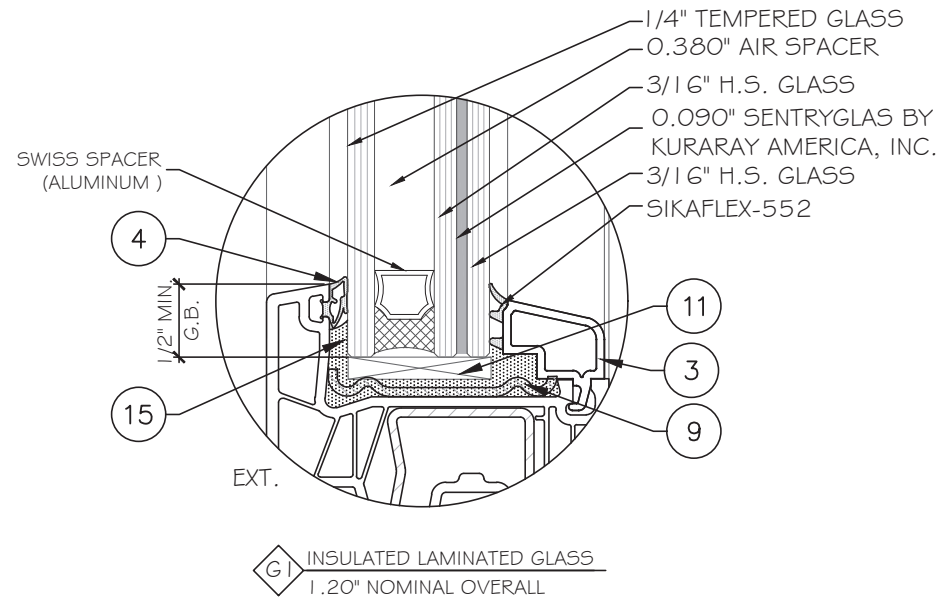


ES WINDOWS, INC.

SERIES 76MD BALCONY DOOR -LARGE MISSILE IMPACT



GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 8TH EDITION FLORIDA BUILDING CODE (2023) INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- PRODUCTS ARE RATED FOR LARGE MISSILE IMPACT. IMPACT SHUTTERS ARE NOT REQUIRED.
- PRODUCTS 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 8TH EDITION FLORIDA BUILDING CODE (2023) SECTION AS APPLICABLE.
- WOOD BUCKS AND 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.
- ALL JOINT AND FRAME CONNECTION SEALED WITH SILICONE SEALANT.
- 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.

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

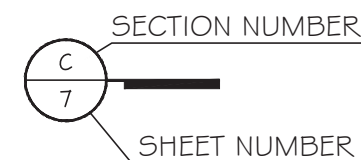
INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1:** DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-22 STANDARD.
- STEP 2:** SEE SHEET 02 FOR APPROVED TYPICAL ELEVATION.
- STEP 3:** SEE SHEET COVER FOR GLASS TYPE.
- STEP 4:** ANCHOR OPTION SEE SHEET 05. ANCHOR LAYOUT SEE SHEET 02.
- STEP 5:** THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

ABBREVIATIONS AND SYMBOLS

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

FL44618

YIRNG WANG
PROFESSIONAL REGISTERED
ENGINEER
L.A.N. 28677
No 55985

STATE OF FLORIDA
PROFESSIONAL ENGINEER

May 06, 2024

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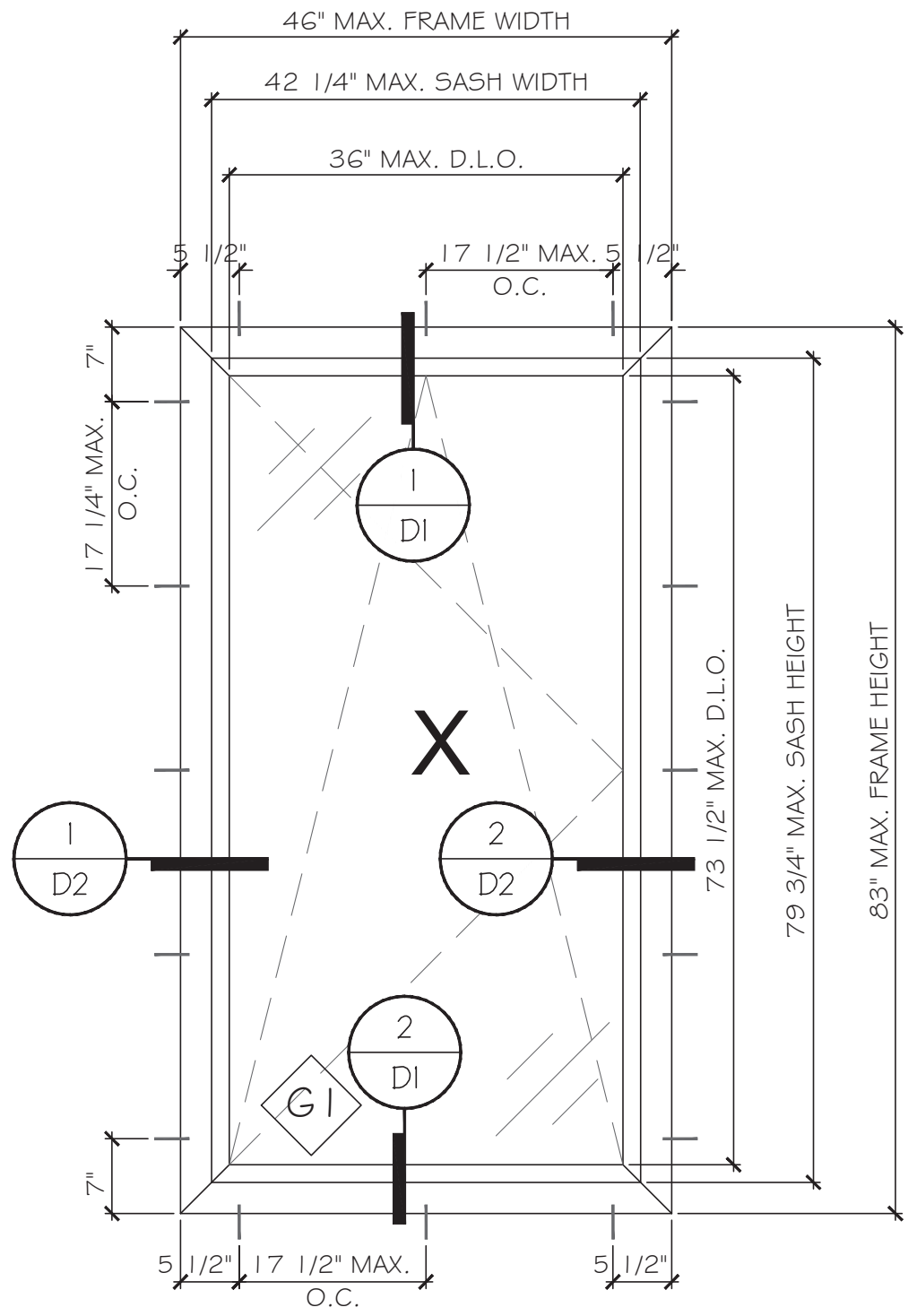
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COVER

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TYPICAL EXTERIOR ELEVATIONS

DESIGN LOAD (PSF)			
MAX. F.W.	MAX. F.H.	DESIGN PRESSURE	GLASS TYPE
46"	83"	± 65.0 PSF	G1

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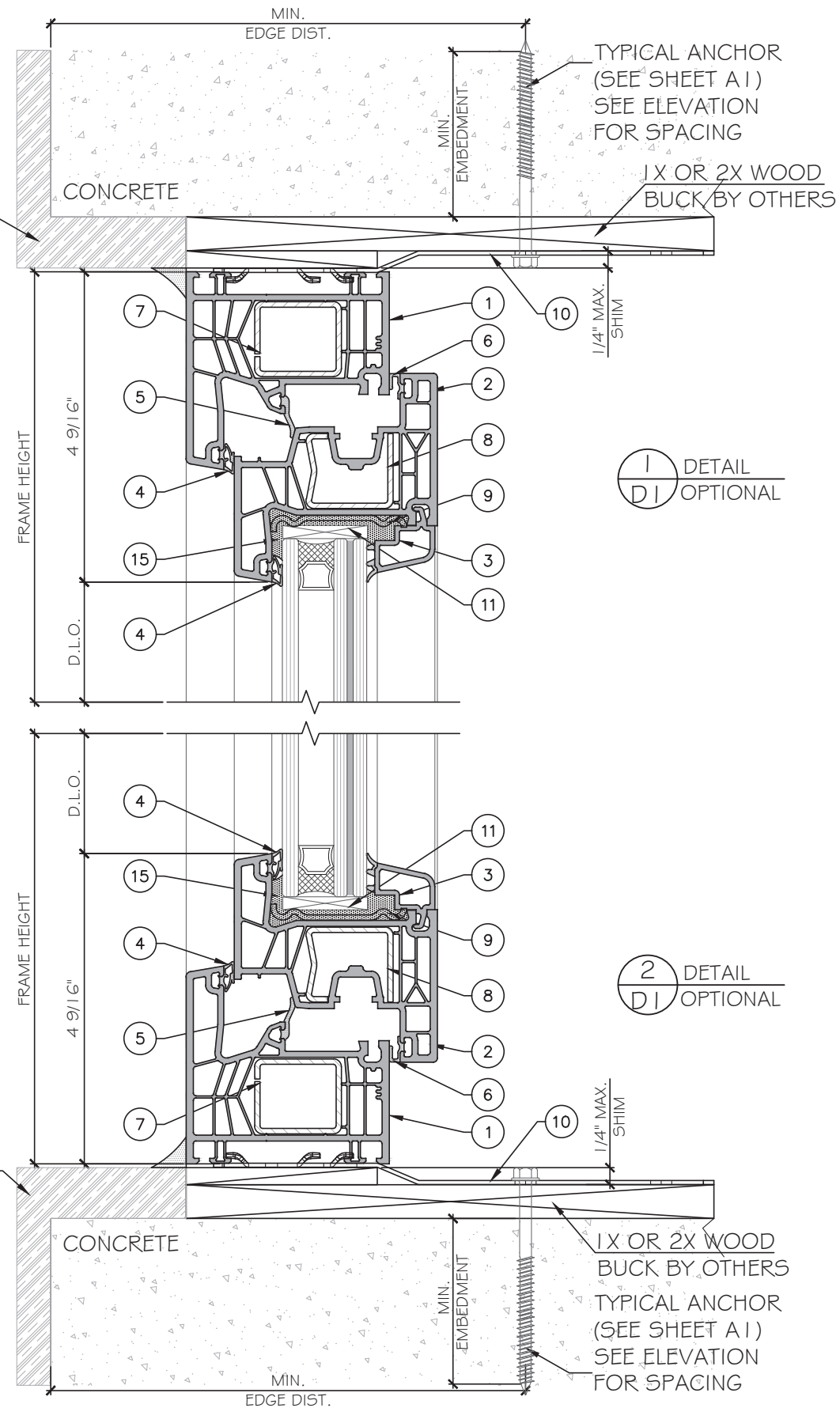
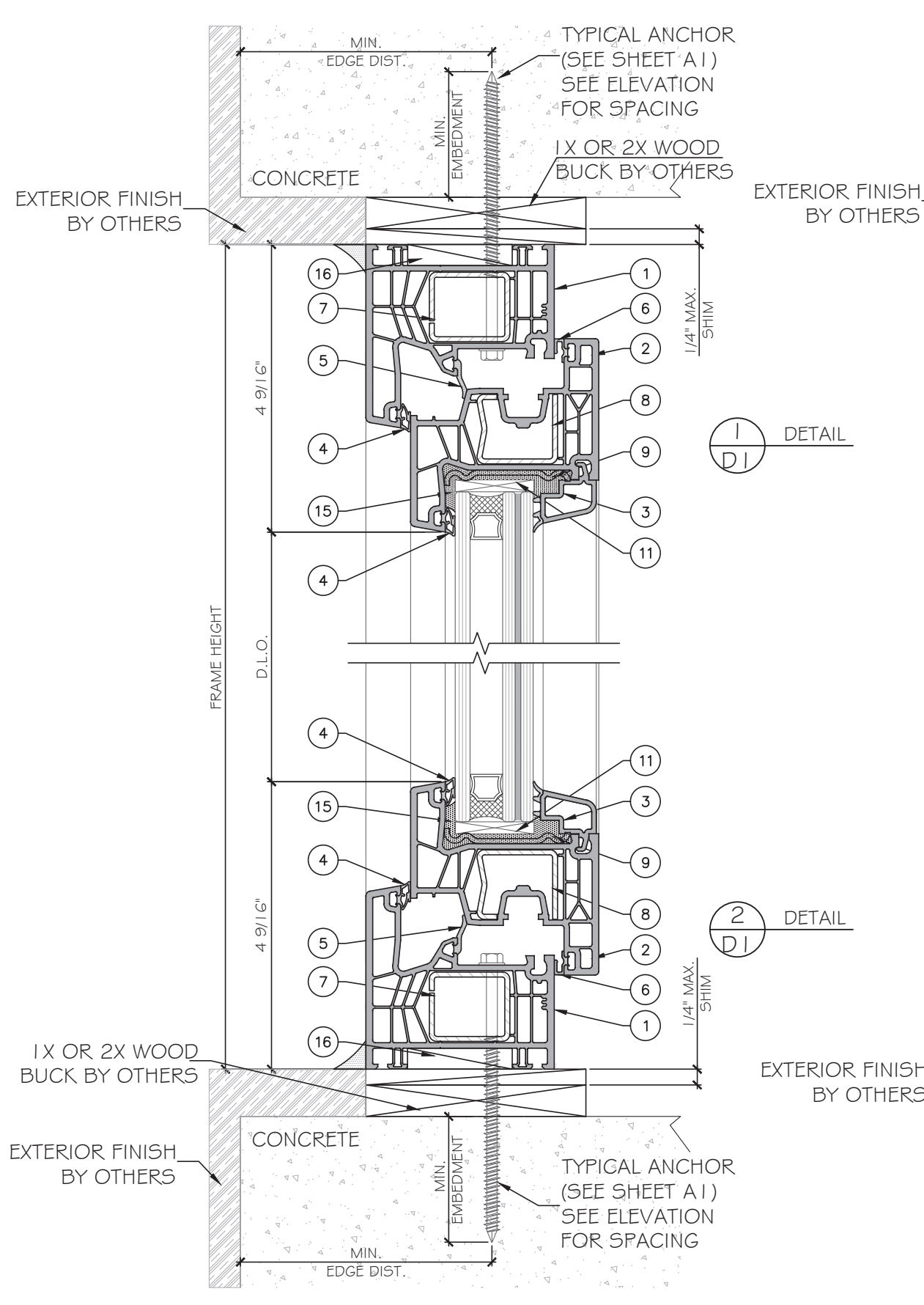
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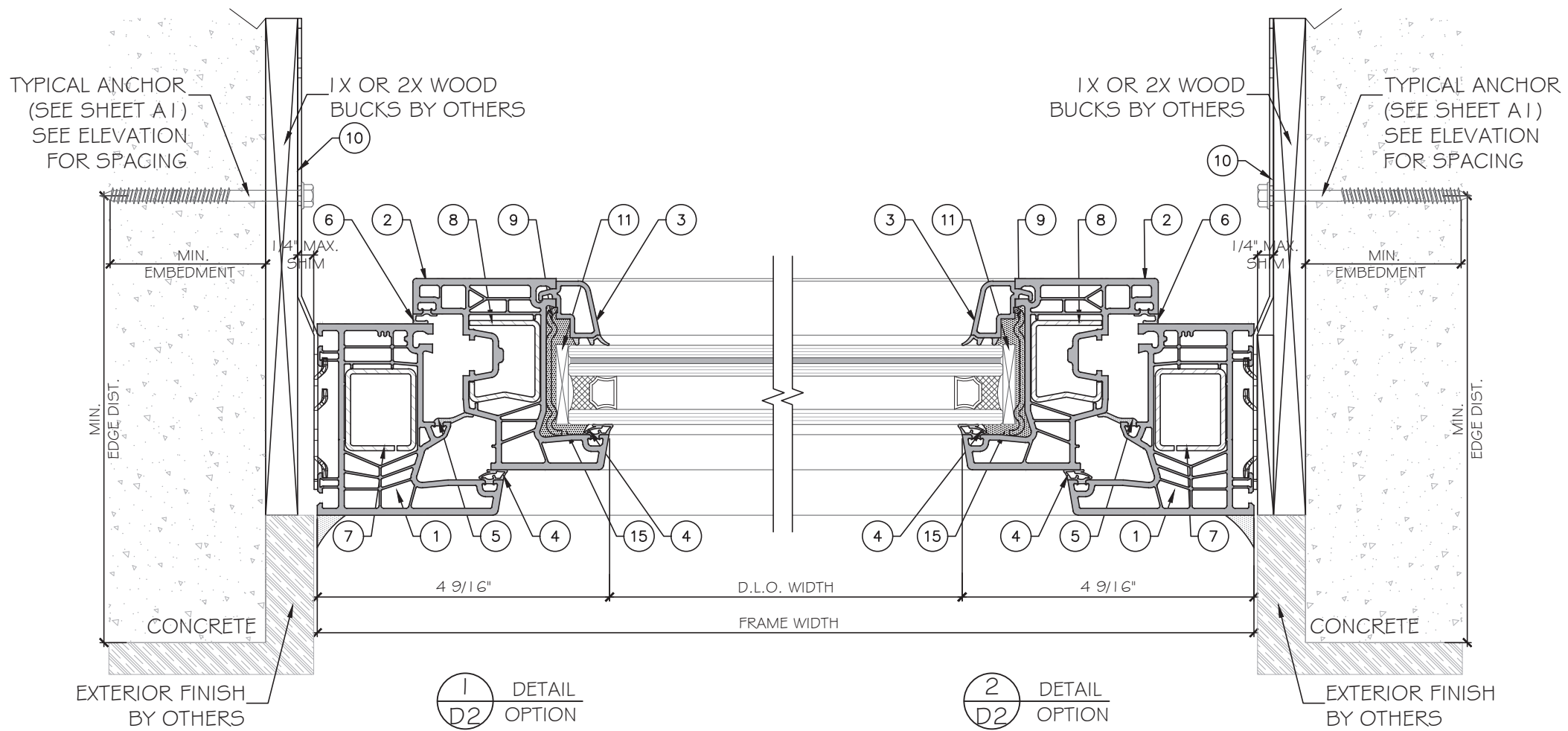
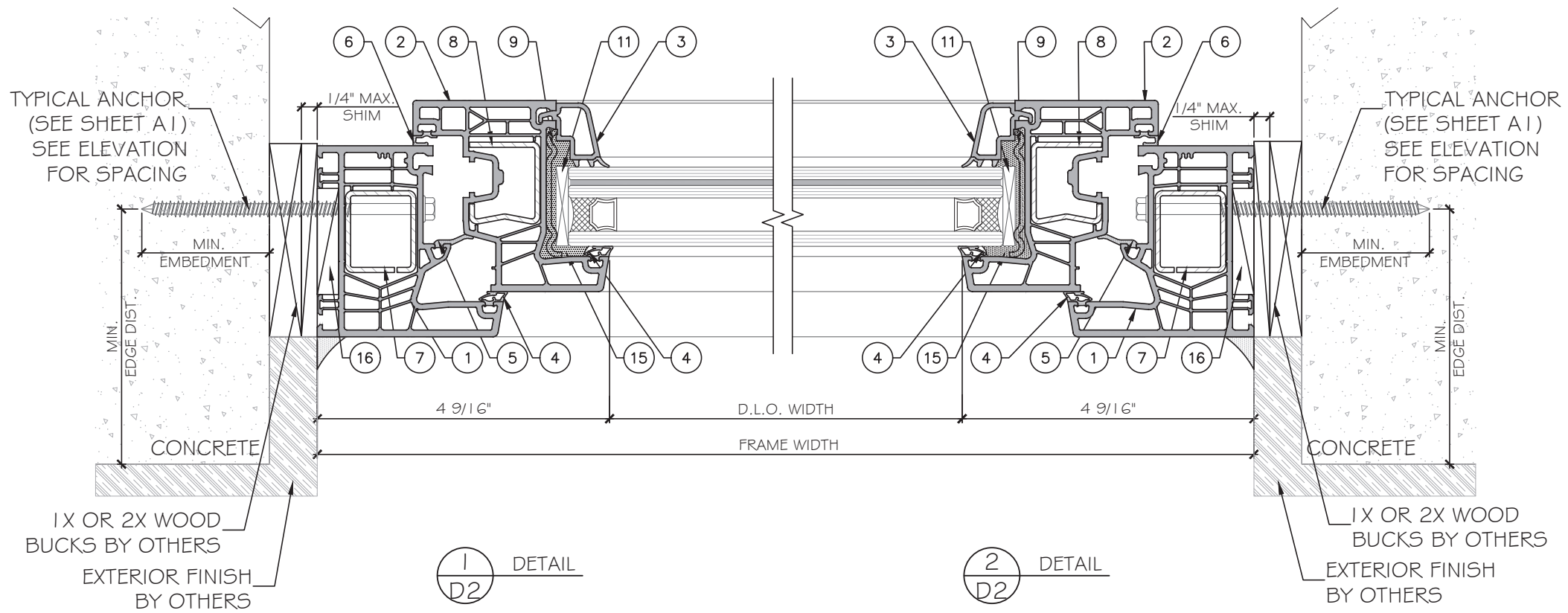
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TYPICAL ANCHOR TYPES

ANCHOR TYPE 'A' - 1/4" DIA. ULTRACON+ BY 'DEWALT' (F_u=164KSI, F_y=148KSI)
 INTO 2BY WOOD BUCKS / WOOD STRUCTURE
 WITH 1 1/2" MIN. PENETRATION INTO WOOD. (HEAD / JAMBS / SILL)

OR THRU 1 BY WOOD BUCKS INTO CONCRETE OR BLOCKS
 1 3/4" MIN. EMBED INTO CONCRETE (HEAD/ JAMBS/ SILL)
 1 3/4" MIN. EMBED INTO BLOCKS (JAMBS)

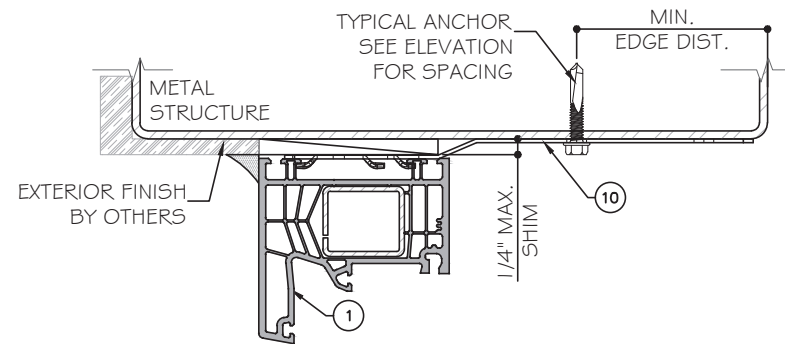
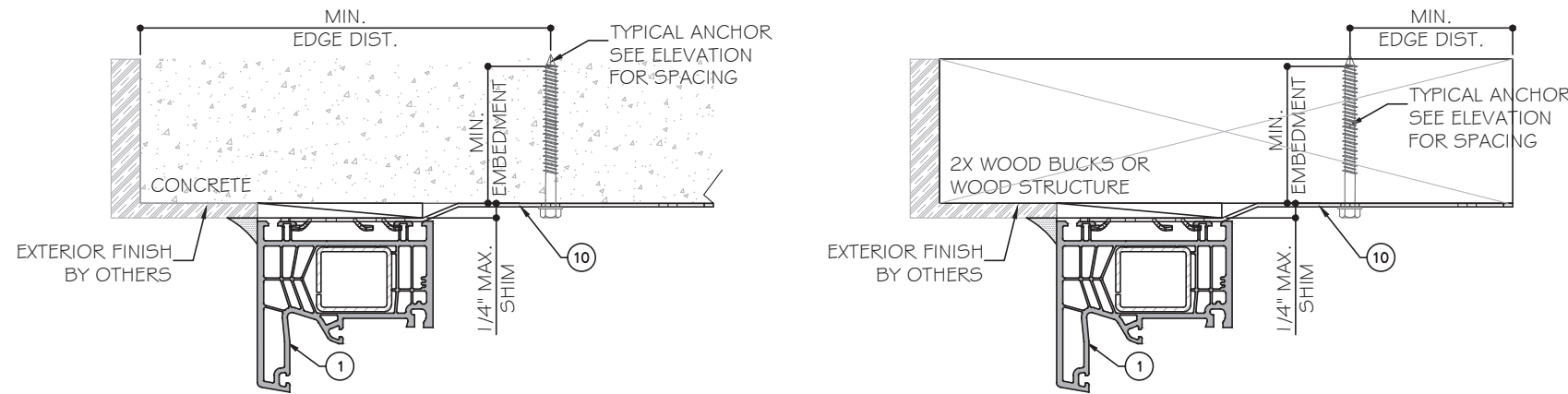
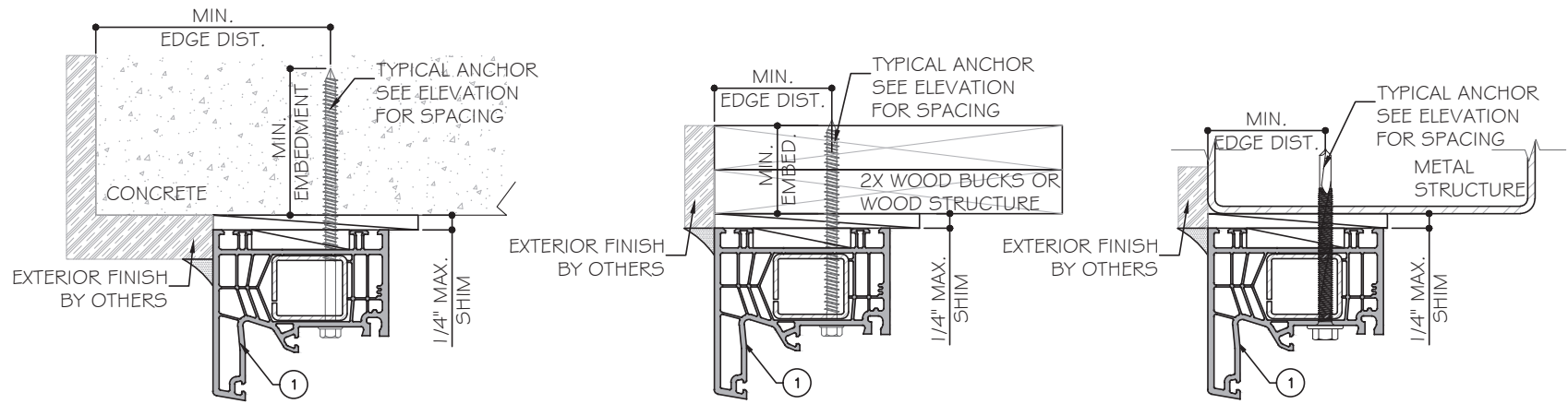
DIRECTLY INTO CONCRETE OR BLOCKS
 1 3/4" MIN. EMBED INTO CONCRETE (HEAD/ JAMBS/ SILL)
 1 3/4" MIN. EMBED INTO BLOCKS (JAMBS)

ANCHOR TYPE 'B' - 1/4" TEKS OR SELF-DRILLING SCREWS (GRADE 5 CRS)
 INTO F.B.C. APPROVED MULLIONS OR INTO METAL STRUCTURES. (HEAD/ JAMBS)
 (3) THREADS MIN. PENETRATION BEYOND METAL SUBSTRATE.

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

SUBSTRATE:
 WOOD: SG = 0.55 MIN.
 CONCRETE: f_c = 3 KSI MIN.
 C-90 HOLLOW / FILLED BLOCK: f_m=2 KSI MIN.
 ALUMINUM: 1/8" THK. MIN. (G063-T5, MIN.)
 STEEL: 1/16" THK. MIN. ASTM A653 GRADE 33 (F_y=33KSI) MIN.
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

1X OR 2X WOOD WOOD BUCKS BY OTHERS TO BE DESIGNED TO SUPPORT THE LOADS IMPOSED BY THIS GLAZING SYSTEM AND TO TRANSFER SUCH LOADS TO THE BUILDING MAIN STRUCTURE.



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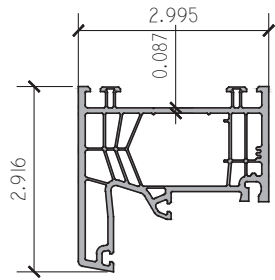
YIRING WANG
 FLORIDA REGISTERED PROFESSIONAL ENGINEER
 No. 55989

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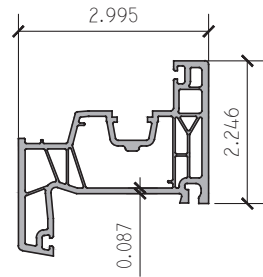
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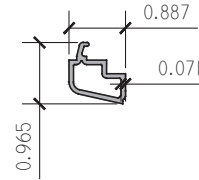
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1 MAIN FRAME
76171 EQUAL LEG RIGID VINYL



2 MAIN SASH
76271 EQUAL LEG RIGID VINYL



3 32MM GLAZING BEAD
2435_2 EQUAL LEG RIGID VINYL



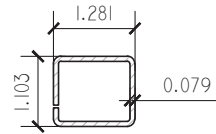
4 FRAME/ GLAZING GASKET
EPDM RUBBER 70 DUR



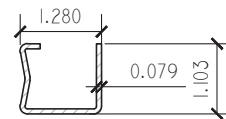
5 INT. FRAME GASKET
EPDM RUBBER 70 DUR



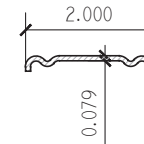
6 SASH GASKET
EPDM RUBBER 70 DUR



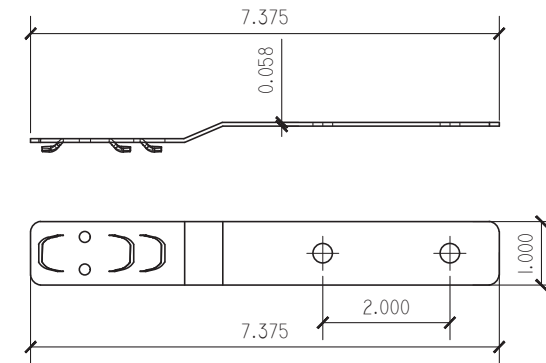
7 FRAME REINFORCEMENT
V310 GALV. STL. 0.079" THICK



8 SASH REINFORCEMENT
V308 GALV. STL. 0.079" THICK



9 SASH GLAZING REINFORCEMENT
V280 GALV. STL. 0.079" THICK



10 GALVANIZED STEEL ANCHOR STRAP
504 16 GA.

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BILL OF MATERIALS

ITEM NO.	DESCRIPTION	PARTS NUMBERS	MANUFACTURER
1	MAIN FRAME, RIGID VINYL	76171	PROFINE
2	SASH, RIGID VINYL	76271	PROFINE
3	1-1/4" I.G. LAMINATED GLAZING BEAD, RIGID VINYL	2435_2	PROFINE
4	FRAME/ GLAZING GASKET, EPDM RUBBER 70 DUR	PURCHASE	PURCHASE
5	INT. FRAME GASKET, EPDM RUBBER 70 DUR	PURCHASE	PURCHASE
6	SASH GASKET, EPDM RUBBER 70 DUR	PURCHASE	PURCHASE
7	1.00" X 1.00" X 0.079" FRAME REINF., GALV. STEEL	V310	PROFINE
8	1.00" X 1.035" X 0.079" SASH REINF., GALV. STEEL	V308	PROFINE
9	1.08" X 0.079" SASH GLAZING REINF., GALV. STEEL	V280	PROFINE
10	1.00" X 7.375" X 0.059" GALV. STL. ANCHOR STRAP	S04	PROFINE
11	SETTING BLOCK, EPDM, DURO 70±5 SHORE A.	██████████	██████████
12	AMO III 7.5MM DIA. CYLINDER HEAD SCREW, VARIABLE LENGTH BASED ON USAGE	██████████	WURTH *
13	#14 PH OR FH WOOD SCREW	PURCHASE	██████████
14	1/4" DIAM.HH OR FH I.T.W. MASONRY ANCHOR	PURCHASE	I.T.W.
15	GLAZING SEALANT, SIKAFLEX 552	PURCHASE	SIKA CORP.
16	SOLID SHIM	██████████	██████████

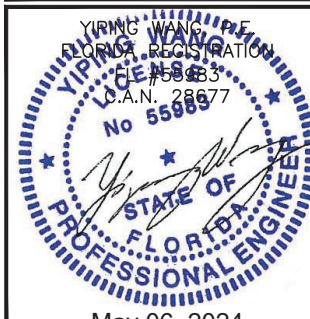
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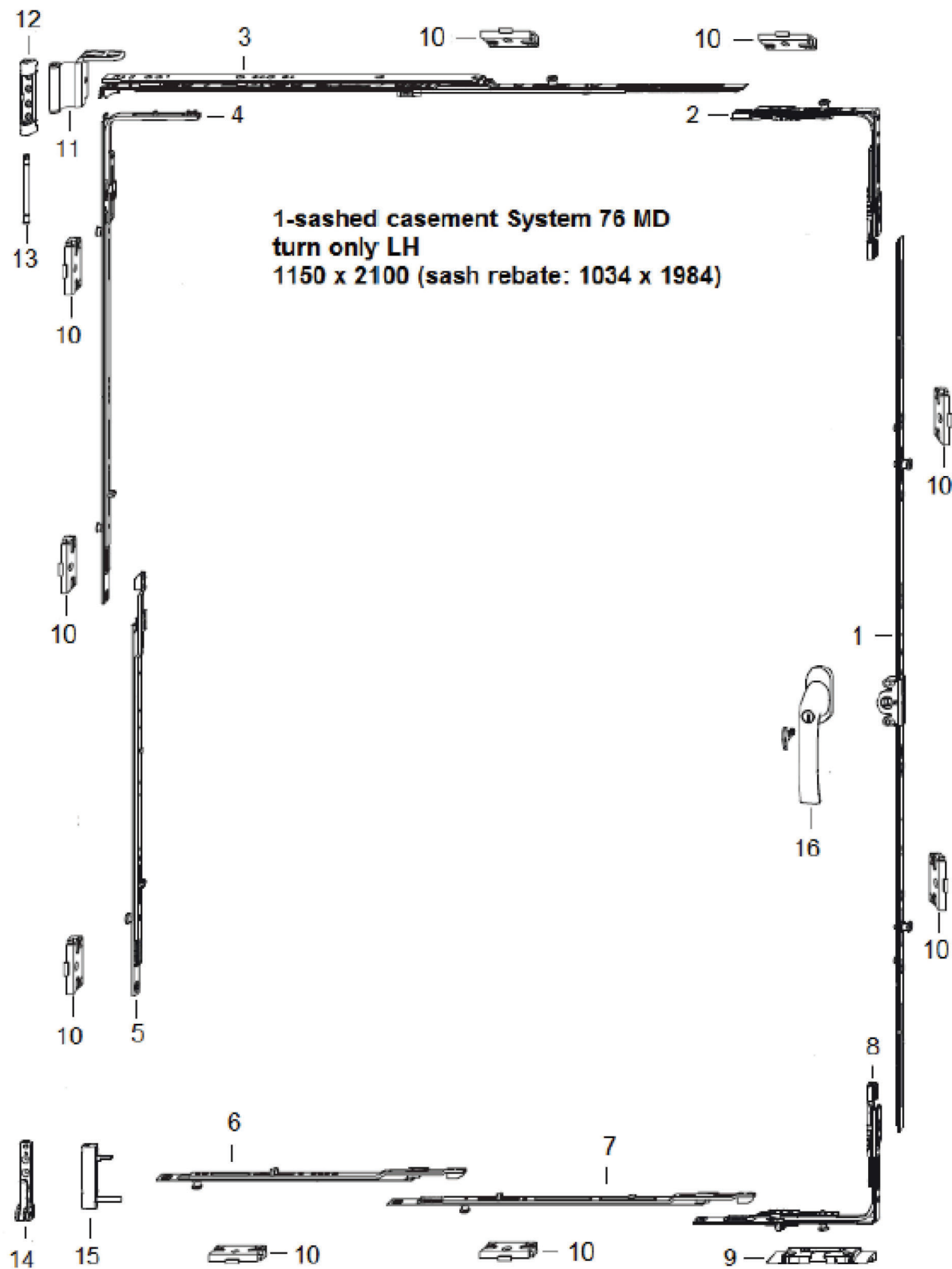
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ITEM	PART DESCRIPTION	PART CODE
1	GEAR 15 AF SZ. 160 2RS 70.	TGMK 4170
2	CORNER DRIVE AF VSO 1RS.	TEUL4010
3	STAY AF SZ.3 1RS	TSKK2030
4	CORNER DRIVE BS/K3 SZ2 + 2RS	TEUL2390
5	LINKAGE BS/FH SZ3+ 1RS	TZBS0300
6	EXTENSION SZ3+ 1RS	TVSLO330
7	LINKAGE BS/FH SZ1+ 1RS	TZBS0180
8	CORN DRIVE AF VSU/K + FH 1S	TEUL5010
9	TILT LOCK BEARING S-ES FH A4460	FRKA0100
10	STRIKER PLATE S-RS 3SL A4460	TRSK0600
11	STAY HINGE 1 2/20-13 DH	TBWB6050
12	TOP HINGE KFD6X24 DH	TBSL6140
13	TOP HINGE PIN POLY	TBSB6020
14	BOTTOM HINGE KF D6X3/24	TBEL6120
15	CORNER HINGE KF D6X1 6/36 D5 ADV	TBEB6140
16	HANDLE GLOBE 35/12 ABS 100 SEC.	ZHGA0060

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