

ES WINDOW INC. ES-PGD3040 GARAGE DOOR - N.I.

GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 7TH EDITION FLORIDA BUILDING CODE (2020)/ 8TH EDITION FLORIDA BUILDING CODE (2023), NOT INCLUDING HIGH VELOCITY HURRICANE ZONE (NON-HVHZ).
- DOORS ARE RATED FOR NON IMPACT. IMPACT SHUTTERS ARE REQUIRED WHEN USED IN HVHZ.
- DOORS ARE NOT APPROVED FOR 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 7TH EDITION FLORIDA BUILDING CODE (2020)/ 8TH EDITION FLORIDA BUILDING CODE (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.
- 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.
- ULTIMATE LOAD OBTAINED FROM ASCE 7-16/ 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.

USE CHARTS AS FOLLOWS.

- STEP 1:** DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-16/ ASCE 7-22 STANDARD OR WIND TUNNEL REPORTS.
- STEP 2:** SEE SHEET E1 FOR TYPICAL DOOR ELEVATION. SEE SHEET G1 FOR GLASS OPTIONS.
- STEP 3:** SEE SHEET A1 FOR ANCHOR OPTIONS. SEE SHEET E2 FOR NUMBER OF ANCHORS REQUIRED.
- STEP 4:** THE LOWEST VALUE RESULTING FROM STEPS 2 & 3 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.

ABBREVIATIONS AND SYMBOLS	
D.L.O. - DAYLITE OPENING	
F.H. - FRAME HEIGHT	
F.W. - FRAME WIDTH	
W/ - WITH	
W/O - WITHOUT	
O.C. - ON CENTER	

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 ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

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

FLORIDA APPROVAL:
FL # 41580.2

YI WANG
FLORIDA REGISTRATION
No. 55983
C.A.N. 8877

STATE OF FLORIDA
PROFESSIONAL ENGINEER

September 01st, 2023

MCY ENGINEERING, INC.
GLAZING CONSULTANTS
12781 MIRAMAR PARKWAY #301
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ES-PGD3040 GARAGE DOOR - NI
E.S. WINDOWS, INC.
10663 NE QUAYBRID GE CT.
MIAMI, FL 33138
TEL. (305) 624-7775

FBC 2023	Description	Date	Drawn By	Rev. No.
06.07.2022	James	R2	James	
DRAWING NO.				
AD22-14				
cover				
Sheet No.				
1 OF 11				

PGD 1600 & 1610
W/ (6) #14X1" HWH
SDS WITH RUBBER
WASHER AND NUT

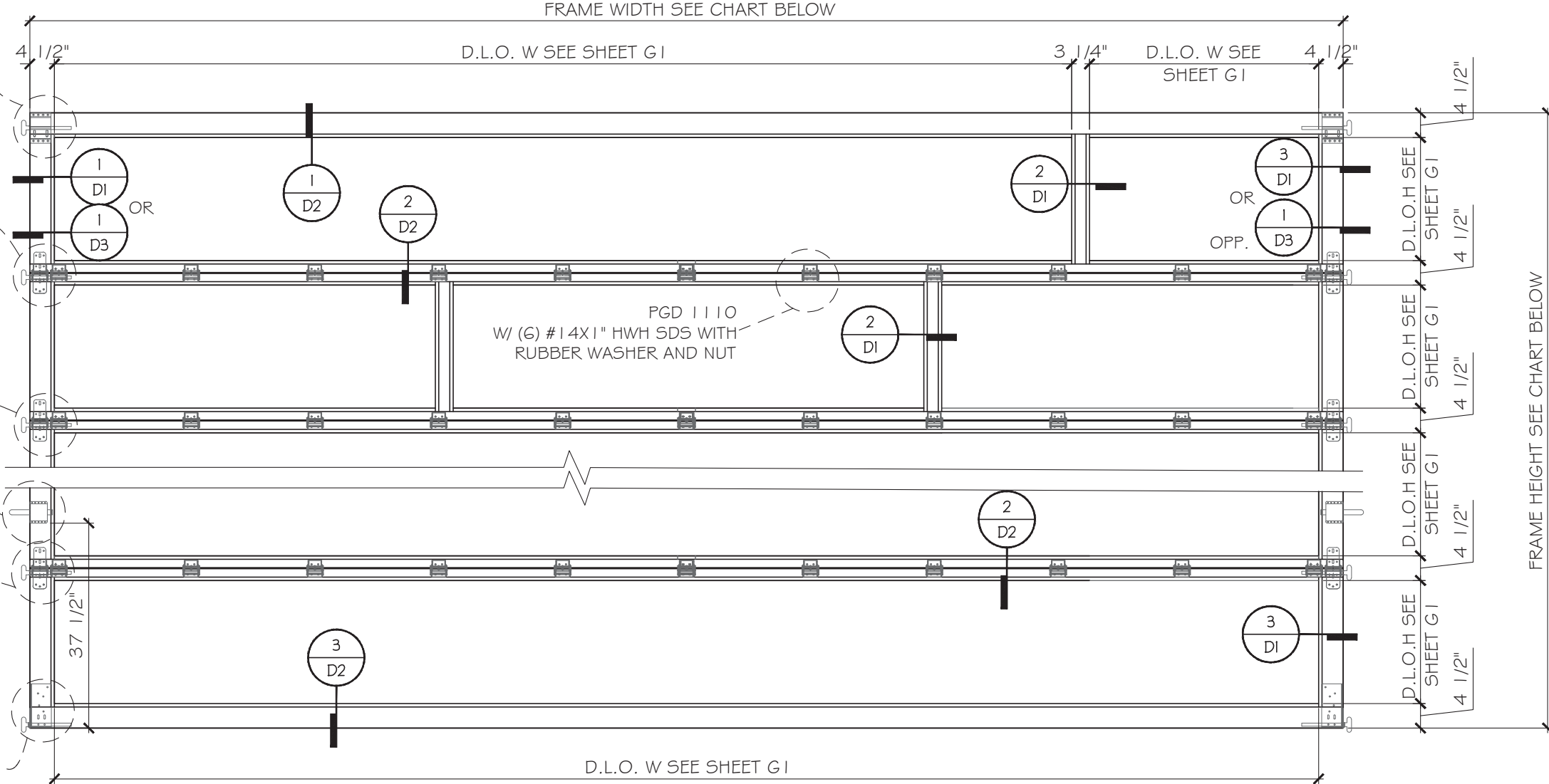
PGD 1400 & 1410
W/ (6) #14X1" HWH
SDS WITH RUBBER
WASHER AND NUT

PGD 1300 & 1310
W/ (6) #14X1" HWH
SDS WITH RUBBER
WASHER AND NUT

PGD 1900
W/ (6) #14X1" HWH
SDS WITH RUBBER
WASHER AND NUT

PGD 1200 & 1210
W/ (6) #14X1" HWH
SDS WITH RUBBER
WASHER AND NUT

PGD 1810 / 1820
& 1830, 1840
W/ (6) #14X1" HWH
SDS WITH RUBBER
WASHER AND NUT



- THE AMOUNT OF CENTER HINGES (PGD-1110) SHOULD BE:
- 5 ACROSS EACH SECTION FOR FRAME WIDTH ≤ 144".
 - 7 ACROSS EACH SECTION FOR FRAME WIDTH ≤ 194".
 - 9 ACROSS EACH SECTION FOR FRAME WIDTH ≤ 240".

DESIGN LOAD CAPACITY-PSF (GLASS TYPE AND CAPACITY SEE SHEET G1)			
TOTAL SECTION	MAX. FRAME WIDTH (INCH)	MAX. FRAME HEIGHT (INCH)	DESIGN LOAD EXT.(+) INT.(-)
4	240	112 1/2	+28/-34
	216	124 1/2	+28/-34
5	240	139 1/2	+28/-34
	216	154 1/2	+28/-34
6	240	166 1/2	+28/-34
	216	184 1/2	+28/-34
7	240	193 1/2	+28/-34
	216	214 1/2	+28/-34
8	240	220 1/2	+28/-34
	216	244 1/2	+28/-34
9	240	247 1/2	+28/-34
	216	274 1/2	+28/-34

TYPICAL EXTERIOR ELEVATIONS

DESIGN LOADS: +28/-34 PSF
(FOR SIZE SHOWN ABOVE OR SMALLER AS PERMITTED BY FBC)

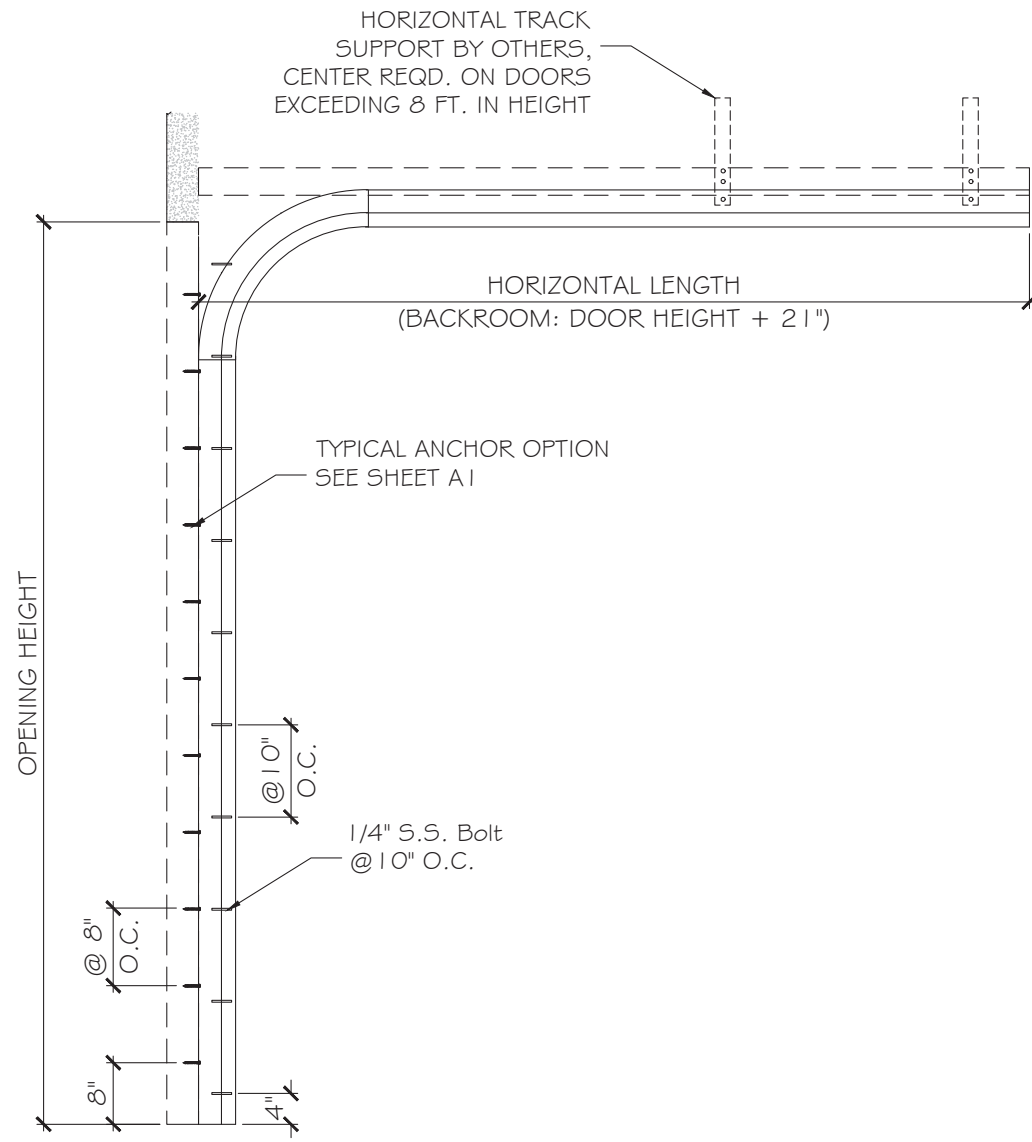
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FL # 41580.2

YIP WANG
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION
#55983
C.A.N. #598877
September 01st, 2023

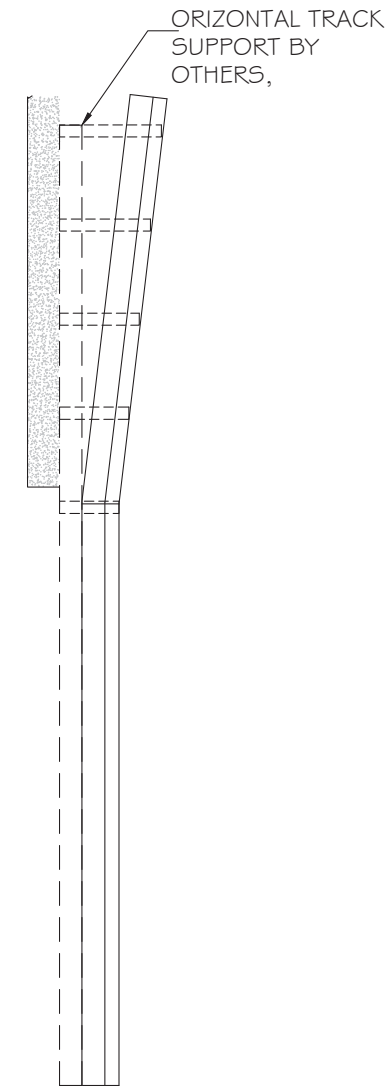
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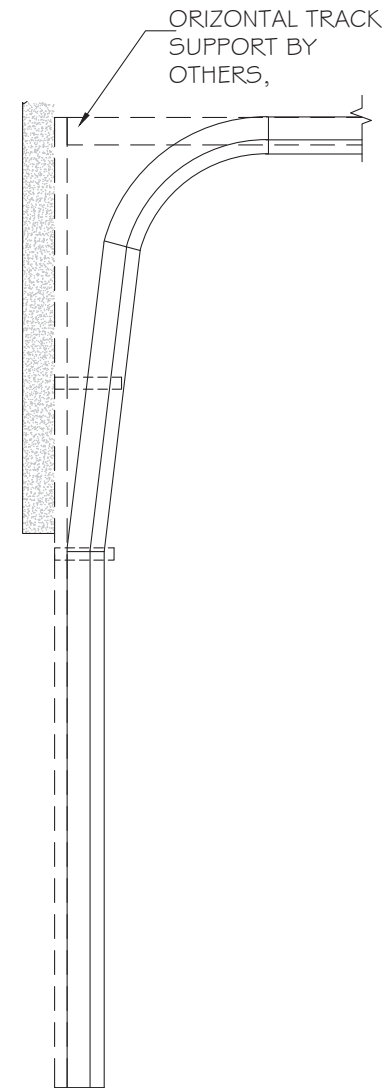
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R2	06.21.2023	James	FBC 2023
DRAWING NO. AD22-14			
Sheet No. E1			
2 OF 11			



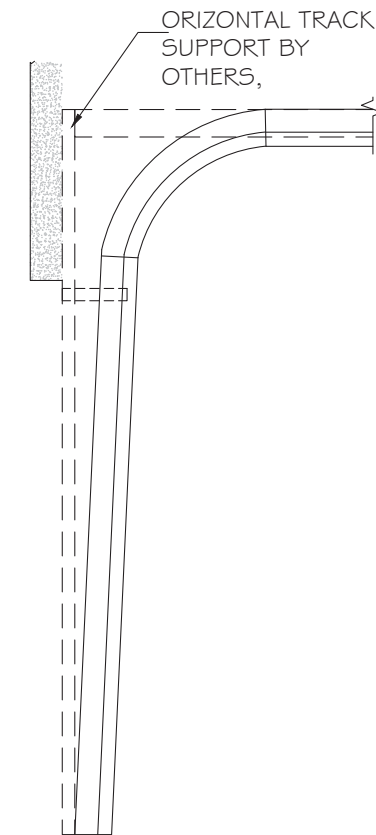
TRACK CONFIGURATION



VERTICAL LIFT



HIGH LIFT



STANDARD LIFT

TRACK OPTION

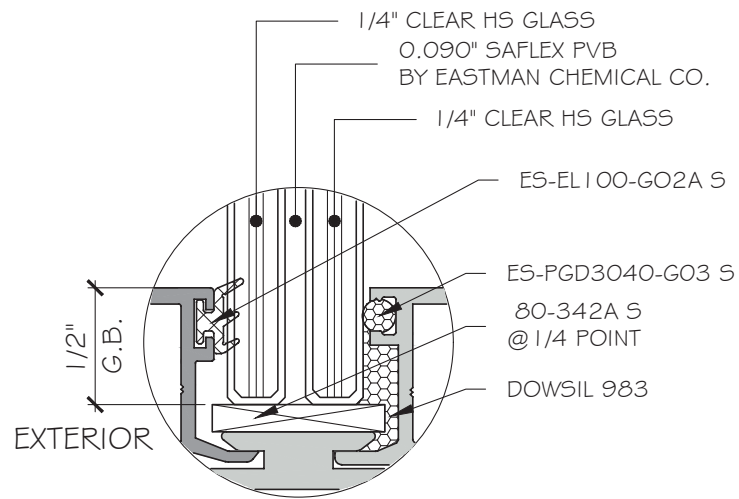
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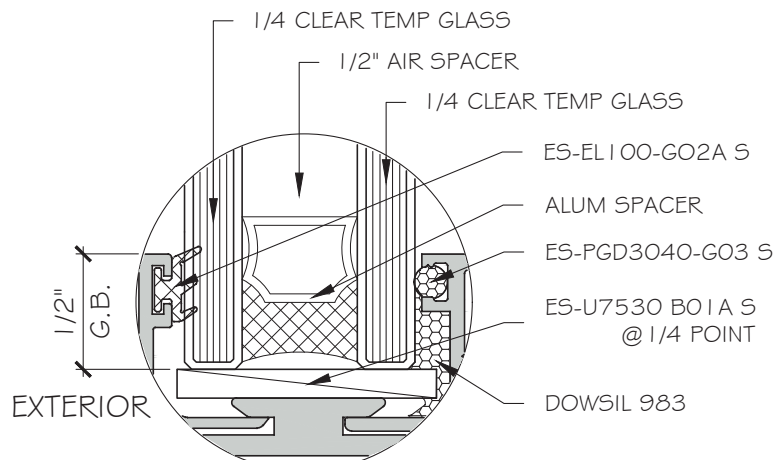
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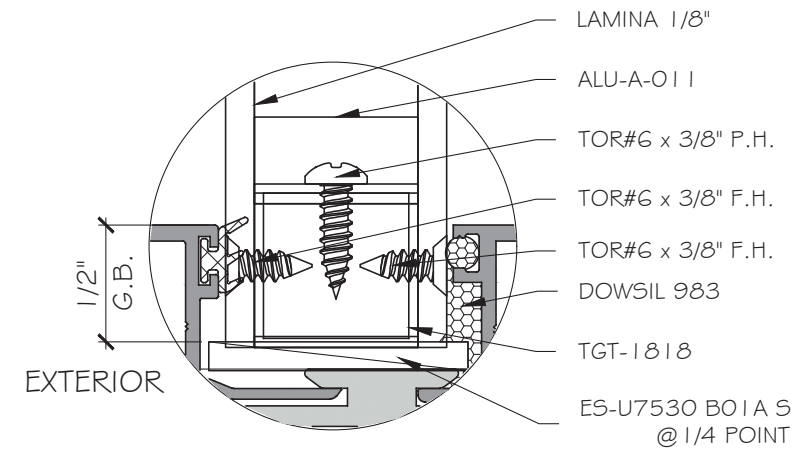
Drawn Date: 06.07.2022
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G3 GLASS TYPE 'G3'
9 1/6" NOMINAL OVERALL



G6 GLASS TYPE 'G6'
1" NOMINAL OVERALL

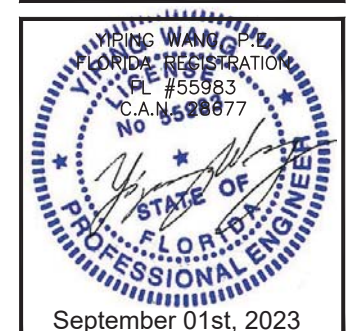


OP GLASS TYPE 'OP'
15 1/6" NOMINAL OVERALL

DESIGN LOAD CAPACITY-PSF			
MAX. DIMENSIONS.		GLASS TYPE	DESIGN LOAD EXT.(+) INT.(-)
DLO.W (INCH)	DLO.H (INCH)		
135	22 1/2	G3	+60/-65
119	25 1/2		
185 7/8	22 1/2	G6	+28/-34
164	25 1/2		
231	22 1/2	OP	+28/-34
207	25 1/2		

NOTE:
GLASS COMPLIES WITH ASTM E 1300-09
(3 SEC. GUSTS).

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G1			
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TYPICAL ANCHOR TYPES:

TYPE "A": 5/16" DIA. ULTRACON BY 'DEWALT' ($F_u=177$ KSI, $F_y=155$ KSI)
THROUGH 1 BY WOOD BUCK OR 2 BY WOOD BUCKS
OR DIRECTLY INTO CONCRETE
WITH 2" MIN. EMBED INTO CONCRETE ($f'_c=3000$ PSI MIN.)

TYPE "B": 5/16" DIA. TEKS SCREW/ DRILL - FLEX (GRADE 5) ($F_u=120$ KSI, $F_y=92$ KSI)
INTO STL.(A36 MIN. 1/4" THK. MIN.)/ ALUM.(6063-T5 MIN. 1/4" THK. MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE ISOLATED OR PAINTED)

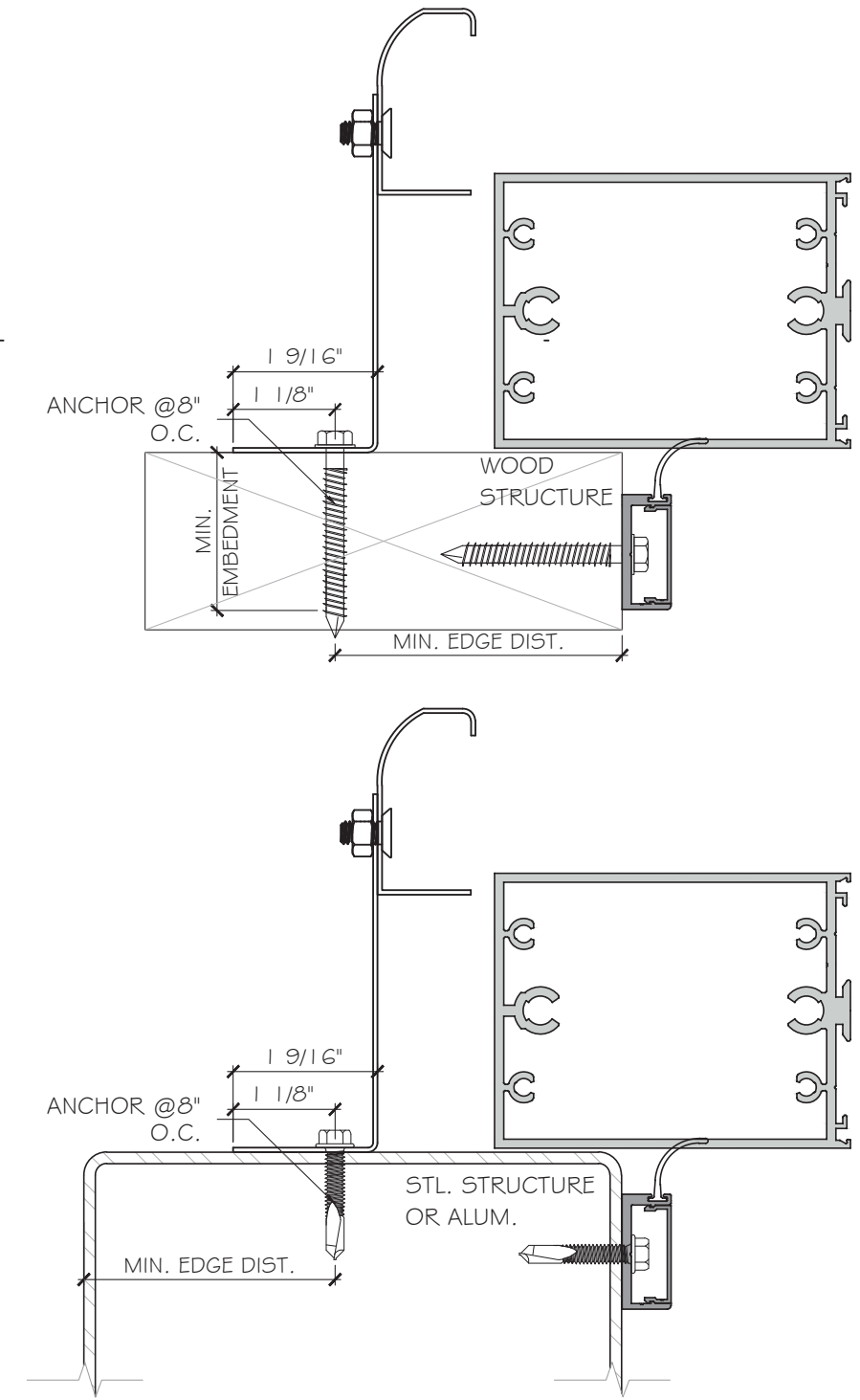
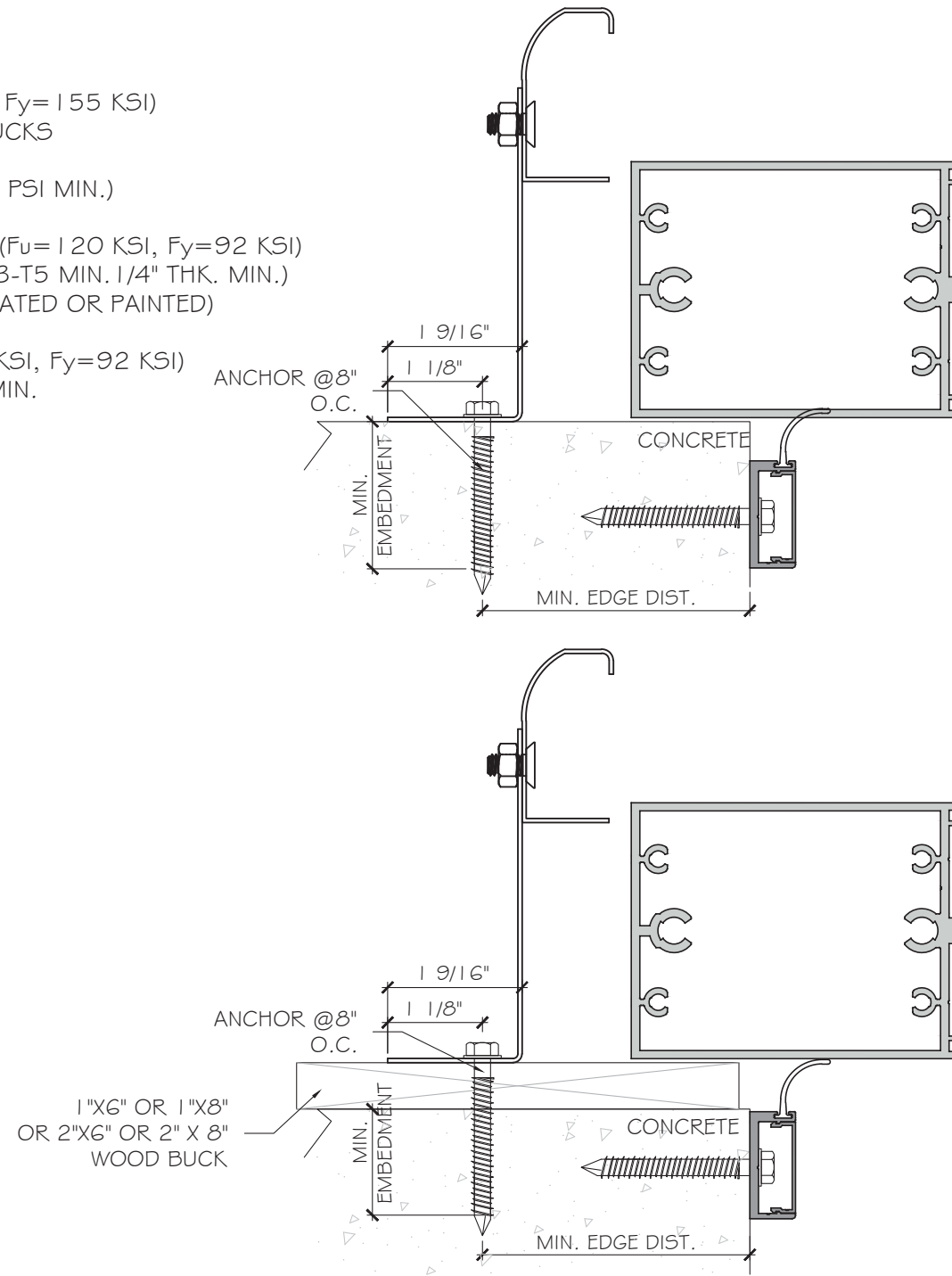
TYPE "C": 5/16" DIA. ULTRACON OR LAG SCREW ($F_u=120$ KSI, $F_y=92$ KSI)
INTO WOODS ($G=0.55$ MIN.), 2" PENETRATION MIN.

TYPICAL ANCHOR EDGE DISTANCE:

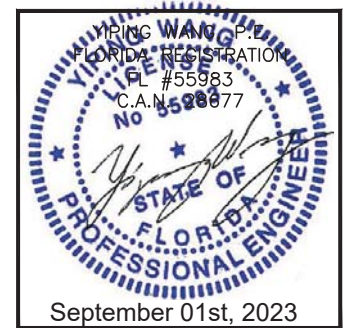
INTO CONCRETE = 3 1/8" MIN.

INTO WOOD STRUCTURE = 1 1/4" MIN.

INTO METAL STRUCTURE = 3/4" MIN.



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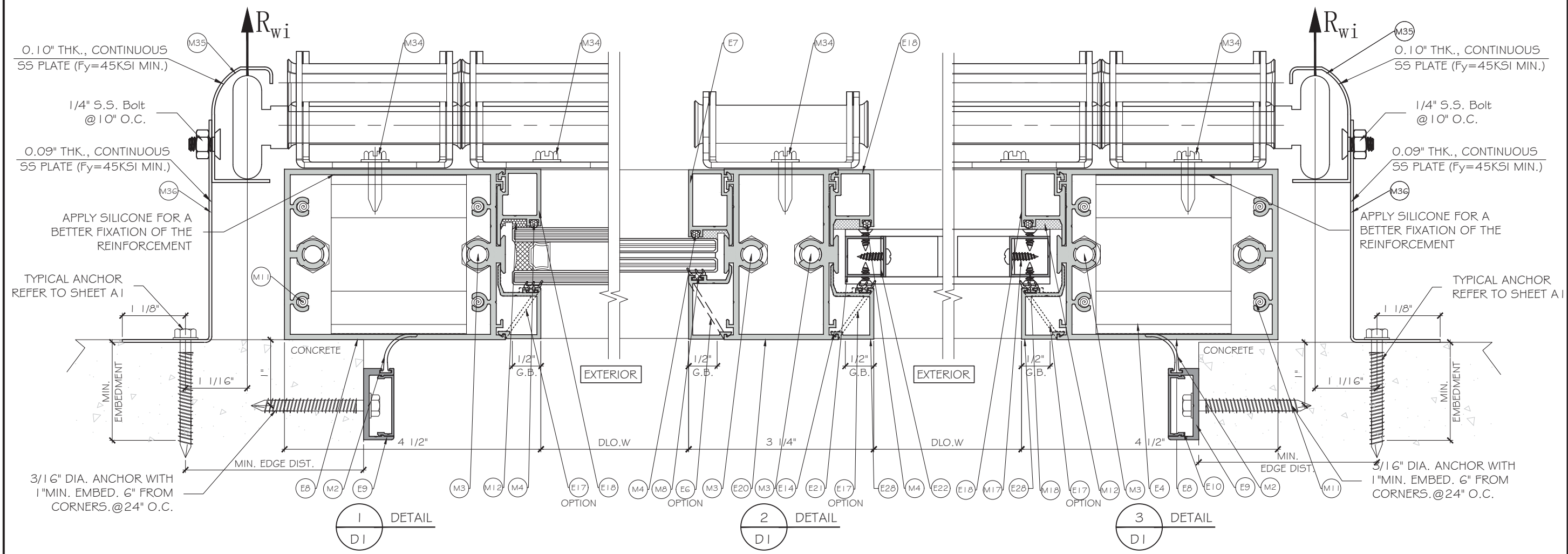


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0.10" THK., CONTINUOUS
SS PLATE (F_y=45KSI MIN.)

1/4" S.S. Bolt
@10" O.C.

0.09" THK., CONTINUOUS
SS PLATE (F_y=45KSI MIN.)

APPLY SILICONE FOR A
BETTER FIXATION OF THE
REINFORCEMENT

TYPICAL ANCHOR
REFER TO SHEET A1

3/16" DIA. ANCHOR WITH
1" MIN. EMBED. 6" FROM
CORNERS. @24" O.C.

0.10" THK., CONTINUOUS
SS PLATE (F_y=45KSI MIN.)

1/4" S.S. Bolt
@10" O.C.

0.09" THK., CONTINUOUS
SS PLATE (F_y=45KSI MIN.)

APPLY SILICONE FOR A
BETTER FIXATION OF THE
REINFORCEMENT

TYPICAL ANCHOR
REFER TO SHEET A1

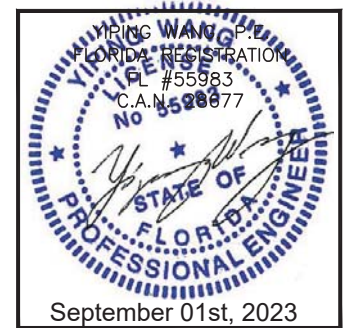
3/16" DIA. ANCHOR WITH
1" MIN. EMBED. 6" FROM
CORNERS. @24" O.C.

1
D1
DETAIL

2
D1
DETAIL

3
D1
DETAIL

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FL # 41580.2

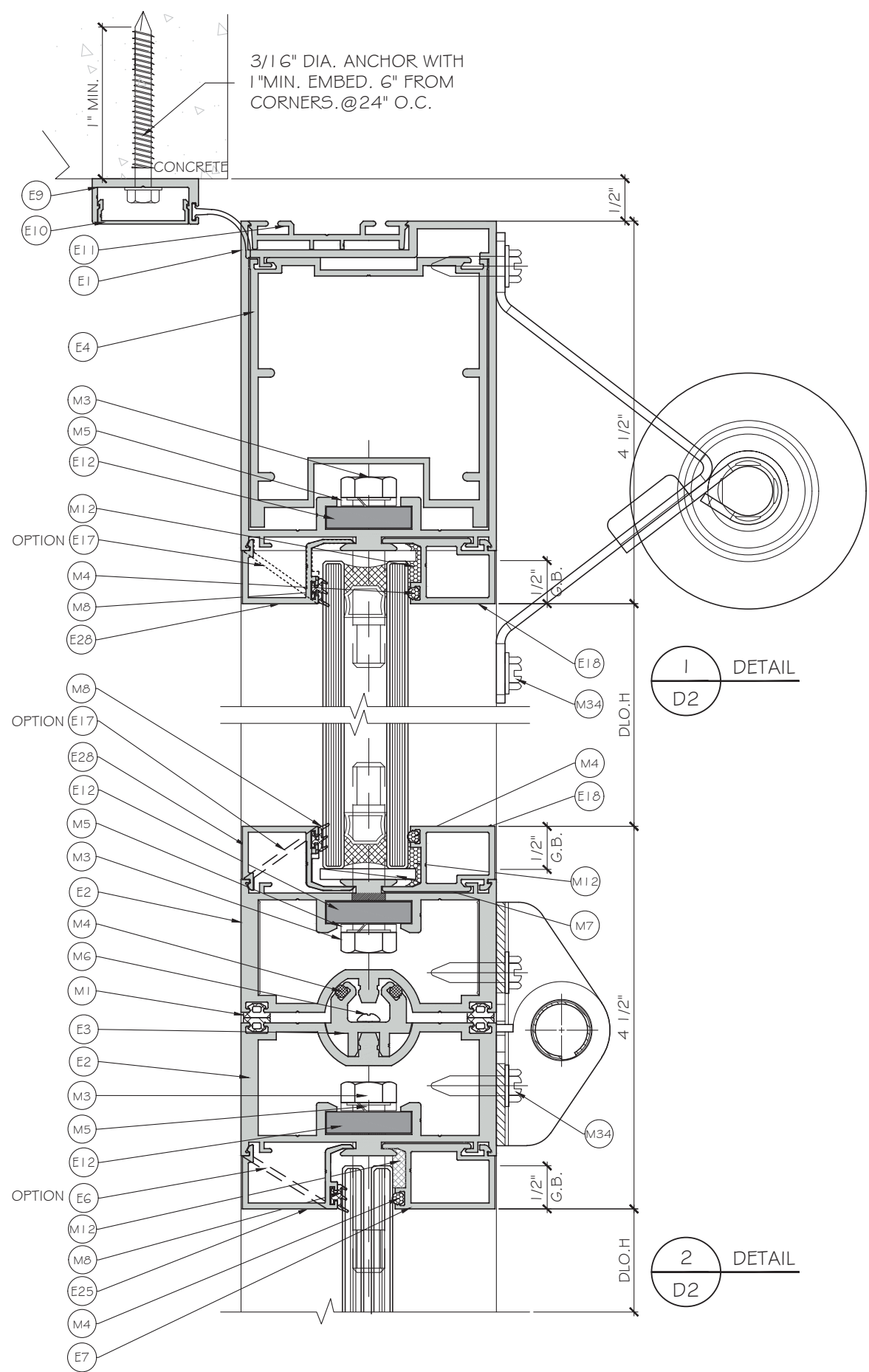


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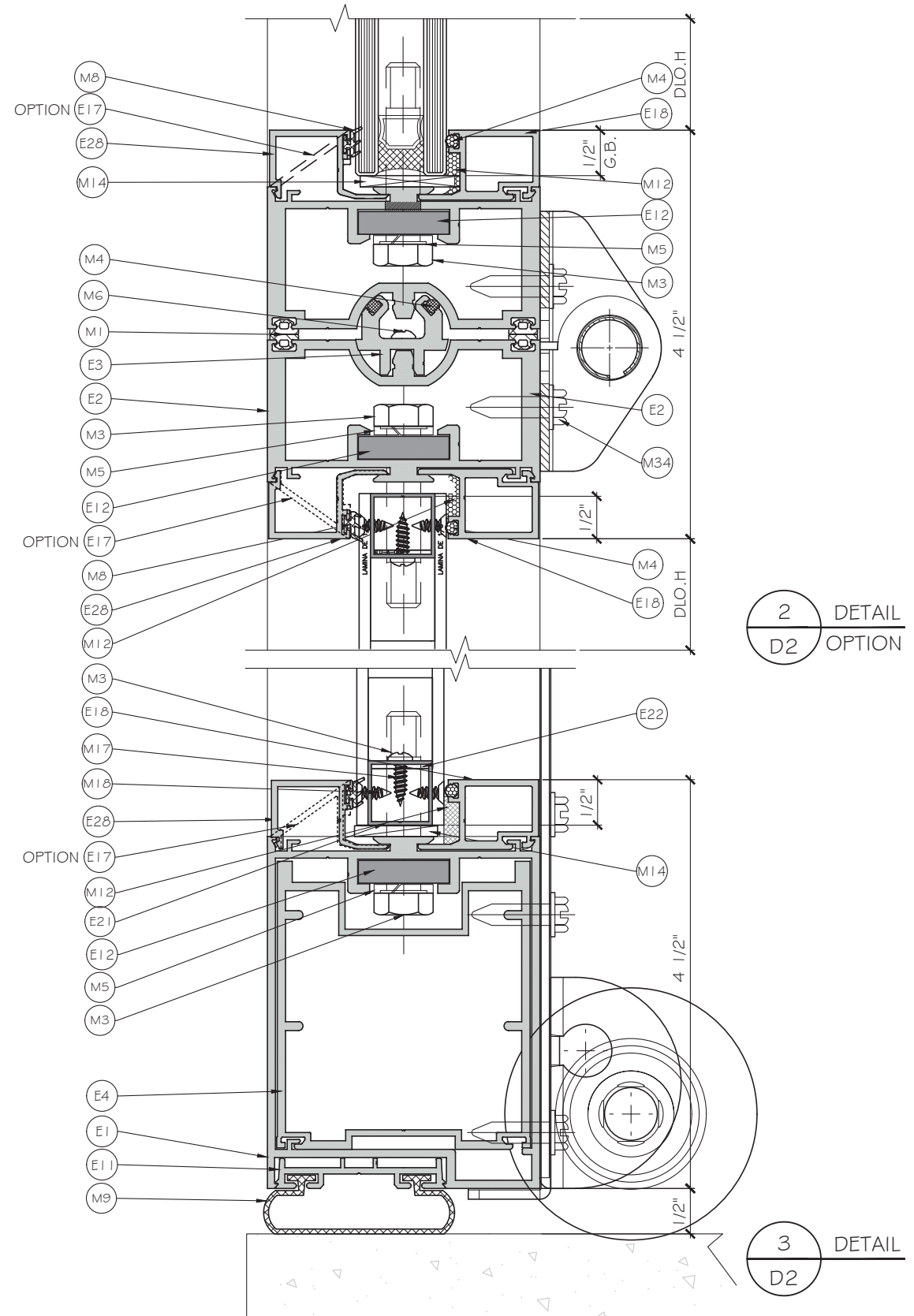
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Drawn By: James
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3/16" DIA. ANCHOR WITH
1" MIN. EMBED. 6" FROM
CORNERS. @24" O.C.

1
D2
DETAIL

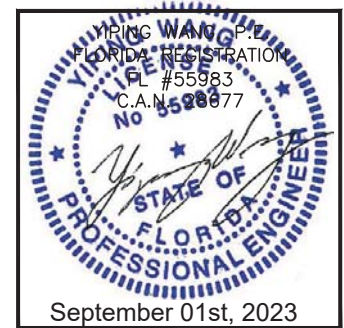
2
D2
DETAIL



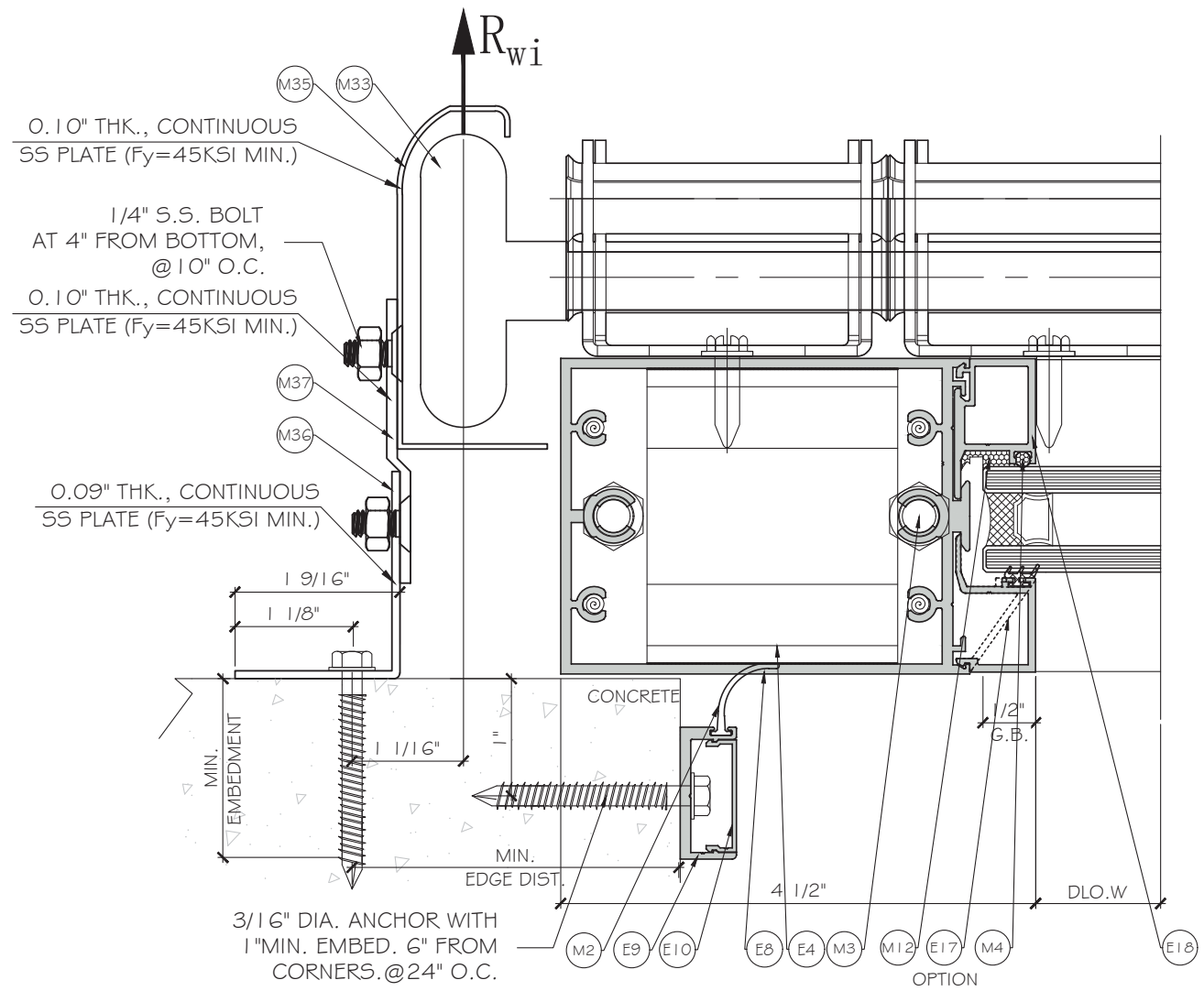
2
D2
DETAIL
OPTION

3
D2
DETAIL

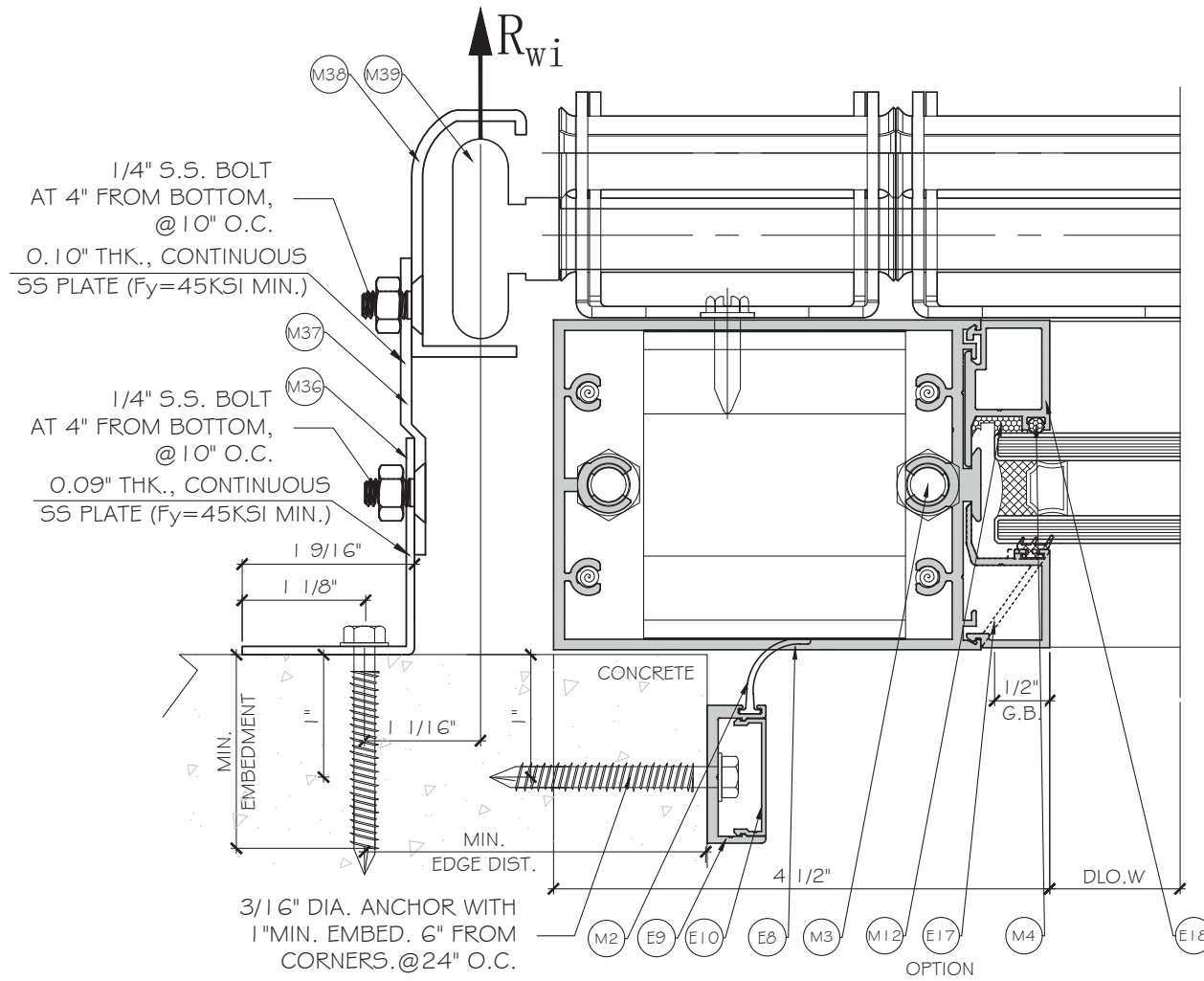
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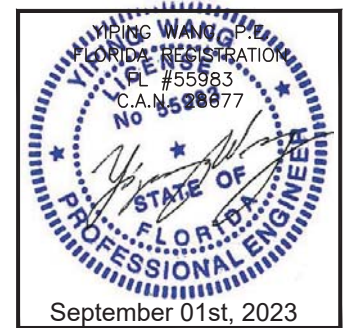


1
D3
DETAIL
3" TRACK
OPTION



1
D3
DETAIL
2" TRACK
OPTION

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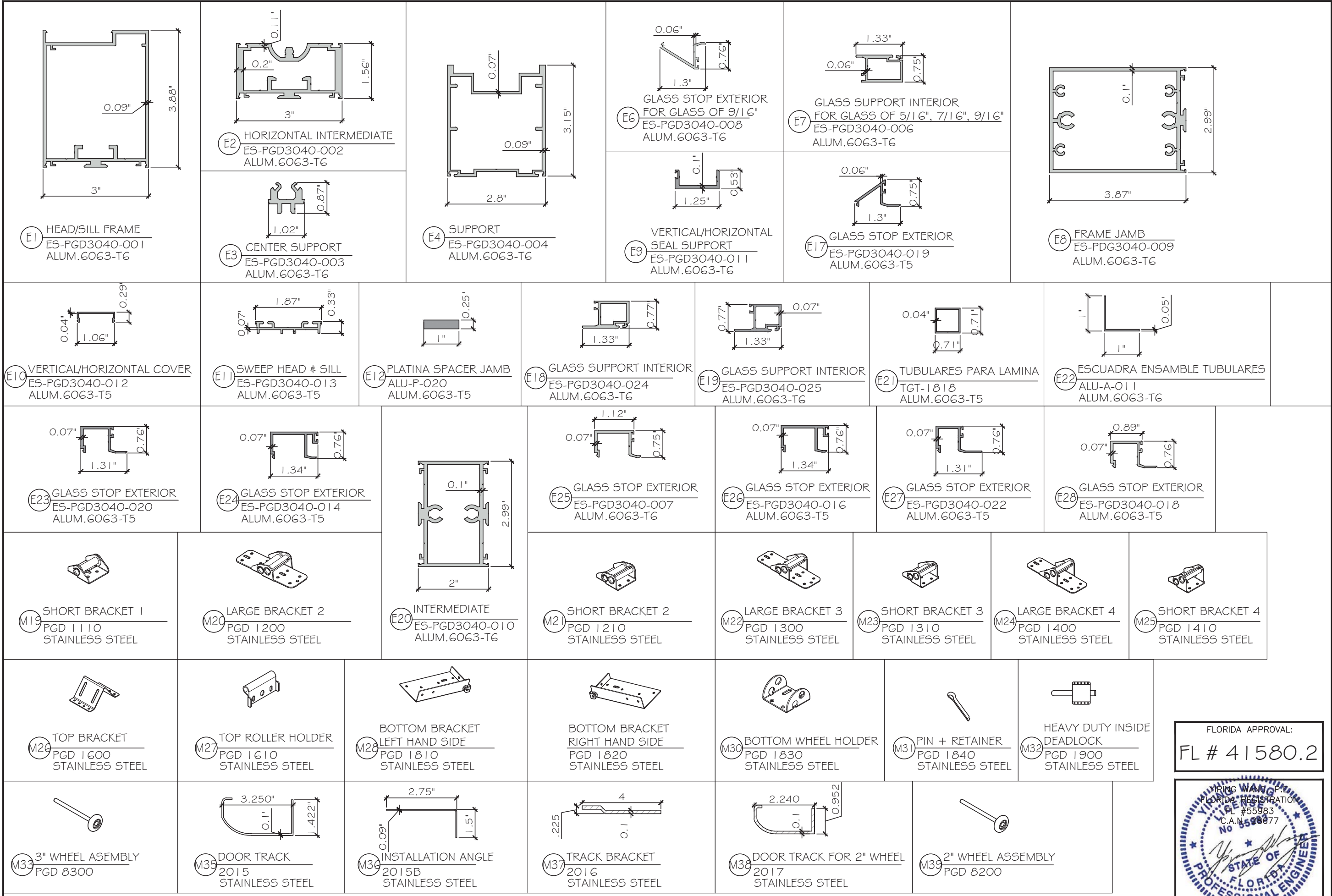
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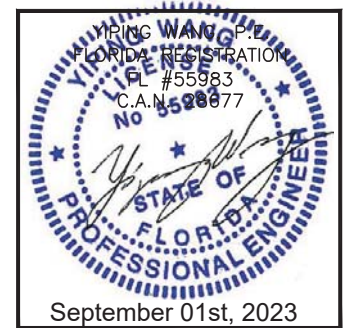
D3

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BILL OF MATERIAL

CODE	PART	DESCRIPTION	MATERIAL
E1	ES-PGD3040-001	HEAD/SILL FRAME	6063-T6
E2	ES-PGD3040-002	HORIZONTAL INTERMEDIATE	6063-T6
E3	ES-PGD3040-003	CENTER SUPPORT	6063-T6
E4	ES-PGD3040-004	SUPPORT	6063-T6
E6	ES-PGD3040-008	GLASS STOP EXTERIOR FOR GLASS OF 9/16"	6063-T6
E7	ES-PGD3040-006	GLASS SUPPORT INTERIOR FOR GLASS OF 5/16", 7/16", 9/16"	6063-T6
E8	ES-PDG3040-009	FRAME JAMB	6063-T6
E9	ES-PGD3040-011	VERTICAL/HORIZONTAL SEAL SUPPORT	6063-T6
E10	ES-PGD3040-012	VERTICAL/HORIZONTAL COVER	6063-T5
E11	ES-PGD3040-013	SWEEP HEAD & SILL	6063-T5
E12	ALU-P-020	PLATINA SPACER JAMB	6063-T6
E18	ES-PGD3040-024	GLASS SUPPORT INTERIOR	6063-T6
E17	ES-PGD3040-019	GLASS STOP EXTERIOR	6063-T5
E19	ES-PGD3040-025	GLASS SUPPORT INTERIOR	6063-T6
E20	ES-PGD3040-010	INTERMEDIATE	6063-T6
E21	TGT-1818	TUBULARES PARA LAMINA	6063-T5
E22	ALU-A-011	ESCUADRA ENSAMBLE TUBULARES	6063-T6
E23	ES-PGD3040-020	GLASS STOP EXTERIOR	6063-T5
E24	ES-PGD3040-014	GLASS STOP EXTERIOR	6063-T5
E25	ES-PGD3040-007	GLASS STOP EXTERIOR	6063-T6
E26	ES-PGD3040-016	GLASS STOP EXTERIOR	6063-T5
E27	ES-PGD3040-022	GLASS STOP EXTERIOR	6063-T5
E28	ES-PGD3040-018	GLASS STOP EXTERIOR	6063-T5

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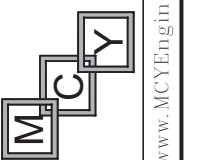
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BILL OF MATERIAL

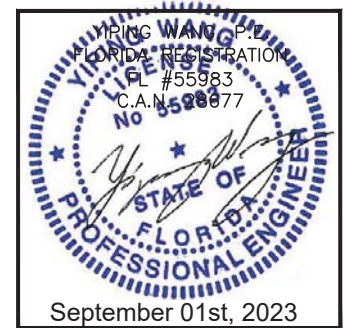
COD	PARTE	DESCRIPCIÓN	MATERIAL
M1	ES-PGD3040-G01 S	SPACER GASKET	SILICONE
M2	ES-PGD3040-G02 S	JAMB SEAL GASKET	SILICONE
M3	TOR 3/8" - 16 X 2" HEX CAP	SCREW	STAINLESS STEEL
M4	ES-PGD3040-G03 S	JOINT GASKET	SILICONE
M5	ARANDELA PRESION 3/8"	WASHER	STAINLESS STEEL
M6	TOR 8 X 1/2" P.H.	SCREW	STAINLESS STEEL
M7	80-342A S	SETTING BLOCK 80±5 SHORE A	SILICONE
M8	ES-EL100-G02A S	GLAZING GASKET	SILICONE
M9	ES-PGD3040-G04 S	BOTTOM SEAL	SILICONE
M10	TOR 8 X 1" P.H.	SCREW	STAINLESS STEEL
M11	TOR 12 X 1" P.H.	SCREW	STAINLESS STEEL
M12	DS-983	STRUCTURAL SILICONE	SILICONE
M13	DS-791	SEAL SILICONE	SILICONE
M14	ES-U7530 B01A S	SETTING BLOCK 80±5 SHORE A	SILICONE
M15	LAM. ALUMINUN 1/8" X 1220mm x 3050 mm	PANEL OP	ALUMINUM
M16	TOR 6 X 3/8" P.H.	SCREW	STAINLESS STEEL
M17	TOR 6 X 1/2" P.H.	SCREW	STAINLESS STEEL
M18	TOR 6 X 3/8" F.H.	SCREW	STAINLESS STEEL
M19	PGD 1110	SHORT BRACKET 1	STAINLESS STEEL
M20	PGD 1200	LARGE BRACKET 2	STAINLESS STEEL
M21	PGD 1210	SHORT BRACKET 2	STAINLESS STEEL
M22	PGD 1300	LARGE BRACKET 3	STAINLESS STEEL
M23	PGD 1310	SHORT BRACKET 3	STAINLESS STEEL
M24	PGD 1400	LARGE BRACKET 4	STAINLESS STEEL
M25	PGD 1410	SHORT BRACKET 4	STAINLESS STEEL
M26	PGD 1600	TOP BRACKET	STAINLESS STEEL
M27	PGD 1610	TOP ROLLER HOLDER	STAINLESS STEEL
M28	PGD 1810	BOTTOM BRACKET LEFT HAND SIDE	STAINLESS STEEL
M29	PGD 1820	BOTTOM BRACKET RIGHT HAND SIDE	STAINLESS STEEL
M30	PGD 1830	BOTTOM WHEEL HOLDER	STAINLESS STEEL
M31	PGD 1840	PIN + RETAINER	STAINLESS STEEL
M32	PGD 1900	HEAVY DUTY INSIDE DEADLOCK	STAINLESS STEEL
M33	PGD 8300	3" WHEEL ASEMBLY	-
M34	TOR #14 X 1"	SCREW	STAINLESS STEEL
M35	2015	DOOR TRACK	STAINLESS STEEL
M36	2015B	INSTALLATION ANGLE	STAINLESS STEEL
M37	2016	TRACK BRACKET	STAINLESS STEEL
M38	2017	DOOR TRACK FOR 2" WHEEL	STAINLESS STEEL
M39	PGD 8200	2" WHEEL ASSEMBLY	-

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