

TECNOGLASS, LLC
OTG SLIDING GLASS DOOR (2 TRACK)
LARGE MISSILE IMPACT

USER GUIDE		
CATEGORY	DESCRIPTION	PAGE
DOOR CONFIGURATION	-	SHEET 02#04
CORNER STILE	-	SHEET 03
GLASS TYPE	DRY GLAZED	SHEET 05
	WET GLAZED	SHEET 06-07
INTERLOCK	LEVEL 1	SHEET 05-07
	LEVEL 2	
	LEVEL 3	
JAMB	ANCHORED JAMB	SHEET 05-07
	POCKET JAMB	SHEET 05-07
	FREE STANDING JAMB	SHEET 08
SILL RAISER	-	SHEET 05
ANCHOR	HEAD/ SILL	SHEET 10
	ANCHORED JAMB	SHEET 09
	POCKET JAMB	

DOORS RATED FOR LARGE MISSILE IMPACT. IMPACT SHUTTERS ARE NOT REQUIRED.

LAMINATED GLASS AND INSULATED-LAMINATED GLASS LARGE MISSILE IMPACT.

ES-SGD 2020TG SLIDING GLASS DOOR

APPLICABLE EGRESS REQUIREMENTS PER FBC TO BE REVIEWED BY BUILDING OFFICIAL.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 8TH EDITION (2023) INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

THESE DOORS ARE APPROVED FOR AIR AND WATER INFILTRATION.

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

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 8TH EDITION (2023) SECTION AS APPLICABLE.

METAL STRUCTURES BY OTHERS TO BE DESIGNED TO SUPPORT THE LOADS IMPOSED BY THIS GLAZING SYSTEM AND TO TRANSFER SUCH LOADS TO THE BUILDING MAIN STRUCTURE.

ULTIMATE LOAD OBTAINED FROM ASCE 7-22, MULTIPLY BY 0.6 SHALL BE LESS THAN OR EQUAL TO MAX. DESIGN LOAD IN THIS DOCUMENT. THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.

MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE LABELING TO COMPLY WITH SECTION 1709.9.2.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS

STEP 1 DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-22 STANDARD.

STEP 2 SEE APPROVED CONFIGURATIONS ON SHEET O2 THROUGH O4. SEE CHARTS ON SHEET O5 TO O7 FOR ALLOWABLE DESIGN LOAD BASED ON DESIRED GLASS TYPE AND INTERLOCK OPTION. SEE SHEET O5 FOR SILL RAISER OPTIONS BASED ON POSITIVE LOAD. SLIDING GLASS DOOR ON SHEET O5 TO O7 ARE WITH ANCHORED OR POCKET JAMB. SEE SHEET O9 FOR JAMB ANCHOR OPTION AND SPACING.

STEP 3 SEE SHEET 08 FOR SLIDING GLASS DOOR WITH FREESTANDING JAMB CAPACITIES.

STEP 4 USING CHARTS ON SHEET 10 FOR HEAD AND SILL ANCHORS. SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

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

ABBREVIATIONS AND SYMBOLS	
D.L.O. - DAYLITE OPENING	☐ - CENTER LINE
F.H. - FRAME HEIGHT	S.S. - STAINLESS STEEL
F.W. - FRAME WIDTH	H.S. - HEAT STRENGTHENED
LG. - LONG	SSG - STRUCTURAL SILICONE
STL. - STEEL	GLAZED
ALUM. - ALUMINUM	TEMP. - TEMPERED
MULL. - MULLION	O.C. - ON CENTER
HORIZ. - HORIZONTAL	G.B. - GLASS BITE
W/ - WITH	SECTION NUMBER
W/O - WITHOUT	
VERT. - VERTICAL	
T.H. - TRANSOM HEIGHT	

LIMITATIONS OF USE

A- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.

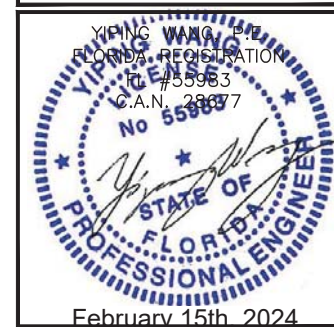
B- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.

C- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

D- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D.

E- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

FL46130.1



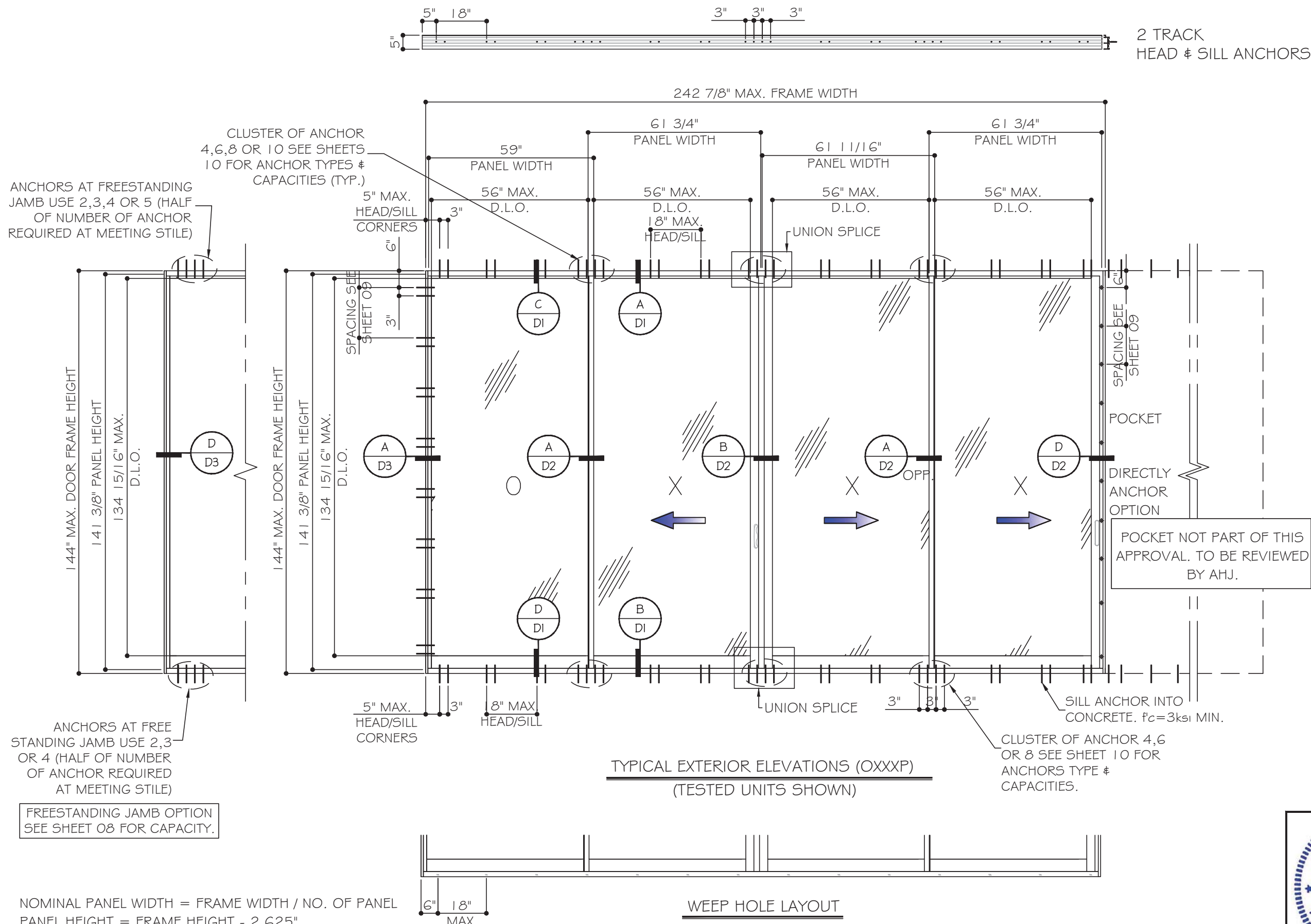
ES-SGD2020TG SLIDING GLASS DOOR (2-TRACK) LARGE MISSILE IMPACT

TECNOGLASS, LLC

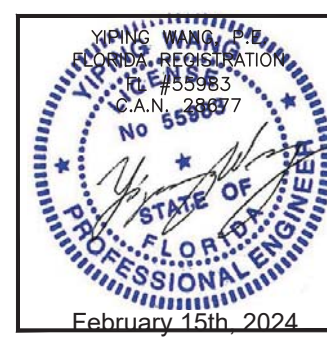
0 NW 49TH STREET
Miami, FL 33142

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NOMINAL PANEL WIDTH = FRAME WIDTH / NO. OF PANEL
PANEL HEIGHT = FRAME HEIGHT - 2.625"
D.L.O. HEIGHT = DOOR FRAME HEIGHT - 9.125"
D.L.O. WIDTH = NOMINAL PANEL WIDTH - 4"



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Rev	Date	Drawn By	Description
1	02.06.2024	James	NEW APPLICATION

Drawn Date
02.06.2024

Scale
AS SHOWN

DRAWING NO.
AD23-75

Sheet No.
02 OF 17



CORNER STILE



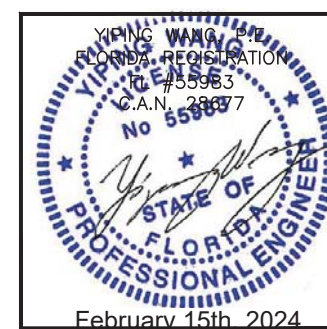
CORNER STILE FOR LAMINATED GLASS



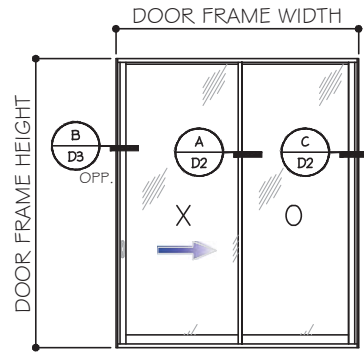
CORNER STILE FOR INSULATED LAMINATED GLASS

SLIDING DOOR WITH 90° CORNER

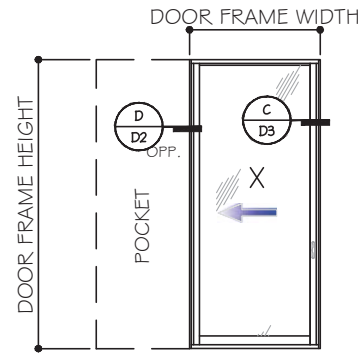
SLIDING DOOR WITH CORNER STILE			
PANEL W. (E.Q. AT BOTH SIDE)	F.H.	ALLOW. DESIGN LOAD	
(IN)	(IN)	(+) PSF	(-) PSF
48	120	90	102
50	114	90	102
53.25	108	90	102
56	102	90	102



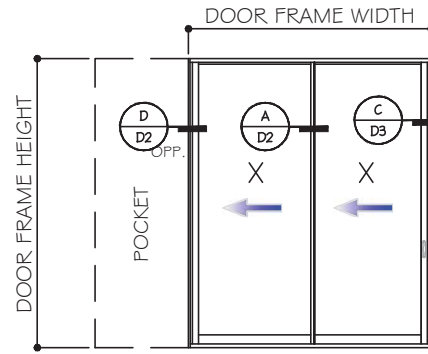
APPROVED CONFIGURATION DOORS



XO (SHOWN)
OX



XP (SHOWN)
PX (REVERSE)

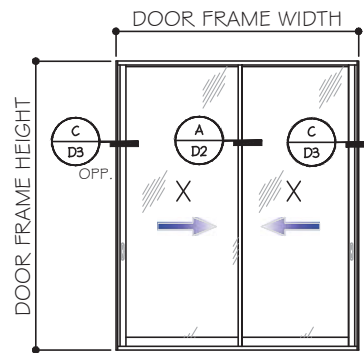


PXX (SHOWN)
XXP (REVERSE)

SIMILAR TO C/D3.
PANEL ON EXTERIOR.

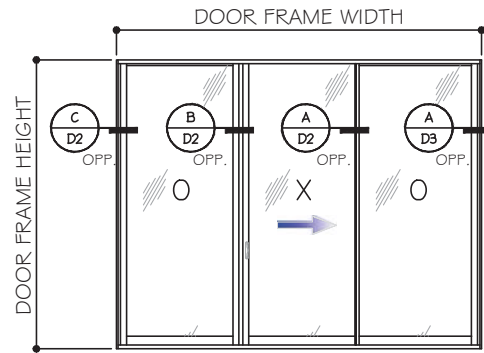
NOTES:

1. REFER TO ELEVATION FOR MAX. DOOR UNIT HEIGHT & WIDTH
2. LOWER DESIGN PRESSURE USING OTHER CHART CONTROLS.
3. POCKETS ARE NOT PART OF THIS APPROVAL AND ARE TO BE REVIEWED BY AHJ.

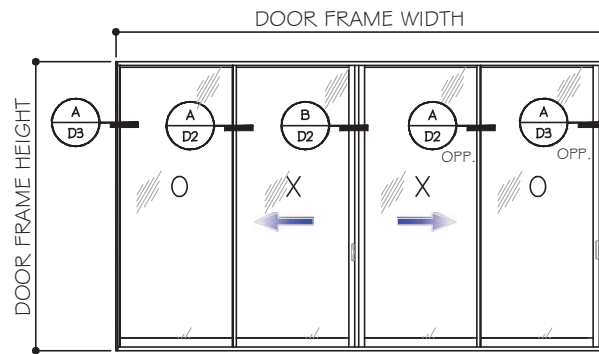


XX

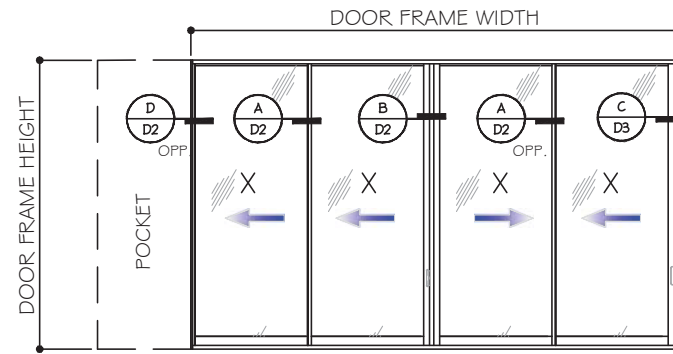
SIMILAR TO C/D3.
PANEL ON EXTERIOR.



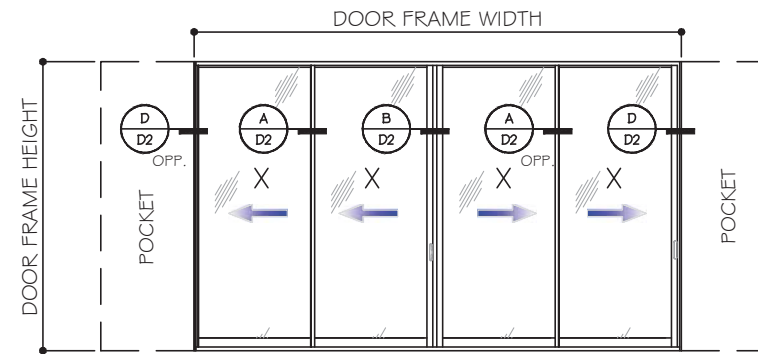
OXO (SHOWN)
OXO (REVERSE)



OXXO (SHOWN)
XXXX (SIMILAR)



PXXX (SHOWN)
XXXXP (REVERSE)
PXXXO
OXXXP



PXXXXP

NOTES:

1. CONFIGURATIONS SHOWN FOR ILLUSTRATION PURPOSES ONLY.
2. SEE CHART ON SHEET 05 TO 07 FOR GLASS CAPACITIES AND GLASS OPTIONS.
3. FOR APPLICABLE DESIGN PRESSURES SGD REINFORCING LEVEL 1, 2 OR 3, SEE SHEET 05 TO 07.
4. FOR ANCHOR DETAILS AND CAPACITIES AT HEAD/SILL SEE SHEET 10.
5. FREE STANDING JAMB SEE CAPACITIES ON SHEET 08 ANCHORED JAMB CAPACITY SEE SHEET 09.
6. DOOR SHALL MEET EGRESS REQUIREMENTS AS APPLICABLE PER FBC.



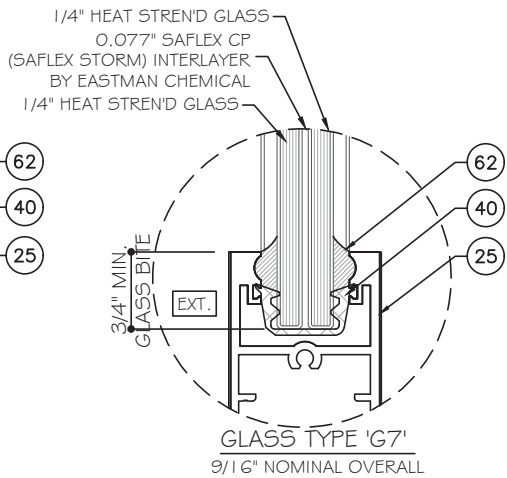
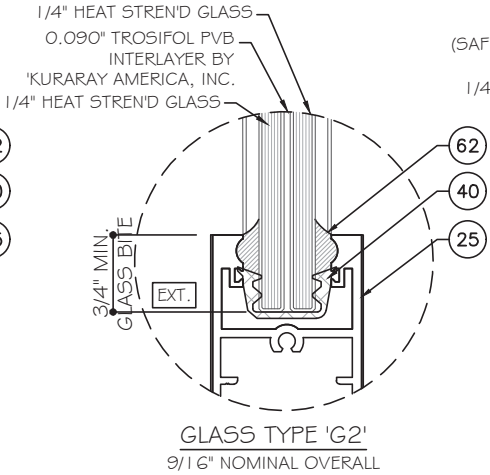
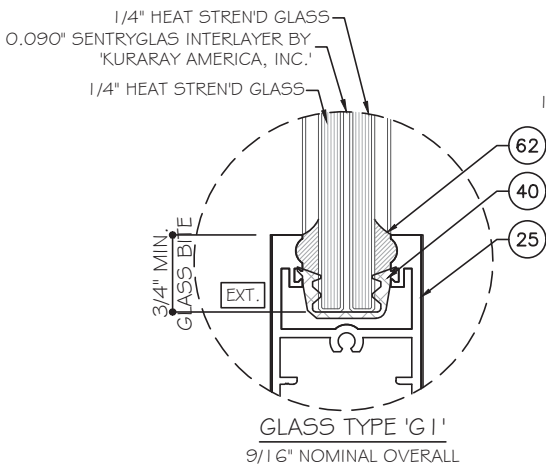
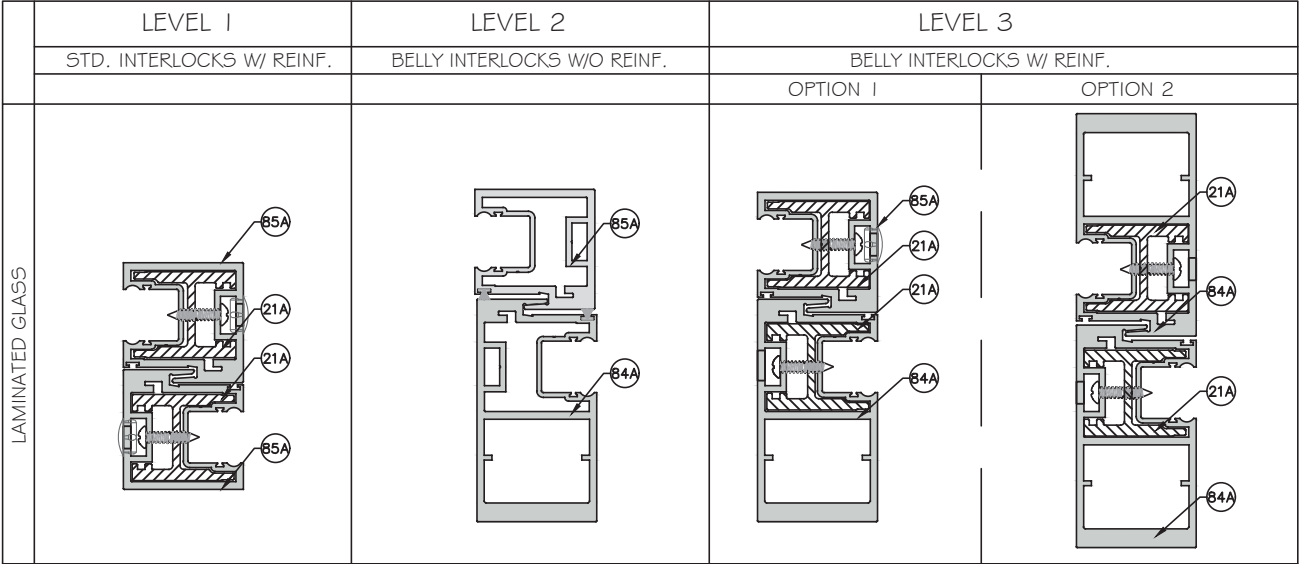
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[illegible]

SGD CAPACITIES W/ WET GLAZED LAMINATED GLASS OPTIONS (PSF)								
SGD PANEL SIZE		INTERLOCK LEVEL 1			INTERLOCK LEVEL 2		INTERLOCK LEVEL 3	
AVE. PANEL W. (INCH)	FRAME H. (INCH)	G1	G2	G7	G1	G7	G1	G7
36	102	+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
42		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
48		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
54		+85/-100		+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
60		+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
66		+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
72	108	-	-	-	+65/-78	-	+85/-102	-
36		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
42		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
48		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
54		+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
60		+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
66	114	+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
72		-	-	-	+65/-78	-	+85/-102	-
36		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
42		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
48		+85/-100		+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
54		+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
60	120	+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
66		-	-	-	+65/-78	-	+85/-102	-
72		-	-	-	+65/-78	-	+85/-102	-
36	126	+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
42		+85/-100	85/-90	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
48		+85/-100	-	+85/-90	+85/-100	+85/-90	+90/-150	+90/-90
54		+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
60		+85/-100	-	+85/-90	+85/-100	+85/-90	+85/-102	+85/-90
66		-	-	-	+65/-78	-	+85/-102	-
72	132	-	-	-	+65/-78	-	+85/-102	-
36		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
42		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
48		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
54		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
60		-	-	-	+65/-78	-	+85/-102	-
72	138	-	-	-	+65/-78	-	+85/-102	-
36		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
42		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
48		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
54		-	-	-	+65/-78	-	+85/-102	-
60		-	-	-	+65/-78	-	+85/-102	-
72	144	-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
36		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
42		-	-	-	+65/-78	+65/-78	+85/-102	+85/-90
48		-	-	-	+65/-78	-	+85/-102	-
54		-	-	-	+65/-78	-	+85/-102	-
60		-	-	-	+65/-78	-	+85/-102	-

NOTE: CHART FOR ANCHORED JAMB OPTIONS.
SEE SHEET 09 FOR JAMB ANCHOR OPTIONS AND SPACING.



NOTE:
GLASS COMPLIES WITH ASTM E1300-16
(3 SEC. GUSTS).

NOTE:
PARTS 40 ARE ALSO USED AS
SETTING BLOCK.

SEE SHEET 05 FOR SILL RAISER OPTIONS.

D.L.O. WIDTH = AVE. PANEL WIDTH - 4"
D.L.O. HEIGHT = FRAME HEIGHT - 9.125"

AVE. PANEL WIDTH = $\frac{\text{FRAME WIDTH}}{\text{\# OF PANELS}}$

YIPING WANG, P.E.
FLORIDA REGISTRATION
No. 55983
C.A.N. 28677

February 15th, 2024

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ES-SGD2020TG SLIDING GLASS DOOR (2-TRACK) LARGE MISSILE IMPACT

				NEW APPLICATION	Description
				James	Drawn By
				02.06.2024	Date
				R1	Rev. No.

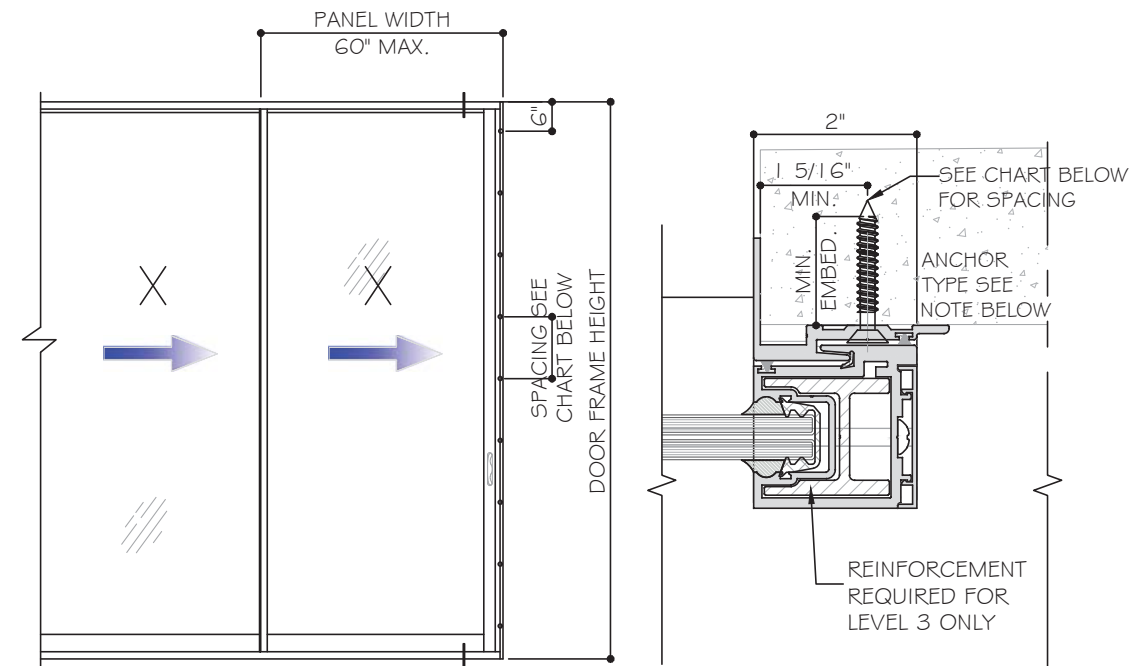
Drawn Date
02.06.2024

Scale
AS SHOWN

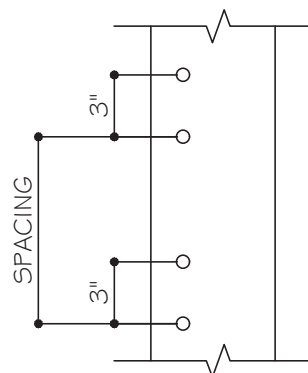
DRAWING NO.
AD23-75

G2

Sheet No.
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POCKET JAMB ANCHOR CHART			
ANCHOR TYPE	EMBEDMENT	SUBSTRATE	ANCHOR SPACING
			W≤60"
B2 (1/4" ULTRACON)	1 3/4"	CONCRETE	12"
C2(#14 DRILFLEX)	1/4"	ALUM.6063-T6	16"
C2(#14 DRILFLEX)	1/8"	STL	16"
C3(#14 SMS)	1 1/2"	WOOD SG=0.55	16"



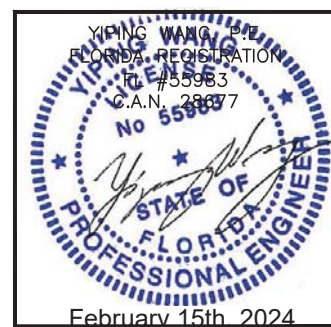
JAMB ANCHOR TYPES:

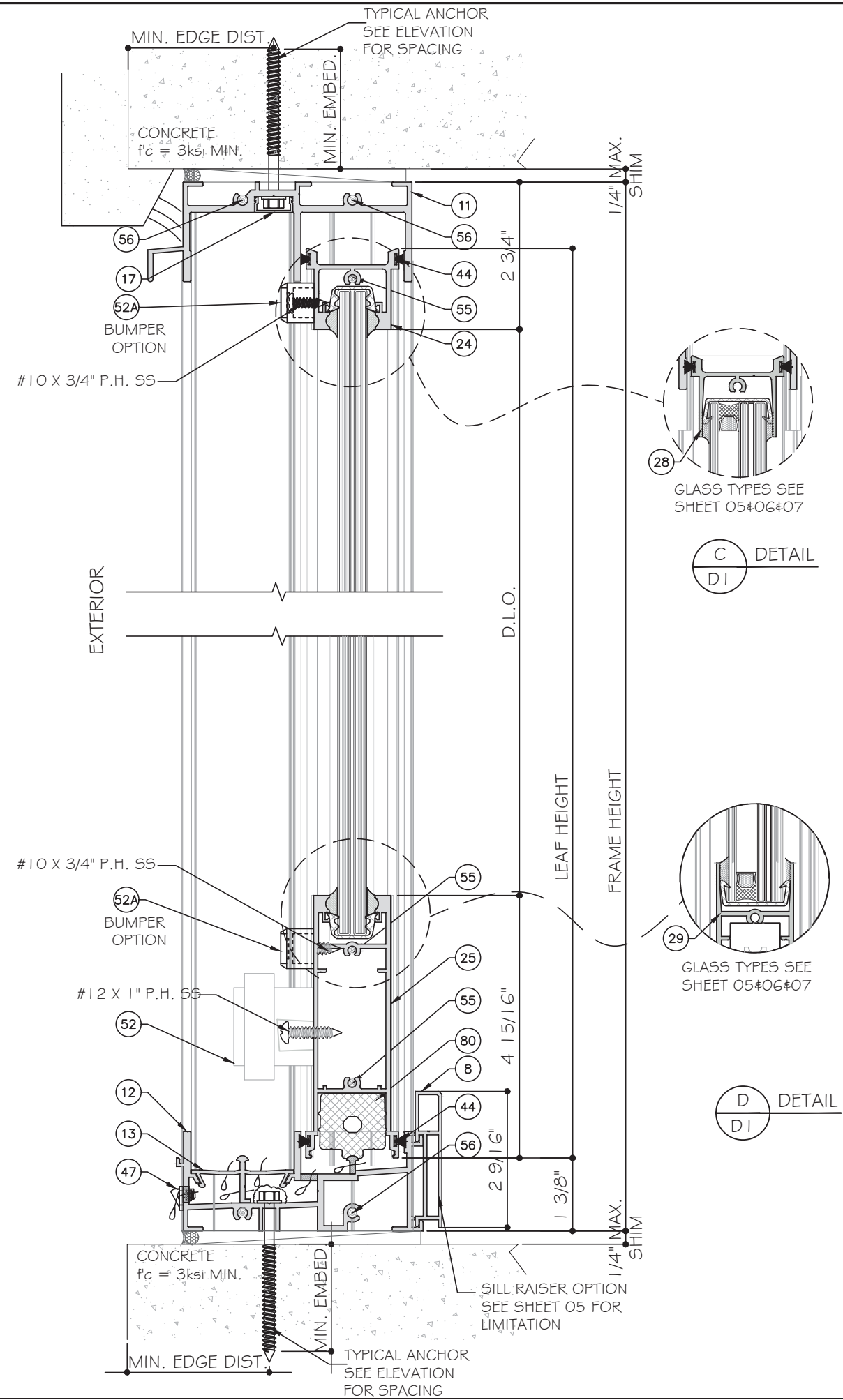
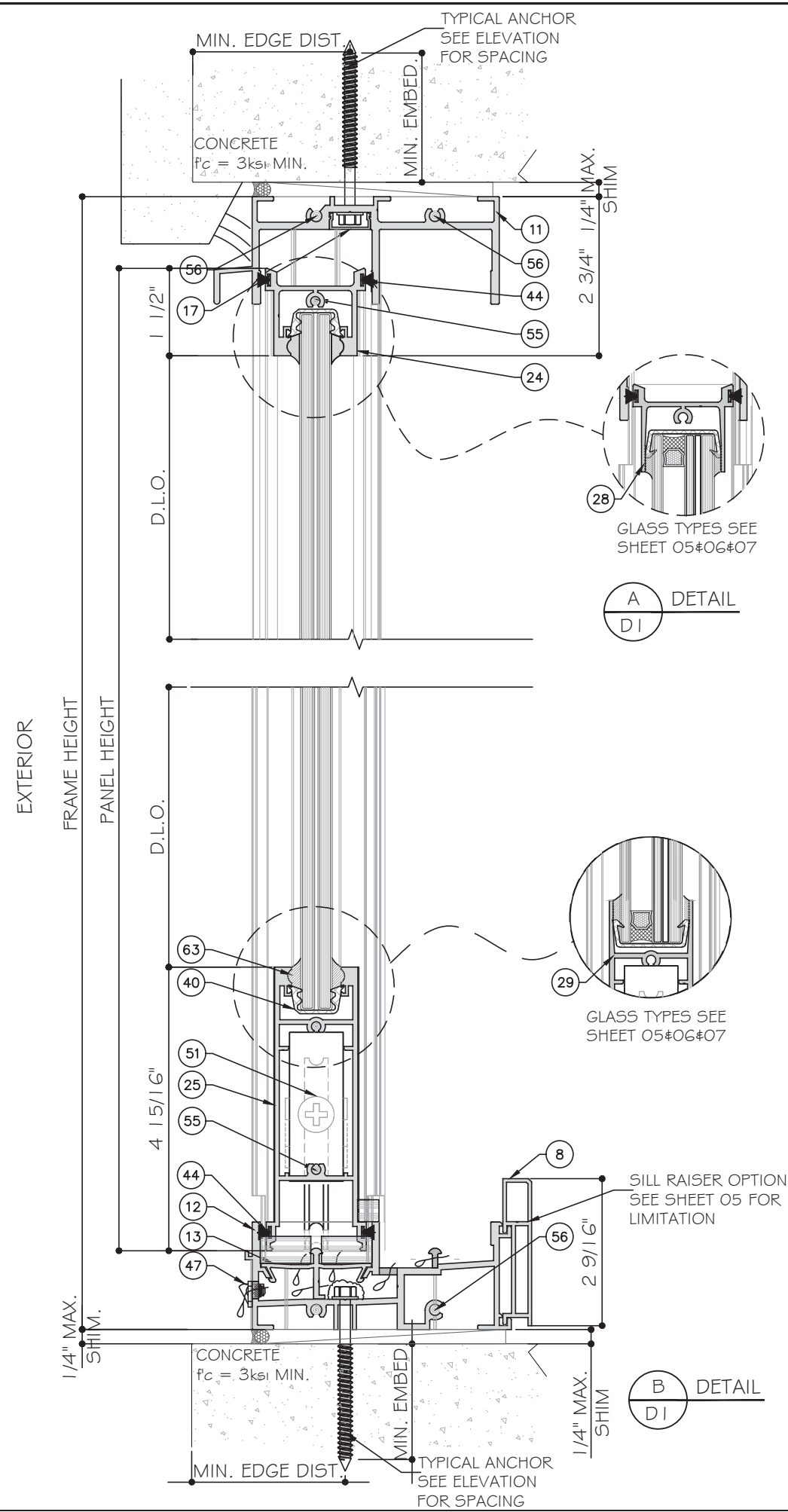
TYPE "B2": 1/4" DIA. ULTRACON+ BY DEWALT (F_u=164 KSI, F_y=148 KSI)
1 3/4" MIN. EMBED INTO f_c=3 KSI MIN. CONCRETE
1 5/16" MIN. EDGE DISTANCE

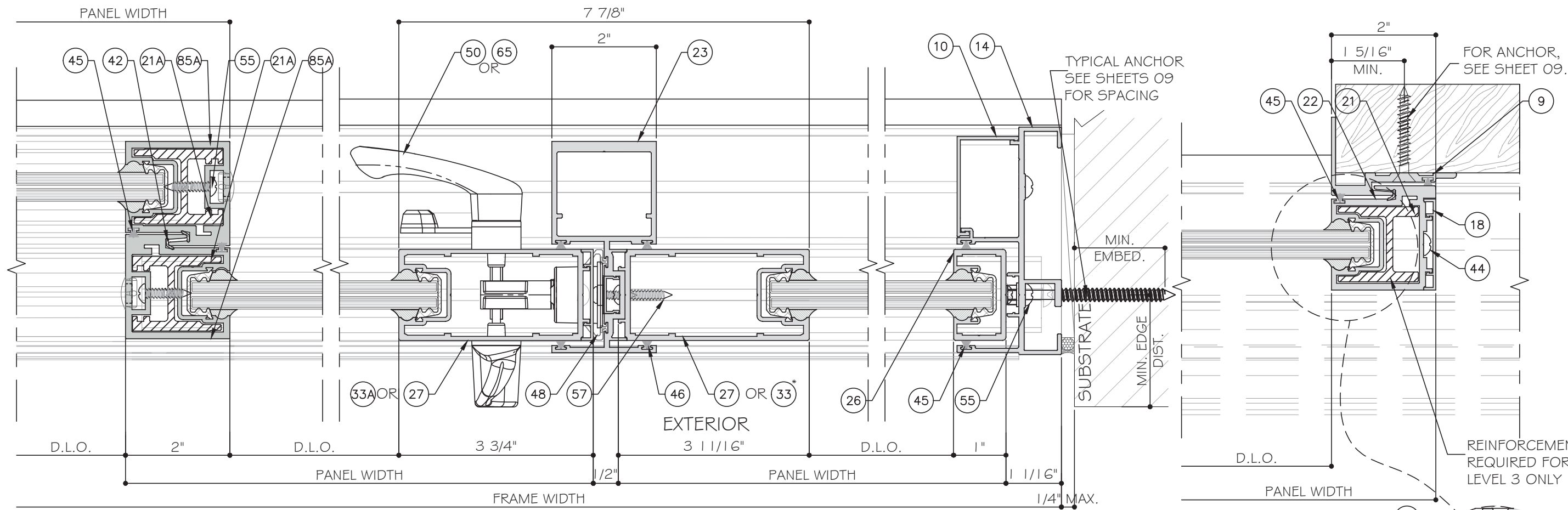
TYPE "C2": 1/4" DIA. ELCO DRIL FLEX SCREW (F_u=120 KSI, F_y=92 KSI)
INTO METAL STRUCTURE
 ALUMINUM: 1/4" THK. MIN. (6063-T6 MIN.)
 STEEL: 1/8" THK. MIN. (F_y=36KSI, MIN.)

TYPE "C3": 1/4" DIA. SMS (F_u=74 KSI, F_y=57 KSI)
1 1/2" MIN. EMBED INTO WOOD STRUCTURE (SG=0.55 MIN.)
1" MIN. EDGE DISTANCE

NOTE:
1X OR 2X WOOD BUCKS/ METAL STRUCTURES BY
OTHERS MUST BE PROPERLY SECURED TO
SUPPORT LOADS IMPOSED BY GLAZING SYSTEM
AND TRANSFER THEM TO THE BUILDING
STRUCTURES.





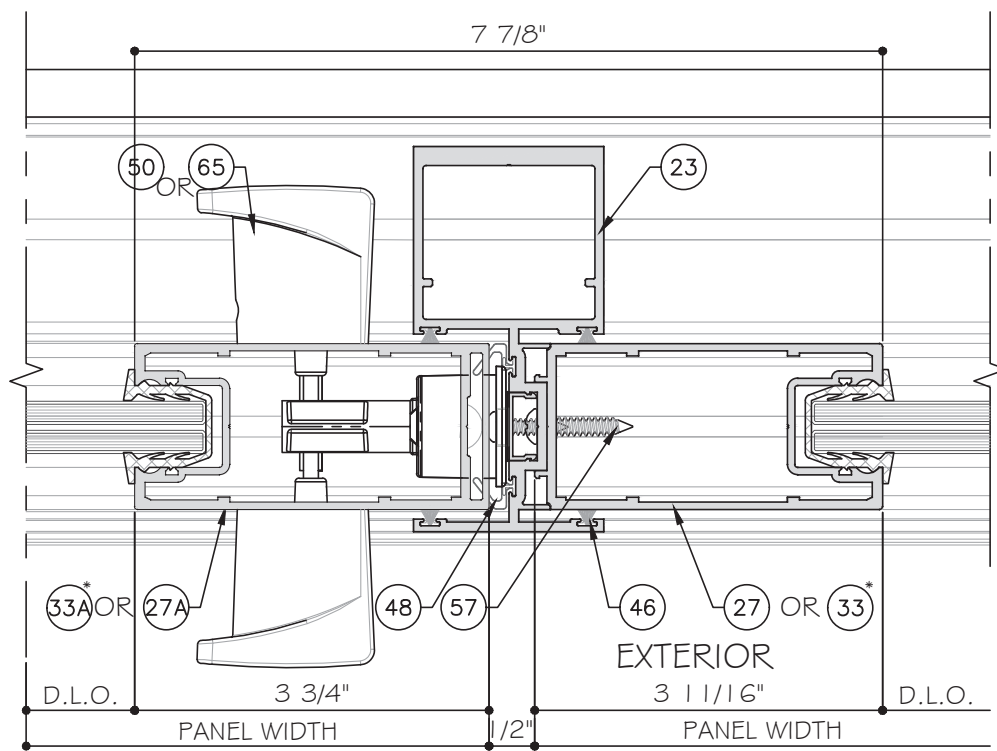


A
D2
DETAIL

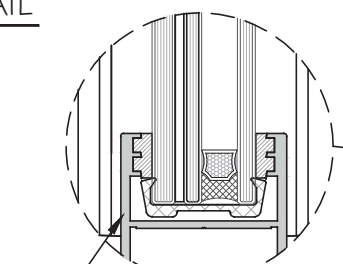
B
D2
DETAIL

C
D2
DETAIL

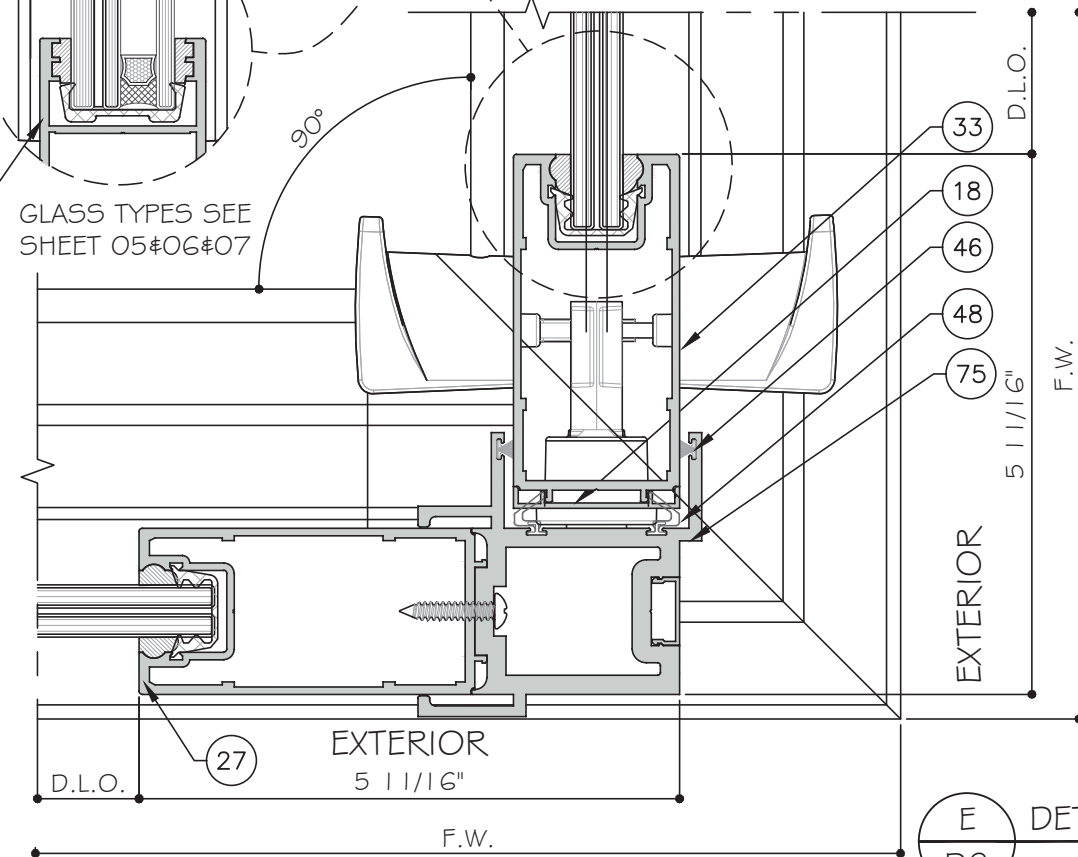
D
D2
DETAIL



B
D2
DETAIL
OPTION



GLASS TYPES SEE SHEET 05#06#07



E
D2
DETAIL

NOTE:
1. STANDARD INTERLOCK W/ REINF. (LEVEL 1) SHOWN. SEE SHEET 06 FOR LEVEL 2 AND 3 INTERLOCKS.
2. SEE SHEET 03 FOR CORNER STILE OPTIONS. CORNER STILE CAN BE USED ON ALL TRACK CONFIGURATIONS
3. LAMINATED GLASS SHOWN, OTHER GLASS TYPES SEE SHEET 05 # 06 # 07.



*NOTE: PART 33 & 33A USED FOR INSULATED LAMINATED GLASS.

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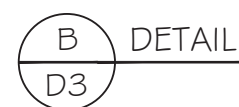
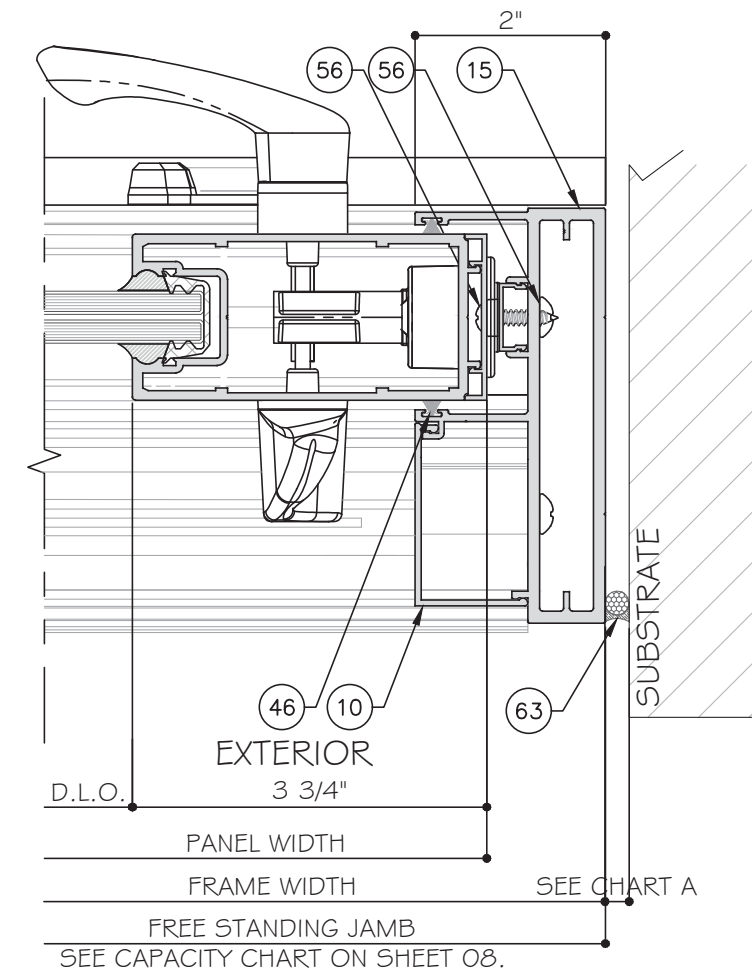
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Drawn Date: 02.06.2024
Scale: AS SHOWN

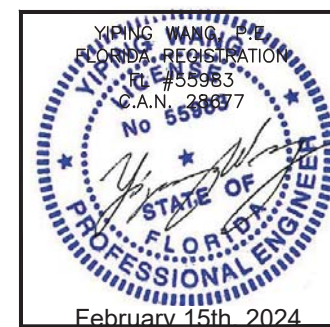
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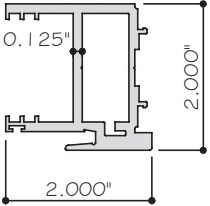
Sheet No.: 12 OF 17



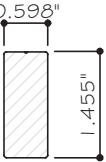
FH	MIN. GAP	MAX.
96"	9/16"	3/4"
108"	5/8"	3/4"
120"	1 1/16"	3/4"
132"	3/4"	7/8"
144"	1 3/16"	7/8"

1. FREE STANDING JAMB SEE CAPACITY CHART ON SHEET O8.
2. DETAILS SHOWN FOR WET GLAZED LAM. GLASS, FOR DRY
GLAZED & INSULATED-LAM. GLASS OPTIONS, REFER TO SHEET
O5 AND O7 FOR DETAILS.

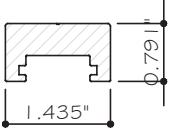




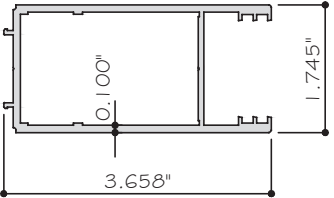
31 INTERLOCK FOR INSULATED LAMINATED GLASS
ES-SGD2020-031 6063-T6



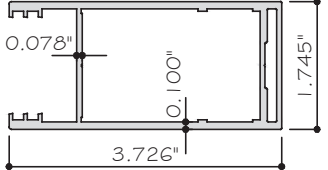
32 REINF. FOR INTERLOCK - INSULATED LAMINATED GLASS
ES-SGD2020-032 6005-T5



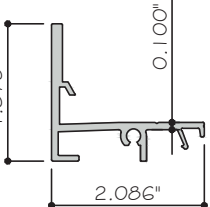
32A REINF. FOR INTERLOCK - INSULATED LAMINATED GLASS
ES-SGD2020-032A 6005-T5



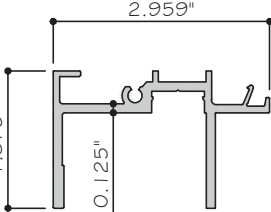
33 LOCK STILE FOR INSULATED LAMINATED GLASS
ES-SGD2020-033 6063-T6



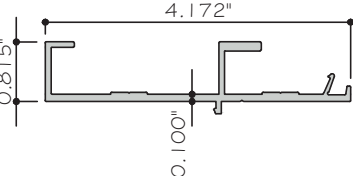
33A LOCKSTILE FOR INSULATE LAMINATED
ES-SGD2020-089 6063-T6



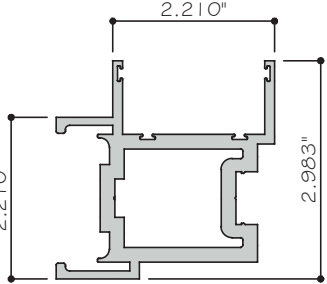
66 FRAME FRONT SILL
ES-SGD2020-054 6063-T6



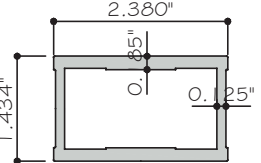
67 FRAME FRONT HEAD
ES-SGD2020-062 6063-T6



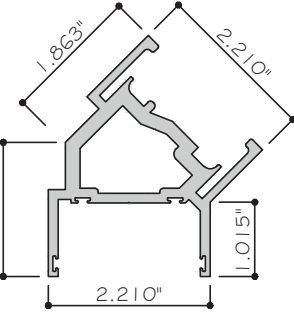
70 FRAME FRONT JAMB
ES-SGD2020-064 6063-T6



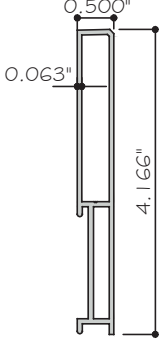
75 FRAME FRONT SILL
ES-SGD2020-068 6063-T6



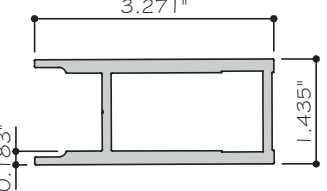
81 REINF. FOR LOCK STILE (INSL-LAM.)
ES-SGD2020-07X 6063-T6



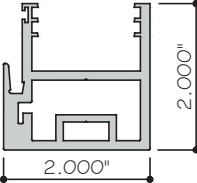
71 FRAME FRONT SILL
ES-SGD2020-056 6063-T6



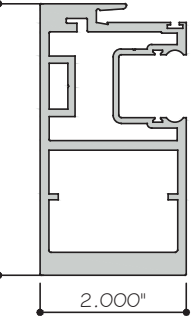
38 SILL RAISER - 90 PSF
ES-SGD2020-040 6063-T6



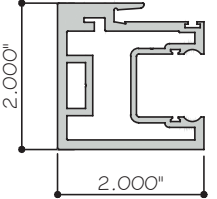
74 REINF. FOR LOCK STILE LAM. GLASS
ES-SGD2020-071 6063-T6



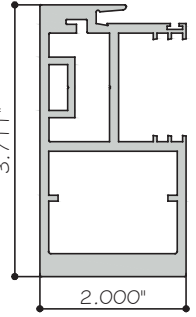
87A INTERLOCK FOR INSULATED LAMINATED GLASS
ES-SGD2020-087A 6005-T5



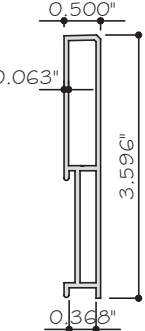
84A INTERLOCK HEAVY FOR LAMINATED GLASS
ES-SGD2020-084A 6005-T5



85A INTERLOCK FOR LAMINATED GLASS
ES-SGD2020-085A 6005-T5



86A INTERLOCK HEAVY FOR INSULATED LAMINATED GLASS
ES-SGD2020-086A 6005-T5



82 SILL RAISER - 80 PSF
ES-SGD2020-041 6063-T6

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YIPING WANG

FLORIDA REGISTRATION

FL #55983

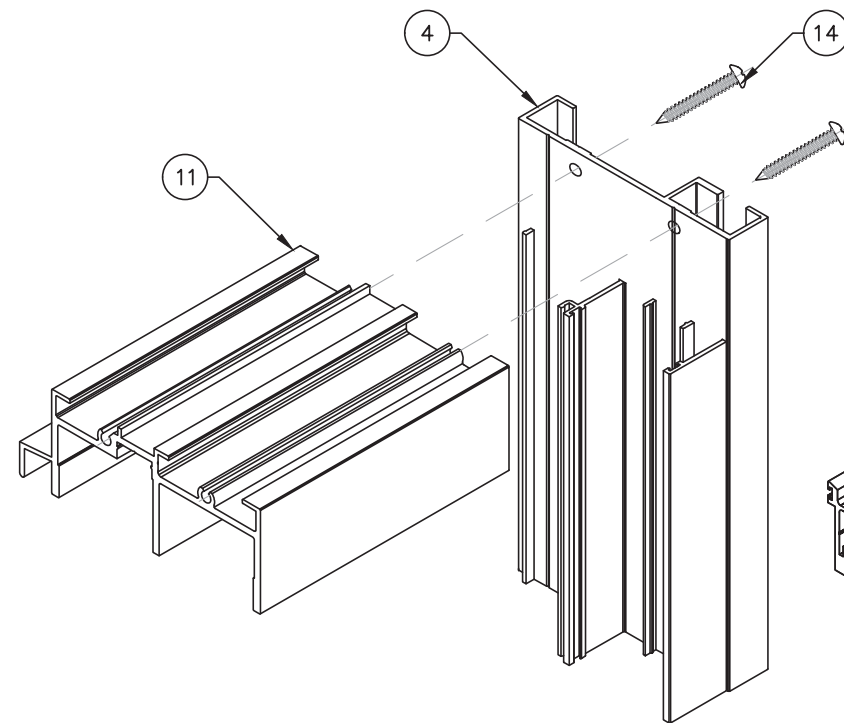
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STATE OF FLORIDA

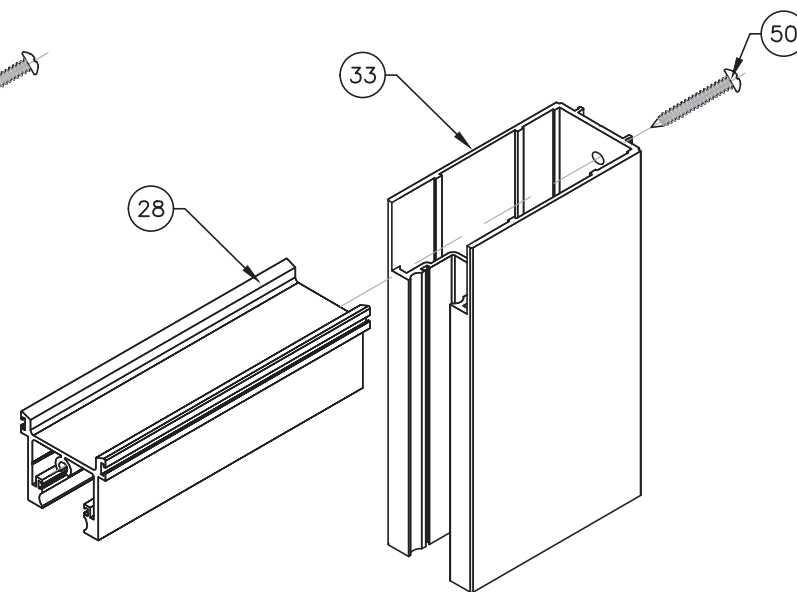
PROFESSIONAL ENGINEER

February 15th, 2024

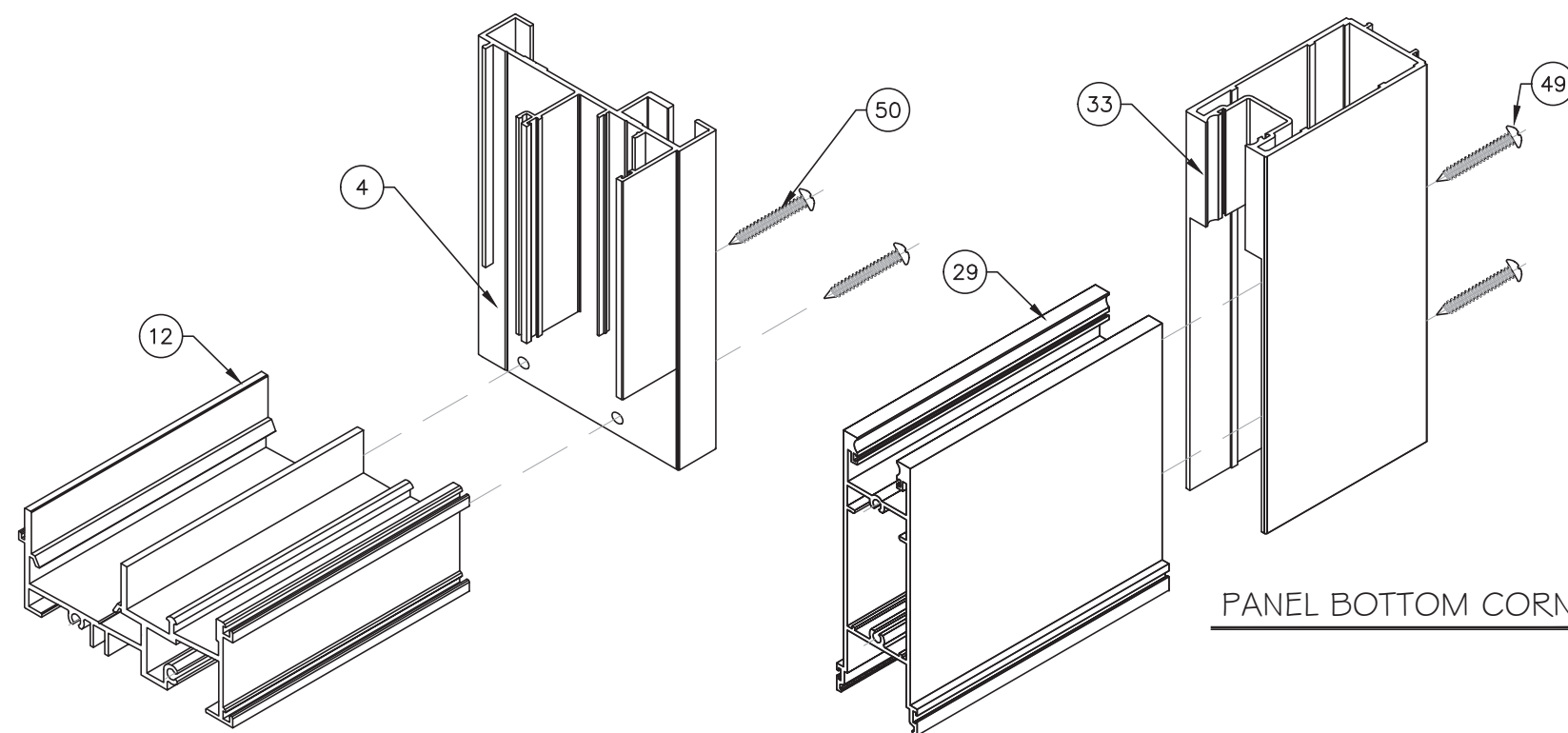
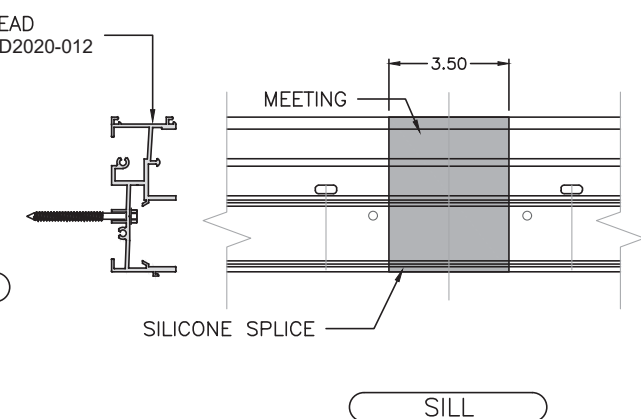
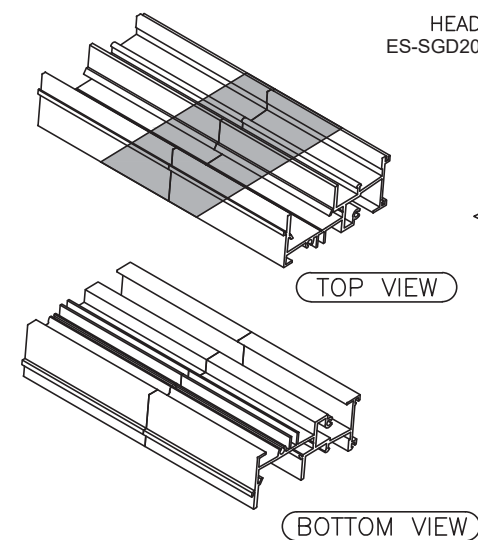
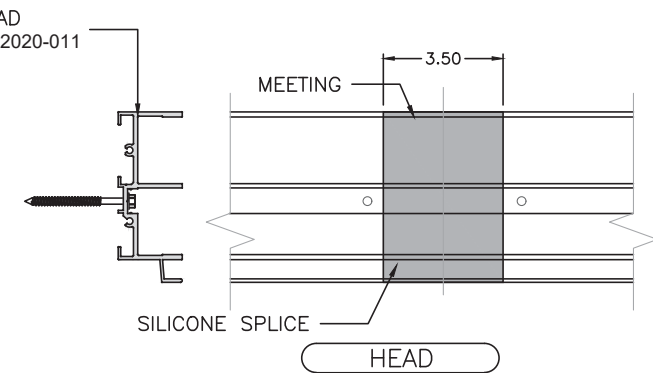
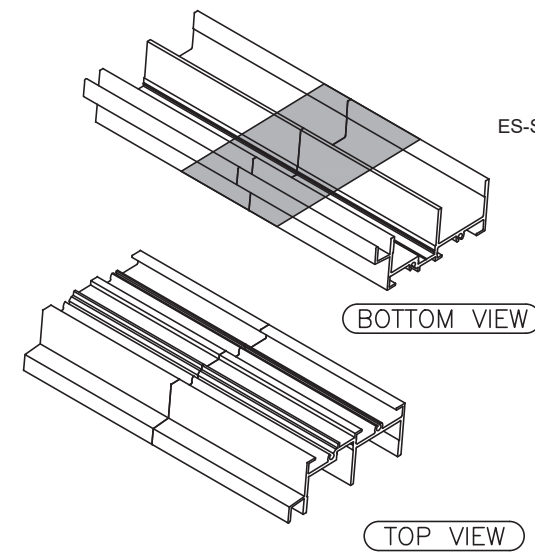
Drawn Date	02.06.2024	Scale	AS SHOWN
DRAWING NO.			
AD23-75			
PARTS			
Sheet No.			
15 OF 17			



FRAME TOP CORNER
2 TRACK SHOWN



PANEL TOP CORNER



FRAME BOTTOM CORNER
2 TRACK SHOWN

