

SERIES 1630 VINYL IMPACT RESISTANT HORIZONTAL
ROLLER WINDOW

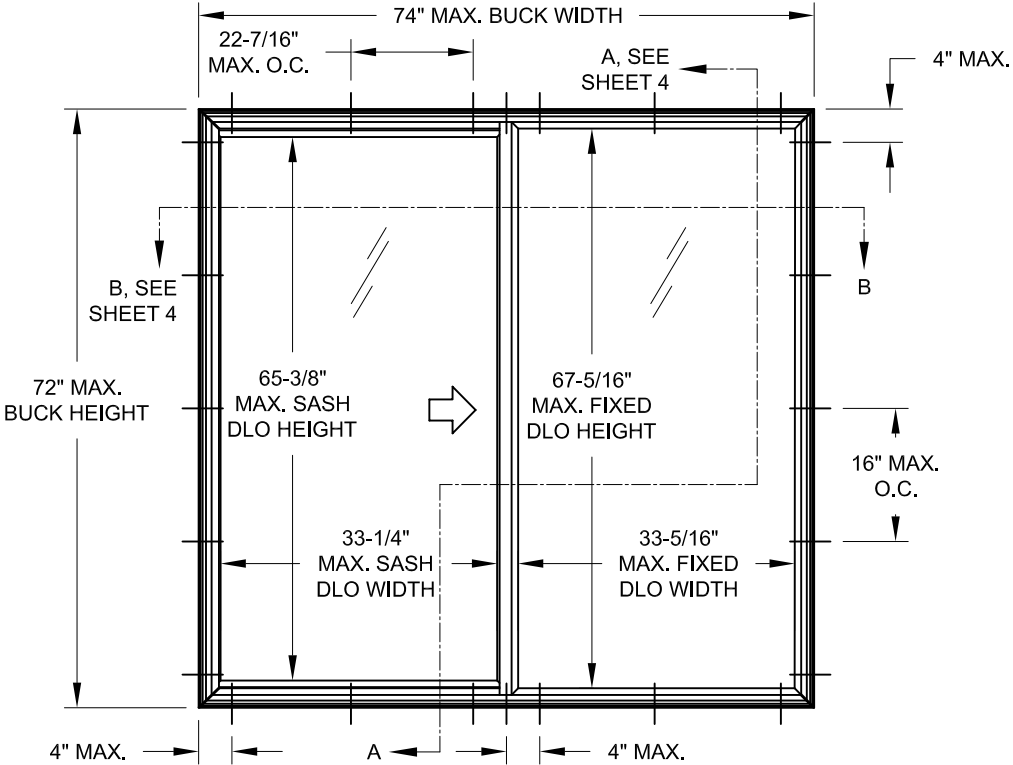
- 1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- 2) SHUTTERS ARE NOT REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.
- 3) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLE 5. ALL WOOD 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) SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.
- 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 FLANGE OR INTEGRAL FINS MAY BE TRIMMED IN-FIELD TO CREATE AN EQUAL-LEG FRAME.

TABLE 1:

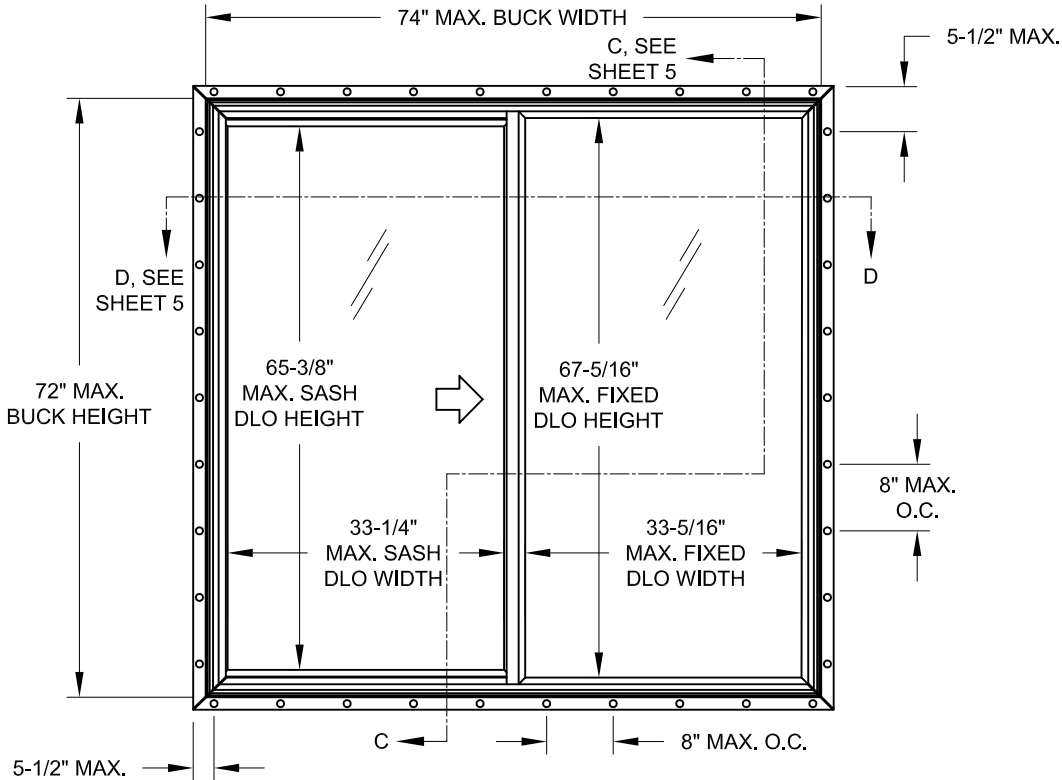
XO/OX, All Frame Types			
Buck Width	Buck Height	Glass Types	Design Pressure
74"	63"	1 & 2	+50/-65
74"	72"	2	+50/-65

FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION.

FLORIDA PRODUCT APPROVAL #47080



ELEVATION FOR TYP. EQUAL-LEG &
FLANGE FRAME, XO

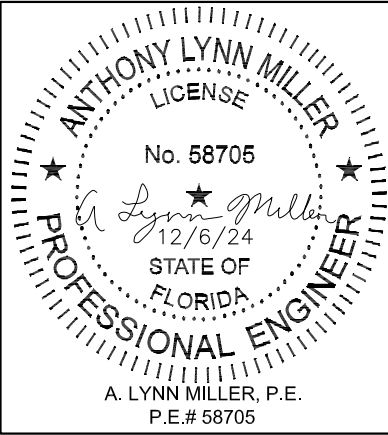


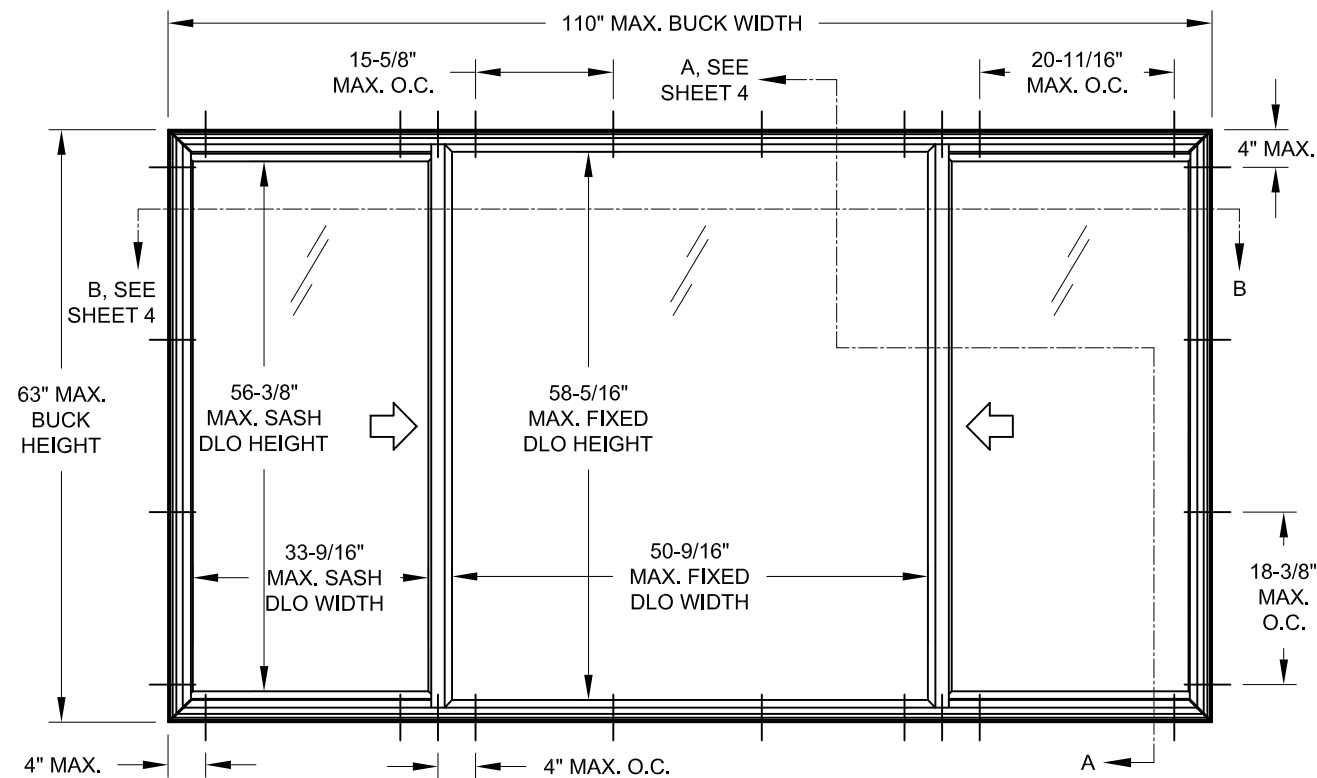
ELEVATION FOR TYP. FIN FRAME, XO

IMPACT RATING	DESIGN PRESSURE RATING
LARGE MISSILE IMPACT RESISTANT (LEVEL D)	SEE TABLES 1-4

Rev.	Date	Revised Notes
A	12/6/24	CK

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		VINYL HORIZONTAL ROLLER WINDOW (LM)			Date	10/17/24					
XO ELEVATION & GENERAL NOTES			By Drown			COLTON KEMPF					
Series/Desc.		1630 HR		Sheet		1 OF 7		DWG No.		1630HRFPA-LM	





ELEVATION FOR TYP. EQUAL-LEG & FLANGE FRAME, XOX

1/4 - 1/2 - 1/4 SHOWN, 1/3 - 1/3 - 1/3 SIMILAR. REFER TO TABLES 2 & 3 FOR APPROVED SIZES AND GLASS TYPES

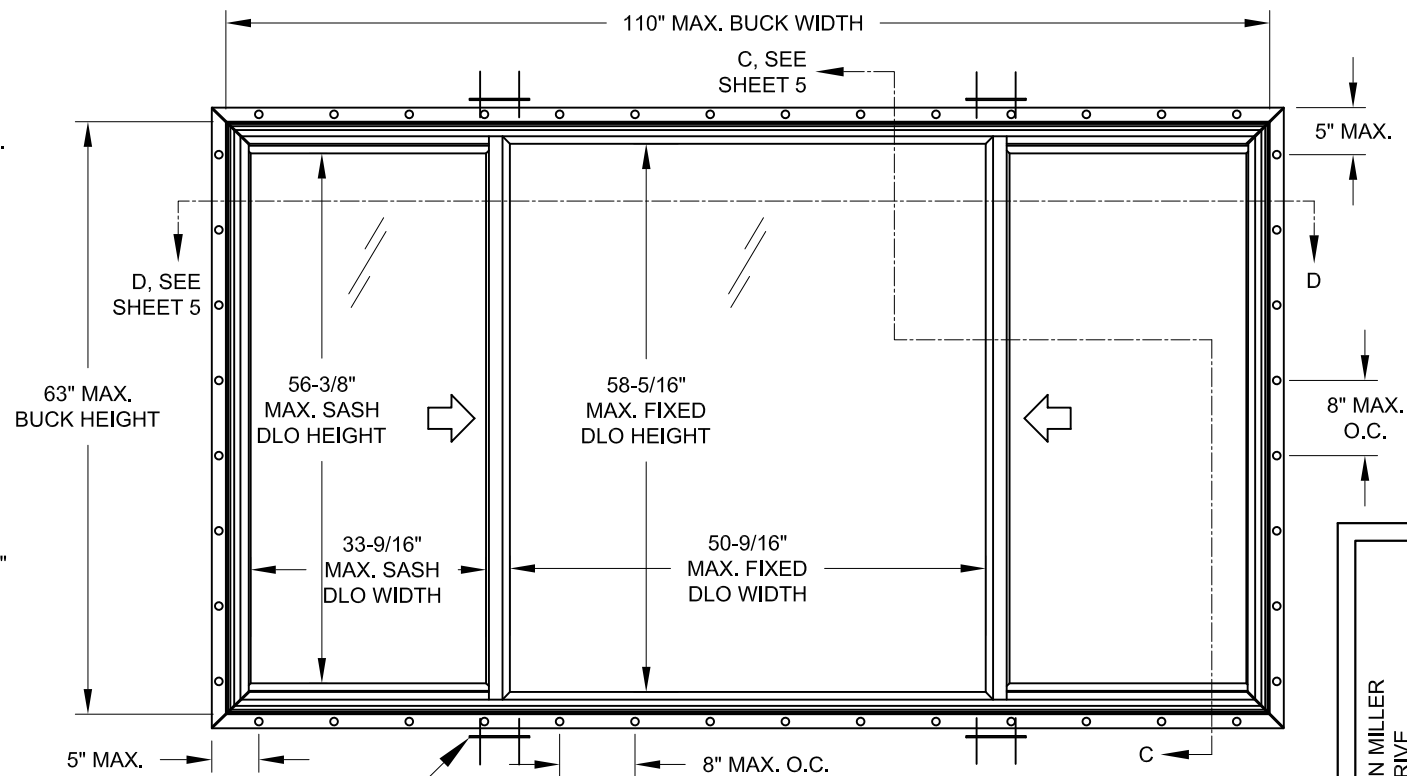
TABLE 2:

Flange & Equal-Leg (1/3-1/3-1/3), All Glass Types		
Buck Width	Buck Height	Design Pressure
110"	63"	+50/-65

TABLE 3:

Flange & Equal-Leg (1/4-1/2-1/4), All Glass Types					
Buck Height	Buck Width				
	76-11/16"	84"	96"	108"	110"
60"	+50/-65	+50/-65*	+50/-65*	+50/-63.3*	+50/-61.1*
63"	+50/-65	+50/-65*	+50/-64.5*	+50/-60.7*	+50/-60.2*

* GLASS TYPE 2 REQUIRED AT FIXED LITE.
FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION.



ELEVATION FOR TYP. FIN FRAME, XOX

1/4 - 1/2 - 1/4 SHOWN, 1/3 - 1/3 - 1/3 SIMILAR. REFER TO TABLE 4 FOR APPROVED SIZES AND GLASS TYPES

INSTALLATION CLIPS REQUIRED AT MEETING RAILS, HEAD AND SILL FOR ALL XOX NAIL FIN FRAME UNITS. 2 ANCHORS REQUIRED PER CLIP

TABLE 4:

XOX Nail Fin Frames, All Glass Types			
Buck Width	Buck Height	Configuration	Design Pressure
110"	63"	1/3 - 1/3 - 1/3 XOX	+50/-65
76-11/16"	63"	1/4 - 1/2 - 1/4 XOX	+50/-65
110"	63"	1/4 - 1/2 - 1/4 XOX	+50/-65*

* GLASS TYPE 2 REQUIRED AT FIXED LITE.
FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION.

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VINYL HORIZONTAL ROLLER WINDOW (LM)		10/17/24	
XOX ELEVATIONS		COLTON KEMP	
1630 HR		2 OF 7	
1630HFRPA-LM		1630HFRPA-LM	

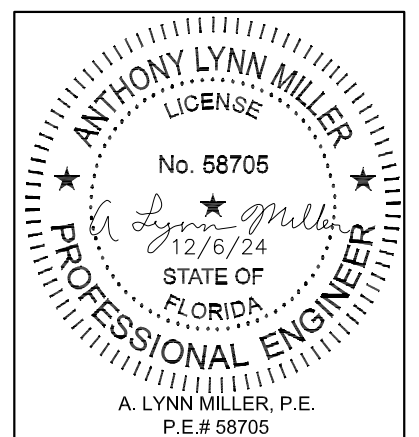


TABLE 5:

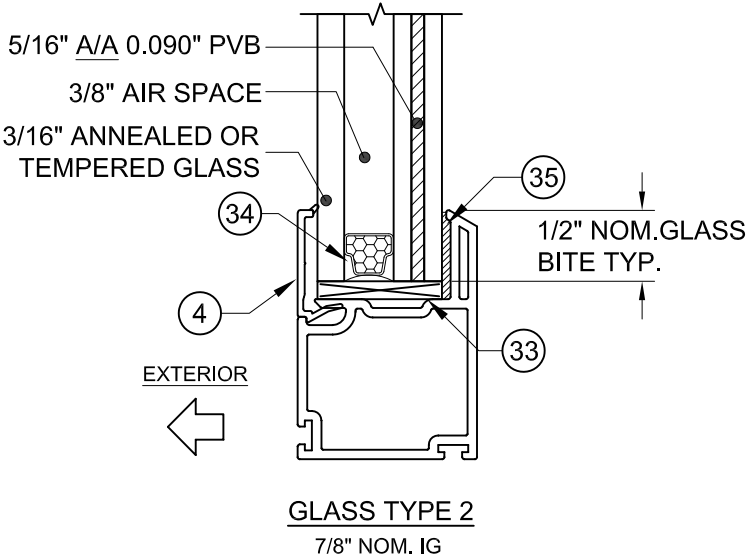
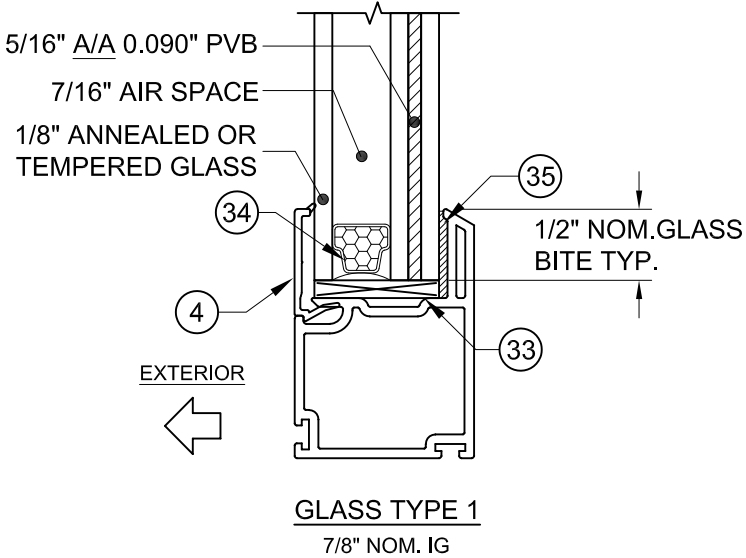
Anchor	Substrate	Min. Edge Distance	Min. Embedment
#8 SMS (steel or 410 S.S.)	Southern Pine (SG=0.55)	7/16"	1-3/8"
	Steel, A36	1/4"	0.0346" (20 Ga.)
	Steel Stud, A653 Gr. 33	1/4"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	1/4"	0.0451" (18 Ga.)
#10 SMS (steel or 410 S.S.)	Southern Pine (SG=0.55)	1/2"	1-3/8"
	Steel, A36	5/16"	0.0346" (20 Ga.)
	Steel Stud, A653 Gr. 33	5/16"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	5/16"	0.0451" (18 Ga.)
3/16" Ultracon+ (steel)	Southern Pine (SG=0.55)	1/2"	1-3/8"
	Concrete (min. 3.00 ksi)	1"	1-3/8"
	UngROUTED CMU, (ASTM C-90)	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.

TABLE 6:

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Ring-Shank Nail	Southern Pine (SG=0.55)	3/8"	2-7/16"
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Panhead or Flathead	Southern Pine (SG=0.55)	1/2"	1-3/8"
	Steel, A36	5/16"	0.0346" (20 Ga.)
	Steel Stud, A653 Gr. 33	5/16"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	7/16"	0.0713" (14 Ga.)

- 1) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.



NOTE: FOR INSTALLATIONS ABOVE 30 FEET IN THE HVHZ, THE OUTBOARD LITE (CAP) MUST BE TEMPERED.

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650 WEST MARKET STREET
GRATZ, PA 17030
(717) 365-3300

VINYL HORIZONTAL ROLLER WINDOW (LM)
ANCHORS & GLAZING DETAILS

COLTON KEMPF

1630 HRFPA-LM

1630 HR

3 OF 7

Sheet

10/17/24

By

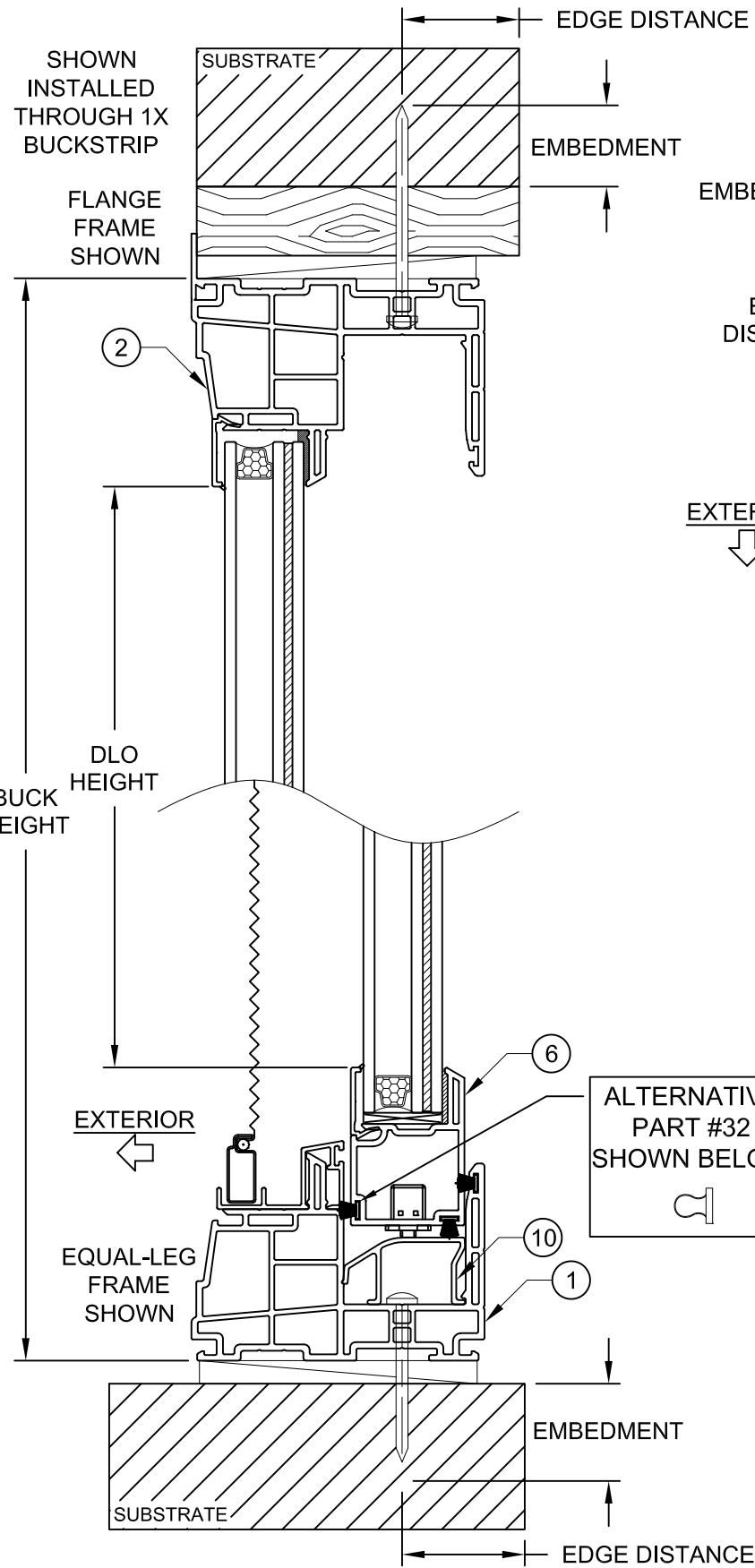
Date

Series

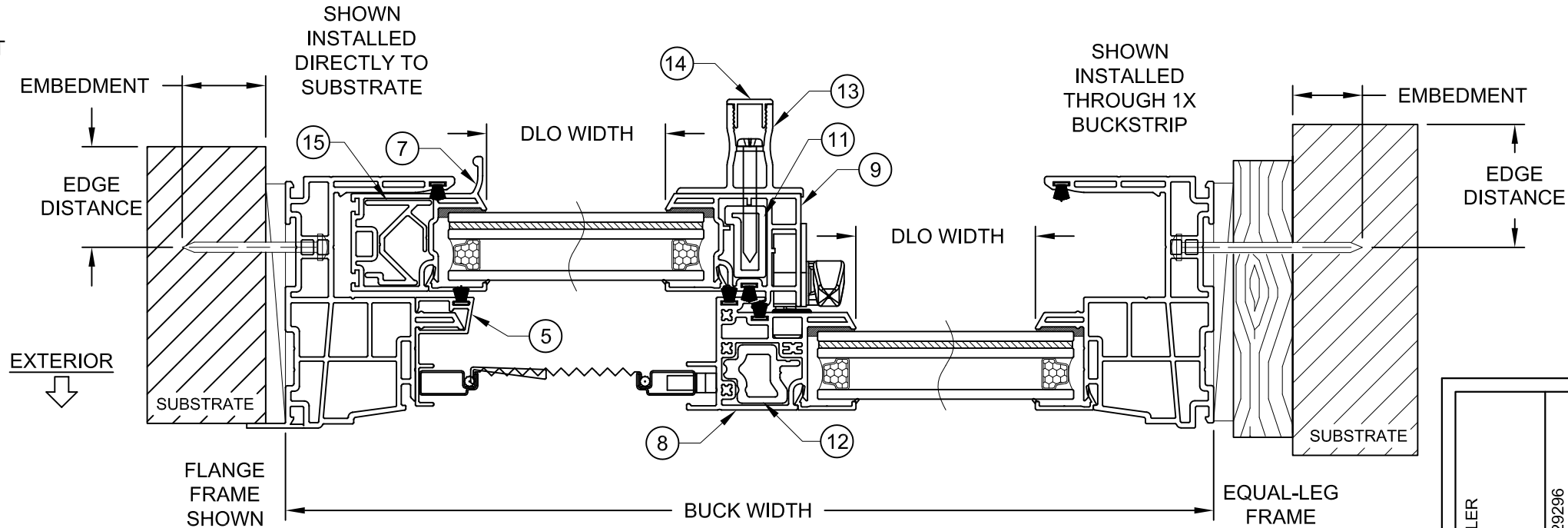
Desc.

Title

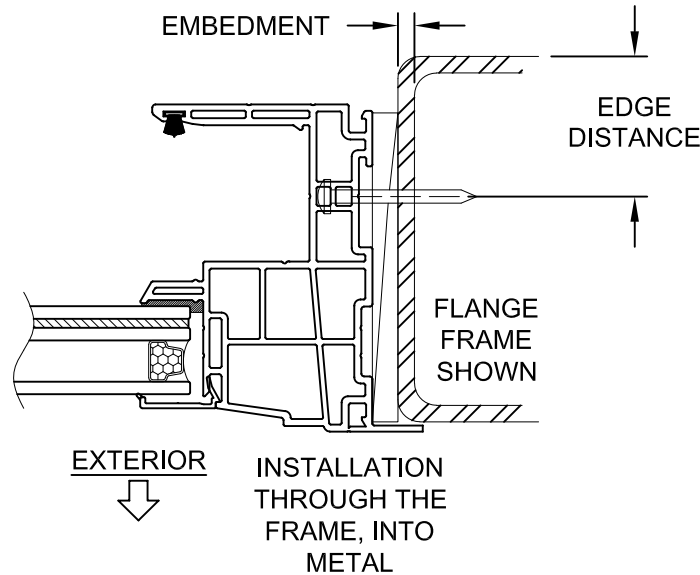
ANTHONY LYNN MILLER
LICENSE
No. 58705
12/6/24
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705



VERTICAL SECTION A-A



HORIZONTAL SECTION B-B (XO)
(OX & XOX SIMILAR)

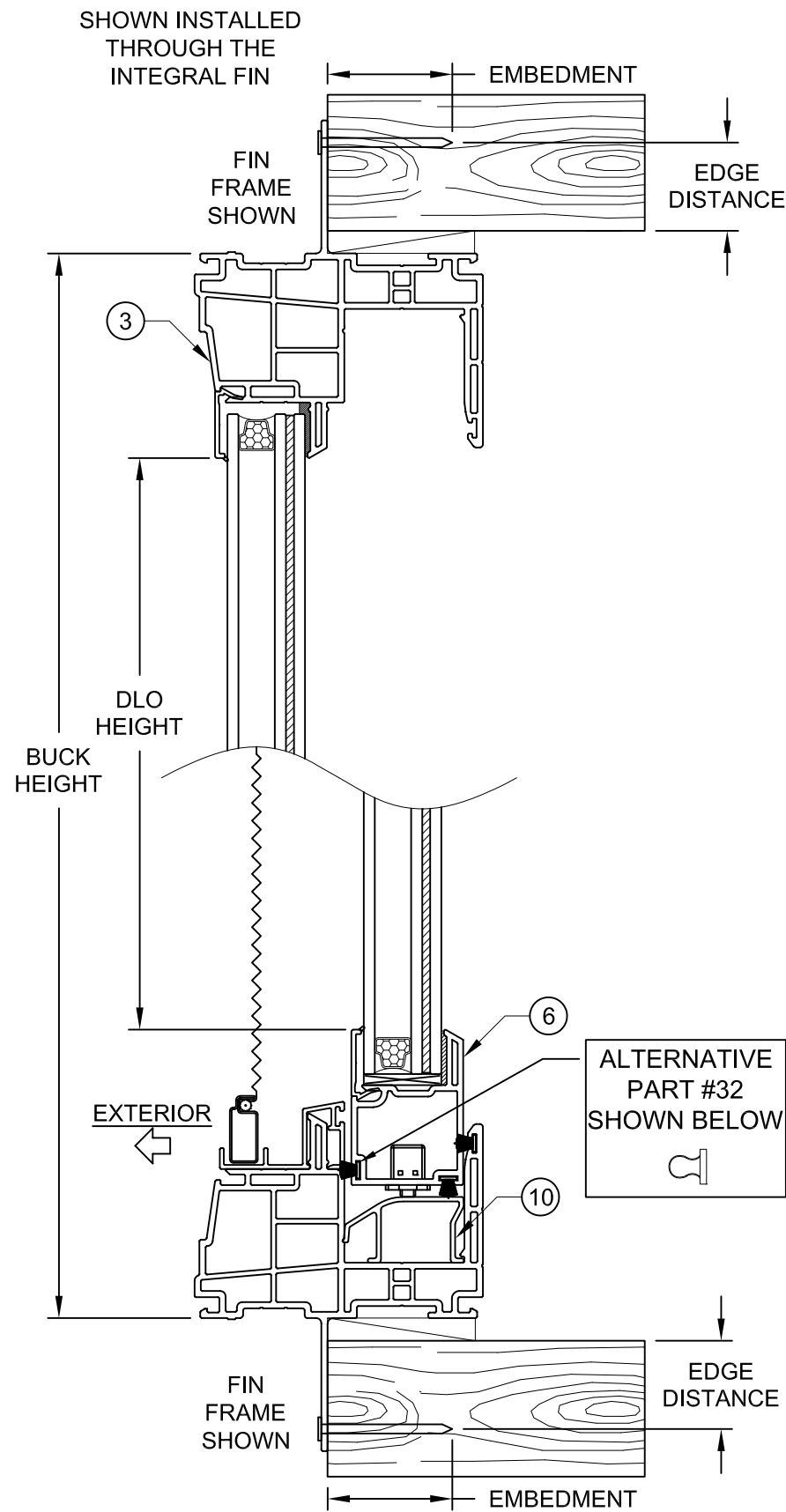


INSTALLATION NOTES:

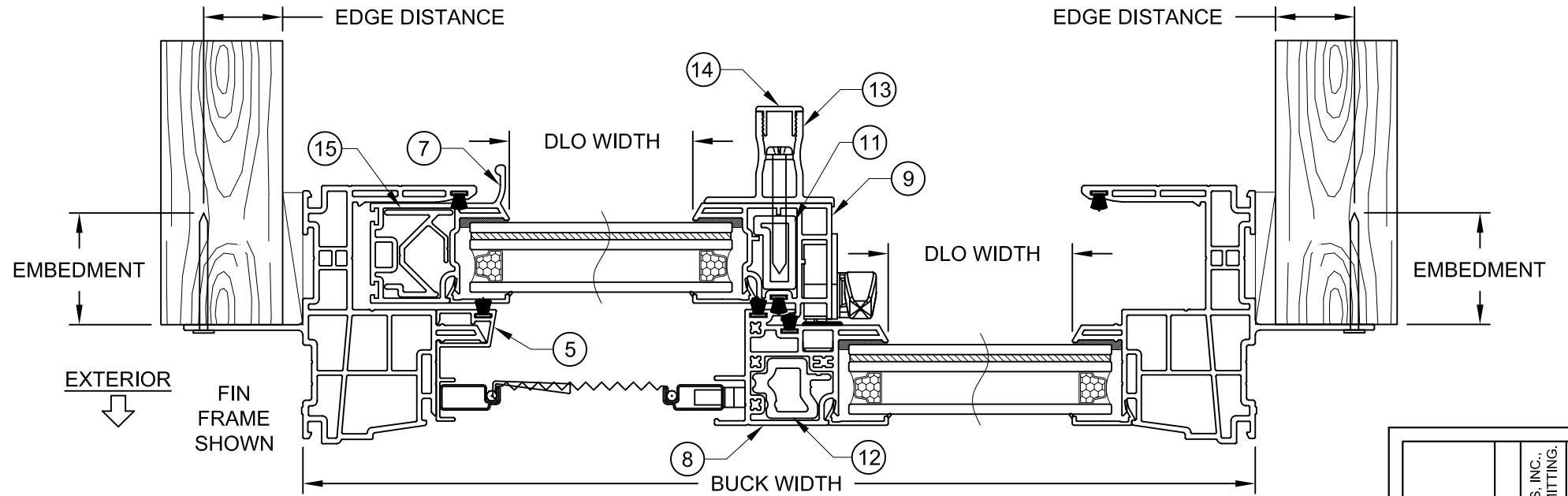
- 1) SEE SHEETS 1 & 2 FOR ANCHOR SPACING REQUIREMENTS
- 2) SEE TABLE 5 ON SHEET 3 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS
- 3) MAXIMUM SHIM THICKNESS TO BE 1/4"
- 4) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES

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VINYL HORIZONTAL ROLLER WINDOW (LM)		10/17/24	
EQUAL-LEG/FLANGE INSTALL. DETAILS		COLTON KEMPf	
1630 HR		4 OF 7	
1630HRFPA-LM			

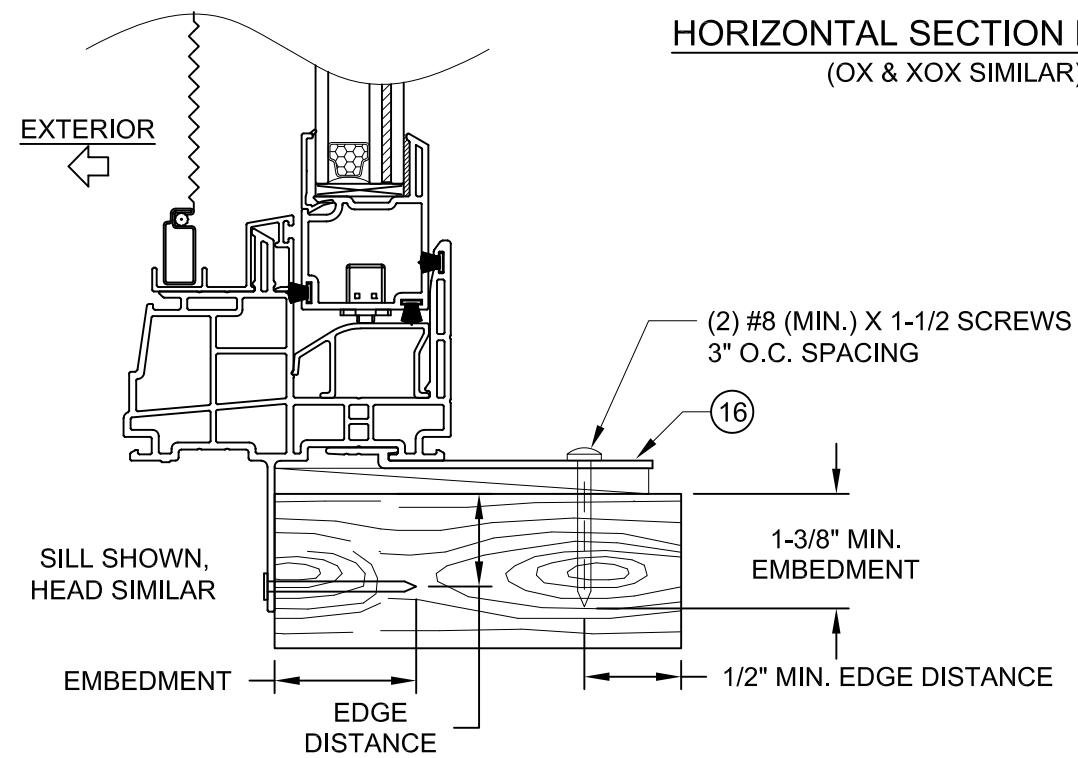
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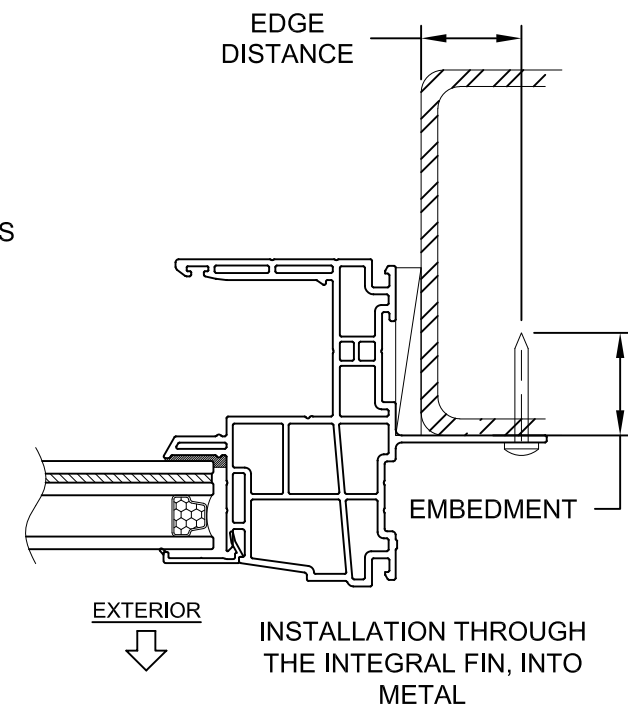
VERTICAL SECTION C-C (1)
(OX & XO ONLY)



HORIZONTAL SECTION D-D (XO)
(OX & XOX SIMILAR)



VERTICAL SECTION C-C (2)
(XOX ONLY)

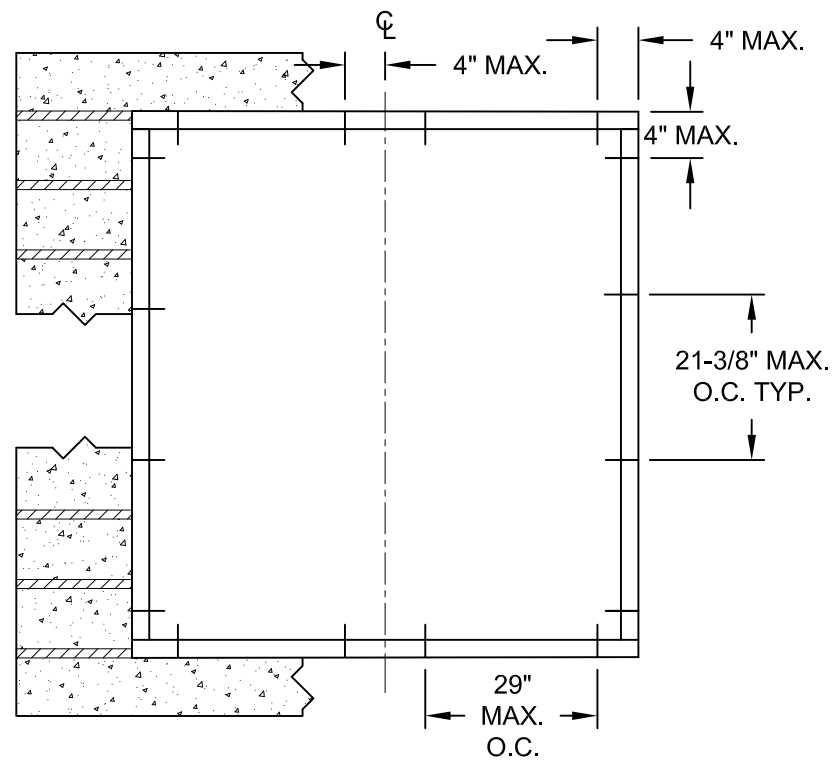


INSTALLATION NOTES:

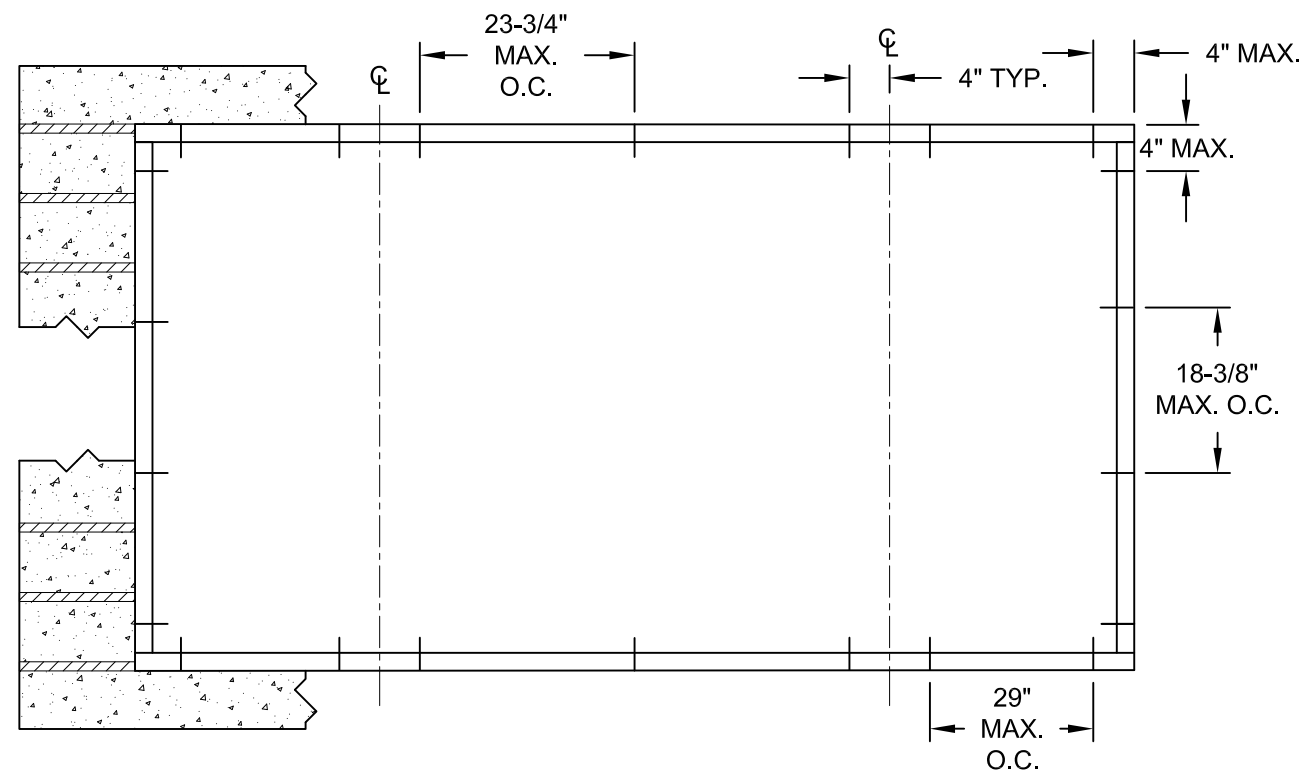
- 1) SEE SHEETS 1 & 2 FOR ANCHOR SPACING REQUIREMENTS
- 2) SEE TABLE 6 ON SHEET 3 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS
- 3) MAXIMUM SHIM THICKNESS TO BE 1/4"
- 4) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES
- 5) MAXIMUM SHIM SPACING TO BE 18" O.C.

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MI WINDOWS and DOORS 650 WEST MARKET STREET GRATZ, PA 17030 (717) 365-3300		VINYL HORIZONTAL ROLLER WINDOW (LM)		1630 HR
5 OF 7 Sheet		COLTON KEMPf By		1630HRFPA-LM
1630 HR		NAIL FIN INSTALL. DETAILS		Series Desc. Title

ANTHONY LYNN MILLER
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 No. 58705
Anthony Lynn Miller
 12/6/24
 STATE OF
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PROFESSIONAL ENGINEER
 A. LYNN MILLER, P.E.
 P.E.# 58705



XO/OX BUCK ANCHORAGE DETAIL



XOX BUCK ANCHORAGE DETAIL

TABLE 7:

Anchor	Substrate	Minimum Edge Distance	Minimum Embedment
3/16" Ultracon+ (steel)	UngROUTED CMU, (ASTM C-90)	2-1/2"	1-1/4"
	Concrete (min. 3.0 ksi)	2-1/2"	1-3/8"
1/4" Ultracon+ (steel)	UngROUTED CMU, (ASTM C-90)	1"	1-1/4"
	Concrete (min. 3.0 ksi)	1"	1-3/8"
1/4" Crete-Flex (410 S.S)	UngROUTED CMU, (ASTM C-90)	1-3/4"	1-1/4"
	Concrete (min. 3.35 ksi)	1-3/4"	1-3/8"
1/4" Aggre-Gator (18-8 S.S)	UngROUTED CMU, (ASTM C-90)	2"	1-1/4"
	Concrete (min. 2.22 ksi)	1-1/2"	1-3/8"

- 1) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
- 2) ALL ANCHOR HEAD TYPES ARE APPLICABLE.

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		VINYL HORIZONTAL ROLLER WINDOW (LM)		10/17/24	
BUCK INSTALL. DETAILS		COLTON KEMPf		1630HRFPA-LM	
1630 HR	6 OF 7	DWG No.	1630HRFPA-LM	10/17/24	12/6/24

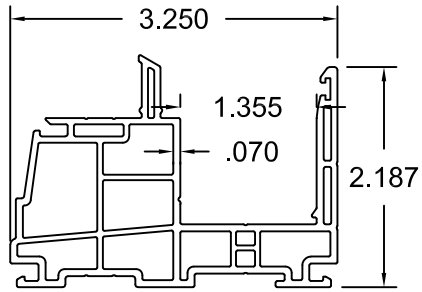
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 No. 58705
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 P.E.# 58705

Rev.	12/6/24	A
Date	12/6/24	A
Rev.	12/6/24	A

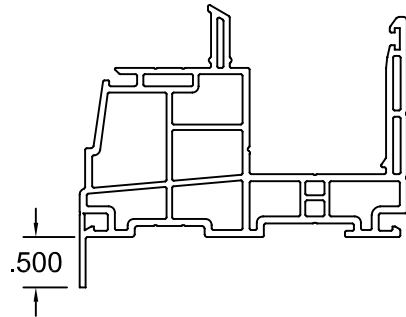
ADDED BUCK DETAILS - CK

TABLE 8:

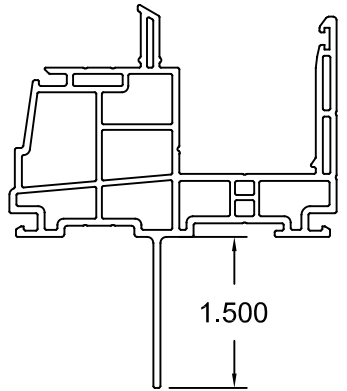
Bill of Materials			
#	Part #	Description	Material
1	V102000C	Equal-leg Frame	PVC
2	V102100C	Flange Frame	PVC
3	V101900C	Nail Fin Frame	PVC
4	V108300C	7/8" IG Glazing Bead	PVC
5	M234000C	Operating Screen Track	6063-T5
6	V067000C	Sash Top/Bottom Rail	PVC
7	V067200C	Sash Pull Rail	PVC
8	V101600C	Fixed Meeting Rail	PVC
9	V067501C	Sash Lock Rail	PVC
10	M254100C	Roller Track	6063-T5
11	M2115000	Sash Lock Rail Reinforcement	6063-T5
12	M2343000	Meeting Rail Reinforcement	6063-T5
13	M235100C	Pull Rail	6063-T5
14	M235200C	Pull Rail Cover	6063-T5
15	M2540000	Sash Pull Rail Reinforcement	6063-T5
16	M2336000	Installation Clip	6063-T5
17		.187"x.210" Operating Screen Track Weatherstrip	
18		.187"x.210" Fixed Meeting Rail Weatherstrip	
19		#8 x 2 1/2" Phillips Truss HD - Fixed Meeting Rail Screws (x2 Top and Bottom)	410 SS
20	K000200C	Adjustable Keeper	
21	FS00360C	#6,8-18 x 3/4" PFH - Keeper Screws (x2 per Keeper)	Zinc
22	MS00000C	Weep Cover (x2 per Unit - 3 3/4" from each end)	PVC
23	FS000470	Sash Pull Rail Reinforcement Screw (x1 per Pull Rail)	SS
24		.187"x.240" Lock Rail Weatherstrip	
25		.187"x.240" Sash Top/Bottom Rail Weatherstrip	
26		#8 x 1 1/2" PPH SDS - Pull Rail Screw (x1/foot)	
27	HD300002	Tandem Brass Roller Housing	
28	LL00074C	Recessed Cam Lock - Left	Cast Zinc
29	LR00074C	Recessed Cam Lock - Right	Cast Zinc
30	FS00350C	#6,8-18 x 7/8" PFH - Lock Screws (x2 per Lock)	Zinc
31	FS001360	#8 x 1/2" PPH SMS Installation Clip Screws (x2 per Clip)	
32	6Q300	0.190" x 0.300" Sash Top & Bot. Rail Ext. Weatherstrip	Foam Bulb (PVC)
33		Setting Block	EPDM
34		TPS, Metal or Composite Spacer System	varies
35		Pecora 896 or RGS 7700 Backbedding	Silicone



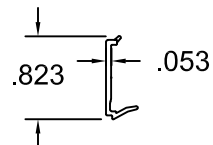
① EQUAL-LEG FRAME



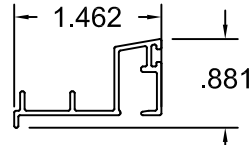
② FLANGE FRAME



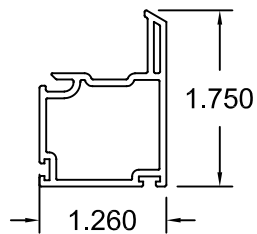
③ NAIL FIN FRAME



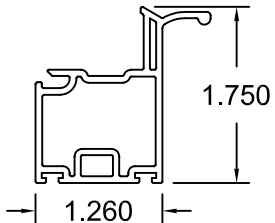
④ GLASS BEAD



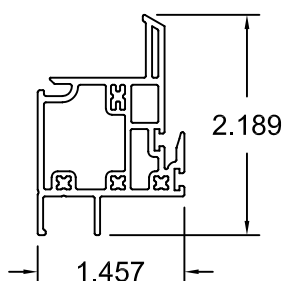
⑤ OPERATING SCREEN TRACK



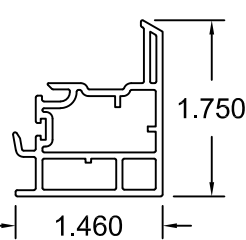
⑥ SASH TOP/BOTTOM RAIL



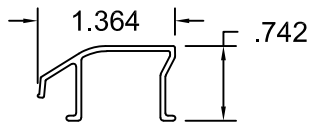
⑦ SASH PULL RAIL



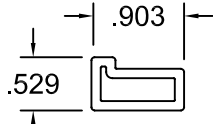
⑧ FIXED MEETING RAIL



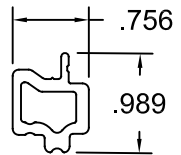
⑨ SASH LOCK RAIL



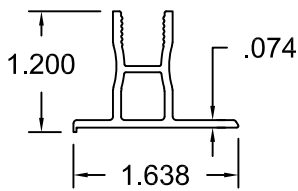
⑩ ROLLER TRACK



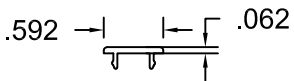
⑪ SASH LOCK RAIL REINFORCEMENT



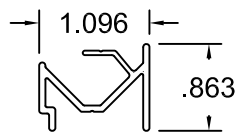
⑫ MEETING RAIL REINFORCEMENT



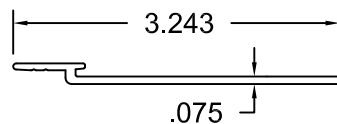
⑬ PULL RAIL



⑭ PULL RAIL COVER

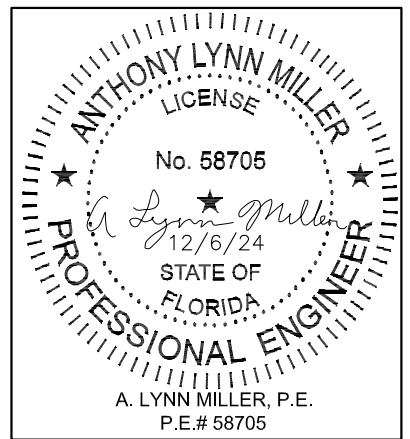


⑮ SASH PULL RAIL REINFORCEMENT



⑯ INSTALLATION CLIP

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VINYL HORIZONTAL ROLLER WINDOW (LM)		Date	10/17/24		
BOM AND EXTRUSIONS		By	COLTON KEMP		
1630 HR		Sheet	7 OF 7		DWG No.
Series Desc.		Title		1630HRFPA-LM	



Rev.	12/6/24	Date
Added Extrusions & BOM - CK		