Engineering Evaluation Report #238-012523-04

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

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

Product Description:
AW238 Aluminum Awning Window, LMI HVHZ – FL16242

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 the requirements of the current Florida Building Code.

Supporting Technical Documentation:
1. Approval Document: drawing number AW238LMI-FPA-REV A, signed and sealed by A. Lynn Miller, P.E.
2. Test Report CTLA-3056 WA, WB, WC dated 03/03/15 and 04/16/15 prepared by Certified Test Laboratories, Inc., signed and sealed by Ramesh C. Patel, P.E.; TAS 201-94, TAS-203-94
3. Test Report HTL-0080-0301-07, 0905-07 dated 09/21/07 and 10/12/06, prepared by Hurricane Testing Lab Inc, signed and sealed by Vinu J. Abraham, P.E.; TAS 202-94
4. Test Report HETI-08-2143, 08- 2144, 08-4287 and 07-4298 dated 06/27/08 and 07/17/08 prepared by Hurricane engineering &Testing Inc, signed and sealed by Candido F. Font, P.E.; TAS-202
5. Test Report HTL-0080-0303-96 and 1107-98, prepared by Hurricane Test Laboratory, Inc., signed and sealed by Timothy S. Marshall, P.E.; TAS 201-94, TAS-203-94
6. Anchor Calculations and Structural Analysis, dated 01/08/18, prepared by Al-Farooq Corporation, and signed and sealed by Javad Ahmad, P.E.

Limitations and Conditions of use:
- Units must be glazed per ASTM E1300-04/09, 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.
- Units must be installed in accordance with the Approval Document.



SERIES 238 ALUMINUM AWNING WINDOWS - LARGE MISSILE

NOTES:

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). 1997 OR 2001 WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

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

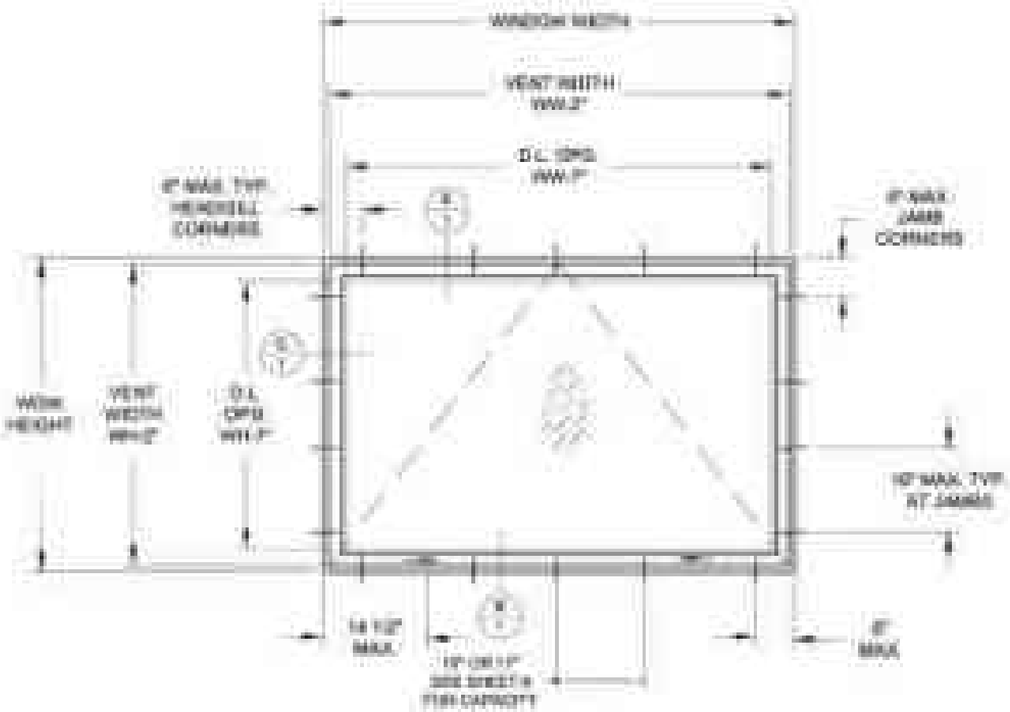
4). A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

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

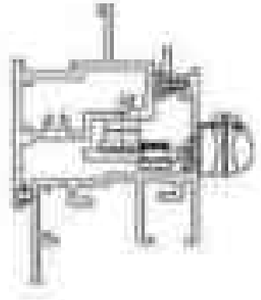
6). MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BLDG. CODE & ADOPTED STANDARDS.

7). THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR THE SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND THE SEALING AROUND THE OPENING FOR WATER INFILTRATION RESISTANCE ETC.

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



TYPICAL ELEVATION
(FLANGE FRAME)



MAXIM MULTI POINT LOCK
BY 'TRUTH'
ALT. TO CAM LOCKS

MAX. WDW HGT(")	LOCK POINTS
42"	3
66"	4
84"	5

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 SHEETS 4 AND 5 FOR DESIGN LOAD CAPACITY OF DESIRED GLASS SIZE/TYPE.

STEP 3. USING CHART ON SHEET 6 SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

STEP 4. IF ALUMINUM BUCK SYSTEM IS USED USE CHART ON SHEET 6 TO DETERMINE CAPACITY.

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

DESIGNED BY A. LYNN MILLER P.E. FL LICENSE NO. 56705	NO CHANGES THIS SHEET
DESCRIPTION OF WORK:	
DRAWN BY: A. MORRISH	1/16/23
SERIES 238 ALUM. AWNING WINDOW (LW)	
ELEVATIONS & GENERAL NOTES	
WINDOOR®	SHEET 1 OF 10
	AW238

ANTHONY LYNN MILLER
LICENSE
No. 56705
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.

GENERAL WINDOW SECTIONS

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

FOR MULLION MULTIPLE UNITS, REFER TO SEPARATE WINDOOR MULLION PPA.

FOR MULLION MULTIPLE UNITS, REFER TO SEPARATE WINDOOR MULLION PPA.

A

FLANGE FRAME

EXTERIOR

FOR GLASS TYPES REFER TO SHEETS 4 AND 5

WIND HEIGHT | VENT HEIGHT | O.L. OPG.

B

EQUAL LEG FRAME

C

EQUAL LEG FRAME

FLANGE FRAME

O.L. OPG.

VENT WIDTH

WINDOW WIDTH

EXTERIOR

	NO CHANGES THIS SHEET	5
	REVISED	4
	ISSUED FOR PERMIT	3
	ISSUED FOR PERMIT	2
	ISSUED FOR PERMIT	1
	DATE	

WINDOOR

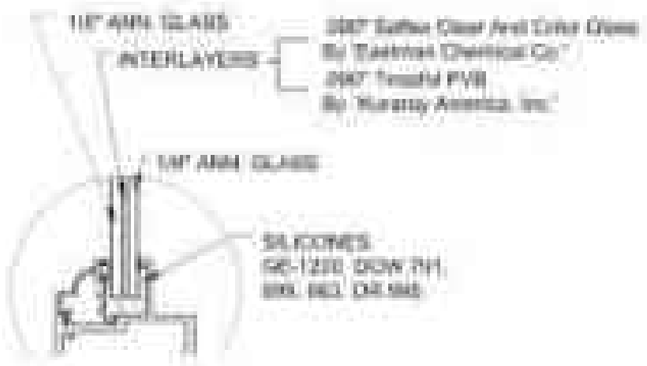
ISSUED FOR ALUMA WINDOW (UM)

SECTION DETAILS

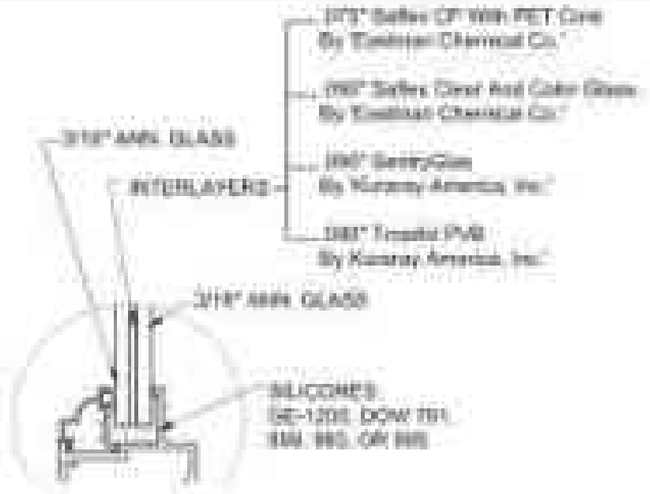
AW30A

4 OF 10

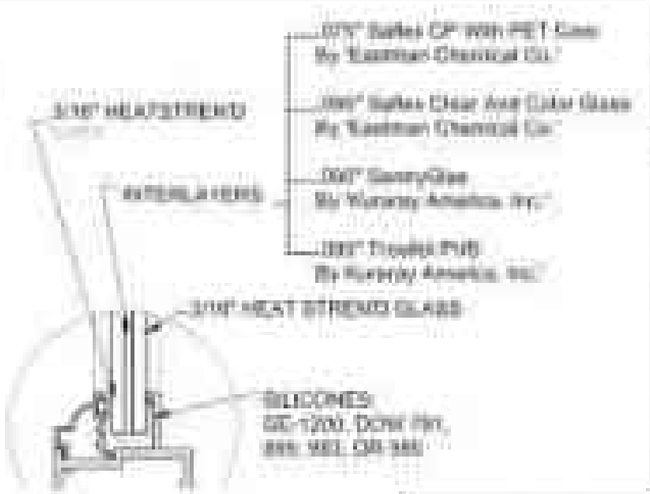
ANTHONY LYNN MILLER
LICENSE
No. 59704
9/28/22
STATE OF
PROFESSIONAL ENGINEER



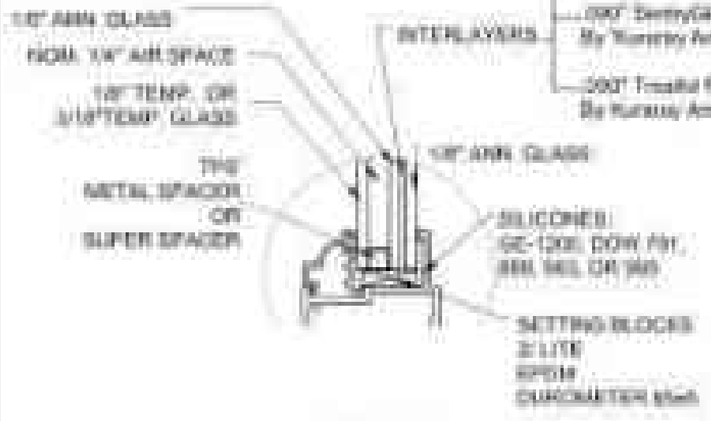
5/16" NOMINAL
GLASS TYPE "1"



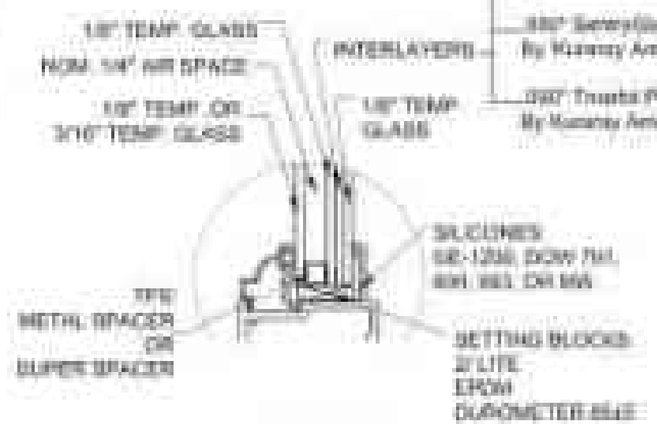
7/16" NOMINAL
GLASS TYPE "2"



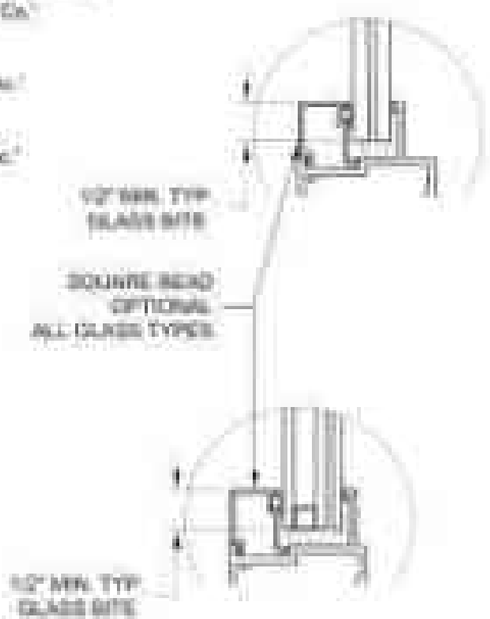
7/16" NOMINAL
GLASS TYPE "3"



INSULATED
GLASS TYPE "1A"



INSULATED
GLASS TYPE "3A"



NO CHANGES THIS SHEET	9/28/23		A
REVISIONS	DATE	BY	

WINDOOR

SERIES "TT3" ALUM. AWNING WINDOW (AMS 3654)

GLASS TYPES

AW30A

3 OF 10

A. MORALES

1/16"=1'-0"

9/28/23

ANTHONY LYNN MILLER
LICENSE
No. 34700
9/28/23
DATE OF
SIGNATURE
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 34700

TABLE 1:

Window Sizes (Use Lines)	Window Design Pressure (+/- psf) — Width (in)												Min. Pro Lites for Glass Type			LS.1a
	23-1/8	24	26-1/2	30	36	37	42	48	53-1/8	54	60	66	72	78	84
36	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]
39	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	
42	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]		
45	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]				
48	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]					
51	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]						
54	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]							
57	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]								
60	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]									
63	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]										
66	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]											
69	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]												
72	+/-[illegible]	+/-[illegible]	+/-[illegible]													
75	+/-[illegible]	+/-[illegible]														
78	+/-[illegible]	+/-[illegible]														
81	+/-[illegible]	+/-[illegible]														

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

LOAD AREA LIMITS
FOR +116.0, -128.0 PSF = 16.34 SQ. FT.
FOR +116.0, -128.0 PSF = 10.00 SQ. FT.

LIMIT MAX. LOADS TO 171.0 PSF WHEN MULTI POINT LOCK BY 'AMERILOCK' IS USED.

TABLE 2:

Window Sizes (Use Lines)	Window Design Pressures (+/- psf) — Width (in)												Min. Pro Lites for Glass Type			2
	23-1/8	24	26-1/2	30	36	37	42	48	53-1/8	54	60	66	72	78	84
36	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]
39	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]
42	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]
45	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	
48	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]			
51	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]				
54	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]					
57	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]						
60	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]							
63	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]								
66	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]									
69	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]										
72	+/-[illegible]	+/-[illegible]	+/-[illegible]	+/-[illegible]											
75	+/-[illegible]	+/-[illegible]	+/-[illegible]												
78	+/-[illegible]	+/-[illegible]													

CHANGE TO MATRIX FORMAT | 8/19/22 | LMS

WINDOOR
WINDOOR TOP ALUM AWNING WINDOW
GLASS PERFORMANCE CHARTS
AW30W
1 OF 10
A
AWNING WINDOWS
A. MATERIALS
(1/8"=1'-0")
DESIGNED BY A LYMAN MILLER
LICENSED
No. 94700
9/28/22
DATE OF
SIGNATURE
PROFESSIONAL ENGINEER

TABLE 3:

Window Dimension	Width (in)															
Height (in)	28 1/8	2+	2+ 1/2	3F	3C	3T	4C	4E	4+ 1/8	4+	4E	5E	5+	5E	6E	
28																
36																
48																
60																
64																
66 1/8																
72																
76																
80																
84																
90 1/8																
92																
96																
100																
108																
114 1/8																
120																
132																

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

LOADS/AREA LIMITS:
FOR +116.0, -126.0 PSF = 16.34 SQ. FT.
FOR +116.0, -105.0 PSF = 16.00 SQ. FT.

LIMIT MAX. LOADS TO 171.0 PSF WHEN MULTI-POINT LOCK BY 'WATERLOCK' IS USED.

TABLE 4:

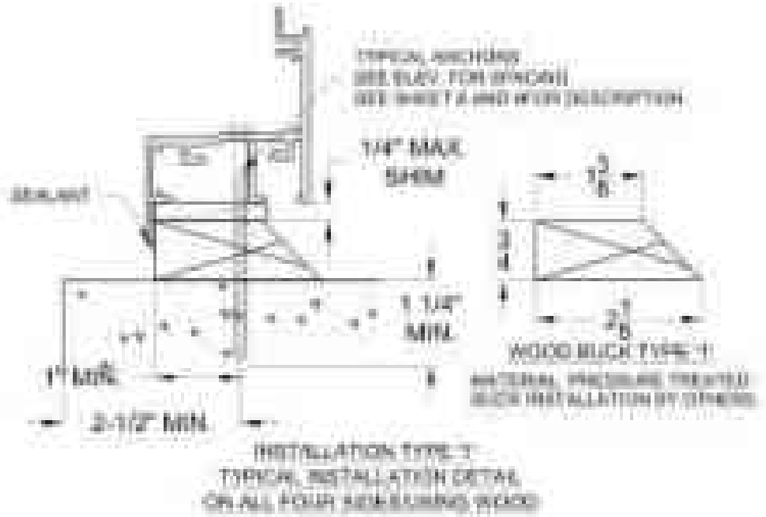
Window Dimension	Width (in)															
Height (in)	28 1/8	2+	2+ 1/2	3E	3C	3T	4C	4E	4+ 1/8	4+	4E	5E	5+	5E	6E	
28																
36																
48																
60																
64																
66 1/8																
72																
76																
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90 1/8																
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120																
132																

CHANGE TO MATRIX FORMAT | 8/19/22 | LMS

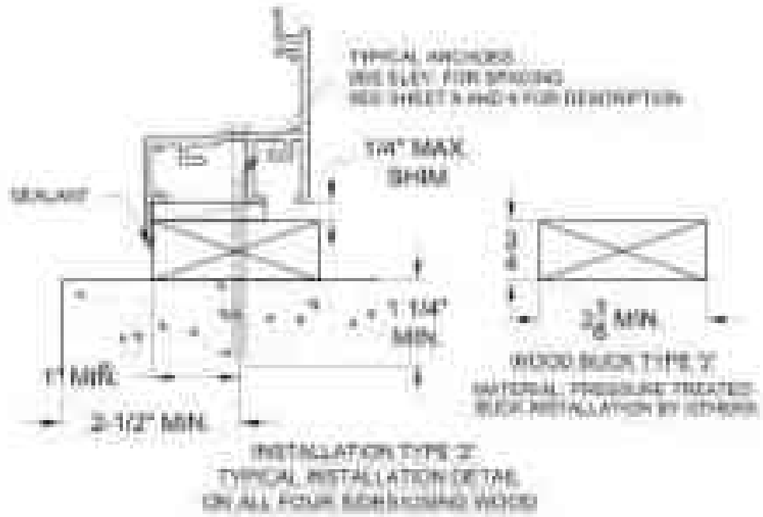
DESIGNED BY A LICENSED ARCHITECT OR ENGINEER AS REQUIRED BY THE JURISDICTION IN WHICH THE WINDOW IS TO BE INSTALLED	A. MONTANARI	7/26/22	A

INSTALLATION CONDITIONS FLANGE FRAME (APPLIES TO ALL FOUR SIDES)

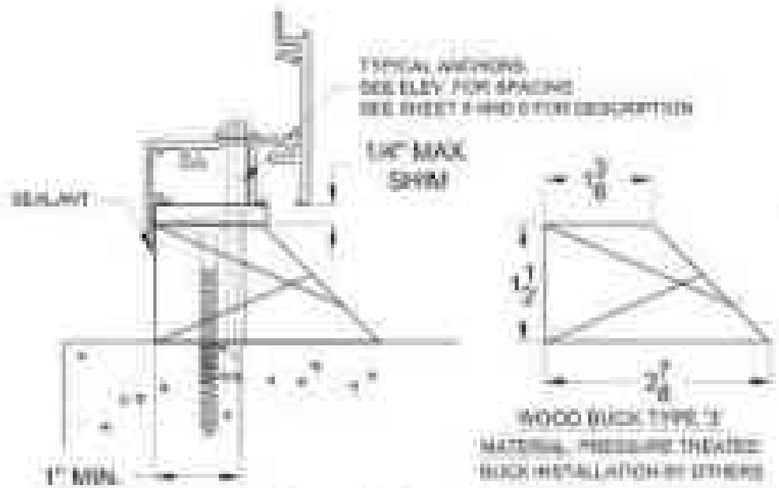
FOR ANCHOR PERFORMANCE VALUES SEE SHEET 8 AND 9



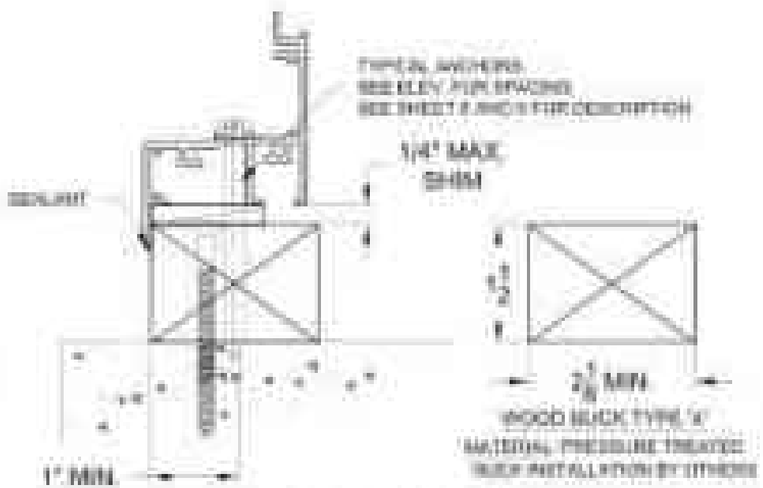
INSTALLATION TYPE '1'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



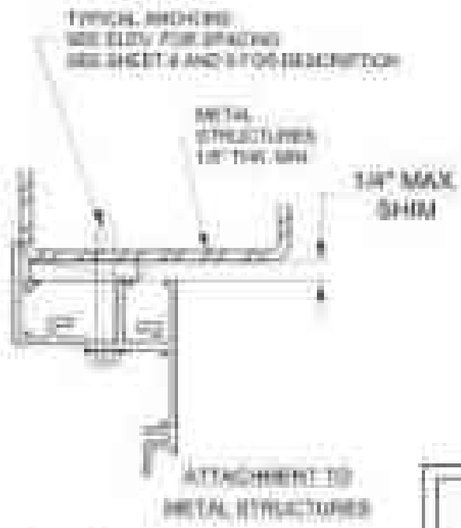
INSTALLATION TYPE '2'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



INSTALLATION TYPE '3'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



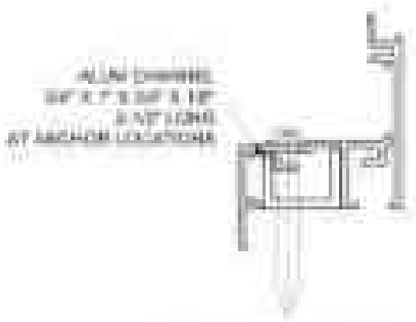
INSTALLATION TYPE '4'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



ATTACHMENT TO
METAL STRUCTURES



ATTACHMENT TO
ARMORED MULLIONS



ALT. ANCHOR LOCATION
WITH SHEAR CLIP

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

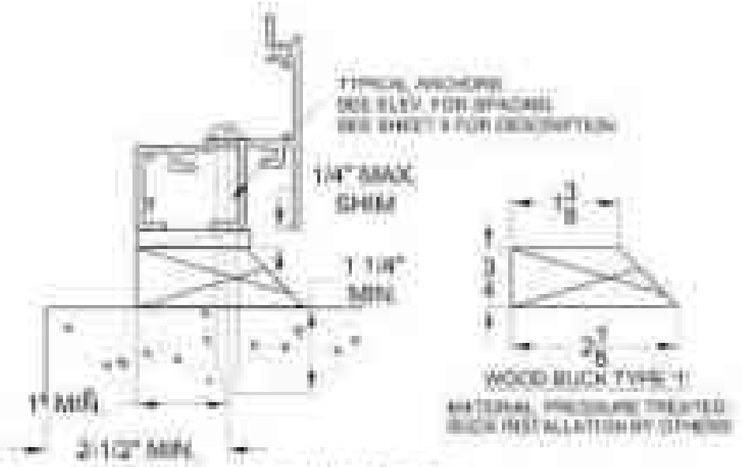
NO.	CHANGES THIS SHEET	BY/DATE
4	AWWM-MI-FPA	
3	ANCHOR INSTALLATION	4 OF 10
2	A. MORRISON	1/20/23
1	SERIES "FW" ALUM. AWNING WINDOW (MI)	AWWM

WinDoor

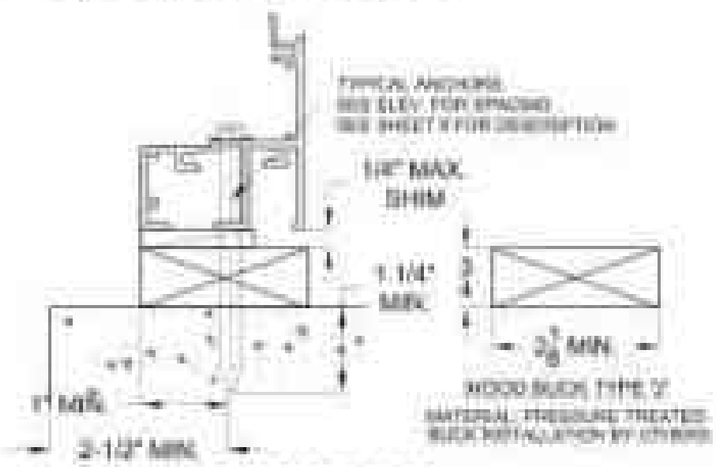
ANTHONY LYNN MILLER
LICENSED
No. 19734
PROFESSIONAL ENGINEER
6/28/22
STATE OF

INSTALLATION CONDITIONS EQUAL LEG FRAME (APPLIES TO ALL FOUR SIDES)

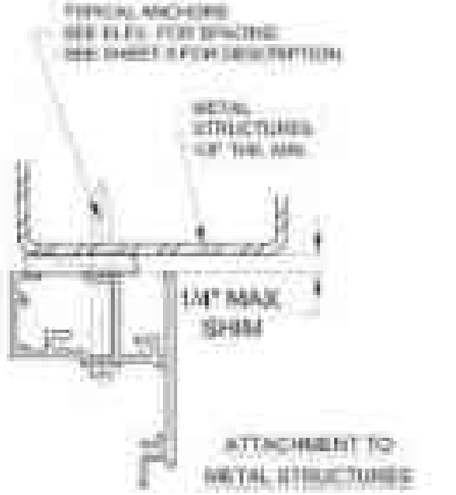
FOR ANCHOR PERFORMANCE VALUES SEE SHEET 6

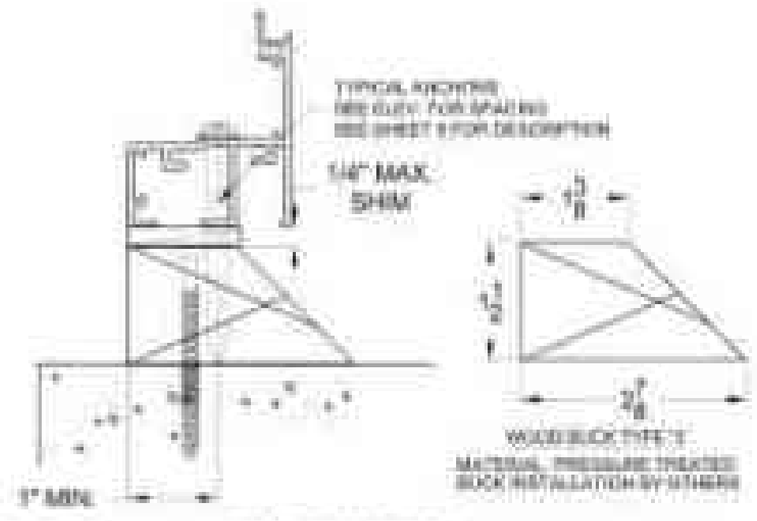


INSTALLATION TYPE '1'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD

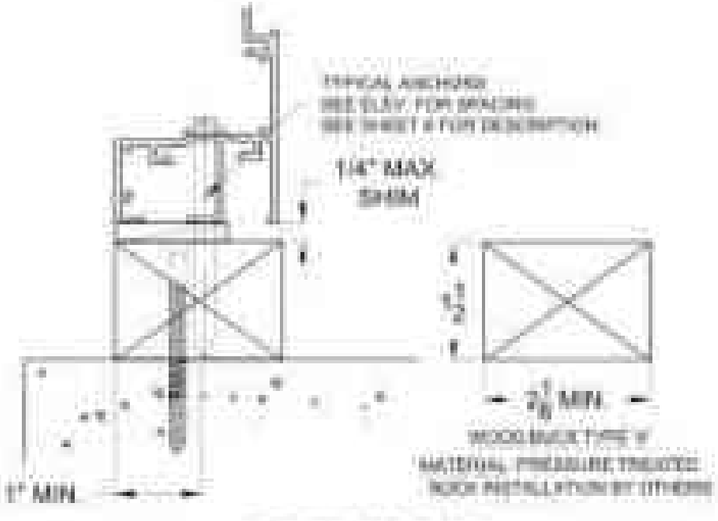


INSTALLATION TYPE '2'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD

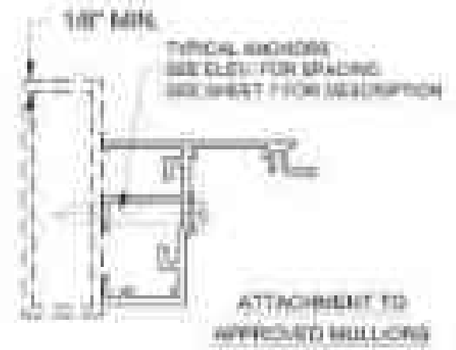




INSTALLATION TYPE '3'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD



INSTALLATION TYPE '4'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD



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

NO.	REVISIONS	BY
4	ADDED ANCHOR PERFORMANCE VALUES	A. MORALES

PREPARED BY A LICENSED ARCHITECT OR ENGINEER AS LISTED BELOW

WINDOOR

SERIES "700" ALUM. AWNING WINDOW AW

ANCHOR INSTALLATION 2

DRAWN BY	CHECKED BY	DATE	SCALE
A. MORALES		1/2023	

AW700-ANCHOR-INSTALLATION-2 | SHEET 5 OF 10 | AW700-AW

ANTHONY LYNN MILLER
LICENSE
No. 68704
5/26/22
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 68704

PERFORMANCE VALUES OF INSTALLATION ANCHORS

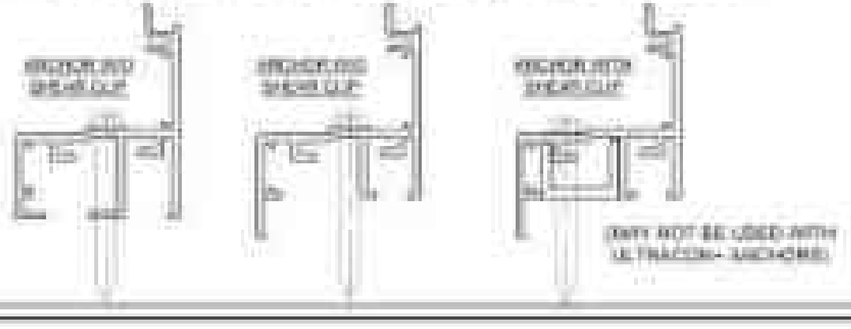
Installation Detail		Anchoring Type A & C				Anchoring Type B	
		Wind Pressure (+)		Wind Pressure (-)		Wind Pressure (+)	
Width	Height	DP+ (PSF)	DP+ (PSF)	DP- (PSF)	DP- (PSF)	DP+ (PSF)	DP+ (PSF)
24"	24"	195.0	195.0	129.0	193.5	195.0	195.0
	28"	195.0	195.0	119.8	165.9	195.0	195.0
	30"	195.0	195.0	114.8	154.8	195.0	195.0
	34"	195.0	195.0	109.0	172.5	195.0	195.0
	42"	195.0	195.0	110.6	147.4	195.0	195.0
	48"	195.0	195.0	109.9	161.3	195.0	195.0
	54"	195.0	195.0	114.7	172.0	195.0	195.0
	60"	193.6	195.0	103.2	154.8	195.0	195.0
	66"	195.0	195.0	117.3	164.2	195.0	195.0
	72"	195.0	195.0	107.5	150.5	195.0	195.0
	78"	186.2	195.0	98.2	158.8	195.0	195.0
	84"	195.0	195.0	110.6	165.9	195.0	195.0
30"	24"	195.0	195.0	154.8	154.8	195.0	195.0
	28"	190.6	195.0	132.7	132.7	195.0	195.0
	30"	195.0	195.0	123.8	123.8	195.0	195.0
	34"	193.6	195.0	103.2	137.6	195.0	195.0
	42"	160.8	195.0	88.5	117.9	195.0	195.0
	48"	193.6	195.0	103.2	129.0	195.0	195.0
	54"	172.1	195.0	91.7	137.6	195.0	195.0
	60"	154.9	195.0	82.8	123.9	195.0	195.0
	66"	175.6	195.0	93.8	131.3	195.0	195.0
	72"	161.3	195.0	86.0	129.4	195.0	195.0
	78"	148.8	195.0	79.4	127.0	195.0	195.0
36"	24"	195.0	195.0	129.0	172.0	195.0	195.0
	28"	195.0	195.0	110.6	147.4	195.0	195.0
	30"	193.6	195.0	103.2	137.6	195.0	195.0
	34"	181.3	195.0	96.9	114.7	195.0	195.0
	42"	138.3	184.4	73.7	98.3	195.0	195.0
	48"	161.3	193.0	86.0	107.5	195.0	195.0
	54"	143.4	191.0	76.4	114.7	195.0	195.0
	60"	129.1	193.6	68.8	103.2	195.0	195.0
42"	24"	195.0	195.0	110.6	147.4	195.0	195.0
	28"	177.8	195.0	94.8	126.4	195.0	195.0
	30"	165.8	195.0	88.5	117.9	195.0	195.0
	34"	138.3	184.4	73.7	98.3	195.0	195.0
	42"	118.5	158.0	63.2	84.2	179.8	195.0
	48"	138.3	172.9	73.7	92.1	195.0	195.0
	54"	122.9	184.4	65.5	98.3	196.4	195.0
48"	24"	195.0	195.0	129.0	161.3	195.0	195.0
	28"	195.0	195.0	110.6	138.2	195.0	195.0
	30"	193.6	195.0	103.2	129.0	195.0	195.0
	34"	161.3	195.0	86.0	107.5	195.0	195.0
	42"	138.3	172.9	73.7	92.1	195.0	195.0
	48"	121.0	161.3	64.5	80.6	183.5	195.0
54"	24"	195.0	195.0	114.7	172.0	195.0	195.0
	28"	184.4	195.0	98.3	147.4	195.0	195.0
	30"	172.1	195.0	91.7	137.6	195.0	195.0
	34"	143.4	191.0	76.4	114.7	195.0	195.0
	42"	122.9	184.4	65.5	98.3	196.4	195.0

PERFORMANCE VALUES OF INSTALLATION ANCHORS

Installation Detail		Anchoring Type A & C				Anchoring Type B	
		Wind Pressure (+)		Wind Pressure (-)		Wind Pressure (+)	
Width	Height	DP+ (PSF)	DP+ (PSF)	DP- (PSF)	DP- (PSF)	DP+ (PSF)	DP+ (PSF)
60"	24"	193.6	195.0	103.2	154.8	195.0	195.0
	28"	165.9	195.0	88.5	132.7	195.0	195.0
	30"	154.8	195.0	82.8	123.8	195.0	195.0
	36"	129.1	193.6	68.8	103.2	195.0	195.0
66"	24"	195.0	195.0	117.3	164.2	195.0	195.0
	28"	158.8	195.0	100.5	14.7	195.0	195.0
	30"	176.5	195.0	93.8	131.3	195.0	195.0
72"	24"	195.0	195.0	107.5	150.5	195.0	195.0
	28"	172.9	195.0	92.1	129.0	195.0	195.0
	30"	161.3	195.0	86.0	120.4	195.0	195.0
78"	24"	186.2	195.0	99.2	158.8	195.0	195.0
	28"	154.8	195.0	82.1	138.1	195.0	195.0
	30"	148.8	195.0	79.4	127.0	195.0	195.0
84"	24"	195.0	195.0	110.6	165.9	195.0	195.0
	28"	177.8	195.0	94.8	142.3	195.0	195.0

PERFORMANCE VALUES OF INSTALLATION ANCHORS

Installation Detail		Anchoring Type A & C				Anchoring Type B	
		Wind Pressure (+)		Wind Pressure (-)		Wind Pressure (+)	
Width	Height	DP+ (PSF)	DP+ (PSF)	DP- (PSF)	DP- (PSF)	DP+ (PSF)	DP+ (PSF)
1'0-1 7/8"	24"	190.3	195.0	348.4	195.0	195.0	195.0
	28-3/8"	195.0	195.0	181.9	195.0	195.0	195.0
	30-3/4"	195.0	195.0	153.5	191.9	195.0	195.0
	34"	195.0	195.0	129.3	195.0	195.0	195.0
	34-1/4"	195.0	195.0	126.8	195.0	195.0	195.0
1'6-1 1/2"	24"	195.0	195.0	167.8	161.8	195.0	195.0
	28-3/8"	195.0	195.0	109.6	146.1	195.0	195.0
	30-3/4"	195.0	195.0	110.8	138.5	195.0	195.0
	33"	167.3	195.0	89.0	133.8	195.0	195.0
	34-1/4"	177.1	195.0	94.4	151.1	195.0	195.0
2'0"	24"	195.0	195.0	110.0	164.8	195.0	195.0
	28-3/8"	147.2	195.0	78.5	104.7	195.0	195.0
	30-3/4"	148.8	198.0	79.3	99.2	195.0	195.0
	33"	119.6	195.0	63.8	111.6	167.4	195.0
2'6"	24"	191.5	195.0	102.1	136.1	195.0	195.0
	28-3/8"	129.7	173.0	69.2	92.2	195.0	195.0
	30-3/4"	131.1	183.9	69.9	87.4	195.0	195.0
3'0-1 1/4"	24"	195.0	195.0	107.6	161.4	195.0	195.0
	28-3/8"	136.7	195.0	72.9	109.3	195.0	195.0



TYPICAL ANCHORS

Anchor Type	Description	Substrate	Frame Members	Min. Edge Distance	Min. Embedment or Metal Thickness
A	1/4" DIA. #8 Self-drill screw 1/4" DIA. Utilizator	Min. 33KY Wood Block or Wood Substrate	All	1"	1-1/2"
		Thru 18KY Block into Concrete or Masonry	All	2-1/2"	1-1/8"
B	1/4" DIA. #8 Self-drill screw 1/4" DIA. Utilizator	Directly into Concrete or Thru Stone	All	2-1/2"	1-3/4"
C	W.U. SMS OR SELF DRILLING SCREW	Min. Steel 12 GA (min)	All	3/8"	(1) Threads into to embedded tapered metal thickness
		Min. Aluminum 1/8" thk	All	3/8"	(1) Threads into to embedded tapered metal thickness
		Min PVC Substrate	All	3/8"	(1) Threads into to embedded tapered metal thickness

WOOD AT HEAD, SILL OR JAMBS SG = 0.50 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 HOLLOW PLATED NORMAL WEIGHT
BLOCK AT JAMBS f'm = 2000 PSI MIN.

NO.	CHANGES TYPE SHEET	BY	DATE
1			
2			
3			
4			

WINDOW & DOOR MANUFACTURERS ASSOCIATION
1400 EAST TOUHY AVENUE, SUITE 470, DES PLAINES, IL 60018
PHONE: (847) 299-5200 FAX: (847) 299-1286
WWW.WDMA.COM

WINDOW & DOOR

ANTHONY LYNN MILLER
LICENSE
No. 19014
9/28/22
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
ATLANTIC MILLER, PE
P.E.# 19014

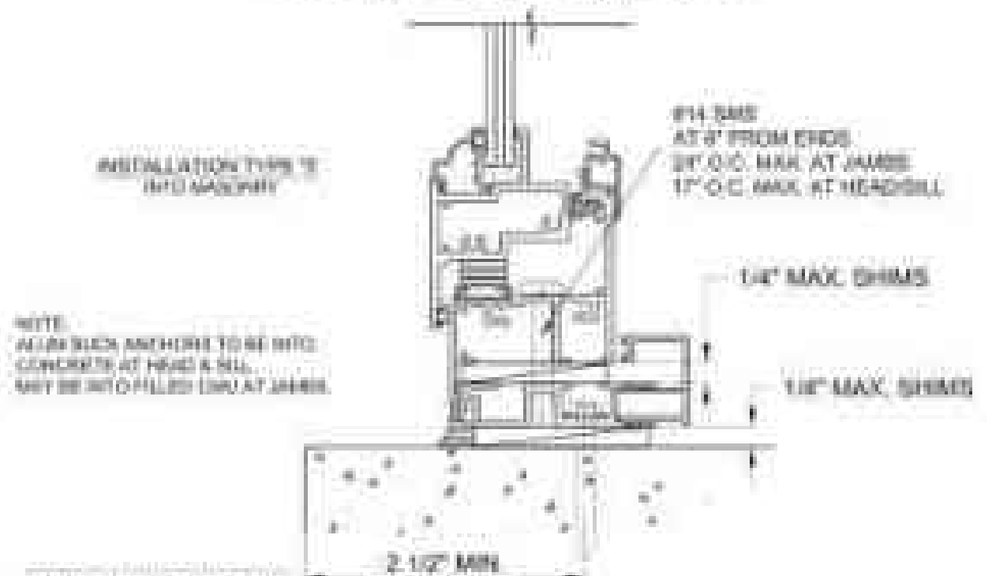
SHEET 11 OF 11

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS			
WINDOW SIZE		UP / INWARD (DP1)	DOWN / OUTWARD (DP2)
WIDTH	HEIGHT	PSF (+)	PSF (-)
24"	24"	199.0	199.0
	28"	199.0	199.0
	30"	199.0	199.0
	36"	199.0	199.0
	42"	199.0	199.0
	48"	199.0	148.0
	54"	199.0	131.8
	60"	177.6	118.4
	66"	161.5	107.6
	72"	148.0	98.7
	78"	136.6	91.1
	84"	126.9	84.6
28"	24"	199.0	199.0
	28"	199.0	199.0
	30"	199.0	199.0
	36"	199.0	169.1
	42"	199.0	145.0
	48"	190.3	126.8
	54"	169.1	112.8
	60"	152.2	101.5
	66"	138.4	92.3
	72"	126.9	84.6
	78"	117.1	78.1
	84"	108.7	72.5
30"	24"	199.0	199.0
	28"	199.0	199.0
	30"	199.0	189.4
	36"	199.0	157.9
	42"	199.0	135.3
	48"	199.0	118.4
	54"	199.0	105.2
	60"	177.6	94.7
	66"	161.5	86.1
	72"	148.0	78.9
	78"	136.6	72.9
36"	24"	199.0	199.0
	28"	199.0	199.0
	30"	199.0	157.9
	36"	199.0	131.6
	42"	199.0	112.8
	48"	199.0	98.7
	54"	164.4	87.7
	60"	148.0	78.9

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS			
WINDOW SIZE		UP / INWARD (DP1)	DOWN / OUTWARD (DP2)
WIDTH	HEIGHT	PSF (+)	PSF (-)
42"	24"	190.3	169.1
	28"	163.1	145.0
	30"	152.2	135.3
	36"	126.9	112.8
	42"	108.7	96.7
	48"	95.1	84.6
	54"	84.6	75.2
48"	24"	190.3	169.0
	28"	190.3	126.9
	30"	177.6	118.4
	36"	148.0	98.7
	42"	126.9	84.6
	48"	111.0	74.0
54"	24"	166.5	131.6
	28"	155.1	112.8
	30"	157.9	105.2
	36"	131.6	87.7
	42"	112.8	75.2
60"	24"	177.6	118.4
	28"	152.2	101.5
	30"	142.1	94.7
	36"	118.4	78.9
66"	24"	166.5	134.5
	28"	173.9	115.3
	30"	161.3	107.6
72"	24"	162.2	123.3
	28"	156.6	105.7
	30"	148.2	98.7
78"	24"	170.8	113.8
	28"	148.4	97.6
	30"	136.9	91.1
84"	24"	160.3	106.9
	28"	163.1	108.7
19-1/8"	28"	190.0	190.0
	38-3/8"	190.0	190.0
	50-3/8"	190.0	130.1
	63"	190.0	141.5
	74-1/4"	190.1	120.1
26-1/2"	28"	190.0	190.0
	38-3/8"	190.0	167.7
	50-3/8"	190.0	127.1
	63"	153.2	102.1
	74-1/4"	130.0	86.7
37"	28"	190.0	177.2
	38-3/8"	135.1	120.1
	50-3/8"	102.4	91.0
	63"	82.3	73.1
53-1/8"	28"	148.2	133.4
	38-3/8"	105.4	93.6

ALUMINUM BUCK FRAMING DETAILS

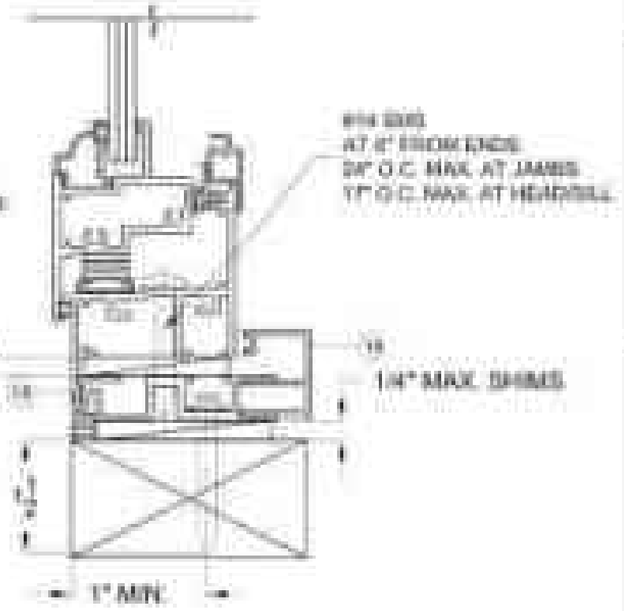
REFER TO SHEETS 4 THRU 9 FOR WINDOW CAPACITIES. USE LOWER APPLICABLE VALUES.



INSTALLATION TYPE "I"
INTO MASONRY

NOTE:
ALUM BUCK ANCHORS TO BE INTO CONCRETE AT HEAD & SILL. MAY BE INTO FILLED CMU AT JAMBS.

TYPICAL INSTALLATION DETAIL ON ALL FOUR SIDES USING ALUMINUM BUCK SYSTEM



INSTALLATION TYPE "II"
DRY WOOD BUCK OR WOOD STRUCTURES

NO.	CHANGES THIS SHEET	BY	DATE
A	ANNIVERSARY		

WINDOR

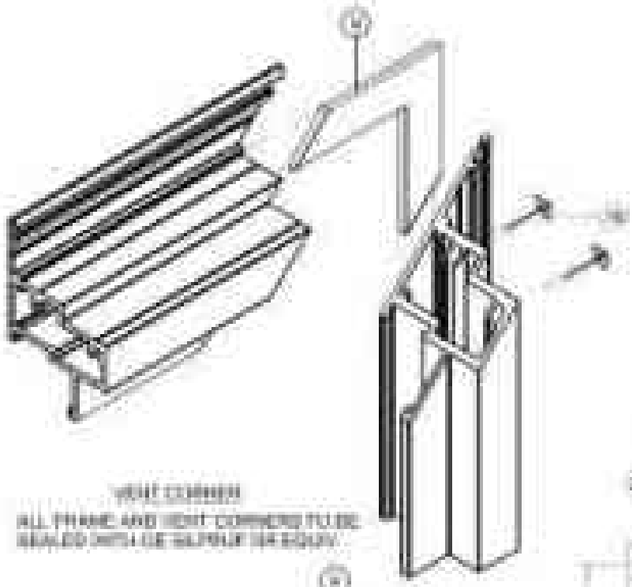
SERIES "ES" ALUM AWNING WINDOW

ALLI BUCK PERFORMANCE

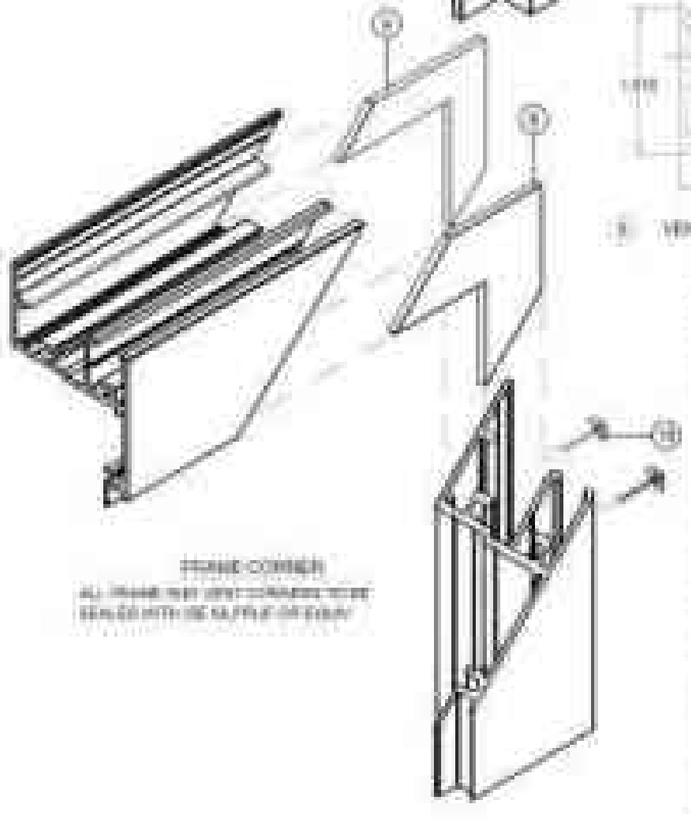
SHEET 10 OF 10

AW30B

ANTHONY LYNN MILLER
LICENSE
No. 69700
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
9/28/22



VENT CORNER
ALL FRAME AND VENT CORNERS TO BE SEALED WITH GE SILPRUF SM EQUIV.

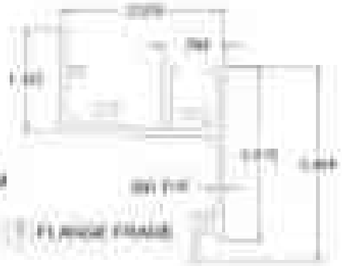


FRAME CORNER
ALL FRAME AND VENT CORNERS TO BE SEALED WITH GE SILPRUF SM EQUIV.



5 DPT. ALUM BUCK COVER

6 CORNER KEY .062 THICK ALUMINUM



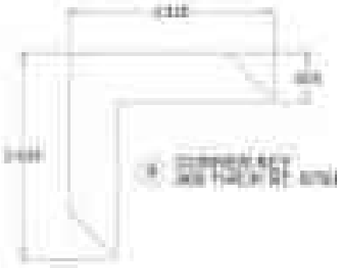
1 FLANGE FRAME



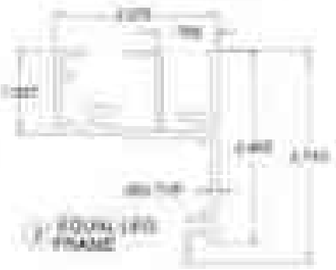
3 VENT (V/H) LAM GLASS



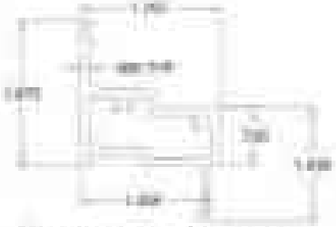
2 SHEAR CLIP CHANNEL



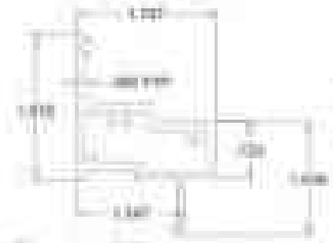
8 CORNER KEY .062 THICK ALUMINUM



7 EQUAL LEG FRAME



4 VENT (H/SILL) LAM GLASS



5 VENT (V/H) LAM GLASS



10 ALUMINUM BLOCK



9 SIDE GLAZING STOP



11 SQUARE GLAZING STOP



20 OPTIONAL DRIP CAP

ITEM	PART #	DESCRIPTION	MATERIAL
1	[illegible]	FLANGE FRAME	6063-T5
2	[illegible]	EQUAL LEG FRAME	6063-T5
3	[illegible]	VENT (H/SILL) LAM GLASS	6063-T5
4	[illegible]	VENT (V/H) LAM GLASS	6063-T5
5	[illegible]	VENT (V/H) LAM GLASS	6063-T5
6	[illegible]	CORNER KEY	6063-T5
7	[illegible]	SQUARE GLAZING BEAD	6063-T5
8	-	.062 THICK CORNER KEY	ALUMINUM
A	-	.062 THICK CORNER KEY	ALUMINUM
10	[illegible]	FRAME ADJUSTING SHIM	-
11	[illegible]	VENT ADJUSTER SHIM	-
12	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]
14	-	MULTI POINT LOCK	-
15	-	[illegible]	[illegible]
16	-	[illegible]	[illegible]
17	-	[illegible]	[illegible]
18	-	[illegible]	[illegible]
19	-	[illegible]	[illegible]
20	[illegible]	OPTIONAL DRIP CAP	6063-T5
21	-	[illegible]	[illegible]

NO	CHANGES THIS SHEET	BY	DATE
	NO CHANGES THIS SHEET		9/28/22

WINDOOR
[illegible]

SERIES 1727 ALUM AWNING WINDOW EXT

ROW A EXTRUSIONS

A. MORGAN

17/0023

AWNWIN

SHEET 10 OF 10

A

ANTHONY LYNN MILLER
LICENSE
No. 34764
9/28/22
DATE OF
SIGNATURE
PROFESSIONAL ENGINEER