Engineering Evaluation Report #09942A-020425

Prepared by:
A. Lynn Miller, P.E.
1070 Technology Dr.
N. Venice, FL 34275
(941) 480-1600
Registration Number: #29296

Manufacturer:
WinDoor, LLC
104 Triple Diamond Blvd.
North Venice, FL 34275
(833) 554-5432

Product Description:
AW9942A Series Impact-resistant Aluminum Awning, (LM & SM); FL Approval #16242

Compliance:
The above-mentioned product has been evaluated for compliance with the requirements of the Florida Department of Business and Professional Regulation for Statewide Acceptance per Rule 61 G20-3.005 method 1(d). The product listed herein complies with requirements of the current Florida Building Code.

This product has been evaluated and is in compliance with the current Florida Building Code, including the “High Velocity Hurricane Zone” (HVHZ).

Supporting Technical Documentation:
1. Approval document: drawing number AW9942ALMI-FPA, signed and sealed by A. Lynn Miller, P.E.

2. Test Report No. QAI NOK-0027, QAI NOK-0099 and QAI NOK-0032; QAI Laboratories, signed and sealed by Idalmis Ortega P.E., dated 4/12/23

TAS 201-94 Large Missile Impact Test
TAS 202-94 Uniform Static Air Pressure Test
TAS 203-94 Cyclic Pressure Loading Test

3. Calculations, signed and sealed by A. Lynn Miller, P.E., dated 6/12/23

Limitations and Conditions of use:
• Units must be glazed per ASTM E1300-09, refer to approval document for glazing details.
• This product is rated to be used in the HVHZ.
• This product is impact resistant and does not require impact protection in wind borne debris regions.
• Frame and panel material to be extruded Aluminum.
• Units must be installed in accordance with approval documents.



SERIES AW9942A ALUMINUM, IMPACT RESISTANT, PASS-THROUGH AWNING WINDOW

FLORIDA PRODUCT APPROVAL #16240

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

2) SHUTTERS ARE NOT REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS. FOR INSULATED GLASS INSTALLATIONS ABOVE 30' IN THE HVHZ, THE OUTBOARD LITE (CAP) MUST TEMPERED.

3) 1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

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

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

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

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

8) THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR THE SITE-SPECIFIC PROJECTS INCLUDING CONSIDERATIONS FOR: LIFE SAFETY, STRUCTURAL ADEQUACY FOR ACCOMMODATING THIS PRODUCT AND THE EFFECTIVENESS OF SEALING AROUND THE OPENINGS TO RESIST WATER INFILTRATION.

9) CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

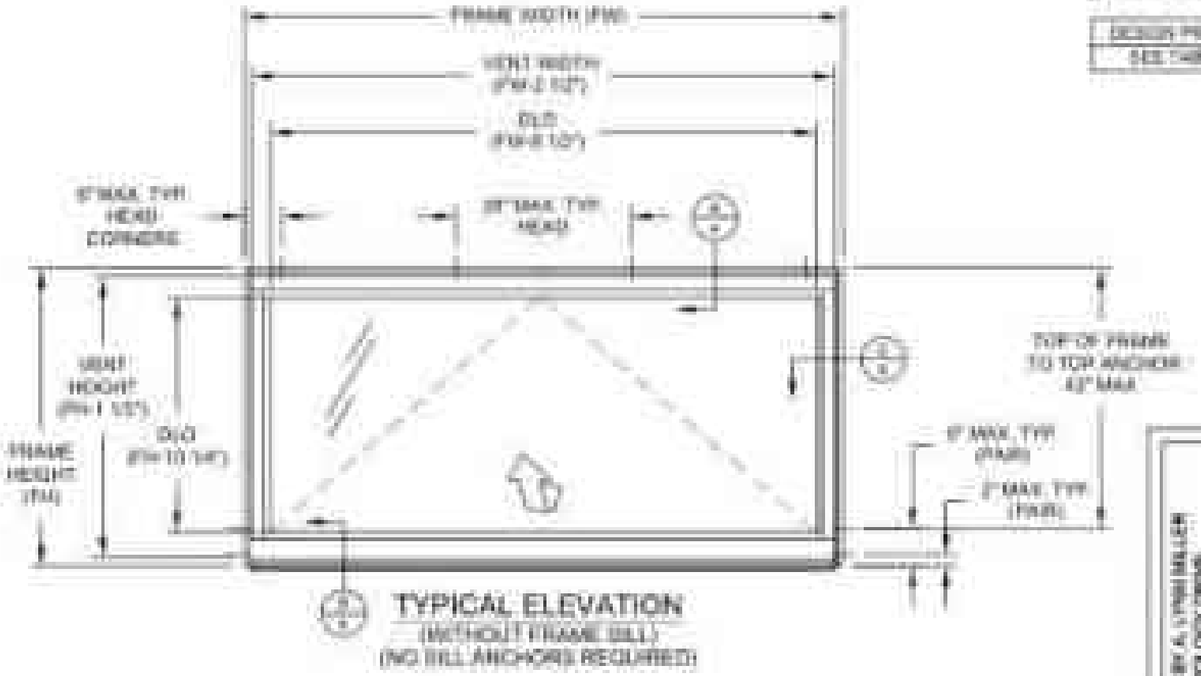
INSTRUCTIONS: USE CHARTS AS FOLLOWS.

STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.

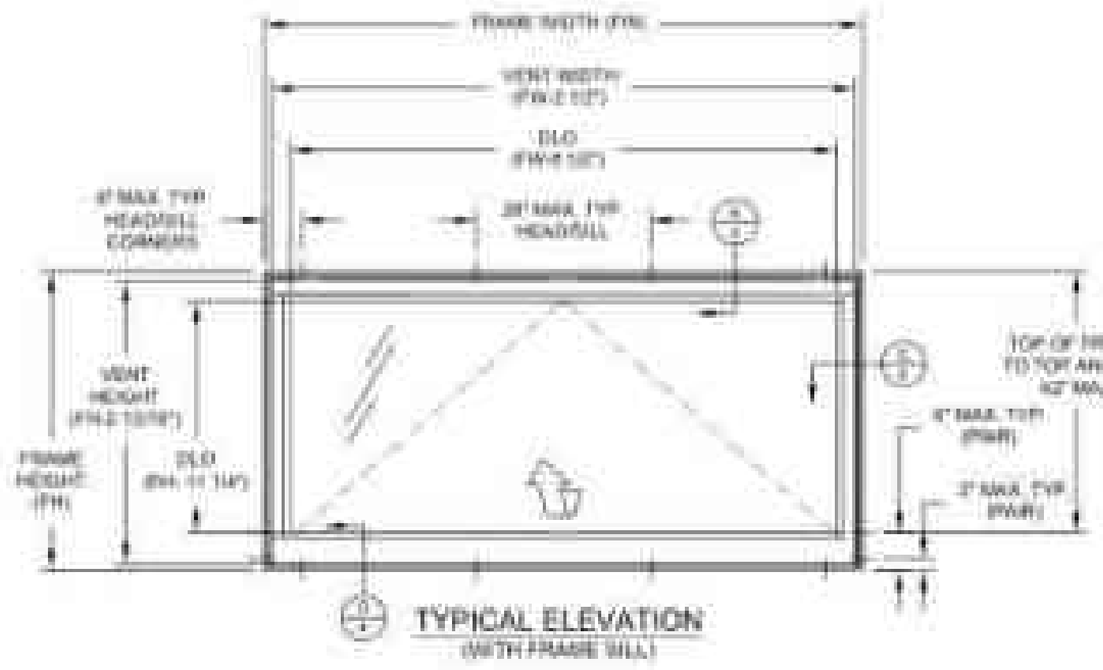
STEP 2: SEE CHARTS ON SHEET 3 FOR DESIGN LOAD CAPACITY OF DESIRED WINDOW SIZE.

STEP 3: THE WINDOW DESIGN LOAD CAPACITY MUST BE EQUAL OR EXCEED THE DESIGN WIND LOAD REQUIREMENT FOR THE WINDOW OPENING OBTAIN IN STEP 1.

ELEVATIONS	1
GLASS TYPES	2
ANCHOR TYPES TABLE	2
DP/ANCHOR TABLE	3
INSTALLATION DETAILS	4
BILL OF MATERIALS	5
EXTRUSIONS	5



TYPICAL ELEVATION
(WITHOUT FRAME SILL)
(NO SILL ANCHORS REQUIRED)



TYPICAL ELEVATION
(WITH FRAME SILL)

IMPACT RATING: LARGE & SMALL MISSILE IMPACT RESISTANCE

DESIGN PRESSURE RATING: SEE TABLE ON SHEET 3

F	8/30/23	MINOR TEXT EDIT - JR

WINDOOR WINDOWS & DOORS
MANUFACTURED BY A. LYNN MILLER
DBA WINDOOR WINDOWS & DOORS
2475 TECHNOLOGY DRIVE
PENSACOLA, FL 32575
(850) 466-1660
RESIDENTIAL/LIGHT COMMERCIAL
COPYRIGHT © 2023 WINDOOR WINDOWS & DOORS, LLC. ALL RIGHTS RESERVED. THIS DRAWING IS THE PROPRIETARY PROPERTY OF WINDOOR WINDOWS & DOORS, LLC AND IS NOT TO BE REPRODUCED, COPIED OR USED IN ANY WAY WITHOUT THE EXPRESS WRITTEN PERMISSION OF WINDOOR WINDOWS & DOORS, LLC.

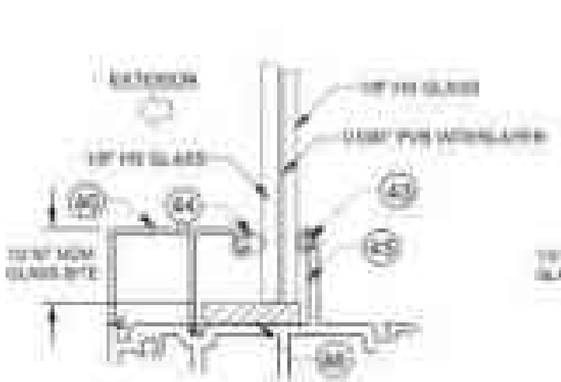
DATE	8/30/23
DRAWN BY	A. MORLESBI
SERIES AW9942A ALUM. AWNING WINDOW (LW)	
ELEVATION & GENERAL NOTES	1 OF 5
AW9942A	AW9942A-FPA

ANTHONY LYNN MILLER
LICENSE
No. 39705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FE 39705

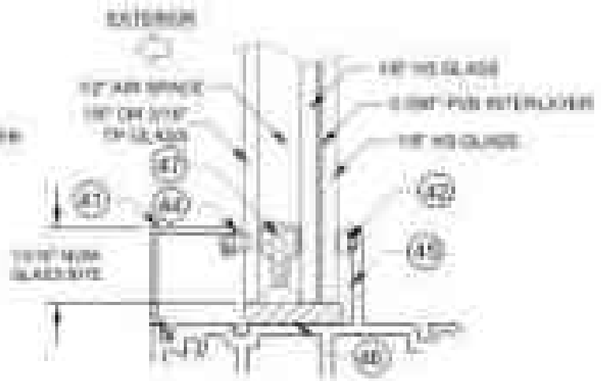
TABLE 1

Anchor Group	Anchor	Substrate	Min. Edge Distance	Minimum Embedment
A	#12 Steel or 19-8 SS Mfrs (Qu. 9)	Southern Pine (SG = 0.55)	2-1/2"	1-3/8"
		6063-T6 Aluminum	3/4"	1-23/32" (14 Ga)
		A36 Steel	3/8"	(20)"
		Cold Strut Gr. 33	3/4"	1-23/32" (16 Ga)
	1/4" Ea/Wall Ultra/Con+	Concrete (min. 2.88 ksi)	4"	1-3/4"
		Ungrouted CMU (ASTM C90)	4"	1-1/4"
		Southern Pine (SG = 0.55)	3"	1-3/4"
	1/4" 410 SS Ea/Wall Ultra/Con+	Concrete (min. 4.35 ksi)	4"	1-3/4"
		Southern Pine (SG = 0.55)	3"	1-3/4"
B	1/4" Ea/Wall Ultra/Con+	Concrete (min. 2.89 ksi)	2-1/2"	1-3/4"
		Hollow Block (ASTM C90)	2-1/2"	1-1/4"
	1/4" 410 SS Ea/Wall Ultra/Con+	Concrete (min. 7.25 ksi)	3"	1-3/4"
		Ungrouted CMU (ASTM C90)	2-1/2"	1-1/4"

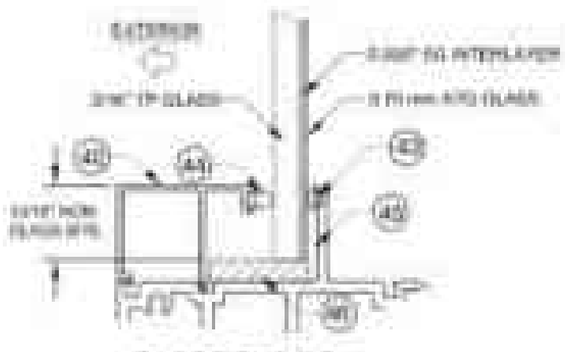
1) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
2) ALL ANCHOR HEAD TYPES ARE ACCEPTABLE.
3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.



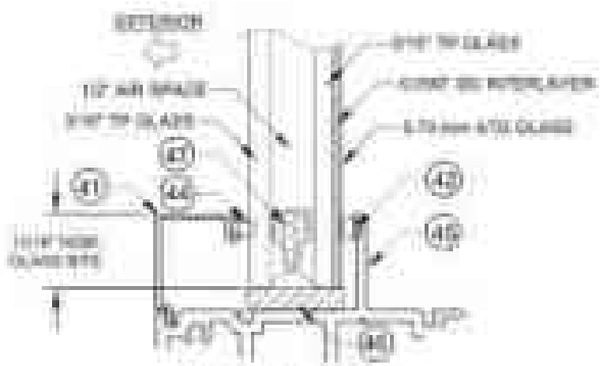
GLASS TYPE 1
5/16" NOM. GLASS STACK



GLASS TYPE 2
15/16" NOM. GLASS STACK (1/8" CAP)
1" NOM. GLASS STACK (3/16" CAP)



GLASS TYPE 3
5/16" NOM. GLASS STACK



GLASS TYPE 4
1" NOM. GLASS STACK

TABLE 2

Glass Type	Description (Listed from Exterior to Interior)
1	5/16" Lami: 1/8" HS + 0.060" PVB interlayer + 1/8" HS
2	1" Lami IG: 1/8" or 3/16" TP Cap + 1/2" Airspace + 1/8" HS + 0.060" PVB interlayer + 1/8" HS
3	5/16" Lami: 3/16" TP + 0.060" SG interlayer + 0.76mm ATG
4	1" Lami IG: 3/16" TP Cap + 1/2" Airspace + 3/16" TP + 0.060" SG interlayer + 0.76mm ATG

			F
		03/20/20	MINOR TEXT EDIT - JR
		5/30/23	A. MORLESINI
			AWW/HOA
			2 OF 5
			AWW/HOA

PREPARED BY: A. LYNN MILLER
SOUTH CHASE COURT DRIVE
N. VENICE, FL 34275
(941) 480-1993

SERIES 9800 ALUM. AWNING WINDOW (LM)

ANCHOR TABLE & GLASS TYPES

ANTHONY LYNN MILLER
No. 39705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FE# 39705

TABLE 3

Design Pressure and Anchor Quantities Required

Window Height	Anchor Location	Window Width / Window O.D. Width / Anchor Count																					
		36"		42"		48"		72"		78"		84"		90"		96"		120"		168"		114		122"	
		35 9/16" (DLO)		41 9/16" (DLO)		47 9/16" (DLO)		65 5/16" (DLO)		65 5/16" (DLO)		75 9/16" (DLO)		81 9/16" (DLO)		87 9/16" (DLO)		113 5/16" (DLO)		161 5/16" (DLO)		161 5/16" (DLO)		111 5/16" (DLO)	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
20"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70	
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5
25"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+57.5 / -67.1	
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5
30"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+57.5 / -67.1	
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5
32"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+57.5 / -67.1		+57.5 / -67.1		+57.5 / -67.1	
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5
36"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+57.5 / -67.1		+57.5 / -67.1		+57.5 / -67.1	
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5
40"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+57.5 / -67.1		+57.5 / -67.1			
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	5	4	5	5	5	5	5	5		
44"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70							
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4						
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	5	4	5	5						
48"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70									
	Jamb	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4								
	Head and Sill	2	2	3	3	3	3	4	4	4	4	4	4	4	4	5	4								
52"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70											
	Jamb	6	6	6	6	6	6	6	6	6	6	6	6												
	Head and Sill	2	2	3	3	4	3	4	4	4	4	4	4												
60"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70		+60 / -70													
	Jamb	6	6	6	6	6	6	6	6	6	6	6	6												
	Head and Sill	2	2	3	3	4	3	4	4	4	4	4	4												
72"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70																	
	Jamb	6	6	6	6	6	6	6	6																
	Head and Sill	2	2	3	3	4	3	4	4																
84"	Design Pressure	+60 / -70		+60 / -70		+60 / -70		+60 / -70																	
	Jamb	6	6	6	6	6	6	6	6																
	Head and Sill	2	2	3	3	4	3	4	4																

NOTES:

1) BUCK DIMENSIONS SHOWN. FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE DIMENSION.

2) WINDOW SIZE TO COMPLY WITH CURRENT FBC EGRESS REQUIREMENTS WHEN REQUIRED.

3) JAMB ANCHORS ARE SPECIFIED AS THE TOTAL QUANTITY, DIVIDE BY 2 FOR PAIRS TO BE INSTALLED.

JAMB = TOTAL # OF ANCHORS THROUGH THE JAMB, DIVIDE BY 2 FOR PAIRS TO BE INSTALLED.

HEAD = TOTAL # OF ANCHORS THROUGH THE HEAD (N.O.A. SILL IF APPLICABLE)



WINDOWS WITH SILL ARE TESTED FOR WATER INFILTRATION, WHEREAS THE WINDOW WITHOUT SILL IS NOT AND MUST ONLY BE USED WHERE WATER RESISTANCE IS NOT REQUIRED OR MAY BE USED WHEN THE WINDOW FOR SERVING FROM A SINGLE-FAMILY KITCHEN IS PROTECTED BY AN OVERHANG COMPLYING WITH THE CURRENT FLORIDA BUILDING CODE (SEE FIG A, THIS SHEET). THIS CONDITION IS NOT RATED FOR WATER INFILTRATION.

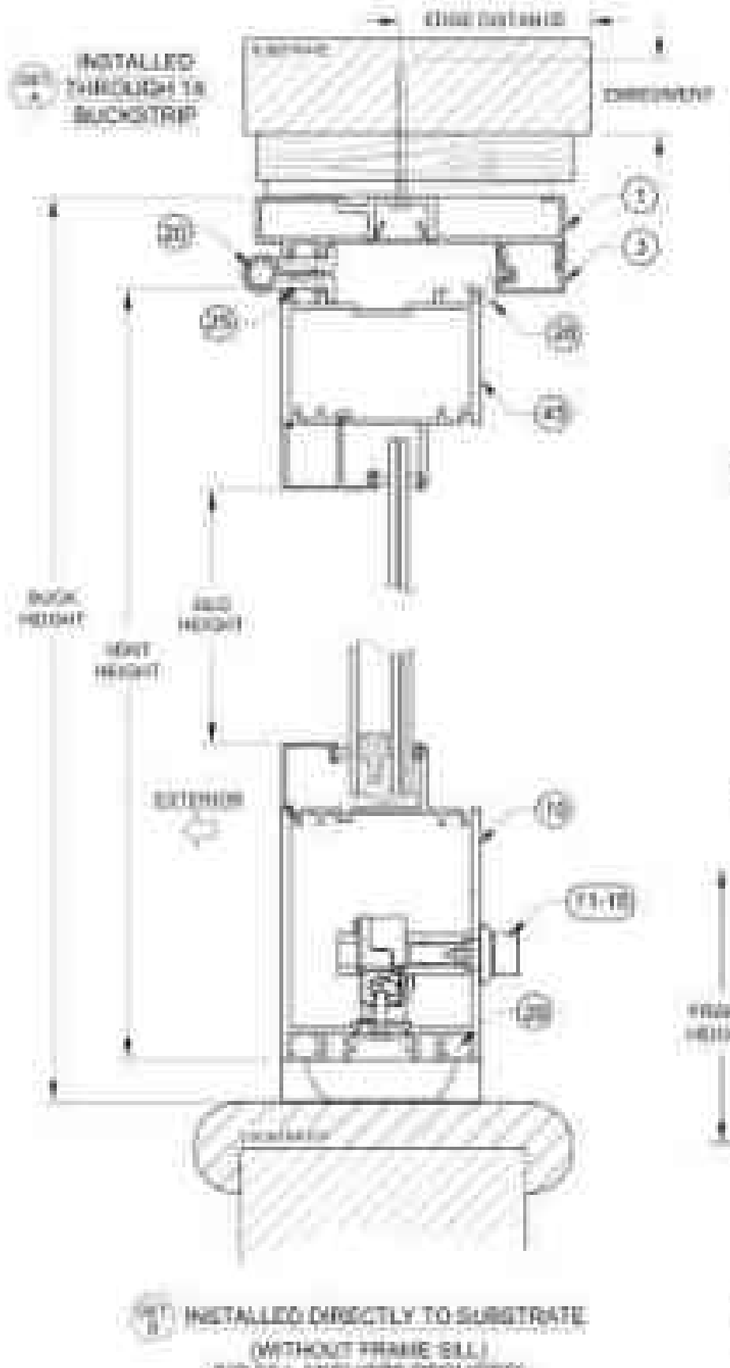
E	
03/20/23	MINOR TEXT EDIT - JR
5/30/23	A. MORLESINI
	AWW-R2-ALUM-FIPA
	SERIES WW-R2 FIXED WINDOW (IMP)
	DESIGN PRESSURE & ANCHOR QUANTITIES
	1 OF 5
	AWW-R2-DPA

PREPARED BY: A. LYNN MILLER
SOUTHERN COUNTY DESIGN
1 N. PINE CIRCLE, SUITE 1
DELTONA, FL 32725
(561) 483-1888

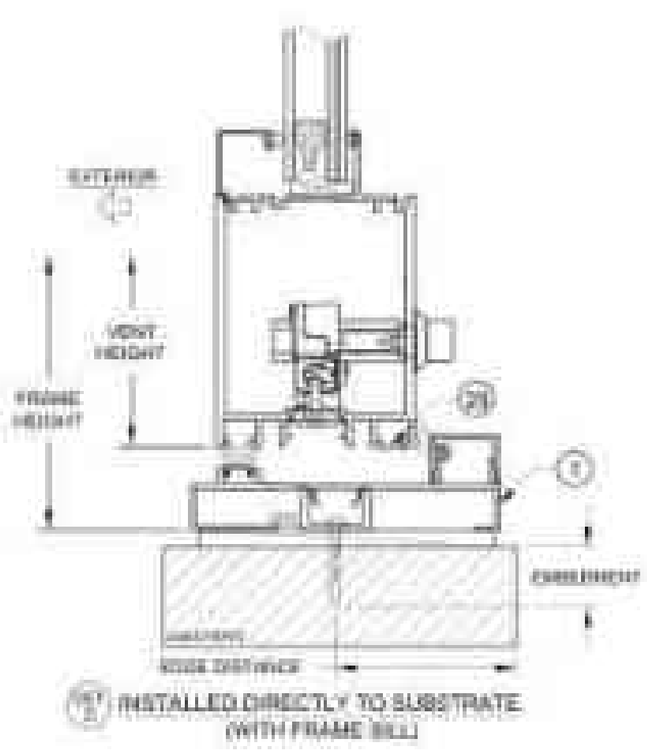
PROJECT ADDRESS

DESIGNED FOR: ALUMITE
1 N. PINE CIRCLE, SUITE 1
DELTONA, FL 32725
(561) 483-1888

ANTHONY LYNN MILLER
License
No. 39705
STATE OF
Florida
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.#39705



(SET A) INSTALLED DIRECTLY TO SUBSTRATE (WITHOUT FRAME SILL) (NO SILL ANCHORS REQUIRED)



(SET B) INSTALLED DIRECTLY TO SUBSTRATE (WITH FRAME SILL)

(SET A) INSTALLED DIRECTLY TO SUBSTRATE

(SET B) INSTALLED INTO METAL MULLION OR SUBSTRATE

INSTALLATION NOTES:

1) SEE SHEET 1 FOR ANCHOR SPACING REQUIREMENTS.

2) SEE TABLE 1 ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.

3) MAXIMUM SHIM THICKNESS TO BE 1/4".

4) MULTIPLE INSTALLATIONS SCENARIOS SHOWN, ANY OF WHICH MAY BE USED AT ANY FRAME MEMBER.

5) WOOD BUCKS, NOT BY WINDOOR, MUST SUSTAIN LOADS IMPOSED ON THEM BY THE GLAZING SYSTEM AND TRANSFER LOADS TO THE BUILDING STRUCTURE.

SCALE = 0.75# THIS SHEET

F	03/07/25	MINOR TEXT EDIT - JR	
	5/30/23	A. MORLESSI	AWW624UM-FPA

PREPARED BY: A. LYNN MILLER
5011 THOMAS COVY DRIVE
N. MYERS, FL 33903
(941) 480-1600
CERTIFICATE OF AUTHORIZATION #30008

SERIES WM2 ALUM. AWNING WINDOW (UM)

INSTALLATION DETAILS

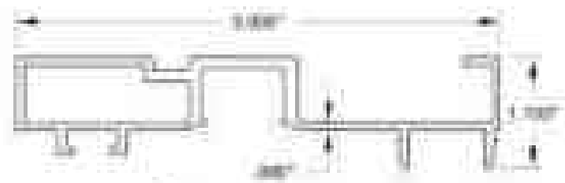
4 OF 5

AWW624

ANTHONY LYNN MILLER
LICENSE
No. 39705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
39705

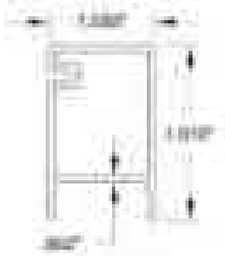
TABLE 4

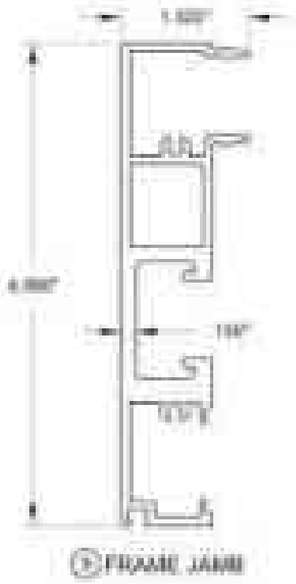
Item	Part No.	Description	Material
1	21000	Frame Head/Sill	6063-T6
2	21006	Jamb/Head/Sill Groove Cover	6063-T6
3	21005	Sill/Head Frame Adaptor	6063-T6
4	21009	Tall Frame Adaptor Jamb	6063-T6
5	21003	Frame Jamb	6063-T6
8	21008	Top Vent Rail	6063-T6
9	21010	Vent Stile	6063-T6
10	23026	Bottom Vent Rail	6063-T6
11	21019	Flush Bolt Guide Top	Nylon
12	21018	Flush Bolt Guide Bottom	Nylon
13	21022	Backset Shim	Nylon
14	21024	Blank Inactive Mortise Lock	Die Cast
15	21025	Drive Rod Adaptor	Aluminum
16	21026	Hex Throw Bolt SS	Stainless Steel
17	21031	Inactive Flush Handle	Die Cast
18	21033	Threaded Rod 1/4-20 120° Length	Stainless Steel
19	21035	Hinge Fastener Kit; Standard	Die Cast
20	21036	Hinge Assembly	Aluminum
22	21048	Corner Plug	Nylon
23	21053	Keeper Cap Top	Nylon
24	21054	Keeper Cap Bottom	Nylon
25	21044	Sash Meeting Gasket	Foamed Filled PVC
26	21047	C-Fold Gasket	Foamed Filled PVC
27	21103	Q-Lon Gasket @ Jamb	Foamed Filled PVC
28	27002	Bottom Rail Seal (No Frame Sill)	Foamed Filled PVC
29	230298	Pile Groove Cover	PVC
40	21014	Square Bead (Mono. Lami.)	6063-T6
41	21012	Square Bead (IG)	6063-T6
42	21045	Large Glz. Leg Weatherstrip	Vinyl
43	21046	Small Glz. Leg Weatherstrip	PVC
44	61224	Bead Bulb Vinyl	Foamed Filled PVC
45		DOW 791, 983 or 795 Backbedding	Silicone
46		Setting Block, 85 +/-5 Durm.	EPDM
47		TPS, SuperSpacer or Metal Spacer	Varies

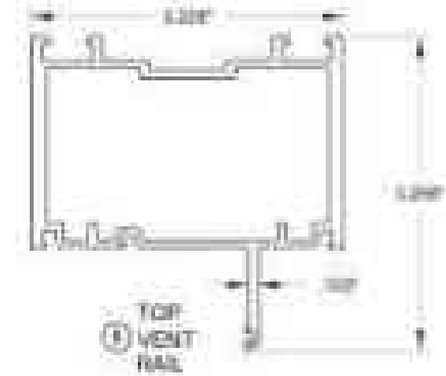


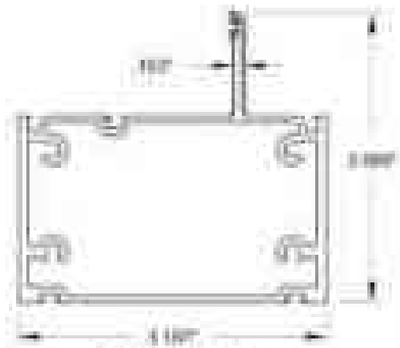


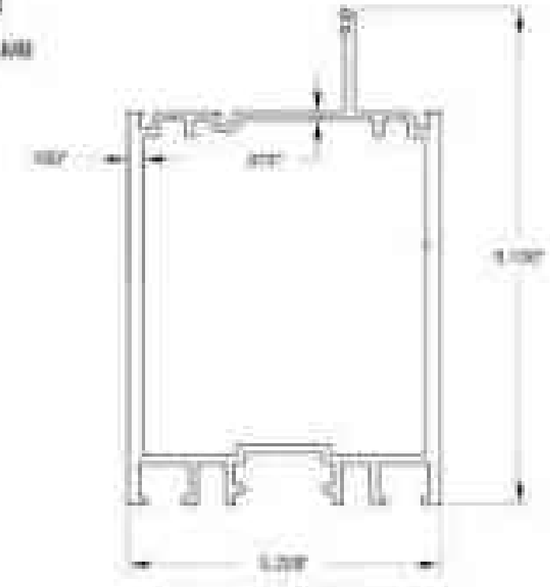


















F

03/20/20 MINOR TEXT EDIT - JR

PREPARED BY: A. LYNN MILLER 1004 THOMAS COVE DRIVE ST. PETERSBURG, FL 33716 (941) 480-1988	REVISIONS	5/30/20 A. MORLESKI
PROJECT: SERIES 9840 ALUM. AWNING WINDOW (AW)	BOM & EXTRUSIONS	SHT. 1 OF 6
MANUFACTURER: WINDSOR, LLC 6675 WEST SNOWBIRD ROAD P.O. BOX 1000 SALT LAKE CITY, UT 84104 (801) 972-6532		AW9840A

ANTHONY LYNN MILLER LICENSE No. 39705 STATE OF FLORIDA PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E. #39705