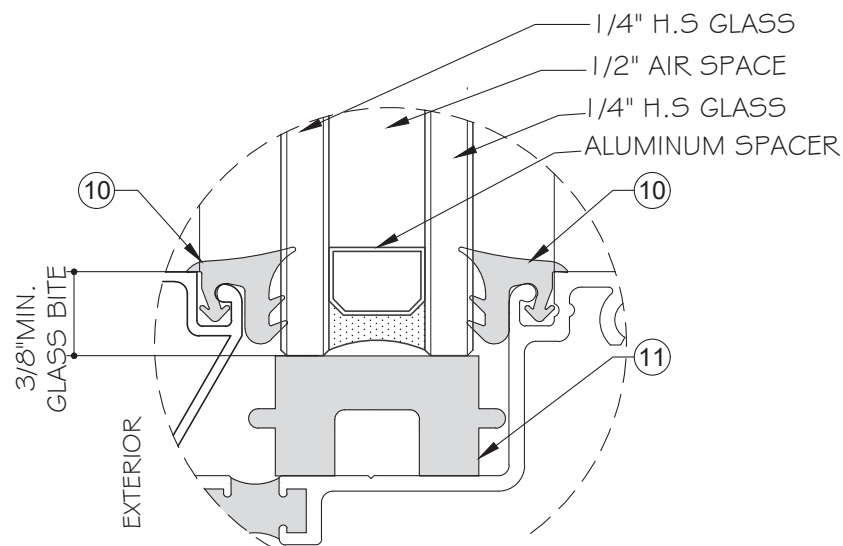
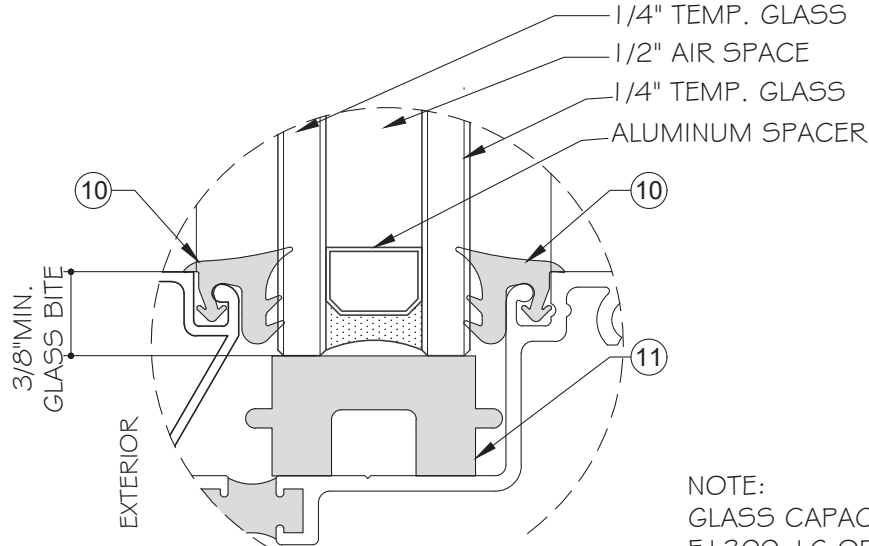


SERIES CT45 I STOREFRONT SYSTEM
NON IMPACT (NON-HVHZ)



GLASS TYPE "A"

MAX. GLASS SIZE APPROVED:
D.L.O. WIDTH x D.L.O. HEIGHT ≤ 33.22 FT²



GLASS TYPE "B"

MAX. GLASS SIZE APPROVED:
D.L.O. WIDTH x D.L.O. HEIGHT ≤ 33.22 FT²

NOTE:
GLASS CAPACITIES ARE BASED ON ASTM
E1300-16 OR 24 (3 SEC. GUSTS) AND
FLORIDA BUILDING COMMISSION DECLARATORY
STATEMENT DCA05-DEC-219.

SERIES CT45 I STOREFRONT SYSTEM

WINDOW WALL SYSTEM IS NON IMPACT SYSTEM TO BE USED OUTSIDE OF HIGH VELOCITY HURRICANE ZONE (NON-HVHZ). THIS SYSTEM MAY BE USED IN CONJUNCTION WITH FLORIDA STATE APPROVED ENTRANCE DOORS.

- CODE REQUIREMENTS FOR SAFEGUARDS MUST BE OBSERVED.
- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 8TH EDITION (2023) / 9TH EDITION (2026) EXCLUDING HIGH VELOCITY HURRICANE ZONE (NON-HVHZ).
- 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.
- 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.
- A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
- 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) / 9TH EDITION (2026) SECTION AS APPLICABLE.
- 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.
- INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING. COMPLIANCE WITH THESE CONDITIONS TO BE CHECKED PER FBC 1711.
- a. FASTENERS USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE AND INSTALLED IN ENCLOSED SPACES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1711.1.1 (E.G., ASTM A153 CLASS D, ASTM A641 CLASS 35, OR EQUIVALENT CORROSION RESISTANCE).
- b. CONNECTORS AND METAL PLATES USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE SHALL BE STANDARD GALVANIZED IN ACCORDANCE WITH SECTION 1711.1.2 (E.G., ASTM A653 G90, ASTM A123, OR PROTECTIVE COATING PER TPI 1).

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BUILDING HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-22 STANDARD.
- STEP 2: SEE SHEET 1 FOR GLASS OPTIONS AND MAX. D.L.O. AREA ALLOWED.
- STEP 3: SEE TYPICAL ELEVATION ON SHEET 2. CHECK MULLION AND JAMB CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHARTS ON SHEET 3. MULLION OR JAMB SUPPORT XX DOOR SEE SHEET 3.1 FOR CAPACITY. THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.
- STEP 4: SEE ANCHOR OPTIONS ON SHEET 7. NUMBER OF ANCHOR REQUIRED AND CAPACITY SEE CHART ON SHEET 8.
- STEP 5: THE LOWEST VALUE RESULTING FROM STEPS 2, 3, & 4 SHALL APPLY TO ENTIRE SYSTEM.
- STEP 6: HIGHLIGHT OPTION USED AND TABLE VALUES USED IN A SPECIFIC APPLICATION WHEN USING THIS FA TO APPLY FOR A PERMIT.

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.

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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p. 800-432-8132

PRODUCT:

Series CT451
ALUMINUM
STOREFRONT
WALL - NI



REVN	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

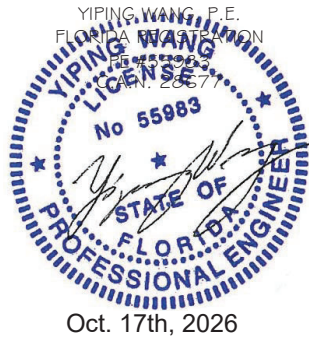
ENGINEER:



MCY ENGINEERING, INC.
GLAZING CONSULTANT

12781 Miramar Pkwy. Ste. 301
Miramar, FL 33027
P: 305 271 0117
mcy@mcyengineering.com
www.MCYEngineering.com

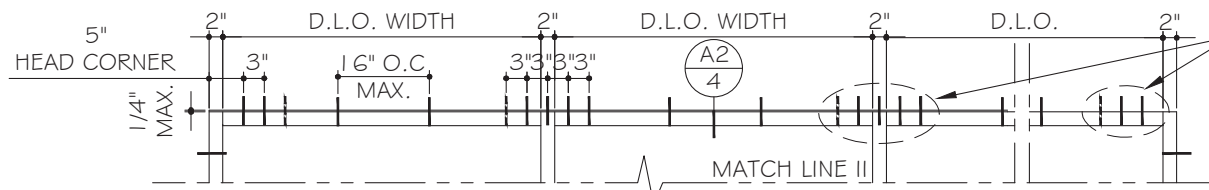
STAMP:



FLORIDA APPROVAL:

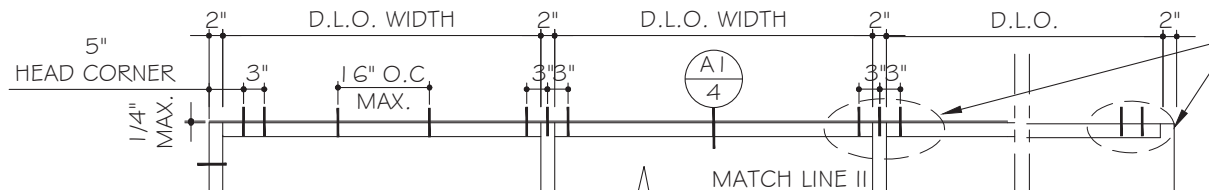
FL29081.1

DRAWN: James	DRAWING No:
DATE: 09/15/2026	1 OF 11
DWG: AD19-04	



HEAD RECEPTOR HEAVY DUTY ANCHOR LAYOUT

ANCHOR TYPE A:
(6) AT MULLION/ (3) AT JAMB END
ANCHOR TYPE B & C:
(4) AT MULLION/(2) AT JAMB END



LIGHT HEAD RECEPTOR ANCHOR LAYOUT

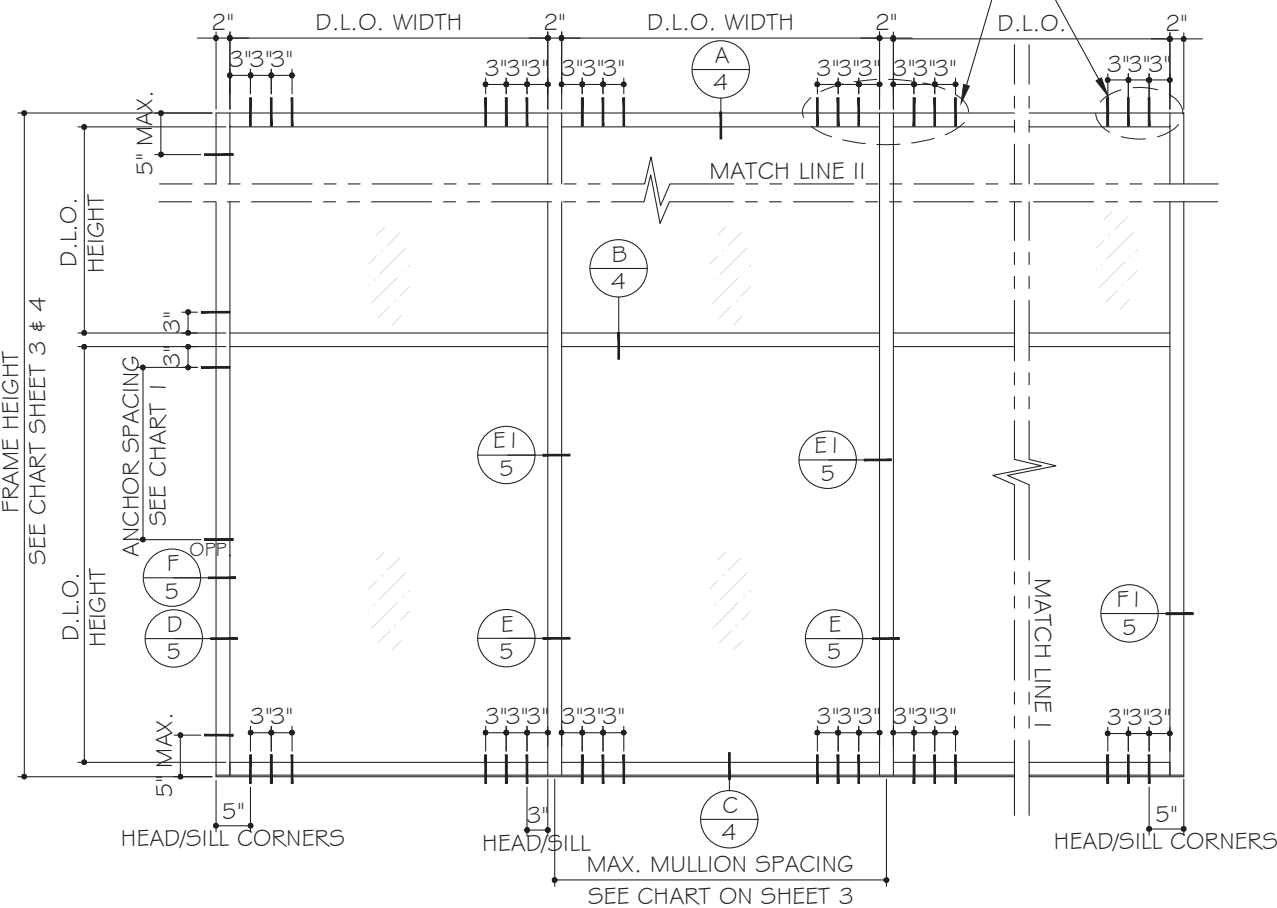
MAX. DESIGN LOAD +/- 23.5PSF

CHART#1:

ANCHOR TYPE	JAMB ANCHOR SPACING (IN)	
	1/4" SHIM	3/8" SHIM
AB1	10	10
B/C*	20	10

*USE 1/4" TEKS FOR 3/8" SHIM

1,2,3 OR 4 ANCHOR PER SIDE OF MULLION (HEAD/ SILL) SEE CHART ON SHEET 8 & 9.



TYPICAL ELEVATIONS
SEE CHART ON SHEET 3 FOR APPROVED SIZE AND DESIGN LOADS.

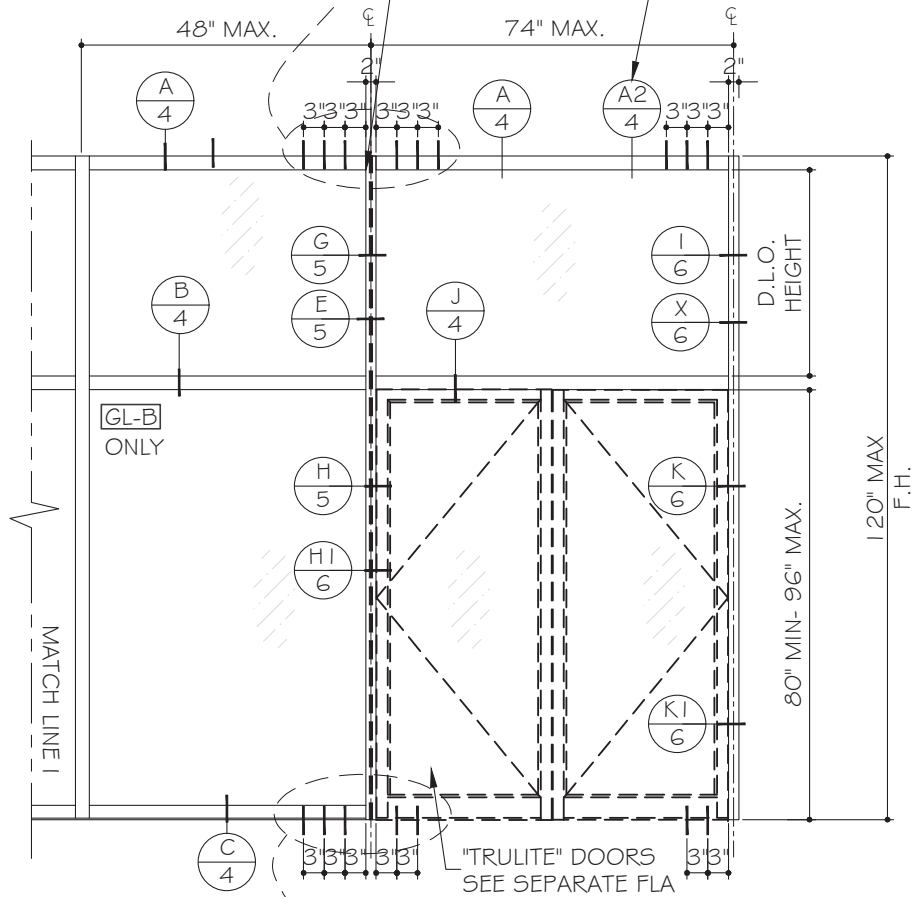
CHART#2:

ANCHOR TYPE	NO OF ANCHOR AT DJM ENDS	
	1/4" SHIM	3/8" SHIM
A	6	6
B	4	6
C*	4	4

*USE 1/4" TEKS FOR 3/8" SHIM

MULLION W/ OR W/O REINFORCEMENT. SEE SHEET 3.1 FOR CAPACITY

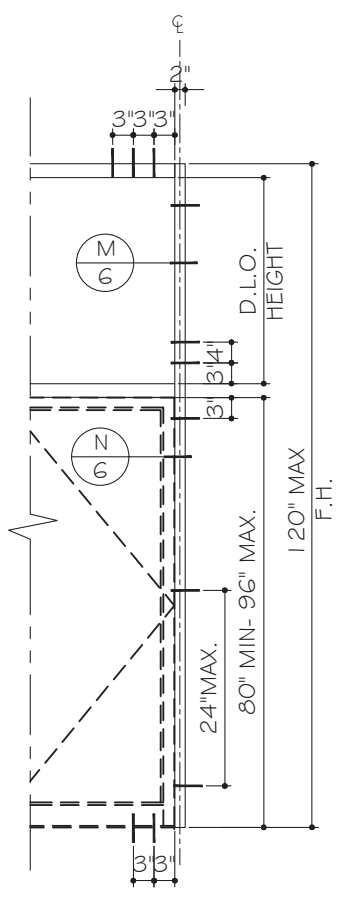
HEAVY DUTY HEAD RECEPTOR SEE ANCHOR LAYOUT ABOVE.



CHART#3:

ANCHOR TYPE	NO OF ANCHOR AT DJM ENDS	
	1/4" SHIM	3/8" SHIM
B	4	5

TYPICAL ELEVATIONS
SEE SHEET 3.1 FOR DJM OPTIONS AND APPROVED SIZE AND DESIGN LOADS.



ANCHORED JAMB OPTION
MAX DESIGN LOAD: 35 PSF



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ALUMINUM
STOREFRONT
WALL - NI



REVN	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

ENGINEER:



MCY ENGINEERING, INC.
GLAZING CONSULTANT

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Miramar, FL 33027
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mcy@mcyengineering.com
www.MCYEngineering.com

STAMP:



Oct. 17th, 2026

FLORIDA APPROVAL:

FL29081.1

DRAWN: James

DATE: 09/15/2026

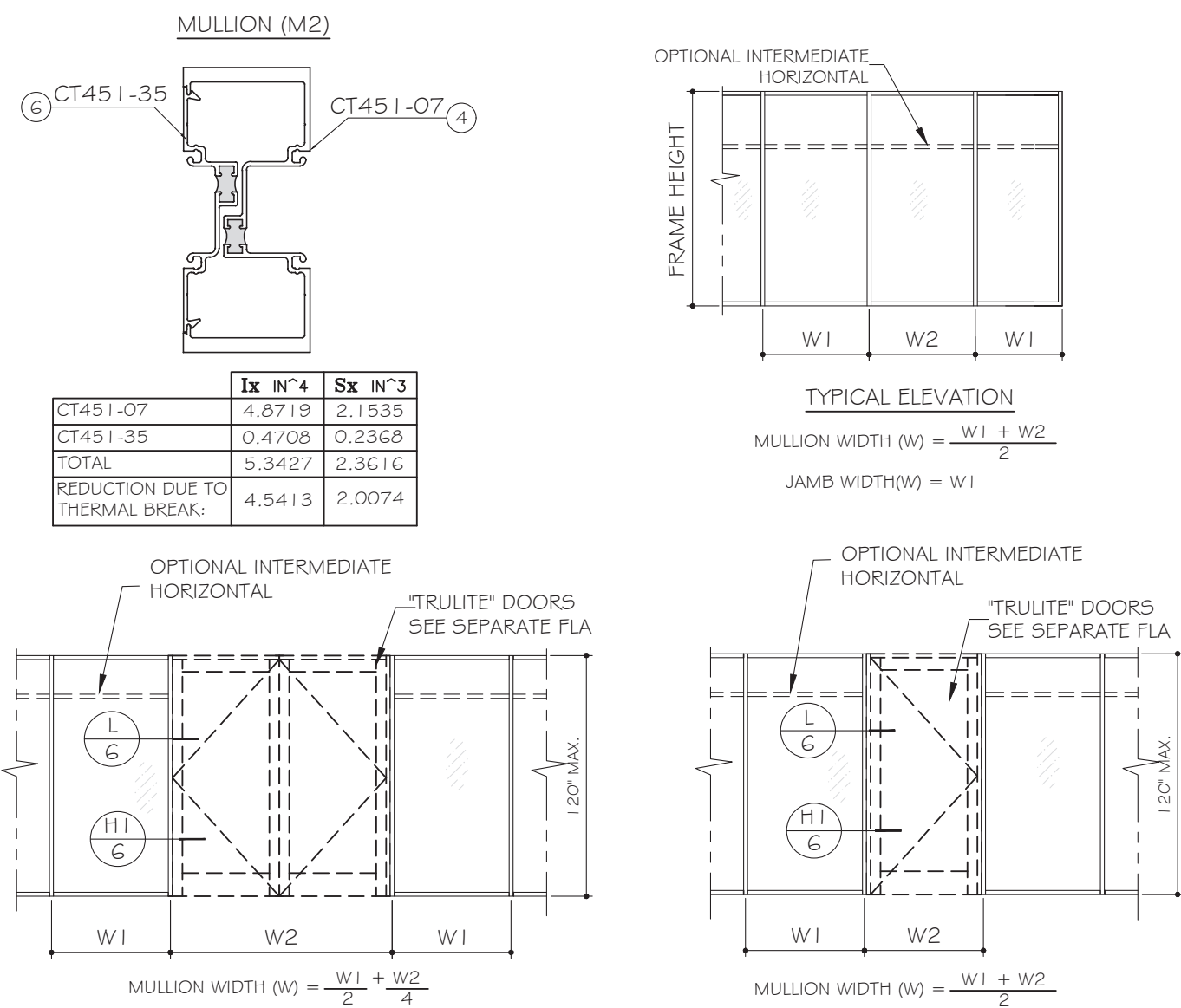
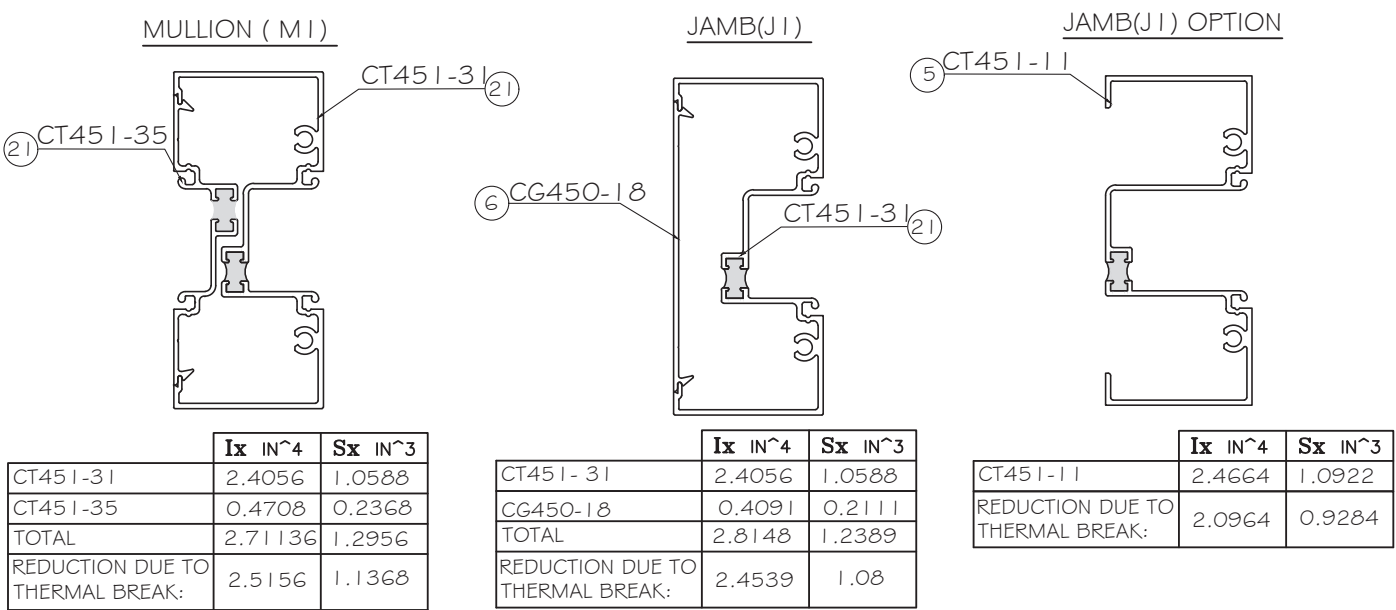
DWG: AD19-04

DRAWING No:

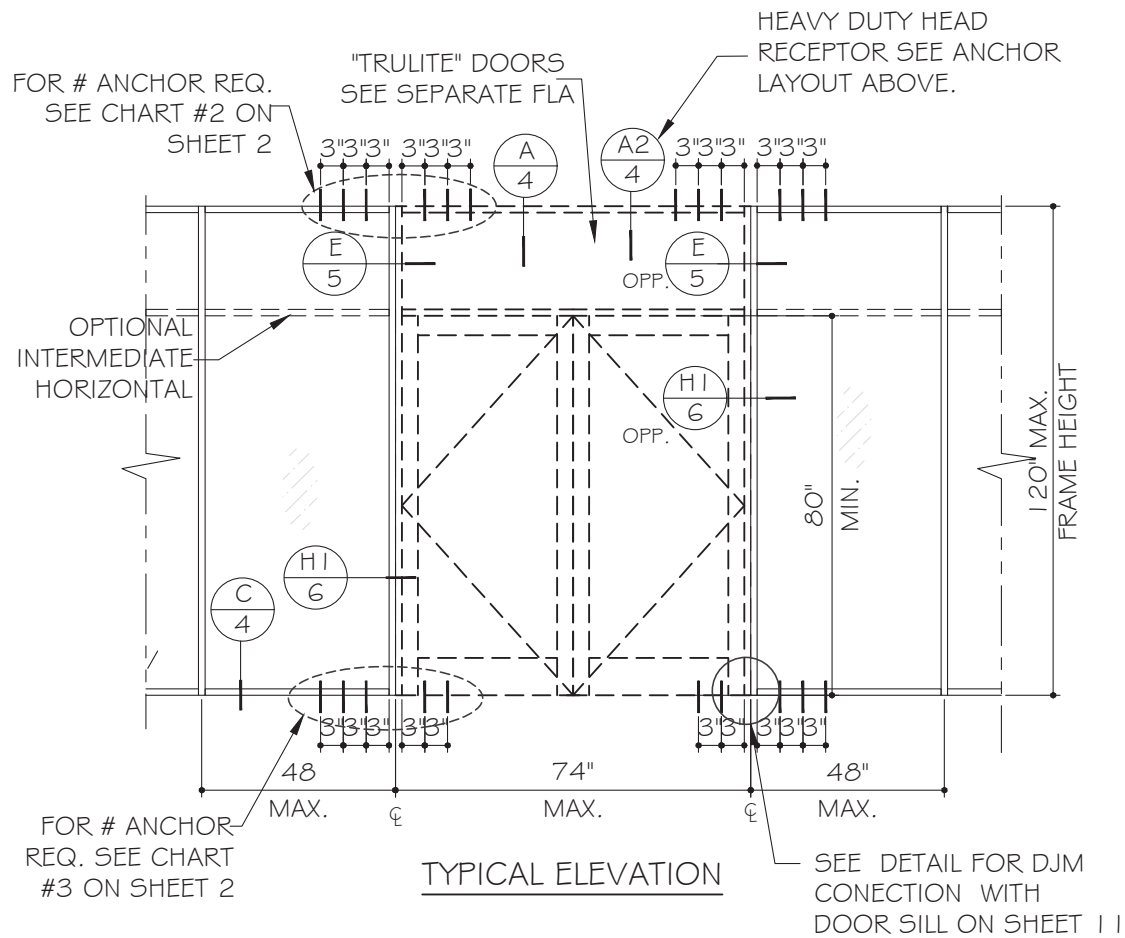
2 OF 11

MULLION LOAD CAPACITY				
WITH OR WITHOUT INTERMEDIATE HORIZONTAL				
WINDOW PANEL		(M1)	(M2)	(J1)
WIDTH (W)	HEIGHT	EXT(+) INT(-)	EXT(+) INT(-)	EXT(+) INT(-)
IN	IN	PSF	PSF	PSF
30	60	80	80	80
36		75	80	80
42		64	80	80
48		56	80	80
54		50	80	80
60		45	72	72
30	66	80	80	80
36		68	80	80
42		58	80	80
48		51	80	80
54		45	73	73
60		41	65	65
30	72	75	80	80
36		62	80	80
42		53	80	80
48		47	75	75
54		41	67	67
60		37	60	60
30	78	69	80	80
36		57	80	80
42		49	79	79
48		43	69	69
54		38	62	62
60		34	55	55
30	84	64	80	80
36		53	80	80
42		46	73	73
48		40	64	64
54		36	57	57
60		32	51	51
30	90	60	80	80
36		50	80	80
42		43	69	73
48		37	60	64
54		33	53	57
60		30	35	51

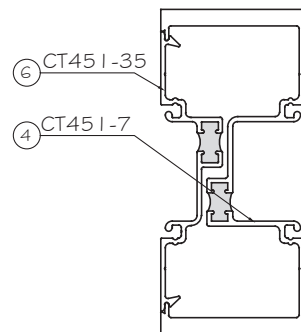
MULLION LOAD CAPACITY				
WITH OR WTHOUT INTERMEDIATE HORIZONTAL				
WINDOW PANEL		(M1)	(M2)	(J1)
WIDTH (W)	HEIGHT	EXT(+) INT(-)	EXT(+) INT(-)	EXT(+) INT(-)
IN	IN	PSF	PSF	PSF
30	96	56	90	80
36		47	75	75
42		40	64	64
48		35	56	56
54		31	50	50
60		28	35	35
30	102	47	83	80
36		39	69	71
42		34	59	61
48		30	52	53
54		26	37	37
30	108	40	74	80
36		33	62	67
42		28	53	57
48		25	46	50
30	114	34	63	70
36		28	52	58
42		24	45	50
48		21	37	37
30	120	29	54	60
36		24	45	50
42		21	38	43
48		-	35	35
30	126	-	46	52
36		-	39	43
42		-	34	36
48		-	30	32
30	132	-	40	45
36		-	34	37
42		-	30	32
48		-	26	28
30	138	-	35	39
36		-	29	33
42		-	26	28
48		-	23	25
30	144	-	31	35
36		-	26	29
42		-	23	25
48		-	20	22



REVN	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

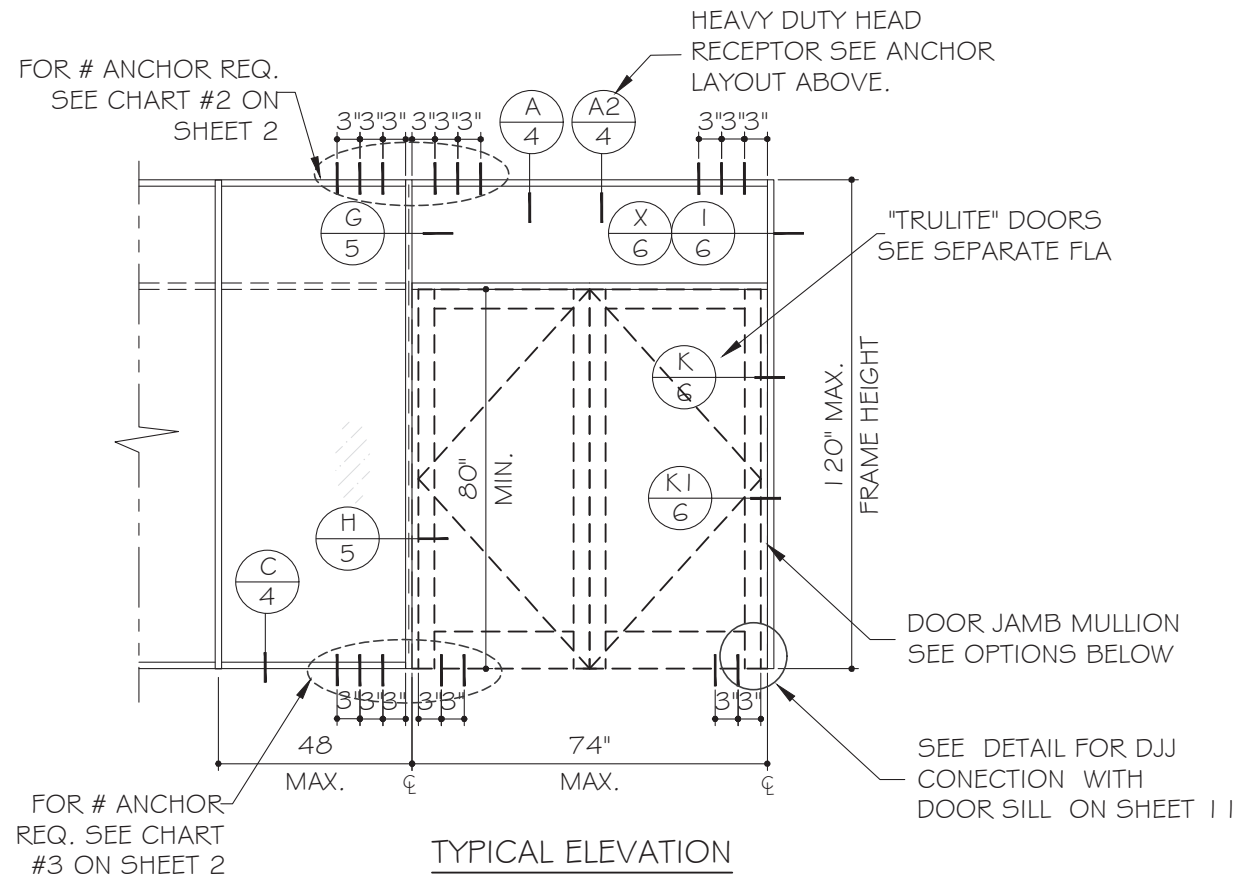


DOOR JAMB MULLION (DET. H I / 6)
MAX. DESIGN LOAD ALLOW: +/- 30 PSF

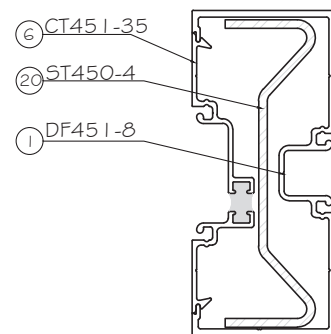


	Ix IN ⁴	Sx IN ³
CT45 I-7	4.8719	2.1535
CT45 I-35	0.4708	0.2368
TOTAL	5.3427	2.3616
REDUCTION DUE TO THERMAL BREAK:	4.5413	2.0074

STEP 3: DOOR JAMB MULLION CAPACITY

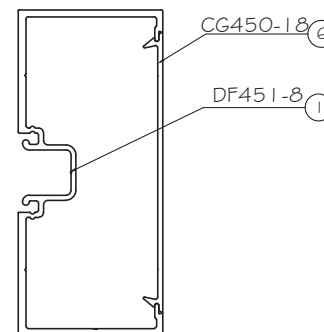


DOOR JAMB MULLION (DET. H / 5)
MAX. DESIGN LOAD ALLOW: +/- 35 PSF



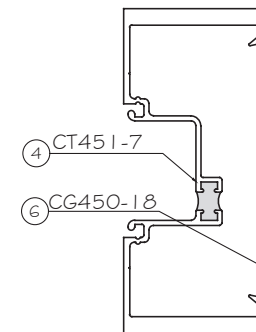
	Ix IN ⁴	Sx IN ³
DF45 I-8	2.7918	1.2404
CT45 I-35	0.4708	0.2368
ST450-4	1.9473	0.9164
TOTAL= I ALUM. + 2.9 I XSTL	8.8392	

DOOR JAMB JAMB (DET. K / 6)
MAX. DESIGN LOAD ALLOW: +/- 35 PSF



	Ix IN ⁴	Sx IN ³
DF45 I-8	2.7918	1.2404
CG450-18	0.4091	0.2111
TOTAL	3.2009	1.4515

DOOR JAMB MULLION (DET. K I / 6)
MAX. DESIGN LOAD ALLOW: +/- 35 PSF



	Ix IN ⁴	Sx IN ³
CT45 I-7	4.8719	2.1535
CT450-18	0.4708	0.2368
TOTAL	5.3427	2.3616
REDUCTION DUE TO THERMAL BREAK:	4.5413	2.0074

PRODUCT:

Series CT451
ALUMINUM
STOREFRONT
WALL - NI

Resistor
PRODUCT SERIES

REVN	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

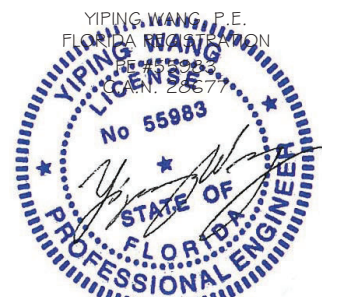
ENGINEER:



MCY ENGINEERING, INC.
GLAZING CONSULTANT

12781 Miramar Pkwy. Ste. 301
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mcy@mcyengineering.com
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STAMP:



Oct. 17th, 2026

FLORIDA APPROVAL:

FL29081.1

DRAWN: James

DATE: 09/15/2026

DWG: AD I 9-04

DRAWING No:

3.1 OF 11

PRODUCT:

Series CT451
ALUMINUM
STOREFRONT
WALL - NI


Resistor
 PRODUCT SERIES

REVN	DATE/REMARKS
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R3	UPDATE TO FBC 2026

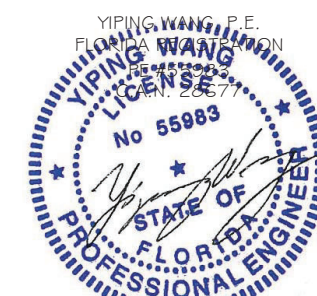
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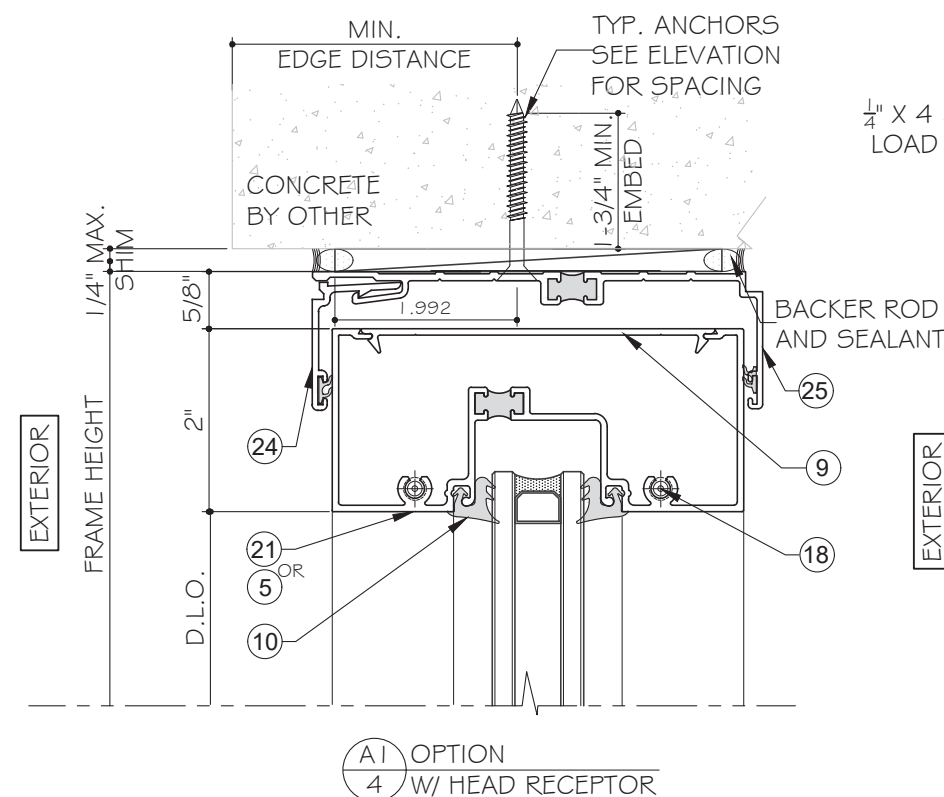
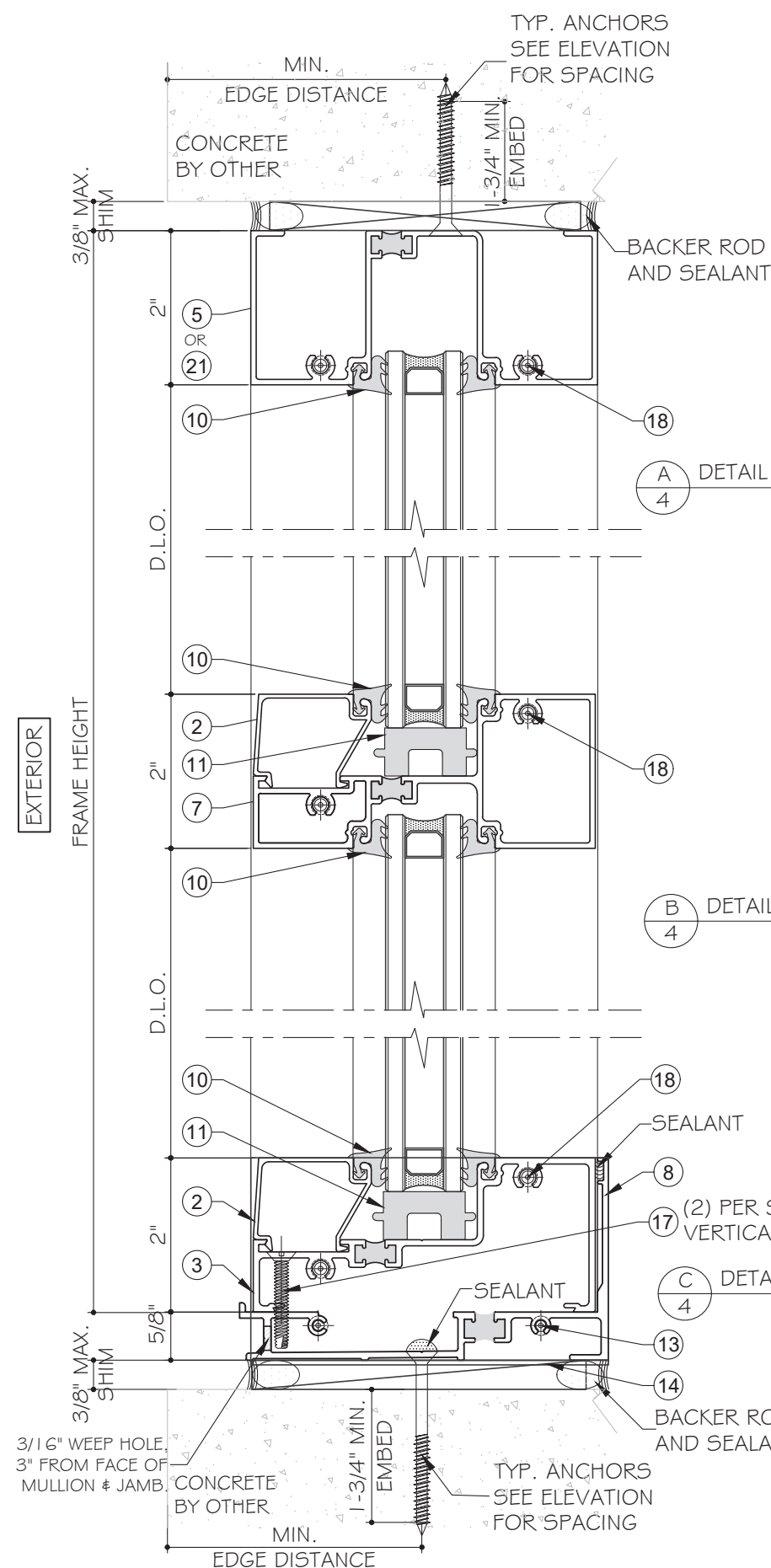
DRAWN: James

DATE: 09/15/2026

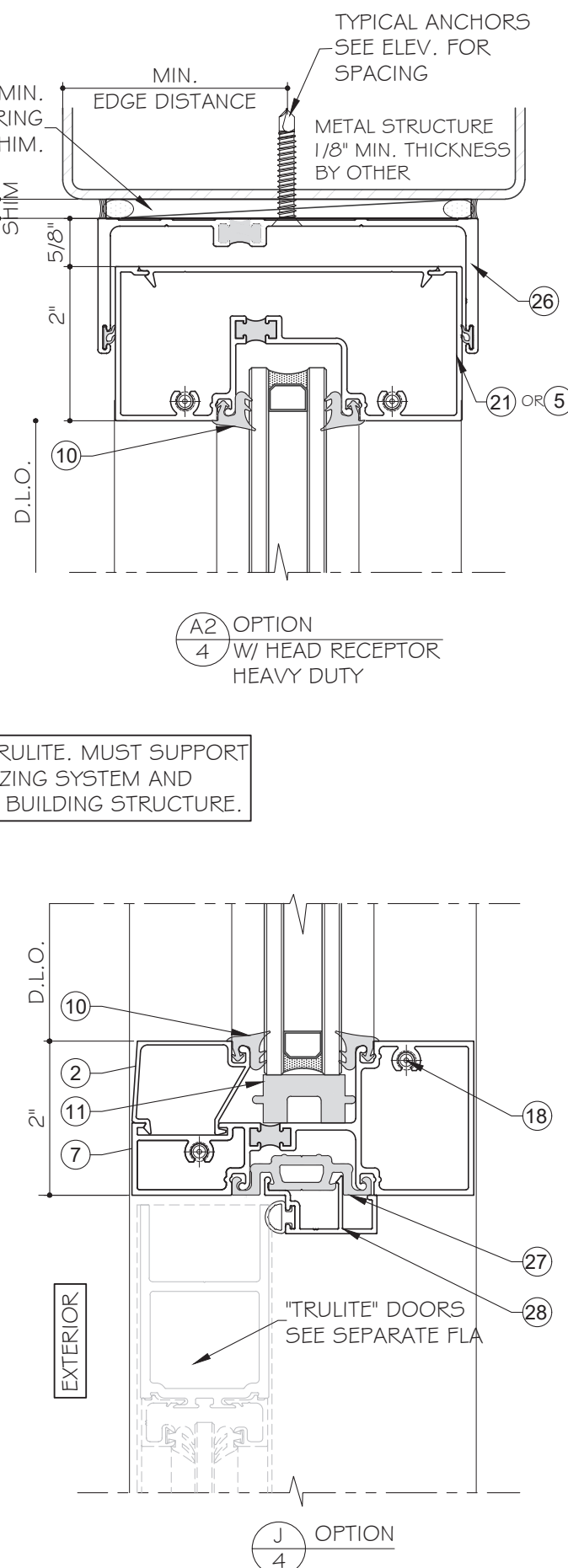
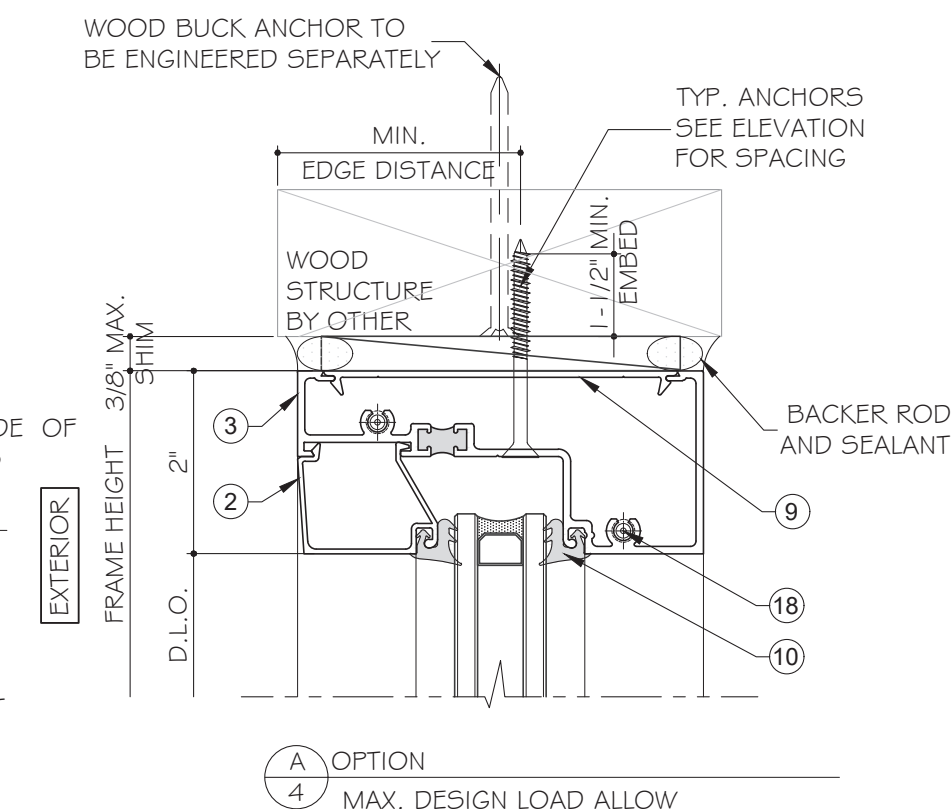
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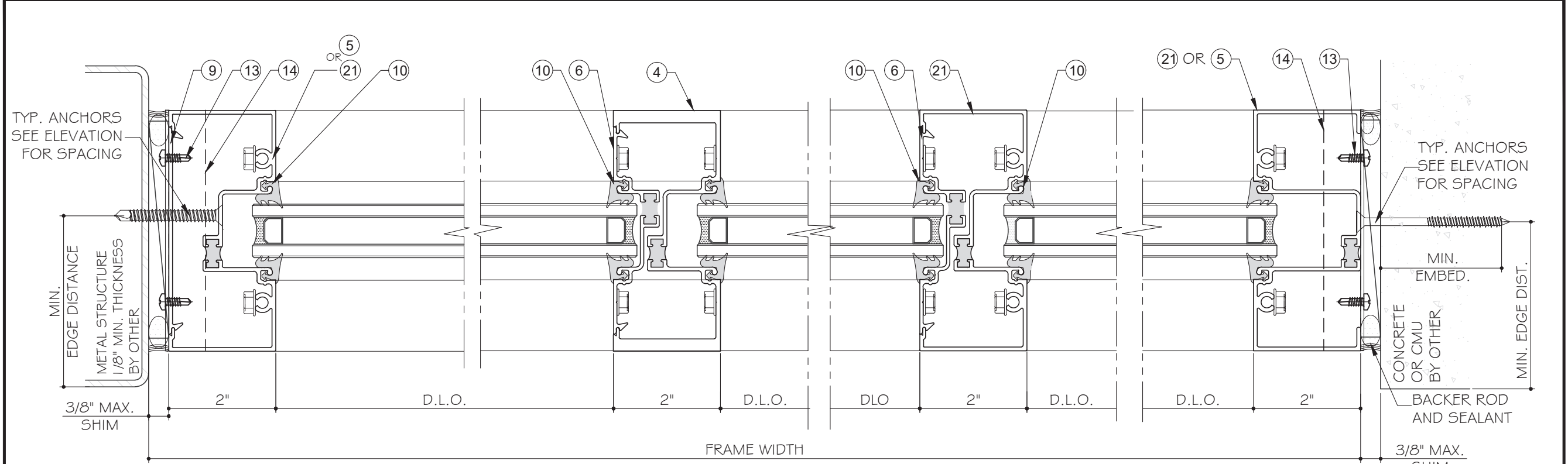
DRAWING No:

4 OF 11



WOOD BUCKS NOT BY TRULITE. MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.



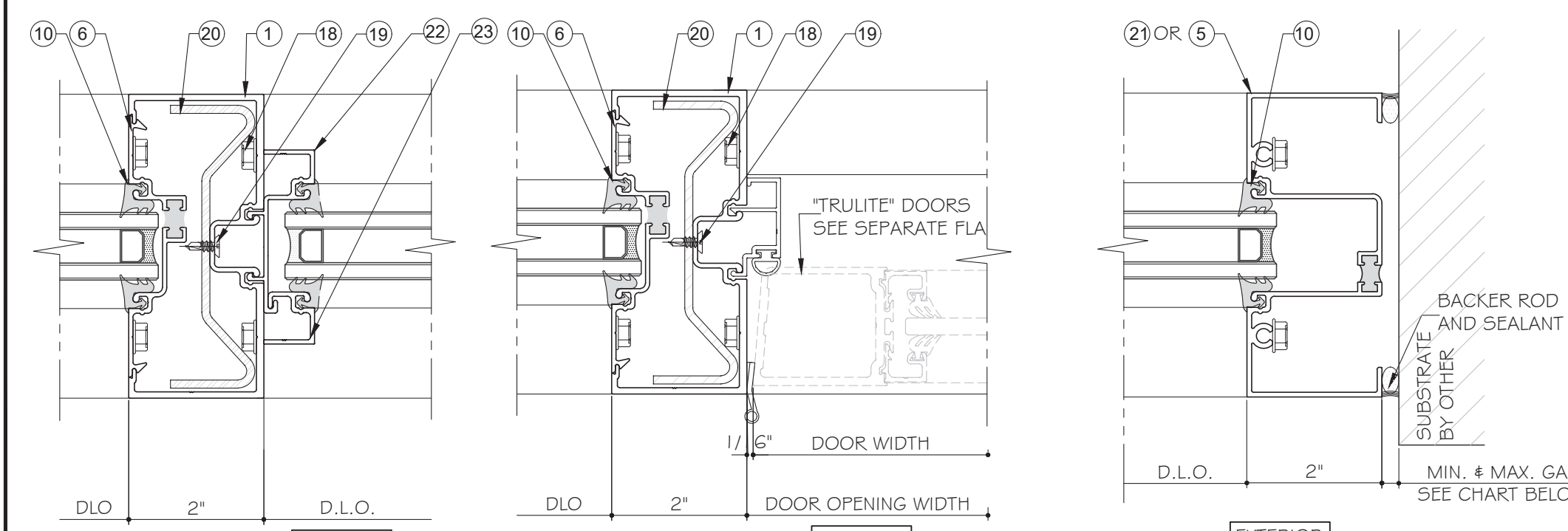


D DETAIL
5

E DETAIL
5

E1 DETAIL
5

F DETAIL
5



G DETAIL
5

H DETAIL
5

F1 DETAIL
5

MAX. FRAME HEIGHT	MIN. OR MAX. GAP AT F.S. JAMB			
	SILICONE GAP (DC 790)		DC 795 OR EQ.	
	MIN.	MAX.	MIN.	MAX.
60"	3/16"	1 1/8"	3/8"	1 1/8"
72"	1/4"	1 1/8"	3/8"	1 1/8"
84"	1/4"	1 1/8"	1/2"	1 1/8"
96"	3/8"	1 1/8"	1/2"	1 1/8"
108"	3/8"	1 1/8"	5/8"	1 1/8"
120"	1/2"	1 1/8"	5/8"	1 1/8"
132"	5/8"	1 1/8"	3/4"	1 1/8"
144"	3/4"	1 1/8"	3/4"	1 1/8"

GLASS & ALUMINUM SOLUTIONS™

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PRODUCT:

Series CT451

ALUMINUM
STOREFRONT
WALL - NI

Resistor

PRODUCT SERIES

REV#	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

ENGINEER:

MCY ENGINEERING, INC.

GLAZING CONSULTANT

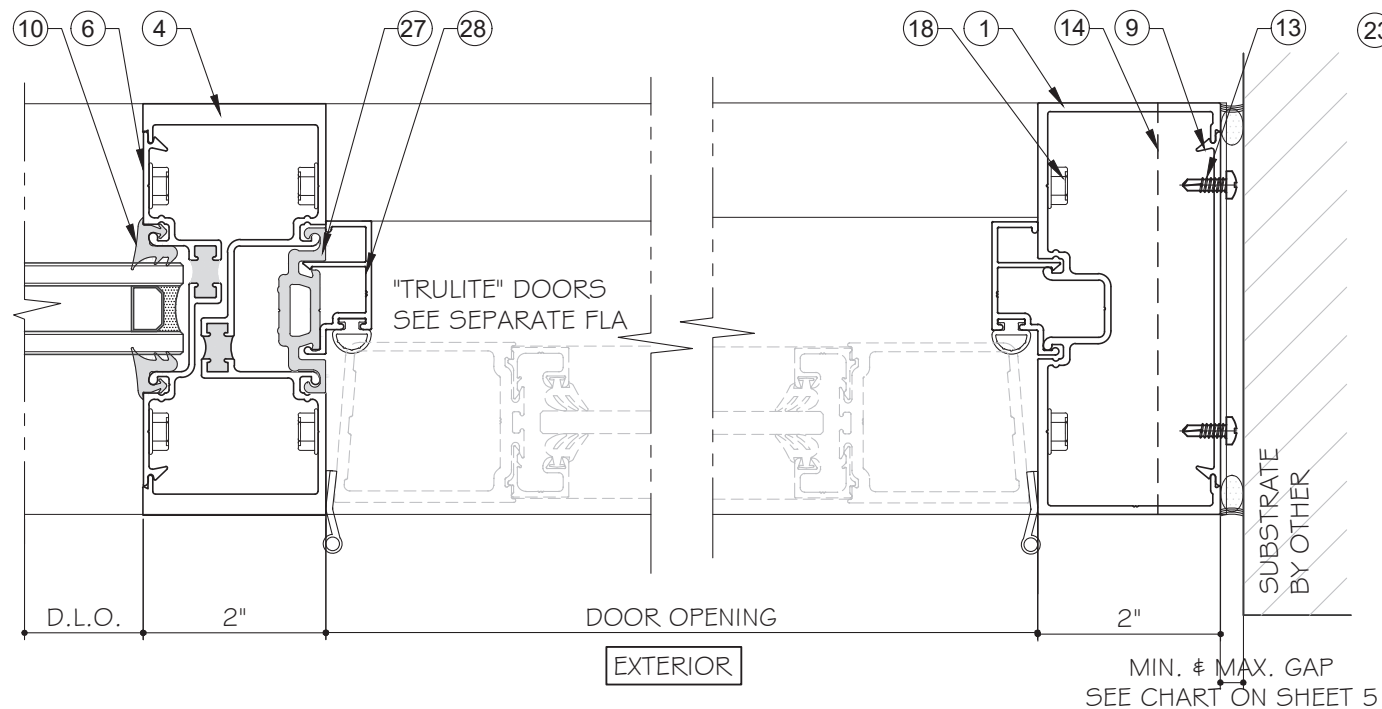
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Miramar, FL 33027
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mcy@mcyengineering.com
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STAMP:

FLORIDA APPROVAL:

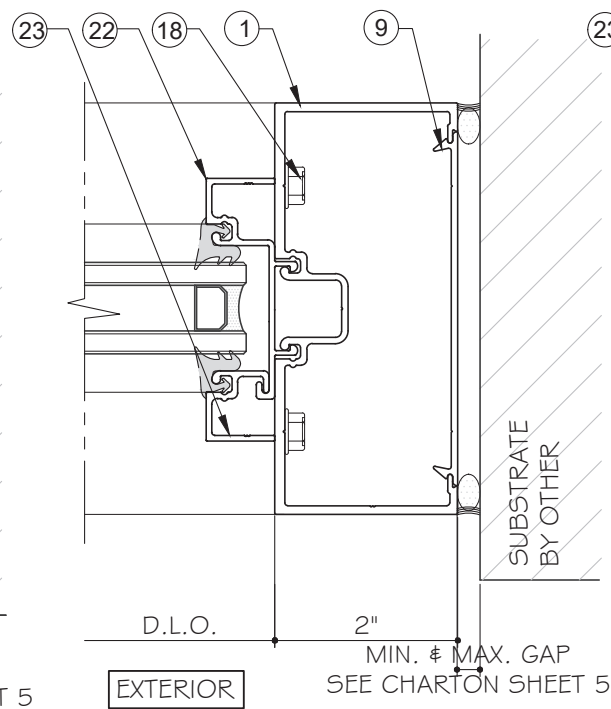
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DRAWN: James	DRAWING No:
DATE: 09/15/2026	5 OF 11
DWG: AD19-04	

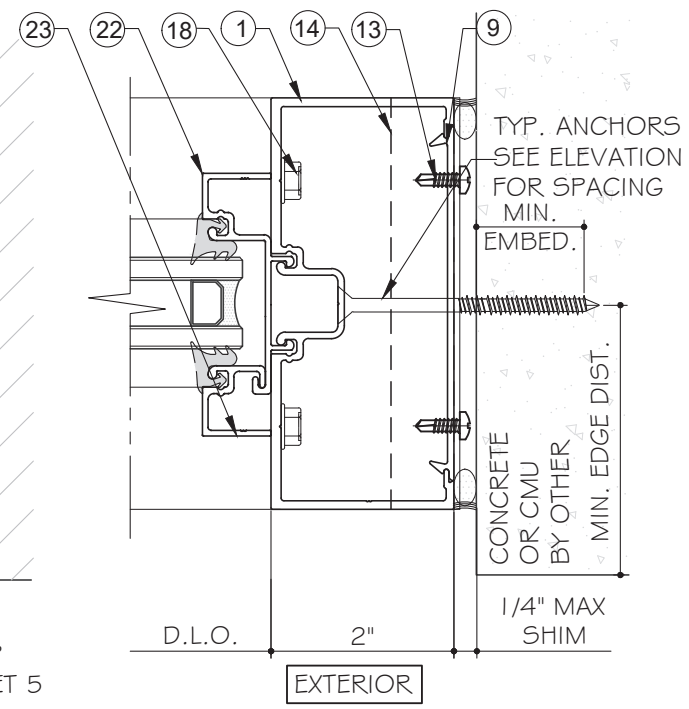


H1
6 OPTION

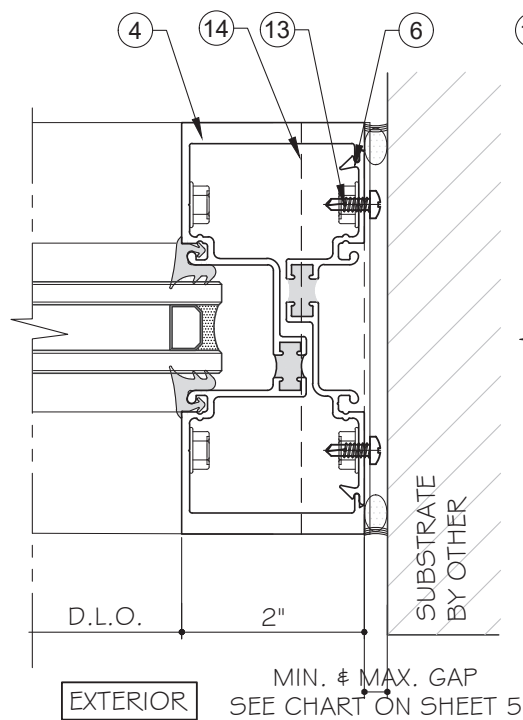
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6 DETAIL



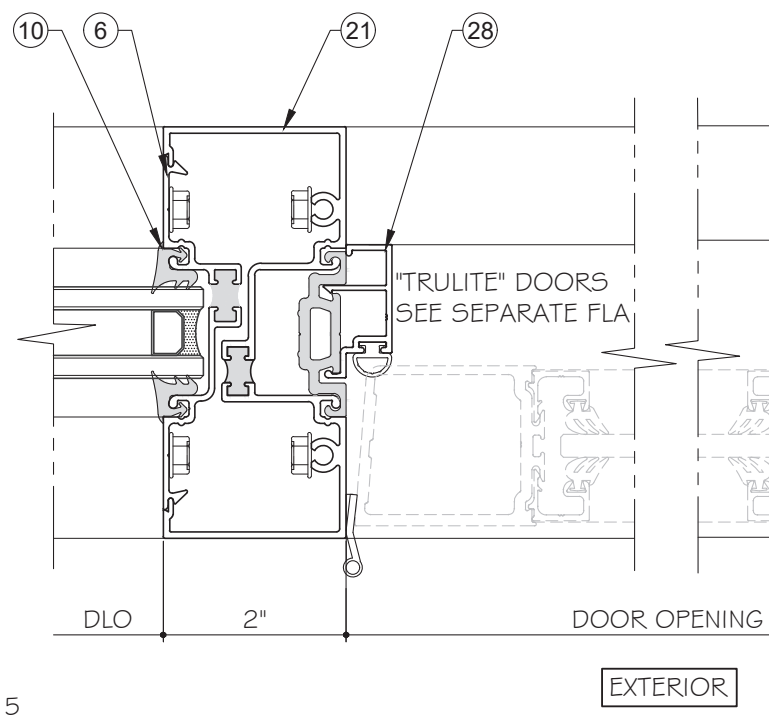
I
6 DETAIL
FOR XX OR X DOOR ONLY.



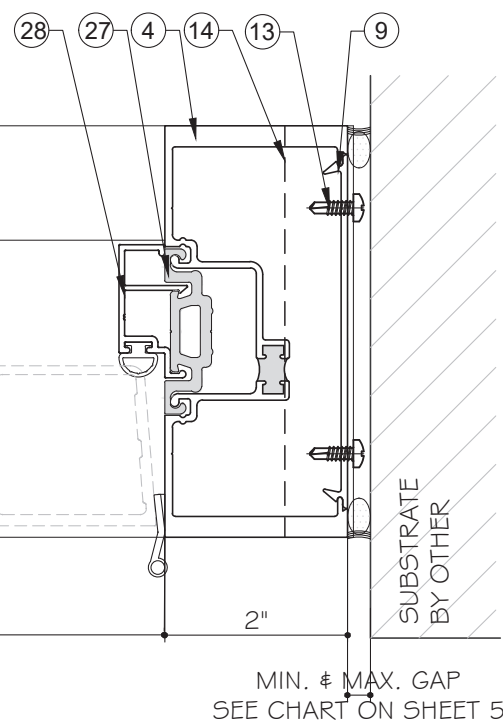
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6 DETAIL
FOR XX OR X DOOR ONLY.



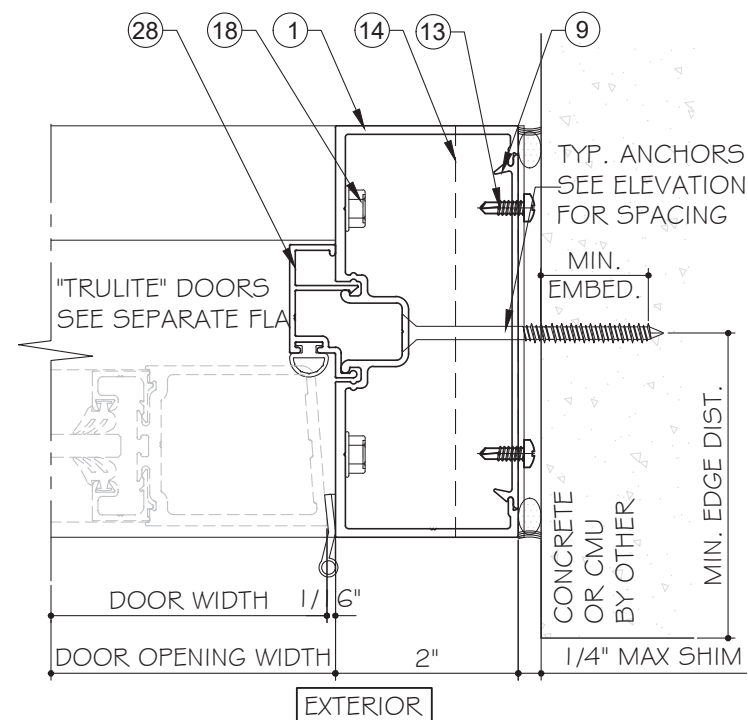
X
6 DETAIL



L
6 DETAIL



KI
6 DETAIL



N
6 DETAIL



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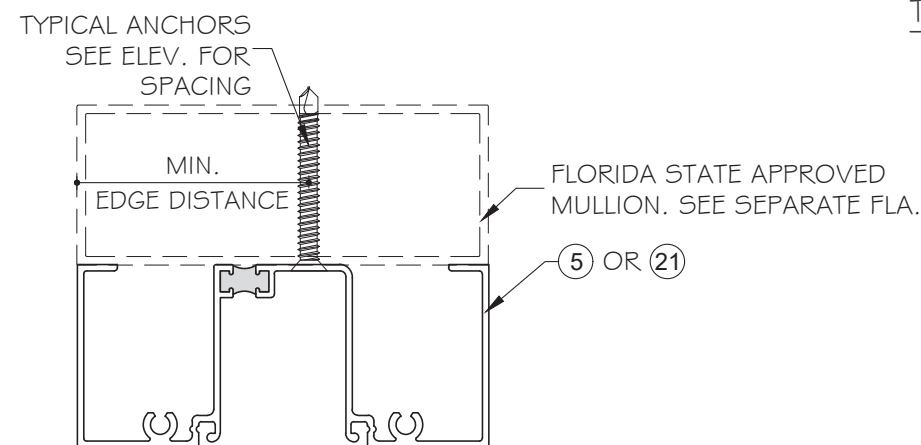
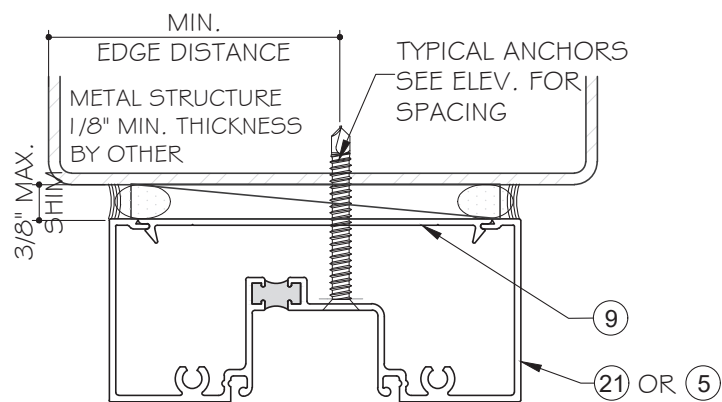
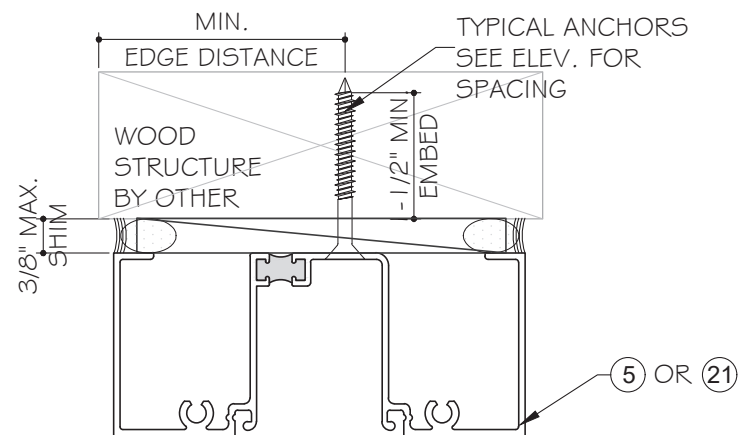
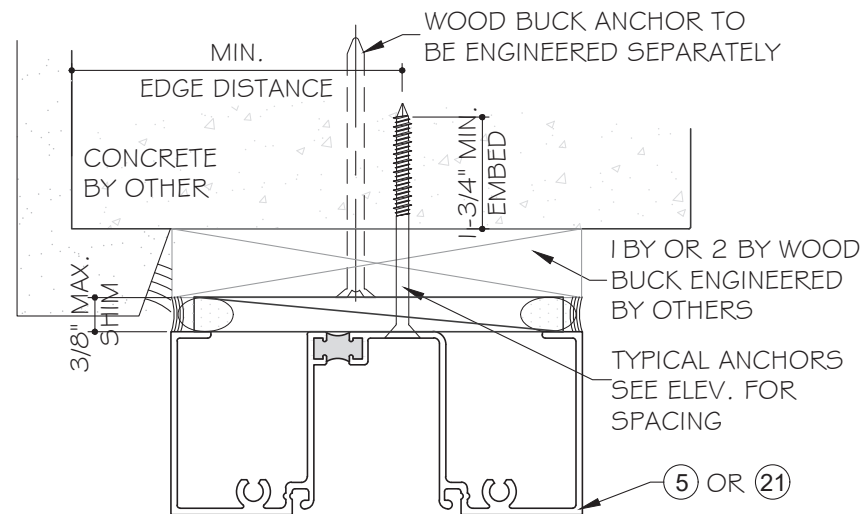
DRAWN: James

DATE: 09/15/2026

DWG: AD19-04

DRAWING No:

6 OF 11



WOOD BUCKS OR METAL STRUCTURES NOT BY TRULITE. MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS:

SEE ELEVATIONS FOR SPACING

TYPE 'A' - 1/4" DIA. TAPCON BY 'ITW' ($F_u = 120$ KSI, $F_y = 92$ KSI) OR 1/4" DIA. ULTRACON+ BY 'DEWALT' ($F_u = 164$ KSI, $F_y = 148$ KSI)

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD.

THRU 1 OR 2 WOOD BUCKS INTO CONCRETE.
1-3/4" MIN. EMBED INTO CONCRETE.

TYPE 'B' - 1/4" DIA. TAPCON BY 'ITW' ($F_u = 120$ KSI, $F_y = 92$ KSI) OR 1/4" DIA. ULTRACON+ BY 'DEWALT' ($F_u = 164$ KSI, $F_y = 148$ KSI)

DIRECTLY INTO CONC.
1-3/4" MIN. EMBED INTO CONC.

TYPE 'B1' - 1/4" DIA. TAPCON BY 'ITW' ($F_u = 120$ KSI, $F_y = 92$ KSI) (JAMB ONLY)

DIRECTLY INTO MEDIUM WEIGHT CMU BLOCK
1-1/4" MIN. EMBED INTO MEDIUM WEIGHT CMU BLOCK OR

1/4" DIA. ULTRACON+ BY 'DEWALT' ($F_u = 164$ KSI, $F_y = 148$ KSI)

1-1/4" MIN. EMBED INTO HOLLOW BLOCK
1-3/4" MIN. EMBED INTO GROUT FILLED BLOCK

TYPE 'C' - 1/4" SMS ($F_u = 74$ KSI, $F_y = 57$ KSI)-1/4" MAX SHIM
1/4" TEKS SELF DRILLING SCREW ($F_u = 120$ KSI, $F_y = 90$ KSI) UP TO 3/8" SHIM

INTO APPROVED MULLIONS
(1/8" THK. MIN.) INTO METAL STRUCTURE.

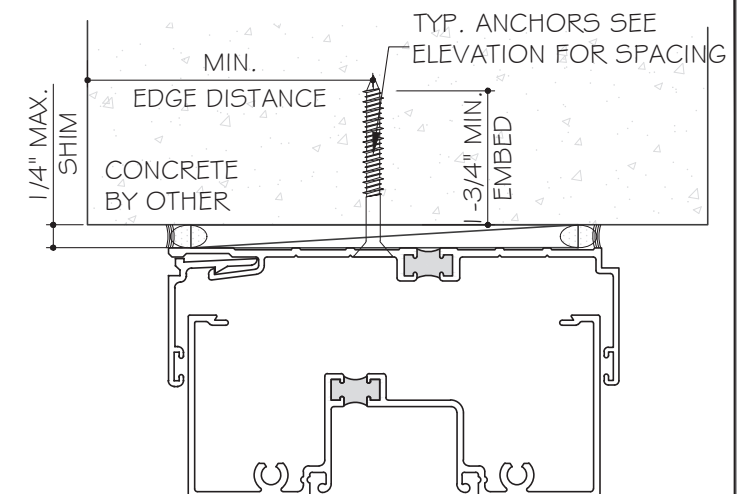
STEEL : 12 GA. MIN. ($F_y = 36$ KSI MIN.)
ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)
(3) THREADS MIN. PENETRATION BEYOND METAL SUBSTRATE

TYPICAL EDGE DISTANCE

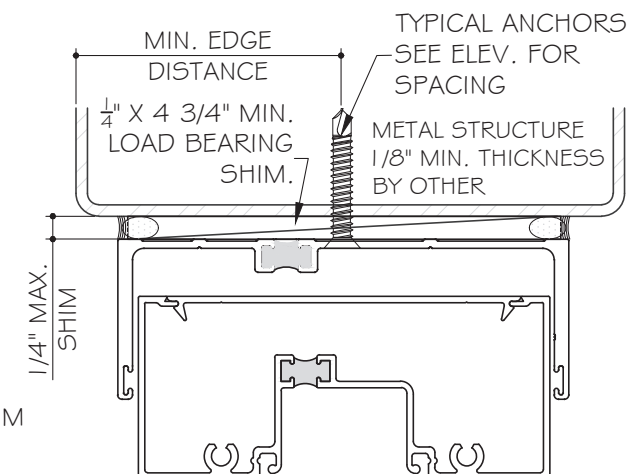
- INTO CONCRETE AND MASONRY = 2-1/2" MIN.
- INTO WOOD STRUCTURE = 1" MIN.
- INTO METAL STRUCTURE = 3/4" MIN.

WOOD SG = 0.55 MIN.
CONCRETE $f_c = 3000$ PSI MIN.
C-90 HOLLOW/FILLED BLOCK $f_m = 2000$ PSI MIN.,
NORMAL STRENGTH CMU (AT JAMB ONLY)

FRAME CORNERS SEALED WITH DOWSIL 1199 OR BUTYL TAPE.



DESIGN LOAD LIMITED TO
+/-23.5 psf



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PRODUCT:

Series CT451
ALUMINUM
STOREFRONT
WALL - NI

Resistor
PRODUCT SERIES

REV#	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

ENGINEER:



MCY ENGINEERING, INC.
GLAZING CONSULTANT

12781 Miramar Pkwy. Ste. 301
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STAMP:



Oct. 17th, 2026

FLORIDA APPROVAL:

FL29081.1

DRAWN: James

DATE: 09/15/2026

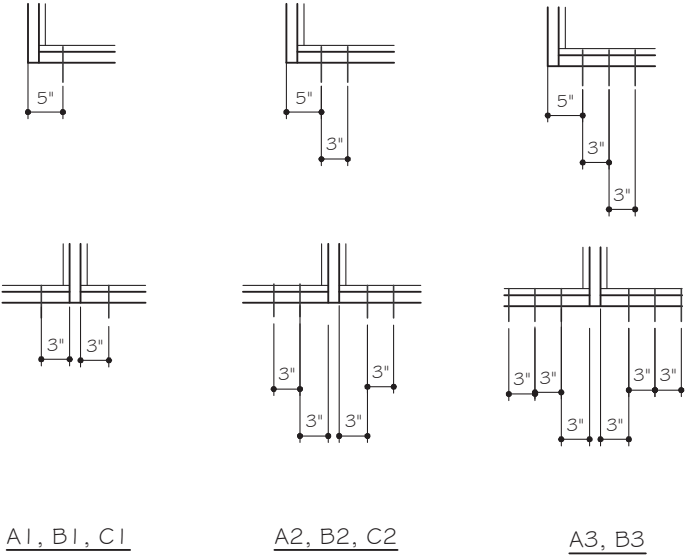
DWG: AD19-04

DRAWING No:

7 OF 11

DESIGN LOAD CAPACITY (PSF)										
MULLION WIDTH (in)	FRAME HEIGHT (in)	ANCHPR TYPES					CAPACITIES (LBS)			
		A1/B1	A2/B2	A3/B3	C1*	C2*	B1	B2	C1	C2
		3/8" MAX SHIM					1/4"MAX. SHIM			
36	60	52.5	80.0	80.0	68.0	80.0	80.0	80.0	80.0	80.0
42		45.0	80.0	94.0	58.3	80.0	70.6	80.0	80.0	80.0
48		39.4	78.8	80.0	51.0	80.0	61.8	80.0	70.0	80.0
54		35.0	70.0	94.0	45.3	80.0	54.9	80.0	62.2	80.0
60		31.5	63.0	94.0	40.8	80.0	49.4	80.0	56.0	80.0
30	66	57.3	80.0	94.0	74.2	80.0	80.0	80.0	80.0	80.0
36		47.8	80.0	94.0	61.8	80.0	74.9	80.0	80.0	80.0
42		40.9	80.0	94.0	53.0	80.0	64.2	80.0	72.7	80.0
48		35.8	71.6	94.0	46.4	80.0	56.2	80.0	63.6	80.0
54		31.8	63.7	94.0	41.2	80.0	49.9	80.0	56.6	80.0
60		28.7	57.3	86.0	37.1	74.2	44.9	80.0	50.9	80.0
30	72	52.5	80.0	94.0	68.0	80.0	80.0	80.0	80.0	80.0
36		43.8	80.0	94.0	56.7	80.0	68.7	80.0	77.8	80.0
42		37.5	75.0	94.0	48.6	80.0	58.9	80.0	66.7	80.0
48		32.8	65.7	94.0	42.5	80.0	51.5	80.0	58.3	80.0
54		29.2	58.4	87.6	37.8	75.6	45.8	80.0	51.9	80.0
60		26.3	52.5	78.8	34.0	68.0	41.2	80.0	46.7	80.0
30	78	48.5	80.0	94.0	62.8	80.0	76.1	80.0	80.0	80.0
36		40.4	80.0	94.0	52.3	80.0	63.4	80.0	71.8	80.0
42		34.6	69.3	94.0	44.8	80.0	54.3	80.0	61.5	80.0
48		30.3	60.6	90.9	39.2	78.5	47.5	80.0	53.8	80.0
54		26.9	53.9	80.8	34.9	69.7	42.3	80.0	47.9	80.0
60		24.2	48.5	72.7	31.4	62.8	38.0	76.1	43.1	80.0
30	84	45.0	80.0	94.0	58.3	80.0	70.6	80.0	80.0	80.0
36		37.5	75.0	94.0	48.6	80.0	58.9	80.0	66.7	80.0
42		32.2	64.3	94.0	41.6	80.0	50.4	80.0	57.1	80.0
48		28.1	56.3	84.4	36.4	72.9	44.1	80.0	50.0	80.0
54		25.0	50.0	75.0	32.4	64.8	39.2	78.5	44.4	80.0
60		22.5	45.0	67.5	29.1	58.3	35.3	70.6	40.0	80.0
30	90	42.0	80.0	94.0	54.4	80.0	65.9	80.0	74.7	80.0
36		35.0	70.0	94.0	210.1	80.0	54.9	80.0	62.2	80.0
42		30.0	60.0	90.1	38.9	77.7	47.1	80.0	53.3	80.0
48		26.3	52.5	78.8	34.0	68.0	41.2	80.0	46.7	80.0
54		23.3	46.7	70.0	30.2	60.4	36.6	73.2	41.5	80.0
60		21.0	42.0	63.0	27.2	54.4	33.0	65.9	37.3	74.7
36	102	30.9	61.8	80.0	40.0	80.0	48.5	80.0	54.9	80.0
42		26.5	53.0	79.5	34.3	68.6	41.5	80.0	47.1	80.0
48		23.2	46.4	69.5	30.0	60.0	36.4	72.7	41.2	80.0
54		20.6	41.2	61.8	26.7	53.3	32.3	64.6	36.6	73.2
60		18.5	37.1	55.6	24.0	48.0	29.1	58.2	32.9	65.9

DESIGN LOAD CAPACITY (PSF)										
MULLION WIDTH (in)	FRAME HEIGHT (in)	ANCHPR TYPES					CAPACITIES (LBS)			
		A1/B1	A2/B2	A3/B3	C1*	C2*	B1	B2	C1	C2
		3/8" MAX SHIM					1/4"MAX. SHIM			
30	108	35.0	70.0	94.0	45.3	80.0	54.9	80.0	62.2	80.0
36		29.2	58.4	87.6	37.8	75.6	45.8	80.0	51.9	80.0
42		25.0	50.0	75.0	32.4	64.8	39.2	78.5	44.4	80.0
48		21.9	43.8	65.7	28.3	56.7	34.3	68.7	38.9	77.8
54			38.9	58.4	25.2	50.4	30.5	61.0	34.6	69.1
60			35.0	52.5	22.7	45.3	27.5	54.9	31.1	62.2
30	114	33.2	66.4	94.0	42.9	80.0	52.0	80.0	58.9	80.0
36		27.6	55.3	82.9	35.8	71.6	43.4	80.0	49.1	80.0
42		23.7	47.4	71.1	30.7	61.4	37.2	74.3	42.1	80.0
48		20.7	41.5	62.2	26.8	53.7	32.5	65.1	36.8	73.7
54			36.9	55.3	23.9	47.7	28.9	57.8	32.7	65.5
60			33.2	49.8	21.5	42.9	26.0	52.0	29.5	58.9
30	120	31.5	63.0	94.0	40.8	80.0	49.4	80.0	56.0	80.0
36		26.3	52.5	78.8	34.0	68.0	41.2	80.0	46.7	80.0
42		22.5	45.0	67.5	29.1	58.3	35.3	70.6	40.0	80.0
48			39.4	59.1	25.5	51.0	30.9	61.8	35.0	70.0
54			35.0	52.5	22.7	45.3	27.5	54.9	31.1	62.2
60			31.5	47.3	20.4	40.8	24.7	49.4	28.0	56.0
30	126	30.0	60.0	90.1	38.9	77.7	47.1	80.0	53.3	80.0
36		25.0	50.0	75.0	32.4	64.8	39.2	78.5	44.4	80.0
42		21.4	42.9	64.3	27.8	55.5	33.6	67.3	38.1	76.2
48			37.5	56.3	24.3	48.6	29.4	58.9	33.3	66.7
60			30.0	50.0	20.0	40.0	20.0	40.0	20.0	40.0
30	132	28.7	57.3	86.0	37.1	74.2	44.9	80.0	50.9	80.0
36		23.9	47.8	71.6	30.9	61.8	37.5	74.9	42.4	80.0
42		20.5	40.9	61.4	26.5	53.0	32.1	64.2	36.4	72.7
48			35.8	53.7	23.2	46.4	28.1	56.2	31.8	63.6
60			27.4	54.8	22.2	44.3	26.9	53.7	30.4	60.9
30	138	27.4	54.8	82.2	35.5	71.0	43.0	80.0	48.7	80.0
36		22.8	45.7	68.5	29.6	59.1	35.8	71.7	40.6	80.0
42			39.2	58.7	25.3	50.7	30.7	61.4	34.8	69.6
48			34.3	51.4	22.2	44.3	26.9	53.7	30.4	60.9
60			26.3	52.5	22.2	44.3	26.9	53.7	30.4	60.9
30	144	26.3	52.5	78.8	34.0	68.0	41.2	80.0	46.7	80.0
36		21.9	43.8	65.7	28.3	56.7	34.3	68.7	38.9	77.8
42			37.5	56.3	24.3	48.6	29.4	58.9	33.3	66.7
48			32.8	49.3	21.3	42.5	25.8	51.5	29.2	58.3



ANCHORS TYPES: SEE SHEET 9 FOR DESCRIPTION

A1 = (1) ANCHORS TYPE 'A' AT JAMB OR EACH SIDE OF MULLION

A2 = (2) ANCHORS TYPE 'A' AT JAMB OR EACH SIDE OF MULLION

A3 = (3) ANCHORS TYPE 'A' AT JAMB OR EACH SIDE OF MULLION

AA1 = (1) ANCHORS TYPE 'A' AT JAMB OR EACH SIDE OF MULLION

AA2 = (2) ANCHORS TYPE 'A' AT JAMB OR EACH SIDE OF MULLION

AA3 = (3) ANCHORS TYPE 'A' AT JAMB OR EACH SIDE OF MULLION

B1 = (1) ANCHORS TYPE 'B' AT JAMB OR EACH SIDE OF MULLION

B2 = (2) ANCHORS TYPE 'B' AT JAMB OR EACH SIDE OF MULLION

C1 = (1) ANCHORS TYPE 'C' AT JAMB OR EACH SIDE OF MULLION

C2 = (2) ANCHORS TYPE 'C' AT JAMB OR EACH SIDE OF MULLION

D1 = (1) ANCHORS TYPE 'C' AT JAMB OR EACH SIDE OF MULLION

D2 = (2) ANCHORS TYPE 'C' AT JAMB OR EACH SIDE OF MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

* 1/4"TEKS (GRADE 5) ONLY FOR 3/8" SHIM



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PRODUCT:

Series CT451
ALUMINUM
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WALL - NI

Resistor
PRODUCT SERIES

REVN	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

ENGINEER:

MCY ENGINEERING, INC.
GLAZING CONSULTANT

12781 Miramar Pkwy. Ste. 301
Miramar, FL 33027
P: 305 271 0117
mcy@mcyengineering.com
www.MCYEngineering.com

STAMP:

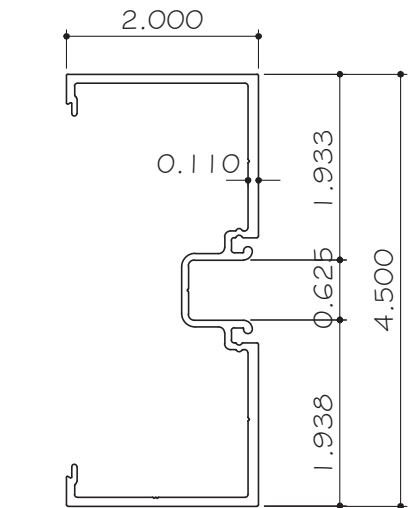
YIPING WANG P.E.
FLORIDA PROFESSIONAL ENGINEER
LICENSE No. 55983
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Oct. 17th, 2026

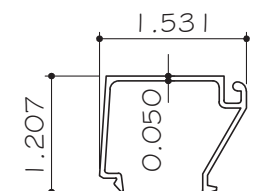
FLORIDA APPROVAL:

FL29081.1

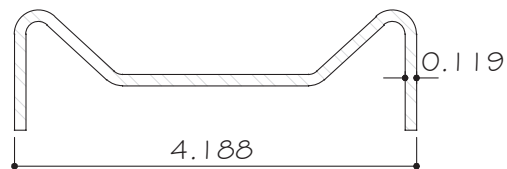
DRAWN: James	DRAWING No:
DATE: 09/15/2026	8 OF 11
DWG: AD 19-04	



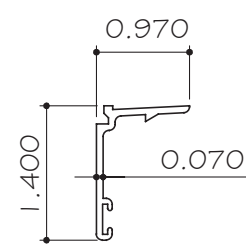
1 DOOR JAMB MULLION
DF451-8 (G063-T6)



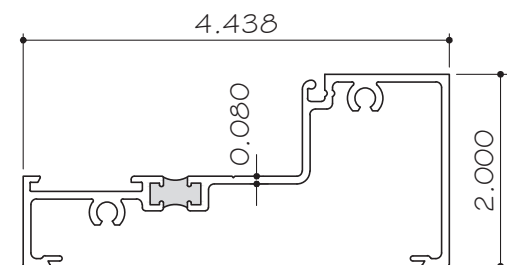
2 GLASS STOP
CG451-3 (G063-T6)



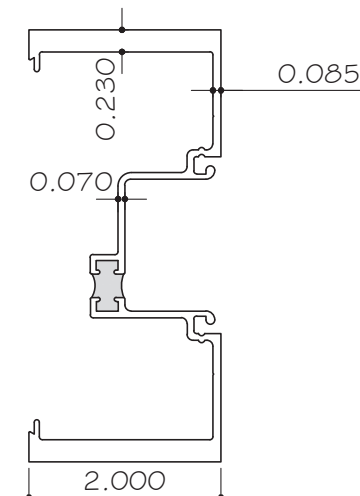
20 STEEL REINFORCING
ST450-4



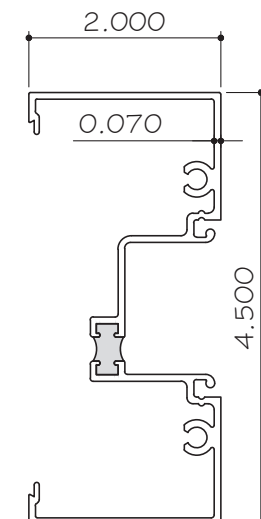
24 MALE TWO PIECE HEAD RECEPTOR
CT450-26 (G063-T6)



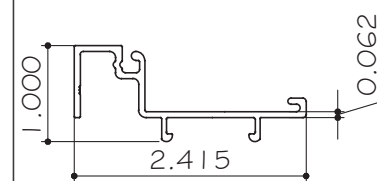
3 SILL / HEAD
CG451-4 (G063-T6)



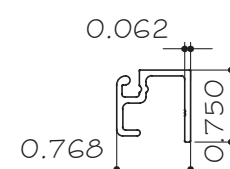
4 HEAVY DUTY VERTICAL MULLION/ JAMB
CT451-7 (G063-T6)



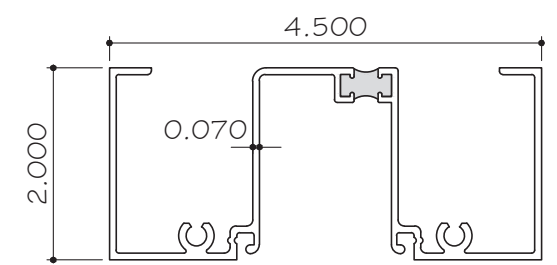
21 LIGHT MULLION / JAMB / HEAD
CT451-31 (G063-T6)



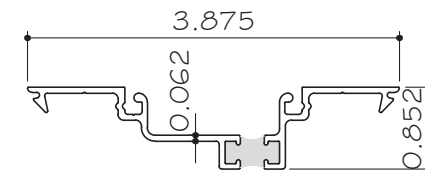
22 GLASS STOP
DF118 (G063-T6)



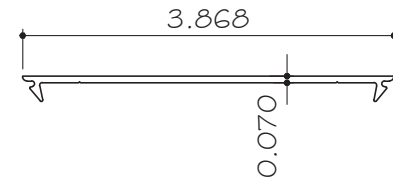
23 GLASS STOP
DF119 (G063-T6)



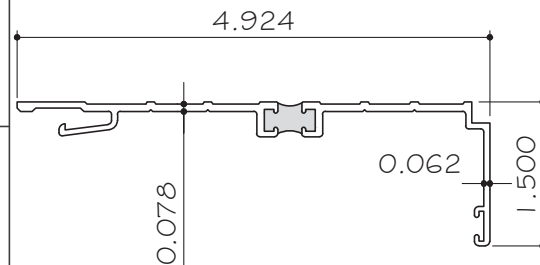
5 WALL JAMB / HEAD DEEP POCKET
CT451-11 (G063-T6)



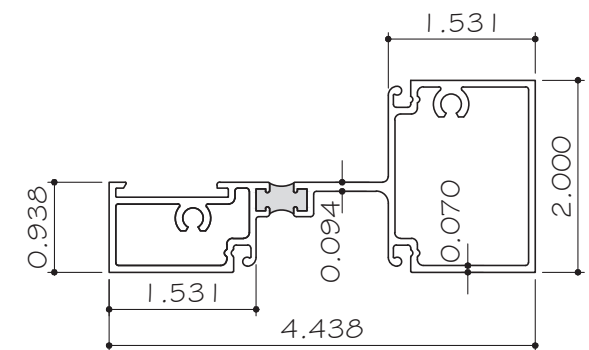
6 VERTICAL FILLER
CT451-35 (G063-T6)



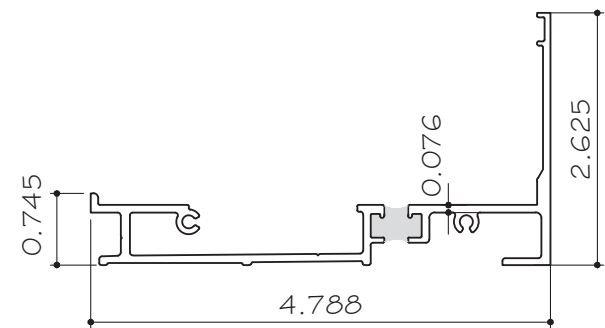
9 FLAT FILLER
CG450-18 (G063-T6)



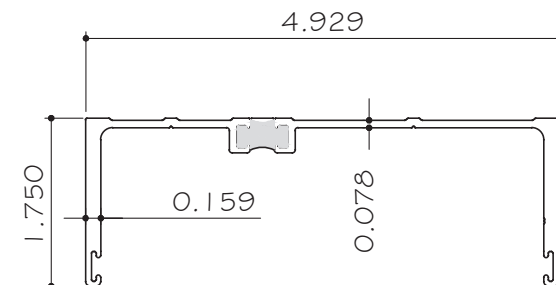
25 FEMALE TWO PIECE HEAD RECEPTOR
CT450-27 (G063-T6)



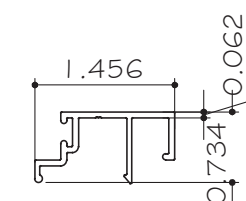
7 INTERMEDIATE HORIZONTAL
CT451-36 (G063-T6)



8 STARTER SILL
CT451-39 (G063-T6)



26 HEAD RECEPTOR HEAVY DUTY
CT451-38 (G063-T6)



28 DOOR STOP
4510 (G063-T6)



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PRODUCT:
Series CT451
ALUMINUM
STOREFRONT
WALL - NI



REVN	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

ENGINEER:

MCY ENGINEERING, INC.
GLAZING CONSULTANT
12781 Miramar Pkwy. Ste. 301
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P: 305 271 0117
mcy@mcyengineering.com
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STAMP:

FLORIDA APPROVAL:

FL29081.1

DRAWN: James	DRAWING No:
DATE: 09/15/2026	9 OF 11
DWG: AD19-04	

ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	DF451-8	AS REQD.	DOOR JAMB MULLION	6063-T6 ALUM	TRULITE
2	CG451-3	AS REQD.	GLASS STOP	6063-T6 ALUM	TRULITE
3	CT451-4	AS REQD.	SILL / HEAD	6063-T6 ALUM	TRULITE
4	CT451-7	AS REQD.	HEAVY DUTY VERTICAL MULLION	6063-T6 ALUM	TRULITE
5	CT451-11	AS REQD.	WALL JAMB / HEAD DEEP POCKET	6063-T6 ALUM	TRULITE
6	CT451-35	AS REQD.	MULLION FILLER	6063-T6 ALUM	TRULITE
7	CT451-36	AS REQD.	INTERMEDIATE HORIZONTAL	6063-T6 ALUM	TRULITE
8	CT451-39	AS REQD.	STARTER SILL	6063-T6 ALUM	TRULITE
9	CG450-18	AS REQD.	FLAT FILLER	6063-T6 ALUM	TRULITE
10	RG-1	AS REQD.	WEDGE-IN GASKET	EPDM, DURO 65 ±5	TREMCO / GRP
11	RSB-3	AS REQD.	SETTING BLOCK AT 1/8 POINT.	EPDM, DURO 85±5	TREMCO / GRP
12	WD-451	AS REQD.	WATER DEFLECTOR	ABS PLASTIC	UNITED PLASTIC
13	23005	AS REQD.	#6 X 3/8" PHP MS FASTENER FOR END DAM	STAINLESS STEEL	VARIES
14	ED450-2	2/ LITE	END DAM, USE AT EACH END OF CT451-39	ABS PLASTIC	UNITED PLASTIC
15	790 OR EQUAL	AS REQD.	SILICONE - PERIMETER	SILICONE	DOWSIL
17	FAS10-13	(2) PER SIDE OF MULLION /JAMB	#10-24 X1-1/4" PHIL FLAT TYPE 23 UNDERCUT 18.8	S.S.	ALLOY FASTENER
18	FAS14-2	AS REQD.	1/4" - 1 4X1" HWH-F MS	ZINC COATED STEEL	ALLOY FASTENER
19	FAS8-4	2	#8-18 X 3/8" PPH-AB MS	STEEL	ALLOY FASTENER - (1) 2" ON EA. SIDE OF VERT. MULLION & (1) @ MIDPOINT
20	ST450-4	AS REQD.	REINFORCEMENT	STEEL	VARIES
21	CT451-31	AS REQD.	LIGHT NULLION / JAMB / HEAD	6063-T6 ALUM	TRULITE
22	DF118	AS REQD.	GLASS TOP	6063-T6 ALUM	TRULITE
23	DF119	AS REQD.	GLASS TOP	6063-T6 ALUM	TRULITE
24	CG450-26	AS REQD.	MALE TWO PIECE HEAD RECEPTOR	6063-T6 ALUM	TRULITE
25	CT451-27	AS REQD.	FEMALE TWO PIECE HEAD RECEPTOR	6063-T6 ALUM	TRULITE
26	CT451-38	AS REQD.	ONE PIECE HEAD RECEPTOR HEAVY DUTY	6063-T6 ALUM	TRULITE
27	DA101	AS REQD.	RIGID PVC JAMB FILLER	PVC	IMPERIAL PLASTIC
28	4510	AS REQD.	DOOR STOP	6063-T6 ALUM	TRULITE
29	-	AS REQD.	ALUMINUM SPACER	ALUMINUM	HELIMA HELVETION INT. / VARIES.



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WALL - NI



PRODUCT SERIES

REV#	DATE/REMARKS
R2	UPDATE TO FBC 2023
R3	UPDATE TO FBC 2026

ENGINEER:



MCY ENGINEERING, INC.
GLAZING CONSULTANT

12781 Miramar Pkwy. Ste. 301
Miramar, FL 33027
P: 305 271 0117
mcy@mcyengineering.com
www.MCYEngineering.com

STAMP:



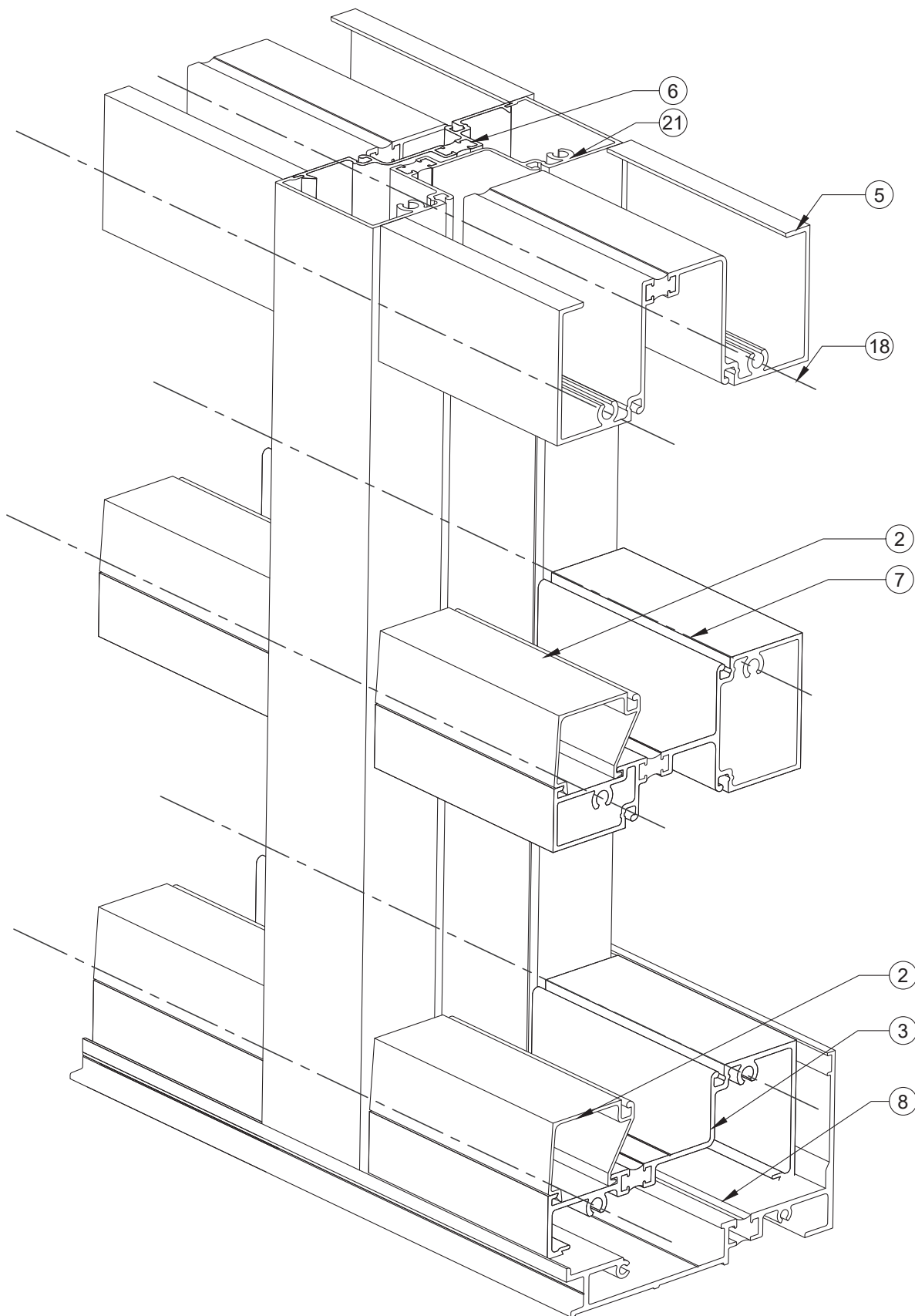
YIPING WANG P.E.
FLORIDA PROFESSIONAL ENGINEER
LICENSE
No. 55983
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Oct. 17th, 2026

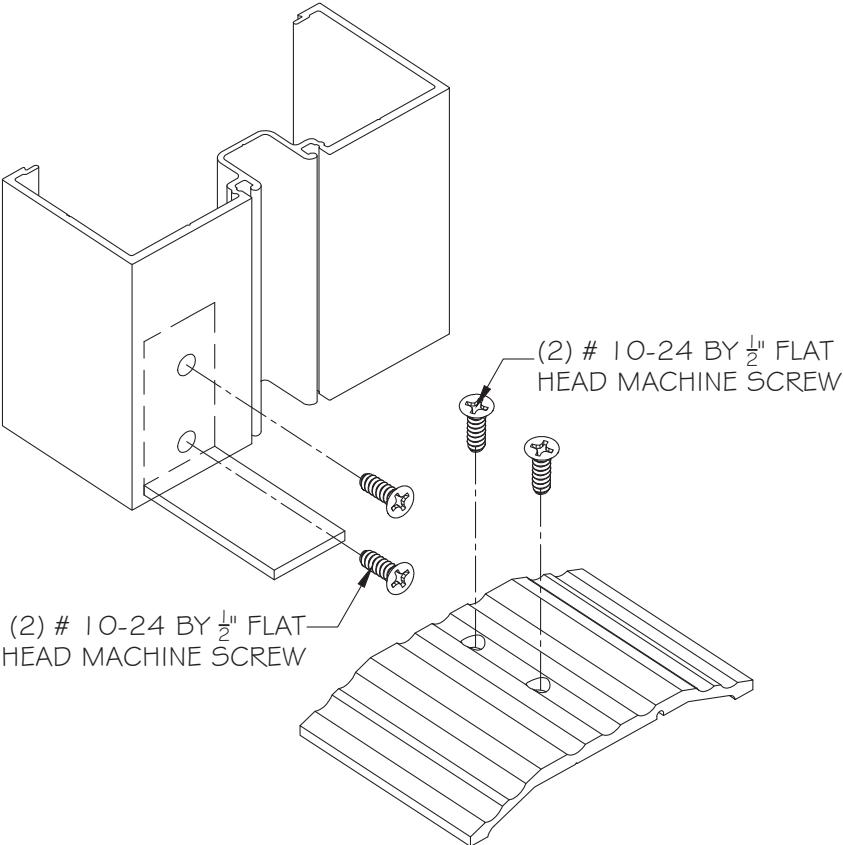
FLORIDA APPROVAL:

FL29081.1

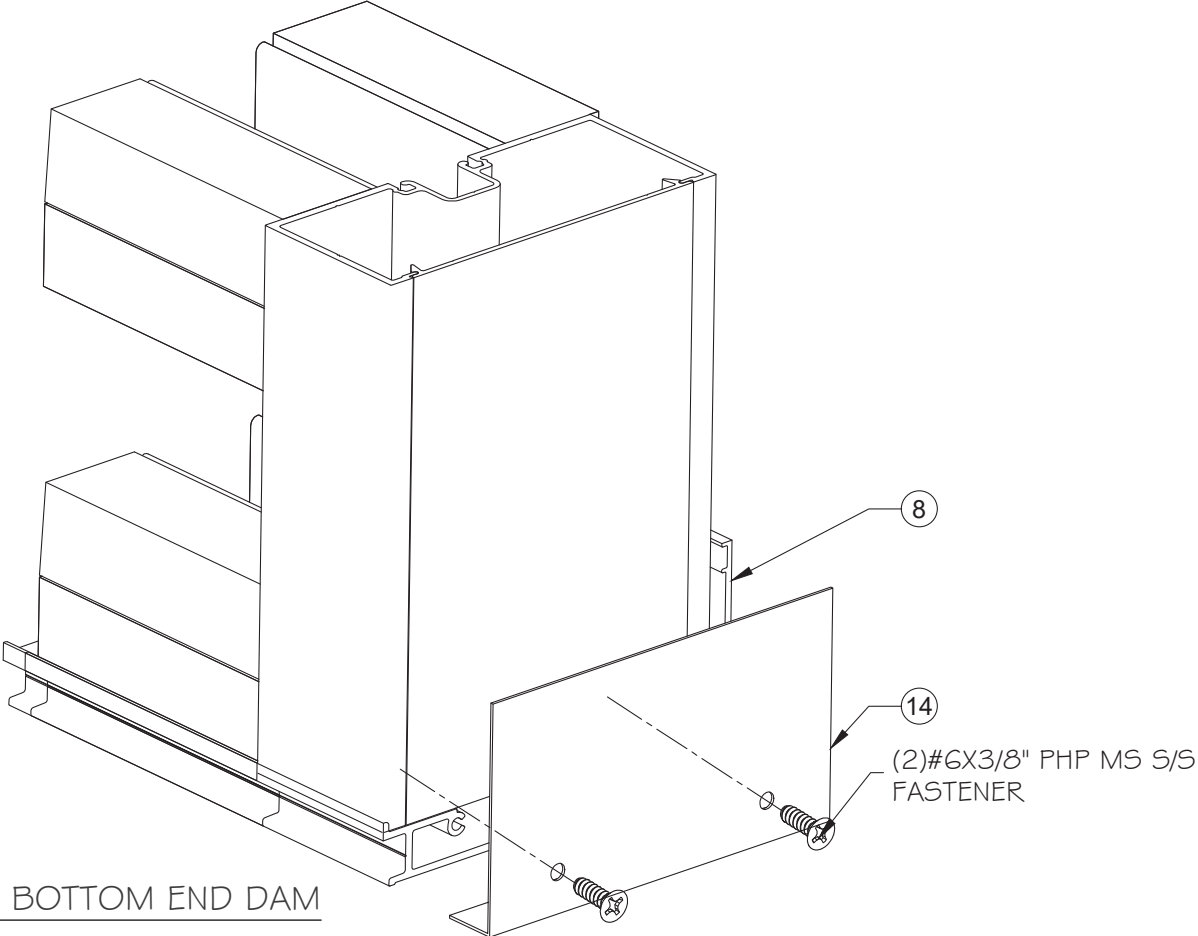
DRAWN: James	DRAWING No:
DATE: 09/15/2026	10 OF 11
DWG: AD19-04	



FRAME CORNERS ISOMETRIC



DJJ OR DJM CONECTION WITH DOOR SILL



JAMB BOTTOM END DAM

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WALL - NI
Resistor
PRODUCT SERIES

REVN	DATE/REMARKS
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R3	UPDATE TO FBC 2026

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