

TRULITE GLASS & ALUMINUM SOLUTIONS

SERIES 3100 IMPACT RESISTANT STOREFRONT SYSTEM

WITH MULTIPLE INFILLS (LMI - HVHZ)

GENERAL NOTES:

1.

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) AND HAS BEEN TESTED TO THE FOLLOWING STANDARDS:
 - TAS 201-94 (ASTM E283, ASTM E330, ASTM E331)
 - TAS 202-94 (ASTM 1996)
 - TAS 203-94 (ASTM E 1886)
2.

SERIES 3100 RESISTOR SERIES ALUMINUM STOREFRONT WAS TESTED TO COMPLY WITH MISSILE LEVEL "D" (50FT/SEC) IMPACT AND QUALIFIED FOR USE ON ESSENTIAL FACILITIES FOR THE FOLLOWING WIND ZONE LOCATIONS:
 - WIND ZONE 1: 130MPH-139MPH
 - WIND ZONE 2: 140MPH TO 149MPH (AT GREATER THAN ONE MILE OF THE COASTLINE)
 - WIND ZONE 3: 150MPH TO 170MPH (AT ELEVATION GREATER THAN 30FT AND WITHIN 1MILE OF THE COAST LINE (EXCLUDING HVHZ)
3.

THIS STOREFRONT SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT. SHUTTERS ARE NOT REQUIRED.
4.

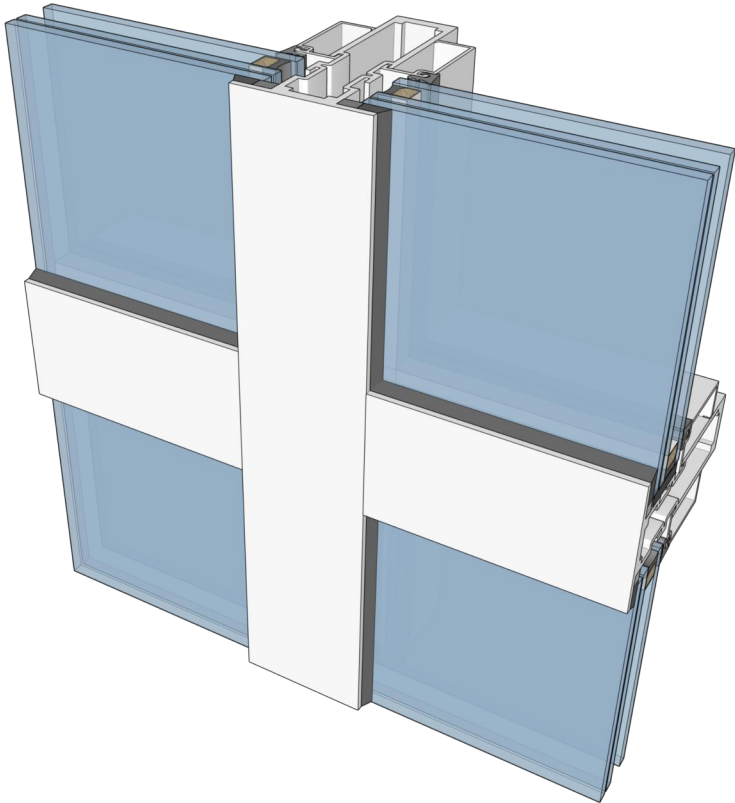
CODE REQUIREMENTS FOR SAFEGUARDS MUST BE OBSERVED.
5.

THE MAIN STRUCTURE WHERE THIS STOREFRONT SYSTEM WILL BE INSTALLED MUST BE CAPABLE OF SUPPORTING ALL THE LOADS IMPOSED BY THIS STOREFRONT SYSTEM.
6.

ANCHORS SHALL BE AS LISTED. SPACED AS SHOWN ON DETAILS. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS REQUIRED. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. FOR INSTALLATION THROUGH METAL FRAME, PROVIDE 3 THREADS MINIMUM PENETRATION BEYOND METAL FRAME SUBSTRATE. FOR GROUTED FILLED BLOCK (CMU), DO NOT INSTALL ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS REFERENCED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT IN FACE SHELL OF BLOCK. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7.

INSTALLATION ANCHORS MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
8.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME IN CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2023 FLORIDA BUILDING CODE & ADAPTED STANDARDS.



9.

ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.
10.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
11.

ULTIMATE LOAD OBTAINED FROM APPLICABLE ASCE 7 STANDARD MULTIPLY BY 0.6 SHALL BE LESS THAN OR EQUAL TO THE DESIGN LOAD CAPACITY IN THIS DOCUMENT. THE DESIGN LOAD CAPACITY SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.

INSTRUCTIONS FOR USE:

1.

DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT & WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
2.

SEE TABLE ON SHEET 4 FOR DESIGN LOAD CAPACITY OF DESIRED GLASS SIZE.
3.

CHECK CAPACITY OF INTERMEDIATE VERTICAL/MULLION AND DOOR JAMB/MULLION ON SHEET 6. DOUBLE DOOR JAMB CAPACITIES SHALL BE AS PER TABLES ON SHEETS 7 & 8 FOR A GIVEN SPACING AND HEIGHT. THE CAPACITY SHOULD BE EQUAL OR GREATER THAN THE DESIGN LOAD.
4.

USING TABLES ON SHEETS 10 & 11 SELECT MULLION/JAMB ANCHOR OPTIONS. FOR DOUBLE DOOR JAMB SEE SHEET 14. DESIGN RATING MUST BE EQUAL OR GREATER THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
5.

THE LOWEST VALUE RESULTING FROM STEP 2,3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

ABBREVIATIONS:

DLO or D.L.O. - DAYLIGHT OPENING
TYP. - TYPICAL
W - WIDTH
H - HEIGHT
TRIBUT. - TRIBUTARY
FH - FRAME HEIGHT
DOW - DOOR OPENING WIDTH
DOH - DOOR OPENING HEIGHT
DP - DESIGN PRESSURE
NTS - NOT TO SCALE

LIMITATION OF USE

- A.

THIS PRODUCT APPROVAL DOCUMENT IS GENERIC AND DOES NOT PROVIDE INFORMATION OF A SITE SPECIFIC PROJECT OR WHERE THE SITE CONDITIONS DEVIATE FROM THIS DOCUMENT.
- B.

FOR CONDITIONS THAT DEVIATE FROM THE PRODUCT APPROVAL DOCUMENTS, THIS SHALL BE REVIEWED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD FOR THE PROJECT.



GLASS & ALUMINUM SOLUTIONS™

<http://www.trulite.com>

403 West Park Court, Suite 201
Peachtree City, GA 30269
p. 800-432-8132

PRODUCT:

**3100 IMPACT
STOREFRONT SYSTEM**

LMI (HVHZ)

Resistor

BLAST & STORM PROTECTION™

REV#	DATE/REMARKS

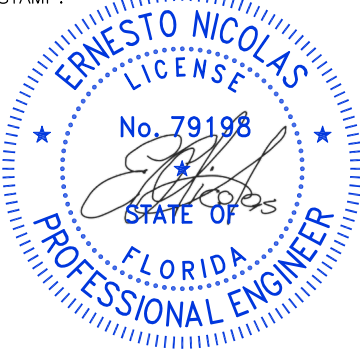
ENGINEER:



En3 Engineering & Consultancy

950 SW 135th Way Sunrise,
FL 33325 P. 786 474 3876
Email: en3.engconsul@gmail.com

STAMP:



FLORIDA PRODUCT APPROVAL:

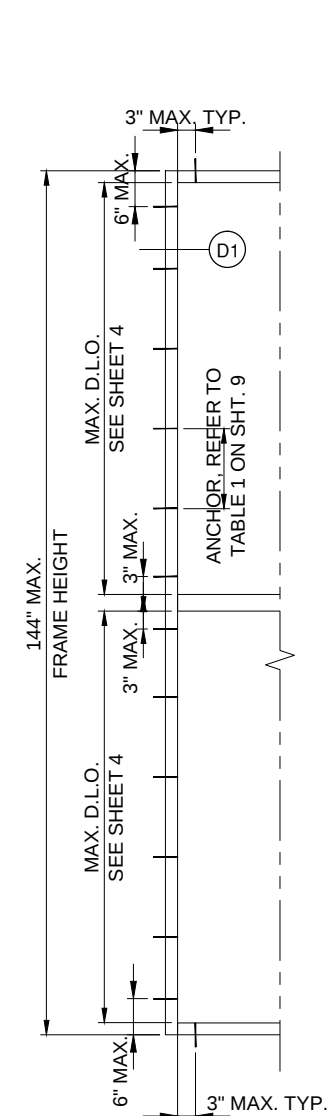
FL45460

DATE: DECEMBER 10, 2023

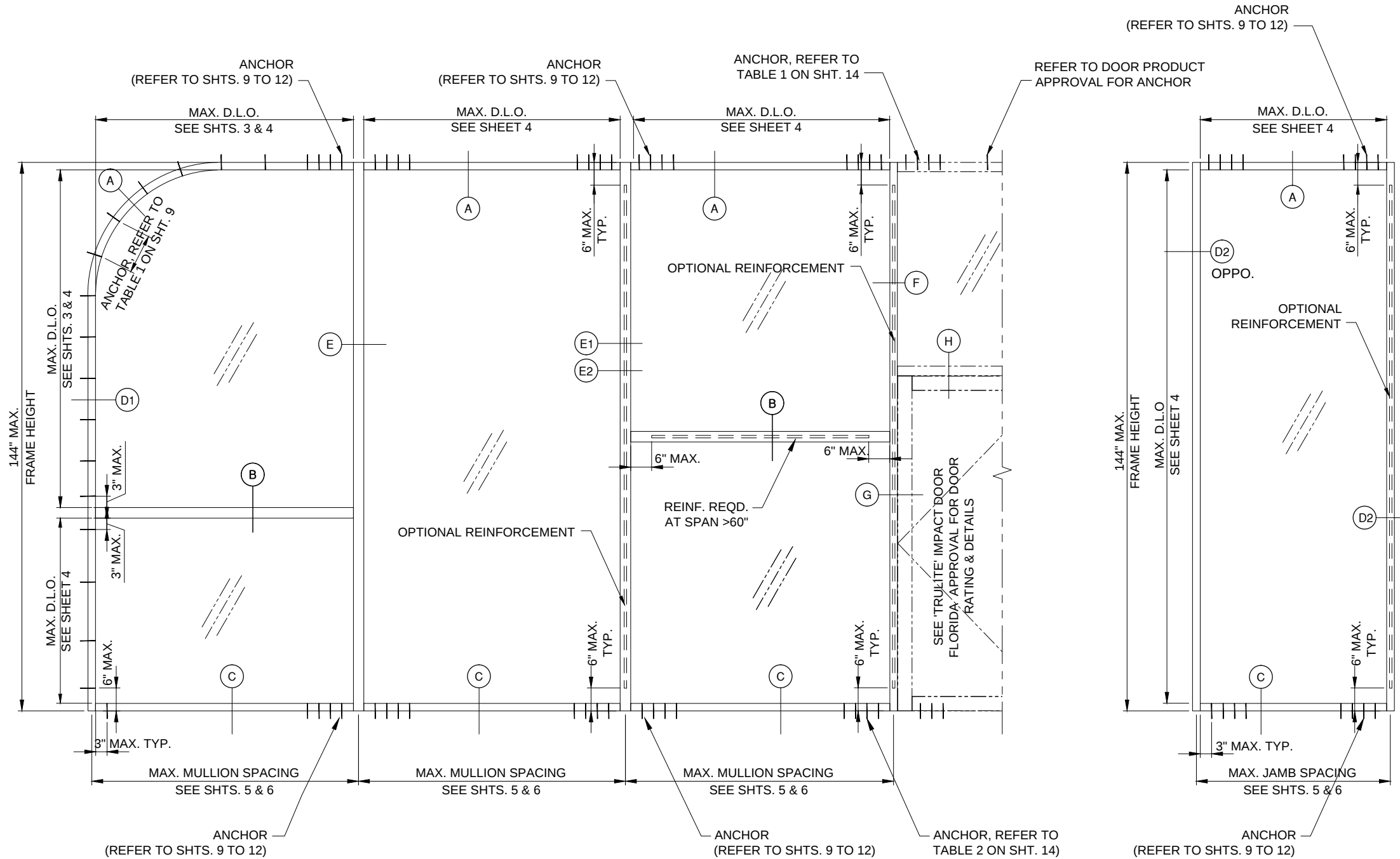
DRAWN: Erick	CHK: ESN
DRWG. No: 23FL-103	SCALE: NTS

SHEET NO.:

1 OF 16



ANCHORED JAMB OPTION
(APPLICABLE TO MAX. DP, MAX. MULLION SPACING & MAX. HEIGHT)



TYPICAL ELEVATIONS

PRODUCT HAS BEEN TESTED FOR WATER INFILTRATION UP TO 50psf



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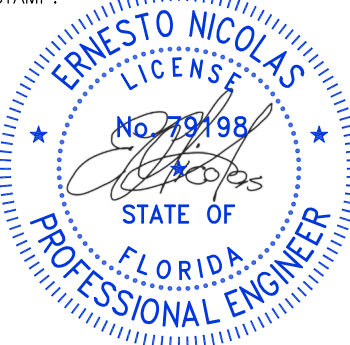
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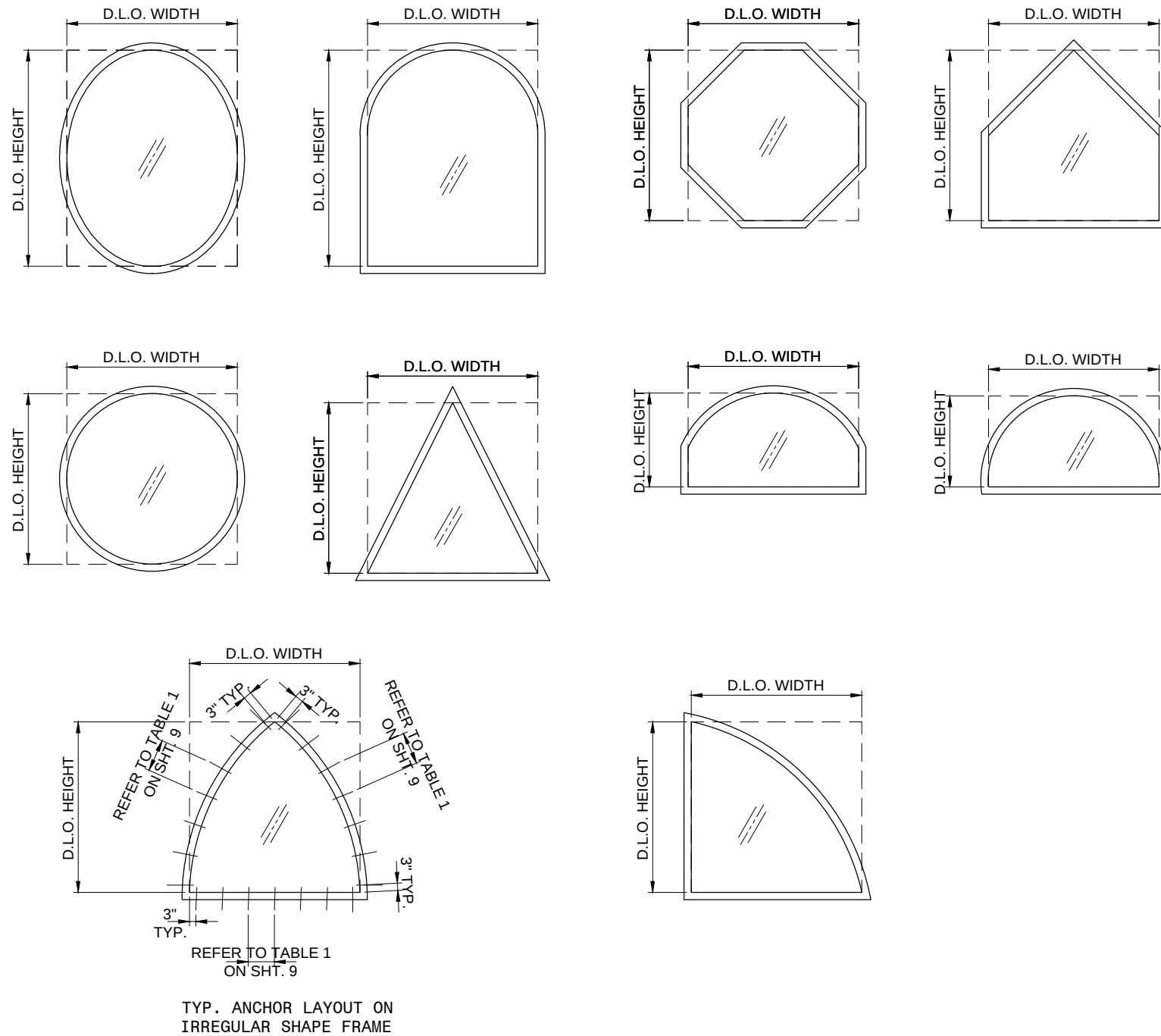
FL45460

DATE: DECEMBER 10, 2023

DRAWN: Erick	CHK: ESN
DRWG. No: 23FL-103	SCALE: NTS

SHEET NO.:

2 OF 16



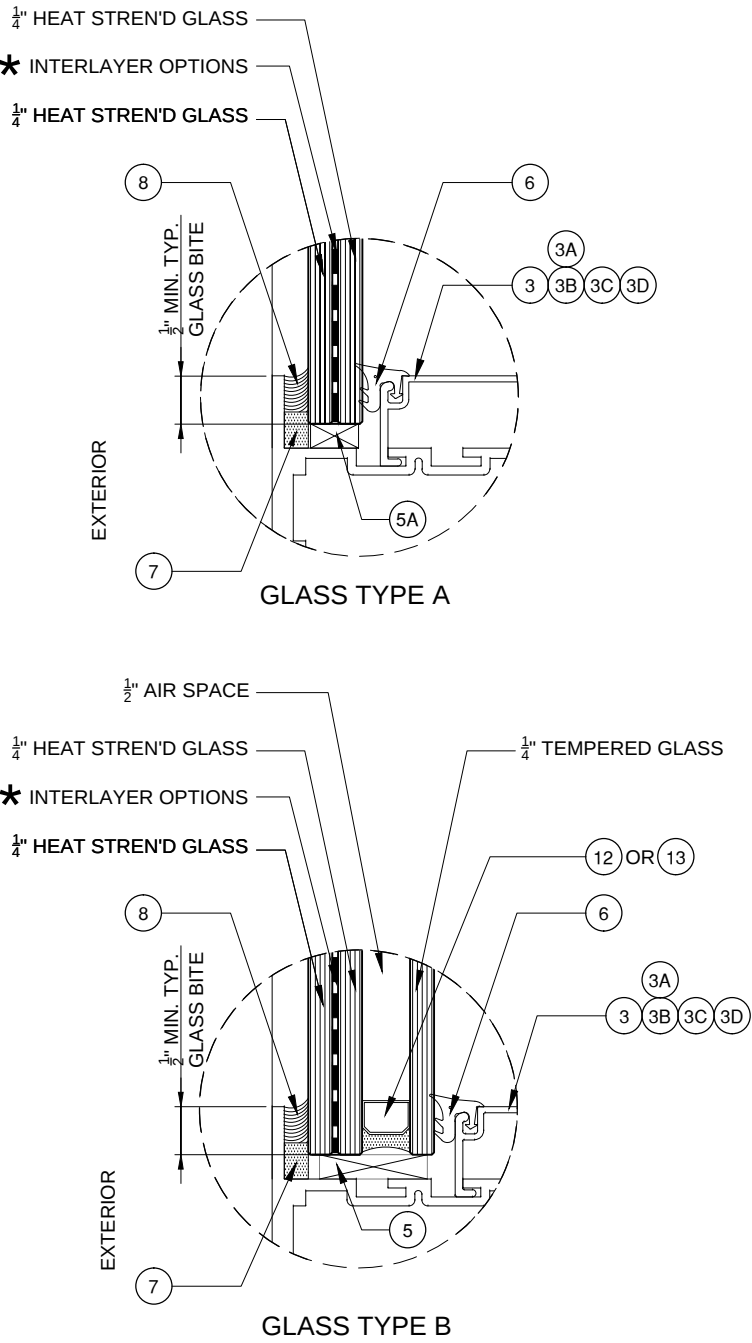
IRREGULAR FRAME SHAPE OPTIONS

NOTE:

ALLOWABLE LOADS FOR ALTERNATE SHAPES AS SHOWN ABOVE OR SIMILAR CAN BE VERIFIED BY INSCRIBING PICTURE WINDOW SHAPE WITHIN SQUARE OR RECTANGLE AS SHOWN IN DOTTED LINES AND OBTAINING ALLOWABLE LOADS FROM THOSE SHAPE. SINGLE LITES MAY BE INSTALLED VERTICALLY AS SHOWN ABOVE OR HORIZONTALLY.

FOR ALTERNATES SHAPES LIMIT MAX. LOADS TO ±90.0 PSF
SEE SHEET 4 FOR D.L.O. WIDTHS AND HEIGHTS.

REFER TO TABLE 1 ON SHT. 9 FOR ANCHOR TYPE & SPACING. REFERENCE 'MULLION SPACING' AS THE EQUIVALENT MAXIMUM ORTHAGONAL DIMENSION.



- ★ INTERLAYER OPTIONS:
- 1. 0.090" SAFLEX PVB CLEAR AND COLOR GLASS INTERLAYERS BY EASTMAN CHEMICAL COMPANY.
 - 2. 0.100" SAFLEX HP CLEAR AND COLOR GLASS INTERLAYERS BY EASTMAN CHEMICAL COMPANY.
 - 3. 0.090" KURARAY SENTRYGLAS INTERLAYER BY KURARAY AMERICA INC.
 - 4. 0.090"EVERLAM SUPER TOUGH PVB INTERLAYER.
 - 5. 0.090" EVERLAM LAM50 PVB INTERLAYER.

GLAZING OPTIONS



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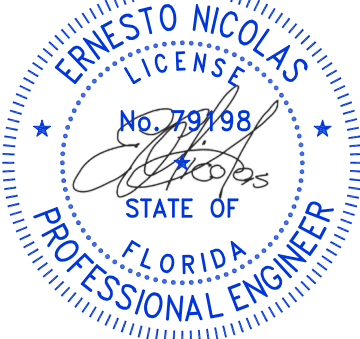
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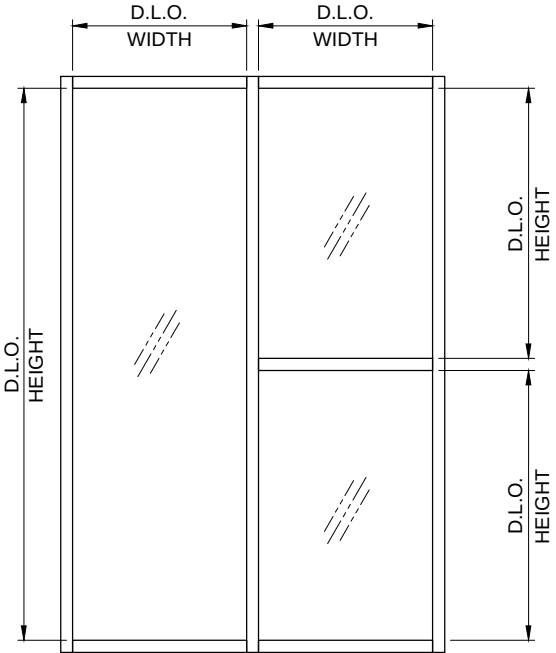
SHEET NO.:

3 OF 16

GLASS LOAD CAPACITY – PSF							
NOMINAL DIMENSIONS		GLASS TYPES					
		A1	B1	A2 / B2	A3 / B3	A4 / B4	A5 / B5
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
20"	68"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
38"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
44"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
50"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
56"		70.0	80.0	100.0	100.0	+70/-85	-
62"		70.0	80.0	100.0	100.0	-	-
68"		70.0	-	100.0	100.0	-	-
72"		70.0	-	100.0	100.0	-	-
20"	74"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
38"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
48"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
50"		70.0	80.0	100.0	100.0	+70/-85	-
56"		70.0	80.0	100.0	100.0	+70/-85	-
62"		70.0	-	100.0	100.0	-	-
68"		-	-	100.0	100.0	-	-
72"		-	-	100.0	100.0	-	-
20"	80"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
38"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
45"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
50"		70.0	80.0	100.0	100.0	+70/-85	-
56"		70.0	-	100.0	100.0	-	-
62"		-	-	100.0	100.0	-	-
68"		-	-	100.0	100.0	-	-
72"		-	-	100.0	100.0	-	-
20"	86"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
38"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
44"		70.0	80.0	100.0	100.0	+70/-85	-
50"		70.0	-	100.0	100.0	-	-
56"		70.0	-	100.0	100.0	-	-
62"		-	-	100.0	100.0	-	-
68"		-	-	100.0	100.0	-	-
72"		-	-	100.0	100.0	-	-
20"	92"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
39.25"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
44"		70.0	80.0	100.0	100.0	+70/-85	-
45.25"		70.0	-	100.0	100.0	+70/-85	-
56"		70.0	-	100.0	100.0	-	-
62"		-	-	100.0	100.0	-	-
68"		-	-	100.0	100.0	-	-
72"		-	-	100.0	-	-	-

GLASS LOAD CAPACITY – PSF							
NOMINAL DIMENSIONS		GLASS TYPES					
		A1	B1	A2 / B2	A3 / B3	A4 / B4	A5 / B5
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
20"	98"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
38"		70.0	80.0	100.0	100.0	+70/-85	-
44"		70.0	-	100.0	100.0	-	-
50"		-	-	100.0	100.0	-	-
56"		-	-	100.0	100.0	-	-
62"		-	-	100.0	100.0	-	-
68"		-	-	100.0	-	-	-
20"	104"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
38"		70.0	80.0	100.0	100.0	+70/-85	-
44"		70.0	-	100.0	100.0	-	-
50"		-	-	100.0	100.0	-	-
56"		-	-	100.0	100.0	-	-
62"		-	-	100.0	100.0	-	-
20"	110"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
38"		70.0	80.0	100.0	100.0	+70/-85	-
44"		70.0	-	100.0	100.0	-	-
50"		-	-	100.0	100.0	-	-
56"		-	-	100.0	100.0	-	-
62"		-	-	97.5	-	-	-
20"	116"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	-
38"		70.0	-	100.0	100.0	-	-
44"		-	-	100.0	100.0	-	-
50"		-	-	100.0	100.0	-	-
56"		-	-	97.9	100.0	-	-
58-3/4"		-	-	94.6	-	-	-
20"	122"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	-
38"		70.0	-	100.0	100.0	-	-
44"		-	-	100.0	100.0	-	-
50"		-	-	100.0	100.0	-	-
20"	128"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	80.0	100.0	100.0	+70/-85	-
38"		70.0	-	100.0	100.0	-	-
44"		-	-	100.0	100.0	-	-
50"		-	-	100.0	100.0	-	-

GLASS LOAD CAPACITY – PSF							
NOMINAL DIMENSIONS		GLASS TYPES					
		A1	B1	A2 / B2	A3 / B3	A4 / B4	A5 / B5
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
20"	134"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	-	100.0	100.0	-	-
38"		-	-	100.0	100.0	-	-
44"		-	-	100.0	100.0	-	-
50"		-	-	100.0	-	-	-
20"	140"	70.0	80.0	100.0	100.0	+70/-85	+65/-75
26"		70.0	80.0	100.0	100.0	+70/-85	+65/-75
32"		70.0	-	100.0	100.0	-	-
38"		-	-	100.0	100.0	-	-
44"		-	-	100.0	100.0	-	-
45-1/4"		-	-	100.0	100.0	-	-



ELEVATION 1

- NOTE:
- GLASS CAPACITIES ON THIS SHEET WERE VERIFIED BASED ON ASTM E1300-16 (3 SEC. GUSTS).
 - PROVIDE 2 SETTING BLOCKS PER GLASS PANEL AS PER FBC CHAPTER 24. GLASS SETTING BLOCKS SHALL BE LOCATED AT 1/8 OF SPAN FOR HORIZONTAL MEMBER LENGTH ≤ 54" AND AT 4" FROM ENDS FOR SPAN > 54".
 - OTHER GLASS SIZES ARE QUALIFIED AS LONG AS EQUAL OR LESS THAN TESTED AREA.



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REVN	DATE/REMARKS

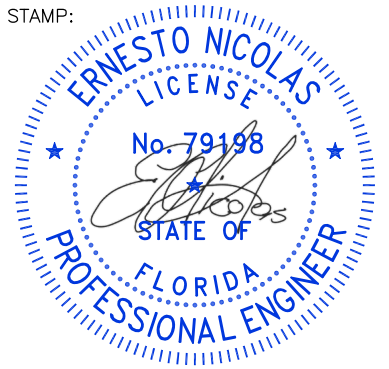
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STAMP:



FLORIDA PRODUCT APPROVAL:

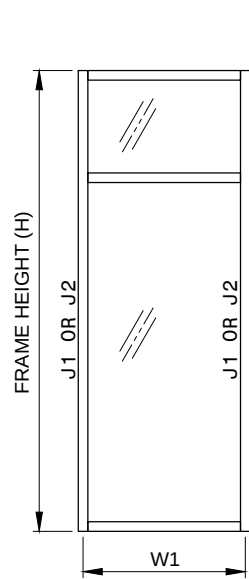
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DATE: DECEMBER 10, 2023

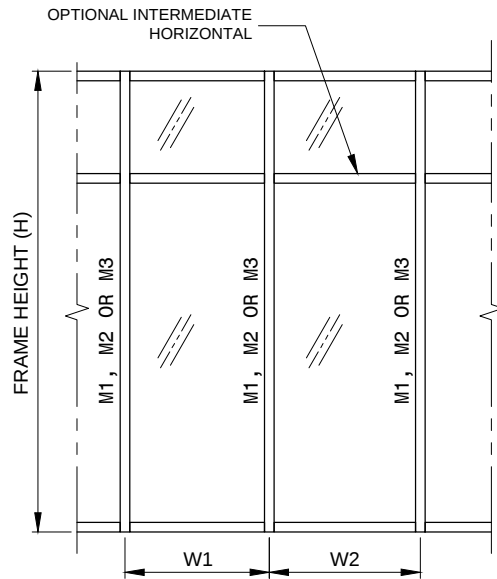
DRAWN: Erick	CHK: ESN
DRWG. No: 23FL–103	SCALE: NTS

SHEET NO.:

4 OF 16

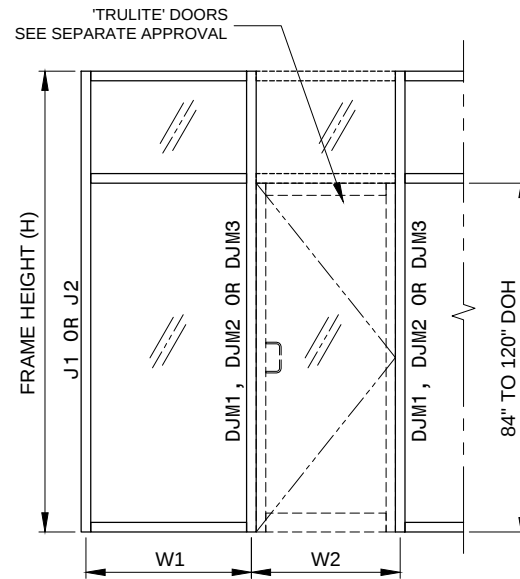


WIDTH (W) = W1 (JAMB)

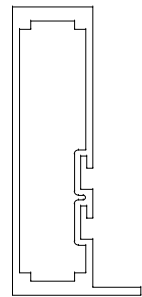
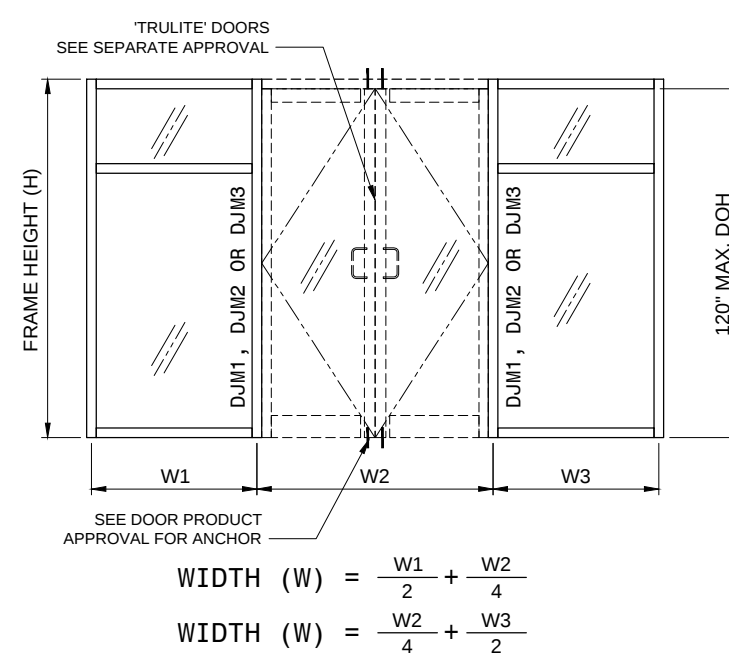


ELEVATION 2

WIDTH (W) = $\frac{W1 + W2}{2}$

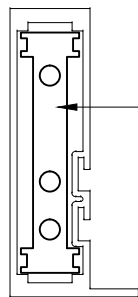


ELEVATION 3



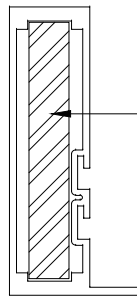
J1/DJM1

PART NO.	Ix (in ⁴)
3101	4.548



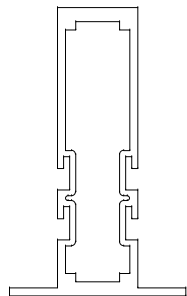
J2/DJM2

PART NO.	Ix (in ⁴)
3101	4.548
3104 / 3104R	2.696
TOTAL (IN ALUM.)	7.244



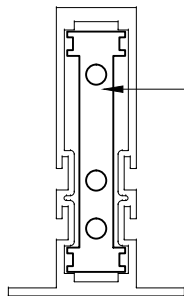
DJM3

PART NO.	Ix (in ⁴)
3101	4.548
ST310	3.333 x 2.9
TOTAL (IN ALUM.)	14.214



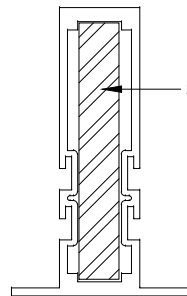
M1

PART NO.	Ix (in ⁴)
3102	5.083



M2

PART NO.	Ix (in ⁴)
3102	5.083
3104 / 3104R	2.696
TOTAL (IN ALUM.)	7.779



M3

PART NO.	Ix (in ⁴)
3102	5.083
ST310	3.333 x 2.9
TOTAL (IN ALUM.)	14.749

Trulite
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<http://www.trulite.com>
403 West Park Court, Suite 201
Peachtree City, GA 30269
p. 800-432-8132

PRODUCT:
**3100 IMPACT
STOREFRONT SYSTEM**
LMI (HVHZ)

Resistor
BLAST & STORM PROTECTION™

REVN	DATE/REMARKS

ENGINEER:
En3 Engineering & Consultancy
950 SW 135th Way Sunrise,
FL 33325 P. 786 474 3876
Email: en3.engconsul@gmail.com

STAMP:
ERNESTO NICOLAS
LICENSE
No. 79198
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

FLORIDA PRODUCT APPROVAL:
FL45460

DATE: DECEMBER 10, 2023
DRAWN: Erick CHK: ESN
DRWG. No: 23FL-103 SCALE: NTS

SHEET NO.:
5 OF 16

JAMB/MULLION CAPACITIES (psf)							
Dimensions (in)		M1		DJM1	J1/M2	DJM2	J2/M3/ DJM3
W	H	EXT. (+)	INT. (-)	EXT. (+) /INT.(-)	EXT. (+) /INT.(-)	EXT. (+) /INT.(-)	EXT. (+) /INT.(-)
54	78	80.0	85.0	87.0	100.0	100.0	100.0
60	78	80.0	80.0	85.4	100.0	100.0	100.0
66	78	77.6	77.6	77.6	100.0	100.0	100.0
72	78	71.2	71.2	71.2	100.0	100.0	100.0
48	84	80.0	80.0	87.0	100.0	100.0	100.0
54	84	80.0	81.3	81.8	100.0	100.0	100.0
60	84	76.0	76.0	76.0	100.0	100.0	100.0
66	84	63.2	63.2	63.2	100.0	100.0	100.0
72	84	57.9	57.9	57.9	97.1	92.3	100.0
42	90	80.0	85.0	87.0	100.0	100.0	100.0
48	90	80.0	80.0	79.9	100.0	100.0	100.0
54	90	77.0	77.0	71.0	100.0	100.0	100.0
60	90	60.6	60.6	60.6	100.0	96.4	100.0
66	90	55.1	55.1	55.1	92.3	87.7	100.0
72	90	50.5	50.5	50.5	84.6	80.4	100.0
36	96	80.0	85.0	87.0	100.0	100.0	100.0
42	96	80.0	80.0	75.2	100.0	100.0	100.0
48	96	73.5	73.5	65.8	100.0	100.0	100.0
54	96	65.4	65.4	58.5	99.1	93.2	100.0
60	96	51.9	51.9	51.9	89.2	83.8	100.0
66	96	47.2	47.2	47.2	81.1	76.2	98.2
72	96	43.3	43.3	43.3	74.3	69.9	60.0
30	102	80.0	81.8	87.0	100.0	100.0	100.0
36	102	80.0	81.8	73.1	100.0	100.0	100.0
42	102	70.1	70.1	62.7	100.0	99.9	100.0
48	102	61.3	61.3	54.9	93.8	87.4	100.0
54	102	48.1	48.1	48.1	83.4	77.7	100.0
60	102	43.3	43.3	43.3	75.1	69.9	95.7
66	102	-	-	-	68.2	63.5	87.0
72	102	-	-	-	58.3	58.3	62.4
24	108	80.0	85.0	87.0	100.0	100.0	100.0
30	108	80.0	82.6	73.9	100.0	100.0	100.0
36	108	68.9	68.9	61.6	100.0	98.1	100.0
42	108	59.0	59.0	52.8	90.3	84.1	100.0
48	108	51.7	51.7	46.2	79.1	73.6	100.0
54	108	40.5	40.5	41.1	70.3	65.4	94.8
60	108	-	-	-	63.2	58.9	85.3
66	108	-	-	-	57.5	53.5	64.3

JAMB/MULLION CAPACITIES (psf)							
Dimensions (in)		M1		DJM1	J1/M2	DJM2	J2/M3/ DJM3
W	H	EXT. (+)	INT. (-)	EXT. (+) /INT.(-)	EXT. (+) /INT.(-)	EXT. (+) /INT.(-)	EXT. (+) /INT.(-)
24	114	80.0	85.0	78.6	100.0	100.0	100.0
30	114	70.3	70.3	62.9	100.0	100.0	100.0
36	114	58.6	58.6	52.4	89.6	83.5	100.0
42	114	44.3	44.3	44.3	76.8	71.5	100.0
48	114	-	-	-	67.2	62.6	95.7
54	114	-	-	-	59.7	55.6	85.1
60	114	-	-	-	53.8	50.1	76.6
24	120	75.3	75.3	67.4	100.0	100.0	100.0
30	120	60.2	60.2	53.9	92.2	85.9	100.0
36	120	50.2	50.2	44.9	76.8	71.5	100.0
42	120	-	-	-	65.9	61.3	98.7
48	120	-	-	-	57.6	53.7	86.4
54	120	-	-	-	51.2	47.7	76.8
60	120	-	-	-	46.1	42.9	63.0
24	126	65.1	65.1	58.2	99.6	92.7	100.0
30	126	52.0	52.0	46.6	79.7	74.2	100.0
36	126	43.4	43.4	-	66.4	61.8	100.0
42	126	-	-	-	56.9	53.0	89.6
48	126	-	-	-	49.8	46.4	78.4
54	126	-	-	-	44.3	41.2	69.7
24	132	56.6	56.6	50.6	86.6	80.6	100.0
30	132	45.3	45.3	40.5	69.3	64.5	100.0
36	132	-	-	-	57.7	53.8	95.2
42	132	-	-	-	49.5	46.1	81.6
48	132	-	-	-	43.3	40.3	71.4
24	138	-	-	-	75.8	70.6	100.0
30	138	-	-	-	60.6	56.5	100.0
36	138	-	-	-	50.5	47.0	87.1
42	138	-	-	-	43.3	40.3	74.7
48	138	-	-	-	-	-	65.3
24	144	-	-	-	66.7	62.1	100.0
30	144	-	-	-	53.4	49.7	96.0
36	144	-	-	-	44.5	41.4	80.0
42	144	-	-	-	-	-	68.6
48	144	-	-	-	-	-	60.0

JAMB/MULLION LOAD CAPACITIES

REFER TO ELEVS. 2 & 3

Trulite

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p. 800-432-8132

PRODUCT:

**3100 IMPACT
STOREFRONT SYSTEM**

LMI (HVHZ)

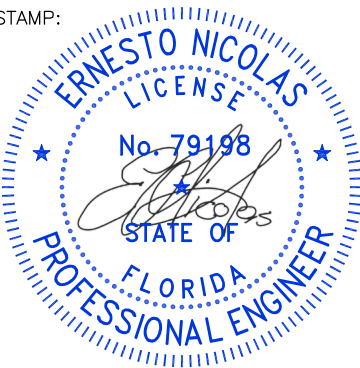


REVN	DATE/REMARKS

ENGINEER:

En3 Engineering & Consultancy

950 SW 135th Way Sunrise,
FL 33325 P. 786 474 3876
Email: en3.engconsul@gmail.com



FLORIDA PRODUCT APPROVAL:

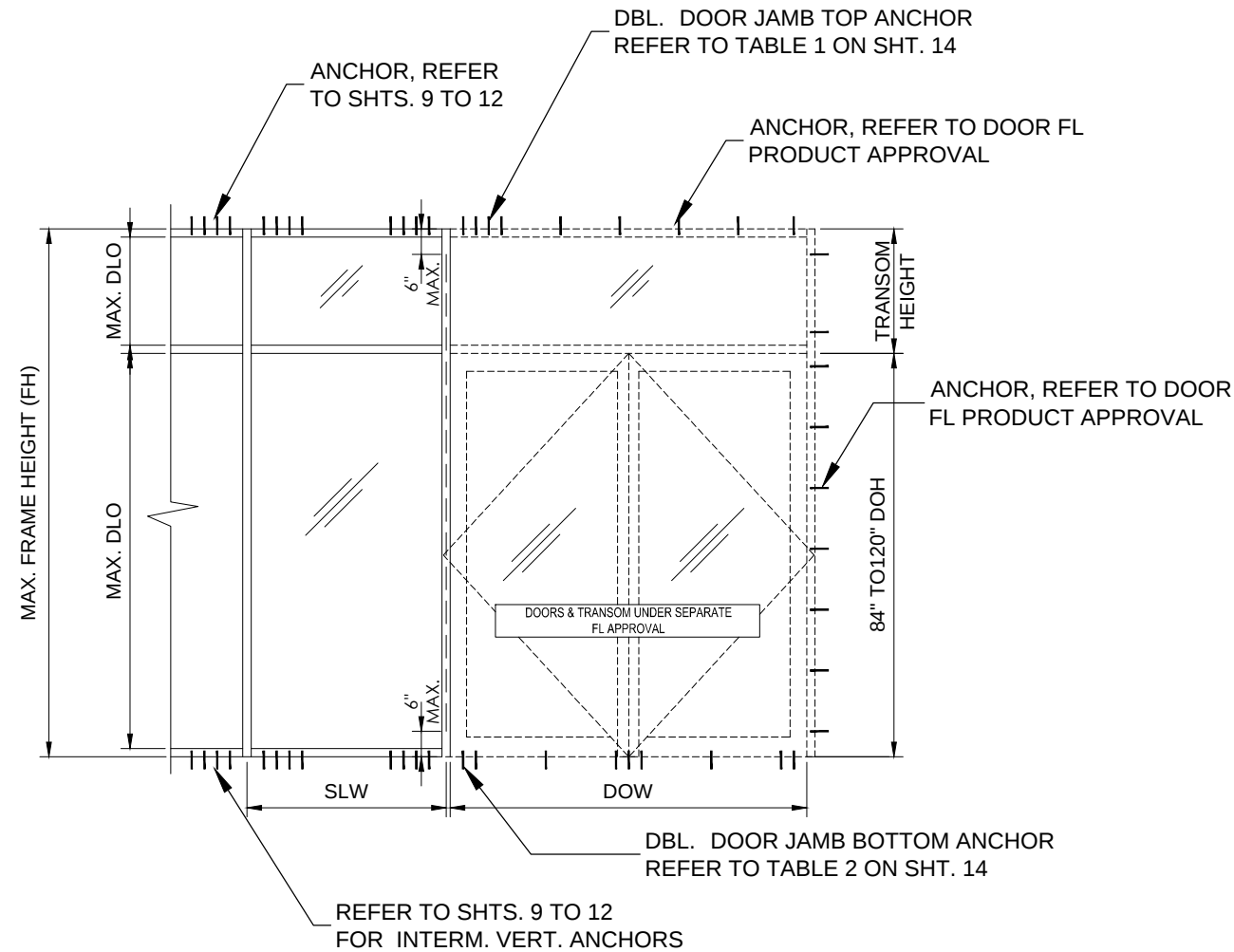
FL45460

DATE: DECEMBER 10, 2023

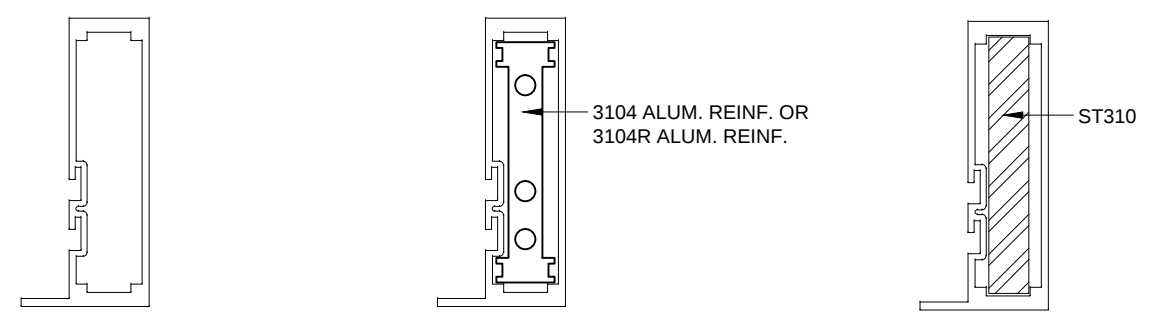
DRAWN: Erick	CHK: ESN
DRWG. No: 23FL-103	SCALE: NTS

SHEET NO.:

6 OF 16



ELEVATION 4



DJ1		DJ2		DJ3	
PART NO.	Ix (in ⁴)	PART NO.	Ix (in ⁴)	PART NO.	Ix (in ⁴)
3101	4.548	3101	4.548	3101	4.548
		3104 / 3104R	2.696	ST310	3.333 x 2.9
		TOTAL	7.244	TOTAL (IN ALUM.)	14.214

DOOR JAMB CAPACITY (psf)							
Nominal Dimensions				DJ1	DJ2	DJ3	
FH	SLW	DOW	DOH	EXT (+) INT. (-)	EXT (+) INT. (-)	EXT (+) INT. (-)	
102	24	72	84	64.0	82.0	87.0	
102	30	72	84	59.6	82.0	87.0	
102	36	72	84	55.8	82.0	87.0	
102	42	72	84	52.4	82.0	87.0	
102	48	72	84	49.4	78.2	87.0	
102	54	72	84	46.8	74.0	87.0	
102	60	72	84	44.4	70.2	87.0	
108	24	72	84	54.3	77.0	87.0	
108	30	72	84	50.8	77.0	87.0	
108	36	72	84	47.7	75.4	87.0	
108	42	72	84	44.9	71.0	87.0	
108	48	72	84	42.4	67.1	87.0	
108	54	72	84	40.2	63.6	87.0	
108	60	72	84	38.2	60.5	87.0	
114	24	72	84	46.2	73.6	87.0	
114	30	72	84	43.1	68.6	87.0	
114	36	72	84	40.3	64.2	87.0	
114	42	72	84	37.9	60.3	87.0	
114	48	72	84	35.7	56.9	87.0	
114	54	72	84	33.8	53.8	87.0	
114	60	72	84	32.1	51.1	87.0	
120	24	72	84	38.6	61.5	87.0	
120	30	72	84	36.0	57.3	87.0	
120	36	72	84	33.7	53.8	87.0	
120	42	72	84	31.8	50.6	87.0	
120	48	72	84	30.0	47.8	87.0	
126	24	72	84	-	52.0	87.0	
126	30	72	84	-	48.6	87.0	
126	36	72	84	-	45.6	87.0	
126	42	72	84	-	43.0	84.3	
126	48	72	84	-	-	79.7	
132	24	72	84	-	44.5	87.0	
132	30	72	84	-	41.6	81.7	
132	36	72	84	-	39.1	76.7	
132	42	72	84	-	-	72.4	
144	24	72	84	-	33.6	65.9	
144	30	72	84	-	-	61.7	
102	30	72	90	64.2	77.0	87.0	
102	36	72	90	59.8	77.0	87.0	
102	42	72	90	55.9	77.0	87.0	
102	48	72	90	52.5	77.0	87.0	
102	54	72	90	49.5	77.0	87.0	
102	60	72	90	46.9	74.1	87.0	
108	24	72	90	57.8	77.0	87.0	
108	30	72	90	53.8	77.0	87.0	
108	36	72	90	50.3	77.0	87.0	
108	42	72	90	47.2	74.6	87.0	
108	48	72	90	44.5	70.4	87.0	
108	54	72	90	42.1	66.5	87.0	
108	60	72	90	39.9	63.1	87.0	
114	24	72	90	48.4	77.0	87.0	
114	30	72	90	44.9	71.6	87.0	
114	36	72	90	41.9	66.8	87.0	
114	42	72	90	39.3	62.6	87.0	
114	48	72	90	37.0	58.9	87.0	
114	54	72	90	34.9	55.7	87.0	
114	60	72	90	33.1	52.7	87.0	

DOOR JAMB CAPACITY (psf)							
Nominal Dimensions				DJ1	DJ2	DJ3	
FH	SLW	DOW	DOH	EXT (+) INT. (-)	EXT (+) INT. (-)	EXT (+) INT. (-)	
120	24	72	90	40.0	63.8	87.0	
120	30	72	90	37.3	59.4	87.0	
120	36	72	90	34.9	55.5	87.0	
120	42	72	90	32.7	52.2	87.0	
120	48	72	90	30.9	49.2	87.0	
120	54	72	90	-	-	87.0	
126	24	72	90	-	53.6	87.0	
126	30	72	90	-	50.0	87.0	
126	36	72	90	-	46.8	87.0	
126	42	72	90	-	44.1	86.4	
126	48	72	90	-	-	81.6	
132	24	72	90	-	45.6	87.0	
132	30	72	90	-	42.6	83.6	
132	36	72	90	-	40.0	78.4	
132	42	72	90	-	-	73.8	
144	24	72	90	-	34.1	66.9	
144	30	72	90	-	-	62.6	
108	24	72	96	62.4	77.0	87.0	
108	30	72	96	57.8	77.0	87.0	
108	36	72	96	53.7	77.0	87.0	
108	42	72	96	50.3	77.0	87.0	
108	48	72	96	47.2	74.6	87.0	
108	54	72	96	44.4	70.3	87.0	
108	60	72	96	41.9	66.5	87.0	
114	24	72	96	51.0	77.0	87.0	
114	30	72	96	47.2	75.2	87.0	
114	36	72	96	43.9	69.9	87.0	
114	42	72	96	41.0	65.4	87.0	
114	48	72	96	38.5	61.4	87.0	
114	54	72	96	36.3	57.8	87.0	
114	60	72	96	34.3	54.7	87.0	
120	24	72	96	41.9	66.7	87.0	
120	30	72	96	38.9	61.9	87.0	
120	36	72	96	36.3	57.7	87.0	
120	42	72	96	34.0	54.1	87.0	
120	48	72	96	32.0	50.9	87.0	
120	54	72	96	-	-	87.0	
126	24	72	96	-	55.6	87.0	
126	30	72	96	-	51.8	87.0	
126	36	72	96	-	48.4	87.0	
126	42	72	96	-	45.4	87.0	
126	48	72	96	-	-	84.0	
132	24	72	96	-	47.1	87.0	
132	30	72	96	-	43.9	86.1	
132	36	72	96	-	41.1	80.6	
132	42	72	96	-	-	75.8	
138	24	72	96	-	40.3	79.0	
138	30	72	96	-	37.6	73.8	
138	36	72	96	-	-	69.2	
144	24	72	96	-	34.8	68.3	
144	30	72	96	-	-	63.8	

DOUBLE DOOR JAMB LOAD CAPACITY
REFER TO ELEV. 4



GLASS & ALUMINUM SOLUTIONS™

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403 West Park Court, Suite 201
Peachtree City, GA 30269
p. 800-432-8132

PRODUCT:

**3100 IMPACT
STOREFRONT SYSTEM**

LMI (HVHZ)



BLAST & STORM PROTECTION™

REV#	DATE/REMARKS

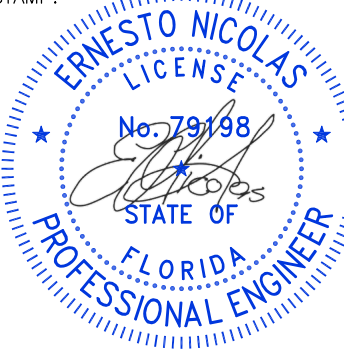
ENGINEER:



En3 Engineering & Consultancy

950 SW 135th Way Sunrise,
FL 33325 P. 786 474 3876
Email: en3.engconsul@gmail.com

STAMP:



FLORIDA PRODUCT APPROVAL:

FL45460

DATE: DECEMBER 10, 2023	
DRAWN: Erick	CHK: ESN
DRWG. No: 23FL-103	SCALE: NTS

SHEET NO.:

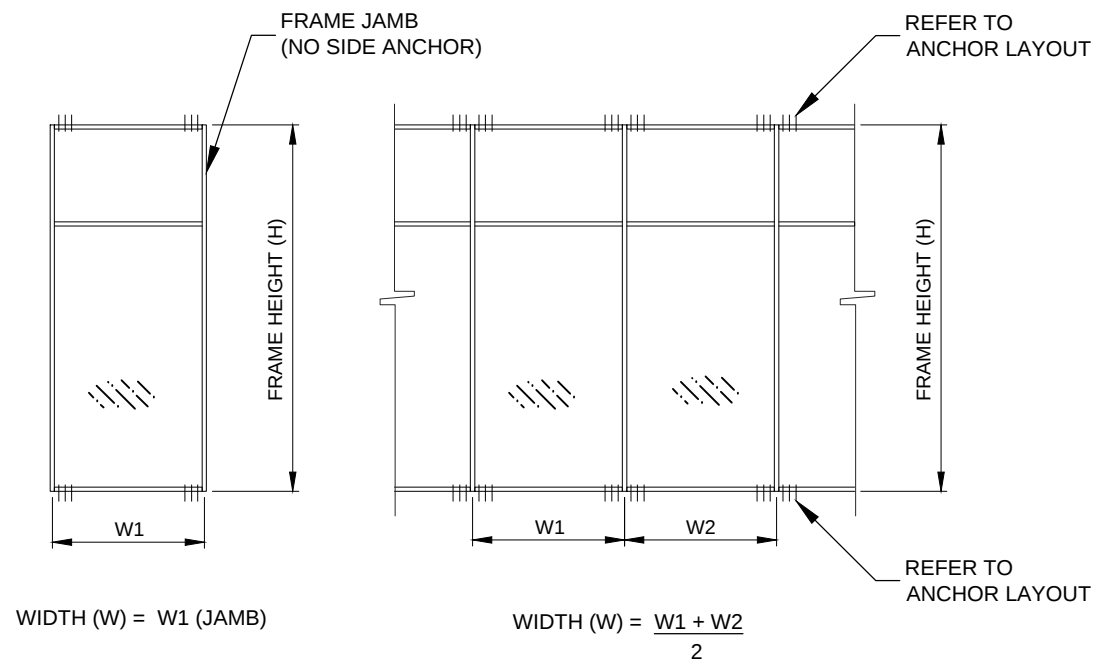
7 OF 16

DOOR JAMB CAPACITY (psf)						
Nominal Dimensions				DJ1	DJ2	DJ3
FH	SLW	DOW	DOH	EXT (+) INT. (-)	EXT (+) INT. (-)	EXT (+) INT. (-)
120	24	72	102	44.1	70.3	87.0
120	30	72	102	40.8	65.0	87.0
120	36	72	102	37.9	60.4	87.0
120	42	72	102	35.4	56.4	87.0
120	48	72	102	33.2	53.0	87.0
120	54	72	102	-	-	87.0
126	24	72	102	-	58.2	87.0
126	30	72	102	-	53.9	87.0
126	36	72	102	-	50.3	87.0
126	42	72	102	-	47.1	87.0
126	48	72	102	-	-	86.9
132	24	72	102	-	48.9	87.0
132	30	72	102	-	45.4	87.0
132	36	72	102	-	42.4	83.2
132	42	72	102	-	-	78.1
144	24	72	102	-	35.7	70.1
144	30	72	102	-	-	65.4
120	24	72	108	46.8	74.6	87.0
120	30	72	108	43.1	68.6	87.0
120	36	72	108	39.9	63.6	87.0
120	42	72	108	37.1	59.2	87.0
120	48	72	108	34.8	55.4	87.0
120	54	72	108	-	-	87.0
126	24	72	108	-	61.2	87.0
126	30	72	108	-	56.5	87.0
126	36	72	108	-	52.5	87.0
126	42	72	108	-	49.1	87.0
126	48	72	108	-	-	87.0
132	24	72	108	-	51.0	87.0
132	30	72	108	-	47.3	87.0
132	36	72	108	-	44.1	86.4
132	42	72	108	-	-	80.9
144	24	72	108	-	36.9	72.4
144	30	72	108	-	-	67.4
126	24	72	114	-	64.8	87.0
126	30	72	114	-	59.6	87.0
126	36	72	114	-	55.2	87.0
126	42	72	114	-	51.3	87.0
126	48	72	114	-	-	87.0
132	24	72	114	-	53.6	87.0
132	30	72	114	-	49.5	87.0
132	36	72	114	-	46.0	87.0
132	42	72	114	-	-	84.2
144	24	72	114	-	38.3	75.1
144	30	72	114	-	-	69.7
132	24	72	120	-	56.7	87.0
132	30	72	120	-	52.1	87.0
132	36	72	120	-	48.2	87.0
132	42	72	120	-	-	87.0
144	24	72	120	-	39.9	78.3
144	30	72	120	-	-	72.5

DOOR JAMB CAPACITY (psf)						
Nominal Dimensions				DJ1	DJ2	DJ3
FH	SLW	DOW	DOH	EXT (+) INT. (-)	EXT (+) INT. (-)	EXT (+) INT. (-)
102	24	84	84	57.4	77.0	87.0
102	30	84	84	53.8	77.0	87.0
102	36	84	84	50.7	77.0	87.0
102	42	84	84	47.9	75.7	87.0
102	48	84	84	45.4	71.8	87.0
102	54	84	84	43.1	68.2	87.0
102	60	84	84	41.1	65.0	87.0
108	24	84	84	48.6	76.9	87.0
108	30	84	84	45.7	72.3	87.0
108	36	84	84	43.2	68.3	87.0
108	42	84	84	40.9	64.7	87.0
108	48	84	84	38.9	61.4	87.0
108	54	84	84	37.0	58.5	87.0
114	24	84	84	41.4	66.0	87.0
114	30	84	84	38.9	61.9	87.0
114	36	84	84	36.6	58.3	87.0
114	42	84	84	34.6	55.1	87.0
114	48	84	84	32.8	52.2	87.0
120	24	84	84	34.5	55.0	87.0
120	30	84	84	32.5	51.7	87.0
120	36	84	84	30.6	48.8	87.0
120	42	84	84	-	-	87.0
126	24	84	84	-	46.5	87.0
126	30	84	84	-	43.8	85.9
126	36	84	84	-	-	81.1
132	24	84	84	-	39.8	78.1
132	30	84	84	-	-	73.5
102	30	84	90	58.2	77.0	87.0
102	36	84	90	54.5	77.0	87.0
102	42	84	90	51.3	77.0	87.0
102	48	84	90	48.4	76.6	87.0
102	54	84	90	45.9	72.5	87.0
102	60	84	90	43.6	68.9	87.0
108	24	84	90	51.8	77.0	87.0
108	30	84	90	48.6	76.8	87.0
108	36	84	90	45.7	72.3	87.0
108	42	84	90	43.2	68.2	87.0
108	48	84	90	40.9	64.6	87.0
108	54	84	90	38.8	61.4	87.0
114	24	84	90	43.5	69.2	87.0
114	30	84	90	40.6	64.7	87.0
114	36	84	90	38.2	60.8	87.0
114	42	84	90	36.0	57.3	87.0
114	48	84	90	34.0	54.2	87.0
120	24	84	90	35.9	57.2	87.0
120	30	84	90	33.7	53.6	87.0
120	36	84	90	31.7	50.5	87.0
120	42	84	90	-	-	87.0
126	24	84	90	-	48.0	87.0
126	30	84	90	-	45.1	87.0
126	36	84	90	-	-	83.4
132	24	84	90	-	40.8	80.1
132	30	84	90	-	-	75.3

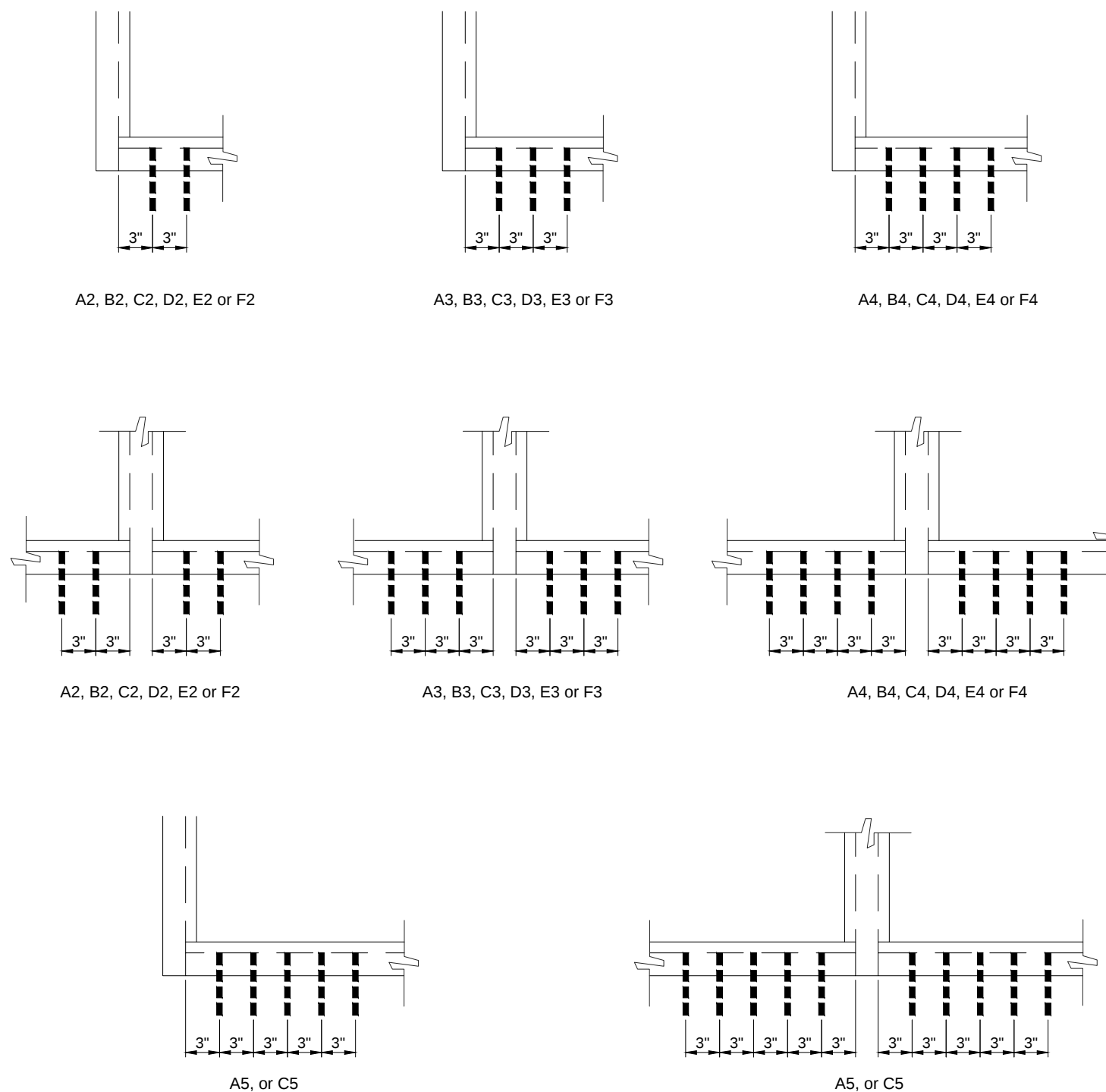
DOOR JAMB CAPACITY (psf)						
Nominal Dimensions				DJ1	DJ2	DJ3
FH	SLW	DOW	DOH	EXT (+) INT. (-)	EXT (+) INT. (-)	EXT (+) INT. (-)
108	24	84	96	56.2	77.0	87.0
108	30	84	96	52.4	77.0	87.0
108	36	84	96	49.1	77.0	87.0
108	42	84	96	46.1	72.9	87.0
108	48	84	96	43.5	68.8	87.0
108	54	84	96	41.2	65.2	87.0
114	24	84	96	46.0	73.2	87.0
114	30	84	96	42.8	68.2	87.0
114	36	84	96	40.1	63.9	87.0
114	42	84	96	37.7	60.0	87.0
114	48	84	96	35.6	56.6	87.0
120	24	84	96	37.6	60.0	87.0
120	30	84	96	35.2	56.0	87.0
120	36	84	96	33.0	52.6	87.0
120	42	84	96	-	49.6	87.0
126	24	84	96	-	49.9	87.0
126	30	84	96	-	46.8	87.0
126	36	84	96	-	-	86.3
132	24	84	96	-	42.2	82.7
132	30	84	96	-	-	77.7
138	24	84	96	-	-	70.7
114	24	84	102	49.0	77.0	87.0
114	30	84	102	45.5	72.4	87.0
114	36	84	102	42.4	67.6	87.0
114	42	84	102	39.7	63.3	87.0
114	48	84	102	37.4	59.5	87.0
120	24	84	102	39.8	63.3	87.0
120	30	84	102	37.0	59.0	87.0
120	36	84	102	34.6	55.2	87.0
120	42	84	102	-	51.9	87.0
126	24	84	102	-	52.3	87.0
126	30	84	102	-	48.8	87.0
126	36	84	102	-	-	87.0
132	24	84	102	-	43.8	86.0
132	30	84	102	-	-	80.6
120	24	84	108	42.3	67.4	87.0
120	30	84	108	39.2	62.5	87.0
120	36	84	108	36.6	58.2	87.0
120	42	84	108	-	54.5	87.0
126	24	84	108	-	55.1	87.0
126	30	84	108	-	51.3	87.0
126	36	84	108	-	-	87.0
132	24	84	108	-	45.9	87.0
132	30	84	108	-	-	84.1
126	24	84	114	-	58.6	87.0
126	30	84	114	-	54.3	87.0
126	36	84	114	-	-	87.0
132	24	84	114	-	48.3	87.0
132	30	84	114	-	-	87.0
132	24	84	120	-	51.2	87.0
132	30	84	120	-	-	87.0

DOOR JAMB CAPACITY (psf)						
Nominal Dimensions				DJ1	DJ2	DJ3
FH	SLW	DOW	DOH	EXT (+) INT. (-)	EXT (+) INT. (-)	EXT (+) INT. (-)
102	24	96	84	52.0	77.0	87.0
102	30	96	84	49.1	77.0	87.0
102	36	96	84	46.4	73.4	87.0
102	42	96	84	44.1	69.7	87.0
102	48	96	84	42.0	66.3	87.0
108	24	96	84	44.0	69.5	87.0
108	30	96	84	41.6	65.8	87.0
108	36	96	84	39.5	62.5	87.0
108	42	96	84	37.6	59.4	87.0
114	24	96	84	37.5	59.8	87.0
114	30	96	84	35.4	56.4	87.0
114	36	96	84	33.5	53.4	87.0
120	24	96	84	31.3	49.8	87.0
120	30	96	84	-	47.1	87.0
126	24	96	84	-	42.1	82.6
102	30	96	90	53.2	77.0	87.0
102	36	96	90	50.1	77.0	87.0
102	42	96	90	47.4	74.9	87.0
102	48	96	90	44.9	71.1	87.0
108	24	96	90	47.0	74.3	87.0
108	30	96	90	44.3	70.0	87.0
108	36	96	90	41.9	66.2	87.0
108	42	96	90	39.7	62.8	87.0
114	24	96	90	39.4	62.8	87.0
114	30	96	90	37.1	59.1	87.0
114	36	96	90	35.0	55.8	87.0
120	24	96	90	32.6	51.9	87.0
120	30	96	90	30.7	48.9	87.0
126	24	96	90	-	43.5	85.3
108	24	96	96	51.1	77.0	87.0
108	30	96	96	47.9	75.8	87.0
108	36	96	96	45.1	71.3	87.0
108	42	96	96	42.6	67.4	87.0
114	24	96	96	41.8	66.6	87.0
114	30	96	96	39.2	62.4	87.0
114	36	96	96	36.9	58.8	87.0
120	24	96	96	34.2	54.4	87.0
120	30	96	96	32.1	51.2	87.0
126	24	96	96	-	45.3	87.0
114	24	96	102	44.7	71.2	87.0
114	30	96	102	41.7	66.5	87.0
114	36	96	102	39.1	62.3	87.0
120	24	96	102	36.2	57.6	87.0
120	30	96	102	33.9	54.0	87.0
126	24	96	102	-	47.5	87.0
120	24	96	108	38.6	61.5	87.0
120	30	96	108	36.0	57.4	87.0
126	24	96	108	31.5	50.2	87.0
126	24	96	114	33.5	53.4	87.0



ELEVATION 5

TABLE 1 - JAMB ANCHOR SPACING (in)						
ANCHOR TYPE	MAX. 1/4" SHIM GAP			MAX. 3/8" SHIM GAP		
	MULLION SPACING (in)					
	≤ 48	≤ 60	≤ 72	≤ 48	≤ 60	≤ 72
A	12	10	8	10	8	7
B	15	12	10	15	12	10
C	15	12	10	10	8	7
D	22	17	14	15	12	10
E	17	13	11	15	12	10
F	18	14	12	12	10	8



ANCHOR LAYOUT

REFER TO SHTS. 10 & 11 FOR CAPACITIES

Trulite
GLASS & ALUMINUM SOLUTIONS™
<http://www.trulite.com>
403 West Park Court, Suite 201
Peachtree City, GA 30269
p. 800-432-8132

PRODUCT:
**3100 IMPACT
STOREFRONT SYSTEM**
LMI (HVHZ)

Resistor
BLAST & STORM PROTECTION™

REVN	DATE/REMARKS

ENGINEER:
En3 Engineering & Consultancy
950 SW 135th Way Sunrise,
FL 33325 P. 786 474 3876
Email: en3.engconsul@gmail.com

STAMP:
ERNESTO NICOLAS
LICENSE
No. 79198
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

FLORIDA PRODUCT APPROVAL:
FL45460

DATE: DECEMBER 10, 2023
DRAWN: Erick CHK: ESN
DRWG. No: 23FL-103 SCALE: NTS

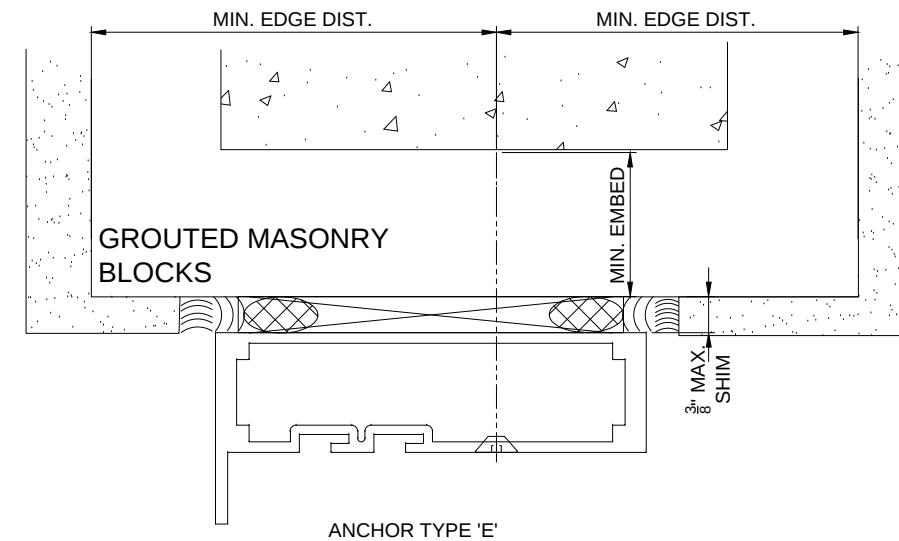
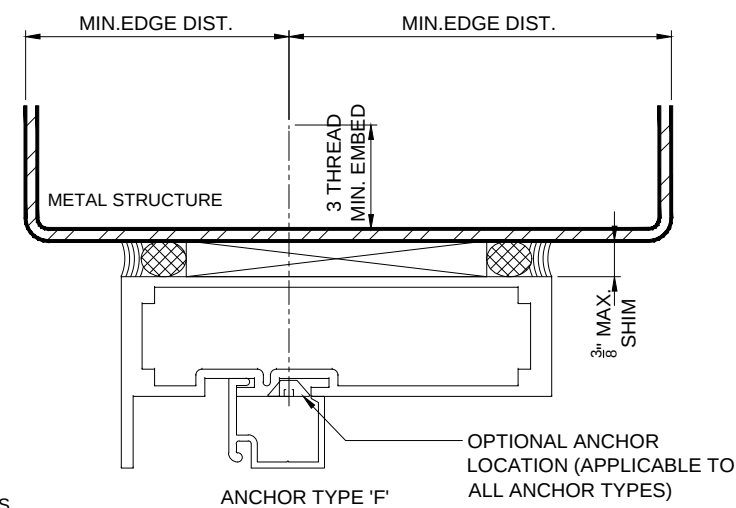
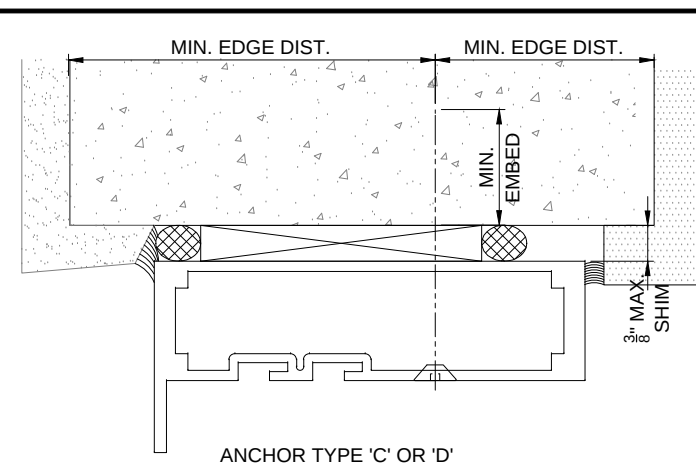
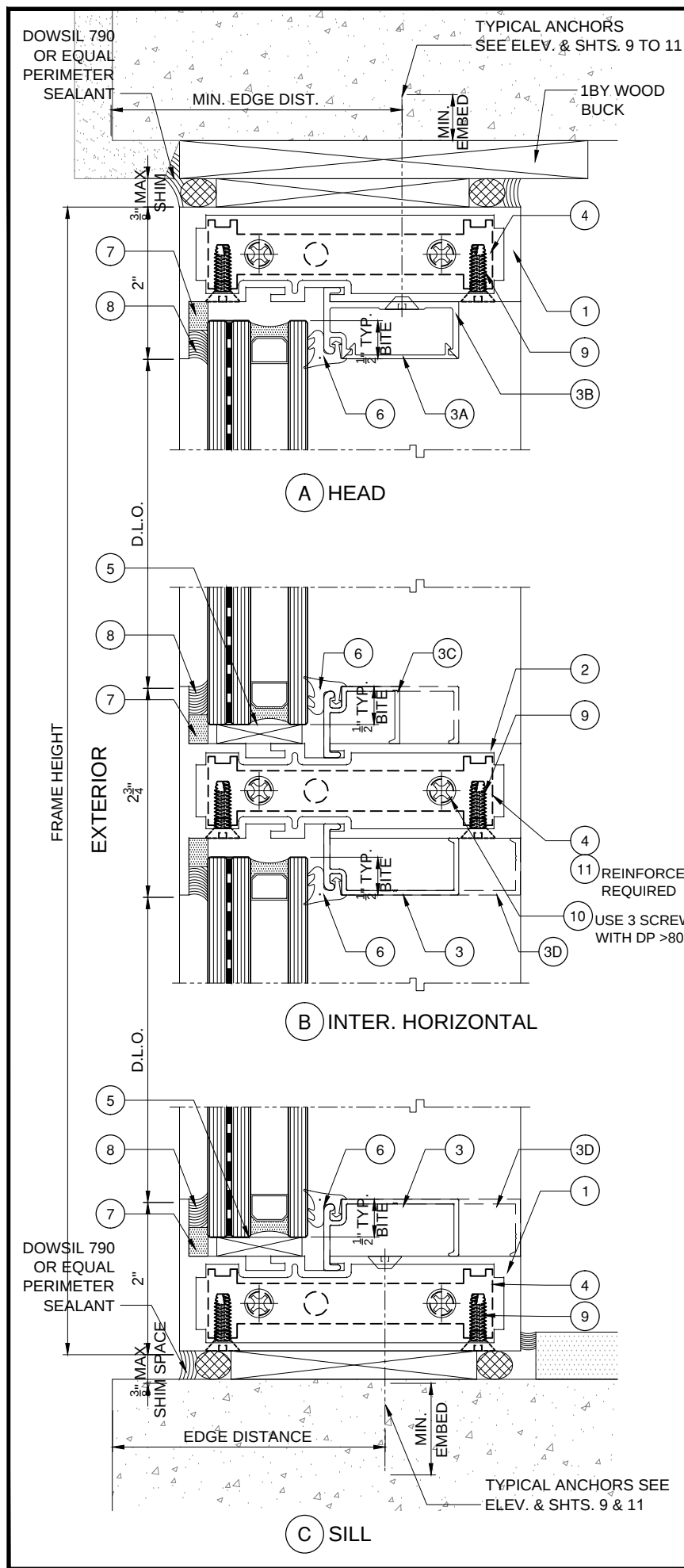
SHEET NO.:
9 OF 16

ANCHOR LOAD CAPACITY (psf)														Ext. (+) / Int. (-)			
Nom. Sizes (in)		TYPE 'A'			TYPE 'B'			TYPE 'C'			TYPE 'D'		TYPE 'E'		TYPE 'F'		
W	H	A2	A3	A4	B2	B3	B4	C2	C3	C4	D2	D3	E2	E3	F2	F3	
30	66	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
42		88.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
48		77.1	100.0	100.0	93.1	100.0	100.0	93.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
54		68.5	100.0	100.0	82.7	100.0	100.0	82.7	100.0	100.0	100.0	100.0	93.7	100.0	97.0	100.0	
60		61.7	92.5	100.0	74.5	100.0	100.0	74.5	100.0	100.0	100.0	100.0	84.4	100.0	87.3	100.0	
66		56.1	84.1	100.0	67.7	100.0	100.0	67.7	100.0	100.0	97.3	100.0	76.7	100.0	79.3	100.0	
72		51.4	77.1	100.0	62.1	93.1	100.0	62.1	93.1	100.0	89.2	100.0	70.3	100.0	72.7	100.0	
30	72	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		94.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
42		80.8	100.0	100.0	97.5	100.0	100.0	97.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
48		70.7	100.0	100.0	85.3	100.0	100.0	85.3	100.0	100.0	100.0	100.0	96.7	100.0	100.0	100.0	
54		62.8	94.2	100.0	75.9	100.0	100.0	75.9	100.0	100.0	100.0	100.0	85.9	100.0	88.9	100.0	
60		56.5	84.8	100.0	68.3	100.0	100.0	68.3	100.0	100.0	98.1	100.0	77.3	100.0	80.0	100.0	
66		51.4	77.1	100.0	62.1	93.1	100.0	62.1	93.1	100.0	89.2	100.0	70.3	100.0	72.7	100.0	
72		47.1	70.7	94.2	56.9	85.3	100.0	56.9	85.3	100.0	81.8	100.0	64.4	96.7	66.7	100.0	
30	78	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		87.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
42		74.5	100.0	100.0	90.0	100.0	100.0	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
48		65.2	97.8	100.0	78.8	100.0	100.0	78.8	100.0	100.0	100.0	100.0	89.2	100.0	92.3	100.0	
54		58.0	87.0	100.0	70.0	100.0	100.0	70.0	100.0	100.0	100.0	100.0	79.3	100.0	82.1	100.0	
60		52.2	78.3	100.0	63.0	94.5	100.0	63.0	94.5	100.0	90.6	100.0	71.4	100.0	73.8	100.0	
66		47.4	71.2	94.9	57.3	85.9	100.0	57.3	85.9	100.0	82.3	100.0	64.9	97.3	67.1	100.0	
72		43.5	65.2	87.0	52.5	78.8	100.0	52.5	78.8	100.0	75.5	100.0	59.5	89.2	61.5	92.3	
30	84	96.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		80.8	100.0	100.0	97.5	100.0	100.0	97.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
42		69.2	100.0	100.0	83.6	100.0	100.0	83.6	100.0	100.0	100.0	100.0	94.7	100.0	98.0	100.0	
48		60.6	90.9	100.0	73.1	100.0	100.0	73.1	100.0	100.0	100.0	100.0	82.9	100.0	85.7	100.0	
54		53.8	80.8	100.0	65.0	97.5	100.0	65.0	97.5	100.0	93.5	100.0	73.7	100.0	76.2	100.0	
60		48.5	72.7	96.9	58.5	87.8	100.0	58.5	87.8	100.0	84.1	100.0	66.3	99.4	68.6	100.0	
66		44.1	66.1	88.1	53.2	79.8	100.0	53.2	79.8	100.0	76.5	100.0	60.3	90.4	62.3	93.5	
72		40.4	60.6	80.8	48.8	73.1	97.5	48.8	73.1	97.5	70.1	100.0	55.2	82.9	57.1	85.7	
30	90	90.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		75.4	100.0	100.0	91.0	100.0	100.0	91.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
42		64.6	96.9	100.0	78.0	100.0	100.0	78.0	100.0	100.0	100.0	100.0	88.4	100.0	91.4	100.0	
48		56.5	84.8	100.0	68.3	100.0	100.0	68.3	100.0	100.0	98.1	100.0	77.3	100.0	80.0	100.0	
54		50.3	75.4	100.0	60.7	91.0	100.0	60.7	91.0	100.0	87.2	100.0	68.7	100.0	71.1	100.0	
60		45.2	67.8	90.5	54.6	81.9	100.0	54.6	81.9	100.0	78.5	100.0	61.9	92.8	64.0	96.0	
66		41.1	61.7	82.2	49.6	74.5	99.3	49.6	74.5	99.3	71.4	100.0	56.2	84.4	58.2	87.3	
72		37.7	56.5	75.4	45.5	68.3	91.0	45.5	68.3	91.0	65.4	98.1	51.6	77.3	53.3	80.0	
30	96	84.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		70.7	100.0	100.0	85.3	100.0	100.0	85.3	100.0	100.0	100.0	100.0	96.7	100.0	100.0	100.0	
42		60.6	90.9	100.0	73.1	100.0	100.0	73.1	100.0	100.0	100.0	100.0	82.9	100.0	85.7	100.0	
48		53.0	79.5	100.0	64.0	96.0	100.0	64.0	96.0	100.0	92.0	100.0	72.5	100.0	75.0	100.0	
54		47.1	70.7	94.2	56.9	85.3	100.0	56.9	85.3	100.0	81.8	100.0	64.4	96.7	66.7	100.0	
60		42.4	63.6	84.8	51.2	76.8	100.0	51.2	76.8	100.0	73.6	100.0	58.0	87.0	60.0	90.0	
66		38.5	57.8	77.1	46.5	69.8	93.1	46.5	69.8	93.1	66.9	100.0	52.7	79.1	54.5	81.8	
72		35.3	53.0	70.7	42.7	64.0	85.3	42.7	64.0	85.3	61.3	92.0	48.3	72.5	50.0	75.0	

ANCHOR LOAD CAPACITY (psf)															Ext. (+) / Int. (-)		
Nom. Sizes (in)		TYPE 'A'			TYPE 'B'			TYPE 'C'			TYPE 'D'		TYPE 'E'		TYPE 'F'		
W	H	A2	A3	A4	B2	B3	B4	C2	C3	C4	D2	D3	E2	E3	F2	F3	
30	102	79.8	100.0	100.0	96.4	100.0	100.0	96.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		66.5	99.8	100.0	80.3	100.0	100.0	80.3	100.0	100.0	100.0	100.0	91.0	100.0	94.1	100.0	
42		57.0	85.5	100.0	68.8	100.0	100.0	68.8	100.0	100.0	99.0	100.0	78.0	100.0	80.7	100.0	
48		49.9	74.8	99.8	60.2	90.4	100.0	60.2	90.4	100.0	86.6	100.0	68.2	100.0	70.6	100.0	
54		44.3	66.5	88.7	53.5	80.3	100.0	53.5	80.3	100.0	77.0	100.0	60.7	91.0	62.7	94.1	
60		39.9	59.9	79.8	48.2	72.3	96.4	48.2	72.3	96.4	69.3	100.0	54.6	81.9	56.5	84.7	
66		36.3	54.4	72.6	43.8	65.7	87.6	43.8	65.7	87.6	63.0	94.5	49.6	74.4	51.3	77.0	
72		33.3	49.9	66.5	40.2	60.2	80.3	40.2	60.2	80.3	57.7	86.6	45.5	68.2	47.1	70.6	
30	108	75.4	100.0	100.0	91.0	100.0	100.0	91.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
36		62.8	94.2	100.0	75.9	100.0	100.0	75.9	100.0	100.0	100.0	100.0	85.9	100.0	88.9	100.0	
42		53.8	80.8	100.0	65.0	97.5	100.0	65.0	97.5	100.0	93.5	100.0	73.7	100.0	76.2	100.0	
48		47.1	70.7	94.2	56.9	85.3	100.0	56.9	85.3	100.0	81.8	100.0	64.4	96.7	66.7	100.0	
54		41.9	62.8	83.8	50.6	75.9	100.0	50.6	75.9	100.0	72.7	100.0	57.3	85.9	59.3	88.9	
60		37.7	56.5	75.4	45.5	68.3	91.0	45.5	68.3	91.0	65.4	98.1	51.6	77.3	53.3	80.0	
66		34.3	51.4	68.5	41.4	62.1	82.7	41.4	62.1	82.7	59.5	89.2	46.9	70.3	48.5	72.7	
72		31.4	47.1	62.8	37.9	56.9	75.9	37.9	56.9	75.9	54.5	81.8	43.0	64.4	44.4	66.7	
30	114	71.4	100.0	100.0	86.2	100.0	100.0	86.2	100.0	100.0	100.0	100.0	97.7	100.0	100.0	100.0	
36		59.5	89.3	100.0	71.9	100.0	100.0	71.9	100.0	100.0	100.0	100.0	81.4	100.0	84.2	100.0	
42		51.0	76.5	100.0	61.6	92.4	100.0	61.6	92.4	100.0	88.5	100.0	69.8	100.0	72.2	100.0	
48		44.6	66.9	89.3	53.9	80.8	100.0	53.9	80.8	100.0	77.5	100.0	61.1	91.6	63.2	94.7	
54		39.7	59.5	79.3	47.9	71.9	95.8	47.9	71.9	95.8	68.9	100.0	54.3	81.4	56.1	84.2	
60		35.7	53.6	71.4	43.1	64.7	86.2	43.1	64.7	86.2	62.0	93.0	48.8	73.3	50.5	75.8	
66		32.5	48.7	64.9	39.2	58.8	78.4	39.2	58.8	78.4	56.3	84.5	44.4	66.6	45.9	68.9	
72		29.8	44.6	59.5	35.9	53.9	71.9	35.9	53.9	71.9	51.6	77.5	40.7	61.1	42.1	63.2	
30	120	67.8	100.0	100.0	81.9	100.0	100.0	81.9	100.0	100.0	100.0	100.0	92.8	100.0	96.0	100.0	
36		56.5	84.8	100.0	68.3	100.0	100.0	68.3	100.0	100.0	98.1	100.0	77.3	100.0	80.0	100.0	
42		48.5	72.7	96.9	58.5	87.8	100.0	58.5	87.8	100.0	84.1	100.0	66.3	99.4	68.6	100.0	
48		42.4	63.6	84.8	51.2	76.8	100.0	51.2	76.8	100.0	73.6	100.0	58.0	87.0	60.0	90.0	
54		37.7	56.5	75.4	45.5	68.3	91.0	45.5	68.3	91.0	65.4	98.1	51.6	77.3	53.3	80.0	
60		33.9	50.9	67.8	41.0	61.4	81.9	41.0	61.4	81.9	58.9	88.3	46.4	69.6	48.0	72.0	
66		30.8	46.3	61.7	37.2	55.9	74.5	37.2	55.9	74.5	53.5	80.3	42.2	63.3	43.6	65.5	
72		28.3	42.4	56.5	34.1	51.2	68.3	34.1	51.2	68.3	49.1	73.6	38.7	58.0	40.0	60.0	
30	126	64.6	96.9	100.0	78.0	100.0	100.0	78.0	100.0	100.0	100.0	100.0	88.4	100.0	91.4	100.0	
36		53.8	80.8	100.0	65.0	97.5	100.0	65.0	97.5	100.0	93.5	100.0	73.7	100.0	76.2	100.0	
42		46.1	69.2	92.3	55.7	83.6	100.0	55.7	83.6	100.0	80.1	100.0	63.1	94.7	65.3	98.0	
48		40.4	60.6	80.8	48.8	73.1	97.5	48.8	73.1	97.5	70.1	100.0	55.2	82.9	57.1	85.7	
54		35.9	53.8	71.8	43.3	65.0	86.7	43.3	65.0	86.7	62.3	93.5	49.1	73.7	50.8	76.2	
60		32.3	48.5	64.6	39.0	58.5	78.0	39.0	58.5	78.0	56.1	84.1	44.2	66.3	45.7	68.6	
30		132	61.7	92.5	100.0	74.5	100.0	100.0	74.5	100.0	100.0	100.0	100.0	84.4	100.0	87.3	100.0
36			51.4	77.1	100.0	62.1	93.1	100.0	62.1	93.1	100.0	89.2	100.0	70.3	100.0	72.7	100.0
42	44.1		66.1	88.1	53.2	79.8	100.0	53.2	79.8	100.0	76.5	100.0	60.3	90.4	62.3	93.5	
48	38.5		57.8	77.1	46.5	69.8	93.1	46.5	69.8	93.1	66.9	100.0	52.7	79.1	54.5	81.8	
54	34.3		51.4	68.5	41.4	62.1	82.7	41.4	62.1	82.7	59.5	89.2	46.9	70.3	48.5	72.7	
30	59.0		88.5	100.0	71.2	100.0	100.0	71.2	100.0	100.0	100.0	100.0	80.7	100.0	83.5	100.0	
36	49.2		73.7	98.3	59.4	89.0	100.0	59.4	89.0	100.0	85.3	100.0	67.2	100.0	69.6	100.0	
42	42.1		63.2	84.3	50.9	76.3	100.0	50.9	76.3	100.0	73.1	100.0	57.6	86.5	59.6	89.4	
48	144	36.9	55.3	73.7	44.5	66.8	89.0	44.5	66.8	89.0	64.0	96.0	50.4	75.7	52.2	78.3	
54		32.8	49.2	65.5	39.6	59.4	79.1	39.6	59.4	79.1	56.9	85.3	44.8	67.2	46.4	69.6	
24		70.7	100.0	100.0	85.3	100.0	100.0	85.3	100.0	100.0	100.0	100.0	96.7	100.0	100.0	100.0	
30		56.5	84.8	100.0	68.3	100.0	100.0	68.3	100.0	100.0	98.1	100.0	77.3	100.0	80.0	100.0	
36		47.1	70.7	94.2	56.9	85.3	100.0	56.9	85.3	100.0	81.8	100.0	64.4	96.7	66.7	100.0	
42		40.4	60.6	80.8	48.8	73.1	97.5	48.8	73.1	97.5	70.1	100.0	55.2	82.9	57.1	85.7	
48		35.3	53.0	70.7	42.7	64.0	85.3	42.7	64.0	85.3	61.3	92.0	48.3	72.5	50.0	75.0	

ANCHOR LOAD CAPACITY (psf)																		Ext. (+) / Int. (-)					
Nom. Sizes (in)		TYPE 'A'				TYPE 'B'			TYPE 'C'				TYPE 'D'			TYPE 'E'			TYPE 'F'				
W	H	A2	A3	A4	A5	B2	B3	B4	C2	C3	C4	C5	D2	D3	D4	E2	E3	E4	F2	F3	F4		
30	66	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
36		88.2	100.0	100.0	100.0	100.0	100.0	100.0	88.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
42		75.6	100.0	100.0	100.0	100.0	100.0	100.0	75.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	89.4	100.0	100.0		
48		66.2	99.3	100.0	100.0	93.1	100.0	100.0	66.2	99.3	100.0	100.0	96.4	100.0	100.0	96.4	100.0	100.0	78.2	100.0	100.0		
54		58.8	88.2	100.0	100.0	82.7	100.0	100.0	58.8	88.2	100.0	100.0	85.7	100.0	100.0	85.7	100.0	100.0	69.5	100.0	100.0		
60		52.9	79.4	100.0	100.0	74.5	100.0	100.0	52.9	79.4	100.0	100.0	77.1	100.0	100.0	77.1	100.0	100.0	62.5	93.8	100.0		
66		48.1	72.2	96.3	100.0	67.7	100.0	100.0	48.1	72.2	96.3	100.0	70.1	100.0	100.0	70.1	100.0	100.0	56.9	85.3	100.0		
72	72	44.1	66.2	88.2	100.0	62.1	93.1	100.0	44.1	66.2	88.2	100.0	64.2	96.4	100.0	64.2	96.4	100.0	52.1	78.2	100.0		
30		97.1	100.0	100.0	100.0	100.0	100.0	100.0	97.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
36		80.9	100.0	100.0	100.0	100.0	100.0	100.0	80.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.6	100.0	100.0		
42		69.3	100.0	100.0	100.0	97.5	100.0	100.0	69.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	81.9	100.0	100.0		
48		60.7	91.0	100.0	100.0	85.3	100.0	100.0	60.7	91.0	100.0	100.0	88.3	100.0	100.0	88.3	100.0	100.0	71.7	100.0	100.0		
54		53.9	80.9	100.0	100.0	75.9	100.0	100.0	53.9	80.9	100.0	100.0	78.5	100.0	100.0	78.5	100.0	100.0	63.7	95.6	100.0		
60		48.5	72.8	97.1	100.0	68.3	100.0	100.0	48.5	72.8	97.1	100.0	70.7	100.0	100.0	70.7	100.0	100.0	57.3	86.0	100.0		
66	78	44.1	66.2	88.2	100.0	62.1	93.1	100.0	44.1	66.2	88.2	100.0	64.2	96.4	100.0	64.2	96.4	100.0	52.1	78.2	100.0		
72		40.4	60.7	80.9	100.0	56.9	85.3	100.0	40.4	60.7	80.9	100.0	58.9	88.3	100.0	58.9	88.3	100.0	47.8	71.7	95.6		
30		89.6	100.0	100.0	100.0	100.0	100.0	100.0	89.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
36		74.7	100.0	100.0	100.0	100.0	100.0	100.0	74.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	88.2	100.0	100.0		
42		64.0	96.0	100.0	100.0	90.0	100.0	100.0	64.0	96.0	100.0	100.0	93.2	100.0	100.0	93.2	100.0	100.0	75.6	100.0	100.0		
48		56.0	84.0	100.0	100.0	78.8	100.0	100.0	56.0	84.0	100.0	100.0	81.5	100.0	100.0	81.5	100.0	100.0	66.2	99.2	100.0		
54		49.8	74.7	99.6	100.0	70.0	100.0	100.0	49.8	74.7	99.6	100.0	72.5	100.0	100.0	72.5	100.0	100.0	58.8	88.2	100.0		
60	84	44.8	67.2	89.6	100.0	63.0	94.5	100.0	44.8	67.2	89.6	100.0	65.2	97.8	100.0	65.2	97.8	100.0	52.9	79.4	100.0		
66		40.7	61.1	81.5	100.0	57.3	85.9	100.0	40.7	61.1	81.5	100.0	59.3	89.0	100.0	59.3	89.0	100.0	48.1	72.2	96.2		
72		37.3	56.0	74.7	93.3	52.5	78.8	100.0	37.3	56.0	74.7	93.3	54.4	81.5	100.0	54.4	81.5	100.0	44.1	66.2	88.2		
30		83.2	100.0	100.0	100.0	100.0	100.0	100.0	83.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.3	100.0	100.0		
36		69.3	100.0	100.0	100.0	97.5	100.0	100.0	69.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	81.9	100.0	100.0		
42		59.4	89.1	100.0	100.0	83.6	100.0	100.0	59.4	89.1	100.0	100.0	86.5	100.0	100.0	86.5	100.0	100.0	70.2	100.0	100.0		
48		52.0	78.0	100.0	100.0	73.1	100.0	100.0	52.0	78.0	100.0	100.0	75.7	100.0	100.0	75.7	100.0	100.0	61.4	92.1	100.0		
54	90	46.2	69.3	92.4	100.0	65.0	97.5	100.0	46.2	69.3	92.4	100.0	67.3	100.0	100.0	67.3	100.0	100.0	54.6	81.9	100.0		
60		41.6	62.4	83.2	100.0	58.5	87.8	100.0	41.6	62.4	83.2	100.0	60.6	90.9	100.0	60.6	90.9	100.0	49.1	73.7	98.3		
66		37.8	56.7	75.6	94.5	53.2	79.8	100.0	37.8	56.7	75.6	94.5	55.1	82.6	100.0	55.1	82.6	100.0	44.7	67.0	89.4		
72		34.7	52.0	69.3	86.7	48.8	73.1	97.5	34.7	52.0	69.3	86.7	50.5	75.7	100.0	50.5	75.7	100.0	41.0	61.4	81.9		
30		77.7	100.0	100.0	100.0	100.0	100.0	100.0	77.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	91.7	100.0	100.0		
36		64.7	97.1	100.0	100.0	91.0	100.0	100.0	64.7	97.1	100.0	100.0	94.2	100.0	100.0	94.2	100.0	100.0	76.4	100.0	100.0		
42		55.5	83.2	100.0	100.0	78.0	100.0	100.0	55.5	83.2	100.0	100.0	80.8	100.0	100.0	80.8	100.0	100.0	65.5	98.3	100.0		
48	96	48.5	72.8	97.1	100.0	68.3	100.0	100.0	48.5	72.8	97.1	100.0	70.7	100.0	100.0	70.7	100.0	100.0	57.3	86.0	100.0		
54		43.1	64.7	86.3	100.0	60.7	91.0	100.0	43.1	64.7	86.3	100.0	62.8	94.2	100.0	62.8	94.2	100.0	51.0	76.4	100.0		
60		38.8	58.2	77.7	97.1	54.6	81.9	100.0	38.8	58.2	77.7	97.1	56.5	84.8	100.0	56.5	84.8	100.0	45.9	68.8	91.7		
66		35.3	52.9	70.6	88.2	49.6	74.5	99.3	35.3	52.9	70.6	88.2	51.4	77.1	100.0	51.4	77.1	100.0	41.7	62.5	83.4		
72		32.4	48.5	64.7	80.9	45.5	68.3	91.0	32.4	48.5	64.7	80.9	47.1	70.7	94.2	47.1	70.7	94.2	38.2	57.3	76.4		
30		72.8	100.0	100.0	100.0	100.0	100.0	100.0	72.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	86.0	100.0	100.0		
36		60.7	91.0	100.0	100.0	85.3	100.0	100.0	60.7	91.0	100.0	100.0	88.3	100.0	100.0	88.3	100.0	100.0	71.7	100.0	100.0		
42	102	52.0	78.0	100.0	100.0	73.1	100.0	100.0	52.0	78.0	100.0	100.0	75.7	100.0	100.0	75.7	100.0	100.0	61.4	92.1	100.0		
48		45.5	68.3	91.0	100.0	64.0	96.0	100.0	45.5	68.3	91.0	100.0	66.3	99.4	100.0	66.3	99.4	100.0	53.8	80.6	100.0		
54		40.4	60.7	80.9	100.0	56.9	85.3	100.0	40.4	60.7	80.9	100.0	58.9	88.3	100.0	58.9	88.3	100.0	47.8	71.7	95.6		
60		36.4	54.6	72.8	91.0	51.2	76.8	100.0	36.4	54.6	72.8	91.0	53.0	79.5	100.0	53.0	79.5	100.0	43.0	64.5	86.0		
66		33.1	49.6	66.2	82.7	46.5	69.8	93.1	33.1	49.6	66.2	82.7	48.2	72.3	96.4	48.2	72.3	96.4	39.1	58.6	78.2		
72		30.3	45.5	60.7	75.8	42.7	64.0	85.3	30.3	45.5	60.7	75.8	44.2	66.3	88.3	44.2	66.3	88.3	35.8	53.8	71.7		

ANCHOR LOAD CAPACITY (psf)																		Ext. (+) / Int. (-)					
Nom. Sizes (in)		TYPE 'A'				TYPE 'B'			TYPE 'C'				TYPE 'D'			TYPE 'E'			TYPE 'F'				
W	H	A2	A3	A4	A5	B2	B3	B4	C2	C3	C4	C5	D2	D3	D4	E2	E3	E4	F2	F3	F4		
30	102	68.5	100.0	100.0	100.0	96.4	100.0	100.0	68.5	100.0	100.0	100.0	99.8	100.0	100.0	99.8	100.0	100.0	80.9	100.0	100.0		
36		57.1	85.6	100.0	100.0	80.3	100.0	100.0	57.1	85.6	100.0	100.0	83.1	100.0	100.0	83.1	100.0	100.0	67.5	100.0	100.0		
42		48.9	73.4	97.9	100.0	68.8	100.0	100.0	48.9	73.4	97.9	100.0	71.3	100.0	100.0	71.3	100.0	100.0	57.8	86.7	100.0		
48		42.8	64.2	85.6	100.0	60.2	90.4	100.0	42.8	64.2	85.6	100.0	62.4	93.5	100.0	62.4	93.5	100.0	50.6	75.9	100.0		
54		38.1	57.1	76.1	95.2	53.5	80.3	100.0	38.1	57.1	76.1	95.2	55.4	83.1	100.0	55.4	83.1	100.0	45.0	67.5	89.9		
60		34.3	51.4	68.5	85.6	48.2	72.3	96.4	34.3	51.4	68.5	85.6	49.9	74.8	99.8	49.9	74.8	99.8	40.5	60.7	80.9		
66		31.1	46.7	62.3	77.9	43.8	65.7	87.6	31.1	46.7	62.3	77.9	45.3	68.0	90.7	45.3	68.0	90.7	36.8	55.2	73.6		
72	28.5	42.8	57.1	71.4	40.2	60.2	80.3	28.5	42.8	57.1	71.4	41.6	62.4	83.1	41.6	62.4	83.1	33.7	50.6	67.5			
30	108	64.7	97.1	100.0	100.0	91.0	100.0	100.0	64.7	97.1	100.0	100.0	94.2	100.0	100.0	94.2	100.0	100.0	76.4	100.0	100.0		
36		53.9	80.9	100.0	100.0	75.9	100.0	100.0	53.9	80.9	100.0	100.0	78.5	100.0	100.0	78.5	100.0	100.0	63.7	95.6	100.0		
42		46.2	69.3	92.4	100.0	65.0	97.5	100.0	46.2	69.3	92.4	100.0	67.3	100.0	100.0	67.3	100.0	100.0	54.6	81.9	100.0		
48		40.4	60.7	80.9	100.0	56.9	85.3	100.0	40.4	60.7	80.9	100.0	58.9	88.3	100.0	58.9	88.3	100.0	47.8	71.7	95.6		
54		36.0	53.9	71.9	89.9	50.6	75.9	100.0	36.0	53.9	71.9	89.9	52.3	78.5	100.0	52.3	78.5	100.0	42.5	63.7	84.9		
60		32.4	48.5	64.7	80.9	45.5	68.3	91.0	32.4	48.5	64.7	80.9	47.1	70.7	94.2	47.1	70.7	94.2	38.2	57.3	76.4		
66		29.4	44.1	58.8	73.5	41.4	62.1	82.7	29.4	44.1	58.8	73.5	42.8	64.2	85.7	42.8	64.2	85.7	34.7	52.1	69.5		
72	27.0	40.4	53.9	67.4	37.9	56.9	75.9	27.0	40.4	53.9	67.4	39.3	58.9	78.5	39.3	58.9	78.5	31.9	47.8	63.7			
30	114	61.3	92.0	100.0	100.0	86.2	100.0	100.0	61.3	92.0	100.0	100.0	89.3	100.0	100.0	89.3	100.0	100.0	72.4	100.0	100.0		
36		51.1	76.6	100.0	100.0	71.9	100.0	100.0	51.1	76.6	100.0	100.0	74.4	100.0	100.0	74.4	100.0	100.0	60.4	90.5	100.0		
42		43.8	65.7	87.6	100.0	61.6	92.4	100.0	43.8	65.7	87.6	100.0	63.8	95.6	100.0	63.8	95.6	100.0	51.7	77.6	100.0		
48		38.3	57.5	76.6	95.8	53.9	80.8	100.0	38.3	57.5	76.6	95.8	55.8	83.7	100.0	55.8	83.7	100.0	45.3	67.9	90.5		
54		34.1	51.1	68.1	85.1	47.9	71.9	95.8	34.1	51.1	68.1	85.1	49.6	74.4	99.2	49.6	74.4	99.2	40.2	60.4	80.5		
60		30.7	46.0	61.3	76.6	43.1	64.7	86.2	30.7	46.0	61.3	76.6	44.6	66.9	89.3	44.6	66.9	89.3	36.2	54.3	72.4		
66		27.9	41.8	55.7	69.7	39.2	58.8	78.4	27.9	41.8	55.7	69.7	40.6	60.9	81.1	40.6	60.9	81.1	32.9	49.4	65.8		
72	25.5	38.3	51.1	63.9	35.9	53.9	71.9	25.5	38.3	51.1	63.9	37.2	55.8	74.4	37.2	55.8	74.4	30.2	45.3	60.4			
30	120	58.2	87.4	100.0	100.0	81.9	100.0	100.0	58.2	87.4	100.0	100.0	84.8	100.0	100.0	84.8	100.0	100.0	68.8	100.0	100.0		
36		48.5	72.8	97.1	100.0	68.3	100.0	100.0	48.5	72.8	97.1	100.0	70.7	100.0	100.0	70.7	100.0	100.0	57.3	86.0	100.0		
42		41.6	62.4	83.2	100.0	58.5	87.8	100.0	41.6	62.4	83.2	100.0	60.6	90.9	100.0	60.6	90.9	100.0	49.1	73.7	98.3		
48		36.4	54.6	72.8	91.0	51.2	76.8	100.0	36.4	54.6	72.8	91.0	53.0	79.5	100.0	53.0	79.5	100.0	43.0	64.5	86.0		
54		32.4	48.5	64.7	80.9	45.5	68.3	91.0	32.4	48.5	64.7	80.9	47.1	70.7	94.2	47.1	70.7	94.2	38.2	57.3	76.4		
60		29.1	43.7	58.2	72.8	41.0	61.4	81.9	29.1	43.7	58.2	72.8	42.4	63.6	84.8	42.4	63.6	84.8	34.4	51.6	68.8		
66		26.5	39.7	52.9	66.2	37.2	55.9	74.5	26.5	39.7	52.9	66.2	38.5	57.8	77.1	38.5	57.8	77.1	31.3	46.9	62.5		
72	24.3	36.4	48.5	60.7	34.1	51.2	68.3	24.3	36.4	48.5	60.7	35.3	53.0	70.7	35.3	53.0	70.7	28.7	43.0	57.3			
30	126	55.5	83.2	100.0	100.0	78.0	100.0	100.0	55.5	83.2	100.0	100.0	80.8	100.0	100.0	80.8	100.0	100.0	65.5	98.3	100.0		
36		46.2	69.3	92.4	100.0	65.0	97.5	100.0	46.2	69.3	92.4	100.0	67.3	100.0	100.0	67.3	100.0	100.0	54.6	81.9	100.0		
42		39.6	59.4	79.2	99.0	55.7	83.6	100.0	39.6	59.4	79.2	99.0	57.7	86.5	100.0	57.7	86.5	100.0	46.8	70.2	93.6		
48		34.7	52.0	69.3	86.7	48.8	73.1	97.5	34.7	52.0	69.3	86.7	50.5	75.7	100.0	50.5	75.7	100.0	41.0	61.4	81.9		
54		30.8	46.2	61.6	77.0	43.3	65.0	86.7	30.8	46.2	61.6	77.0	44.9	67.3	89.7	44.9	67.3	89.7	36.4	54.6	72.8		
60		27.7	41.6	55.5	69.3	39.0	58.5	78.0	27.7	41.6	55.5	69.3	40.4	60.6	80.8	40.4	60.6	80.8	32.8	49.1	65.5		
30		132	52.9	79.4	100.0	100.0	74.5	100.0	100.0	52.9	79.4	100.0	100.0	77.1	100.0	100.0	77.1	100.0	100.0	62.5	93.8	100.0	
36	44.1		66.2	88.2	100.0	62.1	93.1	100.0	44.1	66.2	88.2	100.0	64.2	96.4	100.0	64.2	96.4	100.0	52.1	78.2	100.0		
42	37.8		56.7	75.6	94.5	53.2	79.8	100.0	37.8	56.7	75.6	94.5	55.1	82.6	100.0	55.1	82.6	100.0	44.7	67.0	89.4		
48	33.1		49.6	66.2	82.7	46.5	69.8	93.1	33.1	49.6	66.2	82.7	48.2	72.3	96.4	48.2	72.3	96.4	39.1	58.6	78.2		
54	29.4		44.1	58.8	73.5	41.4	62.1	82.7	29.4	44.1	58.8	73.5	42.8	64.2	85.7	42.8	64.2	85.7	34.7	52.1	69.5		
30	138		50.6	76.0	100.0	100.0	71.2	100.0	100.0	50.6	76.0	100.0	100.0	73.7	100.0	100.0	73.7	100.0	100.0	59.8	89.7	100.0	
36			42.2	63.3	84.4	100.0	59.4	89.0	100.0	42.2	63.3	84.4	100.0	61.4	92.2	100.0	61.4	92.2	100.0	49.9	74.8	99.7	
42		36.2	54.3	72.3	90.4	50.9	76.3	100.0	36.2	54.3	72.3	90.4	52.7	79.0	100.0	52.7	79.0	100.0	42.7	64.1	85.5		
48		31.7	47.5	63.3	79.1	44.5	66.8	89.0	31.7	47.5	63.3	79.1	46.1	69.1	92.2	46.1	69.1	92.2	37.4	56.1	74.8		
54		28.1	42.2	56.3	70.3	39.6	59.4	79.1	28.1	42.2	56.3	70.3	41.0	61.4	81.9	41.0	61.4	81.9	33.2	49.9	66.5		
24		144	60.7	91.0	100.0	100.0	85.3	100.0	100.0	60.7	91.0	100.0	100.0	88.3	100.0	100.0	88.3	100.0	100.0	71.7	100.0	100.0	
30			48.5	72.8	97.1	100.0	68.3	100.0	100.0	48.5	72.8	97.1	100.0	70.7	100.0	100.0	70.7	100.0	100.0	57.3	86.0	100.0	
36	40.4		60.7	80.9	100.0	56.9	85.3	100.0	40.4	60.7	80.9	100.0	58.9	88.3	100.0	58.9	88.3	100.0	47.8	71.7	95.6		
42	34.7		52.0	69.3	86.7	48.8	73.1	97.5	34.7	52.0	69.3	86.7	50.5	75.7	100.0	50.5	75.7	100.0	41.0	61.4	81.9		
48	30.3	45.5	60.7	75.8	42.7	64.0	85.3	30.3	45.5	60.7	75.8	44.2	66.3	88.3	44.2	66.3	88.3	35.8	53.8	71.7			



ANCHOR SUBSTRATE OPTIONS

ANCHOR TYPES

TYPE	SUBSTRATE	MATERIAL	MIN. EMBED (IN.)	MIN. EDGE DIST. (IN.)
A	WOOD	$\frac{1}{4}$ " $\emptyset$ - TAPCON (Fy = 100ksi & Fu = 125ksi min.)	1.50	1.25
B		$\frac{1}{4}$ " $\emptyset$ - ULTRACON (Fy = 148ksi & Fu = 164ksi min.)	1.50	1.25
C	CONCRETE	$\frac{1}{4}$ " $\emptyset$ - TAPCON (Fy = 100ksi & Fu = 125ksi min.)	1.75	2.50
D		$\frac{1}{4}$ " $\emptyset$ - ULTRACON (Fy = 148ksi & Fu = 164ksi min.)	1.75	2.50
E	GROUTED CMU	$\frac{1}{4}$ " $\emptyset$ - ULTRACON (Fy = 148ksi & Fu = 164ksi min.)	1.25	2.50
F	METAL	$\frac{1}{4}$ " $\emptyset$ Gr. 5 Metal Screw	Min. 3 Threads pass substrate	1.00

NOTE:

- MIN. SPECIFIC GRAVITY OF WOOD = 0.55
- MIN. CONCRETE COMPRESSIVE STRENGTH = 3000psi (NORMAL WEIGHT & UNCRACKED)
- MIN. COMPRESSIVE STRENGTH OF CONCRETE MASONRY = 2000PSI (MEDIUM WEIGHT & CONFORM TO ASTM C90)
- METAL SUBSTRATE SHALL BE STEEL (FY=36KSI MIN. & 12GA. THICK MIN.) OR ALUMINUM (6063-T5 MIN. & 0.10" THICK MIN.)

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PRODUCT:

**3100 IMPACT
STOREFRONT SYSTEM**
LMI (HVHZ)

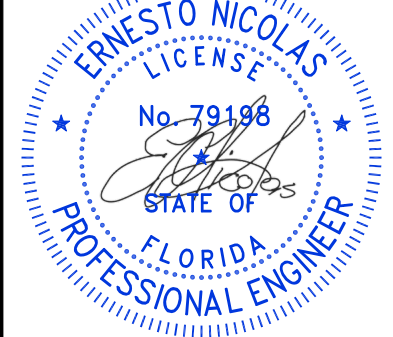
Resistor
BLAST & STORM PROTECTION™

REVN	DATE/REMARKS

ENGINEER:

En3 Engineering & Consultancy
950 SW 135th Way Sunrise,
FL 33325 P. 786 474 3876
Email: en3.engconsul@gmail.com

STAMP:



FLORIDA PRODUCT APPROVAL:

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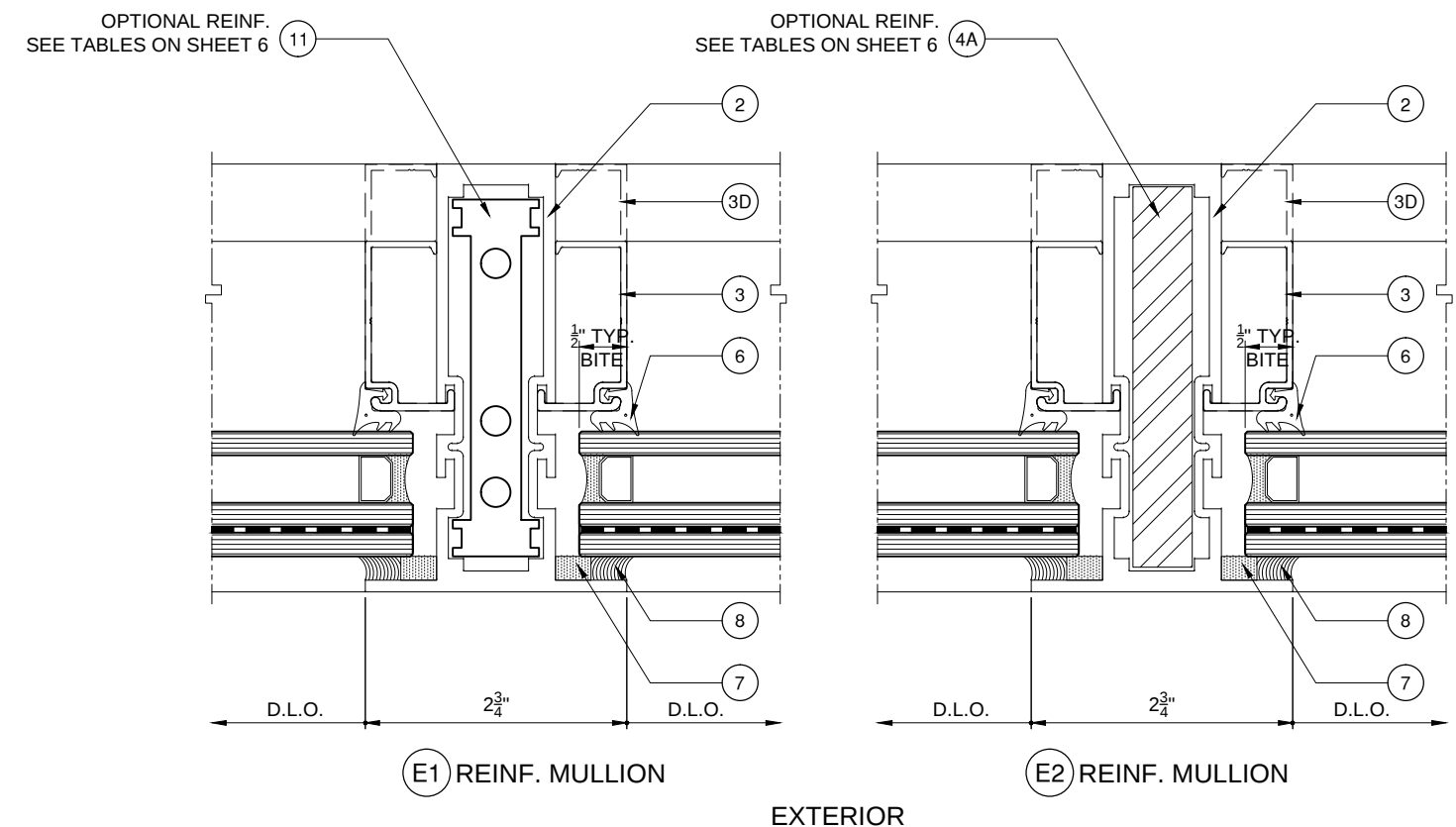
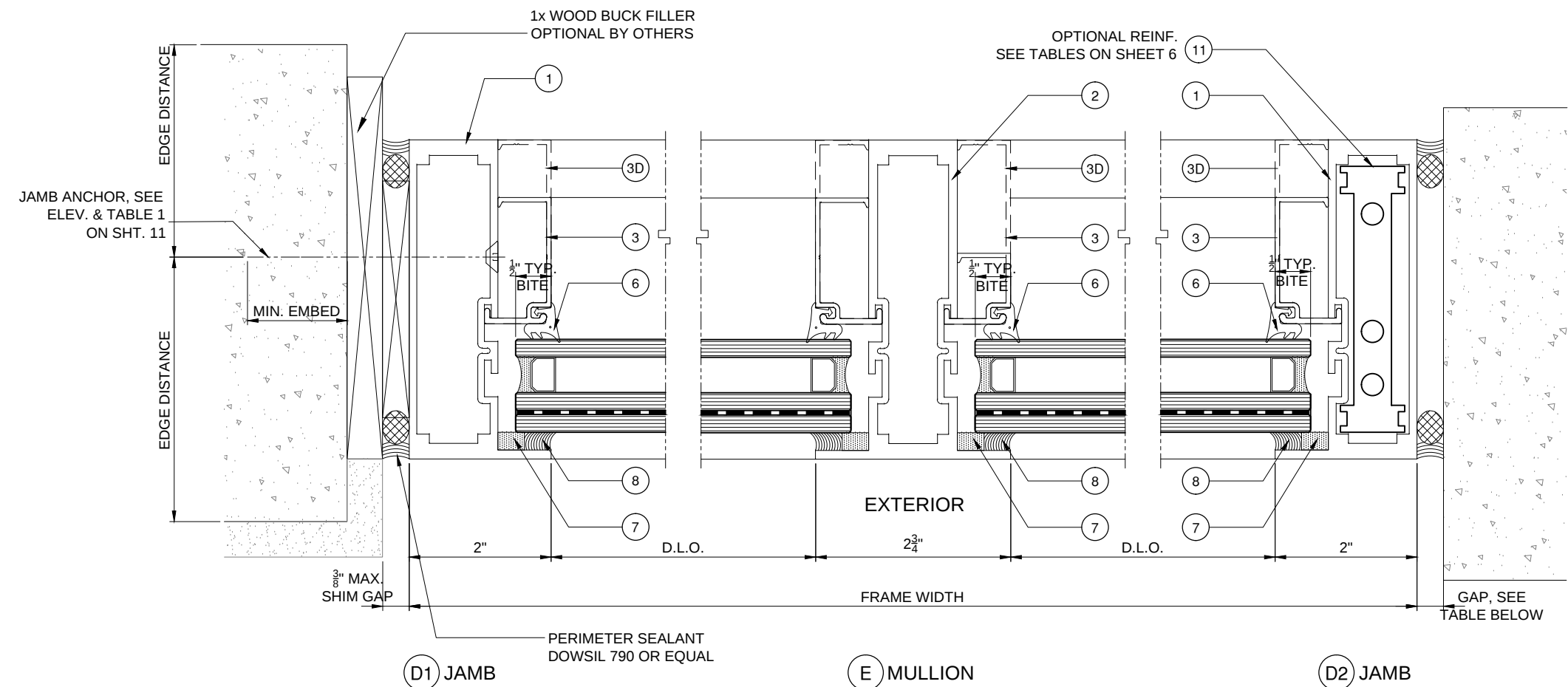
DATE: DECEMBER 10, 2023

DRAWN: Erick CHK: ESN

DRWG. No: 23FL-103 SCALE: NTS

SHEET NO.:

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RECOMMENDED FRAME GAP ON UN-ANCHORED JAMB USING DOWSIL 790 SEALANT (3/4\"

Jamb Height (ft.)	≤6	≤8	≤10	≤12
Min. gap (in)	1/4	5/16	3/8	1/2

ALTERNATE SEALANT AT JAMB GAP
CAN BE DESIGNED BY ENGINEER
OF RECORD BASED ON MANUFACTURER'S
GUIDE LINES

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STAMP:
ERNESTO NICOLAS
LICENSE
No. 79198
STATE OF
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PROFESSIONAL ENGINEER

FLORIDA PRODUCT APPROVAL:
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DRWG. No: 23FL-103 SCALE: NTS

SHEET NO.:
13 OF 16

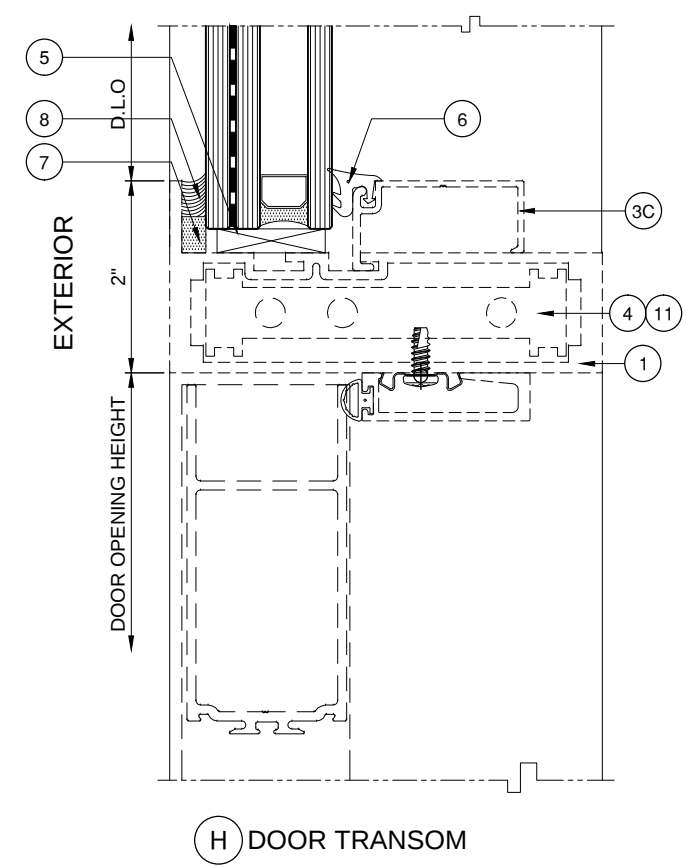
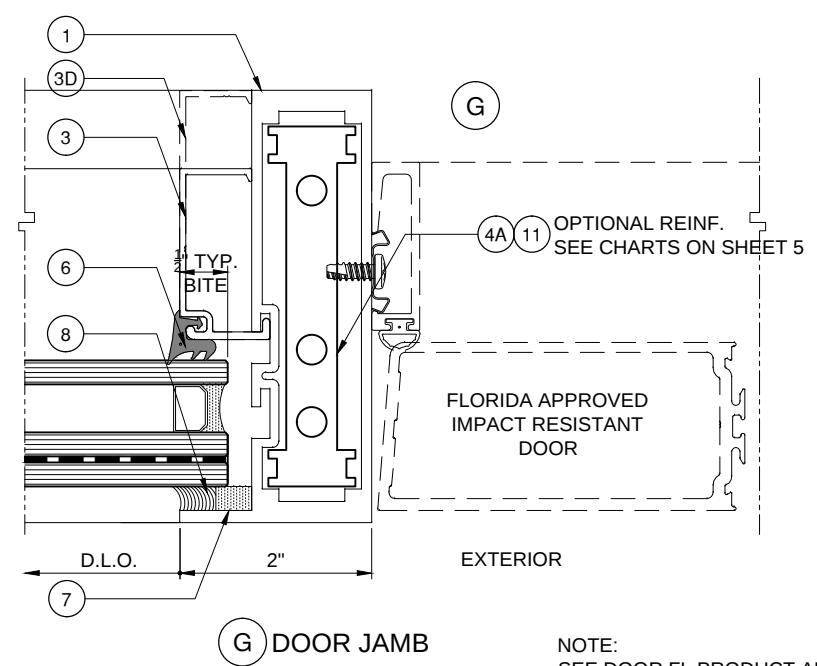
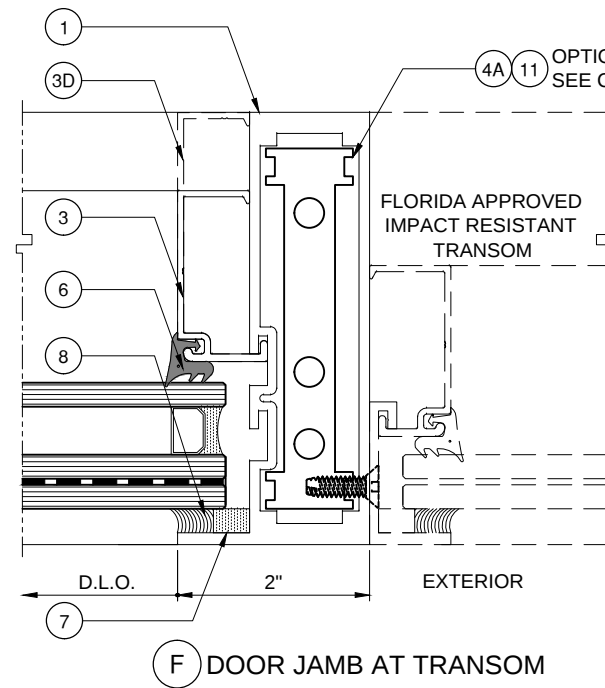


TABLE 1 - ANCHOR AT DOOR JAMB TOP

ANCHOR TYPE	1/4" Shim	3/8" Shim
A	11	13
B	9	9
C	9	13
D	6	9
E	8	9
F	8	11

NOTE:
SEE DOOR FL PRODUCT APPROVAL
FOR DESIGN LOAD CAPACITY OF
DOOR, TRANSOM AND DOOR
ANCHORS.

LOWER VALUES FROM DOOR FL
FLORIDA APPROVAL OR WINDOW
WALL SYSTEM CAPACITY CHARTS
WILL APPLY TO ENTIRE SYSTEM.

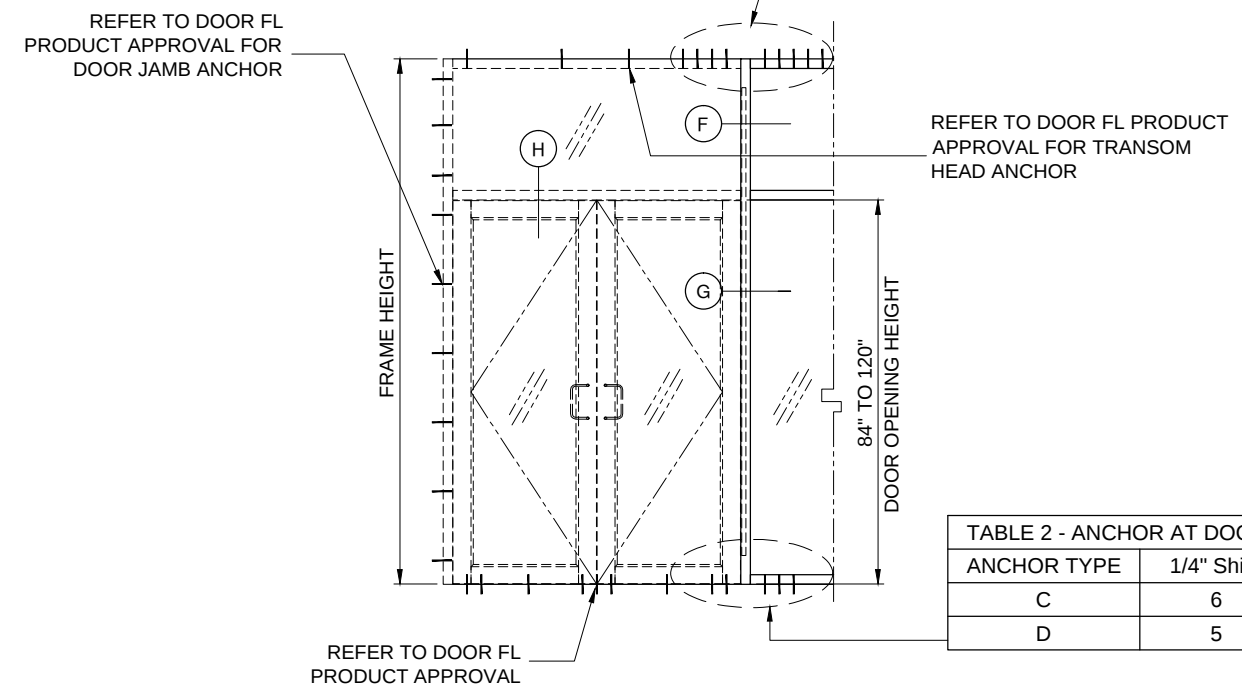


TABLE 2 - ANCHOR AT DOOR JAMB BOTTOM

ANCHOR TYPE	1/4" Shim	3/8" Shim
C	6	9
D	5	6

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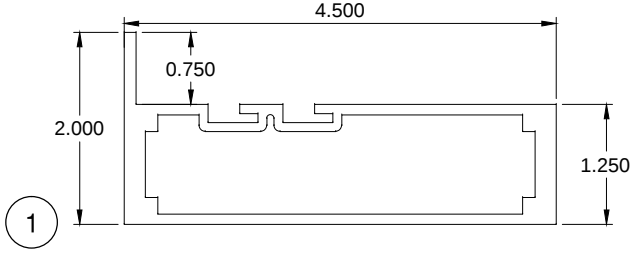
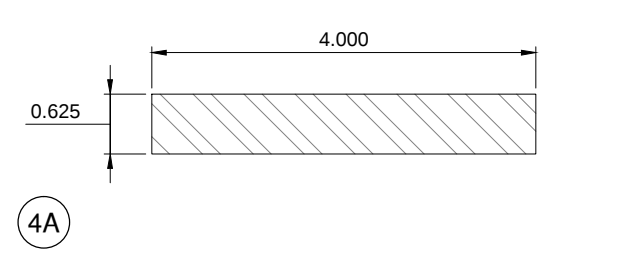
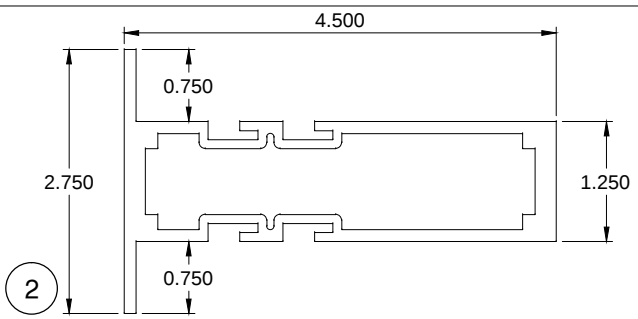
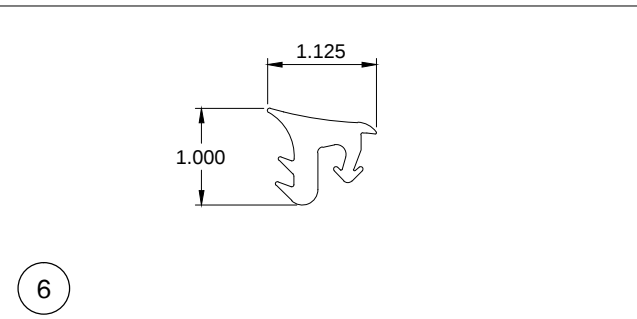
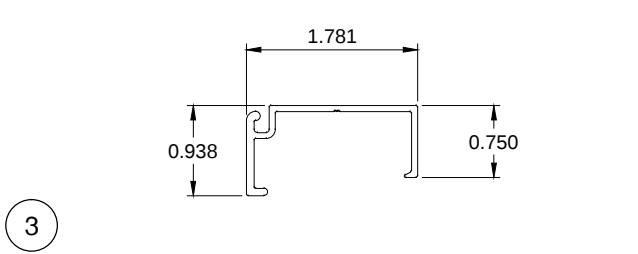
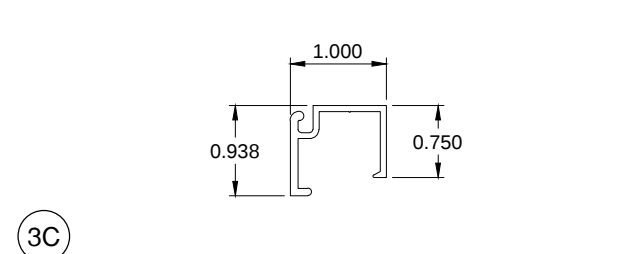
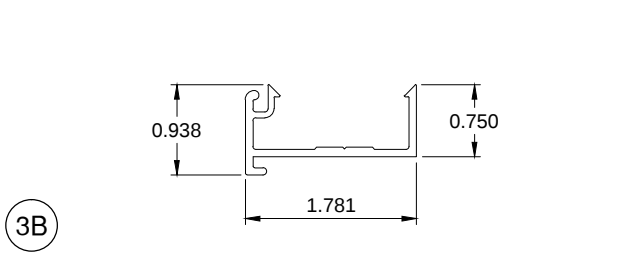
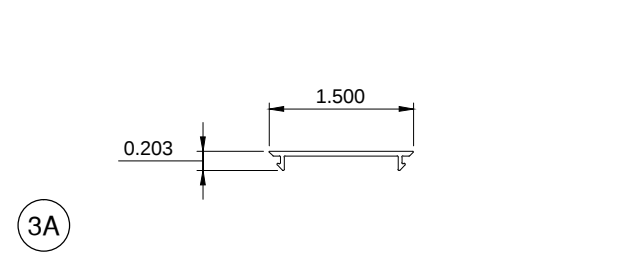
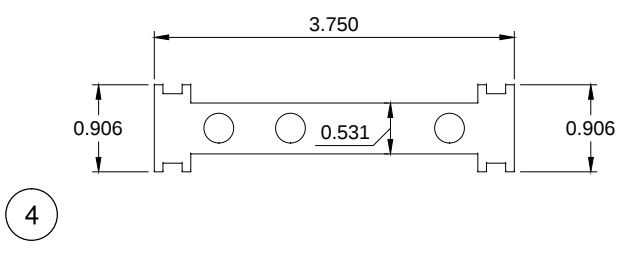
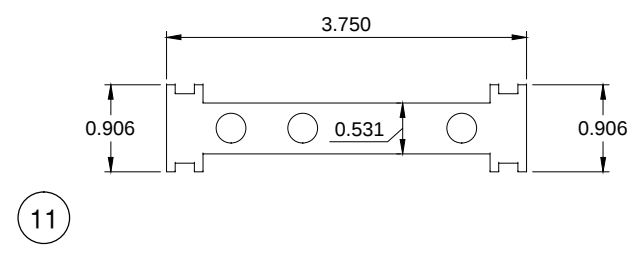
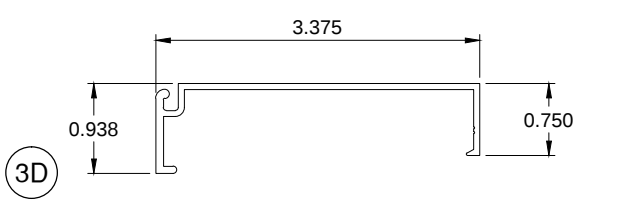
FLORIDA PRODUCT APPROVAL:

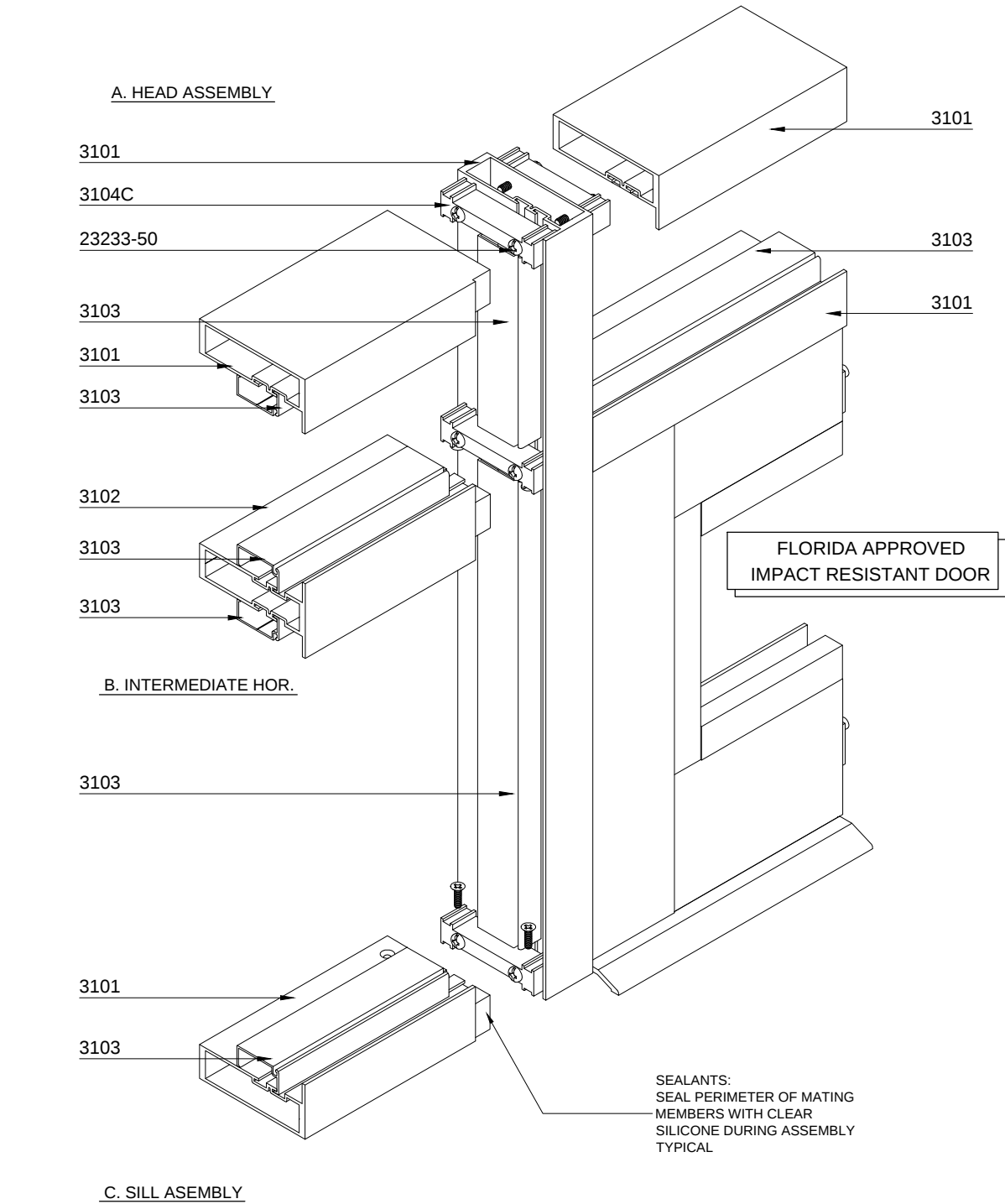
FL45460

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DRAWN: Erick	CHK: ESN
DRWG. No: 23FL-103	SCALE: NTS

SHEET NO.:

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 1	 4A
3101 FRAME HEAD/SILL/JAMB	ST310 STEEL MULLION REINF. (A572, GR. 50)
 2	 6
3102 INTERMEDIATE VERTICAL/HORIZONTAL	RG-1 EXTERIOR GLAZING GASKET
 3	 3C
3103 STANDARD GLASS STOP	3003 OPTIONAL GLASS STOP
 3B	 3A
3304 OPEN BACK GLASS STOP	3303 GLASS STOP COVER
 4	 11
3104CLIP / 3104C SHEAR BLOCK	3104 / 3104R ALUMINUM REINFORCEMENT
 3D	
3103Z GLASS STOP	



3100 SERIES FRAME CORNERS ISOMETRIC

GENERAL NOTE:

- GLASS NOT SHOWN FOR CLARITY.
- FRAME AND PANEL CORNER, INSTALLATION SCREWS AND ALL METAL PARTS CONNECTIONS TO TO BE SEALAD WITH CLEAR/COLORED SEALANT.

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PRODUCT:

**3100 IMPACT
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LMI (HVHZ)

Resistor
BLAST & STORM PROTECTION™

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Email: en3.engconsul@gmail.com

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SHEET NO.:

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BILL OF MATERIALS				
ITEM #	PART NO.	DESCRIPTION	MATERIAL	MANUFACTURER/REMARKS
1	3101	FRAME HEAD/JAMB/JAMB	ALUM. 6063-T6	TRULITE
2	3102	INTERMEDIATE VERTICAL/HORIZONTAL	ALUM. 6063-T6	TRULITE
3	3103	GLASS STOP	ALUM. 6063-T6	TRULITE
3A	3303	GLASS STOP COVER	ALUM. 6063-T6	TRULITE
3B	3304	OPEN BACK GLASS STOP	ALUM. 6063-T6	TRULITE
3C	3003	GLASS STOP	ALUM. 6063-T6	TRULITE
3D	3103Z	GLASS STOP	ALUM. 6063-T6	TRULITE
4	3104CLIP / 3104C	SHEAR BLOCK	ALUM. 6063-T6	TRULITE
4A	ST310	MULLION REINFORCING	STEEL A572 - GR. 50 MIN.	VARIES
5	H62F	SETTING BLOCK (INSUL, LAM. GLASS) DUROMETER 85 +/-5	EDPM	1-3/8" x 1/4" x 4" LONG
5A	H62D	SETTING BLOCK (9/16" LAM. GLASS) DUROMETER 85 +/-5	EDPM	1/2" x 1/4" x 4" LONG
6	RG-1	WEDGE IN GASKET DUROMETER 65 +/-5	EDPM	-
7	V2100 / VK1826	GLAZING FOAM TAPE – 1/4" x 3/8"	-	ST. GOBAIN / CAPITAL TAPE
8	DOWSIL 955/983	GLAZING SEALANT	SILICONE	DOW
9	23163	#12-24 x 3/4" FHPMS TYPE 23	ZINC COATED STEEL	-
10	23233	1/4-20 x 1-1/2" PHMS TYPE 23 (GR. 5)	ZINC COATED STEEL	-
11	3104R / 3104	ALUMINUM REINFORCEMENT	ALUM. 6063-T6	TRULITE
12	-	ALUMINUM GLASS SPACER	ALUMINUM	HELIMA HELVETION INT. / VARIES
13	-	KODISPACE 4SG WARM EDGE SPACER	THERMOPLASTIC	HB FULLER/KOMMERLING



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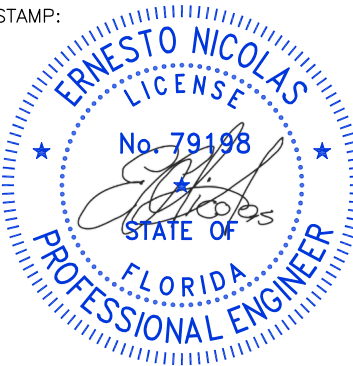
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