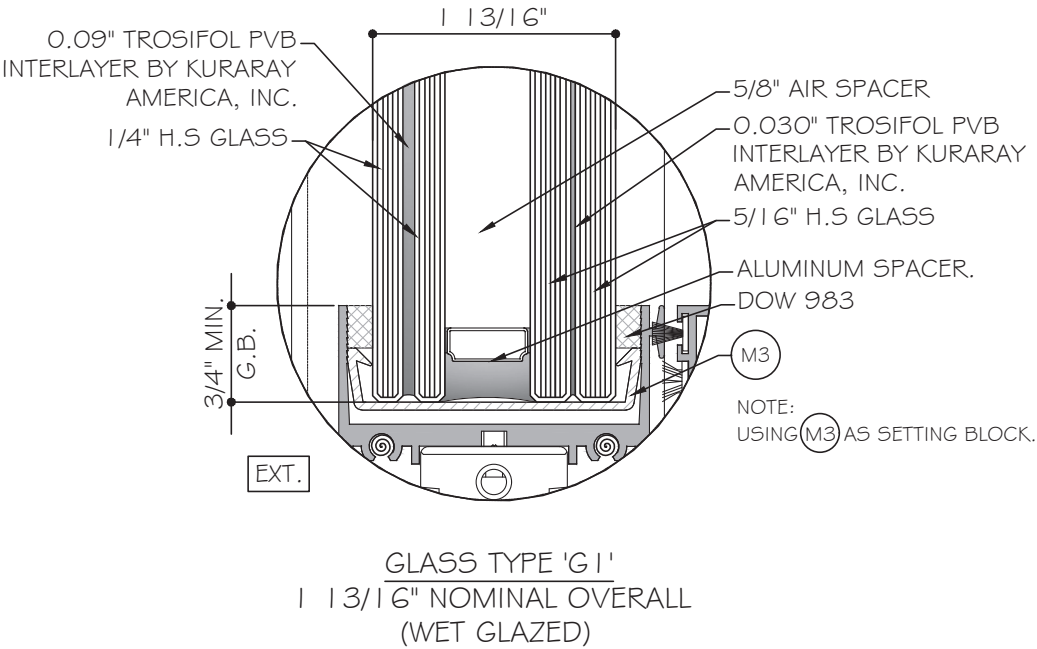


ES WINDOWS, INC.
SERIES PH3500 SLIDING GLASS DOOR
LARGE MISSILE IMPACT (L.M.I.)



GENERAL NOTES:

- 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).
- SLIDING DOORS ARE RATED FOR LARGE MISSILE IMPACT. IMPACT SHUTTERS ARE NOT REQUIRED.
- THESE SLIDING 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.
- WOOD BUCKS OR METAL STRUCTURES NOT BY ES WINDOWS, INC. DESIGNED TO SUPPORT THE LOADS IMPOSED BY THIS GLAZING SYSTEM AND TO TRANSFER SUCH LOADS TO THE BUILDING MAIN STRUCTURE.
- THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS. ULTIMATE LOAD OBTAINED FROM ASCE 7-22, MULTIPLY BY 0.6 SHALL BE LESS THAN OR EQUAL TO MAX. DESIGN LOAD IN THIS DOCUMENT.
- 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.
- SEALANT:
ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER GLAZING BEAD TO FRAME INSTALLATION SEALED WITH SILICONE SEALANT.

INSTRUCTIONS:
USE CHARTS AS FOLLOWS.

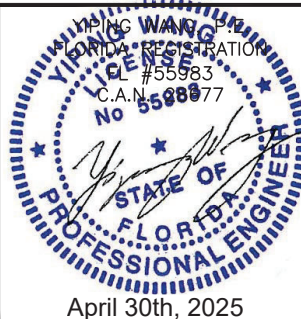
- STEP 1 DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-22 STANDARD OR WIND TUNNEL REPORTS.
- STEP 2 SEE SHEET E1 FOR DOOR SIZE AND DESIGN LOAD. SEE SHEET A1 FOR TYPICAL ANCHOR TYPES.
- STEP 3 THE LOWEST VALUE RESULTING FROM STEPS 2 SHALL APPLY TO ENTIRE SYSTEM.

NOTE:
GLASS COMPLIES WITH ASTM E1300-09
(3 SEC. GUSTS).

- 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.

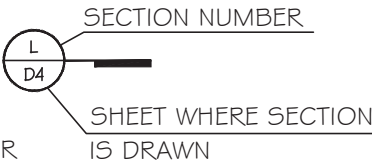
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ABBREVIATIONS AND SYMBOLS

- D.L.O. - DAYLITE OPENING
F.H. - FRAME HEIGHT
F.W. - FRAME WIDTH
W - WITH
W/O - WITHOUT
O.C. - ON CENTER
SGD - SLIDING GLASS DOOR
H.R. - HEAD RECEPTOR
AVE. - AVERAGE
G.B. - GLASS BITE



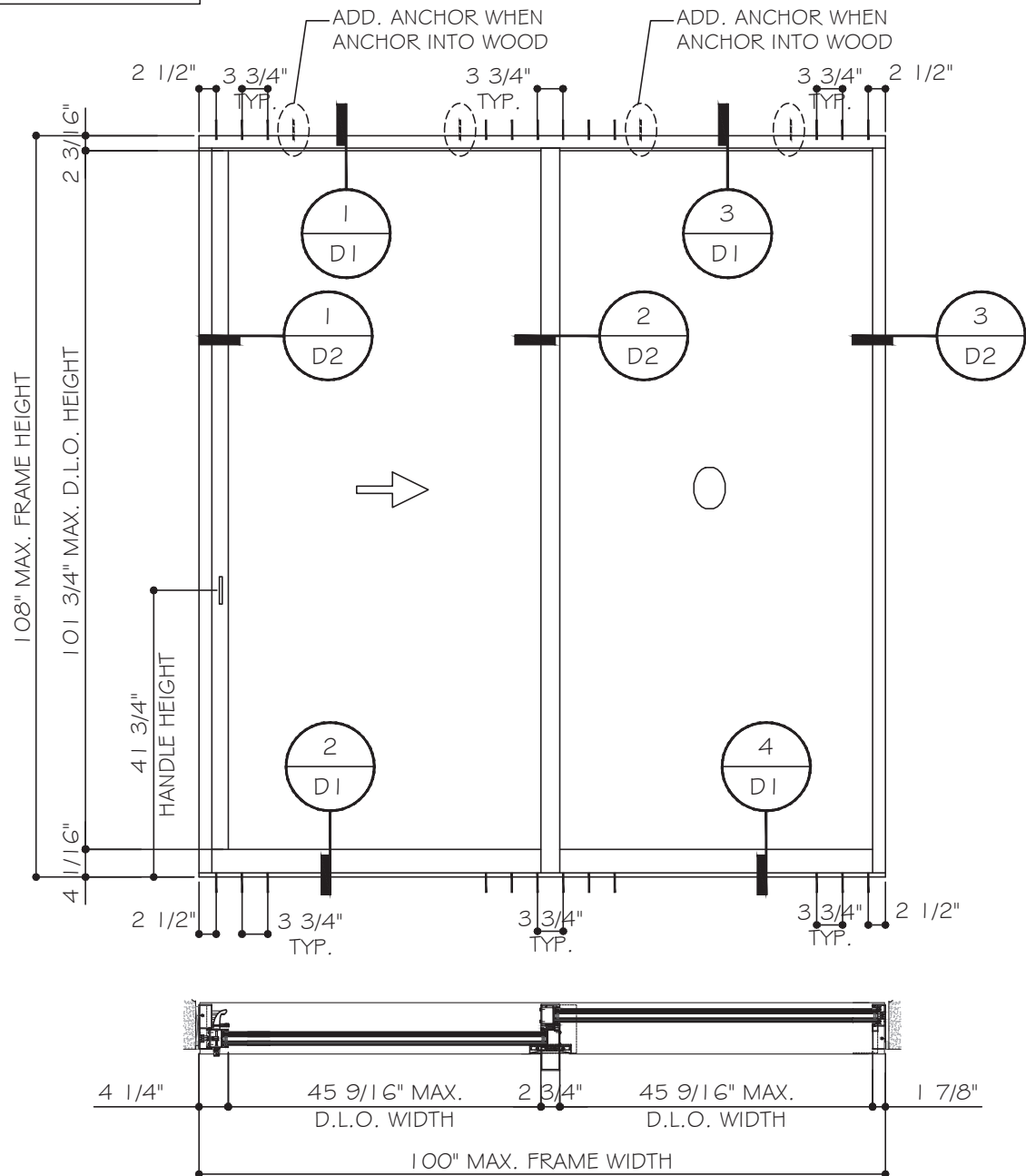
SERIES PH3500 SLIDING GLASS DOOR (L.M.I.)

ES WINDOWS, INC.
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NOTE:
USING ANCHOR TYPE
A/B/C REFER TO SHEET A1.

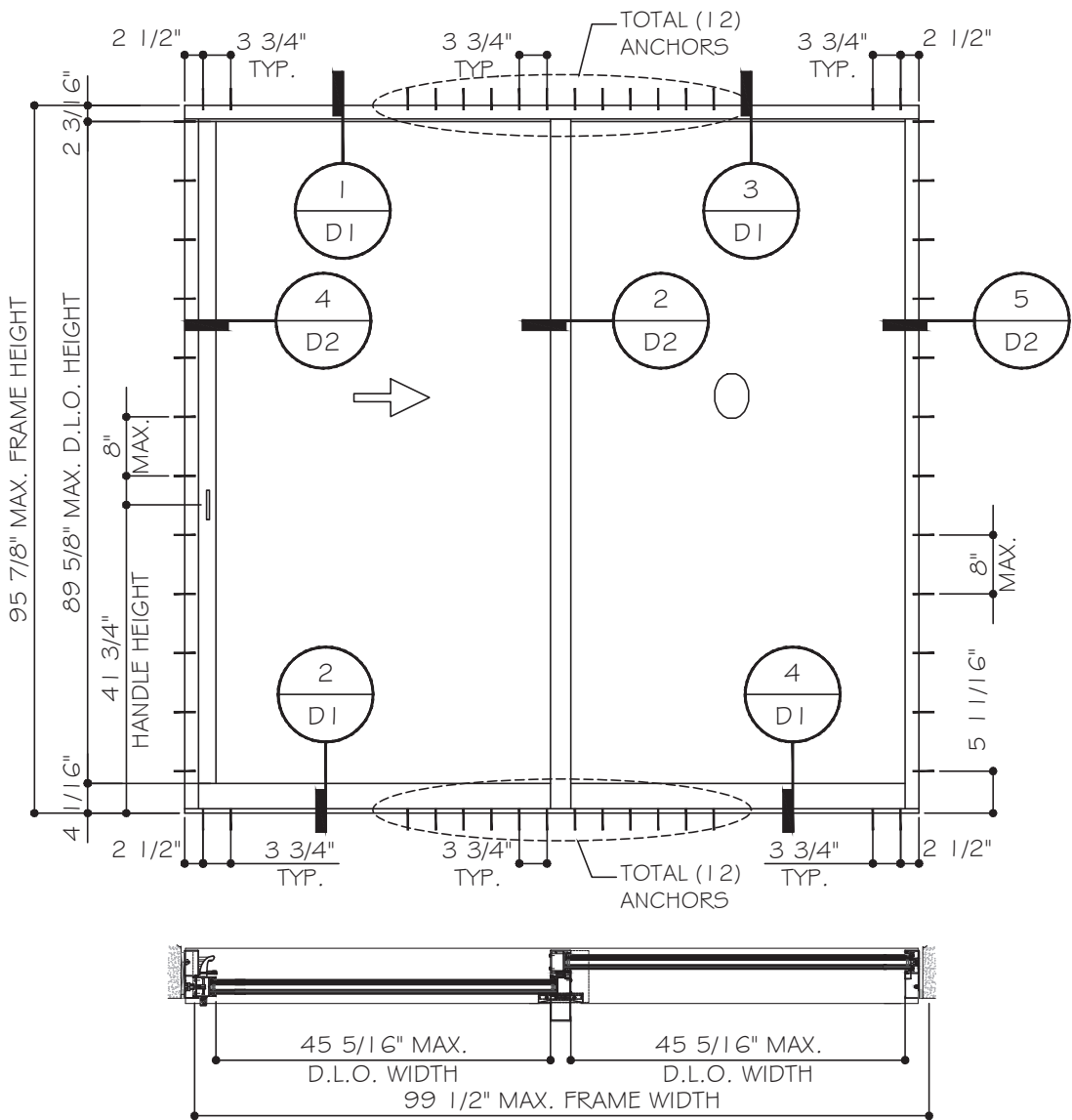


TYPICAL EXTERIOR ELEVATIONS

XO (SHOWN) OR OX (OPTION)

DESIGN LOADS (PSF)	
EXT. (+)	INT. (-)
80	80

NOTE:
USING ANCHOR TYPE
D/E/F REFER TO SHEET A1.



TYPICAL EXTERIOR ELEVATIONS

XO (SHOWN) OR OX (OPTION)

DESIGN LOADS (PSF)	
EXT. (+)	INT. (-)
61	111

FLORIDA APPROVAL:
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YIPING WANG
FLORIDA REGISTRATION
No. 55983
C.A.N. 00077
April 30th, 2025

SERIES PH3500 SLIDING GLASS DOOR (L.M.I.)

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ANCHOR TYPES: (SEE ELEVATION FOR SPACING)

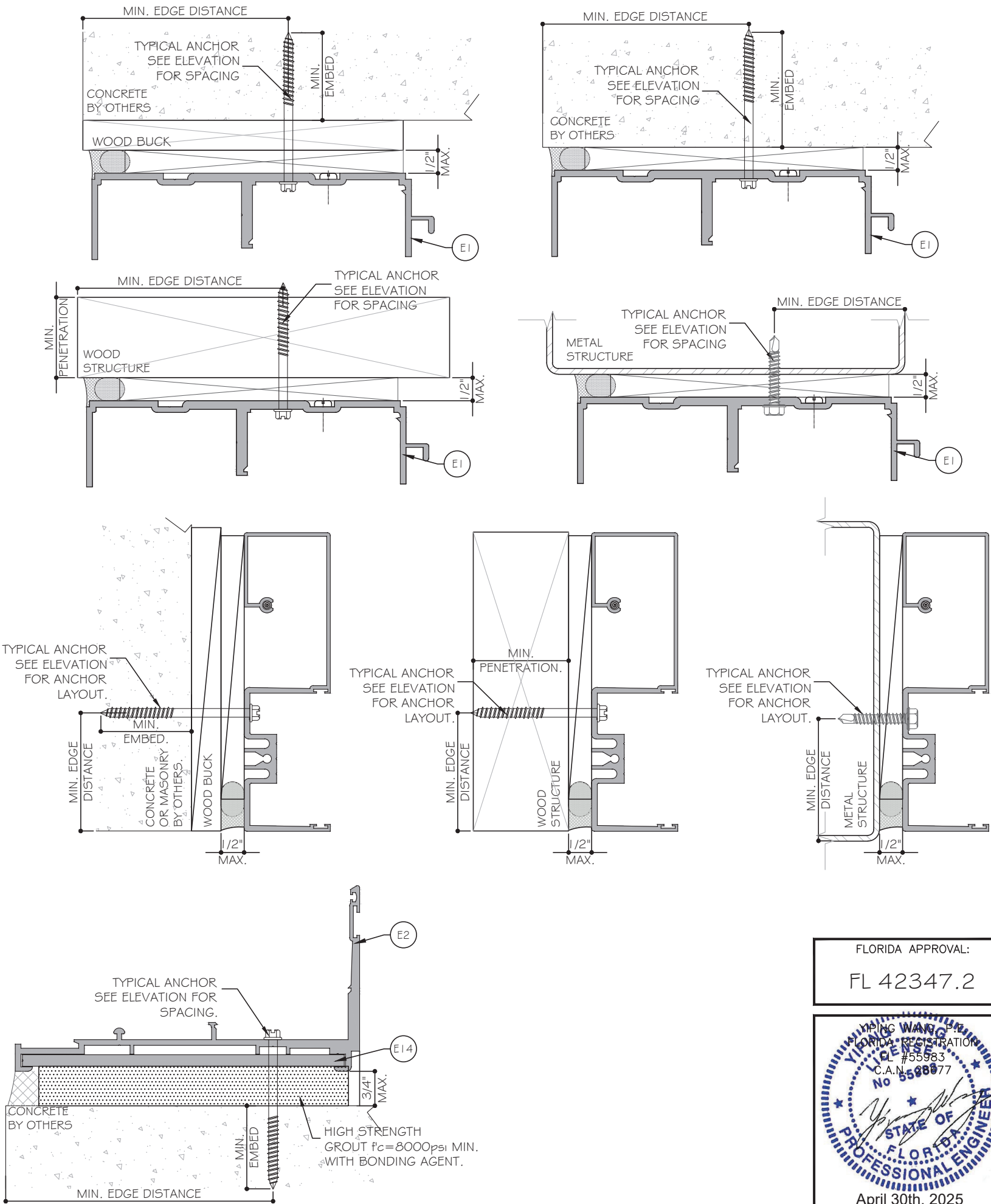
- TYPE 'A' -- 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
INTO 2 BY WOOD BUCKS OR WOOD STRUCTURES.
2" MIN. PENETRATION INTO WOOD.
- THRU 1 BY WOOD BUCK INTO CONCRETE
1 3/4" MIN. EMBED INTO CONCRETE (fc=4ksi MIN.).
- TYPE 'B' -- 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE (fc=4ksi MIN.).
1 3/4" MIN. EMBED IN TO CONCRETE
- TYPE 'C' -- 5/16" DIA. SELF DRILLING SCREW (GRADE 5 CRS, Fu=120ksi, Fy=92 ksi)
INTO FBC APPROVED MULLIONS
OR INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)
- TYPE 'D' -- 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO 2 BY WOOD BUCKS OR WOOD STRUCTURES W/ 1 1/2" MIN PENETRATION.
OR THRU WOOD INTO CONCRETE OR MASONRY W/ 1 3/4" MIN. PENETRATION.
- TYPE 'E' -- 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE (fc=3050 psi MIN.)
W/ 1 3/4" MIN. EMBED IN TO CONCRETE
OR ANCHOR INTO BLOCKS WITH 1 3/4" EMBED. (JAMB ONLY)
- TYPE 'F' -- 1/4" DIA. SELF DRILLING SCREWS (GRADE 5 CRS, Fu=120ksi, Fy=92 ksi)

INTO FBC APPROVED MULLIONS
OR INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

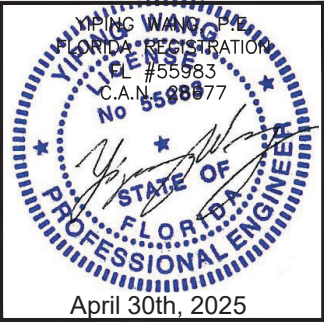
SUBSTRATE
WOOD: SG=0.55 MIN.
ALUMINUM: 1/8" THK. MIN.(6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (A36 MIN.)
C-90 HOLLOW/GROUT FILLED BLOCK AT JAMBS: fm=2ksi MIN.

ANCHOR EDGE DISTANCE
INTO CONCRETE = 2-1/2" MIN.
INTO METAL STRUCTURE = 3/4" MIN.
INTO WOOD STRUCTURE = 1" MIN.

NOTE:
WOOD STRUCTURES & METAL STRUCTURES BY
OTHERS MUST BE PROPERLY SECURED TO SUPPORT
LOADS IMPOSED BY GLAZING SYSTEM AND
TRANSFER THEM TO THE BUILDING STRUCTURES.



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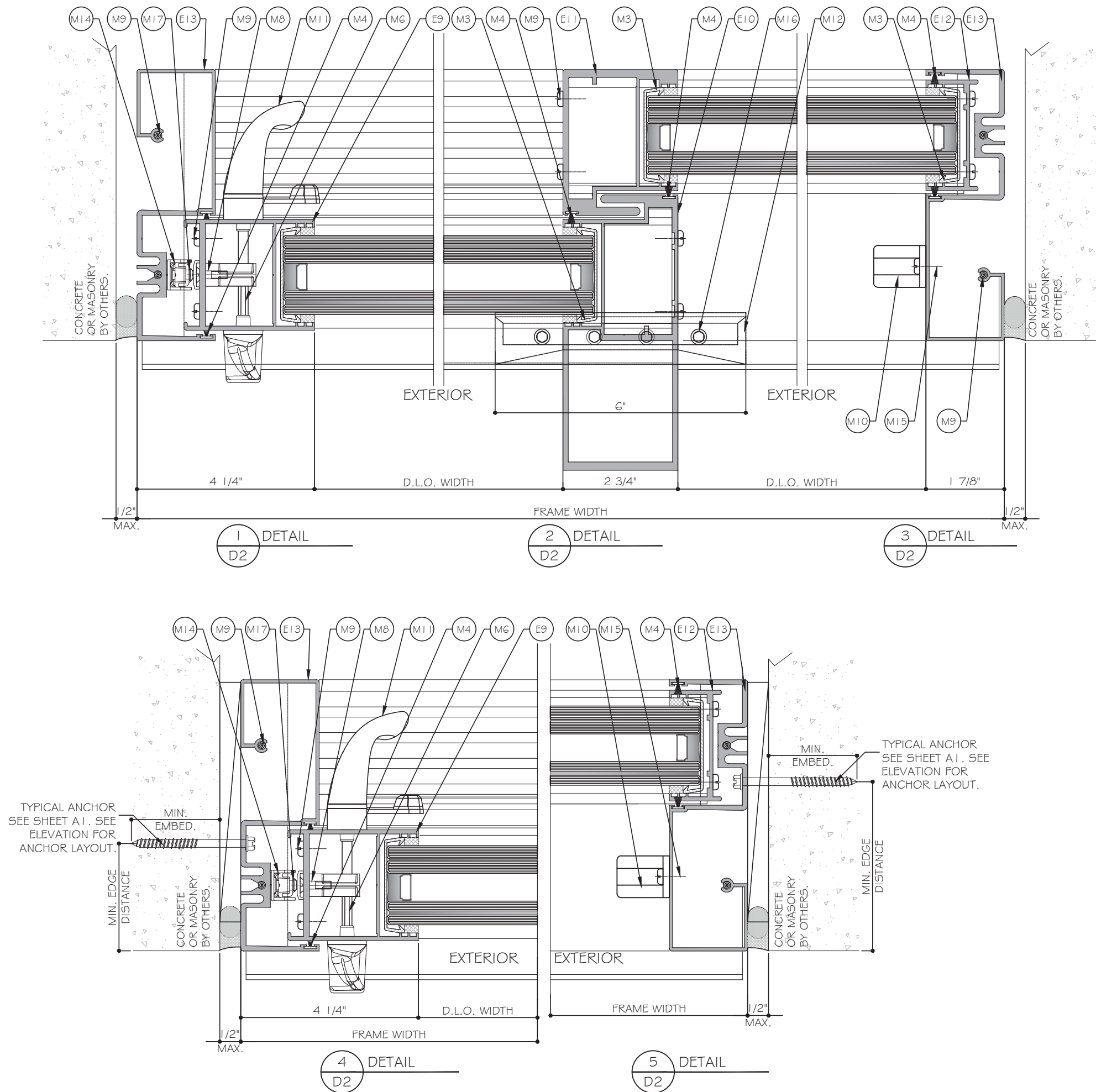
Rev. No.	Date	Drawn By	Description
2	04/28/2025	James	REV/ISO11
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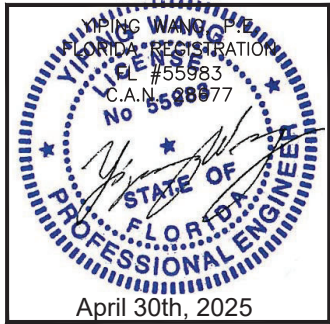
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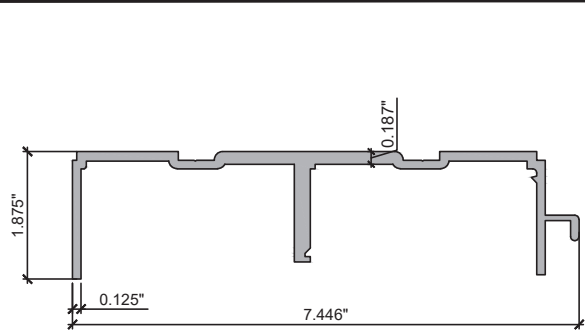
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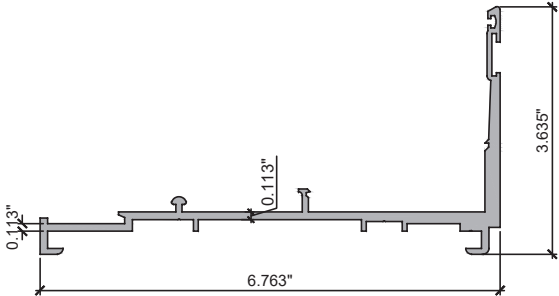
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2	04/28/2025	James	REV/ISO
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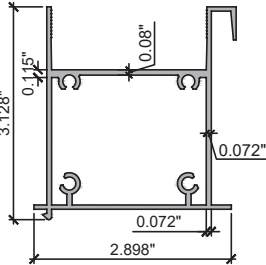
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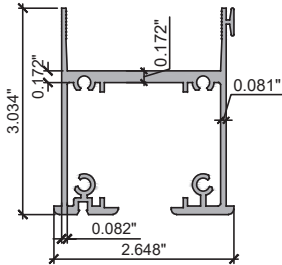
E1 FRAME HEAD
PH3500-001 6005-T5



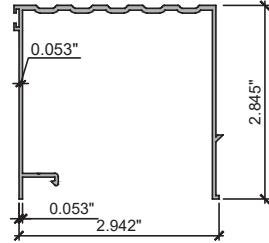
E2 FRAME SILL
PH3500-002 6005-T5



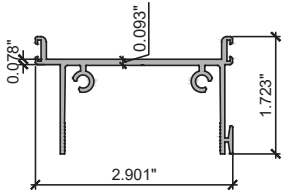
E3 INSIDE FIXED BOTTOM RAIL
PH3500-003 6005-T5



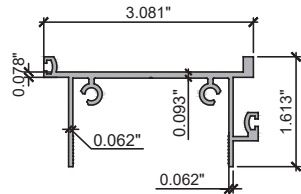
E4 OUTSIDE BOTTOM RAIL
PH3500-004 6005-T5



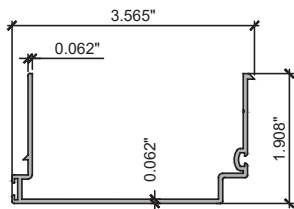
E5 THRESHOLD
PH3500-005 6005-T5



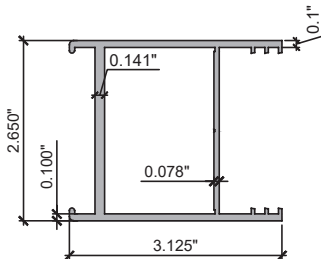
E6 OUTSIDE TOP RAIL
PH3500-006 6063-T6



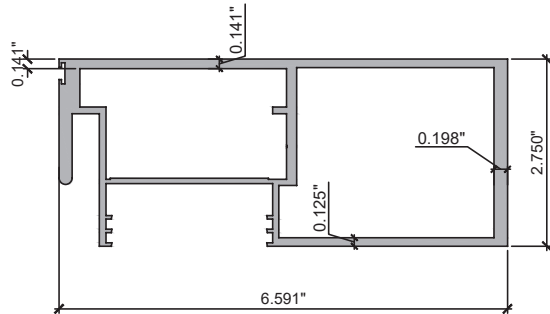
E7 FIXED INSIDE TOP RAIL
PH3500-007 6063-T6



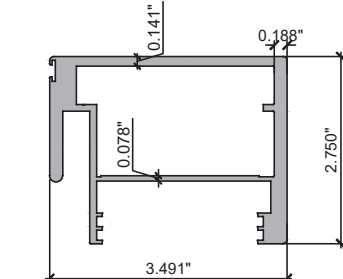
E8 HEAD CLOUSER ADAPTER
PH3500-008 6063-T6



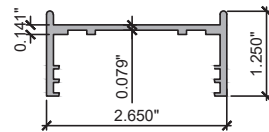
E9 LOCKSTILE
PH3500-009 6063-T6



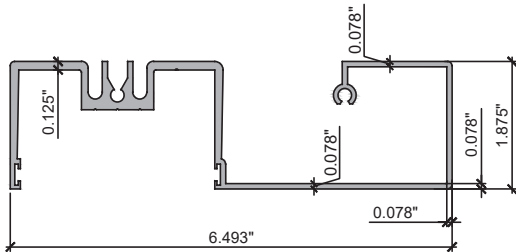
E10 HEAVY INTERLOCK
PH3500-010 6005-T5



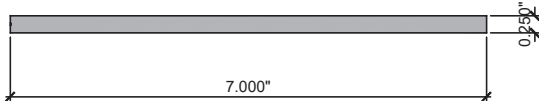
E11 INTERLOCK
PH3500-011 6005-T5



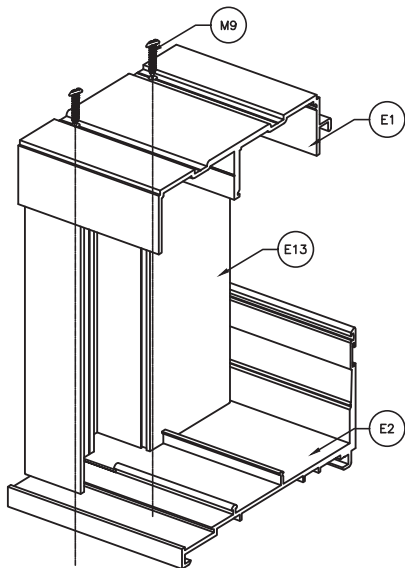
E12 FIXED STILE
PH-3500-012 6063-T6



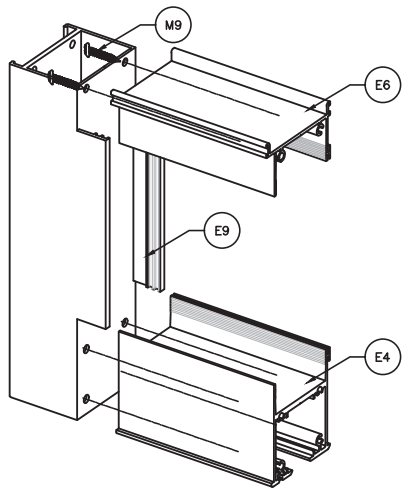
E13 FRAME JAMB
PH3500-013 6063-T6



E14 SILL TRACK PLATE
PH3500-014 6061-T6



FRAME CORNER ASSEMBLY



PANEL CORNER ASSEMBLY

FLORIDA APPROVAL:
FL 42347.2



SERIES PH3500 SLIDING GLASS DOOR (L.M.I.)

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BILL OF MATERIALS				
ITEM	PART	DESCRIPTION	MATERIAL	MANUF.
E1	PH-3500-001	FRAME HEAD	6005-T5	ES WINDOWS
E2	PH-3500-002	FRAME SILL	6005-T5	ES WINDOWS
E3	PH-3500-003	INSIDE FIXED BOTTOM RAIL	6005-T5	ES WINDOWS
E4	PH-3500-004	OUTSIDE BOTTOM RAIL	6005-T5	ES WINDOWS
E5	PH-3500-005	THRESHOLD	6005-T5	ES WINDOWS
E6	PH-3500-006	OUTSIDE BOTTOM RAIL	6063-T6	ES WINDOWS
E7	PH-3500-007	FIXED INSIDE TOP RAIL	6063-T6	ES WINDOWS
E8	PH-3500-008	HEAD CLOSER ADAPTOR	6063-T6	ES WINDOWS
E9	PH-3500-009	LOCKSTILE	6063-T6	ES WINDOWS
E10	PH-3500-010	HEAVY INTERLOCK	6005-T5	ES WINDOWS
E11	PH-3500-011	INTERLOCK	6005-T5	ES WINDOWS
E12	PH-3500-012	FIXED STILE	6063-T6	ES WINDOWS
E13	PH-3500-013	FRAME JAMB	6063-T6	ES WINDOWS
E14	PH-3500-014	SILL TRACK PLATE	6061-T6	ES WINDOWS
M1	V-019A S	DRIP SILL VINYL OUTER PANEL EDGE	POLYVINYL CHLORIDE	-
M2	V-026	BULD GASKET	POLYVINYL CHLORIDE	-
M3	PH3400-G01	GLAZING GASKET	EPDM DURO 70 SHORE A	-
M4	W73285NK	WEATHER STRIPPING	POLYPROPYLENE	-
M5	W31245NK	WEATHER STRIPPING	POLYPROPYLENE	-
M6	PS01-1020	MORTISE TWO POINT LOCK 30 MM, FIXED WITH (2) #10X1" FH SMS	ZINC DIE CAST	-
M7	GTT 354/460A	TANDEM NYLON WHEEL, FIXED WITH (1) #10-32 X 1 1/2" FH MS	NYLON	-
M8	-	#10X1" FH SCREW FOR LOCK	STAINLESS STEEL	-
M9	-	#12X1" PH SCREW FOR ASSEMBLY	STAINLESS STEEL	-
M10	P-047	BUMPER	POLYVINYL CHLORIDE	-
M11	PS01-0014-FINISH	HARDWARE KIT	ALUMINUM	-
M12	PS01-5001-000	SILL TRACK 6" LG.	ALUMINUM	-
M13	V2208 1/4" X 1/2" X50" CIS	T-BOND	POLYURETHANE	-
M14	PS01-0060-00B	TWO POINT STRIKE, FIXED WITH (2) #8X3/4" PH SMS	STAINLESS STEEL	-
M15	-	#10X5/8" PH SCREW FOR BUMPER	STAINLESS STEEL	-
M16	-	(4) 1/4"-20X3/4" SH FOR SILL TRACK	STAINLESS STEEL	-
M17	-	#8X3/4" PH SCREW FOR STRIKE	STAINLESS STEEL	-
M18	P3802AFK	PILE PAD 1.75	POLYPROPYLENE	-
M19	PS01-0324-117	SNIB	ALUMINUM	-

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