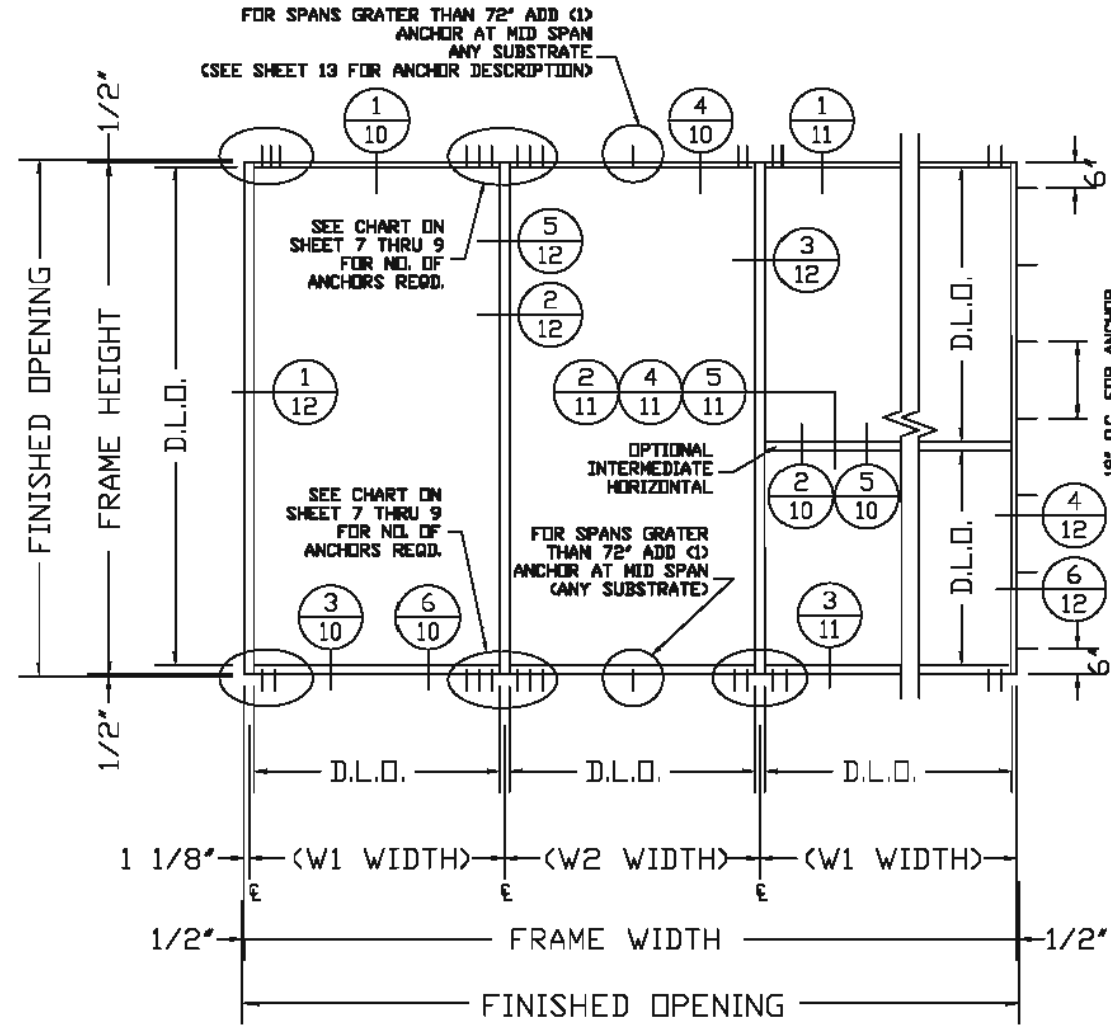
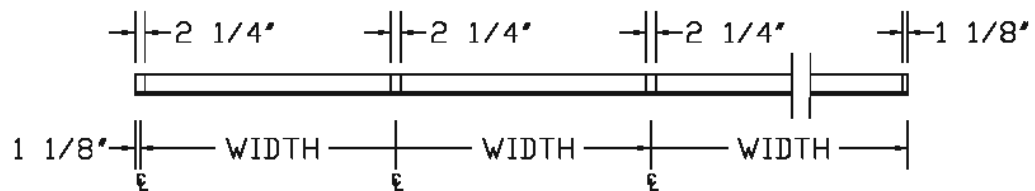


PRO-TECH 4SG STRUCTURAL GLAZED SYSTEM

NON IMPACT SYSTEM



TYPICAL ELEVATION



PLAN VIEW

MONOLITHIC GLASS &
INSULATED GLASS
NON-IMPACT

DESIGN NOTES:

POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7-16 AND CHAPTER 1609 OF THE FLORIDA BUILDING CODE SEVENTH EDITION (2020) SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

GENERAL NOTES:

- THE SYSTEM & GLASS TYPES DESCRIBED HEREIN HAVE BEEN DESIGNED AND TESTED IN ACCORDANCE WITH FLORIDA BUILDING CODE SEVENTH EDITION (2020) PER THE FOLLOWING STANDARDS:
A. ASTM E330-02, E331-00, AND E283-04
B. AAMA 501
- DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
- 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.
- CURTAINWALL FRAMING: PRO-TECH 4SG 2 1/4" X 4" STRUCTURAL GLAZED SYSTEM WITH 1/4" TEMPERED MONOLITHIC AND 1" TEMPERED INSULATED GLAZING AS MANUFACTURED BY CRAWFORD TRACY.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR $C_d=1.6$ HAS BEEN USED FOR WOOD ANCHOR DESIGN.
- STRUCTURAL SILICONE TO BE DOW-CORNING 983. NOTE: USE DOW-CORNING 790 FOR BUTT JOINTS. BUTT-JOINTS AND WEATHERSEALS TO BE DOW-CORNING 790 UNLESS SPECIFIED OTHERWISE BY DOW-CORNING.
- 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.
- 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.
- ALL CONCRETE ANCHORS SPECIFIED HEREIN REFER TO DEWALT ULTRACONS CARBON STEEL, FASTENED TO 3" MIN. THICK 3,000 PSI MIN. NON-CRACKED CONCRETE (BY OTHERS). INSTALL ALL CONCRETE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL FASTENERS TO BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION 1.3.7.2 BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
- ALL EXTRUSIONS SHALL BE 6005-T5 MIN ALLOY AND TEMPER U.N.O., AS MANUFACTURED BY CRAWFORD TRACY CORPORATION.
- THE CONTRACTOR IS RESPONSIBLE TO ISOLATE OR PROTECT ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- ENGINEER SEAL AFFIXED HERE TO VALIDATES 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.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
- THE SYSTEM DETAILED HEREIN HAS BEEN TESTED PER ASTM TEST PROTOCOLS AS REFERENCED IN TEST REPORT #ATLSF 0819.01-11 BY AMERICAN TEST LAB OF SOUTH FLORIDA (ATL). PRODUCT SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER SYSTEM AS SPECIFIED IN THE FLORIDA BUILDING CODE AND AT A MINIMUM CONTAINING THE FOLLOWING:
CRAWFORD TRACY CORPORATION
DEERFIELD BEACH, FLORIDA
ASTM E331-00, E330-02
APPROVED BY FLORIDA BUILDING COMMISSION
FLORIDA PRODUCT APPROVAL NUMBER

FRANK BENNARDO, P.E.
PE# 0046549 CA# 9885



FL#15273.1

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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
FLORIDA STATE PRODUCT APPROVAL

REMARKS	DATE	CHKD	DATE	DATE
2020 FBC UPDATE	09/07/20	JPC	AJP	

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VISIT [ECALC.IO/2029758](https://ecalculator.com/2029758) SCAN HERE:

FOR HELPFUL RESOURCES, SITE SPECIFIC JOB ORDERING & MORE INFORMATION ABOUT THIS PRODUCT & RELATED SERVICES

20-29758

SCALE: NTS UNLESS NOTED

1

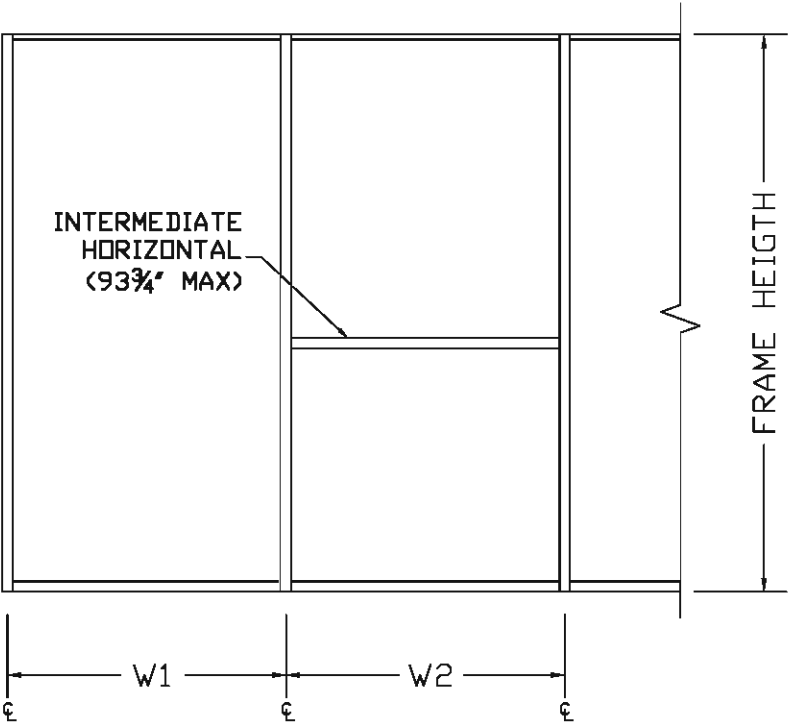
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C:\Users\joem\Engineering\Express\Production - Documents\Projects\20-29758 Pro Tech 4SG Non Impact\01Drawings\2020 FBC Update\20-29758c Pro-Tech 4SG Structurally Glazed System.dwg 08/26/2020 - 10:17am joem

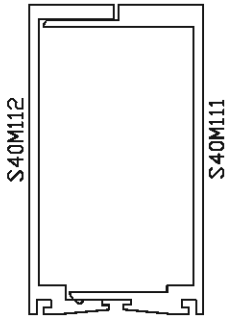
MULLION LOAD CAPACITY CHART

MULLION LOADING CAPACITY (PSF) - UNREINFORCED								
NOMINAL DIMS			NOMINAL DIMS			NOMINAL DIMS		
WIDTH	HEIGHT	P.S.F	WIDTH	HEIGHT	P.S.F	WIDTH	D.L.O. HEIGHT	P.S.F
30"	60"	172	30"	96"	93	30"	132"	45
36"		153	36"		78	36"		37
42"		140	42"		66	42"		32
48"		123	48"		58	48"		28
54"		109	54"		52	54"		25
60"		98	60"		46	60"		22
66"		83	66"		42	66"		20
72"		63	72"		39	72"		18
78"		49	78"		34	78"		17
84"		39	84"		26	84"		16
90"	72"	31	90"	108"	21	90"	144"	-
96"		26	96"		17	96"		-
30"		163	30"		74	30"		34
36"		138	36"		61	36"		28
42"		119	42"		52	42"		24
48"		104	48"		46	48"		21
54"		92	54"		41	54"		19
60"		83	60"		37	60"		17
66"		72	66"		33	66"		-
72"		54	72"		30	72"		-
78"	84"	42	78"	120"	28	78"	156"	-
84"		33	84"		24	84"		-
90"		26	90"		19	90"		-
96"		22	96"		-	96"		-
30"		122	30"		60	30"		27
36"		102	36"		50	36"		22
42"		87	42"		42	42"		19
48"		76	48"		37	48"		17
54"		68	54"		33	54"		-
60"		61	60"		30	60"		-
66"	96"	55	66"	132"	27	66"	168"	-
72"		48	72"		25	72"		-
78"		37	78"		23	78"		-
84"		29	84"		21	84"		-
90"		23	90"		18	90"		-
96"		19	96"		-	96"		-

PRESSURES ABOVE 80 PSF ARE LIMITED TO A MAX POSITIVE PRESSURE OF 80 PSF



$$\begin{aligned} \text{WIDTH (W) AT FRAME JAMB} &= \frac{W1}{2} \\ \text{WIDTH (W) AT FRAME MULLION} &= \frac{W1 + W2}{2} \end{aligned}$$



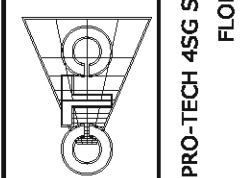
UNREINFORCED

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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
FLORIDA STATE PRODUCT APPROVAL

REMARKS	DATE	CHKD	DATE
2020 FBC UPDATE	08/07/20	AJP	-

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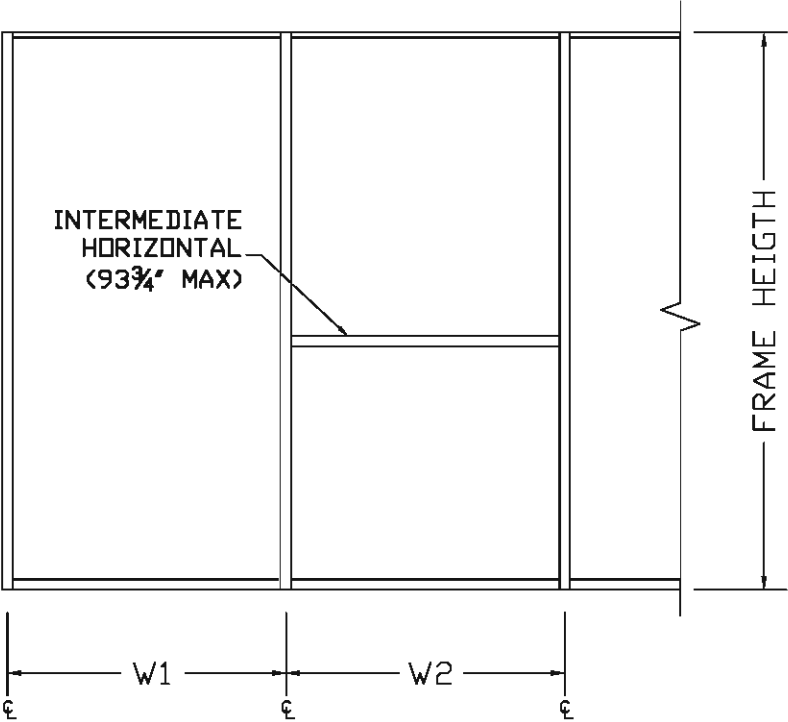
20-29758

SCALE: NTS UNLESS NOTED

MULLION LOAD CAPACITY CHART

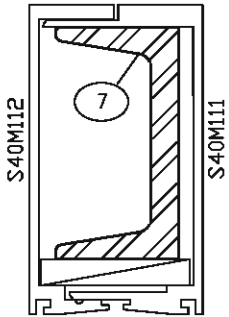
MULLION LOADING CAPACITY (PSF) - REINFORCED								
NOMINAL DIMS			NOMINAL DIMS			NOMINAL DIMS		
WIDTH	HEIGHT	P.S.F	WIDTH	HEIGHT	P.S.F	WIDTH	D.L.O. HEIGHT	P.S.F
30"	60"	172	30"	96"	143	30"	132"	90
36"		153	36"		125	36"		75
42"		140	42"		107	42"		64
48"		123	48"		93	48"		56
54"		109	54"		83	54"		50
60"		98	60"		75	60"		45
66"		83	66"		60	66"		40
72"		63	72"		44	72"		37
78"		49	78"		34	78"		28
84"		39	84"		26	84"		22
90"	72"	31	90"	108"	21	90"	144"	17
96"		26	96"		17	96"		-
30"		163	30"		133	30"		69
36"		143	36"		111	36"		57
42"		130	42"		95	42"		49
48"		121	48"		83	48"		43
54"		109	54"		74	54"		38
60"		95	60"		66	60"		34
66"		72	66"		56	66"		31
72"		54	72"		41	72"		28
78"	84"	42	78"	120"	31	78"	156"	26
84"		33	84"		24	84"		21
90"		26	90"		19	90"		16
96"		22	96"		-	96"		-
30"		153	30"		119	30"		54
36"		137	36"		99	36"		45
42"		122	42"		85	42"		39
48"		107	48"		74	48"		34
54"		95	54"		66	54"		30
60"		85	60"		60	60"		27
66"	96"	65	66"		54	66"		24
72"		48	72"		39	72"		22
78"		37	78"		29	78"		21
84"		29	84"		23	84"		19
90"		23	90"		18	90"		16
96"		19	96"		-	96"		-

PRESSURES ABOVE 80 PSF ARE LIMITED TO A MAX POSITIVE PRESSURE OF 80 PSF



WIDTH (W)
AT FRAME JAMB = $\frac{W1}{2}$

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



STEEL REINF.
L = MULLION LENGTH - 4"

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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
FLORIDA STATE PRODUCT APPROVAL

REMARKS	DATE	DRWN	CHKD
2020 FBC UPDATE	08/07/20	JPC	AJP
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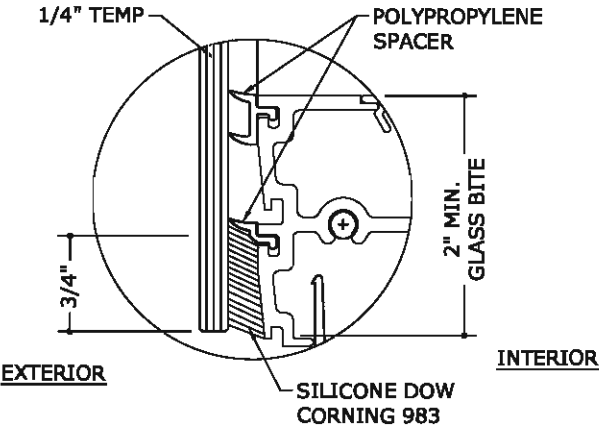
GLASS LOAD CAPACITY CHART

GLASS LOADING CAPACITY - PSF									
NOMINAL DIMS		GLASS TYPE A		GLASS TYPE B		GLASS TYPE C		GLASS TYPE D	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	60	80	144	80	126	80	144	80	144
36"		80	120	80	114	80	120	80	120
42"		80	102	80	102	80	102	80	102
48"		80	90	80	90	80	90	80	90
54"		80	80	80	80	80	80	80	80
60"		72	72	72	72	72	72	72	72
66"		72	72	72	72	72	72	72	72
72"		72	72	72	72	72	72	72	72
78"		72	72	71.7	71.7	72	72	72	72
84"		72	72	66.4	66.4	72	72	72	72
90"	72	72	72	62	62	72	72	72	72
96"		72	72	57.7	57.7	72	72	72	72
30"		80	144	80	107	80	144	80	144
36"		80	120	80	91.7	80	120	80	120
42"		80	102	80	87.4	80	102	80	102
48"		80	90	80	84.8	80	90	80	90
54"		80	80	80	80	80	80	80	80
60"		72	72	72	72	72	72	72	72
66"		65	65	65	65	65	65	65	65
72"		60	60	60	60	60	60	60	60
78"	84	60	60	60	60	60	60	60	60
84"		60	60	58.4	58.4	60	60	60	60
90"		60	60	55.1	55.1	60	60	60	60
96"		60	60	51.7	51.7	60	60	60	60
30"		80	144	80	97.3	80	144	80	144
36"		80	120	77.9	77.9	80	120	80	120
42"		80	102	72.8	72.8	80	102	80	102
48"		80	90	71.6	71.6	80	90	80	90
54"		80	80	69.8	69.8	80	80	80	80
60"		72	72	66.4	66.4	72	72	72	72
66"	96	65	65	62.3	62.3	65	65	65	65
72"		60	60	58.4	58.4	60	60	60	60
78"		55	55	54.5	54.5	55	55	55	55
84"		51	51	51	51	51	51	51	51
90"		51	51	48.4	48.4	51	51	51	51
96"		51	51	45.8	45.8	51	51	51	51

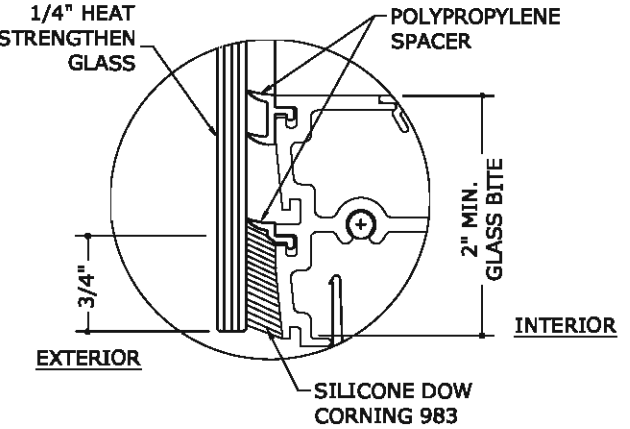
NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-04 (3 SEC GUST)

THE PERIMETER SEAL SYSTEM FOR THE INSULATED GLASS WAS COMPRISED OF THE AIR SPACER WHICH HAD AN EMBEDMENT OF 8.250 mm (0.325") FROM THE INNERMOST EDGE OF THE SPACER TO THE EDGE OF GLASS WHICH WAS SEALED WITH IGS3743 INSULATING GLASS SEALANT MANUFACTURED BY MOMENTIVE PERFORMANCE MATERIALS LEAVING AN EXTERIOR SIGHTLINE OF 8.250 mm (0.325") AROUND THE PERIMETER OF THE INSULATED GLASS.

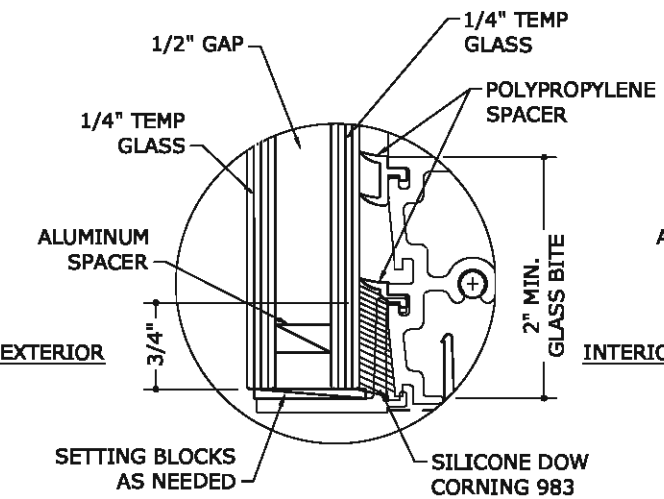
GLAZING TYPE A
1/4" MONOLITHIC GLASS



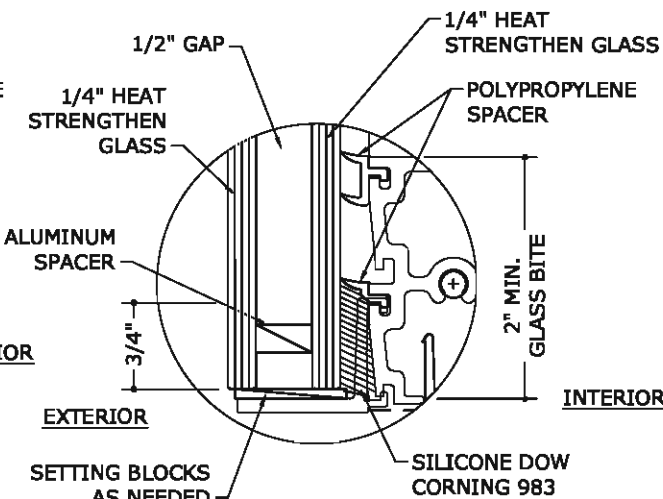
GLAZING TYPE B
1/4" MONOLITHIC GLASS



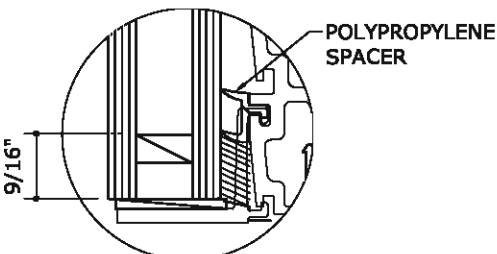
GLAZING TYPE C
1" INSULATED TEMPERED



GLAZING TYPE D
1" INSULATED HEAT STRENGTH

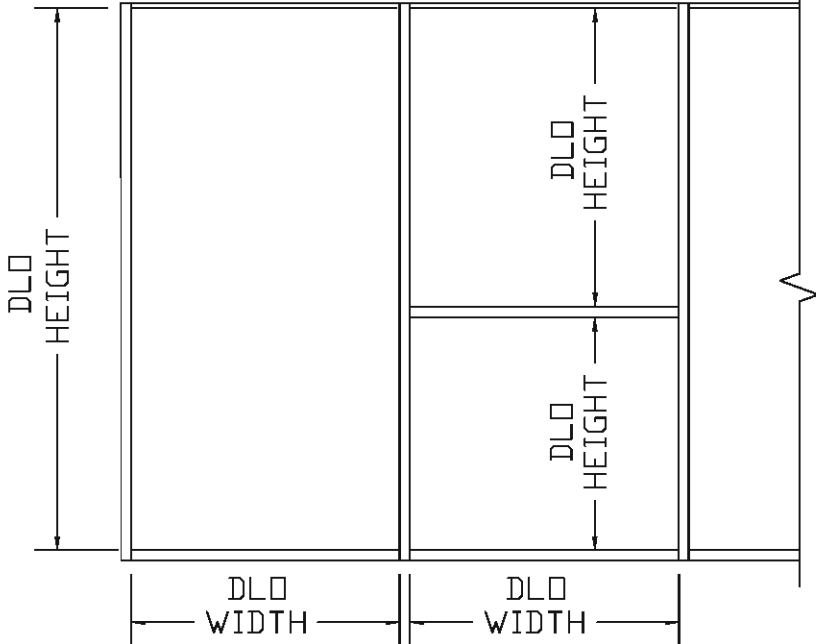


OPTIONAL FOR MONOLITHIC
AND INSULATED GLASS



- GLASS PRESSURE CHART VALUES ARE USING 3/4" SILICONE BED MINIMUM
- FOR 3/16" SEALANT BED USE GLASS CHART PRESSURE x 0.75 FACTOR

SPANDREL GLASS MAY BE USED PROVIDED COATING IS ON ROOM SIDE SURFACE OF GLASS



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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
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20-29758

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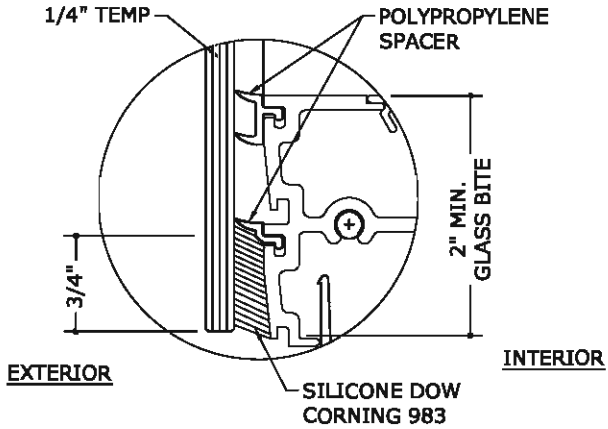
GLASS LOAD CAPACITY CHART

GLASS LOADING CAPACITY - PSF									
NOMINAL DIMS		GLASS TYPE A		GLASS TYPE B		GLASS TYPE C		GLASS TYPE D	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	96	80	144	80	90.8	80	144	80	144
36"		80	120	69.1	69.1	80	120	80	120
42"		80	102	60.1	60.1	80	102	80	102
48"		80	90	59.3	59.3	80	90	80	90
54"		80	80	59.2	59.2	80	80	80	80
60"		72	72	57.7	57.7	72	72	72	72
66"		65	65	55.2	55.2	65	65	65	65
72"		60	60	51.7	51.7	60	60	60	60
78"		55	55	48.8	48.8	55	55	55	55
84"		51	51	45.8	45.8	51	51	51	51
90"	108	48	48	42.8	42.8	48	48	48	48
96"		45	45	40.6	40.6	45	45	45	45
30"		80	144	80	86.1	80	144	80	144
36"		80	120	62.8	62.8	80	120	80	111
42"		80	102	52.5	52.5	80	102	80	93.4
48"		80	90	50.3	50.3	80	90	80	89.8
54"		80	80	50.6	50.6	80	80	80	80
60"		72	72	50.5	50.5	72	72	72	72
66"		65	65	49	49	65	65	65	65
72"		60	60	47	47	60	60	60	60
78"	120	55	55	43.9	43.9	55	55	55	55
84"		51	51	41.1	41.1	51	51	51	51
90"		48	48	39	39	48	48	48	48
96"		45	45	36.8	36.8	45	45	45	45
30"		80	144	80	82.8	80	144	80	144
36"		80	119	59.5	59.5	80	120	80	105
42"		80	96.3	48.1	48.1	80	102	80	85.9
48"		80	86.8	43.4	43.4	80	90	77.6	77.6
54"		80	80	43.6	43.6	80	80	78.1	78.1
60"		72	72	44.3	44.3	72	72	72	72

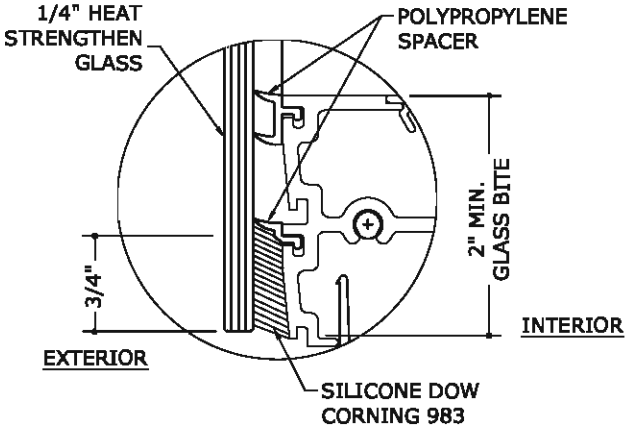
NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-04 (3 SEC GUST)

THE PERIMETER SEAL SYSTEM FOR THE INSULATED GLASS WAS COMPRISED OF THE AIR SPACER WHICH HAD AN EMBEDMENT OF 8.250 mm (0.325") FROM THE INNERMOST EDGE OF THE SPACER TO THE EDGE OF GLASS WHICH WAS SEALED WITH IGS3743 INSULATING GLASS SEALANT MANUFACTURED BY MOMENTIVE PERFORMANCE MATERIALS LEAVING AN EXTERIOR SIGHTLINE OF 8.250 mm (0.325") AROUND THE PERIMETER OF THE INSULATED GLASS.

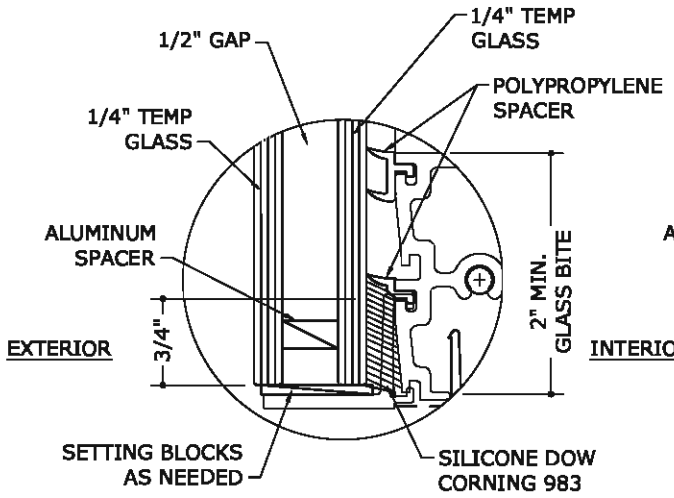
GLAZING TYPE A
1/4" MONOLITHIC GLASS



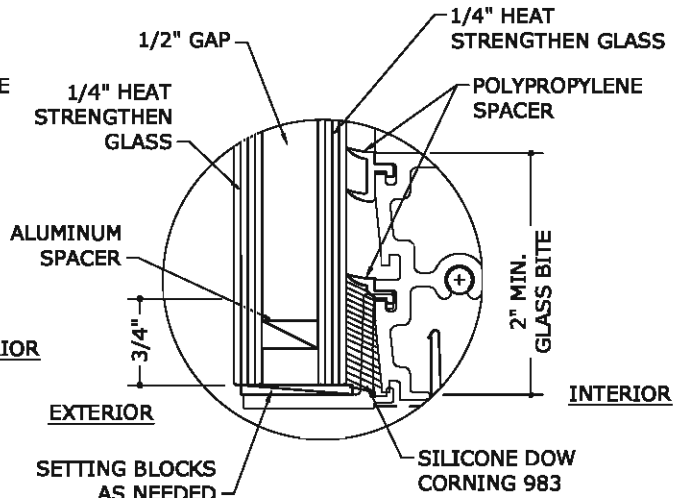
GLAZING TYPE B
1/4" MONOLITHIC GLASS



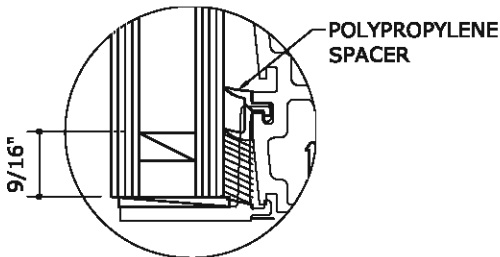
GLAZING TYPE C
1" INSULATED TEMPERED



GLAZING TYPE D
1" INSULATED HEAT STRENGTH

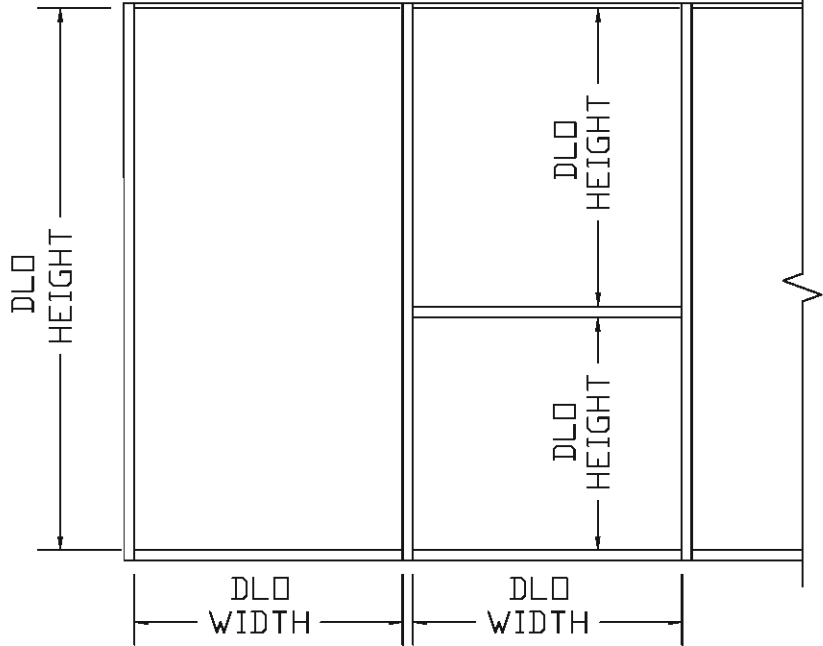


OPTIONAL FOR MONOLITHIC
AND INSULATED GLASS



- GLASS PRESSURE CHART VALUES ARE USING 3/4" SILICONE BED MINIMUM
- FOR 9/16" SEALANT BED USE GLASS CHART PRESSURE x 0.75 FACTOR

SPANDREL GLASS MAY BE USED PROVIDED
COATING IS ON ROOM SIDE SURFACE OF GLASS



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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
FLORIDA STATE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
2020 FBC UPDATE	JPC	AJP	08/07/20

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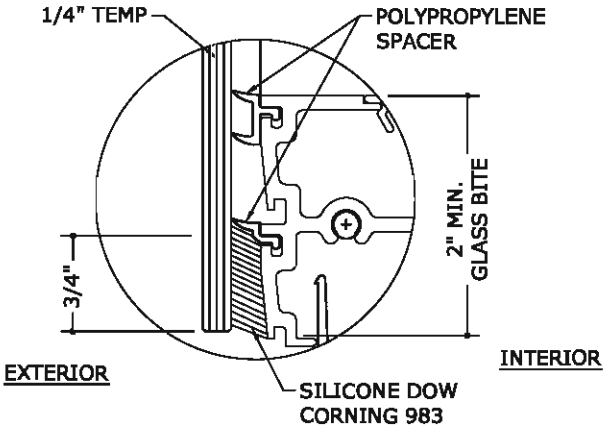
GLASS LOAD CAPACITY CHART

GLASS LOADING CAPACITY - PSF									
NOMINAL DIMS		GLASS TYPE A		GLASS TYPE B		GLASS TYPE C		GLASS TYPE D	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	132	80	144	80	80.9	80	144	80	141
36"		80	114	57	57	80	120	80	101
42"		80	89.3	44.7	44.7	80	102	79.7	79.7
48"		78.4	78.4	39.2	39.2	80	90	70.1	70.1
54"		76.8	76.8	38.4	38.4	80	80	68.8	68.8
60"		72	72	38.9	38.9	72	72	69.8	69.8
66"		65	65	39.2	39.2	65	65	65	65
72"		60	60	38.3	38.3	60	60	60	60
78"		55	55	36.8	36.8	55	55	55	55
84"		51	51	34.7	34.7	51	51	51	51
90"	144	48	48	32.5	32.5	48	48	48	48
96"		45	45	30.6	30.6	45	45	45	45
30"		80	144	79.2	79.2	80	144	80	139
36"		80	110	55	55	80	120	80	97.5
42"		80	83.9	41.9	41.9	80	102	74.8	74.8
48"		72.2	72.2	36.1	36.1	80	90	64.6	64.6
54"		67.8	67.8	33.9	33.9	80	80	60.8	60.8
60"		68.5	68.5	34.3	34.3	72	72	61.5	61.5
66"		65	65	34.9	34.9	65	65	62.6	62.6
72"		60	60	34.9	34.9	60	60	60	60
78"	156	55	55	33.6	33.6	55	55	55	55
84"		51	51	31.8	31.8	51	51	51	51
90"		48	48	30.2	30.2	48	48	48	48
96"		45	45	28.9	28.9	45	45	45	45
30"		80	144	77.8	77.8	80	144	80	137
36"		80	107	53.5	53.5	80	120	80	94.9
42"		80	81	40.5	40.5	80	102	72.2	72.2
48"		66.9	66.9	33.4	33.4	80	90	59.8	59.8
54"		61.1	61.1	30.5	30.5	80	80	54.7	54.7
60"		60.6	60.6	30.3	30.3	72	72	54.4	72
66"	168	61.5	61.5	30.8	30.8	65	65	55.2	55.2
72"		60	60	31	31	60	60	55.7	55.7
78"		55	55	30.9	30.9	55	55	55	55
84"		51	51	29.7	29.7	51	51	51	51
90"		48	48	28.5	28.5	48	48	48	48
96"		45	45	27.1	27.1	45	45	45	45

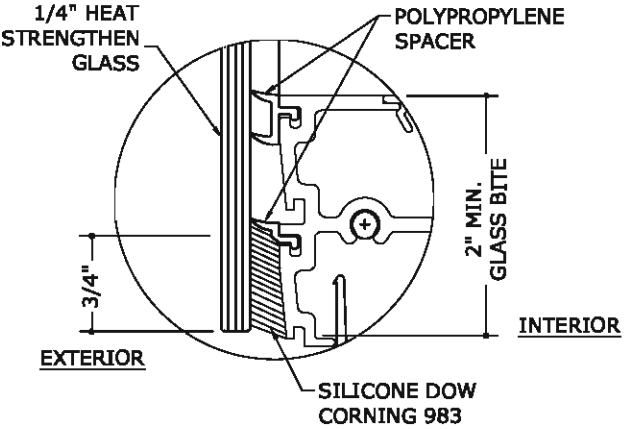
NOTE:
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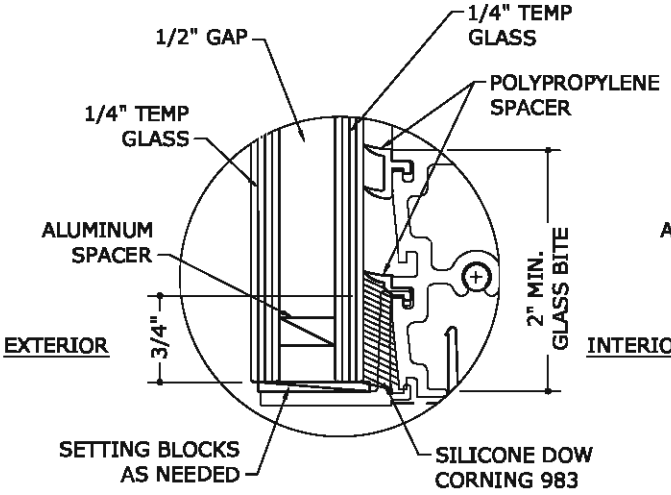
GLAZING TYPE A 1/4" MONOLITHIC GLASS



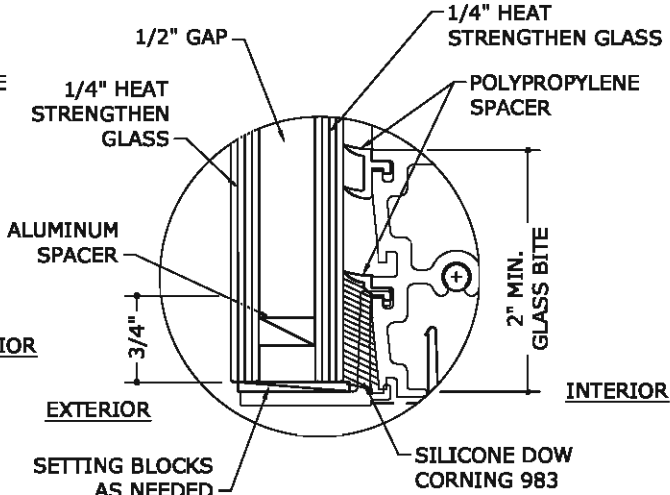
GLAZING TYPE B 1/4" MONOLITHIC GLASS



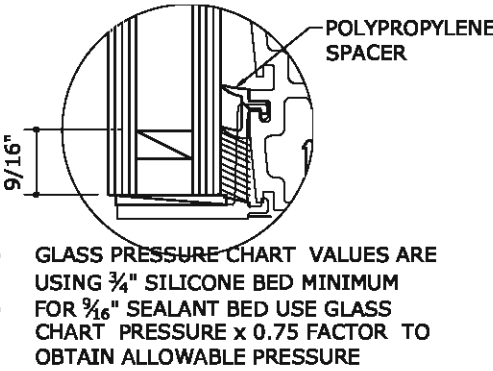
GLAZING TYPE C 1" INSULATED TEMPERED



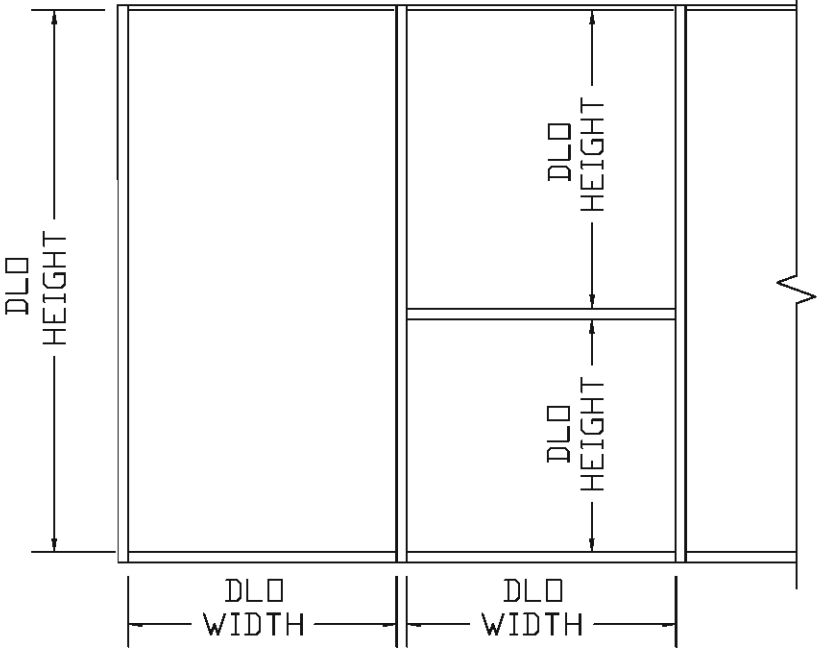
GLAZING TYPE D 1" INSULATED HEAT STRENGTH



OPTIONAL FOR MONOLITHIC
AND INSULATED GLASS



SPANDREL GLASS MAY BE USED PROVIDED
COATING IS ON ROOM SIDE SURFACE OF GLASS



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2020 FBC UPDATE	08/07/20	JPC	AJP
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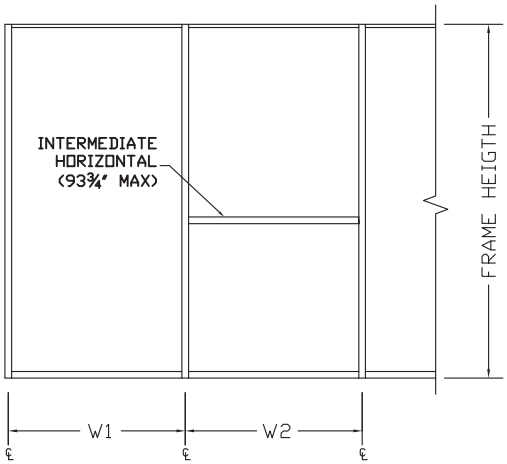
20-29758

SCALE: NTS UNLESS NOTED

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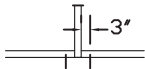
ANCHOR LOAD CAPACITY CHART

ANCHOR LOADING CAPACITY - PSF																	
NOMINAL DIMS		TYPE 'C' (CONCRETE)		TYPE 'G' (G.FILLED BLK)					TYPE 'W' (WOOD)					TYPE 'M' (STEEL)		TYPE 'M' (ALUMINUM)	
WIDTH	HEIGHT	C1	C2	G1	G2	G3	G4	G5	W1	W2	W3	W4	W5	M1	M2	M1	M2
30"	60"	125	172	60	120	172			56	113	169	172		108	172	126	172
36"		104	153	50	100	150	153		47	94	141	153		90	153	105	153
42"		89	140	43	85	128	140		40	80	121	140		77	140	90	140
48"		78	123	37	75	112	123		35	70	106	123		68	123	79	123
54"		69	109	33	66	100	109		31	63	94	109		60	109	70	109
60"		62	98	30	60	90	98		28	56	84	98		54	98	63	98
66"		57	83	27	54	82	83		26	51	77	83		49	83	57	83
72"		52	63	25	50	63			23	47	63			45	63	53	63
78"		48	49	23	46	49			22	43	49			42	49	49	49
84"		39		21	39				20	39				39	39	39	
90"	72"	31		20	31				19	31				31		31	
96"		26		19	26				18	26				26		26	
30"		104	163	50	100	150	163		47	94	141	163		90	163	105	163
36"		87	143	42	83	125	143		39	78	117	143		75	143	88	143
42"		74	130	36	71	107	130		34	67	101	130		64	129	75	130
48"		65	121	31	62	94	121		29	59	88	117	121	56	113	66	121
54"		58	109	28	55	83	109		26	52	78	104	109	50	100	59	109
60"		52	95	25	50	75	95		23	47	70	94	95	45	90	53	95
66"		47	72	23	45	68	72		21	43	64	72		41	72	48	72
72"		43	54	21	42	54			20	39	54			38	54	44	54
78"		40	42	19	38	42			18	36	42			35	42	41	42
84"	84"	33		18	33				17	33				32	33	33	
90"		26		17	26				16	26				26		26	
96"		22		16	22				-	22				22		22	
30"		89	153	43	85	128	153		40	80	121	153		77	153	90	153
36"		74	137	36	71	107	137		34	67	101	134	137	64	129	75	137
42"		64	122	31	61	92	122		29	57	86	115	122	55	110	64	122
48"		56	107	27	53	80	107	107	25	50	75	101	107	48	96	56	107
54"		50	95	24	47	71	95	95	22	45	67	89	95	43	86	50	95
60"		45	85	21	43	64	85		20	40	60	80	85	39	77	45	85
66"		41	65	19	39	58	65		18	37	55	65		35	65	41	65
72"	96"	37	48	18	36	48			17	34	48			32	48	38	48
78"		34	37	16	33	37			-	31	37			30	37	35	37
84"		29		-	29				-	29	29			28	29	29	
90"		23		-	23				-	23				23		23	
96"		19		-	19				-	19				19		19	
30"		78	143	37	75	112	143		35	70	106	141	143	68	135	79	143
36"		65	125	31	62	94	125	125	29	59	88	117	125	56	113	66	125
42"		56	107	27	53	80	107	107	25	50	75	101	107	48	96	56	107
48"		49	93	23	47	70	93		22	44	66	88	93	42	84	49	93
54"		43	83	21	42	62	83		20	39	59	78	83	38	75	44	83
60"	96"	39	75	19	37	56	75	75	18	35	53	70	75	34	68	40	75
66"		35	60	17	34	51	60		16	32	48	60		31	60	36	60
72"		33	44	16	31	44			-	29	44			28	44	33	44
78"		30	34	-	29	34			-	27	34			26	34	30	34
84"		26		-	26				-	25	26			24	26	26	
90"		21		-	21				-	21				21		21	
96"		17		-	17				-	17				17		17	



WIDTH (W) = $\frac{W1}{2}$
AT FRAME JAMB

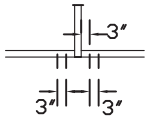
WIDTH (W) = $\frac{W1 + W2}{2}$
AT FRAME MULLION



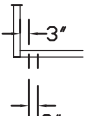
C1, G1, W1, M1



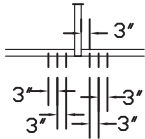
C1, G1, W1, M1



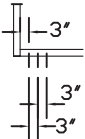
C2, G2, W2, M2



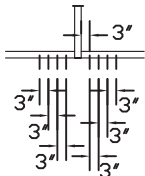
C2, G2, W2, M2



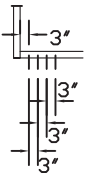
G3, W3



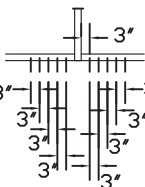
G3, W3



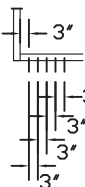
G4, W4



G4, W4



G5, W5



G5, W5

- C1, G1, W1 OR M1 = (1) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- C2, G2, W2 OR M2 = (2) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- G3 OR W3 = (3) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- G4 OR W4 = (4) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- G5 OR W5 = (5) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.

ANCHORS TYPES C, G, W & M SEE SHEET 13 FOR DESCRIPTION

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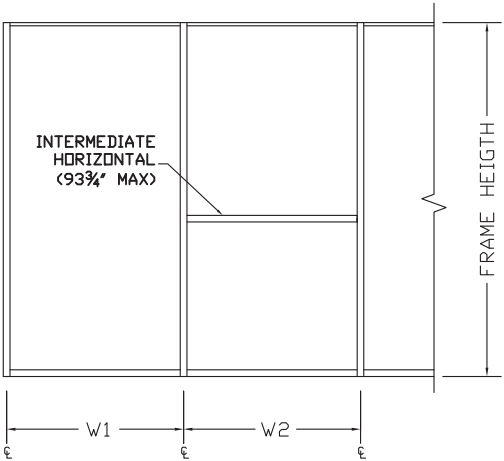
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SCALE: NTS UNLESS NOTED

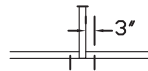
ANCHOR LOADING CAPACITY - PSF															
NOMINAL DIMS		TYPE 'C' (CONCRETE)		TYPE 'G' (G.FILLED BLK)				TYPE 'W' (WOOD)				TYPE 'M' (STEEL)		TYPE 'M' (ALUMINUM)	
WIDTH	HEIGHT	C1	C2	G1	G2	G3	G4	W1	W2	W3	W4	M1	M2	M1	M2
30"	108"	69	133	33	66	100	133	31	63	94	125	60	120	70	133
36"		58	111	28	55	83	111	26	52	78	104	50	100	59	111
42"		50	95	24	47	71	95	22	45	67	89	43	86	50	95
48"		43	83	21	42	62	83	20	39	59	78	38	75	44	83
54"		39	74	18	37	55	74	17	35	52	70	33	67	39	74
60"		35	66	17	33	50	66	16	31	47	63	30	60	35	66
66"		32	56	-	30	45	56	-	28	43	56	27	55	32	56
72"		29	41	-	28	41	-	-	26	39	41	25	41	29	41
78"		27	31	-	26	31	-	-	24	31	-	23	31	27	31
84"		24	-	-	24	24	-	-	22	24	-	21	24	24	-
90"		19	-	-	19	-	-	-	19	-	-	19	-	19	-
96"		-	-	-	-	-	-	-	-	-	-	15	-	-	-
30"	120"	62	119	30	60	90	119	28	56	84	113	54	108	63	119
36"		52	99	25	50	75	99	23	47	70	94	45	90	53	99
42"		45	85	21	43	64	85	20	40	60	80	39	77	45	85
48"		39	74	19	37	56	74	18	35	53	70	34	68	40	74
54"		35	66	17	33	50	66	16	31	47	63	30	60	35	66
60"		31	59	-	30	45	59	-	28	42	56	27	54	32	59
66"		28	54	-	27	41	54	-	26	38	51	25	49	29	54
72"		26	39	-	25	37	39	-	23	35	39	23	39	26	39
78"		24	29	-	23	29	-	-	22	29	-	21	29	24	29
84"		22	23	-	21	23	-	-	20	23	-	19	23	23	23
90"		18	-	-	18	-	-	-	18	-	-	18	-	18	-
96"		-	-	-	-	-	-	-	-	-	-	14	-	-	-
30"	132"	57	90	27	54	82	90	26	51	77	90	49	90	57	90
36"		47	75	23	45	68	75	21	43	64	75	41	75	48	75
42"		41	64	19	39	58	64	18	37	55	64	35	64	41	64
48"		35	56	17	34	51	56	16	32	48	56	31	56	36	56
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60"		28	45	-	27	41	45	-	26	38	45	25	45	29	45
66"		26	40	-	25	37	40	-	23	35	40	22	40	26	40
72"		24	37	-	23	34	37	-	21	32	37	20	37	24	37
78"		22	28	-	21	28	-	-	20	28	-	19	28	22	28
84"		20	22	-	19	22	-	-	18	22	-	18	22	21	22
90"		17	-	-	17	-	-	-	17	-	-	16	17	17	-
96"		-	-	-	-	-	-	-	-	-	-	13	-	-	-
30"	144"	52	69	25	50	69	-	23	47	69	-	45	69	53	69
36"		43	57	21	42	57	-	20	39	57	-	38	57	44	57
42"		37	49	18	36	49	-	17	34	49	-	32	49	38	49
48"		33	43	16	31	43	-	-	29	43	-	28	43	33	43
54"		29	38	-	28	38	-	-	26	38	-	25	38	29	38
60"		26	34	-	25	34	-	-	23	34	-	23	34	26	34
66"		24	31	-	23	31	-	-	21	31	-	20	31	24	31
72"		22	28	-	21	28	-	-	20	28	-	19	28	22	28
78"		20	26	-	19	26	-	-	18	26	-	17	26	20	26
84"		19	21	-	18	21	-	-	17	21	-	16	21	19	21
90"		16	-	-	16	-	-	-	16	16	-	15	16	16	-
96"		-	-	-	-	-	-	-	-	-	-	13	-	-	-
30"	156"	48	54	23	46	54	-	22	43	54	-	42	54	49	54
36"		40	45	19	38	45	-	18	36	45	-	35	45	41	45
42"		34	39	16	33	39	-	15	31	39	-	30	39	35	39
48"		30	34	-	29	34	-	14	27	34	-	26	34	30	34
54"		27	30	-	26	30	-	12	24	30	-	23	30	27	30
60"		24	27	-	23	27	-	11	22	27	-	21	27	24	27
66"		22	24	-	21	24	-	10	20	24	-	19	24	22	24
72"		20	22	-	19	22	-	9	18	22	-	17	22	20	22
78"		18	21	-	18	21	-	8	17	21	-	16	21	19	21
84"		17	19	-	16	19	-	8	-	19	-	15	19	17	19
90"		16	-	-	-	16	-	7	-	16	-	14	16	16	-
96"		-	-	-	-	-	-	7	-	-	-	12	-	-	-

ANCHOR LOAD CAPACITY CHART



WIDTH (W) AT FRAME JAMB = $\frac{W1}{2}$

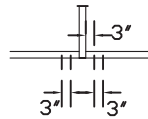
WIDTH (W) AT FRAME MULLION = $\frac{W1 + W2}{2}$



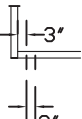
C1, G1, W1, M1



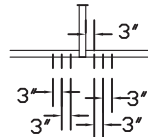
C1, G1, W1, M1



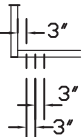
C2, G2, W2, M2



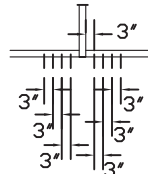
C2, G2, W2, M2



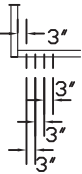
G3, W3



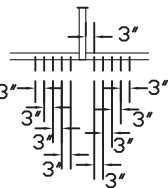
G3, W3



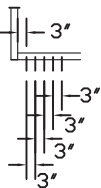
G4, W4



G4, W4



G5, W5



G5, W5

- C1, G1, W1 OR M1 = (1) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- C2, G2, W2 OR M2 = (2) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- G3 OR W3 = (3) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- G4 OR W4 = (4) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.
- G5 OR W5 = (5) ANCHOR TYPE 'C', 'G', 'H', 'W' OR 'M' AT EACH SIDE OF VERTICAL MEMBERS.

ANCHORS TYPES C, G, W & M SEE SHEET 13 FOR DESCRIPTION

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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
FLORIDA STATE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
2020 FBC UPDATE	JPC	AJP	08/07/20

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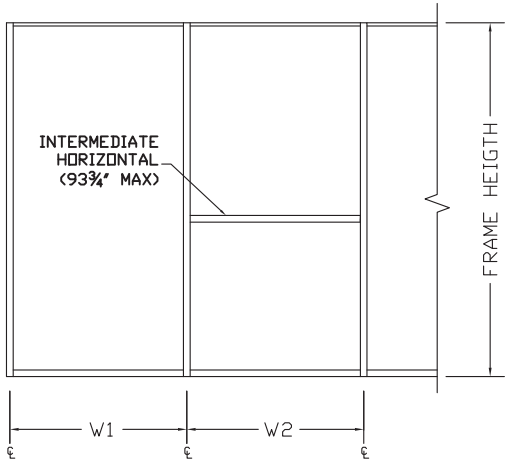
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ANCHOR LOADING CAPACITY - PSF							
NOMINAL DIMS		TYPE 'GG' (G.FILLED BLK)				TYPE 'WW' (WOOD)	
WIDTH	HEIGHT	GG1	GG2	GG3	GG4	WW1	WW2
30"	60"	71	142	172		129	172
36"		59	118	153		108	153
42"		51	101	140		92	140
48"		44	89	123		81	123
54"		39	79	109		72	109
60"		36	71	98		65	98
66"		32	65	83		59	83
72"		30	59	63		54	63
78"		27	49			49	
84"		25	39			39	
90"		24	31			31	
96"		22	26			26	
30"	72"	59	118	163		108	163
36"		49	99	143		90	143
42"		42	85	127	130	77	130
48"		37	74	111	121	67	121
54"		33	66	99	109	60	109
60"		30	59	89	95	54	95
66"		27	54	72		49	72
72"		25	49	54		45	54
78"		23	42			41	42
84"		21	33			33	
90"		20	26			26	
96"		19	22			22	
30"	84"	51	101	152	153	92	153
36"		42	85	127	137	77	137
42"		36	72	109	122	66	122
48"		32	63	95	107	58	107
54"		28	56	85	95	51	95
60"		25	51	76	85	46	85
66"		23	46	65		42	65
72"		21	42	48		39	48
78"		20	37			36	37
84"		18	29			29	
90"		17	23			23	
96"		16	19			19	
30"	96"	44	89	133	143	81	143
36"		37	74	111	125	67	125
42"		32	63	95	107	58	107
48"		28	56	83	93	51	93
54"		25	49	74	83	45	83
60"		22	44	67	75	40	75
66"		20	40	60		37	60
72"		19	37	44		34	44
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84"		16	26			26	
90"		-	21			21	
96"		-	17			17	

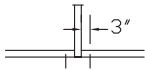
ANCHOR LOADING CAPACITY - PSF							
NOMINAL DIMS		TYPE 'GG' (G.FILLED BLK)				TYPE 'WW' (WOOD)	
WIDTH	HEIGHT	GG1	GG2	GG3	GG4	WW1	WW2
30"	108"	39	79	118	133	72	133
36"		33	66	99	111	60	111
42"		28	56	85	95	51	95
48"		25	49	74	83	45	83
54"		22	44	66	74	40	74
60"		20	39	59	66	36	66
66"		18	36	54	56	33	56
72"		16	33	41		30	41
78"		-	30	31		28	31
84"		-	24			24	
90"		-	19			19	
96"		-	-			-	
30"	120"	36	71	107	119	65	119
36"		30	59	89	99	54	99
42"		25	51	76	85	46	85
48"		22	44	67	74	40	74
54"		20	39	59	66	36	66
60"		18	36	53	59	32	59
66"		16	32	48	54	29	54
72"		-	30	39		27	39
78"		-	27	29		25	29
84"		-	23			23	
90"		-	18			18	
96"		-	-			-	
30"	132"	32	65	90		59	90
36"		27	54	75		49	75
42"		23	46	64		42	64
48"		20	40	56		37	56
54"		18	36	50		33	50
60"		16	32	45		29	45
66"		-	29	40		27	40
72"		-	27	37		25	37
78"		-	25	28		23	28
84"		-	22			21	22
90"		-	17			17	
96"		-	-			-	
30"	144"	30	59	69		54	69
36"		25	49	57		45	57
42"		21	42	49		39	49
48"		19	37	43		34	43
54"		16	33	38		30	38
60"		-	30	34		27	34
66"		-	27	31		25	31
72"		-	25	28		22	28
78"		-	23	26		21	26
84"		-	21			19	21
90"		-	16			16	
96"		-	-			-	
30"	156"	27	54			50	54
36"		23	45			41	45
42"		20	39			36	39
48"		17	34			31	34
54"		-	30			28	30
60"		-	27			25	27
66"		-	24			23	24
72"		-	22			21	22
78"		-	21			19	21
84"		-	19			18	19
90"		-	16			16	
96"		-	-			-	

ANCHOR LOAD CAPACITY CHART



WIDTH (W) AT FRAME JAMB = $\frac{W1}{2}$

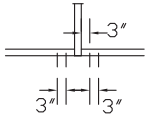
WIDTH (W) AT FRAME MULLION = $\frac{W1 + W2}{2}$



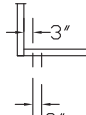
GG1, WW1



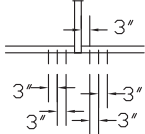
GG1, WW1



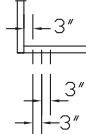
GG2, WW2



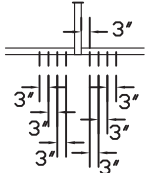
GG2, WW2



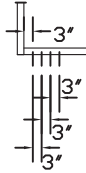
GG3



GG3



GG4



GG4

- GG1, WW1 = (1) ANCHOR TYPE 'GG' OR 'WW' EACH SIDE OF VERTICAL MEMBERS.
- GG2, WW2 = (2) ANCHOR TYPE 'GG' OR 'WW' EACH SIDE OF VERTICAL MEMBERS.
- GG3 = (3) ANCHOR TYPE 'GG' OR 'WW' EACH SIDE OF VERTICAL MEMBERS.
- GG4 = (4) ANCHOR TYPE 'GG' OR 'WW' EACH SIDE OF VERTICAL MEMBERS.

ANCHORS TYPES GG & WW SEE SHEET 13 FOR DESCRIPTION

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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
FLORIDA STATE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
2020 FBC UPDATE	JPC	AJP	08/07/20

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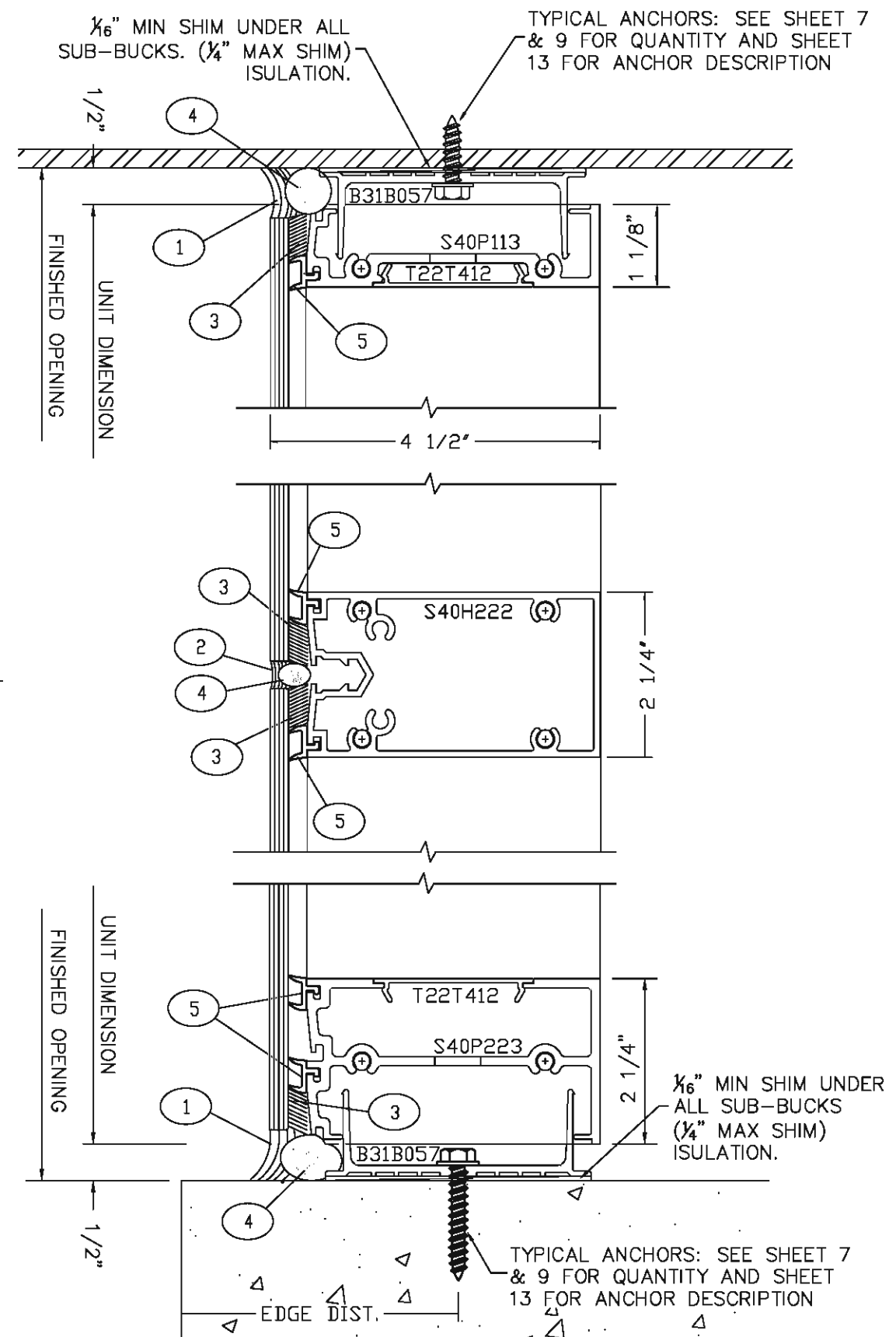
PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
 FLORIDA STATE PRODUCT APPROVAL

REMARKS	DATE	CHKD	DRWN	JPC	AJPC
2020 FBC UPDATE	08/07/20	-	-	-	-
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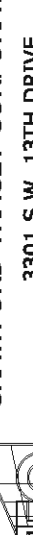
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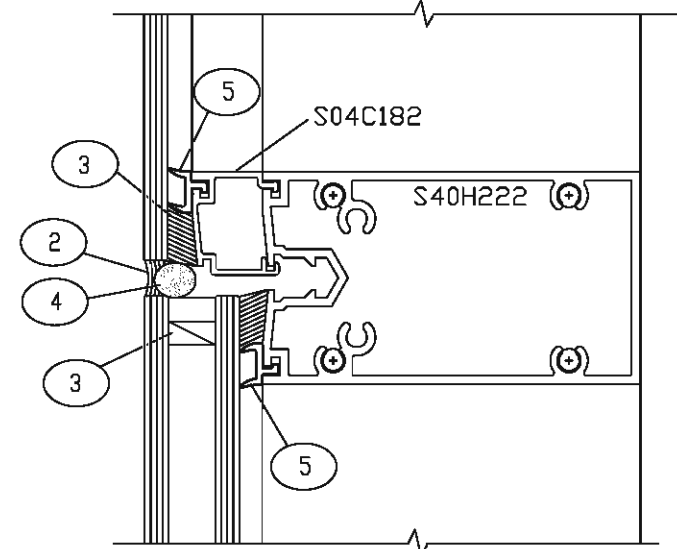
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FLORIDA STATE PRODUCT APPROVAL

2020 FRC UPDATE	JFC	AJP	08/07/20
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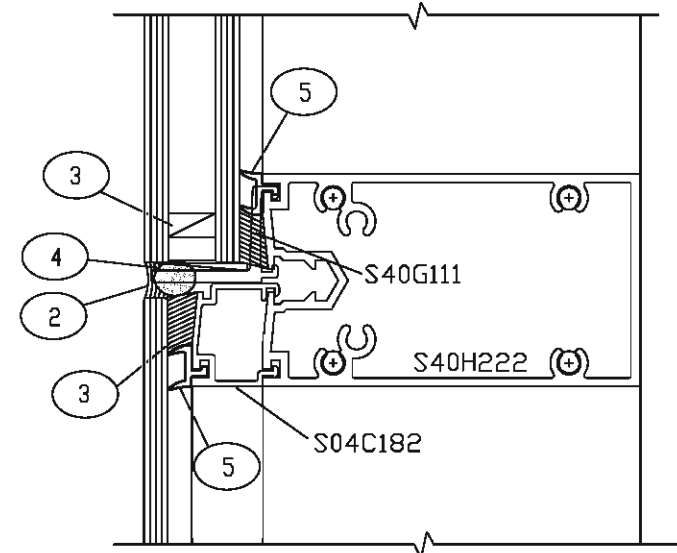
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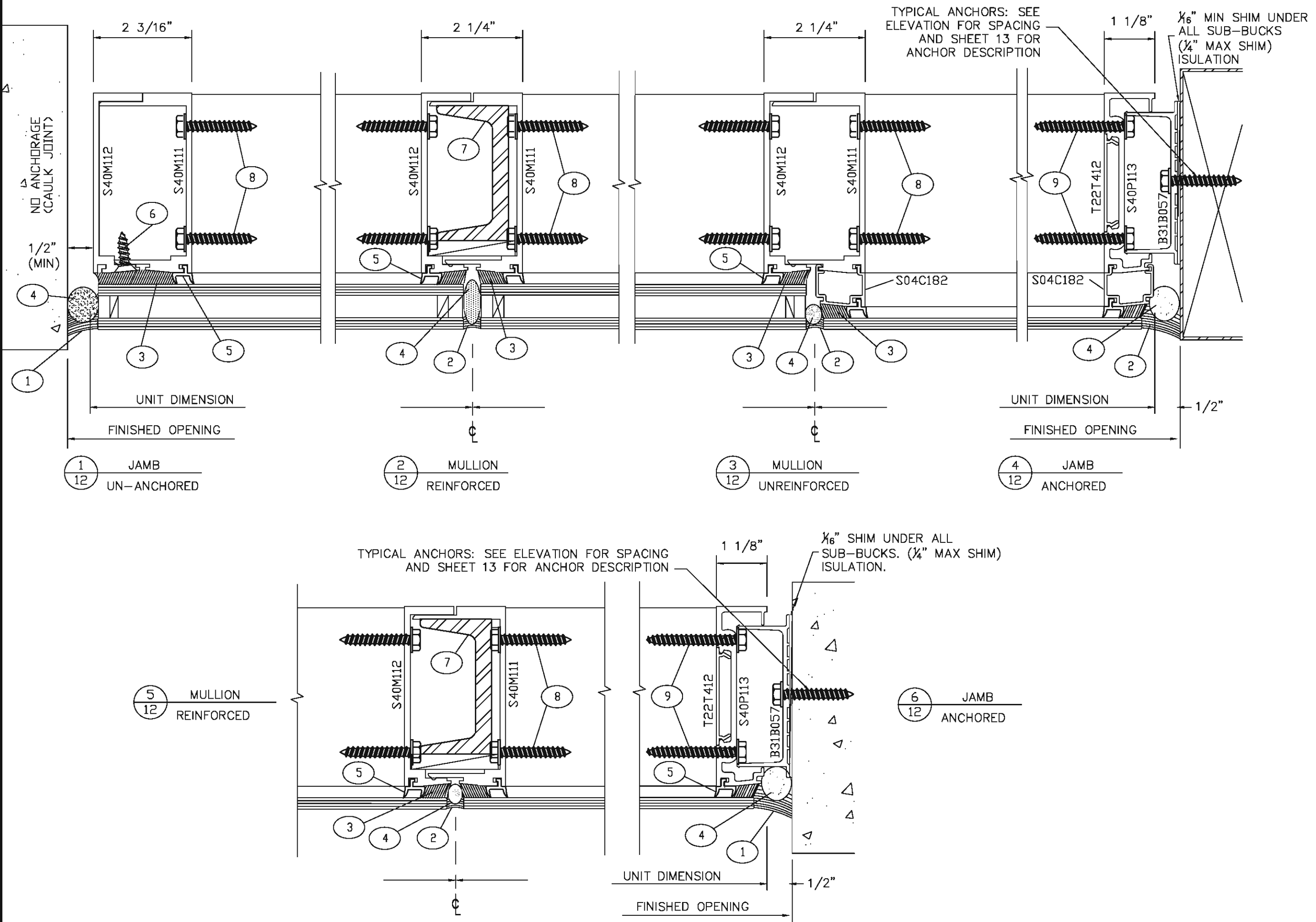
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 FLORIDA STATE PRODUCT APPROVAL

2020 FBC UPDATE	JPC	AJP	08/07/20
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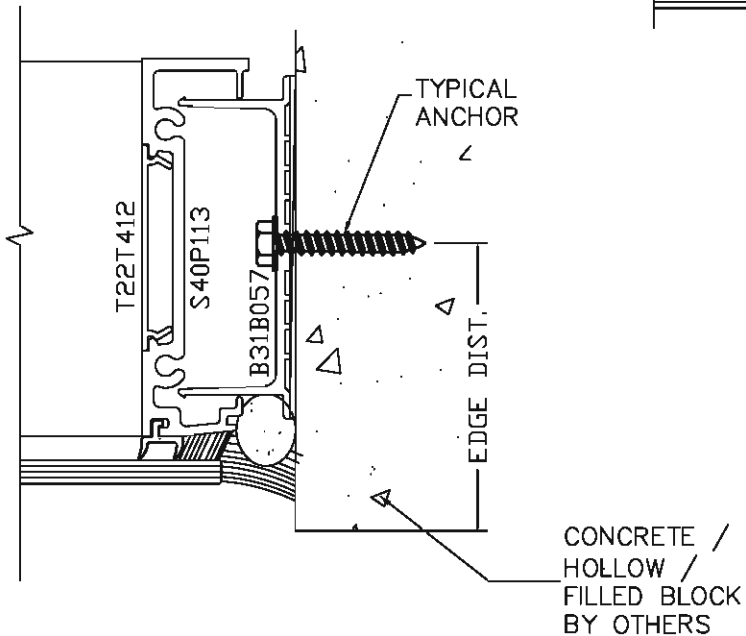
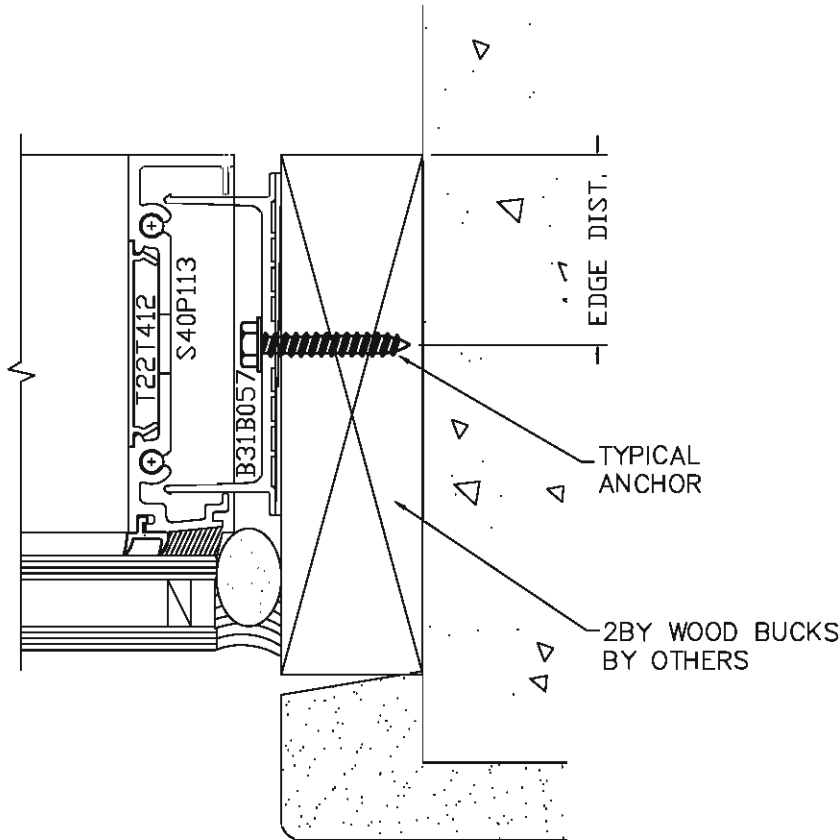
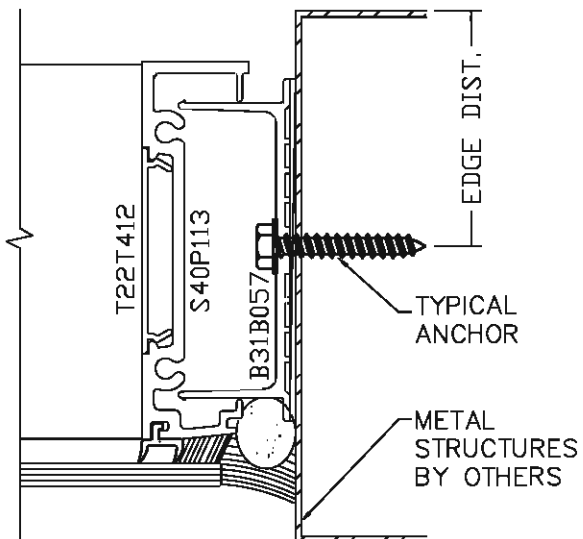
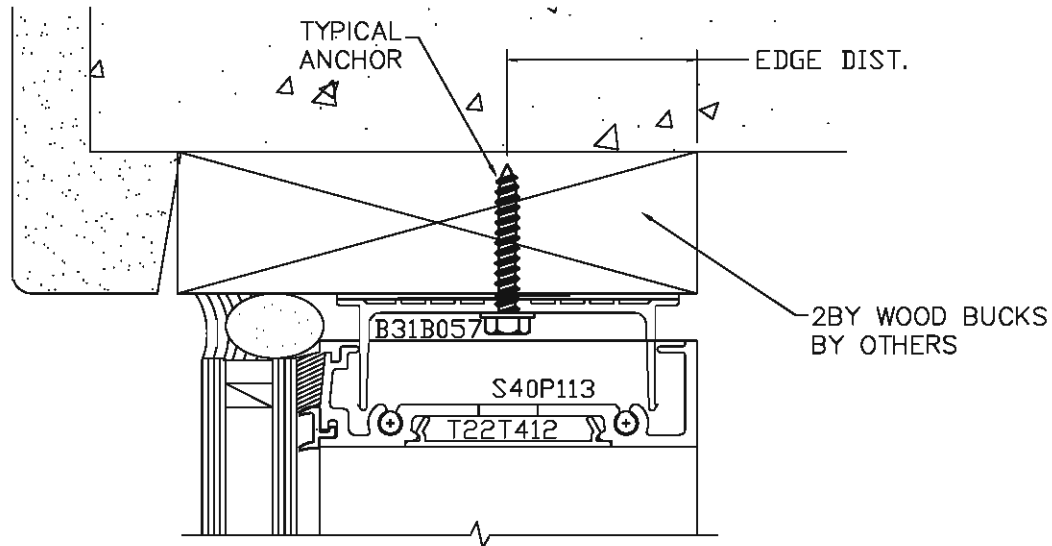
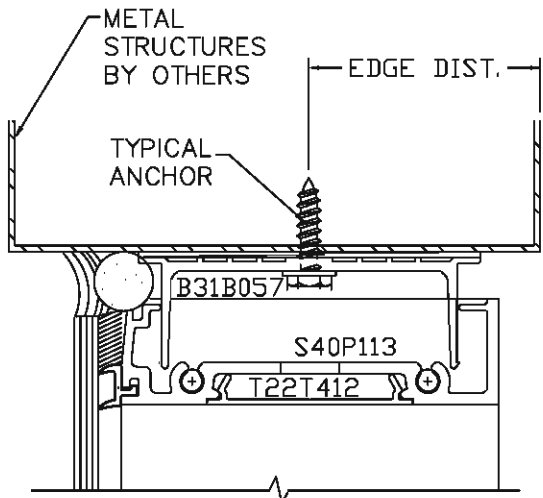
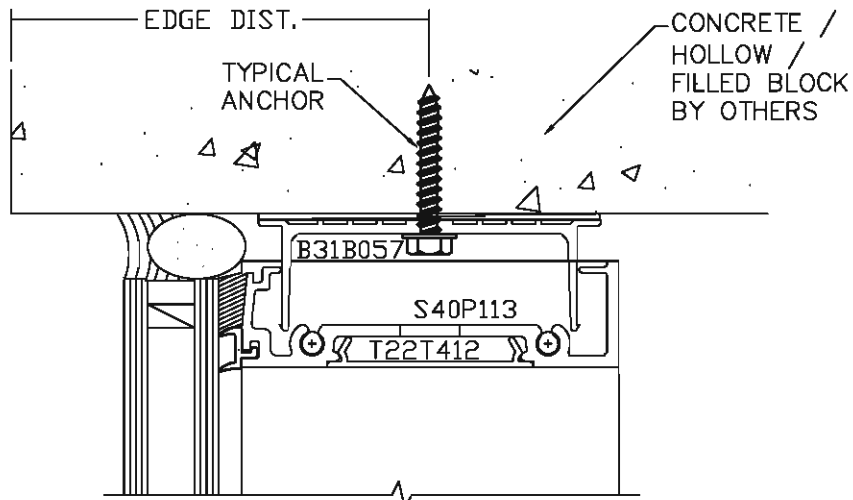
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TYPICAL ANCHORS:

SEE ELEV. & ANCHOR CHARTS
FOR SPACING & QUANTITY

- TYPE 'C' - 1/4" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE (3050 PSI MIN)
1-3/4" MIN. EMBED INTO CONCRETE
- TYPE 'G' - 1/4" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO GROUT FILLED BLOCK (ASTM C-90 MIN)
1-3/4" MIN. GROUT FILLED BLOCK
- TYPE 'W' - 1/4" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES (SYP#2 G=0.55 MIN)
1-1/2" MIN. THREAD PENETRATION INTO WOOD
- TYPE 'M' - 1/4-20 DIA. DRIL-FLEX BY 'DEWALT'** (GRADE 5 MIN)
INTO METAL STRUCTURES (5 PITCHES PAST THE THREAD PLANE MIN.)
STEEL: 18 GAGE STEEL MIN (Fy=36 KSI MIN)
ALUMINUM: 1/8" THK MIN. (6063-T5 MIN)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)
- TYPE 'GG' - 5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO GROUT FILLED BLOCK (ASTM C-90 MIN)
1-3/4" MIN. GROUT FILLED BLOCK
- TYPE 'WW' - 5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES (SYP#2 G=0.55 MIN)
1-1/2" MIN. PENETRATION INTO WOOD

TYPICAL EDGE DISTANCE

INTO CONCRETE/HOLLOW BLOCK/GROUT FILLED BLOCK= 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN. (FOR 1/4" DIA ULTRACONS)
INTO WOOD STRUCTURE = 1 9/16" MIN. (FOR 5/16" DIA ULTRACONS)
INTO METAL STRUCTURE = 3/4" MIN.

ANCHOR NOTES:

- SEE SYSTEM ANCHOR CHART FOR ANCHOR LOCATIONS AND/OR SPACING.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- ANCHOR REQUIREMENTS AS SHOWN HEREIN, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE, EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, THE BUILDING OFFICIAL MAY REQUIRE A ONE-TIME SITE-SPECIFIC NOTICE OF ACCEPTANCE BE OBTAINED, OR THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, WHICH DETAIL AND JUSTIFY THE DEVIATION.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
- PRESSURE TREATED WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.

FRANK BENNARDO, P.E.
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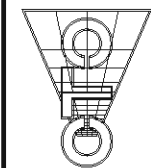
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PRO-TECH 4SG STRUCTURAL GLAZING SYSTEM (NON-IMPACT)
FLORIDA STATE PRODUCT APPROVAL

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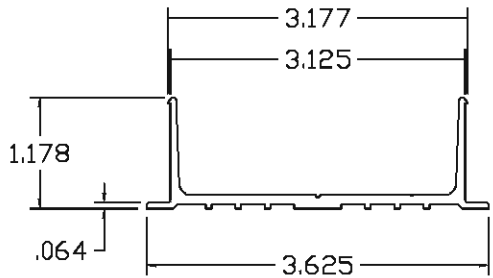
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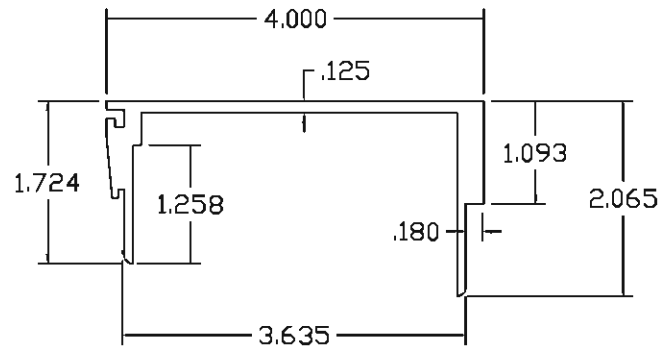
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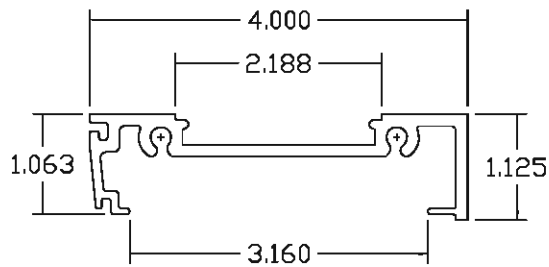
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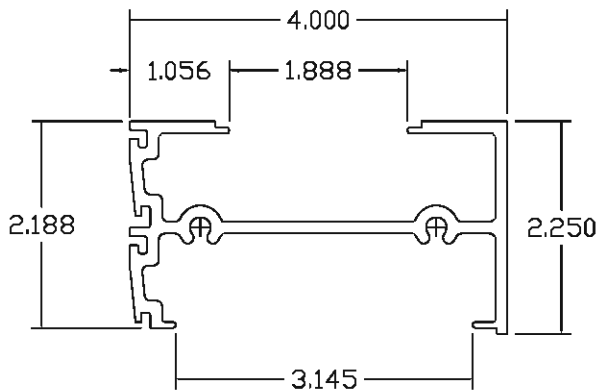
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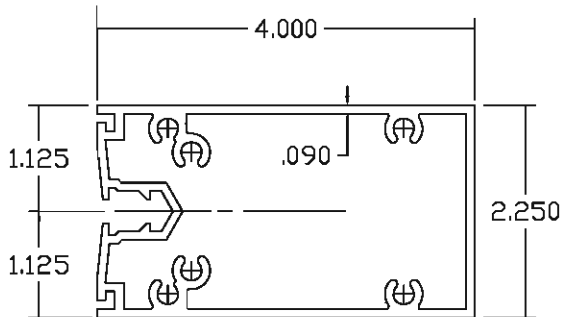
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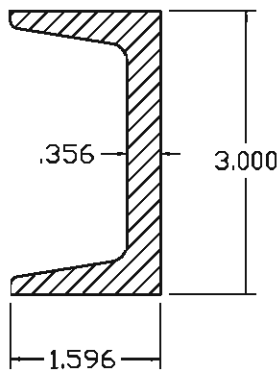
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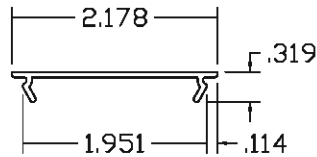
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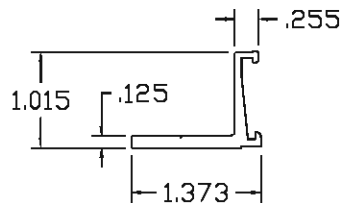
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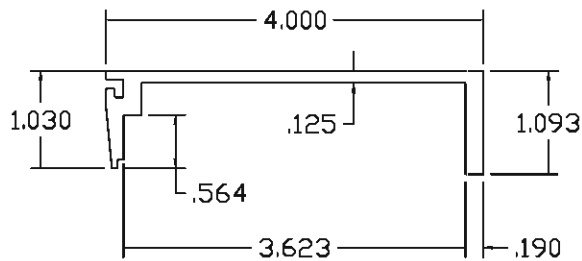
C3x6 CHANNEL
STRUCTURAL STEEL



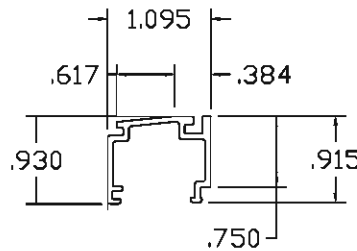
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S40G111



S40M112



S04C182

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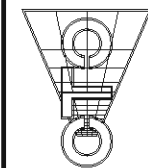
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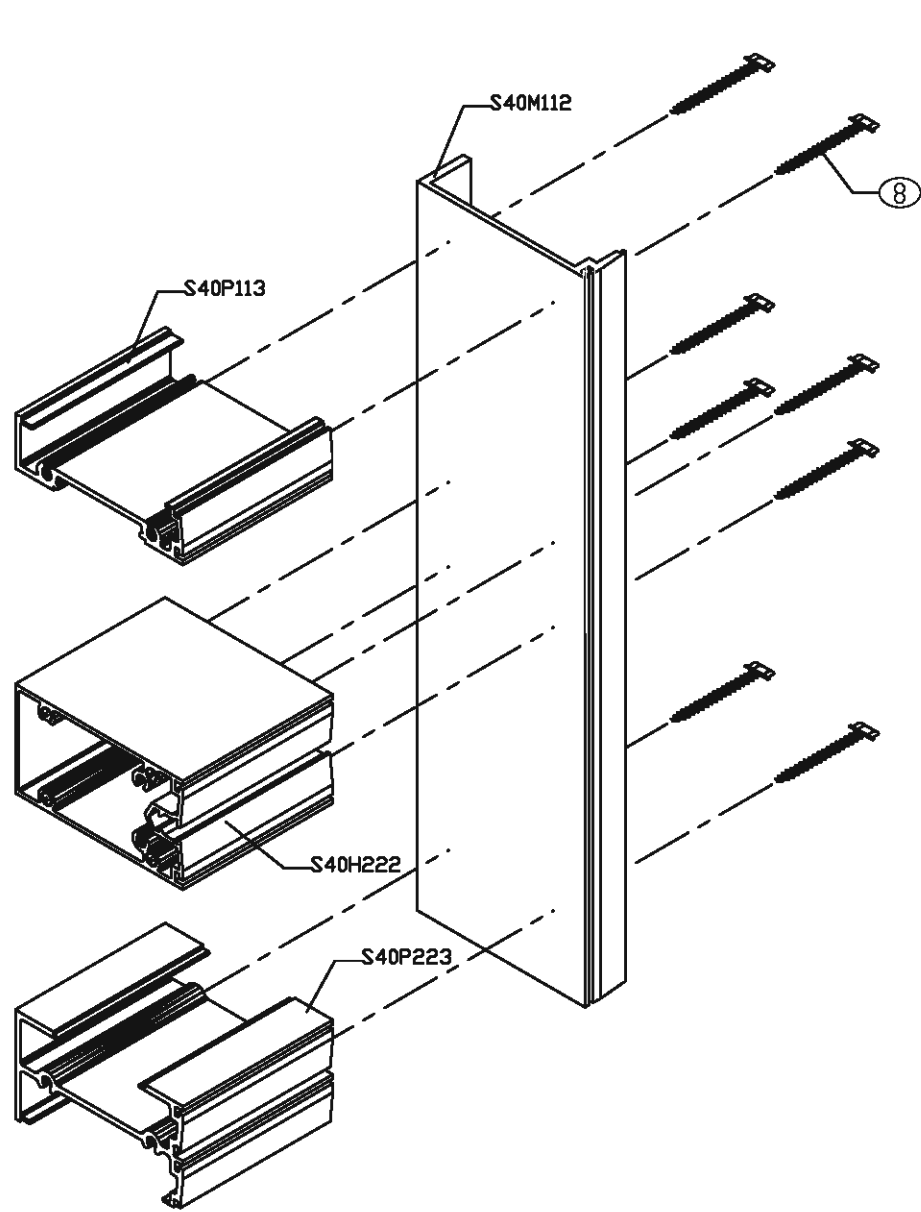
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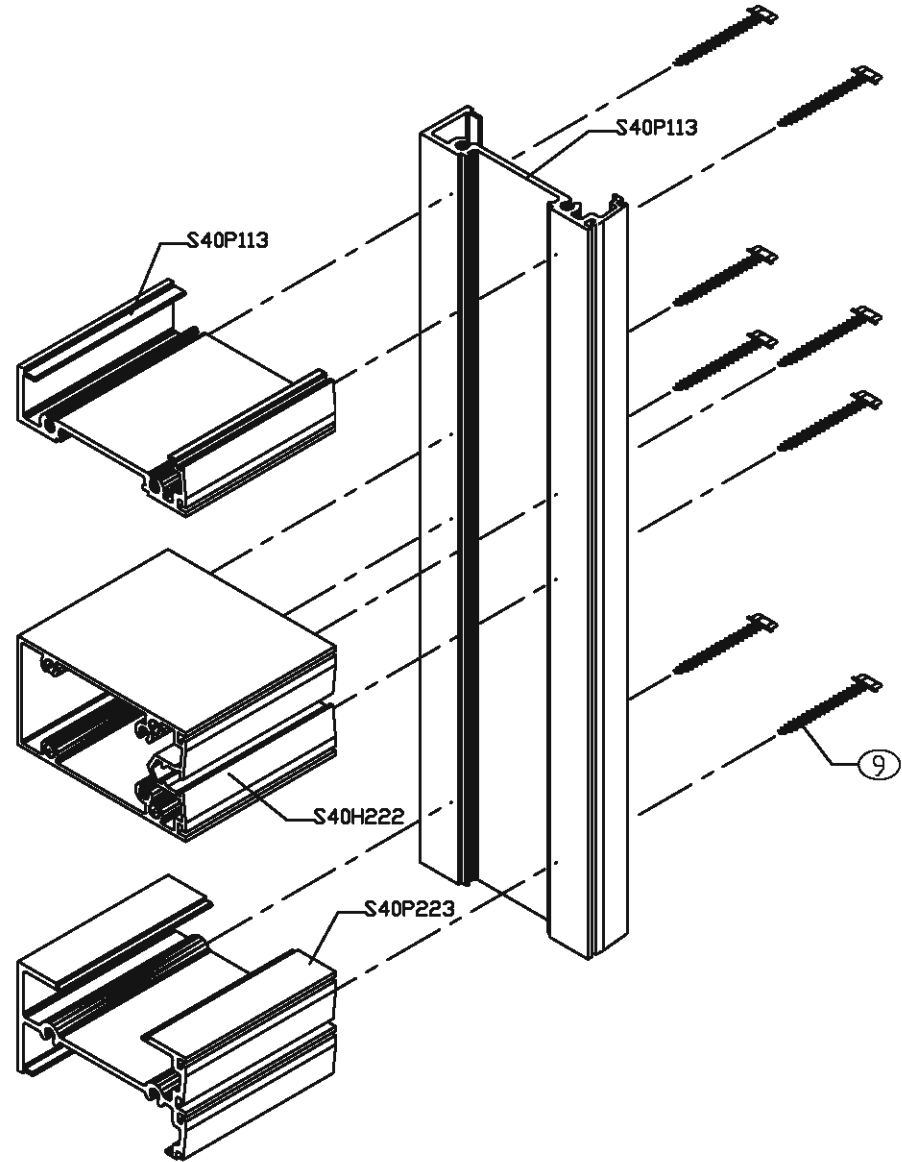
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joem

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MULLION ASSEMBLY



JAMB ASSEMBLY

LEGEND

- PERIMETER SEALANT SHALL BE #790 BLACK SILICONE AS MANUFACTURED BY DOW CORNING.
- GLASS TO GLASS WEATHERSEALS SHALL BE #790 BLACK SILICONE AS MANUFACTURED BY DOW CORNING.
- SHOP APPLIED STRUCTURAL SILICONE SHALL BE #983 BLACK AS MANUFACTURED BY DOW CORNING. $\frac{3}{8}$ " THK MIN BY $\frac{5}{8}$ " LONG MIN).
- TUNDRA OPEN CELL FOAM, MANUFACTURED BY ITP CORPORATION.
- POLYPROPYLENE STRUCTURAL GLAZING SPACER, PART #-CTC0961.
- $\frac{3}{16}$ " X 1" TEK SCREW AT 24" OC ON UNSUPPORTED JAMB.
- C3X6 STEEL STIFFENER AT 116" LONG, SHIMMED SNUG IN MULLION AT 16" ON CENTER.
- MULLION TO HORIZONTAL FASTENERS TO BE HEX HEAD 304 ALLOY STAINLESS STEEL #14X1-1/2" LONG.
- JAMB TO HORIZONTAL FASTENERS TO BE HEX HEAD 304 ALLOY STAINLESS STEEL #14X2" LONG.
- S40G111 - 4" LONG SETTING PIECE (INSULATED GLASS) AT 1/4" POINTS.

ALLOYS

S40M112	6005-T5
S40M111	6005-T5
B31B057	6005-T5
S40P113	6005-T5
S40P223	6005-T5
S40H222	6005-T5
S04C182	6005-T5
T22T412	6005-T5
S40G111	6005-T5

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