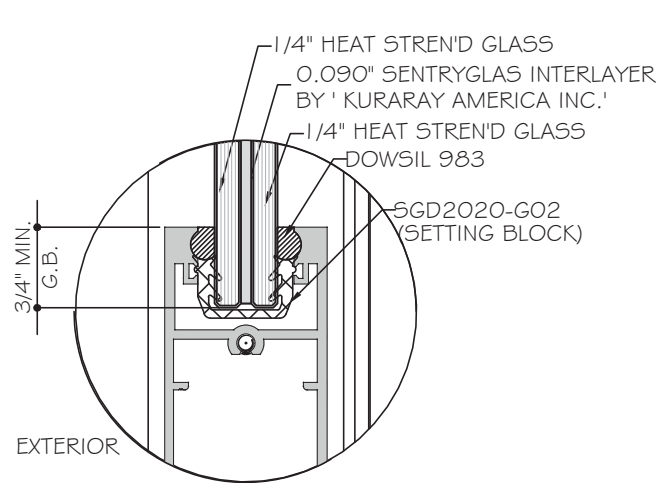
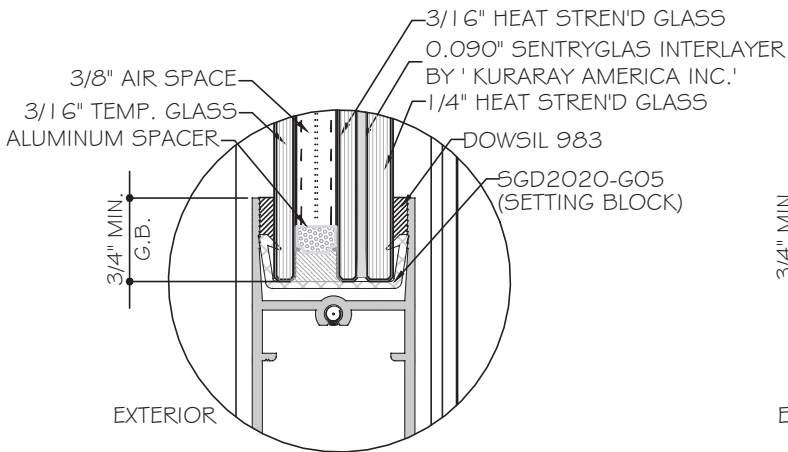


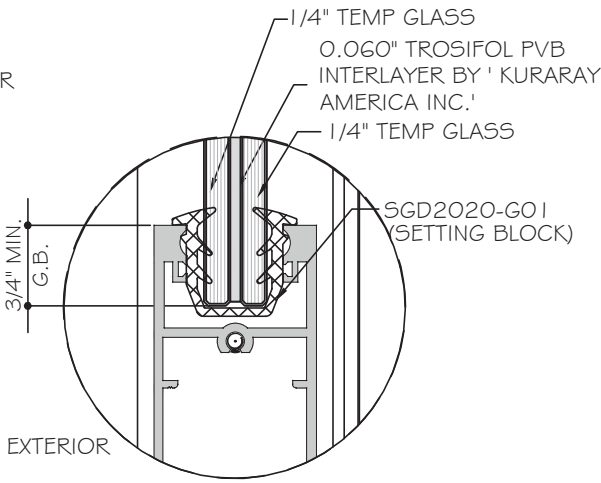
SERIES ES-FX2020 FIX WINDOWS
LARGE MISSILE IMPACT AND SMALL MISSILE IMPACT



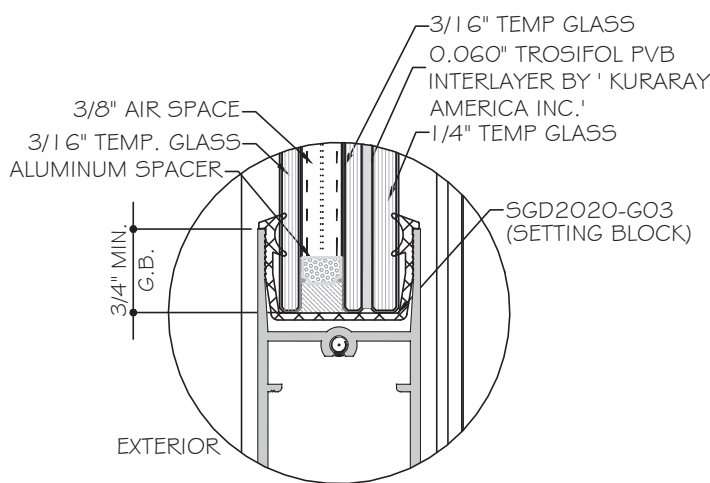
GLASS TYPE 'G1' (WET GLAZED)
9/16" NOMINAL OVERALL
LARGE MISSILE IMPACT



GLASS TYPE 'G2' (WET GLAZED)
1 1/16" NOMINAL OVERALL
LARGE MISSILE IMPACT



GLASS TYPE 'G3' (DRY GLAZED)
9/16" NOMINAL OVERALL
SMALL MISSILE IMPACT



GLASS TYPE 'G4' (DRY GLAZED)
1 1/16" NOMINAL OVERALL
SMALL MISSILE IMPACT

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

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).
- WINDOWS ARE RATED FOR LARGE AND SMALL MISSILE IMPACT. IMPACT SHUTTERS ARE NOT REQUIRED. LARGE MISSILE IMPACT IS USED FOR INSTALLATION UP TO 30 FT. SMALL MISSILE IMPACT IS USED FOR INSTALLATION ABOVE 30 FT.
- THESE WINDOWS 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.
- 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.

-SEALANTS:

ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER GLAZING BEAD TO FRAME INSTALLATION FASTENERS SEALED WITH SILICONE SEALANT.

INSTRUCTIONS:

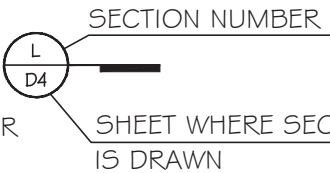
USE CHARTS AS FOLLOWS.

- 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 & E2 FOR APPROVED CONFIGURATION AND CAPACITY.
- STEP 3** TYPICAL ANCHOR SEE SHEET A1 FOR ANCHOR TYPE. SEE SHEET E1 & E2 FOR ANCHOR LAYOUT.
- STEP 4** THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 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
SGD - SLIDING GLASS DOOR
H.R. - HEAD RECEPTOR
AVE. - AVERAGE

G.B. - GLASS BITE

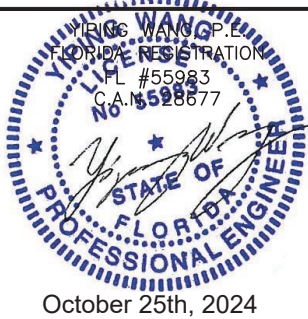


LIMITATIONS OF USE

- 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.

FLORIDA APPROVAL:

FL#28067.2



SERIES ES-FX2020 FIX WINDOW (L.M.I.& S.M.I.)

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mcy@mcyengineering.com

Drawn Date

10/25/2024

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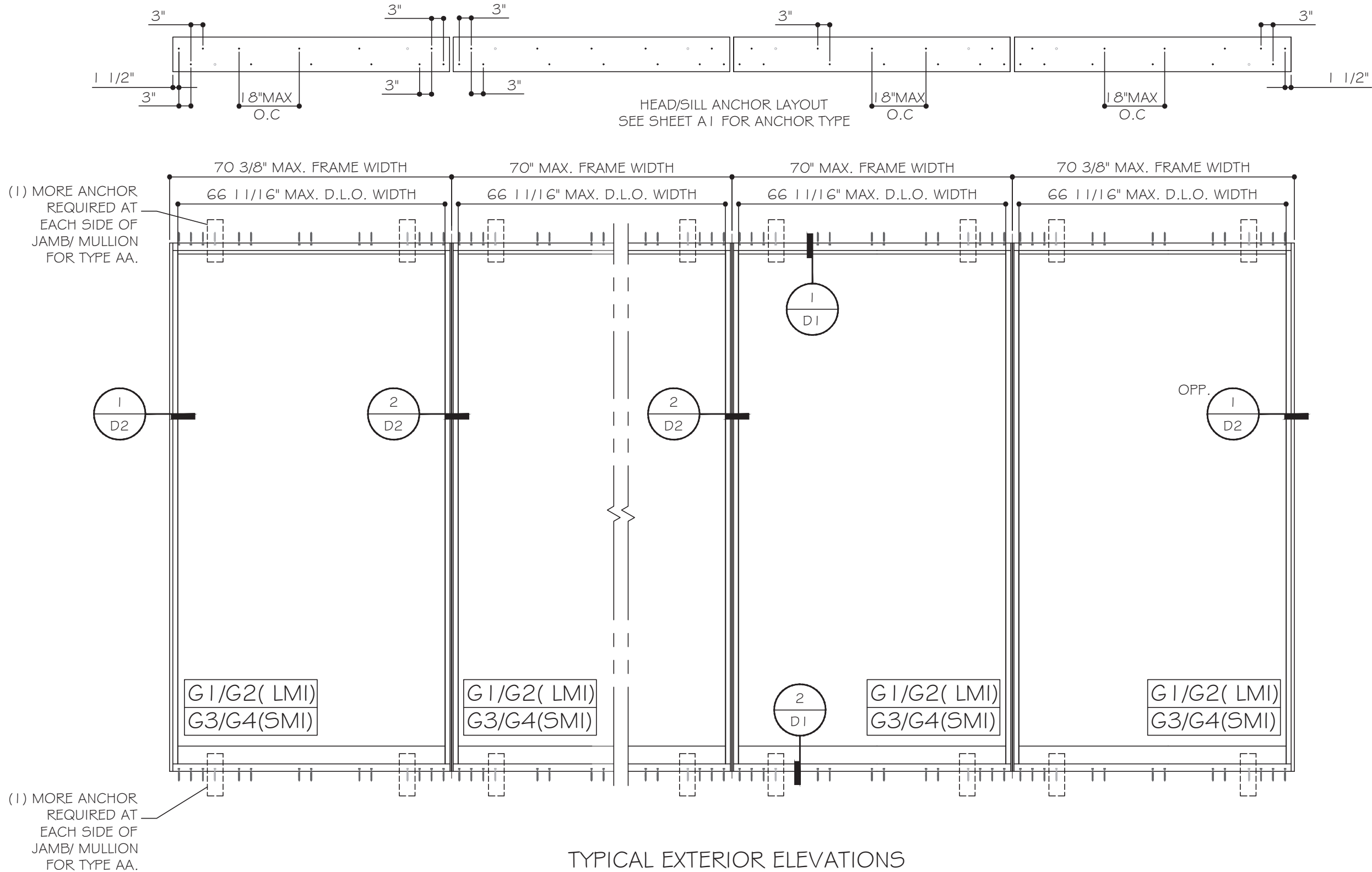
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COVER

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TYPICAL EXTERIOR ELEVATIONS
FOR SIZE SHOWN ABOVE OR SMALLER AS PERMITTED BY FBC.
MAX. DESIGN LOADS - PSF
+/- 80



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Professional Engineer Seal for YONG WANG, P.E., License No. 55983, State of Florida. Date: October 25th, 2024.

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TYPICAL ANCHOR

TYPE "AA": 1/4" DIA. ULTRACON+ BY DEWALT ($F_u=164$ KSI, $F_y=148$ KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURE.
WITH 1 1/2" MIN. PENETRATION.
OR THRU 1BY WOOD BUCK INTO CONCRETE.
WITH 1 3/4" MIN. EMBEDMENT.

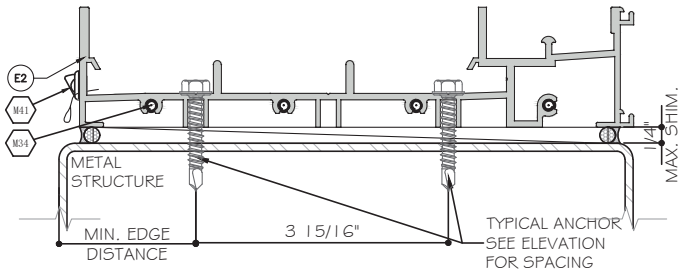
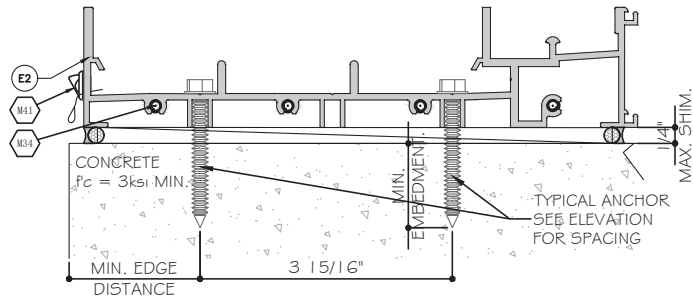
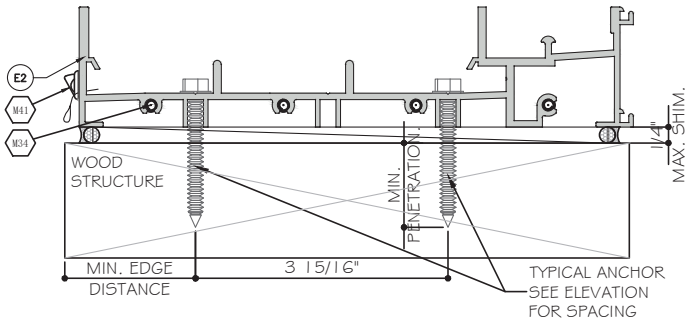
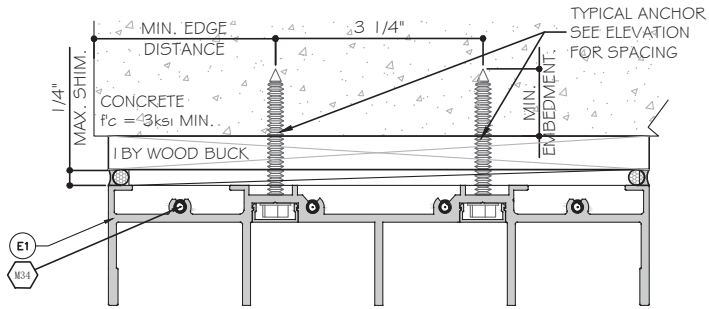
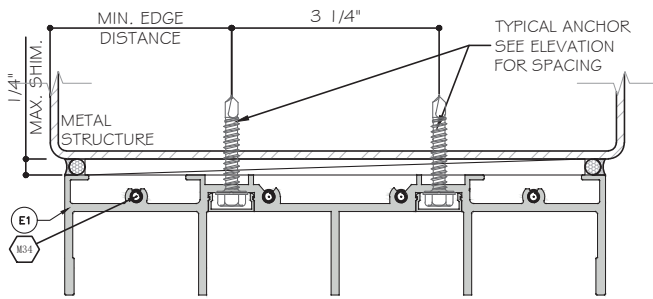
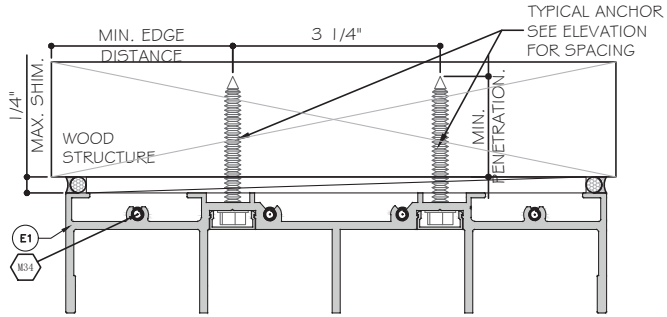
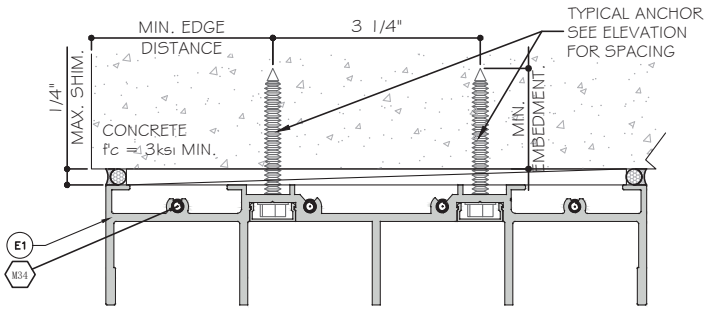
TYPE "A": 1/4" DIA. ULTRACON+ BY DEWALT ($F_u=164$ KSI, $F_y=148$ KSI)
DIRECTLY INTO CONCRETE.
WITH 1 3/4" MIN. EMBEDMENT.

TYPE "B": 1/4" DIA. TEKS/DRIL-FLEX SCREW GRADE 5 ($F_u=120$ KSI, $F_y=92$ KSI)
INTO METAL STRUCTURES OR FLORIDA APPROVED MULLION
(3) THREADS MIN. PENETRATION BEYOND METAL SUBSTRATES

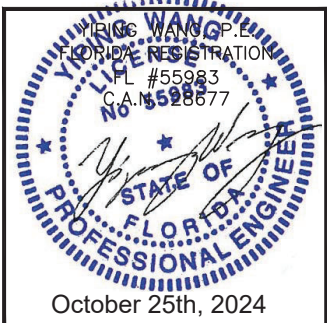
ANCHOR EDGE DISTANCE:
INTO WOOD STRUCTURE: 1" MIN.
INTO CONCRETE = 2 1/2" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

SUBSTRATE:
WOOD SG: 0.55 MIN.
CONCRETE: $f'_c=3$ ksi MIN.
ALUMINUM: 1/8" THK MIN. (6063-T5 MIN.)
STEEL: 1 GGA THK. MIN. ASTM 653 GRADE 33 ($F_y=33$ ksi) MIN.
(STEEL IN CONTACT WITH ALUMINUM TO BE PAINTED OR PLATED)

1X OR 2X WOOD BUCKS AND METAL STRUCTURES
NOT BY E.S. WINDOWS MUST SUPPORT LOADS
IMPOSED BY GLAZING SYSTEM AND TRANSFER
THEM TO THE BUILDING STRUCTURE.



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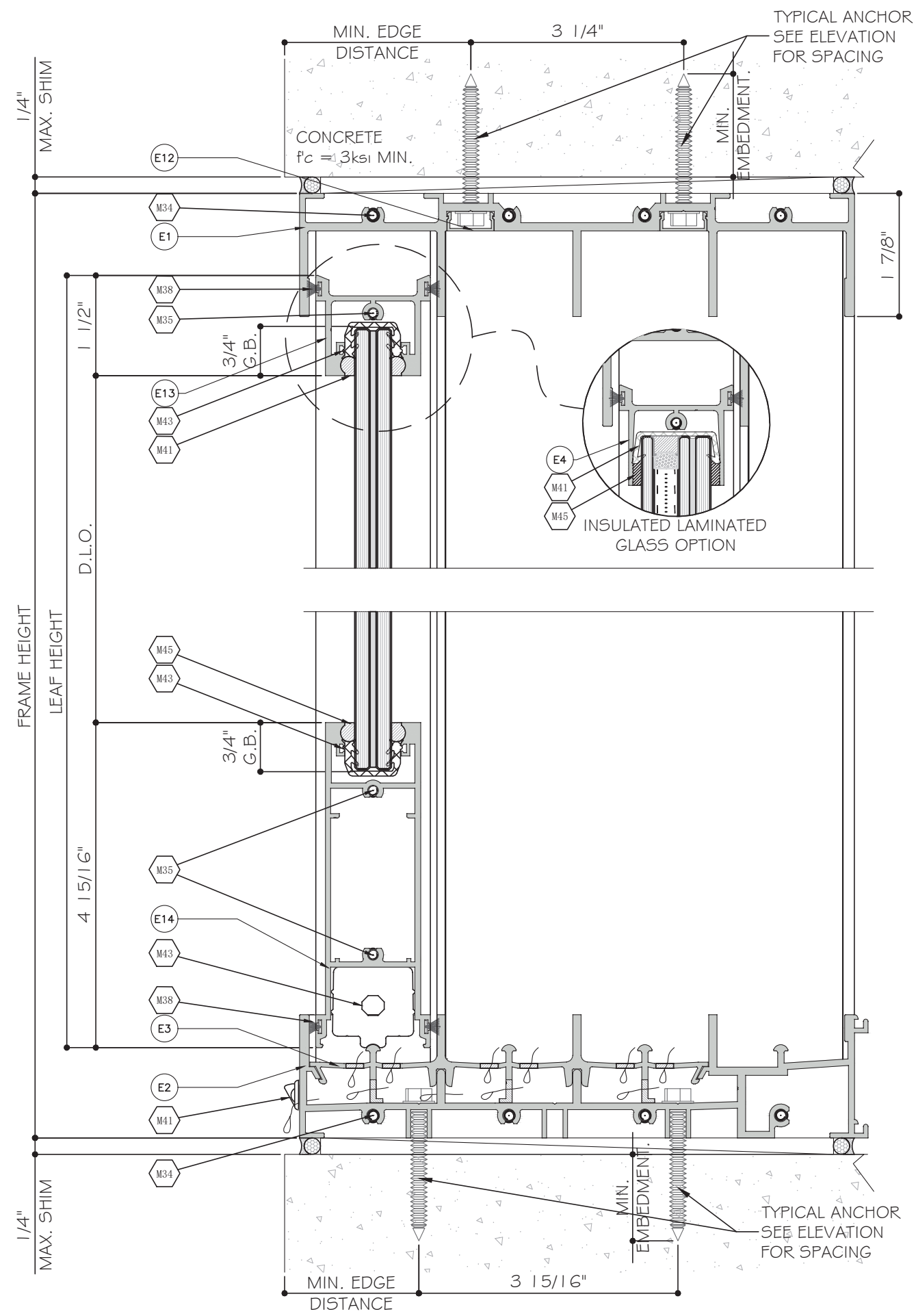


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1
D1
DETAIL

2
D1
DETAIL

WET GLAZED SHOWN, SEE SHEET
01 FOR DRY GLAZED OPTION.

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FL#28067.2

YONG WANG, P.E.
FLORIDA REGISTRATION
No. 55983
October 25th, 2024

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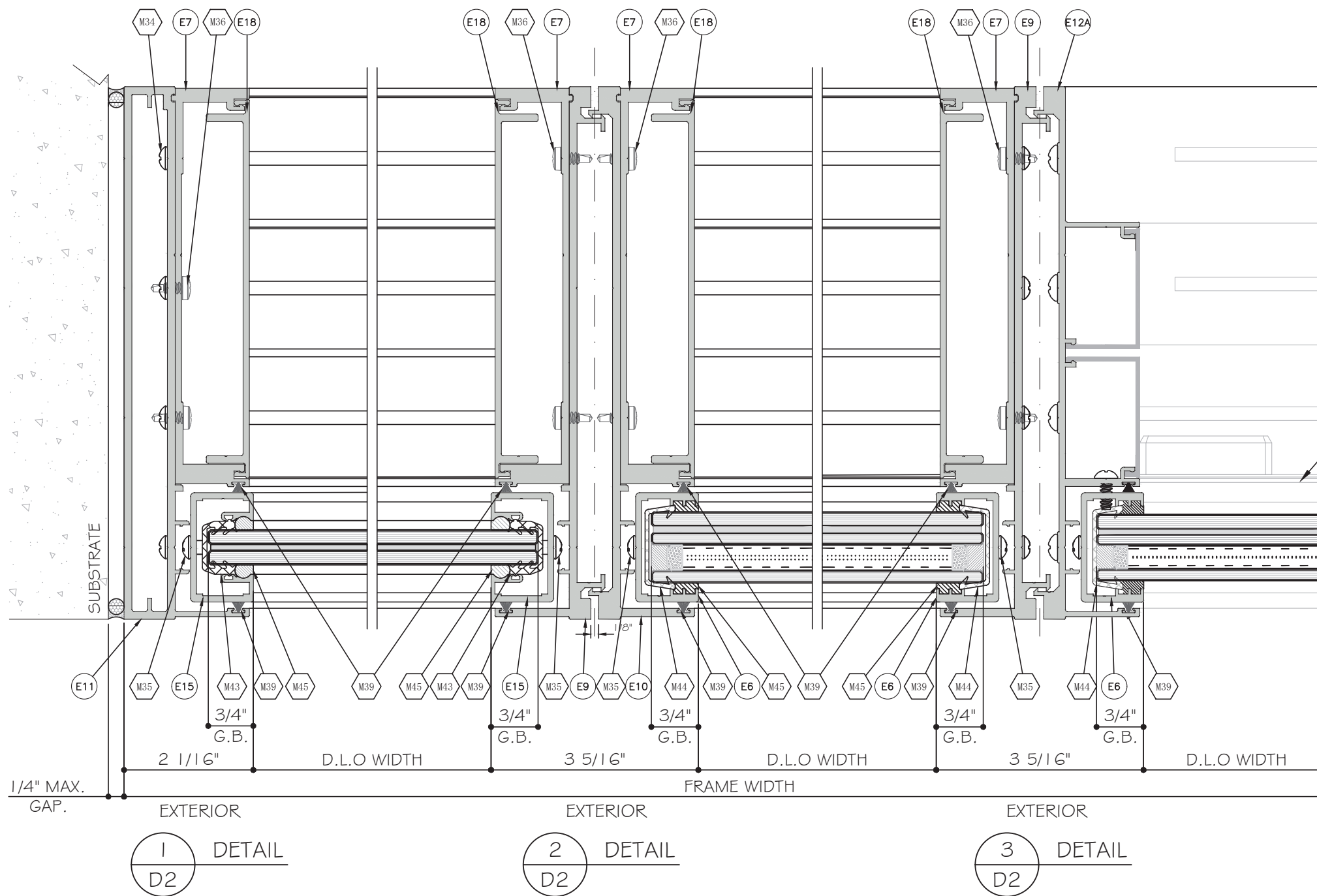
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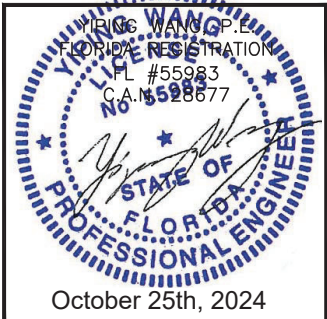
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WET GLAZED SHOWN, SEE SHEET
01 FOR DRY GLAZED OPTION.

SEE E5 WINDOW
SGD-2020
IN SEPARATE
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M

C

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E1 FRAME HEAD 4 TRACK
E5-SGD2020-034 6063-T6

E2 FRAME SILL 4 TRACK
E5-SGD2020-034 6063-T6

E3 FRAME SILL COVER 4 TRACK
E5-SGD2020-036 6063-T6

E4 TOP RAIL INSULATED LAMINATED
E5-SGD2020-028 6063-T6

E5 BOTTOM RAIL INSULATED LAMINATED
E5-SGD2020-029 6063-T6

E6 FIXED STILE FOR INSULATED LAMINATED
E5-SGD2020-030 6063-T6

E7 PRESSURE PLATE 4 TRACKS
E5-SGD2020-079 6063-T6

E8 PRESSURE PLATE COVER
E5-SGD2020-080 6063-T6

E9 TOP RAIL FOR LAMINATED
E5-SGD2020-074 6063-T6

E10 FEMALE MULLION 4 TRACKS
E5-SGD2020-075 6063-T6

E11 FREE STANDING JAMB
E5-FX2020-001 6063-T6

E12 JAMB SCREW COVER
E5-6011 6063-T6

E13 TOP RAIL FOR LAMINATED
E5-SGD2020-024 6063-T6

E14 BOTTOM RAIL FOR LAMINATED
E5-SGD2020-025 6063-T6

E15 FIXED STILE FOR LAMINATED
E5-SGD2020-026 6063-T6

E12A MALE CONNECTING JAMB 4 TRACKS
E5-SGD2020-077 6063-T6

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PARTS

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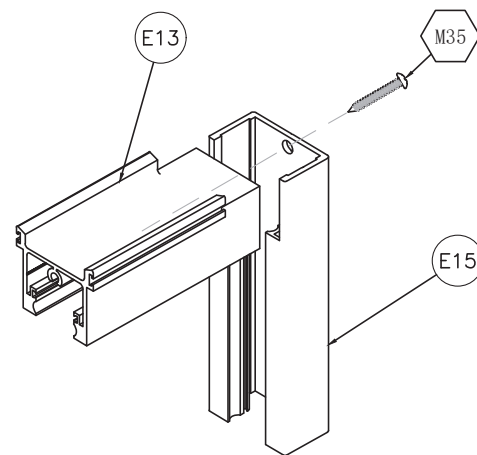
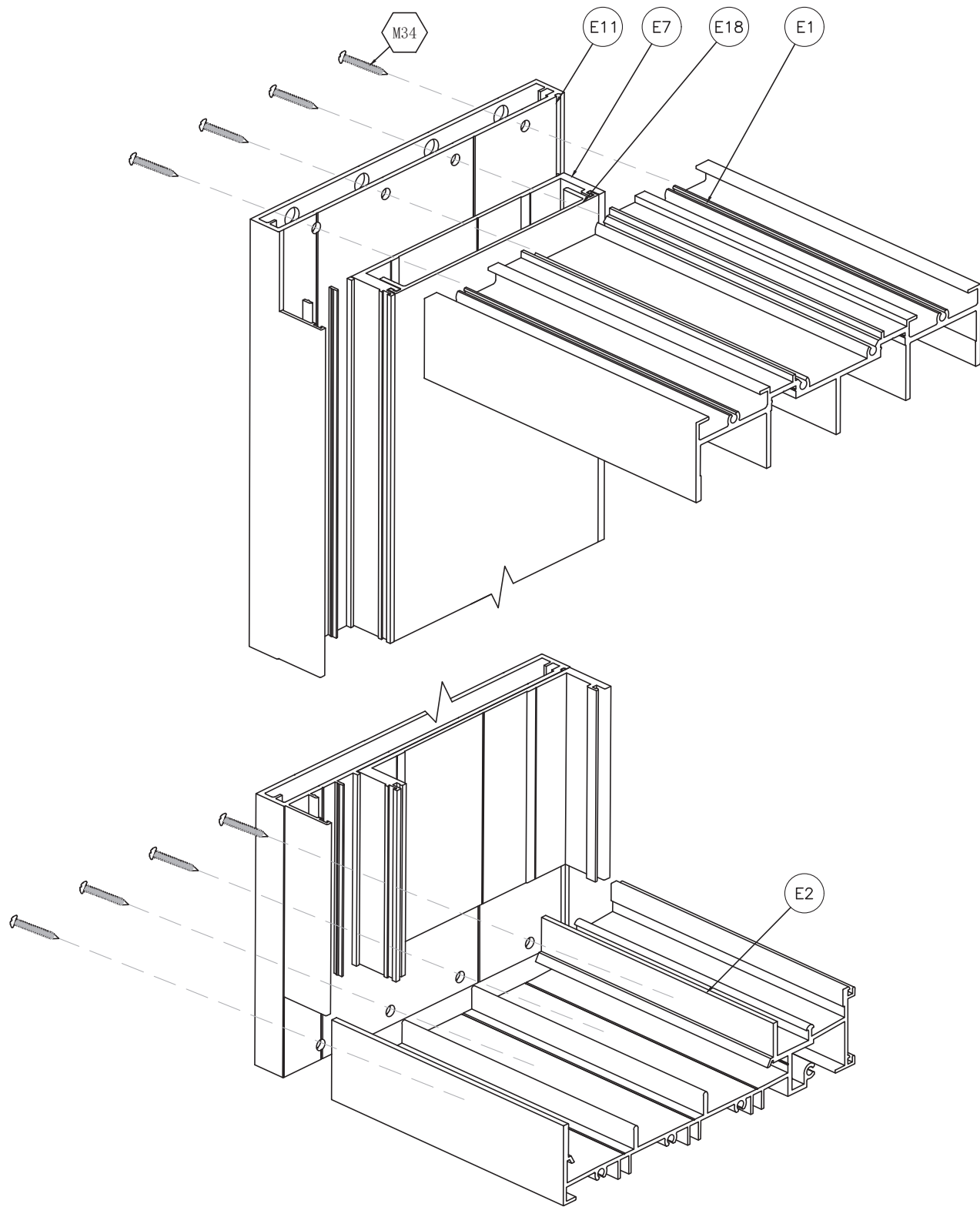
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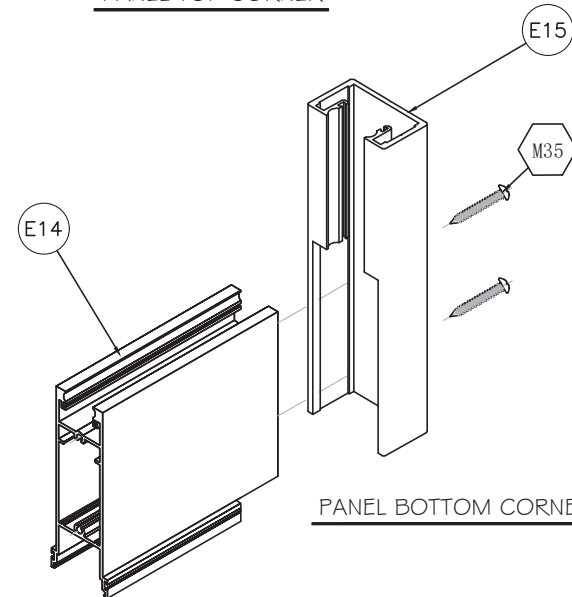
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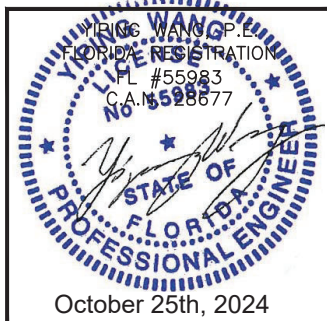


PANEL TOP CORNER



PANEL BOTTOM CORNER

FLORIDA APPROVAL:
FL#28067.2



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