

**HR910V HORIZONTAL ROLLER WINDOW,
LM/SM IMPACT RESISTANT,
FLANGE, EQUAL-LEG & FIN FRAMES**

DP RATING SEE TABLES 1 & 2	LARGE & SMALL MISSILE IMPACT RESISTANT
-------------------------------	--

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

2) SHUTTERS ARE NOT REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.

3) MASONRY ANCHORS MAY BE USED INTO WOOD. ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER.

4) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH.

5) MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS.

6) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

7) FRAME FLANGES OR INTEGRAL FINNS MAY BE TRIMMED IN-FIELD TO CREATE AN EQUAL-LEG FRAME.

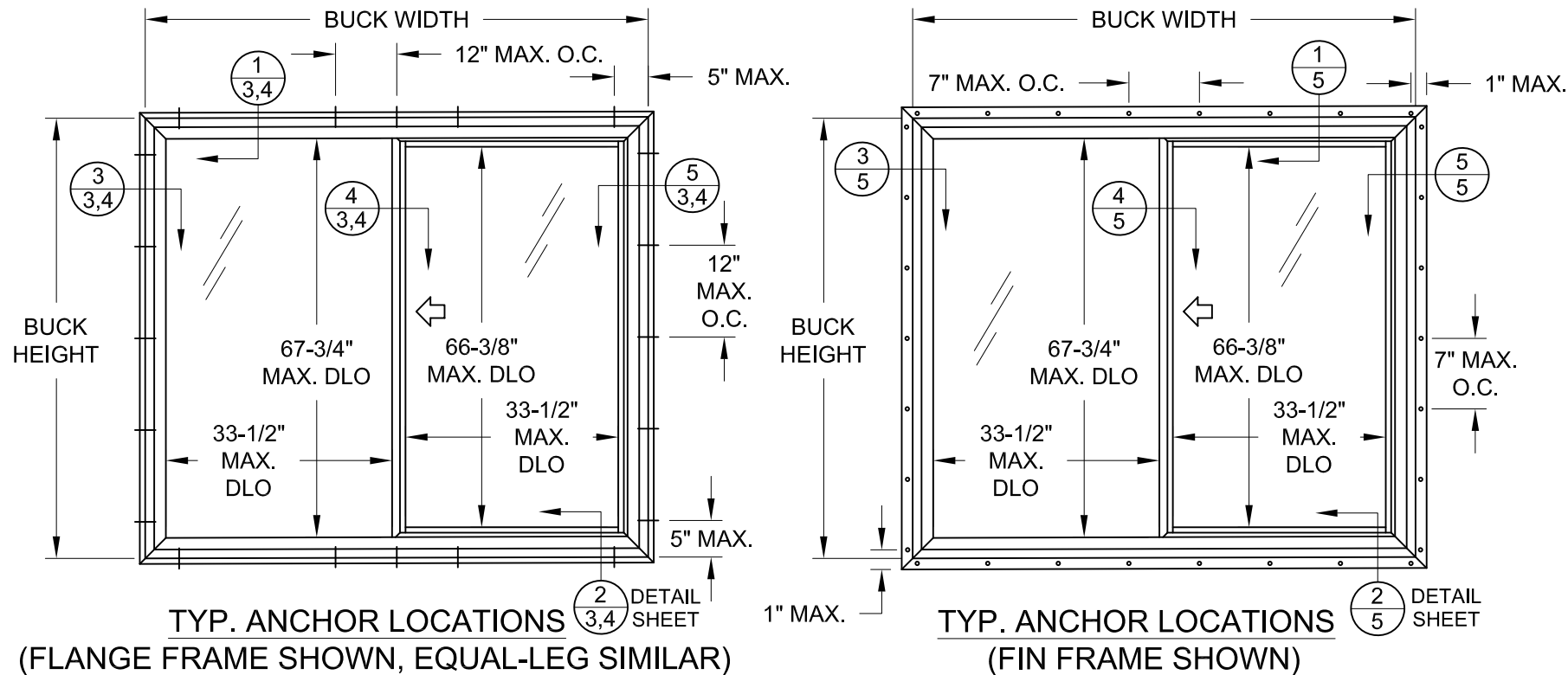


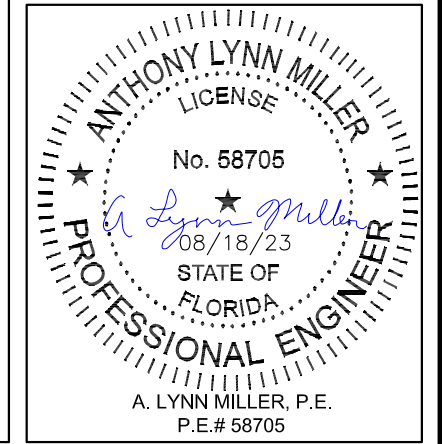
TABLE 1: DESIGN PRESSURES

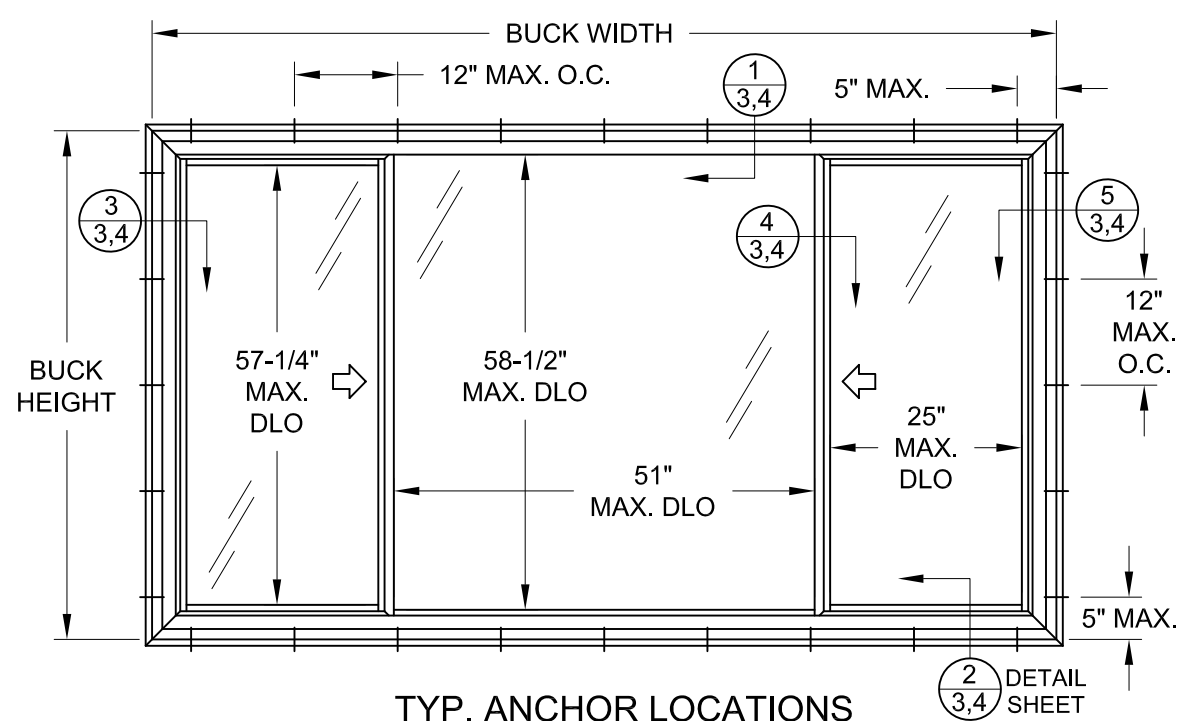
Buck Width	Buck Height	Configuration	Impact Level	Frame Type	Glass Types	Design Pressure	
						(+) psf	(-) psf
74"	63"	XO/OX	LM/SM	All	1 or 2	50.0	60.0
74"	72"	XO/OX	LM/SM	Flange, Equal-Leg	1 or 2	45.0	50.0

1) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION.
2) FOR GLASS TYPES, SEE SHEET 7.

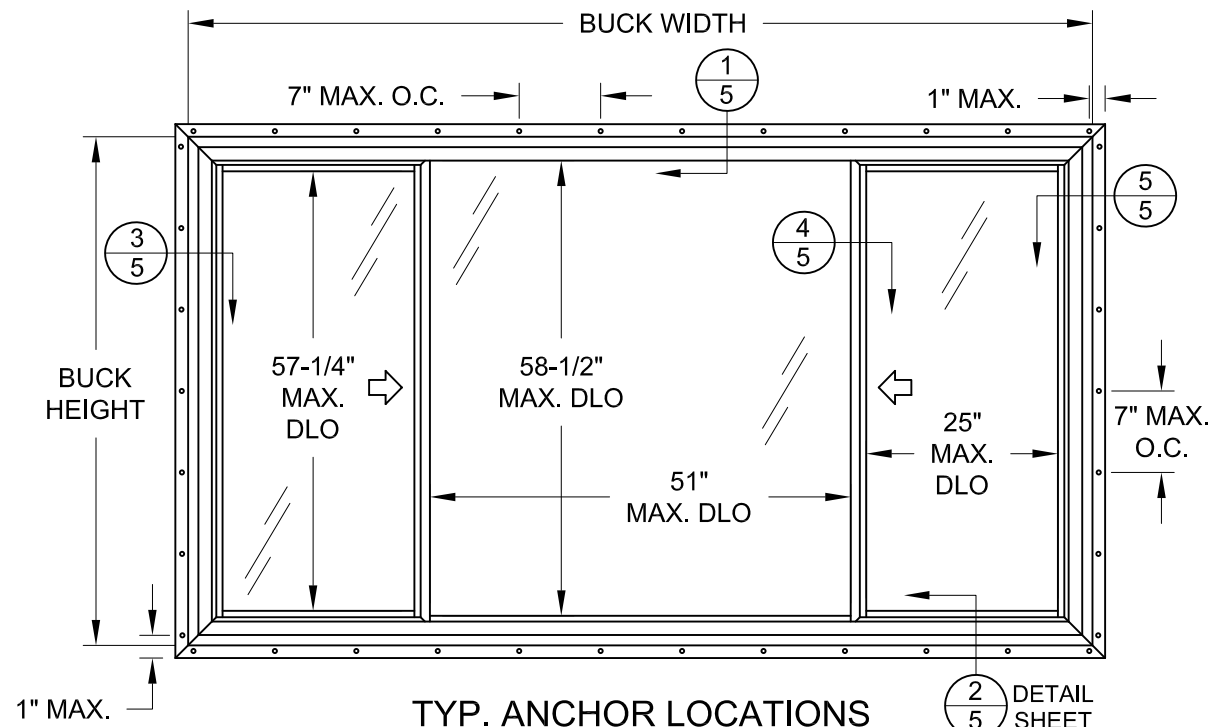
Rev.# 08/17/23
Date
MINOR EDITORIAL UPDATES
Rev.

Impact Resistant Windows & Doors CGI WINDOWS AND DOORS 3780 W. 104TH STREET HIALEAH, FL 33018	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296 COPYRIGHT © 2023 PGT, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	04/17/23 Date	LOGAN YODER By	HR910V-FPA-LM No.
	VINYL HORIZONTAL ROLLER WINDOW (LM) Desc. Title	1 OF 6 Sheet	HR910V Series	ELEVATION & GENERAL NOTES	





TYP. ANCHOR LOCATIONS
(FLANGE FRAME SHOWN, EQUAL-LEG SIMILAR)
(1/4 - 1/2 - 1/4 CONFIGURATION SHOWN)



TYP. ANCHOR LOCATIONS
(FIN FRAME SHOWN)
(1/4 - 1/2 - 1/4 CONFIGURATION SHOWN)

TABLE 2: XOX DESIGN PRESSURES

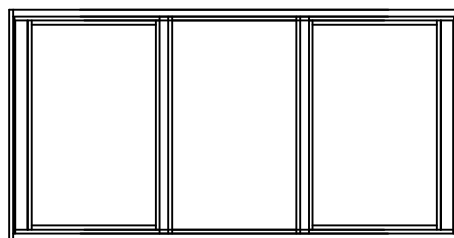
Buck Width	Buck Height	Configuration	Impact Level	Frame Type	Glass Types	Design Pressure	
						(+) psf	(-) psf
82-7/8"	63"	1/3 - 1/3 - 1/3 XOX	LM/SM	All	1, 2, 3 or 4 (operable) 3 or 4 (fixed lite)	50.0	55.0
111"	63"	1/4 - 1/2 - 1/4 XOX	LM/SM	All	1, 2, 3 or 4 (operable) 4 (fixed lite)	50.0	55.0
111"	63"	1/4 - 1/2 - 1/4 XOX	LM/SM	All	1, 2, 3 or 4 (operable) 3 (fixed lite)	See Table 2A	

1) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION.
2) FOR GLASS DESCRIPTIONS, SEE SHEET 7.

TABLE 2A:

Design Pressure	XOX 1/4 - 1/2 - 1/4 using Glass Types 3 at Fixed Lite						
	Width						
	60"	72"	84"	96"	108"	111"	
Height	36"	+50/-55	+50/-55	+50/-55	+50/-55	+50/-55	+50/-55
	48"	+50/-55	+50/-55	+50/-55	+50/-55	+50/-55	+50/-55
	54"	+50/-55	+50/-55	+50/-55	+50/-55	+50/-55	+50/-55
	60"	+50/-55	+50/-55	+50/-55	+50/-55	+50.0/-52.9	+50.0/-52.2
	63"	+50/-55	+50/-55	+50/-55	+50.0/-54.2	+50.0/-50.4	+/-49.6

1) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION.
2) FOR GLASS DESCRIPTIONS, SEE SHEET 7.

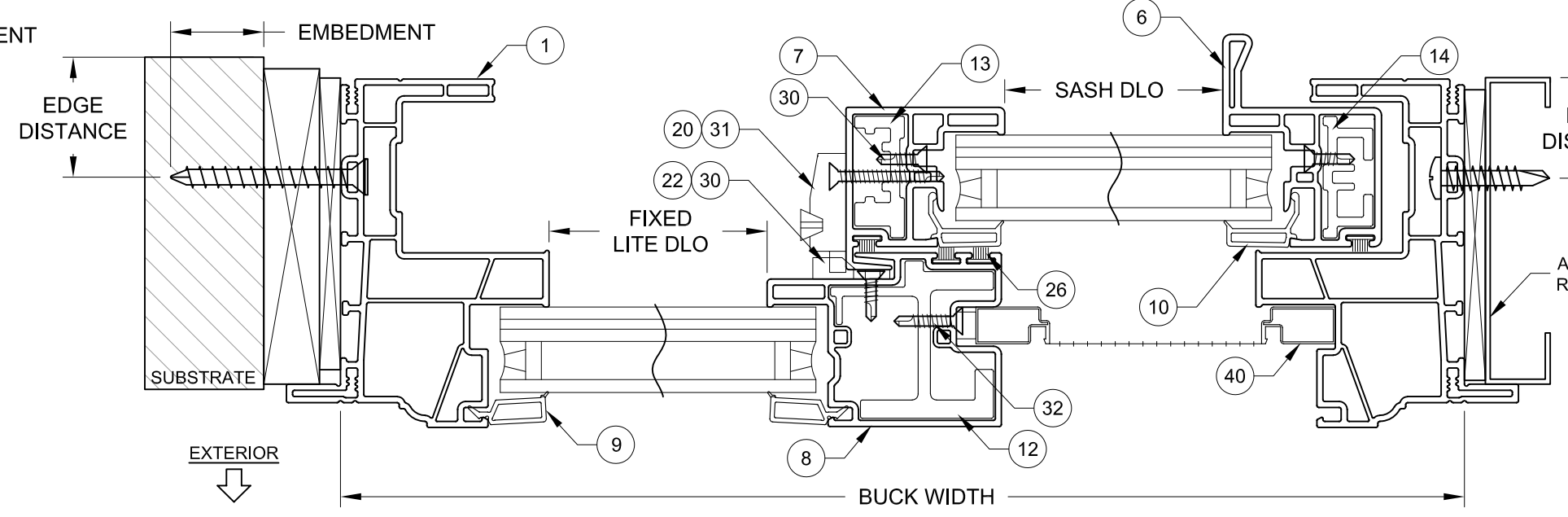
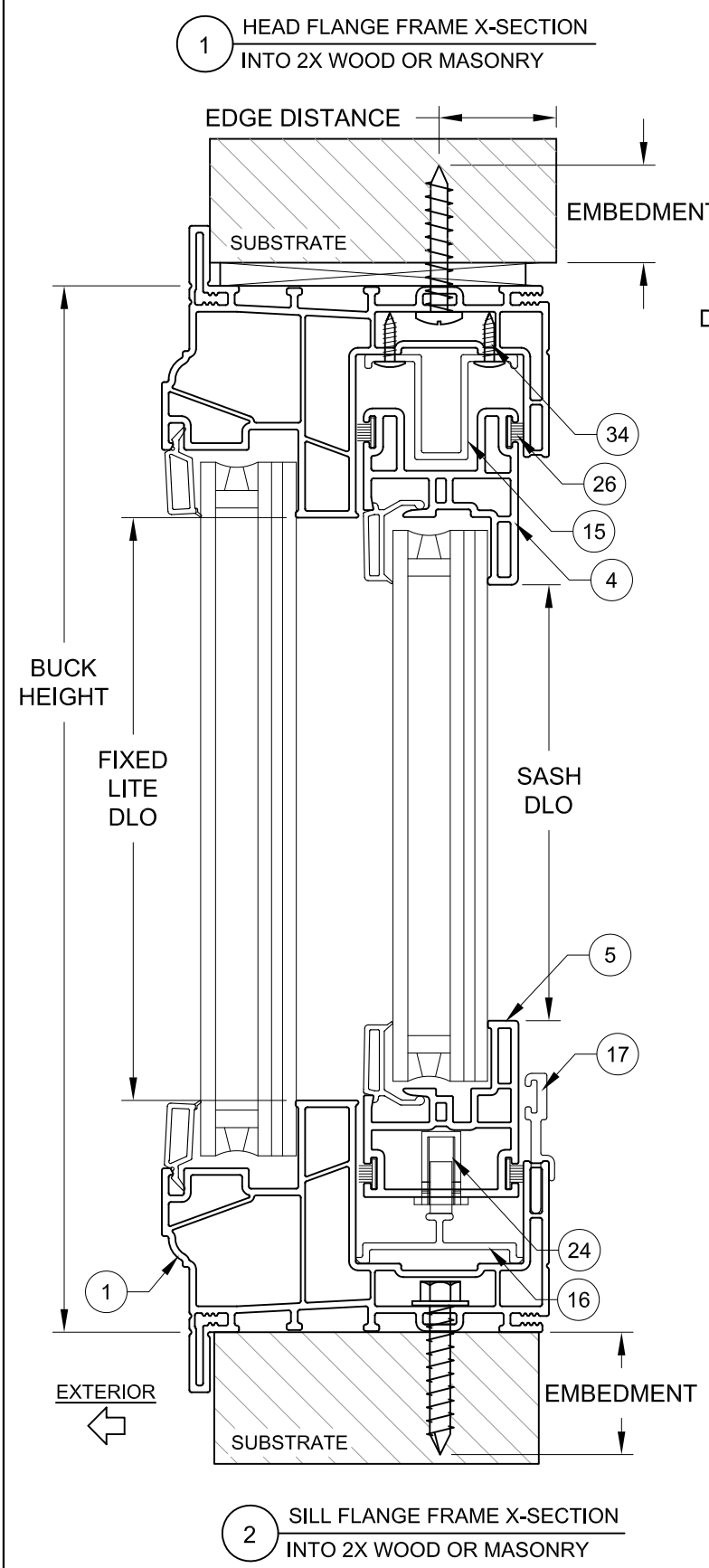


WINDOW MAY BE A 1/4 - 1/2 - 1/4 CONFIGURATION (AS SHOWN ABOVE), OR 1/3 - 1/3 - 1/3 CONFIGURATION (AS SHOWN TO THE LEFT) PROVIDED DLO (DAYLITE OPENING) SIZES ARE NOT EXCEEDED.

Impact Resistant Windows & Doors CGI WINDOWS AND DOORS 3780 W. 104TH STREET HIALEAH, FL 33018	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296 COPYRIGHT © 2023 PGT, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	04/17/23 Date
	VINYL HORIZONTAL ROLLER WINDOW (LM)	By LOGAN YODER	HR910V-FPA-LM No.
2 OF 6 Sheet	HR910V Series	PRESSURES & ANCHOR ELEVATION Desc.	GENERAL NOTES, XOX DESIGN Title

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3 JAMB FLANGE FRAME X-SECTION THRU 1X INTO 2X WOOD OR MASONRY

4 MEETING RAIL X-SECTION SHOWN FOR OX CONFIGURATION (XOX SIMILAR)

5 JAMB FLANGE FRAME X-SECTION USING SCREWS INTO METAL



2 SILL FLANGE FRAME X-SECTION INTO 2X WOOD OR MASONRY

TABLE 3: INSTALLATION ANCHORS

Anchor	Substrate	Minimum Edge Distance	Minimum Embedment
#10 or #12 Steel or 410 SS Screw	Southern Pine (SG = .55)	9/16"	1-3/8"
	Aluminum, 6063-T5 min.	3/8"	0.050"
	Steel Stud, Gr. 33 min.	3/8"	0.045" (20 Ga)
	A36 Steel	3/8"	0.050"
3/16" Steel Ultracon+	Concrete (min. 2.9 ksi)	1"	1-3/4"
	UngROUTED CMU, (ASTM C-90)	1"	1-1/4"
	Southern Pine (SG = .55)	1"	1-3/8"
1/4" Steel Ultracon+	Concrete (min. 3.0 ksi)	1"	1-3/8"
	UngROUTED CMU, (ASTM C-90)	1"	1-1/4"
	Southern Pine (SG = .55)	1"	1-3/8"

- 1) ANCHOR MUST EXTEND A MINIMUM OF 3 THREADS BEYOND ANY METAL SUBSTRATE.
- 2) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUDED CMU APPLICATIONS.
- 3) ALL ANCHOR HEAD TYPES ARE APPLICABLE.

- INSTALLATION NOTES:
- 1) SEE SHEET 1 FOR ANCHOR SPACING REQUIREMENTS.
 - 2) ANY INSTALLATION OPTION SHOWN (2X BUCK OR WOOD FRAMING, 1X BUCK, DIRECT TO MASONRY, STEEL STUD) MAY BE USED ON ANY SIDE OF THE WINDOW.
 - 3) USE ONLY SUBSTRATE APPROPRIATE ANCHORS LISTED IN ANCHOR TABLE 3. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. MAX. SHIM THICKNESS TO BE 1/4".

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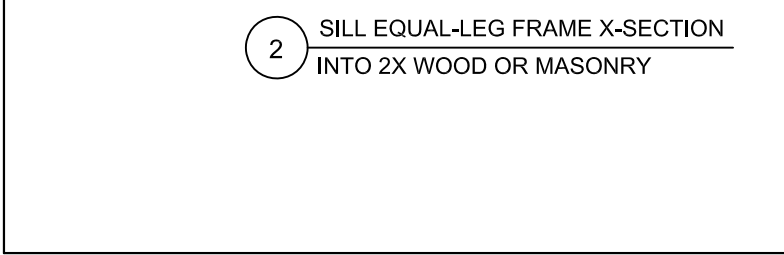
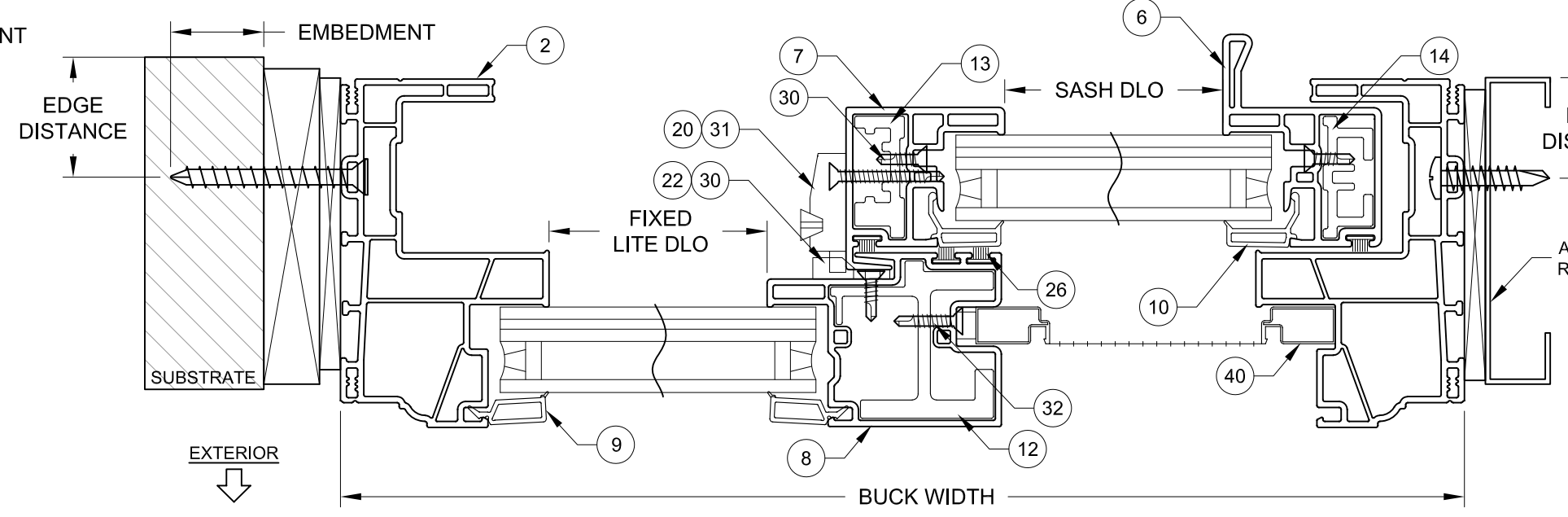
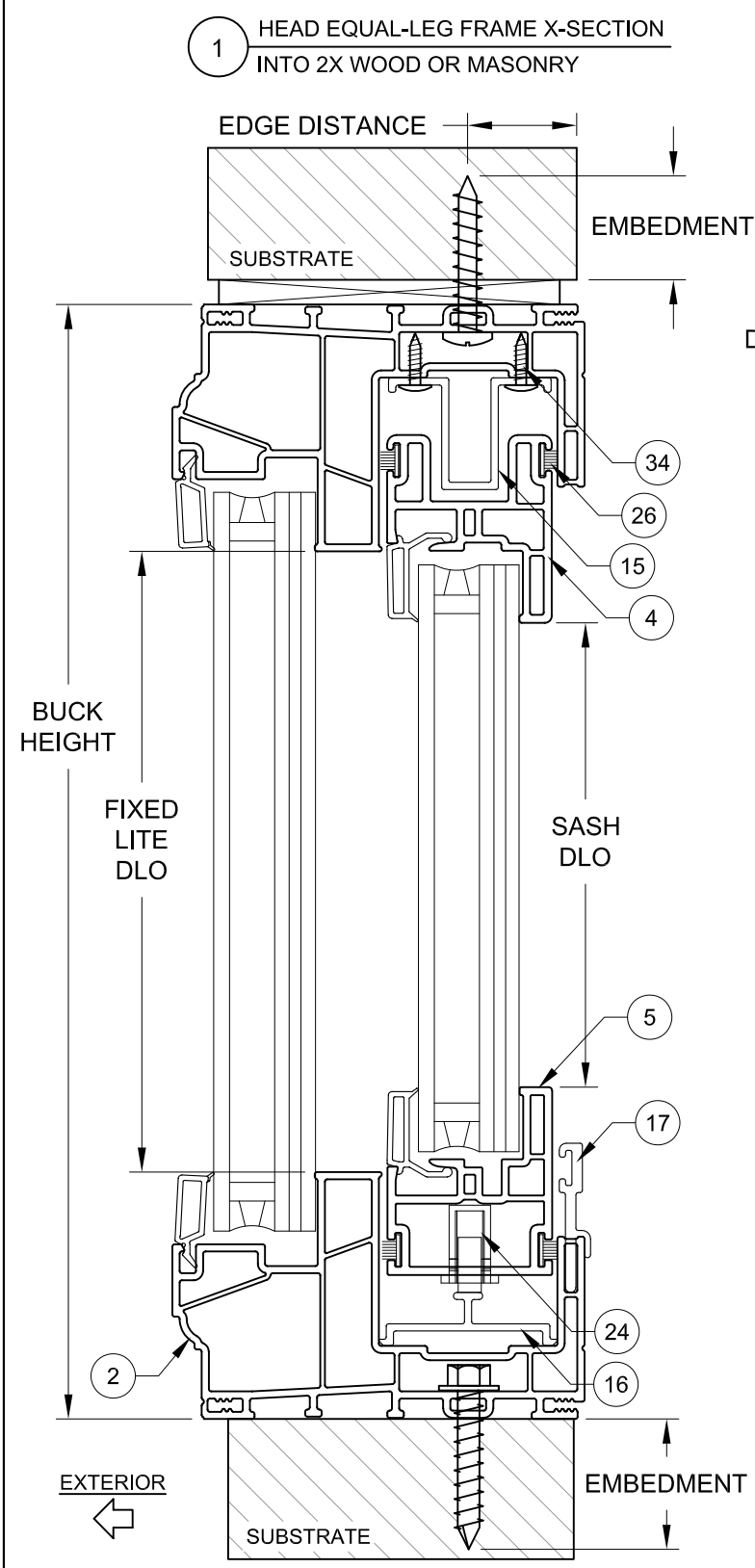
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3780 W. 104TH STREET
HIALEAH, FL 33018

VINYL HORIZONTAL ROLLER WINDOW (LM) 04/17/23
FLANGE INSTALL & ANCHOR TYPES LOGAN YODER

HR910V 3 OF 6 HR910V-FPA-LM

Impact Resistant Windows & Doors

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3 JAMB EQUAL-LEG FRAME X-SECTION THRU 1X INTO 2X WOOD OR MASONRY
4 MEETING RAIL X-SECTION SHOWN FOR OX CONFIGURATION (XOX SIMILAR)
5 JAMB EQUAL-LEG FRAME X-SECTION USING SCREWS INTO METAL

TABLE 4: INSTALLATION ANCHORS

Anchor	Substrate	Minimum Edge Distance	Minimum Embedment
#10 or #12 Steel or 410 SS Screw	Southern Pine (SG = .55)	9/16"	1-3/8"
	Aluminum, 6063-T5 min.	3/8"	0.050"
	Steel Stud, Gr. 33 min.	3/8"	0.045" (20 Ga)
	A36 Steel	3/8"	0.050"
3/16" Steel Ultracon+	Concrete (min. 2.9 ksi)	1"	1-3/4"
	UngROUTED CMU, (ASTM C-90)	1"	1-1/4"
	Southern Pine (SG = .55)	1"	1-3/8"
1/4" Steel Ultracon+	Concrete (min. 3.0 ksi)	1"	1-3/8"
	UngROUTED CMU, (ASTM C-90)	1"	1-1/4"
	Southern Pine (SG = .55)	1"	1-3/8"

- 1) ANCHOR MUST EXTEND A MINIMUM OF 3 THREADS BEYOND ANY METAL SUBSTRATE.
- 2) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUDED CMU APPLICATIONS.
- 3) ALL ANCHOR HEAD TYPES ARE APPLICABLE.

- INSTALLATION NOTES:
- 1) SEE SHEET 1 FOR ANCHOR SPACING REQUIREMENTS.
 - 2) ANY INSTALLATION OPTION SHOWN (2X BUCK OR WOOD FRAMING, 1X BUCK, DIRECT TO MASONRY, STEEL STUD) MAY BE USED ON ANY SIDE OF THE WINDOW.
 - 3) USE ONLY SUBSTRATE APPROPRIATE ANCHORS LISTED IN ANCHOR TABLE 4. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. MAX. SHIM THICKNESS TO BE 1/4".

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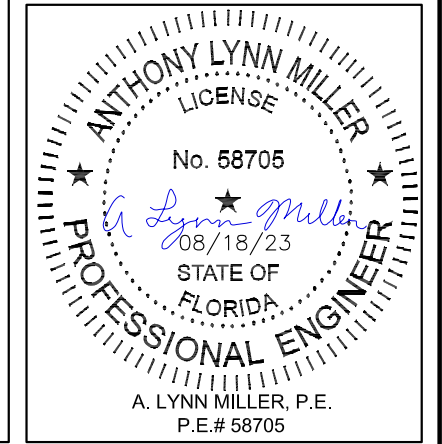
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HIALEAH, FL 33018

VINYL HORIZONTAL ROLLER WINDOW (LM)
EQUAL-LEG INSTALLATION & ANCHOR TYPES

LOGAN YODER

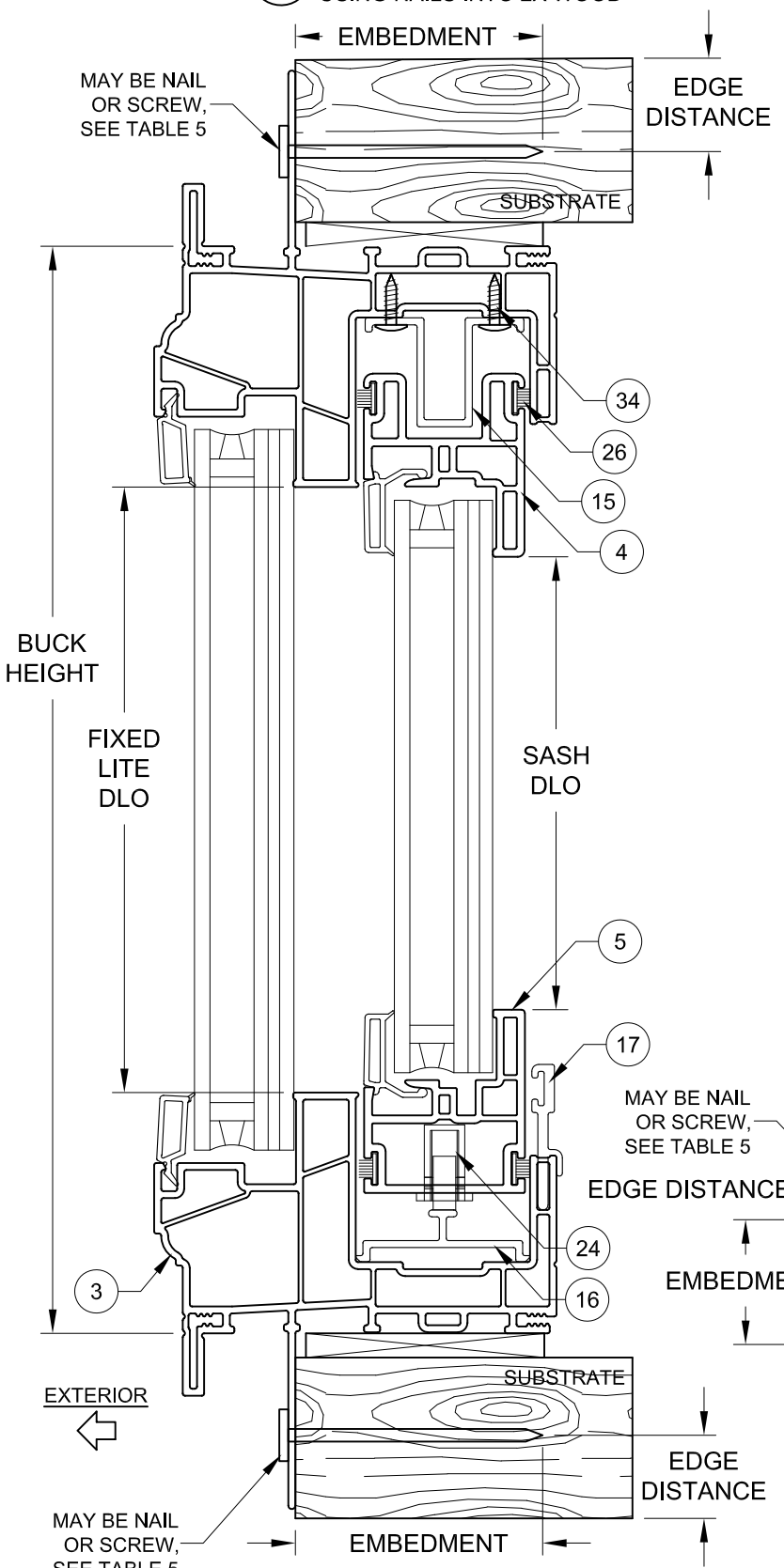
HR910V
4 OF 6
HR910V-FPA-LM

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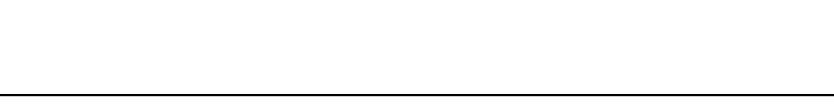


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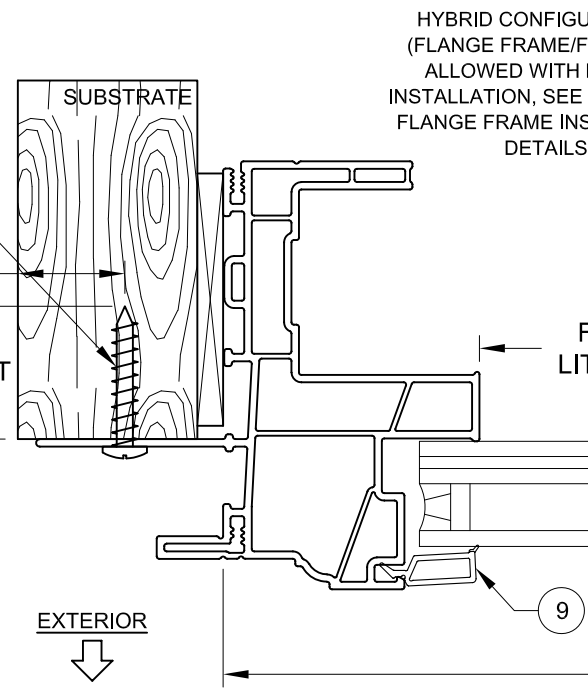
1 HEAD FIN FRAME X-SECTION USING NAILS INTO 2X WOOD



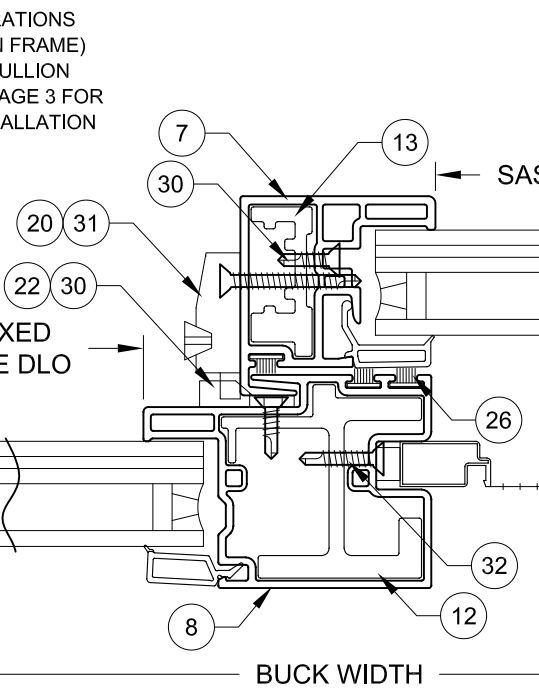
2 SILL FIN FRAME X-SECTION USING NAILS INTO 2X WOOD



3 JAMB FIN FRAME X-SECTION USING SCREWS INTO 2X WOOD



4 MEETING RAIL X-SECTION SHOWN FOR OX CONFIGURATION (XOX SIMILAR)



5 JAMB FIN FRAME X-SECTION USING SCREWS INTO METAL

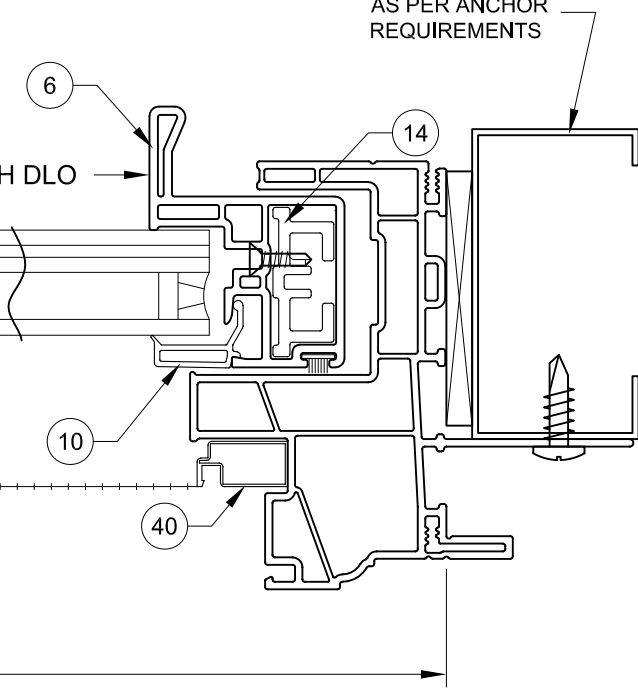


TABLE 5: INSTALLATION ANCHORS

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .113" Box Nail	P.T. Southern Pine (SG = .55)	5/16"	2-7/16"
2-1/2" x .131" Common Nail	P.T. Southern Pine (SG = .55)	3/8"	2-7/16"
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG = .55)	3/8"	2-7/16"
#10 Steel SMS	P.T. Southern Pine (SG = .55)	1/2"	1-3/8"
	Aluminum, 6063-T5 min.	3/8"	1/8"
	Steel Stud, Gr. 33 min.	3/8"	0.036
	A36 Steel	3/8"	1/8"

1) ANCHOR MUST EXTEND A MINIMUM OF 3 THREADS BEYOND ANY METAL SUBSTRATE.
2) ALL ANCHOR HEAD TYPES ARE APPLICABLE.

INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) FLANGE AND/OR FIN MAY BE REMOVED TO CREATE OTHER FRAME TYPES.
- 3) USE ONLY SUBSTRATE APPROPRIATE ANCHORS LISTED IN ANCHOR TABLE 5. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY OR ALL SIDES OF THE WINDOW.
- 4) MAX. SHIM THICKNESS TO BE 1/4". MAX. SHIM SPACING TO BE 18".

HYBRID CONFIGURATIONS (FLANGE FRAME/FIN FRAME) ALLOWED WITH MULLION INSTALLATION, SEE PAGE 3 FOR FLANGE FRAME INSTALLATION DETAILS.

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By LOGAN YODER
HR910V-FPA-LM

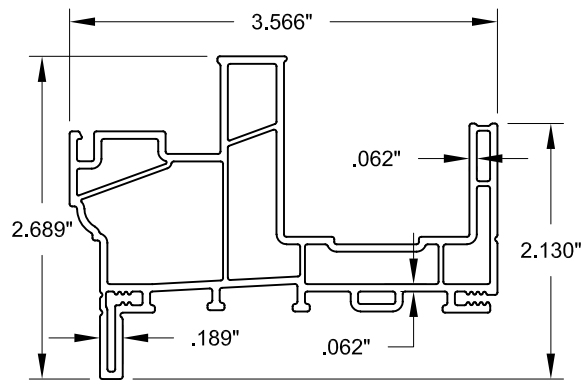
Impact Resistant Windows & Doors

HR910V 5 OF 6

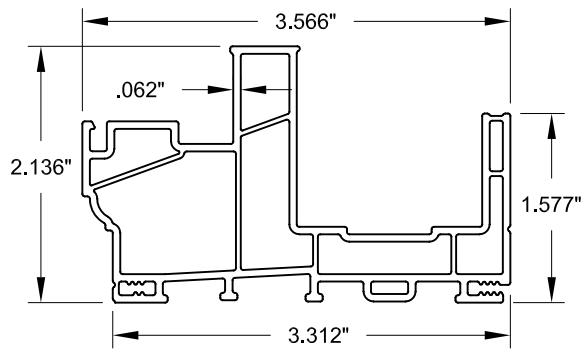
FIN INSTALL & ANCHOR TYPES

Series Desc. Title

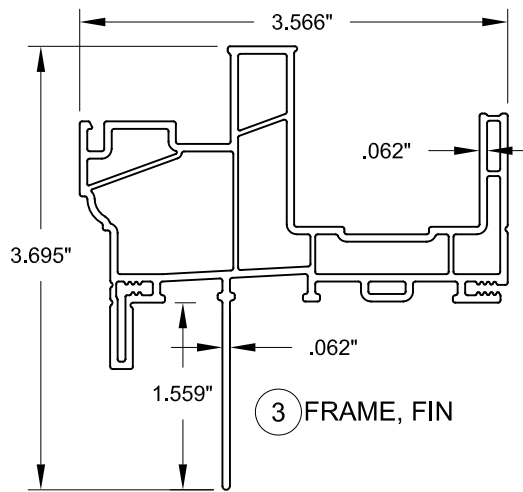
ANTHONY LYNN MILLER
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A. Lynn Miller
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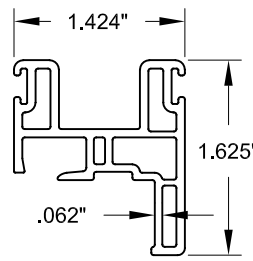
1 FRAME, FLANGE



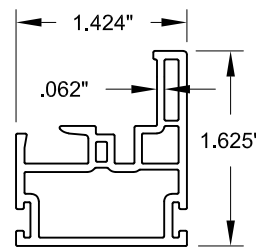
2 FRAME, EQUAL-LEG



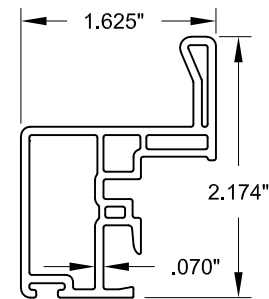
3 FRAME, FIN



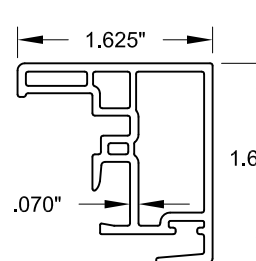
4 SASH TOP RAIL



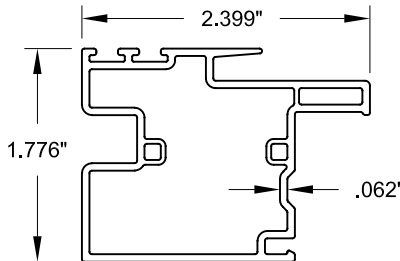
5 SASH BOTTOM RAIL



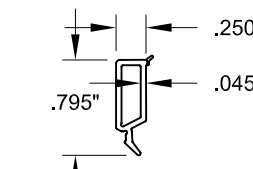
6 SASH HANDLE STILE



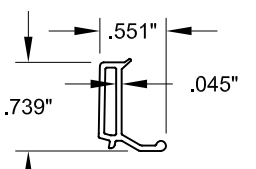
7 SASH LOCK RAIL



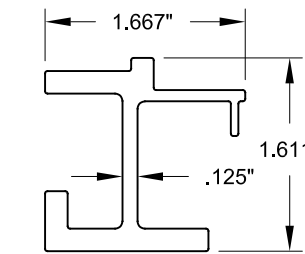
8 SASH MEETING RAIL



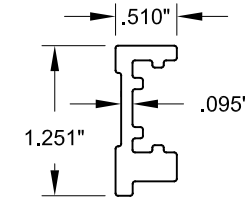
9 GLAZING BEAD



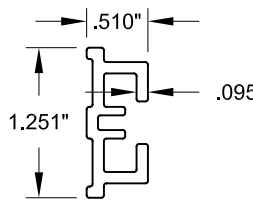
10 GLAZING BEAD



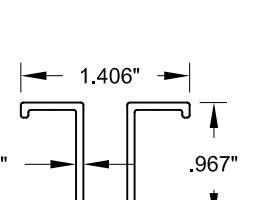
12 REINFORCEMENT (@ MEETING RAIL)



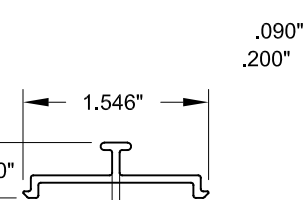
13 REINFORCEMENT (@ LOCK RAIL)



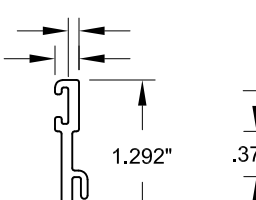
14 REINFORCEMENT (@ HANDLE STILE)



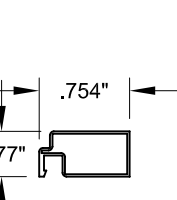
15 ANTI-LIFT RAIL



16 ROLLER TRACK



17 SILL RISER

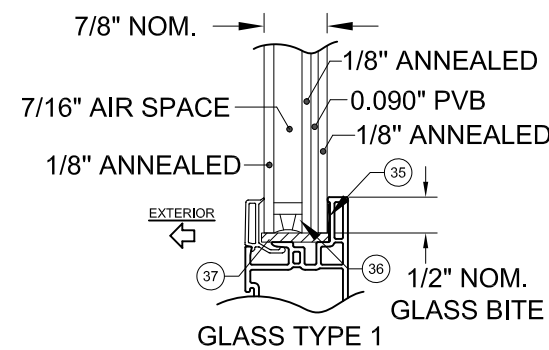


40 SCREEN

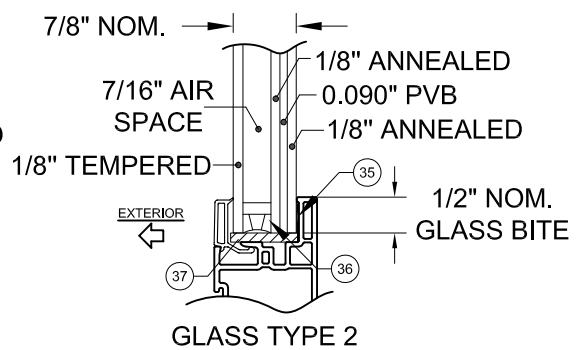
TABLE 6:

BILL OF MATERIALS			
ITEM #	PART #	DESCRIPTION	MATERIAL
1		Frame, Flange	PVC
2	9439	Frame, Equal-Leg	PVC
3		Frame, Fin	PVC
4	9478	Sash Top Rail	PVC
5	9424	Sash Bottom Rail	PVC
6	9475	Sash Handle Stile	PVC
7	9476	Sash Lock Rail	PVC
8	9477	Sash Meeting Rail	PVC
9	9436	Glazing Bead	PVC
10	9425	Glazing Bead	PVC
12	6165	Reinforcement @ Meeting Rail	6063-T6
13	6163	Reinforcement @ Lock Rail	6063-T6
14	6166	Reinforcement @ Handle Stile	6063-T6
15	6162	Anti-Lift Rail	6063-T6
16	6161	Roller Track	6063-T6
17	6158	Sill Riser	6063-T6
20	8097	Lock	
22	8302	Keeper	
24	8153	Roller Assm.	
25	8223	Weep Cover	Composite
26	4007	Weatherstrip, .270" x .250" Polyfin	
30	1003	Screw, #6 x 1/2" PFH	Steel
31	1007	Screw, #6 x 1-1/4" PFH	Steel
32	1012	Screw, #6 x 3/4" PFH	Steel
33	1015	Screw, #8 x 1/2" PTRUSS	Steel
34	1067	Screw, #6 x 3/8" PPH	Steel
35		RGS7700, Sika 552, Dow 791,983,995 Backbedding	
36		IG Spacer	varies
37		Setting Block	varies
40	6244	Screen	Nylon

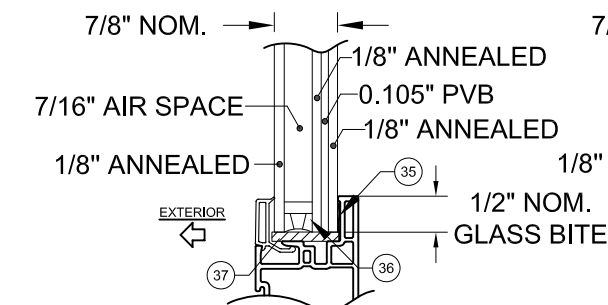
THE APPROVED, RIGID PVC EXTERIOR EXTRUSIONS ARE TO BE PRODUCED BY EXTRUDERS' LICENSEES UNDER "AAMA CERTIFICATION PROGRAMS FOR RIGID PVC EXTRUSIONS".



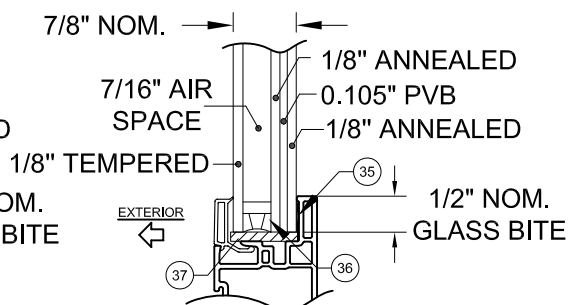
GLASS TYPE 1



GLASS TYPE 2



GLASS TYPE 3



GLASS TYPE 4

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

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DATE: 04/17/23
BY: LOGAN YODER
DWC No.: HR910V-FPA-LM
Sheet: 6 OF 6
Series: HR910V
Desc: EXTRUSIONS & BOM
Title: VINYL HORIZONTAL ROLLER WINDOW (LM)

Impact Resistant Windows & Doors
CGI WINDOWS AND DOORS
3780 W. 104TH STREET
HIALEAH, FL 33018

ANTHONY LYNN MILLER
LICENSE
No. 58705
08/18/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

Rev.# 08/17/23
Date
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