/4"	86.7	100.0	80.0	80.0	86.7	100.0
26-1/2"	80"	86.7	100.0	-	-	86.7	100.0
53 1/8"		-	-	-	-	87.0	100.0

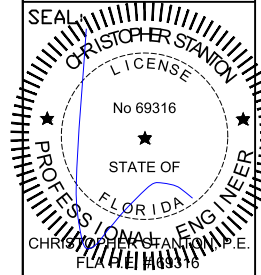


NOTE:
 WIDTH AND HEIGHT CAN BE ORIENTED VERTICALLY OR HORIZONTALLY. AS SHOWN ABOVE

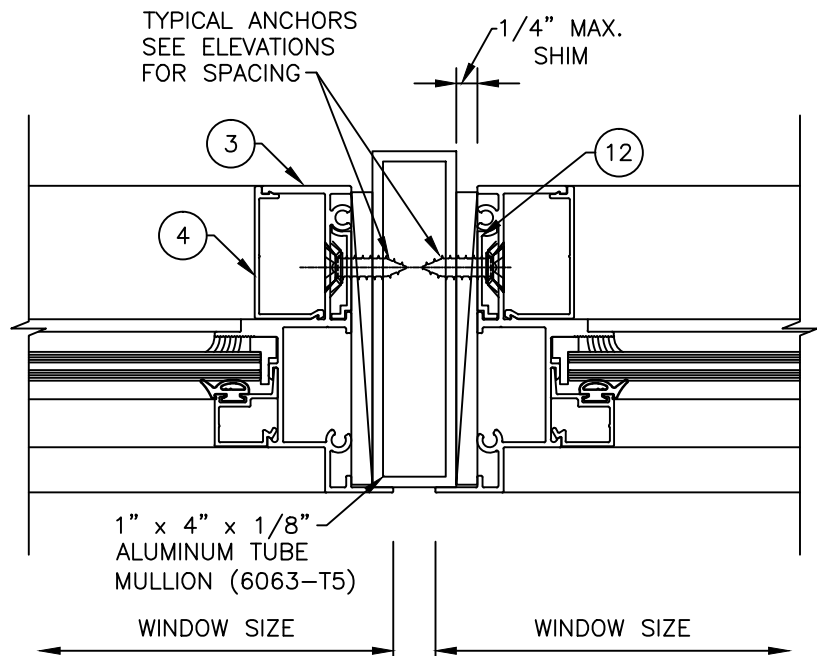
NOTE:
 GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300 (3 SEC. GUSTS)

FPA FL#20804.1

NO.	DATE	REVISIONS
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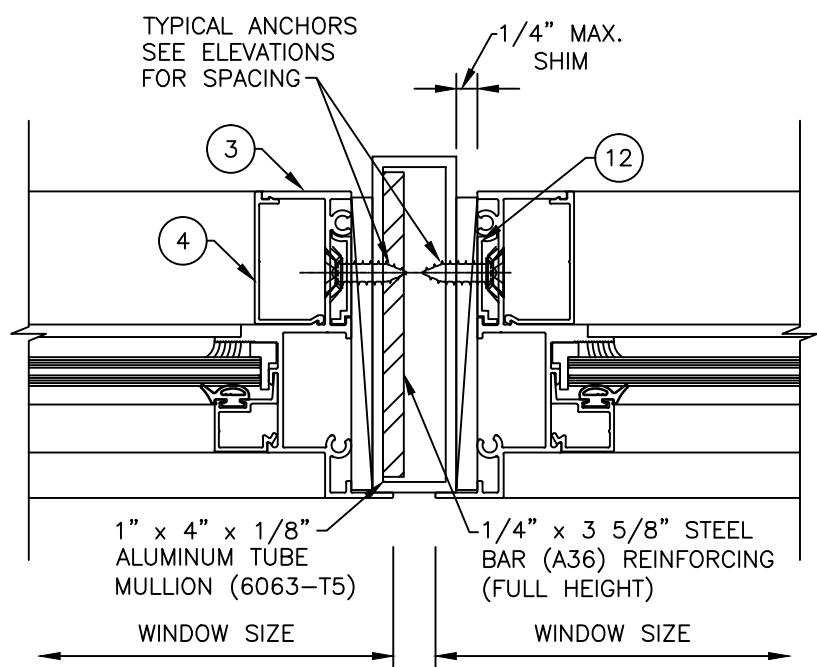


MULLION LOAD CAPACITY - PSF			
WINDOW DIMS.		TYPE '1'	TYPE '2'
WIDTH (W)	LENGTH (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)
26-1/2"	38-3/8"	100.0	100.0
32"		100.0	100.0
37"		100.0	100.0
42"		100.0	100.0
48"		100.0	100.0
53-1/8"		100.0	100.0
26-1/2"	50-5/8"	100.0	100.0
32"		100.0	100.0
37"		100.0	100.0
42"		100.0	100.0
48"		100.0	100.0
53-1/8"		100.0	100.0
26-1/2"	60"	100.0	100.0
32"		100.0	100.0
37"		100.0	100.0
42"		100.0	100.0
48"		100.0	100.0
53-1/8"		100.0	100.0
26-1/2"	63"	100.0	100.0
32"		100.0	100.0
37"		100.0	100.0
42"		100.0	100.0
48"		100.0	100.0
53-1/8"		100.0	100.0
26-1/2"	74"	100.0	100.0
32"		100.0	100.0
37"		100.0	100.0
42"		100.0	100.0
48"		100.0	100.0
53-1/8"		100.0	100.0
26-1/2"	80"	100.0	100.0
32"		100.0	100.0
37"		100.0	100.0
42"		100.0	100.0
48"		95.0	100.0
53-1/8"		86.0	100.0



EXTERIOR
**UN-REINFORCED MULLION
TYPE 1**

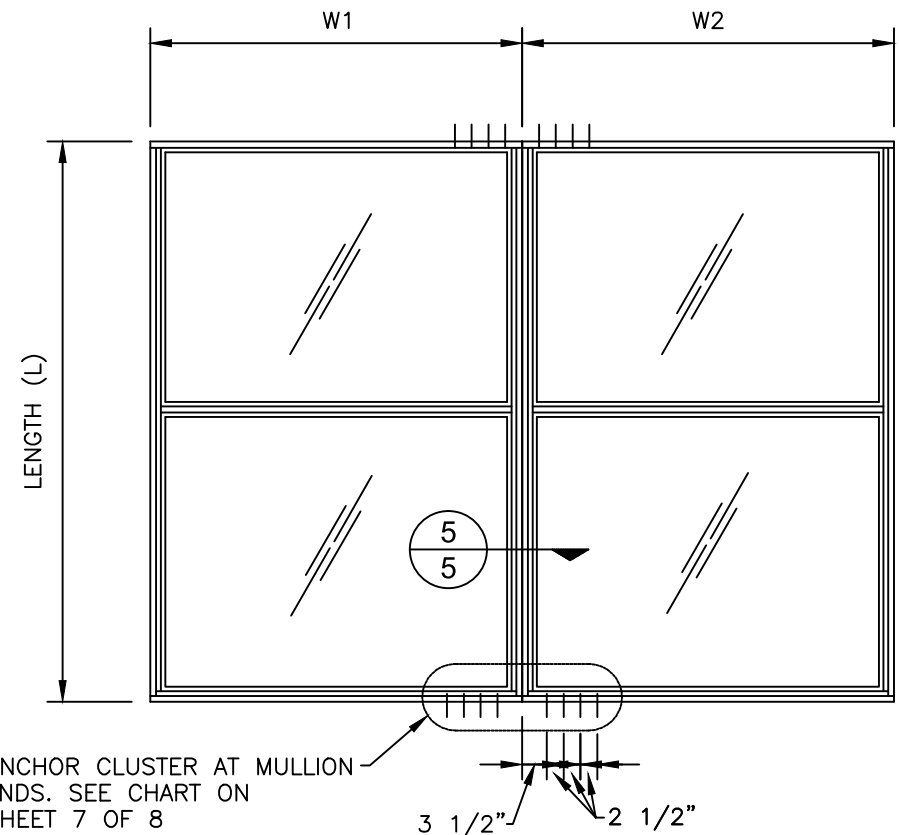
5
5



EXTERIOR
**REINFORCED MULLION
TYPE 2**

5
5

ALT.



TYPICAL ELEVATION
SIDE BY SIDE WINDOWS
SIDE BY SIDE APPLIES TO 2 OR MORE WINDOWS

ALL OTHER ANCHORS PER
ELEVATION ON SHEET 1 OF 8

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

NOTES:

1. USE CHART ON THIS SHEET FOR SIDE BY SIDE CONNECTION CAPACITY OF WINDOW MULLION.
2. FOR SINGLE WINDOW CAPACITY SEE SHEET 5 OF 8.
3. LOWER VALUES FROM STEPS 1 OR 2 WILL APPLY TO ENTIRE SYSTEM.

FPA FL#20804.1

NO.	DATE	REVISIONS
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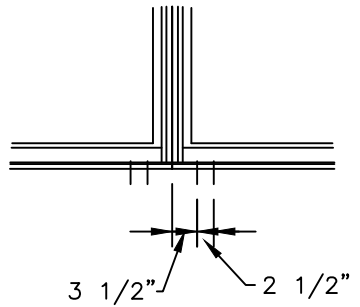
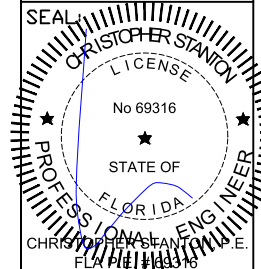
STANTON ENGINEERING, INC.
STRUCTURAL ENGINEERING SERVICES
2701 NW BOCA RATON BLVD. SUITE 204
BOCA RATON, FL 33431
TEL: (561) 393-1003 FAX: (561) 393-1008

SERIES 535 ALUMINUM FIXED WINDOW (L.M.I.)
SOL-A-TROL
aluminum products, inc.
4101 N.W. 132nd Street
Miami, Florida 33054
Phone: (305) 681-2020
Fax: (305) 681-2035

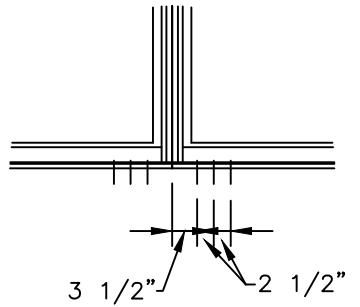
SCALE: NOTED
DATE: 10/23/23
DRAWN BY: DGI
CHECKED BY: C.S.

535FW
DRAWING NO.

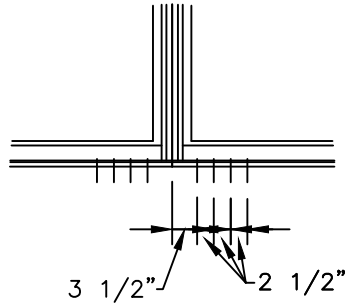
SHEET NO.



(2) EA. SIDE



(3) EA. SIDE



(4) EA. SIDE

WINDOW DIMS.		MULLION ANCHOR LOAD CAPACITY - PSF															
		ANCHOR TYPE 1				ANCHOR TYPE 2				ANCHOR TYPE 3		ANCHOR TYPE 4		ANCHOR TYPE 5		ANCHOR TYPE 6	
		(2) EA. SIDE		(3) EA. SIDE		(3) EA. SIDE		(4) EA. SIDE		(2) EA. SIDE		(2) EA. SIDE		(2) EA. SIDE		(3) EA. SIDE	
WIDTH (W)	LENGTH (L)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
26-1/2" 37" 40" 48" 53-1/8"	38-3/8"	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
26-1/2" 37" 40" 48" 53-1/8"	50-5/8"	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
26-1/2" 37" 40" 48" 53-1/8"	60"	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	96.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		86.0	86.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
26-1/2" 37" 40" 48" 53-1/8"	63"	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	91.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		82.0	82.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
26-1/2" 37" 40" 48" 53-1/8"	72"	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	96.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		80.0	80.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		72.0	72.0	90.0	100.0	90.0	100.0	90.0	94.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
26-1/2" 37" 40" 48" 53-1/8"	76"	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	98.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		90.0	91.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		75.0	75.0	90.0	100.0	90.0	99.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		68.0	68.0	90.0	100.0	89.0	89.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
26-1/2" 37" 40" 48" 53-1/8"	80"	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		93.0	93.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		86.0	86.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		72.0	72.0	90.0	100.0	90.0	94.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	100.0
		65.0	65.0	90.0	97.0	85.0	85.0	90.0	100.0	90.0	100.0	90.0	100.0	90.0	99.0	90.0	97.0

ALL OTHER ANCHORS PER ELEVATION ON SHEET 1 OF 8

FPA FL#20804.1

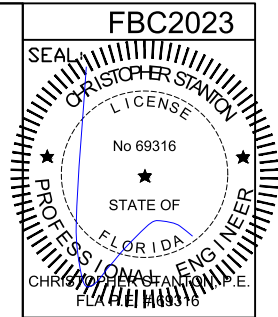
NO.	DATE	REVISIONS
1		
2		
3		
4		
5		

STANTON ENGINEERING, INC.
 STRUCTURAL ENGINEERING SERVICES
 2701 NW BOCA RATON BLVD. SUITE 204
 BOCA RATON, FL 33431
 TEL: (561) 393-1003 FAX: (561) 393-1008

SERIES 535 ALUMINUM FIXED WINDOW (L.M.I.)
 SOL-A-TROL aluminum products, inc.
 4101 N.W. 132nd Street
 Miami, Florida 33054
 Phone: (305) 681-2020
 Fax: (305) 681-2035

SCALE: NOTED
 DATE: 10/23/23
 DRAWN BY: DGI
 CHECKED BY: C.S.

535FW
 DRAWING NO.
 SHEET NO.
7 of 8



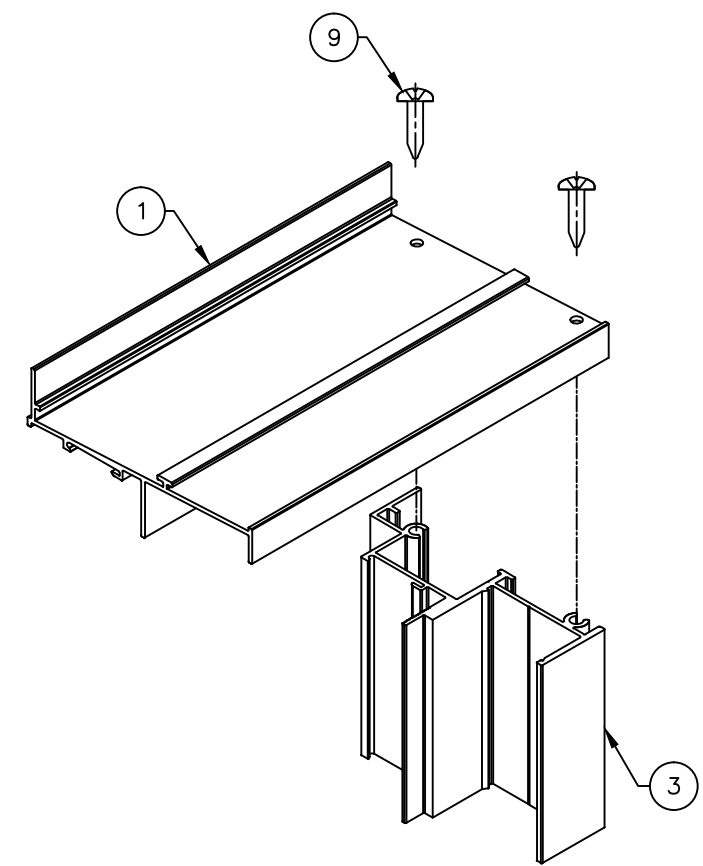
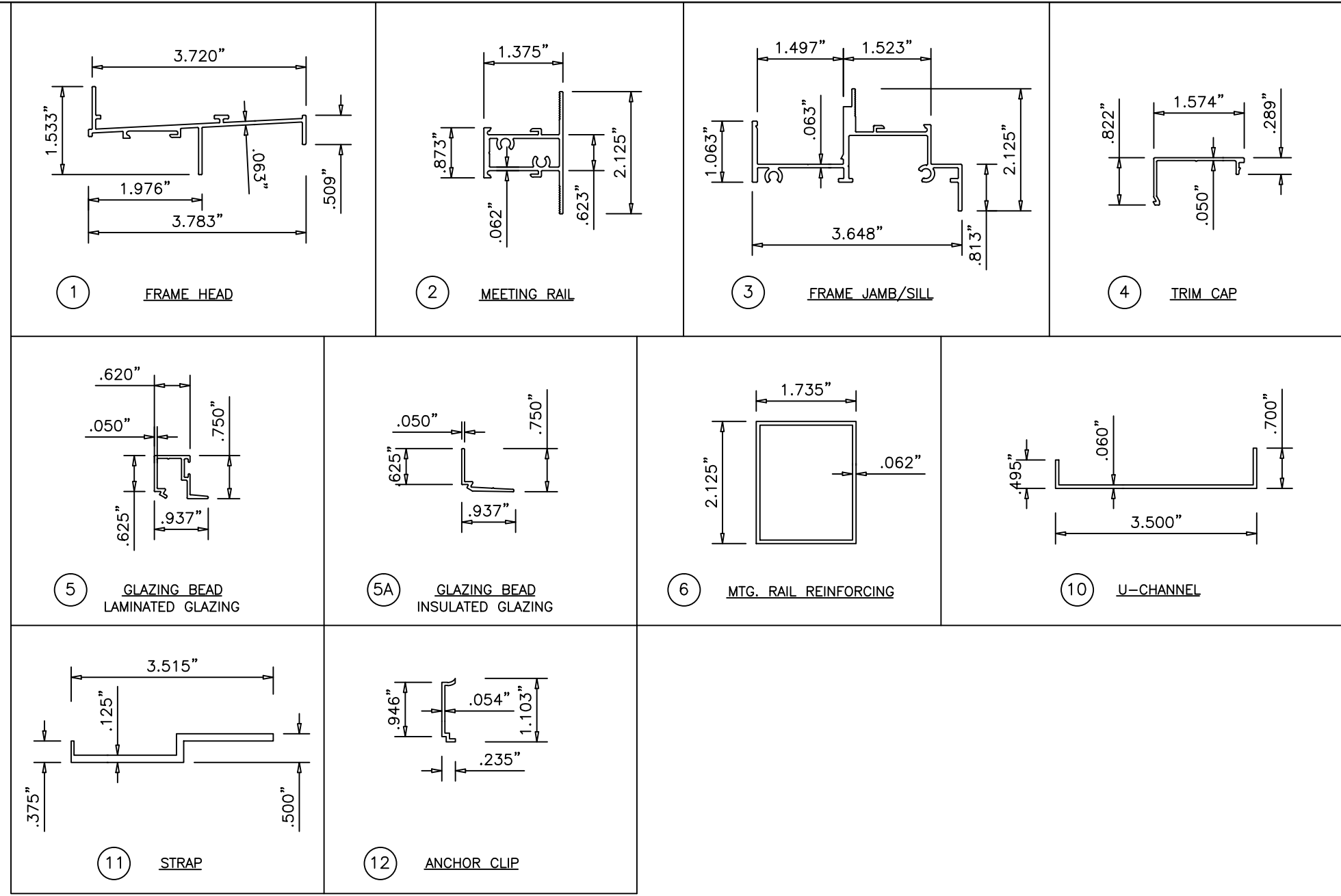
STANTON ENGINEERING, INC.
STRUCTURAL ENGINEERING SERVICES
 2701 NW BECA RATON BLVD. SUITE 204
 BOCA RATON, FL 33431
 TEL: (561) 393-1003 FAX: (561) 393-1008

SERIES 535 ALUMINUM FIXED WINDOW (L.M.I.)
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535FW
 DRAWING NO.

SHEET NO.
8 of 8



FRAME CORNERS

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ARSO-954	1	FRAME HEAD	6063-T6	-
2	ARSO-952	1	MEETING RAIL	6063-T5	-
3	ARSO-955	2	FRAME JAMB/SILL	6063-T6	-
4	ARSO-961	1	TRIM CAP	6063-T6	-
5	ARSO-953A	AS RQD.	GLAZING BEAD (LAMINATED)	6063-T6	-
5A	ARSO-991	AS RQD.	GLAZING BEAD (INSULATED)	6063-T6	-
6	-	1	MTG. RAIL REINFORCING	6063-T6	-
7	TR8384E	AS RQD.	GLAZING GASKET	VINYL	TREMCO
8	326-FP-894B	AS RQD.	SETTING BLOCK	VINYL	PROTOTYPE PLASTICS
9	#10 X 1"	AS REQD.	FRAME ASSEMBLY SCREWS	ST. STEEL	PH SMS
10	-	AS RQD.	U-CHANNEL	ALUMINUM	-
11	ARSO-979	AS REQD.	STRAP ANCHOR	6063-T5	-
12	-	AS REQD.	ANCHOR CLIP, 2" LONG	6063-T6	-
13	-	AS REQD.	1/8" x 1/2" GLAZING TAPE	PVC	-

FPA FL#20804.1

NO.	DATE	REVISIONS
1		
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