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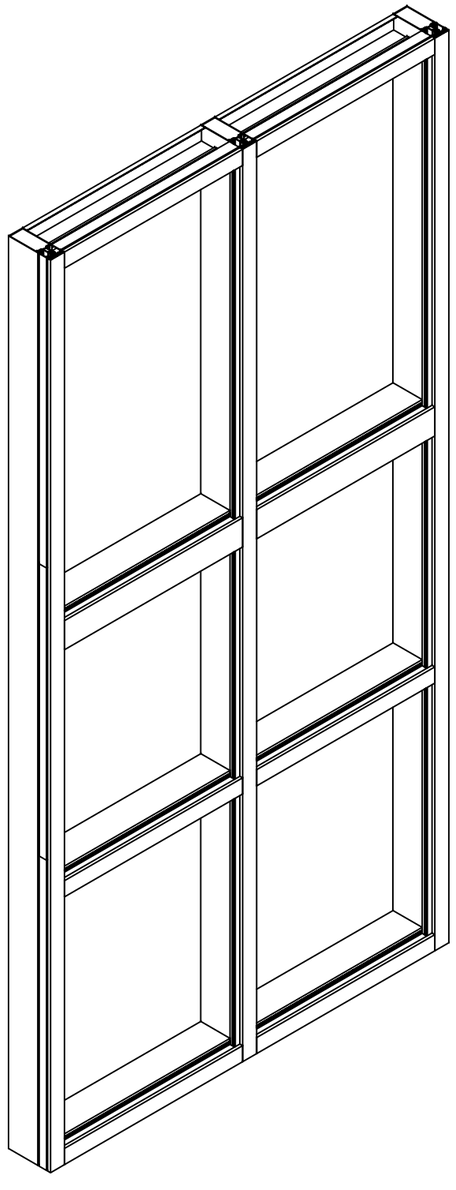
SERIES 6000 THERMAL MULTIPLANE CENTER-SET AND FRONT-SET OUTSIDE-GLAZED STOREFRONT (NON-IMPACT / NON-HVHZ)



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23	TOTAL

FRANK BENNARDO, PE
PE# 0046549 CA# 9885

FRANK L. BENNARDO LICENSE No.PE0046549 STATE OF FLORIDA PROFESSIONAL ENGINEER

SEPTEMBER 26, 2023

Digitally signed by Frank Bennardo
Date: 2023.09.28 16:46:59 -04'00'

NOTE REGARDING USE OF THIS DOCUMENT & USE OUTSIDE FLORIDA:

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. THIS PRODUCT EVALUATION IS VALID FOR USE IN **FLORIDA ONLY**. USE IN FLORIDA OR ANY OTHER STATE SHALL REQUIRE A REVIEW & CERTIFICATION BY A REGISTERED DESIGN PROFESSIONAL LICENSED IN THAT STATE, WHO SHALL BE RESPONSIBLE FOR THE CONTENT & PROPER ADAPTATION OF THIS GENERAL PERFORMANCE EVALUATION TO ANY SITE-SPECIFIC PROJECT. CONTACT THIS OFFICE FOR ASSISTANCE WITH YOUR PROJECT NEEDS.

GENERAL NOTES:

1. THE SYSTEM AND GLASS TYPES DESCRIBED HEREIN COMPLY AND HAVE BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 8TH EDITION (2023) PER
   a. ASTM E330, E331, E283
   b. AAMA 501
   c. ANSI Z97.1 (400 ft-lb. IMPACT)
   d. ALUMINUM DESIGN MANUAL 2015, ASCE 7-22
2. FOR USE OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
3. GLASS UNIT(S) SHALL ME THE REQUIREMENTS OF ASTM E-1300.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
5. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
6. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
7. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
8. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION J.3.7.2 BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
9. REFER TO FASTENER MANUFACTURER'S PUBLISHED DATA SHEETS AND RECOMMENDATIONS FOR FASTENER INSTALLATION INSTRUCTIONS.
10. ENGINEER SEAL AFFIXED HERETO VALIDATE STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
11. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
12. PRESSURE VALUES ON THIS APPROVAL ARE (ASD) ALLOWABLE DESIGN PRESSURES.
13. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
14. SAFEGUARDS MUST BE OBSERVED (NOT IN THIS CERTIFICATION)
15. IF SLOPED GLAZING IS NEEDED, IT SHALL BE ALLOWED UNDER SITE SPECIFIC ENGINEERING. DESIGN MUST BE CHECKED AND APPROVED BY A PROFESSIONAL ENGINEER AND THE MANUFACTURER(S).
16. UNITS SHALL BE LABELED IN ACCORDANCE WITH THE FLORIDA BUILDING COMMISSION AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATION.

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FOR SITE-SPECIFIC DEVIATIONS
& MORE INFORMATION ABOUT THIS DOCUMENT
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6000-MP THERMAL STOREFRONT - NON-IMPACT/NON-HVHZ
FLORIDA BUILDING CODE EIGHTH EDITION (2023)
FLORIDA STATEWIDE APPROVAL (FSA FL#17688.4)

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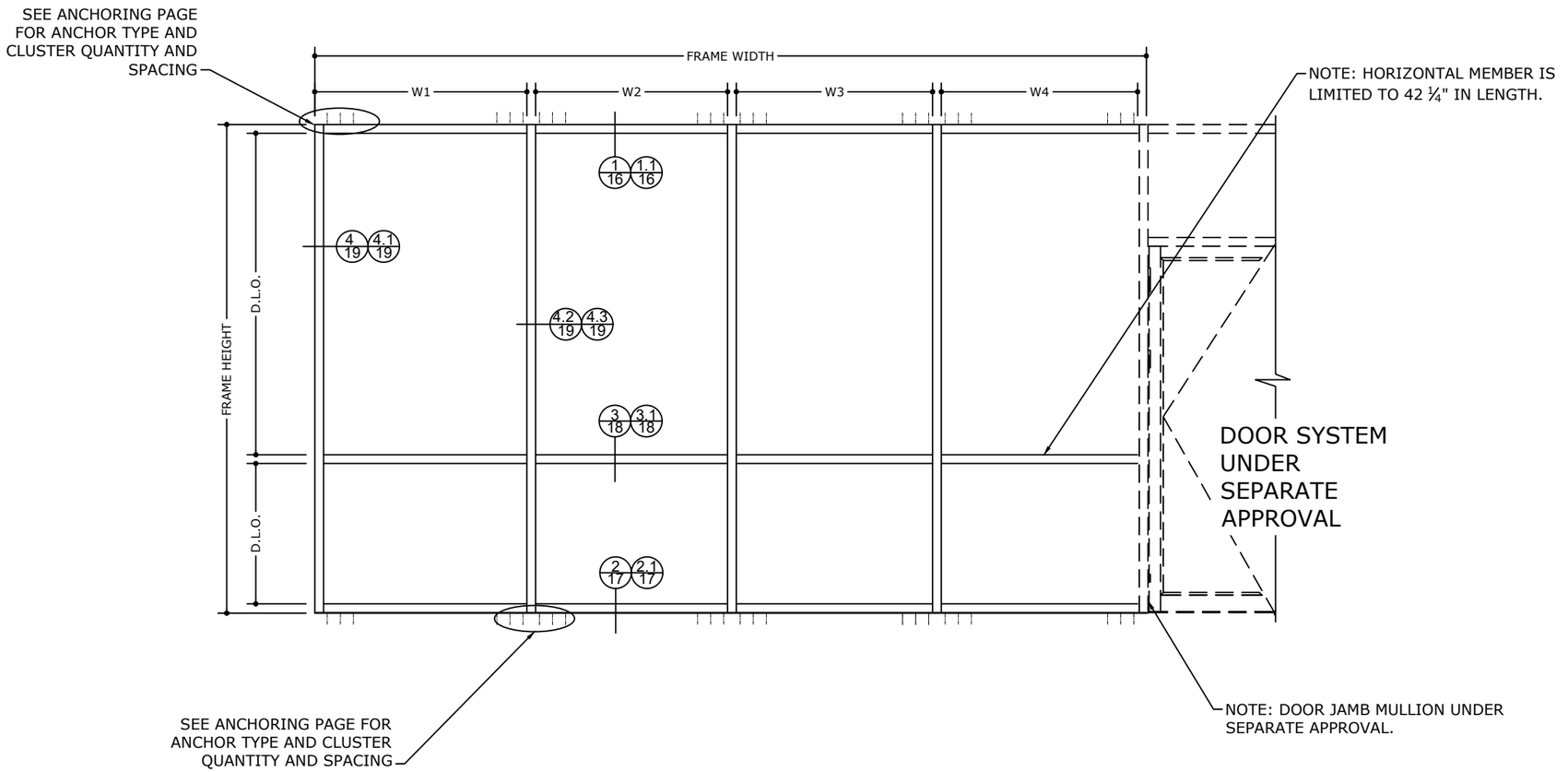
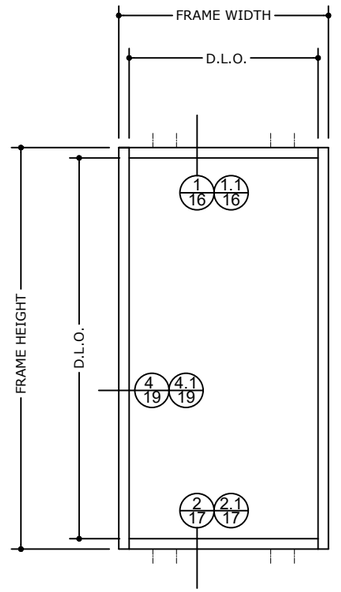
SERIES 6000 THERMAL MULTIPLANE CENTER-SET AND FRONT-SET STOREFRONT ELEVATION (N.T.S.)



TYPICAL STOREFRONT ELEVATIONS



TYPICAL SINGLE PANEL OPENING

FRAME SIZE FOR SINGLE OPENINGS SHALL BE GOVERNED BY THE MAXIMUM ALLOWABLE D.L.O. DIMENSIONS DISPLAYED ON THE GLASS CHARTS

INSTRUCTIONS TO DETERMINE DESIGN PRESSURE RATING

STEP (1): USE THE GLASS LOADING TABLES TO DETERMINE THE ALLOWABLE PRESSURE OF THE GLASS.

STEP (2): USE THE MULLION LOADING TABLE TO DETERMINE THE ALLOWABLE PRESSURES FOR THE MULLIONS
NOTE: TO DETERMINE THE LOADS OF THE MULLIONS, SEE DIAGRAM ON PAGE 5

STEP (3): THE MINIMUM VALUE BETWEEN STEP (1) AND STEP (2) WILL DETERMINE THE DESIGN LOAD PRESSURE FOR THE STOREFRONT SYSTEM.

WATER INFILTRATION NOTE:

WATER RESISTANCE PER ASTM E331 = 10 P.S.F

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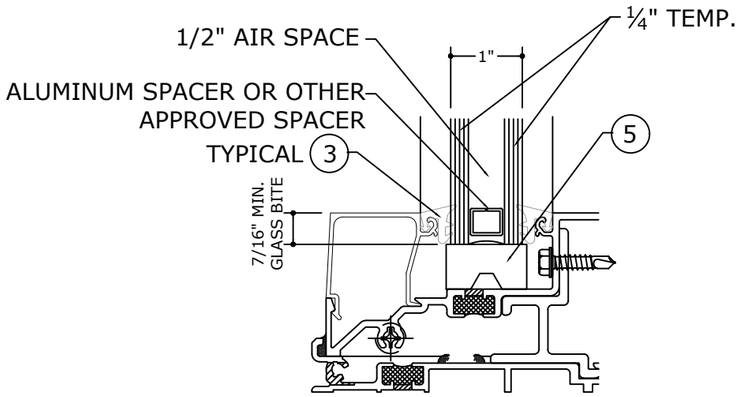
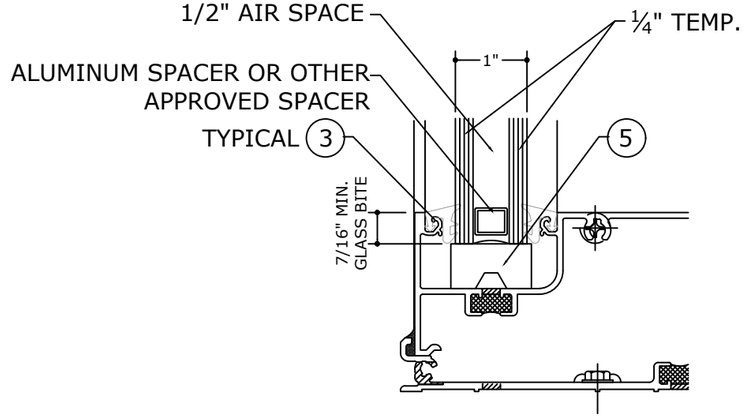
GLASS TYPE



CENTER SET GLASS PROFILE



FRONT SET GLASS PROFILE

GLAZING DETAIL

N.T.S.

NOTE: GLASS SIZE = DLO + 7/8"

GLAZING DETAIL

N.T.S.

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GLASS LOADING TABLES

FRONT AND CENTER SET		
MAX. D.L.O WIDTH (in)	MAX. D.L.O HEIGHT (in)	ALLOWABLE PRESSURE (P.S.F)
24	144	+ / - 65
30	96	+ / - 56
36	84	+ / - 46
42 1/4	72	+ / - 40
48	60	+ / - 35
54	54	+ / - 31

NOTE: D.L.O. WIDTH AND HEIGHT DIMENSIONS CAN BE REVERSED.

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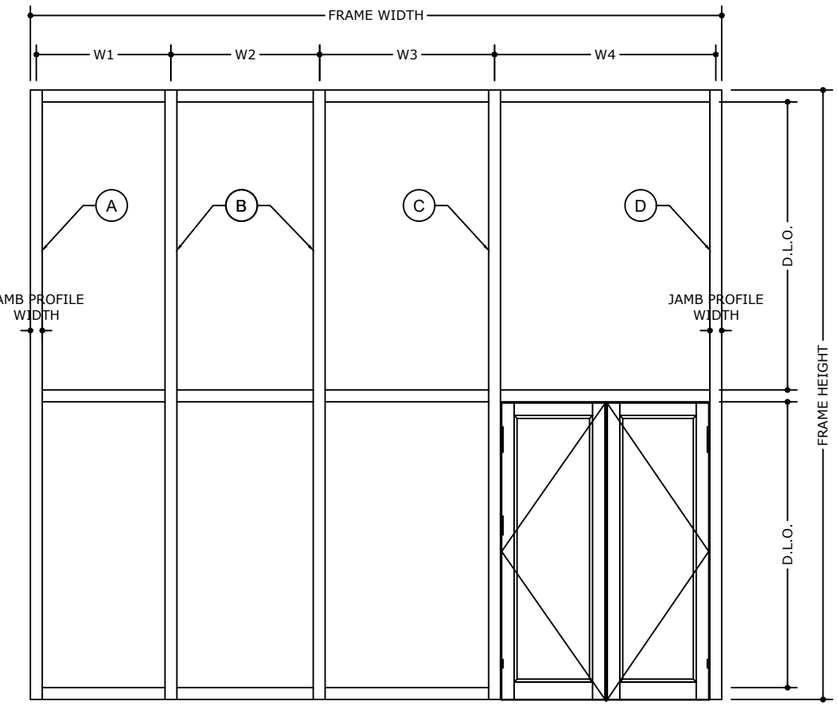
MULLION & JAMB LOAD DETERMINATION



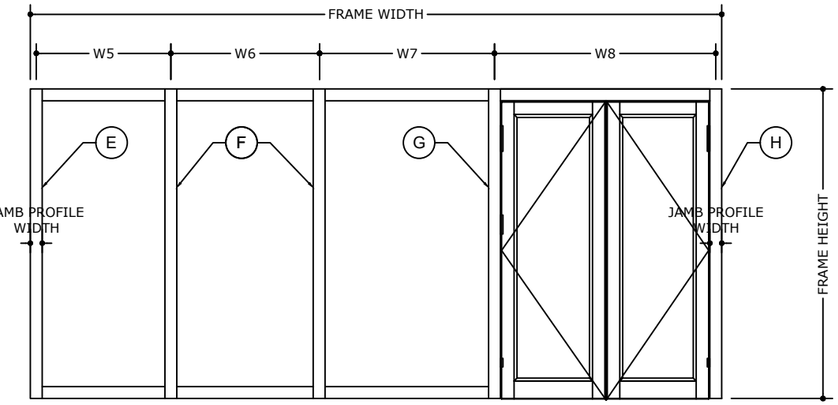
LOAD DETERMINATION

TRIBUTARY WIDTH A = $\frac{W1}{2}$ + 1/2" JAMB PROFILE WIDTH
(FOR STANDARD JAMB MULLION)

TRIBUTARY WIDTH B = LARGER OF $\frac{W1 + W2}{2}$ OR $\frac{W2 + W3}{2}$
(FOR STANDARD MULLION)

TRIBUTARY WIDTH C = $\frac{W3 + W4}{2}$
(FOR INTERMEDIATE DOOR MULLION)

TRIBUTARY WIDTH D = $\frac{W4}{2}$ + 1/2" JAMB PROFILE WIDTH
(FOR DOOR JAMB MULLION)



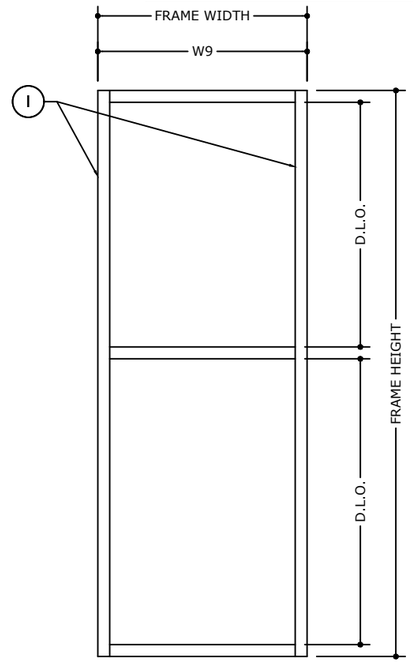
LOAD DETERMINATION

TRIBUTARY WIDTH E = $\frac{W5}{2}$ + 1/2" JAMB PROFILE WIDTH
(FOR STANDARD JAMB MULLION)

TRIBUTARY WIDTH F = LARGER OF $\frac{W5 + W6}{2}$ OR $\frac{W6 + W7}{2}$
(FOR STANDARD MULLION)

TRIBUTARY WIDTH G = $\frac{W7}{2} + \frac{W8}{4}$
(FOR INTERMEDIATE DOOR MULLION)

TRIBUTARY WIDTH H = $\frac{W8}{4}$ + 1/2" JAMB PROFILE WIDTH
(FOR DOOR JAMB MULLION)



LOAD DETERMINATION

TRIBUTARY WIDTH I = $\frac{W9}{2}$
(FOR STANDARD JAMB MULLION)

A E I	JAMB MULLION
B F	STANDARD MULLION
C G	DOOR JAMB INTERMEDIATE MULLION
D H	DOOR JAMB MULLION

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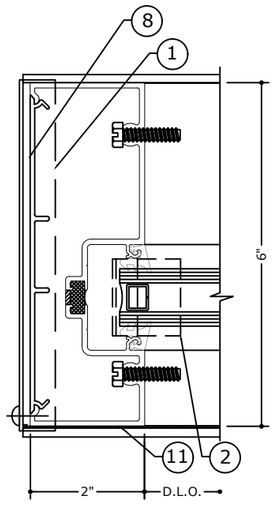
OUTSIDE GLAZE SINGLE SPAN MULLION



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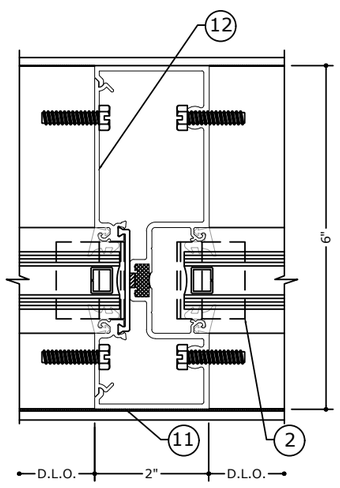

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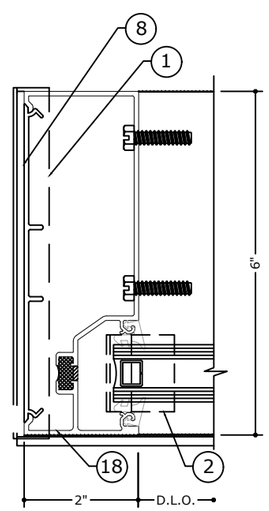
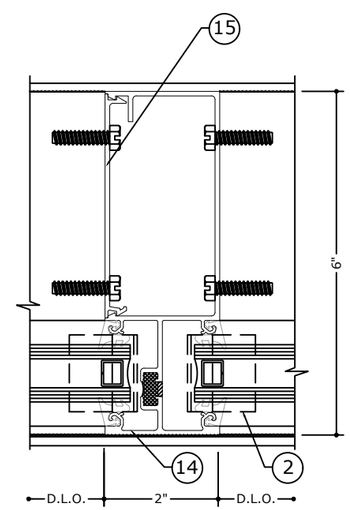


J2



M2

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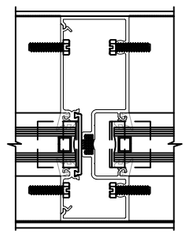
MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STANDARD MULLIONS

MULLION LOADING CHART		MULLION TYPE M1-M2	
FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	(+) P.S.F	(-) P.S.F
36	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	65	65
	60	65	65
	66	65	65
	72	65	65
	78	65	65
	80	65	65
42	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	65	65
	60	65	65
	66	65	65
	72	65	65
	78	65	65
	80	65	65
48	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	65	65
	60	65	65
	66	65	65
	72	65	65
	78	65	65
	80	65	65

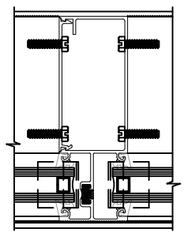
MULLION LOADING CHART		MULLION TYPE M1-M2	
FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	(+) P.S.F	(-) P.S.F
54	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	65	65
	60	65	65
	66	65	65
	72	65	65
	78	65	65
	80	65	65
60	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	65	65
	60	65	65
	66	65	65
	72	65	65
	78	65	65
	80	65	65
64	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	65	65
	60	65	65
	66	65	65
	72	65	65
	78	65	65
	80	65	65

MULLION LOADING CHART		MULLION TYPE M1-M2	
FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	(+) P.S.F	(-) P.S.F
72	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	65	65
	60	65	65
	66	65	65
	72	65	65
78	24	65	65
	30	65	65
	36	65	65
	42	65	65
	48	65	65
	54	61	61
	60	58	58
	66	57	57
84	24	65	65
	30	65	65
	36	65	65
	42	64	64
	48	58	58
	54	55	55
	60	52	52
90	24	65	65
	30	65	65
	36	65	65
	42	58	58
	48	53	53
	54	49	49
96	24	65	65
	30	65	65
	36	60	60
	42	53	53
	48	49	49
	54	45	45

MULLION LOADING CHART		MULLION TYPE M1-M2	
FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	(+) P.S.F	(-) P.S.F
102	24	65	65
	30	65	65
	36	56	56
	42	49	49
	48	45	45
108	24	65	65
	30	60	60
	36	52	52
	42	46	46
	48	42	42
114	24	65	65
	30	57	57
	36	49	49
	42	43	43
118	24	65	65
	30	54	54
	36	47	47
	44 1/4	40	40
120	24	65	65
	30	54	54
	36	47	47
	42	41	41
126	24	62	62
	30	50	50
	36	42	42
132	24	56	56
	30	45	45
	36	38	38
138	24	51	51
	30	41	41
	36	35	35
144	24	47	47
	30	38	38
	36	32	32



M1
DETAIL 4.2



M2
DETAIL 4.3

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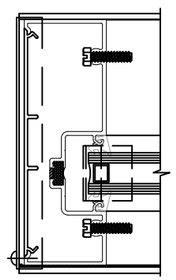
MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STANDARD JAMBS

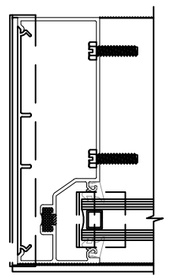
JAMB LOADING CHART		JAMB TYPE J1 J2
FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	(+ / -) P.S.F
36	24	65
	30	65
	36	65
	42	65
	48	65
	54	65
	60	65
	66	65
	72	65
	78	65
	80	65
42	24	65
	30	65
	36	65
	42	65
	48	65
	54	65
	60	65
	66	65
	72	65
	78	65
	80	65
48	24	65
	30	65
	36	65
	42	65
	48	65
	54	65
	60	65
	66	65
	72	65

JAMB LOADING CHART		JAMB TYPE J1 J2
FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	(+ / -) P.S.F
54	24	65
	30	65
	36	65
	42	65
	48	65
	54	65
	60	65
	66	65
60	24	65
	30	65
	36	65
	42	64
	48	61
	54	59
	60	58
64	24	65
	30	65
	36	63
	42	58
	48	54
	54	52
72	24	65
	30	61
	36	54
	42	49
	48	45
78	24	65
	30	55
	36	48
	42	44

JAMB LOADING CHART		JAMB TYPE J1 J2
FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	(+ / -) P.S.F
84	24	61
	30	50
	36	44
	42	39
90	24	56
	30	46
	36	40
99	24	40
	30	41
	36	36
102	24	48
	30	40
108	24	45
	30	37
114	24	43
	30	35
118	24	41
	30	33
120	24	40
126	24	37
132	24	33
138	24	30
144	24	27



J1
DETAIL 4



J2
DETAIL 4.1

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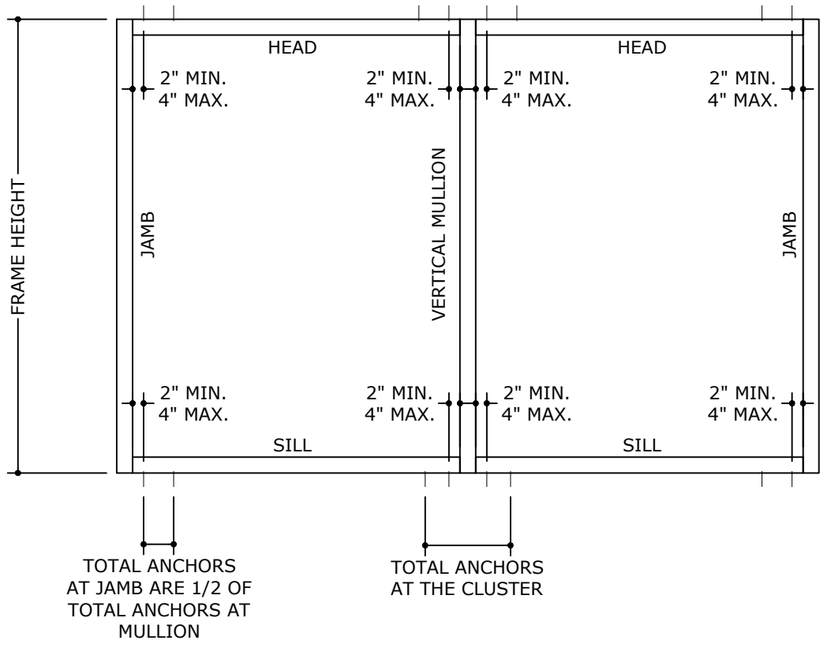
FASTENER SCHEDULE



FASTENER SCHEDULE

ANCHOR TYPE	ANCHOR DIAMETER	TYPE	MANUFACTURER	SUBSTRATE	MIN EMBEDMENT (IN)	MIN EDGE DISTANCE (IN)	SPACING (IN)
A	1/4"	ULTRACON ANCHOR	DEWALT	POURED CONCRETE 3000 PSI MIN	1-3/4	2-1/2	3" MIN. 4" MAX.
B	1/4"-14	DRIL-FLEX HEX WASHER HEAD SELF DRILLING SCREW	DEWALT	16 GA MIN. STUD ASTM A-653 GRADE 33 STEEL	FULL	1-1/2	3" MIN. 4" MAX.
				1/8" STEEL-A36			
				1/8" ALUMINUM-6063-T6			
C	1/4"	ULTRACON ANCHOR OR LAG SCREW	DEWALT	2X WOOD BUCK G=0.55	1-1/2	1-1/2	3" MIN. 4" MAX.

NOTE: REFER TO PAGE 5 FOR TRIBUTARY WIDTH CALCULATIONS FOR USE WITH ANCHOR TABLES.

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MAXIMUM ALLOWABLE STRESS DESIGN PRESSURE RATING FOR STANDARD MULLIONS WITH HEAD & SILL CONNECTIONS-ANCHOR TYPE A

FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE A		
		2	4	6
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
36	24	65	65	65
	36	65	65	65
	48	65	65	65
	60	60	65	65
	72	50	65	65
	80	45	65	65
48	24	65	65	65
	36	65	65	65
	48	56	65	65
	60	45	65	65
	72	37	65	65
	80	33	65	65
60	24	65	65	65
	36	60	65	65
	48	45	65	65
	60	36	65	65
	72	30	60	65
	80	27	54	65
72	24	65	65	65
	36	50	65	65
	48	37	65	65
	60	30	60	65
	72	25	50	65
	80	22	45	65

FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE A				
		2	4	6	8	10
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
84	24	64	65	65	65	65
	36	42	65	65	65	65
	48	32	64	65	65	65
	60	25	51	65	65	65
	72	21	42	64	65	65
	80	19	38	57	65	65
96	24	56	65	65	65	65
	36	37	65	65	65	65
	48	28	56	65	65	65
	60	22	45	65	65	65
	72	18	37	56	65	65
	80	16	33	50	65	65
108	24	50	65	65	65	65
	36	33	65	65	65	65
	48	25	50	65	65	65
	60	20	40	60	65	65
	72	16	33	50	65	65
	80	15	30	45	60	65
120	24	45	65	65	65	65
	36	30	60	65	65	65
	48	22	45	65	65	65
	60	18	36	54	65	65
	72	15	30	45	60	65
	80	13	27	40	54	65

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FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE A					
		2	4	6	8	10	12
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
132	24	40	65	65	65	65	65
	36	27	54	65	65	65	65
	48	20	40	61	65	65	65
	60	16	32	49	65	65	65
	72	13	27	40	54	65	65
	80	12	24	36	49	61	65
144	24	37	65	65	65	65	65
	36	25	50	65	65	65	65
	48	18	37	56	65	65	65
	60	15	30	45	60	65	65
	72	12	25	37	50	62	65
	80	11	22	33	45	56	65

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MAXIMUM ALLOWABLE STRESS DESIGN PRESSURE RATING FOR STANDARD MULLIONS WITH HEAD & SILL CONNECTIONS-ANCHOR TYPE B

FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE B	
		2	4
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
36	24	65	65
	36	65	65
	48	65	65
	60	65	65
	72	65	65
	80	65	65
48	24	65	65
	36	65	65
	48	65	65
	60	65	65
	72	65	65
	80	65	65
60	24	65	65
	36	65	65
	48	65	65
	60	65	65
	72	65	65
	80	60	65
72	24	65	65
	36	65	65
	48	65	65
	60	65	65
	72	55	65
	80	50	65

FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE B		
		2	4	6
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
84	24	65	65	65
	36	65	65	65
	48	65	65	65
	60	57	65	65
	72	47	65	65
	80	42	65	65
96	24	65	65	65
	36	65	65	65
	48	62	65	65
	60	50	65	65
	72	41	65	65
	80	37	65	65
108	24	65	65	65
	36	65	65	65
	48	55	65	65
	60	44	65	65
	72	37	65	65
	80	33	65	65
120	24	65	65	65
	36	65	65	65
	48	50	65	65
	60	40	65	65
	72	33	65	65
	80	30	60	65

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FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE B		
		2	4	6
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
132	24	65	65	65
	36	60	65	65
	48	45	65	65
	60	36	65	65
	72	30	60	65
	80	27	54	65
144	24	65	65	65
	36	55	65	65
	48	41	65	65
	60	33	65	65
	72	27	55	65
	80	25	50	65

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MAXIMUM ALLOWABLE STRESS DESIGN PRESSURE RATING FOR STANDARD MULLIONS WITH HEAD & SILL CONNECTIONS-ANCHOR TYPE C

FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE C			
		2	4	6	8
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
36	24	65	65	65	65
	36	65	65	65	65
	48	56	65	65	65
	60	45	65	65	65
	72	37	65	65	65
	80	34	65	65	65
48	24	65	65	65	65
	36	56	65	65	65
	48	42	65	65	65
	60	34	65	65	65
	72	28	56	65	65
	80	25	51	65	65
60	24	65	65	65	65
	36	45	65	65	65
	48	34	65	65	65
	60	27	54	65	65
	72	22	45	65	65
	80	20	40	61	65
72	24	56	65	65	65
	36	37	65	65	65
	48	28	56	65	65
	60	22	45	65	65
	72	18	37	56	65
	80	17	34	51	65

		TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE C						
		2	4	6	8	10	12	16
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
84	24	48	65	65	65	65	65	65
	36	32	64	65	65	65	65	65
	48	24	48	65	65	65	65	65
	60	19	38	58	65	65	65	65
	72	16	32	48	64	65	65	65
	80	14	29	43	58	65	65	65
96	24	42	65	65	65	65	65	65
	36	28	56	65	65	65	65	65
	48	21	42	63	65	65	65	65
	60	17	34	51	65	65	65	65
	72	14	28	42	56	65	65	65
	80	12	25	38	51	63	65	65
108	24	37	65	65	65	65	65	65
	36	25	50	65	65	65	65	65
	48	18	37	56	65	65	65	65
	60	15	30	45	60	65	65	65
	72	12	25	37	50	62	65	65
	80	11	22	34	45	56	65	65
120	24	34	65	65	65	65	65	65
	36	22	45	65	65	65	65	65
	48	17	34	51	65	65	65	65
	60	13	27	40	54	65	65	65
	72	11	22	34	45	56	65	65
	80	10	20	30	40	51	61	65

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FRAME HEIGHT (in)	TRIBUTARY WIDTH (in)	TOTAL NUMBER OF ANCHORS AT THE CLUSTER-ANCHOR TYPE C						
		2	4	6	8	10	12	16
		MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)	MAX PRESSURE (PSF)
132	24	30	61	65	65	65	65	65
	36	20	41	61	65	65	65	65
	48	15	30	46	61	65	65	65
	60	12	24	37	49	61	65	65
	72	10	20	30	41	51	61	65
	80	9	18	27	37	46	55	65
144	24	28	56	65	65	65	65	65
	36	18	37	56	65	65	65	65
	48	14	28	42	56	65	65	65
	60	11	22	34	45	56	65	65
	72	9	18	28	37	47	56	65
	80	8	17	25	34	42	51	65

FRANK BENNARDO, PE
PE# 0046549 CA# 9885

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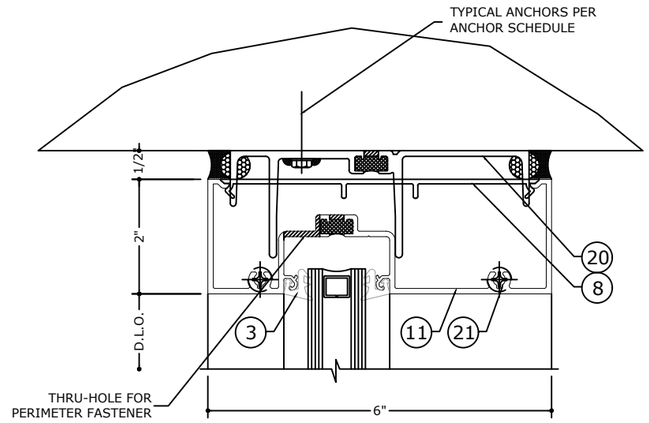
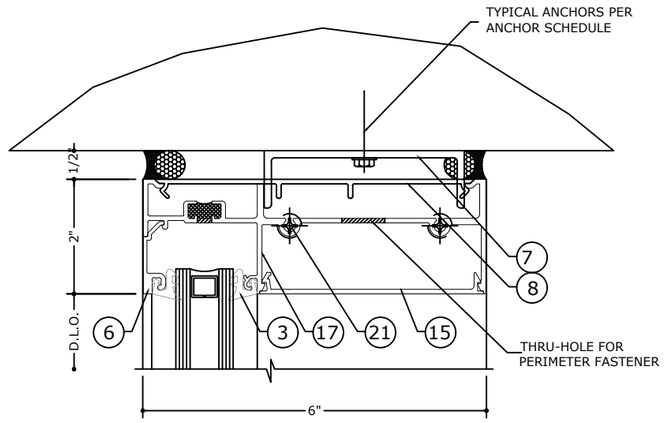
HEAD CONNECTION DETAILS



1 HEAD DETAIL



1.1 HEAD DETAIL

NOTE: REFER TO SYSTEM INSTALLATION MANUAL
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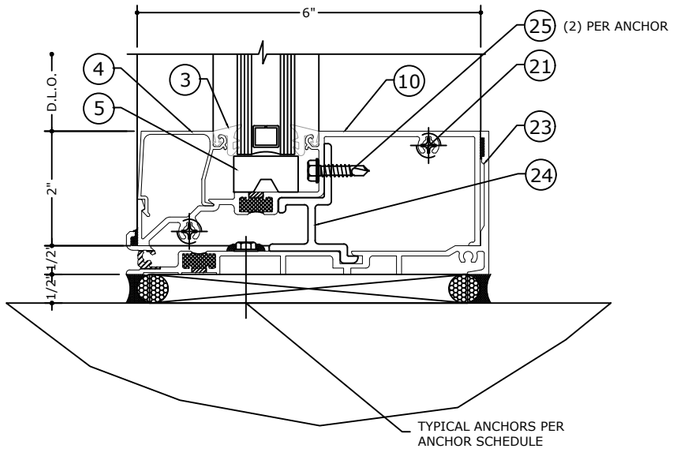
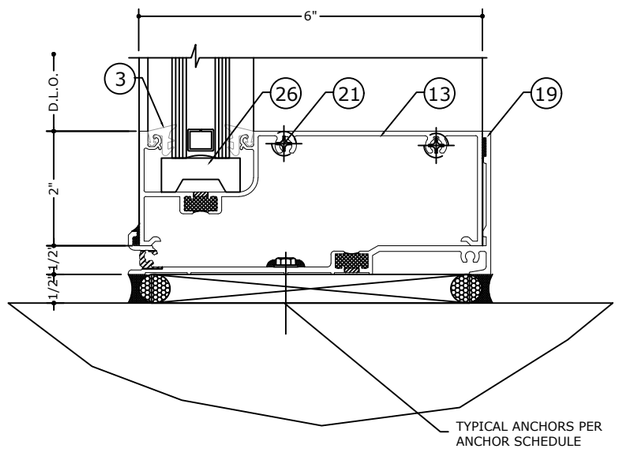
SILL DETAILS



2 SILL DETAIL



2.1 SILL DETAIL

NOTE: REFER TO SYSTEM INSTALLATION MANUAL
FOR FABRICATION AND ASSEMBLY INSTRUCTIONS.

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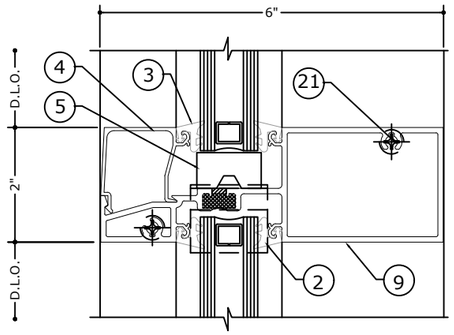
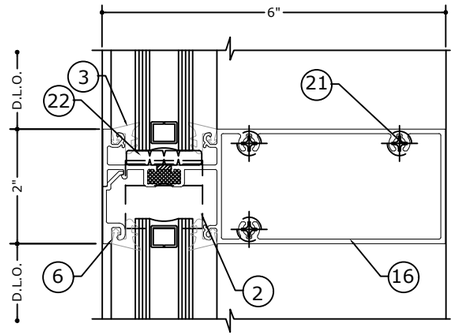
HORIZONTAL CONNECTION DETAILS



3 HORIZONTAL DETAIL



3.1 HORIZONTAL DETAIL

NOTE: REFER TO SYSTEM INSTALLATION MANUAL
FOR FABRICATION AND ASSEMBLY INSTRUCTIONS.

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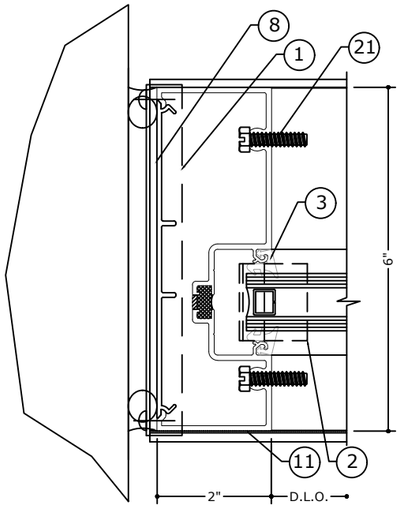
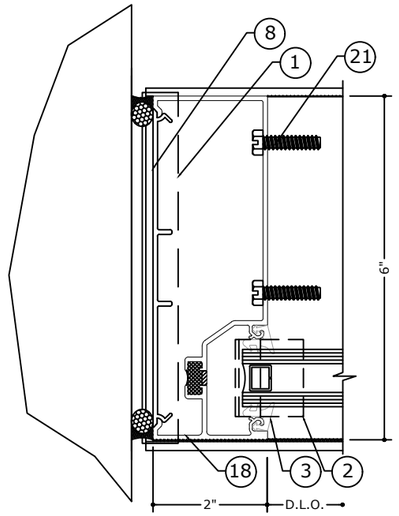
JAMB & STANDARD MULLIONS



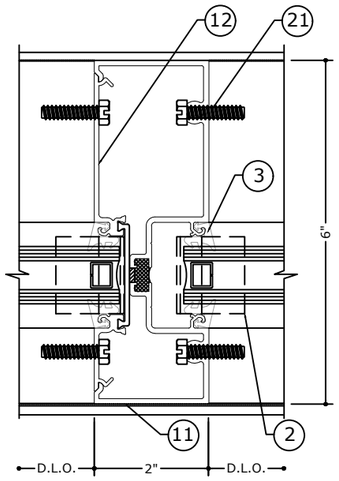
4 JAMB DETAIL

J1



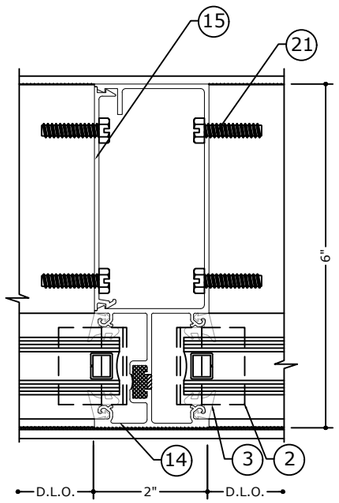
4.1 JAMB DETAIL

J2



4.2 VERTICAL DETAIL

M1



4.3 VERTICAL DETAIL

M2

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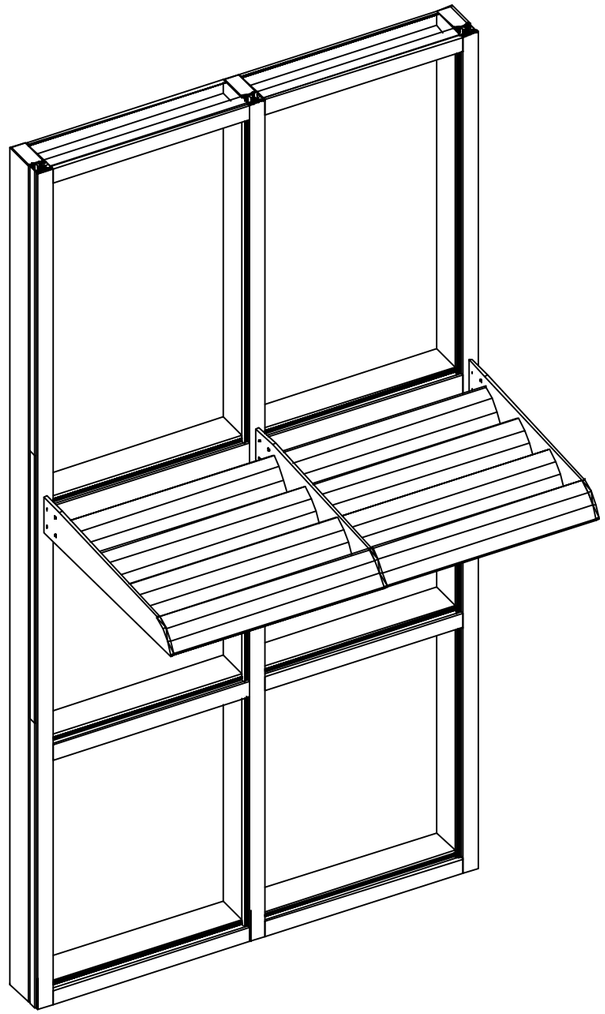
SUNSHADE OPTION



NOTE: OPTIONAL SUNSHADES IN NON-HVHZ CONDITIONS CAN BE USED BASED ON SITE SPECIFIC ENGINEERING.

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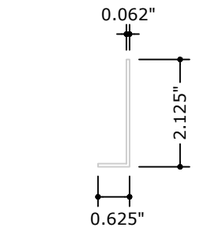
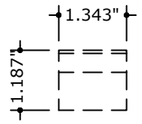
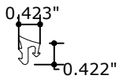
SERIES 6000 THERMAL MULTIPLANE SYSTEM COMPONENTS



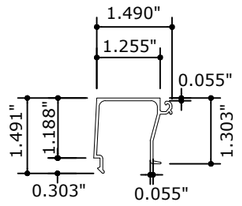
1 AN-50-01 END DAM



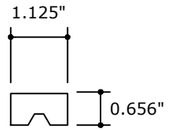
2 FG-1000-FP-2 WATER DIVERTER



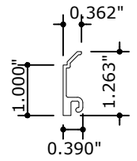
3 FG-1133 GLAZING GASKET



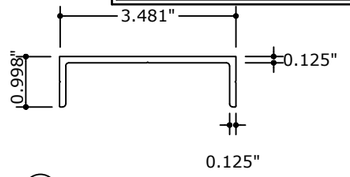
4 FG-3144 GLAZING BEAD



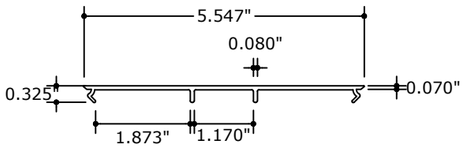
5 FG-3220 SETTING BLOCK



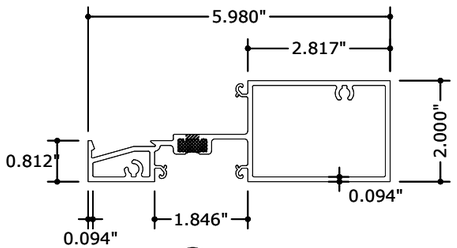
6 FG-3295 GLAZING BEAD



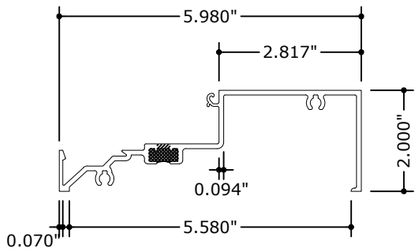
7 FG-6100-01 CHANNEL ANCHOR



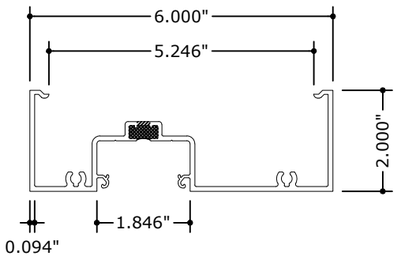
8 FG-6188 VINYL FILLER



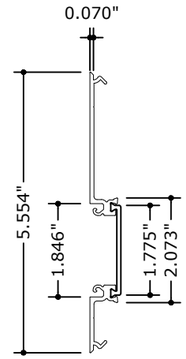
9 FG-6197 FRAME (HORIZ)



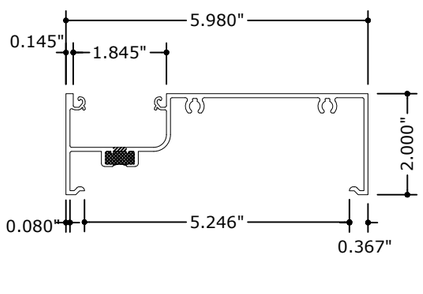
10 FG-6198 FRAME (SILL)



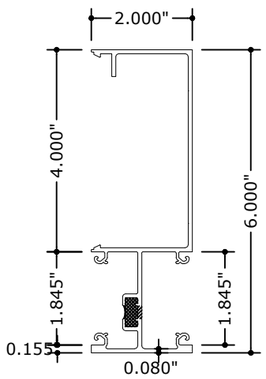
11 FG-6231 FRAME (HEAD, JAMB, MULL)



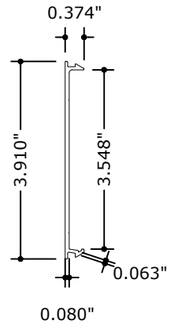
12 FG-6344 FILLER



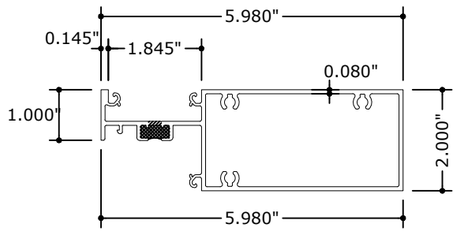
13 FG-6281 SILL



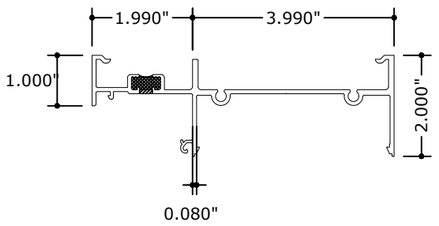
14 FG-6283 FRAME (MULLION)



15 FG-6284 FILLER



16 FG-6294 FRAME (HORIZ)



17 FG-6296 FRAME (HEAD)

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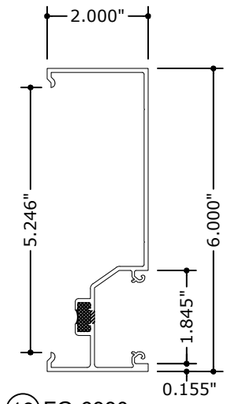
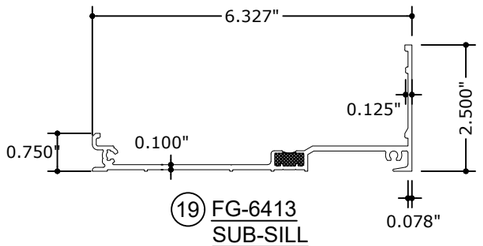
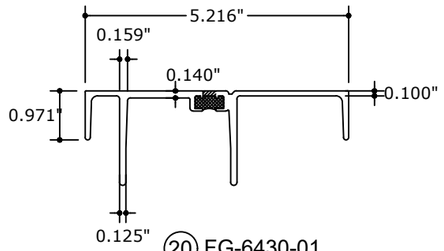
SERIES 6000 THERMAL MULTIPLANE SYSTEM COMPONENTS



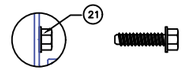
18 FG-6380
FRAME (JAMB)



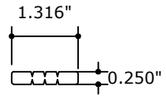
19 FG-6413
SUB-SILL



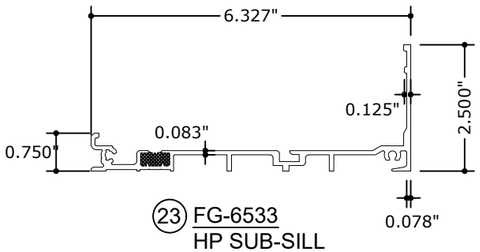
20 FG-6430-01
ANCHOR



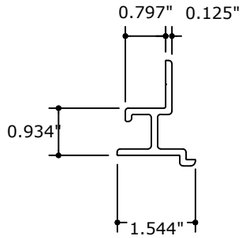
21 FS-8
JOINT FASTENER



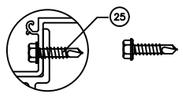
22 HP-17
SETTING BLOCK



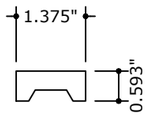
23 FG-6533
HP SUB-SILL



24 FG-6535-01
HP SILL ANCHOR



25 FS-327



26 FG-3278
SETTING BLOCK

FRANK BENNARDO, PE
PE# 0046549 CA# 9885

FRANK L. BENNARDO LICENSE No 0046549 STATE OF FLORIDA PROFESSIONAL ENGINEER
SIGNED: 09/26/2023

SEPTEMBER 26, 2023

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FLORIDA STATEWIDE APPROVAL (FSA FL#17688.4)

REMARKS	DRWN	CHKD	DATE
INT. ISSUE (19-20209c)	JEM	AJP	10/22/20
FBC 2023 UPDATE	-	RS	08/29/23
-	-	-	-
-	-	-	-
-	-	-	-

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BILL OF MATERIALS

ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	SIZE
1	AN–50–01	END DAM	6063–T5	0.625" x 3.093" x 0.062" x 6.125" LONG
2	FG–1000–FP–2	WATER DIVERTER	PVC	1.187" x 0.750" x 1.343"
3	FG–1133	GASKET	EPDM	0.501" x 0.548"
4	FG–3144	GLAZING BEAD	6063–T5	1.491" x 1.552" x 0.055"
5	FG–3220	SETTING BLOCK	EPDM	0.656" x 1.125" x 4.000"
6	FG–3295	GLAZING BEAD	6063–T5	1.263" x 0.362" x 0.062"
7	FG–6100–01	CHANNEL ANCHOR	6063–T6	1.000" x 3.493" x 0.125" x 4.000" LONG
8	FG–6188	VINYL FILLER	VINYL	5.559" x 0.330" x 0.080"
9	FG–6197	FRAME (HORIZ)	6063–T6	5.980" x 2.000" x 0.094"
10	FG–6198	FRAME (SILL)	6063–T6	5.980" x 2.000" x 0.094"
11	FG–6231	FRAME (HEAD, JAMB, MULLION)	6063–T6	6.000" x 2.000" x 0.094"
12	FG–6344	FILLER	6063–T6 ALUMINUM & POLYAMIDE	5.554" x 0.549" x 0.080"
13	FG–6281	FRAME (SILL)	6063–T6	5.980" x 2.000" x 0.080"
14	FG–6283	FRAME (MULLION)	6063–T6	6.000" x 2.000" x 0.080"
15	FG–6284	FILLER	6063–T5	3.910" x 0.375" x 0.080"
16	FG–6294	FRAME (HORIZ)	6063–T6	5.980" x 2.000" x 0.080"
17	FG–6296	FRAME (HEAD)	6063–T6	5.980" x 2.000" x 0.080"
18	FG–6380	FRAME (JAMB)	6063–T6	6.000" x 2.000" x 0.080"
19	FG–6413	SUB–SILL	6063–T6	6.327" x 2.500" x 0.100"
20	FG–6430–01	ANCHOR	6063–T6	5.216" x 1.869" x 0.100" x 4.000" LONG
21	FS–8	#14 X 1" HHSTS	STEEL	–
22	HP–17	SETTING BLOCK	EPDM	0.250" x 1.316" x 4" LONG
23	FG–6533	HIGH PERFORMANCE SUB–SILL	6063–T6	6.327" x 2.500" x 0.100"
24	FG–6535–01	SILL ANCHOR	6063–T6	2.087" x 1.549" x 0.100" x 4.000" LONG
25	FS–327	#12–14 X 7/8" HEX WASHER HEAD	STEEL	–
26	FG–3278	SETTING BLOCK	EPDM	1.375" x 0.593" x 4.000"

FRANK BENNARDO, PE
PE# 0046549 CA# 9885

FRANK L. BENNARDO LICENSE No 0046549 STATE OF FLORIDA PROFESSIONAL ENGINEER SIGNED: 09/26/2023

SEPTEMBER 26, 2023

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