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Business & Professional Regulation



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Product Approval USER: Public User

Product Approval Menu > Product or Application Search > Application List > Application Detail FL # FL40096-R2 Application Type Revision Code Version 2020 Application Status Approved Comments Archived Product Manufacturer Eco Window Systems 8502 NW 80th Street Address/Phone/Email Suite 103 Medley, FL 33166 (305) 885-5299 jrosowski@pgtindustries.com Authorized Signature Jens Rosowski jrosowski@pgtindustries.com Technical Representative Lynn Miller, P.E. Address/Phone/Email 1070 Technology Dr N Venice, FL 34275 (941) 486-0100 Ext 21142 Imiller@pgtindustries.com Quality Assurance Representative Address/Phone/Email Category Windows Subcategory Single Hung Compliance Method Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer Evaluation Report - Hardcopy Received Florida Engineer or Architect Name who developed the A. Lynn Miller, P.E. Evaluation Report Florida License PE-58705 Quality Assurance Entity Fenestration and Glazing Industry Alliance (formerly AAMA) Quality Assurance Contract Expiration Date 12/31/2023 Validated By Steven M. Urich, PE Validation Checklist - Hardcopy Received FL40096 R2 COI Cert of Independence.pdf Certificate of Independence Referenced Standard and Year (of Standard) <u>Standard</u> Year TAS 201, 202 & 203 1994 Equivalence of Product Standards

Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	08/15/2022
Date Validated	08/15/2022
Date Pending FBC Approval	08/28/2022
Date Approved	10/11/2022

Summary of Products

FL #	Model, Number or Name	Description		
40096.1	Eco-Guard Series 100 Single Hung	Small Missile Impact Resistant, Aluminum Single Hung Window		
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL40096 R2 II SH100SM-FPA.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL40096 R2 AE ECO SH100SMI ENG EVAL.pdf Created by Independent Third Party: No		
40096.2	Eco-Guard Series 100 Single Hung	Large Missile Impact Resistant, Aluminum Single Hung Window		
	ide HVHZ: Yes nclosed documents for product anchorage details, and anchor type,	Installation Instructions <u>FL40096 R2 II SH100LM-FPA.pdf</u> Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports <u>FL40096 R2 AE ECO SH100LMI ENG EVAL.pdf</u> Created by Independent Third Party: No		
40096.3	Eco-Guard Series 50 Single Hung	Large Missile Impact Resistant, Aluminum Single Hung Window		
	ide HVHZ: Yes nclosed documents for product anchorage details, and anchor type,	Installation Instructions FL40096 R2 II SH50FPA-LMI.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL40096 R2 AE ECO SH50LMI ENG EVAL.pdf Created by Independent Third Party: No		
40096.4	Eco-Guard Series 50 Single Hung	Non-Impact Resistant, Aluminum Single Hung Window		
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL40096 R2 II SH50FPA-NI.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL40096 R2 AE ECO SH50NI ENG EVAL.pdf Created by Independent Third Party: No		
40096.5	Series 150 Single Hung	Large Missile Impact Resistant, Aluminum Single Hung Window		
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL40096 R2 II SH150FPA - LMI.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: Yes Evaluation Reports FL40096 R2 AE ECO SH150LMI ENG EVAL.pdf Created by Independent Third Party: Yes		
40096.6	Series 150 Single Hung	Small Missile Impact Resistant, Aluminum Single Hung Window		
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL40096 R2 II SH150FPA - SMI.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL40096 R2 AE ECO SH150SMI ENG EVAL.pdf Created by Independent Third Party: No		
40096.7	Series 155 Single Hung	Large Missile Impact Resistant, Aluminum Single Hung Window		
Limits of Use		Installation Instructions FL40096 R2 II SH155FPA - LMI.pdf		

Florida Building Code Online

Approved for use outside HVHZ: Yes		ide HVHZ: Yes	Verified By: A. Lynn Miller, P.E. PE-58705
	Impact Resistant: Yes		Created by Independent Third Party: No
	Design Pressure: N/A		Evaluation Reports
	Other: Please see the er	closed documents for product	FL40096 R2 AE ECO SH155LMI ENG EVAL.pdf
	performance information,	anchorage details, and anchor type,	Created by Independent Third Party: No
	size, and spacing informa	tion.	
	40096.8	Series 155 Single Hung	Small Missile Impact Resistant, Aluminum Single Hung Wind

40096.8 Series 155 S	ingle Hung	Small Missile Impact Resistant, Aluminum Single Hung Window
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the enclosed docum performance information, anchorage d size, and spacing information.	nents for product	Installation Instructions FL40096 R2 II SH155FPA - SMI.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL40096_R2_AE_ECO SH155SMI ENG EVAL.pdf Created by Independent Third Party: No



Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

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Engineering Evaluation Report

Prepared by:

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

Manufacturer:

Eco Window Systems 8502 NW 80th Street Suite 103 Medley, FL 33178 (305) 885-5299

Product Description:

Series "Eco-Guard 100", Large Missile Impact Resistant, Aluminum Single Hung Window FPA# 40096

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:

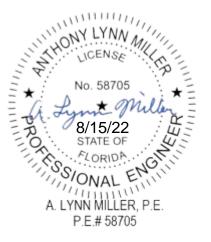
1. Approval Document: drawing number "SH100LM-FPA", signed and sealed by A. Lynn Miller, P.E. 2. Test Reports:

- No. 21-1195, signed by Idalmis Ortega, P.E.; Fenestration Testing Laboratory. Test Standards: TAS 201-94, TAS202-94, TAS 203-94, dated 10/8/21.
- No. FTL-7635, signed by Marlin D. Brinson, P.E.; Fenestration Testing Laboratory. Test Standards: TAS 201-94, TAS202-94, TAS 203-94, dated 12/9/14.
- No. HETI-08-2166A, HETI-08-2166C, HETI-08-2168, & HETI-08-2170 signed by Candido F. Font, P.E.; Hurricane Engineering & Testing Inc. Test Standards: TAS 201-94, TAS 202-94, TAS 203-94, dated 12/15/09.

3. Anchor verification calculations and structural analysis, dated 10/12/21.

Limitations and Conditions of use:

- Maximum Design Pressure: +75.0/-90.0 psf
- Units must be glazed per ASTM E1300-09, refer to approval document for glazing details.
- This product is impact resistant and does not require impact protection in wind borne debris regions.
- Frame and sash material to be extruded aluminum.
- Units must be installed in accordance with Approval Document.



Urich Engineering, LLC

6154 Newgate Circle Mechanicsburg, PA 17050 717-317-8454 steve@urichengrllc.com

October 4, 2017

To Whom it May Concern:

Urich Engineering, LLC is owned and operated by Steven Urich, PE.

Urich Engineering, LLC and Steven Urich, PE do not have, nor intend to acquire, a financial interest in any company manufacturing or distributing a product listed in this product approval;

Urich Engineering, LLC and Steven Urich, PE are not affiliated with any company testing or labeling a product under this approval;

Urich Engineering, LLC and Steven Urich, PE do not have, nor intend to acquire, a financial interest in any company involved in the approval process of the products listed in this product approval.

Thank you.

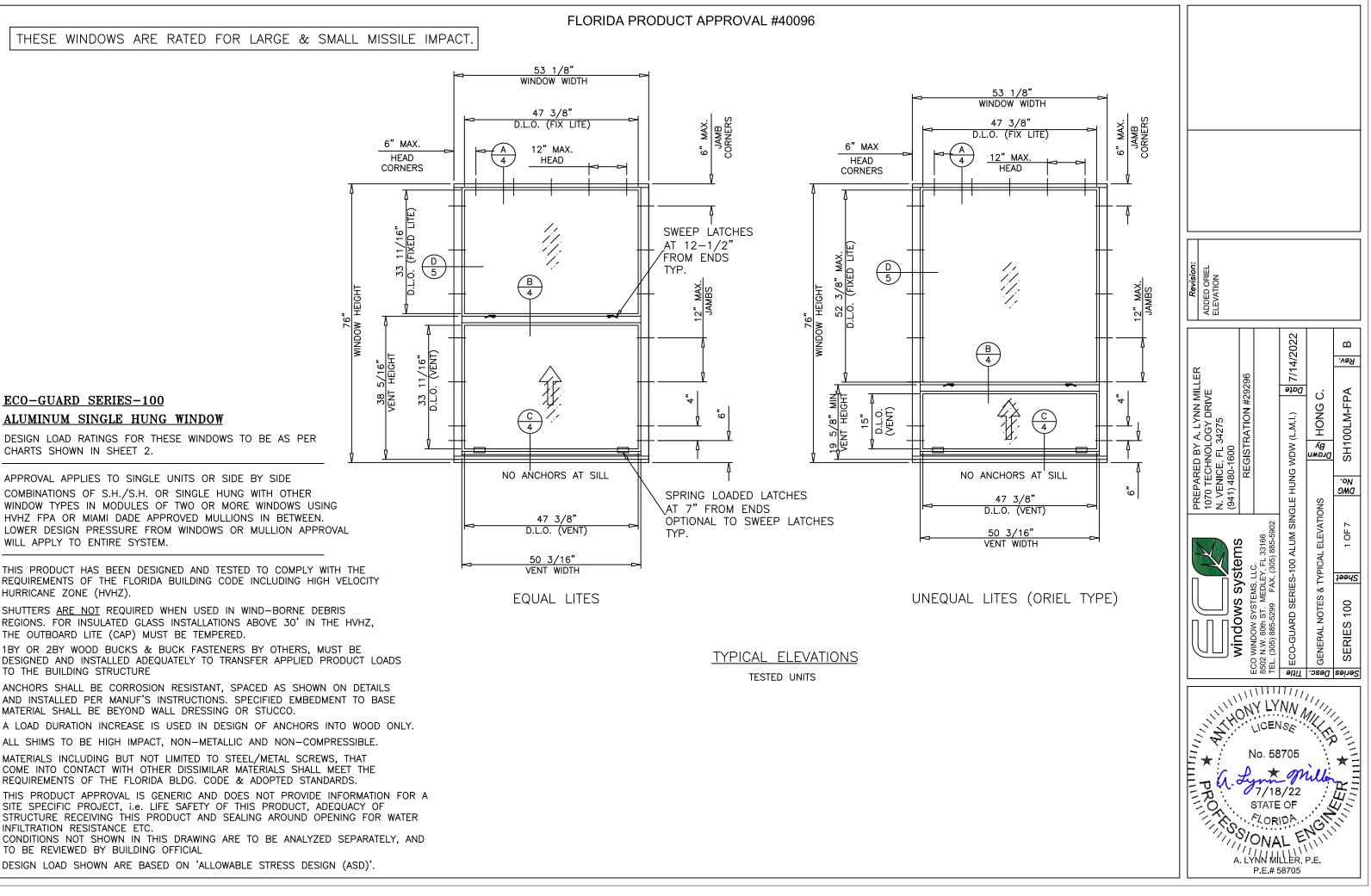
St 2 21

Steven M. Urich, PE President



This item has been electronically signed and sealed by Steven M. Urich, PE on 10/4/2017 using a Digital Signature.

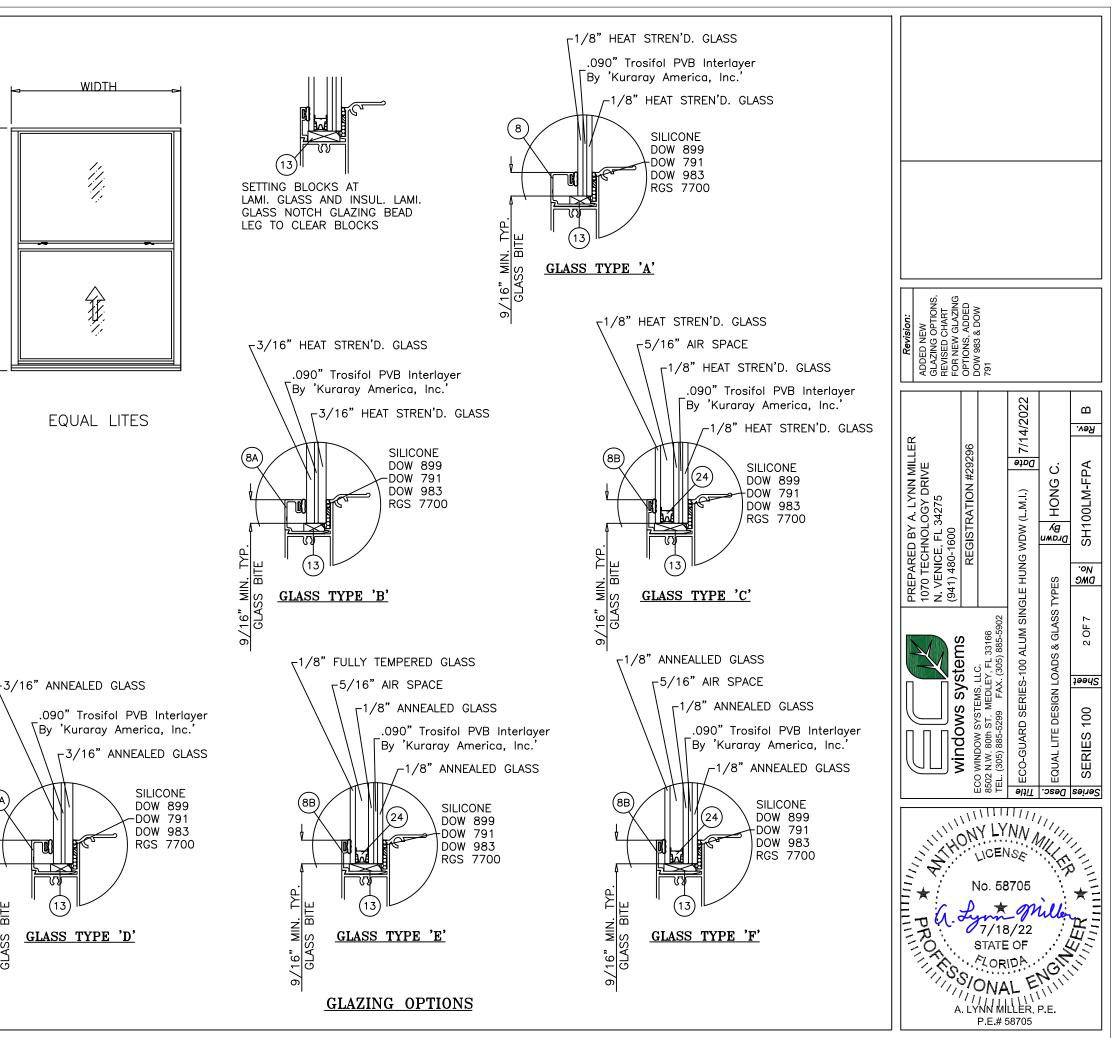
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



TO BE REVIEWED BY BUILDING OFFICIAL

DESIGN LOAD SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

FLANGE		GLASS A. B. C.	TYPES D, & E	GLASS		
WIDTH	HEIGHT		В, а Е NEG. (-)			
19-1/8"		75.0	90.0	75.0	90.0	
24"		75.0	90.0	75.0	90.0	Ą
26-1/2"		75.0	90.0	75.0	90.0	
32"	26"	75.0	90.0	75.0	90.0	
37"	(3)	75.0	90.0	75.0	90.0	
40"		75.0	90.0	75.0	90.0	<u> </u>
48"		75.0	90.0	75.0	90.0	CH ⁻
53-1/8"		75.0	90.0	75.0	90.0	HE
19-1/8"		75.0	90.0	75.0	90.0	
24"		75.0	90.0	75.0	90.0	
26-1/2"		75.0	90.0	75.0	90.0	
32"	38-3/8"	75.0	90.0	75.0	90.0	
37"	(4)	75.0	90.0	75.0	90.0	V
40"		75.0	90.0	75.0	90.0	
48"		75.0	90.0	75.0	90.0	
53-1/8"		75.0	90.0	75.0	90.0	
19-1/8"		75.0	90.0	75.0	90.0	
24"		75.0	90.0	75.0	90.0	
26-1/2"		75.0	90.0	75.0	90.0	
32"	50-5/8"	75.0	90.0	75.0	90.0	
37"	(5)	75.0	90.0	75.0	90.0	
40"		75.0	90.0	75.0	90.0	
48"		75.0	90.0	75.0	90.0	
53-1/8"		75.0	90.0	75.0	90.0	
19-1/8"		75.0	90.0	75.0	90.0	
24"		75.0	90.0	75.0	90.0	
26-1/2"		75.0	90.0	75.0	90.0	
32"	63"	75.0	90.0	75.0	90.0	
37"	(6)	75.0	90.0	75.0	90.0	
40"		75.0	90.0	75.0	90.0	
48"		75.0	90.0	75.0	90.0	
53-1/8"		75.0	90.0	75.0	90.0	
19-1/8"		75.0	90.0	75.0	90.0	
24"		75.0	90.0	75.0	90.0	
26-1/2"		75.0	90.0	75.0	90.0	
32"	76"	75.0	90.0	75.0	90.0	
37"	(7)	75.0	90.0	75.0	90.0	
40"		75.0	90.0	75.0	90.0	
48"		75.0	90.0	75.0	88.8	
53-1/8"		75.0	90.0	75.0	79.6	

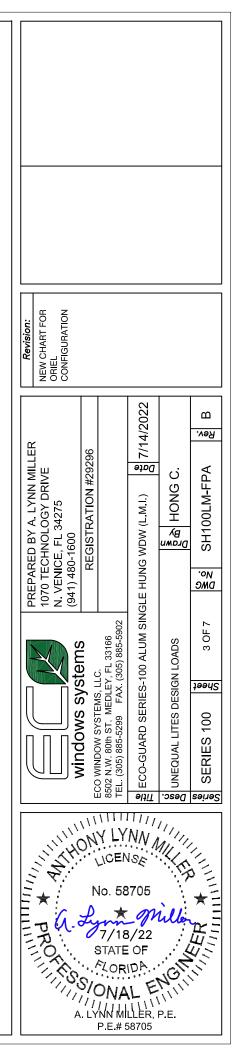


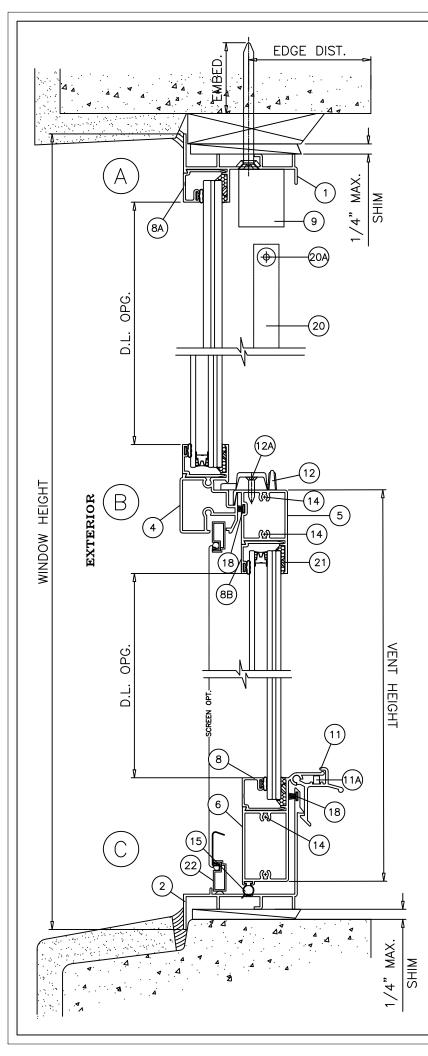
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300–09 (3 SEC. GUSTS)

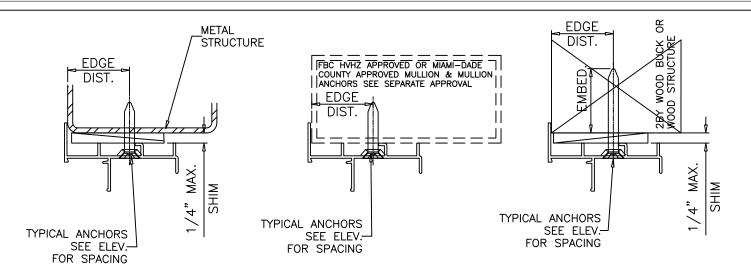
DESIGN LOAD CAPACITY - PSF (UNEQUAL LITE SIZES)							
			TYPE	GLASS TYPES		GLASS TYPES 'D', 'E', & 'F'	
FLANG	FLANGE DIMS.		Α'		& 'C'		
WIDTH	HEIGHT	POS. (+)	NEG. (-)	POS. (+)	NEG. (-)	POS. (+)	NEG. (-)
19-1/8"		75.0	90.0	75.0	90.0	75.0	90.0
24"		75.0	90.0	75.0	90.0	75.0	90.0
26-1/2"		75.0	90.0	75.0	90.0	75.0	90.0
32"	50-5/8"	75.0	90.0	75.0	90.0	75.0	90.0
37"	(5)	75.0	90.0	75.0	90.0	75.0	90.0
40"		75.0	90.0	75.0	90.0	75.0	90.0
48"		75.0	90.0	75.0	90.0	75.0	90.0
53-1/8"		75.0	90.0	75.0	90.0	75.0	90.0
19-1/8"		75.0	90.0	75.0	90.0	75.0	90.0
24"		75.0	90.0	75.0	90.0	75.0	90.0
26-1/2"		75.0	90.0	75.0	90.0	75.0	90.0
32"	57-5/16"	75.0	90.0	75.0	90.0	75.0	90.0
37"	(5)	75.0	90.0	75.0	90.0	75.0	90.0
40"		75.0	90.0	75.0	90.0	75.0	90.0
48"		75.0	90.0	75.0	90.0	75.0	90.0
53-1/8"		75.0	90.0	75.0	90.0	75.0	90.0
19-1/8"		75.0	90.0	75.0	90.0	-	-
24"		75.0	90.0	75.0	90.0	-	_
26-1/2"		75.0	90.0	75.0	90.0	-	_
32"	63"	75.0	90.0	75.0	90.0	-	_
37"	(6)	75.0	90.0	75.0	90.0	-	-
40"		75.0	90.0	75.0	90.0	-	_
48"		_	_	75.0	90.0	-	_
53-1/8"		_	_	75.0	90.0	-	_
19-1/8"		75.0	90.0	75.0	90.0	-	_
24"		75.0	90.0	75.0	90.0	-	_
26-1/2"		75.0	90.0	75.0	90.0	-	_
32"	76"	75.0	90.0	75.0	90.0	-	_
37"	(7)	_	_	75.0	90.0	-	-
40"		_	-	75.0	90.0	-	-
48"		_	_	75.0	90.0	-	_
53-1/8"		_	_	75.0	90.0	-	-

		- WIDTH -
HEIGHT		
	19 5/8 MIN. VENT HEIGHT	

UNEQUAL LITES (ORIEL TYPE)







WOOD BUCKS AND METAL STRUCTURE NOT BY 'ECO WDW.' MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

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

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/JAMBS)

THRU 1BY BUCKS INTO CONC. OR BLOCKS 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS) 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

DIRECTLY INTO CONCRETE OR BLOCKS 1-1/2" MIN. EMBED INTO CONCRETE (HEAD/JAMBS) 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

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

INTO HVHZ FPA OR MIAMI-DADE COUNTY APPROVED MULLIONS OR INTO METAL STRUCTURES (HEAD/JAMBS) (3) THREADS MIN. PENETRATION BEYOND SUBSTRATE

ALUMINUM : 1/8" THK. MIN. (6063–T5 MIN.) STEEL : 1/8" THK. MIN. (Fy = 36 KSI MIN.) (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

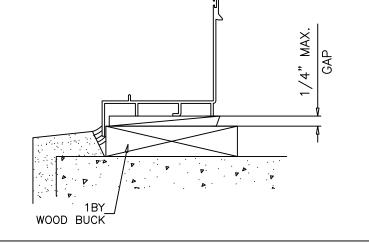
TYPICAL EDGE DISTANCE

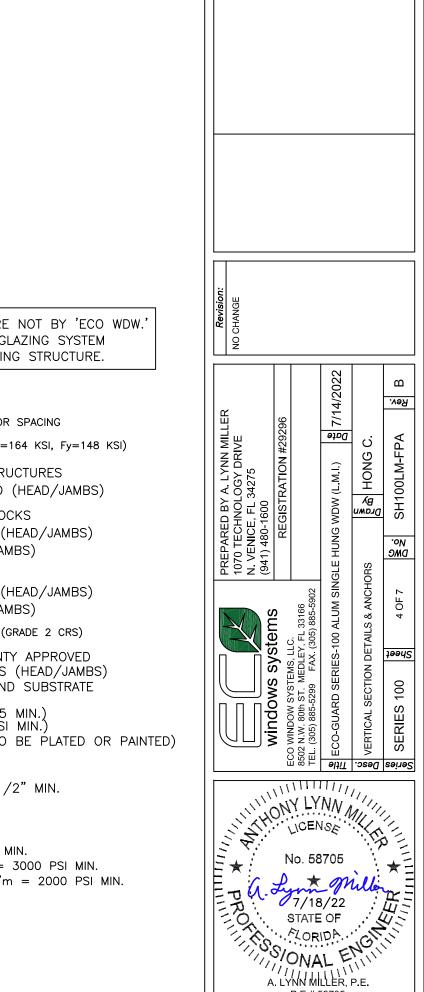
INTO CONCRETE AND MASONRY = 2-1/2" MIN. INTO WOOD STRUCTURE = 1" MIN. INTO METAL STRUCTURE = 3/4" MIN.

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

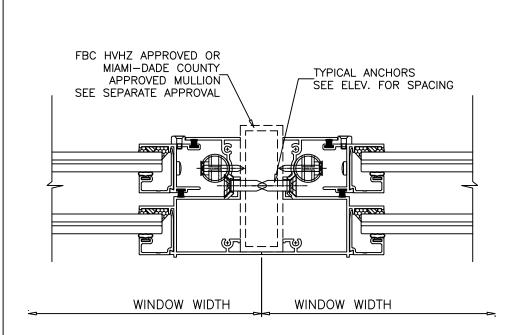


ALL JOINT AND FRAME CONNECTIONS SEALED WITH JOINT SEALER.

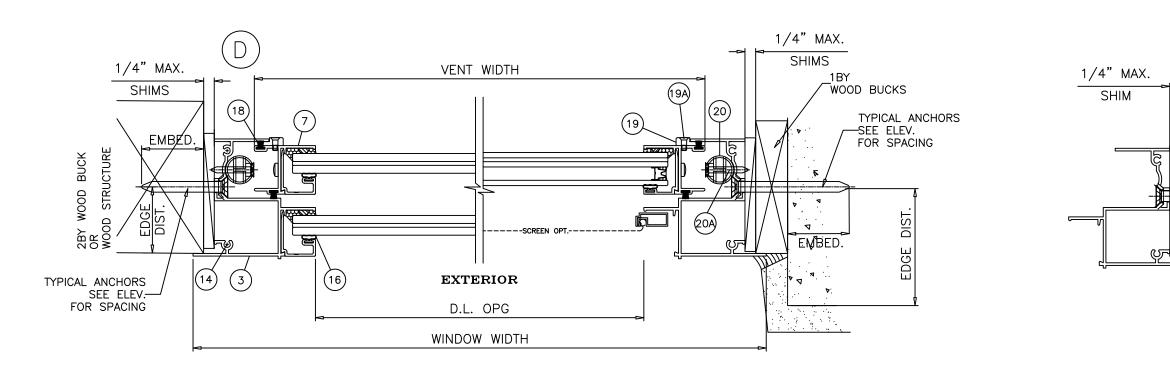


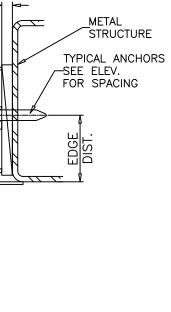


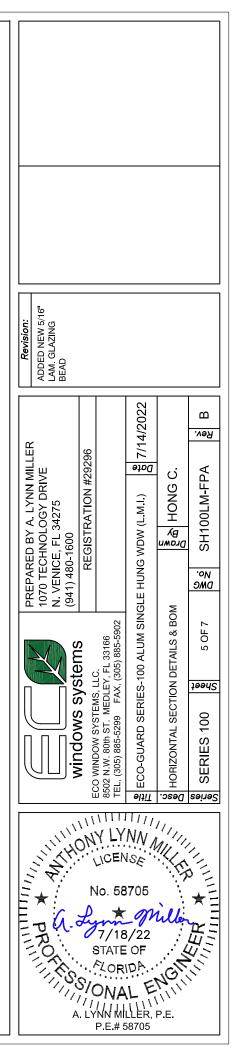
P.E.# 58705

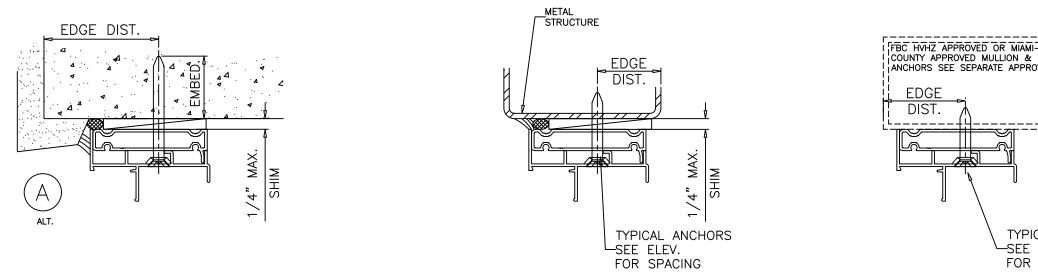


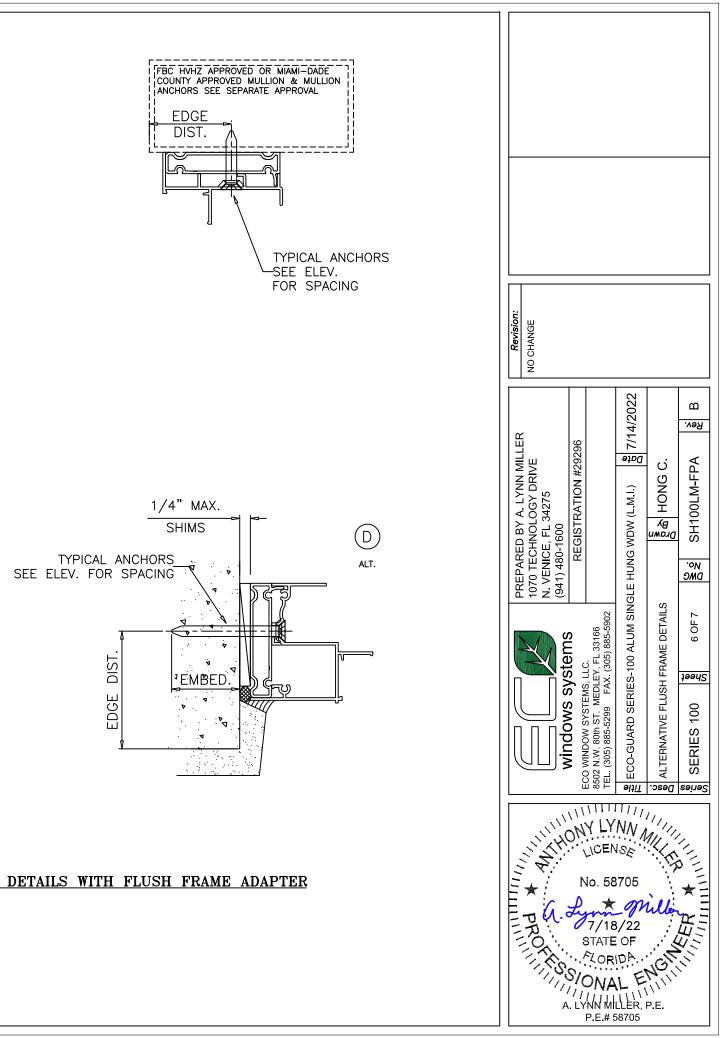
ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	FY101	1	FRAME HEAD	6063 — T6	_
2	FY115	1	FRAME SILL	6063 — T6	-
3	FY103	2	FRAME JAMB	6063 — T6	-
4	FY104	1	FIXED MTG. RAIL	6063 — T6	-
5	FY105	1	VENT TOP RAIL	6063 — T6	-
6	FY114	1	VENT BOTTOM RAIL	6063 — T6	-
7	FY107	2	VENT SIDE RAIL	6063 — T6	—
8	FY108	AS REQD.	GLAZING BEAD (5/16" LAM. GLASS)	6063 — T6	_
8A	FY109	AS REQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063 — T6	-
8B	FY110	AS REQD.	GLAZING BEAD (3/4" LAM. IG GLASS)	6063 — T6	-
9	FY116	2 / VENT	SASH STOP	6063 — T6	-
11	FY113	2 / VENT	SPRING LOADED LATCH, AT 7" FROM ENDS	6063 — T6	-
11A	_	1 / LATCH	LATCH SPRING	ST. STEEL	-
12	SL203P	2/ VENT	SWEEP LATCH	ZAWAK	SULLIVAN & ASSOC.
12A	#8 X 5/8"	2 / LATCH	LATCH INST. SCREWS	ST. STEEL	FH SMS
13	_	AS REQD.	SETTING BLOCK	EPDM	DUROMETER 80±5 SHORE A
14	#8 X 1"	AS REQD.	FRAME & VENT ASSEMBLY SCREWS	CRS	PH SMS
15	E207	AS REQD.	BOTTOM RAIL SEAL - SERIES 101	NEOPRENE	ULTRAFAB
16	E203	AS REQD.	GLAZING BEAD BULB	SANTOPRENE	ULTRAFAB
18	W23181	AS REQD.	FIN SEAL W'STRIPPING	_	ULTRAFAB
19	FY117	4 / VENT	SASH GUIDE	CELCON	M&M PLASTICS
19A	#6 X 3/8"	1 / GUIDE	SASH GUIDE INST. SCREW	_	OH SMS TYPE B
20	F210	2 / VENT	SASH BALANCE	_	SUPERBOOST BY BSI
20A	#8 X 5/8"	1 / BALANCE	BALANCE INST. SCREW	_	PFH SMS
21	_	AS REQD.	GLASS OFFSET SPACER	SILICONE	FRANK LOWE
22	_	1	5/16" BOX SCREEN	_	OPTIONAL
23	FY120	AS REQD.	FLUSH FRAME ADAPTER	6063 — T6	OPTIONAL
24		_	IG SPACER	VARIOUS	VARIOUS

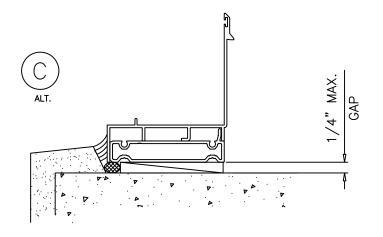




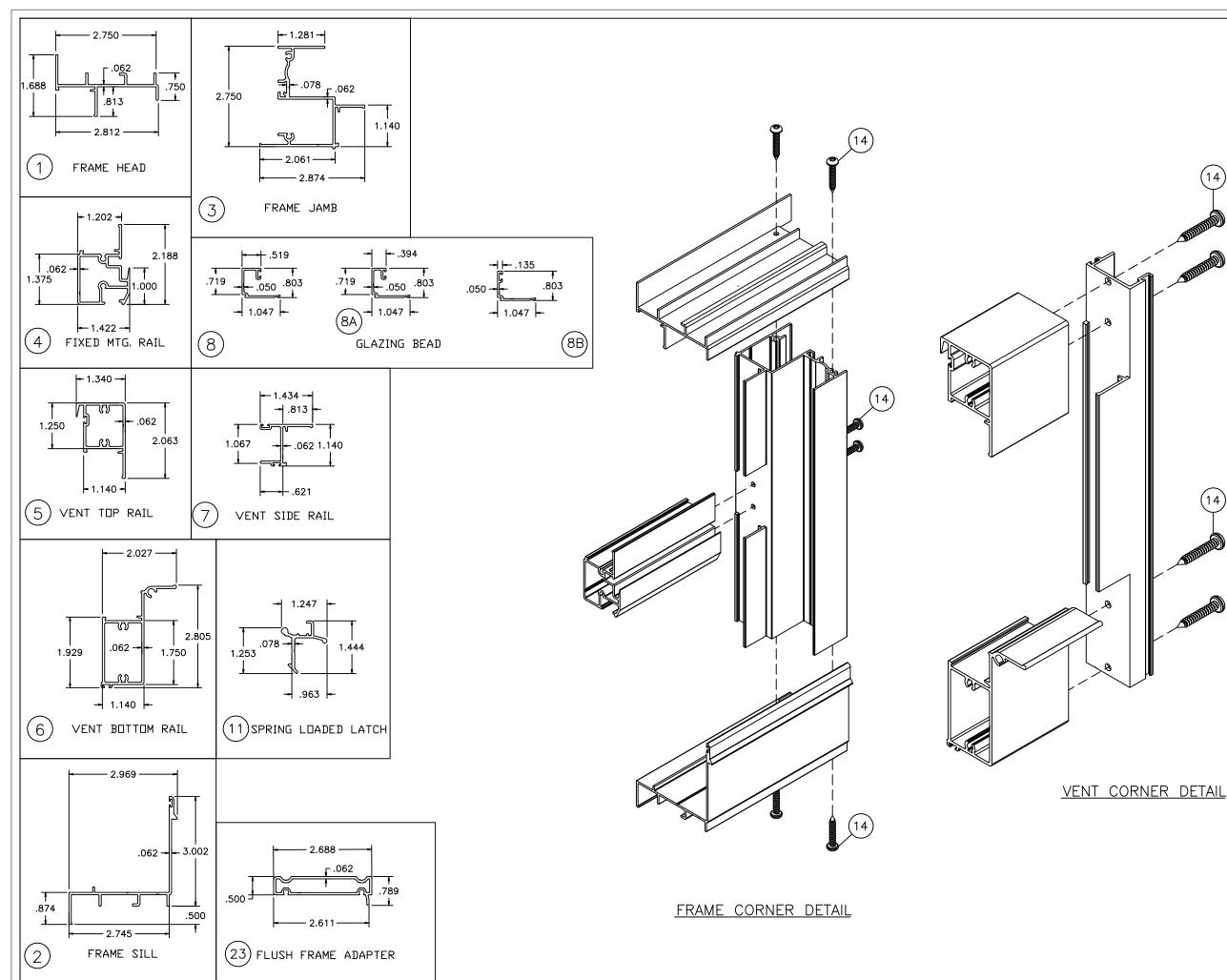


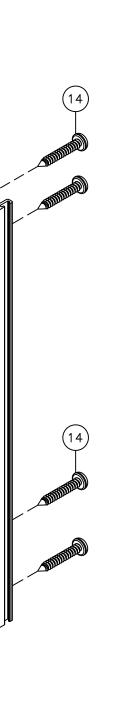






INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER





Revision:	ADDED NEW GALZING BEAD					
LER	Windows systems (941) 480-1600	ECO WINDOW SYSTEMS, I.I.C. REGISTRATION #29296	8502 N.W. 80th ST. MEDLEY, FL 33166 TEL. (305) 885-5299 FAX. (305) 885-5902	ECO-GUARD SERIES-100 ALUM SINGLE HUNG WDW (L.M.I.)	B PROFILES & CORNER ASSEMBLY DETAILS B B HONG C.	ଞ୍ଚ SERIES 100 ହୁଁ 7 ୦F 7 ଓୁଁ ଓୁଁ SH100LM-FPA ହୁଁ B
" MANTINITINA	THE ROLL	S/C			P.E.	VILLER * VIV