

HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS

GENERAL NOTES:

- HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS, SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2020 (7th EDITION) OF THE FLORIDA BUILDING CODE. PRODUCT MAY BE INSTALLED WITHIN HIGH VELOCITY HURRICANE ZONES OR OUT OF IT. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTIONS 1620 & 1609 OF THE ABOVE MENTIONED CODE, USING ASCE 7-16 AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 2 BELOW. IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-16 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 2 BELOW.

IN ORDER TO VERIFY THAT ANCHORS ON THIS P.E.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. FASTENERS SPACING TO WOOD HAS BEEN DETERMINED IN ACCORDANCE WITH N.D.S. 2018 AND OR AVAILABLE TEST DATA FROM MANUFACTURER.
THIS PRODUCT'S ADEQUACY FOR IMPACT AND WIND RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER PROTOCOLS TAS-201, TAS-202, TAS-203 & AAMA 501 (PER SECTION 2411.3.2.1.1.), PER FENESTRATION TESTING LABORATORY REPORT # 6179 AND AS PER SUBMITTED STRUCTURAL CALCULATIONS, PERFORMED AS PER SECTIONS 1616 & 1604 OF THE FLORIDA BUILDING CODE.
- MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR THIS PRODUCT SHALL BE AS SHOWN ON SHEETS 5 THRU 15 & 23 FOR OPTIONAL SYSTEM # 1 AND FROM SHEETS 31 THRU 44A FOR OPTIONAL SYSTEM # 2.
- THIS PRODUCT WILL NOT REQUIRE AN APPROVED HURRICANE PROTECTION DEVICE.
- THIS PRODUCT IS APPROVED FOR WATER INFILTRATION AT 19.5 p.s.f.
- THIS PRODUCT COMPLIES WITH SECTION 2406 OF THE FLORIDA BUILDING CODE.
- ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY AND TEMPER. THE THICKNESS OF ALL EXTRUSIONS SHALL BE AS SHOWN ON SHEETS 2, 26 & 27 OF THIS DRAWING.
- PROVIDE 1/4" OR 3/8" MAX. LOAD BEARING SHIM SPACE (TYP.), WHEN ALLOWED BY THIS DRAWING.
- WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE BUILDING STRUCTURE. WOOD BUCKS MUST BE SOUTHERN PINE #2, G = 0.55. AND SHALL COMPLY WITH SECTIONS 2411.3.3.3 AND 2411.3.3.4 OF THE FLORIDA BUILDING CODE.
(8.1) 2 X WOOD BUCKS MUST BE ANCHORED PROPERLY TO EXISTING STRUCTURE TO TRANSFER LOADS TO IT. ANCHORAGE IS INDEPENDENT OF GLASS WALL FRAME MUST BE SEPARATELY ANCHORED TO 2X WOOD WOOD BUCK FOLLOWING DETAILS ON THIS DRAWINGS.
(8.2) 1X WOOD BUCK (OR ANY WOOD BUCK LESS THAN 2X) MUST BE PROPERLY ANCHORED TO EXISTING STRUCTURE TO TRANSFER LOADS TO IT. GLASS WALL FRAME ANCHOR SHALL BE USED TO ATTACH 1X WOOD BUCK TO EXISTING STRUCTURE BY DRIVING ANCHOR THRU BOTH GLASS WALL FRAME & 1X WOOD BUCK INTO EXISTING STRUCTURE W/PROPER EMBEDMENT AND EDGE DISTANCE AS SHOWN ON THIS DRAWING.
(8.3) GLASS WALL FRAME MAY BE DIRECTLY CONNECTED TO EXISTING STRUCTURE WITH NO NEED OF WOOD BUCKS WHEN MASONRY OPENING IS NOT LARGER THAN ACTUAL GLASS WALL FRAME OVERALL DIMENSIONS. HOWEVER, SHIMS (SEE NOTE 7) MAY BE ALLOWED AT GLASS WALL FRAME ANCHOR LOCATION IF NEEDED.
- REMAINING COMPONENTS FOR THIS PRODUCT SHALL BE AS INDICATED ON BILL OF MATERIALS, SHEETS 3 (OPTIONAL SYSTEM # 1) & 27 (OPTIONAL SYSTEM # 2) OF THIS DRAWING.
- ALL ALUMINUM EXTRUSIONS IN CONTACT WITH STEEL, CONCRETE AND WOOD SHALL COMPLY WITH SECTION III-6 OF THE 2015 ALUMINUM DESIGN MANUAL.
- SEE ANCHOR SCHEDULES ON SHEETS 8 THRU 13 (OPTIONAL SYSTEM # 1) AND ON SHEETS 33 THRU 43 (OPTIONAL SYSTEM # 2) FOR ANCHOR TYPE IDENTIFICATION AND SPACING.
- SHOP DRAWINGS PREPARED BASED ON THIS APPROVAL AND TAKING INTO ACCOUNT THE SPECIFIC JOB CONDITIONS, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS PART OF THE PERMIT DOCUMENTS.
- STRUCTURAL SUBSTRATES NOTED ON THIS DRAWING AS "EXISTING BY OTHERS", MUST WITHSTAND THE LOADS IMPOSED BY THIS PRODUCT.
- PRODUCT'S MANUFACTURER LABEL SHALL BE PLACED ON A READILY VISIBLE LOCATION AT PRODUCE IN ACCORDANCE WITH SECTION 1709.5 OF THE FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY UNIT.
- (A) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
(B) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
(C) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.E.D., SHALL SUBMIT TO THIS LATTER SITE SPECIFIC DRAWING FOR REVIEW.
(E) ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

INSTRUCTIONS:

- STEP 1:** DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BUILDING HEIGHT, WIND ZONE, USING APPLICABLE ASCE 7 STANDARD.
- STEP 2:** GO TO SCHEDULE ON SHEETS 5, 5A (OPTIONAL SYSTEM # 1) & 31, 31A (OPTIONAL SYSTEM # 2) TO DETERMINE MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) CAPACITY OF DESIRED GLASS SIZE BASED ON GLASS PANEL DIMENSIONS.
- STEP 3:** DETERMINE MAXIMUM INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) FOR A GIVEN MULLION EFFECTIVE SPACING "b", ON SCHEDULE ON SHEETS 6, 7 (OPTIONAL SYSTEM # 1) & 32, 32A (OPTIONAL SYSTEM # 2) AND SELECT ANCHOR OPTION W/ A.S.D. DESIGN PRESSURE RATING EQUAL OR GREATER THAN A.S.D. DESIGN WIND LOAD SPECIFIED IN STEP 1 USING SCHEDULES ON SHEETS 8 THRU 13 (OPTIONAL SYSTEM # 1) AND 33 THRU 43 (OPTIONAL SYSTEM # 2).
- STEP 4:** USING SCHEDULES ON SHEETS 14, 15 (OPTIONAL SYSTEM # 1) & 44, 44A (OPTIONAL SYSTEM # 2), VERIFY MAXIMUM A.S.D. DESIGN PRESSURE RATING OF HORIZONTAL MULLIONS (IF USED) FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O.".
- STEP 5:** THE LOWEST VALUE OF A.S.D. DESIGN PRESSURE RATINGS RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO THE ENTIRE SYSTEM.

THIS DRAWING SHALL ONLY BE USED TO
OBTAIN PERMITS IN THE STATE OF FLORIDA



FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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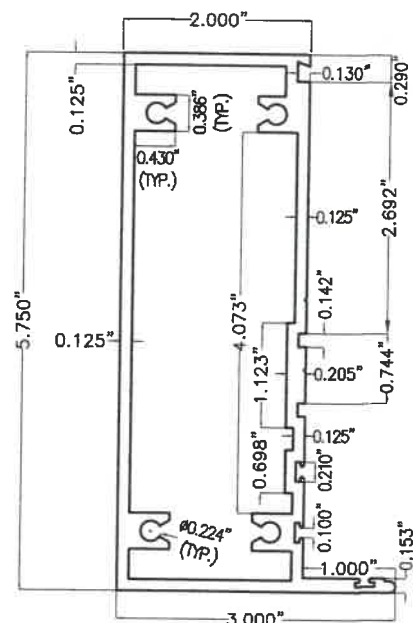
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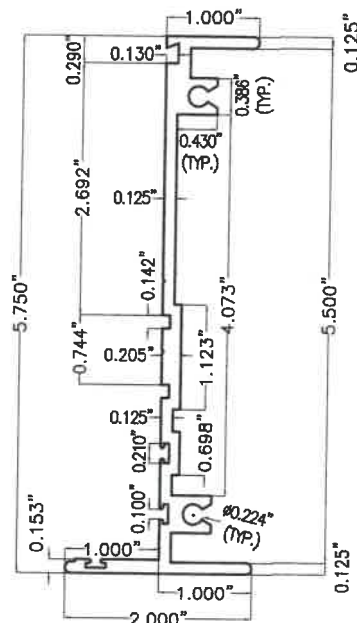
HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS						M.P. DRAWN BY
 290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com						8/26/2021 DATE
						21-118 DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	
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2	-	-	4	-	-	
SHEET 1 OF 51						

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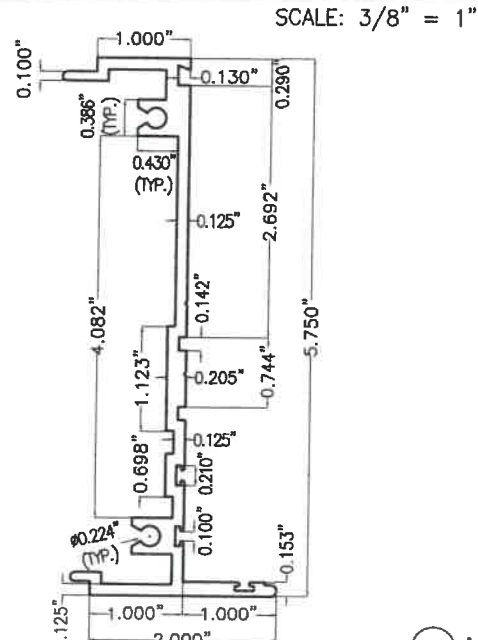
COMPONENTS FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000



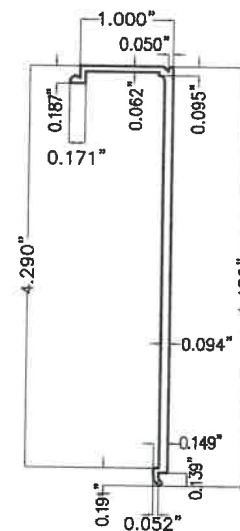
① FRAME JAMB, HEAD & SILL
(1/8" THICK)



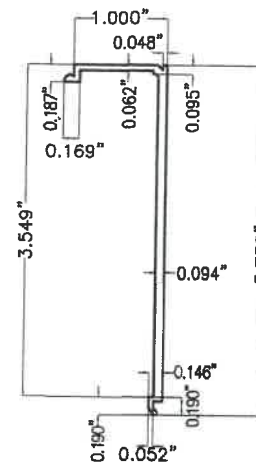
② FEMALE MULLION
(1/8" THICK)



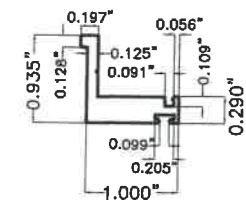
3 MALE MULLION
(1/8" THICK)



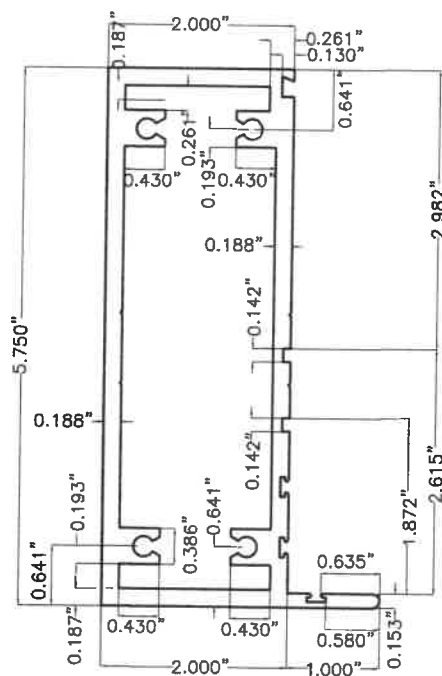
④ LAMINATED WINDOW COVER



4A INSULATED WINDOW COVER

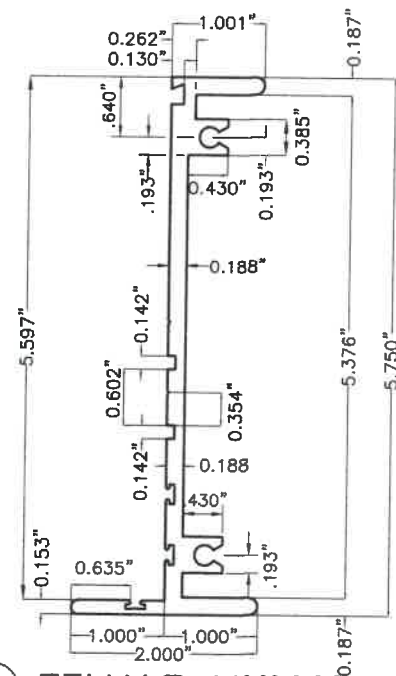


5 GLAZING BEAD ANGLE
6063-T6 ALUMINUM ALLOY

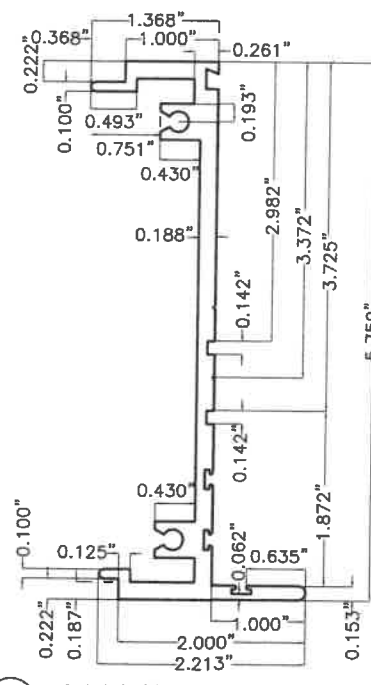


2.000 1.000

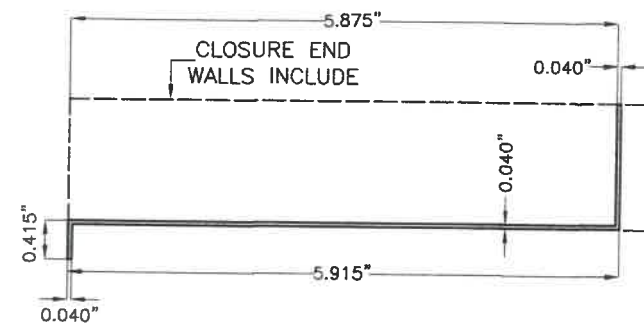
(15) FRAME JAMB, HEAD & SILL
(3/16" THICK)



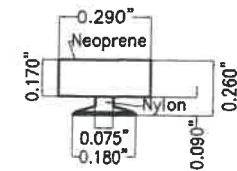
2.000
 (16) FEMALE MULLION
(3/16" THICK)



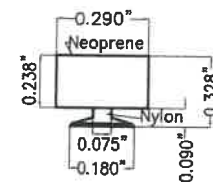
17 MALE MULLION
(3/16" THICK)



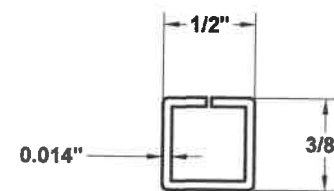
18 SILL FLASHING
(OPTIONAL)
3105-H14 ALUMINUM ALLOY



6 **SOLID RUBBER GASKET**
NEOPRENE/NYLON
N.T.S.



6A SOLID RUBBER GASKET
NEOPRENE/NYLON
N.T.S.



19 INSULATED GLASS
UNIT SPACER
NTS

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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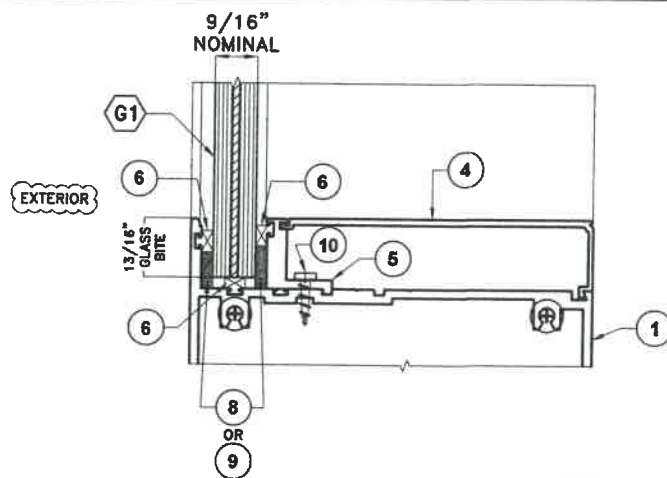
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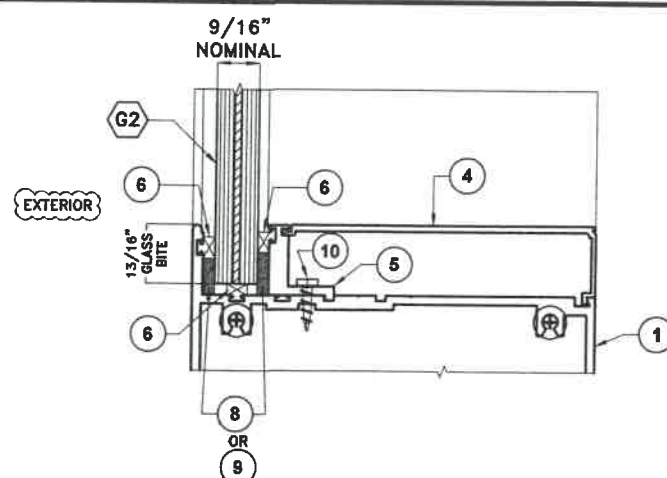
SHEET 2 OF 51

COMPONENTS: OPTIONAL SYSTEM # 1

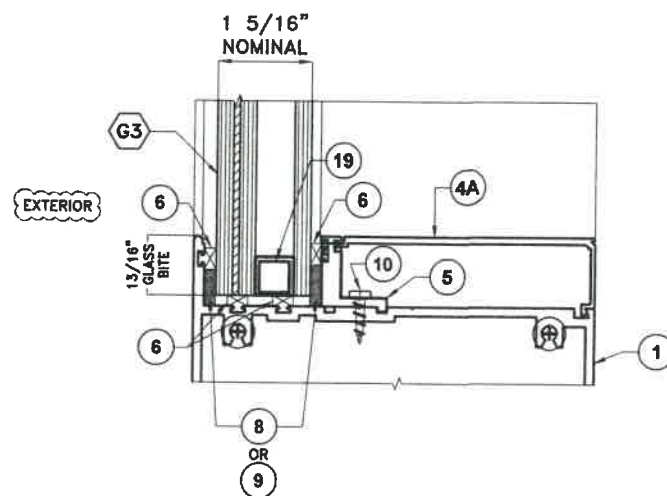
(3.116) THICK
 WALTER A. TILLIT JR.
 LICENSE
 No 44167
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER
 8/1/2022
 P.E. SEAL/SIGNATURE/DATE



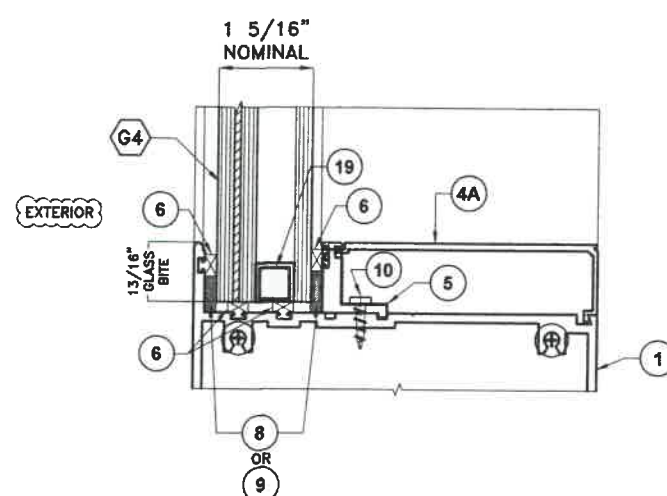
GLAZING DETAIL FOR G1



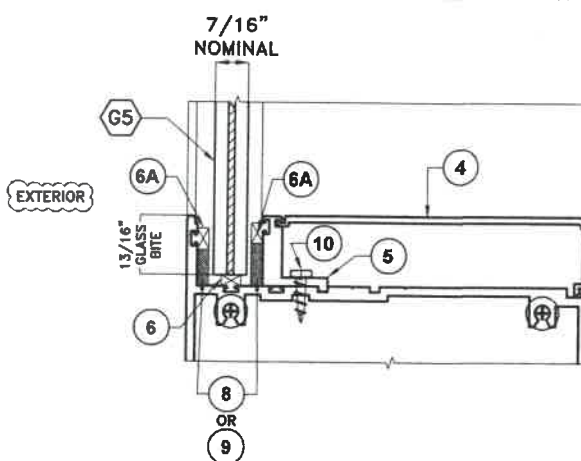
GLAZING DETAIL FOR G2



GLAZING DETAIL FOR G3



GLAZING DETAIL FOR G4



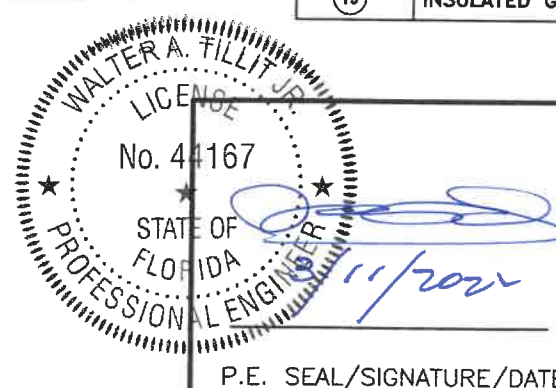
GLAZING DETAIL FOR G5

GLAZING DETAILS: OPTIONAL SYSTEM # 1

SCALE: 3/8" = 1"

BILL OF MATERIALS: OPTIONAL SYSTEM # 1

ITEM #	DESCRIPTION	DIMENSIONS & REMARKS	MATERIAL
1	FRAME JAMB, HEAD & SILL	5.75"x3"x0.125" THK.	6063-T6 ALUMINUM
2	FEMALE MULLION	5.75"x2"x0.125" THK.	6063-T6 ALUMINUM
3	MALE MULLION	5.75"x2"x0.125" THK.	6063-T6 ALUMINUM
4	LAMINATED WINDOW COVER	4.682"x1"xVARIES THK.	6063-T6 ALUMINUM
4A	INSULATED WINDOW COVER	3.941"x1"xVARIES THK.	6063-T6 ALUMINUM
5	GLAZING BEAD ANGLE	0.929"x0.906"xVARIES THK.	6063-T6 ALUMINUM
6	SOLID RUBBER GASKET	0.260"x0.290"xVARIES THK.	NEOPRENE/NYLON
6A	SOLID RUBBER GASKET	0.328"x0.290"xVARIES THK.	NEOPRENE/NYLON
8	STRUCTURAL SILICONE DOW CORNING 995	ALL AROUND GLASS	SILICONE OPTIONAL TO 9
9	STRUCTURAL SILICONE DOW CORNING 795	ALL AROUND GLASS	SILICONE OPTIONAL TO 8
10	GLAZING BEAD ANGLE ASSEMBLY SCREW	1/4"x1" TEK SCREW @ 8" o.c.	STEEL
11	SPLINE ASSEMBLY SCREW	1/4"x2 3/4" F.H. TEK SCREW	STEEL
11A	ARCH SPLINE ASSEMBLY SCREW	1/4"x2 3/4" F.H. TEK SCREW	STEEL
12	JOINT DETAIL (METAL TO METAL) GASKET 1/16 XLP W/ RUBBER BASED PSA	OPTIONAL TO 13 FOR INTERNAL JOINT. MANUFACTURED BY FRANK LOWE RUBBER & GASKET CO.	CLOSED CELL POLYETHYLENE FOAM TAPE COATED IN ONE SIDE
13	STRUCTURAL SILICONE 795 DOW CORNING	OPTIONAL TO 12 FOR INTERNAL JOINT, PLUS EXTERIOR FRAME SEALANT ALL AROUND PERIMETER	SILICONE
14	MULLION ASSEMBLY BOLT	1/4"x20x2 1/2" THRU BOLT W/ NUT @ 12" O.C. (START @ 6" O.C. FROM TOP/BOTTOM)	STAINLESS STEEL AISI 304 SERIES
15	FRAME JAMB, HEAD & SILL	5.75"x3"x0.188" THK.	6063-T6 ALUMINUM
16	FEMALE MULLION	5.75"x2"x0.188" THK.	6063-T6 ALUMINUM
17	MALE MULLION	5.75"x2"x0.188" THK.	6063-T6 ALUMINUM
18	SILL FLASHING (OPTIONAL)	1.340" MIN.x5.915" MIN.x0.415" MIN.x0.040" THK.	3105-H14 ALUMINUM
G1	9/16" NOMINAL LAMINATED GLASS W/ 1/4" H.S. GLASS + 0.090" SENTRYGLAS® INTERLAYER + 1/4" H.S. GLASS.	KURARAY AMERICA, INC.	GLASS
G2	9/16" NOMINAL LAMINATED GLASS W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER + 1/4" H.S. GLASS.	KURARAY AMERICA, INC.	GLASS
G3	1 5/16" NOMINAL INSULATED GLASS W/ 1/4" H.S. GLASS + 0.090" SENTRYGLAS® INTERLAYER + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS	KURARAY AMERICA, INC.	GLASS
G4	1 5/16" NOMINAL INSULATED GLASS W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS	KURARAY AMERICA, INC.	GLASS
G5	7/16" NOMINAL LAMINATED GLASS W/ 3/16" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER + 3/16" H.S. GLASS.	KURARAY AMERICA, INC.	GLASS
19	INSULATED GLASS UNIT SPACER	1/2"x 0.014" THK. (SEE SHT. 2)	3105-H24 ALUMINUM



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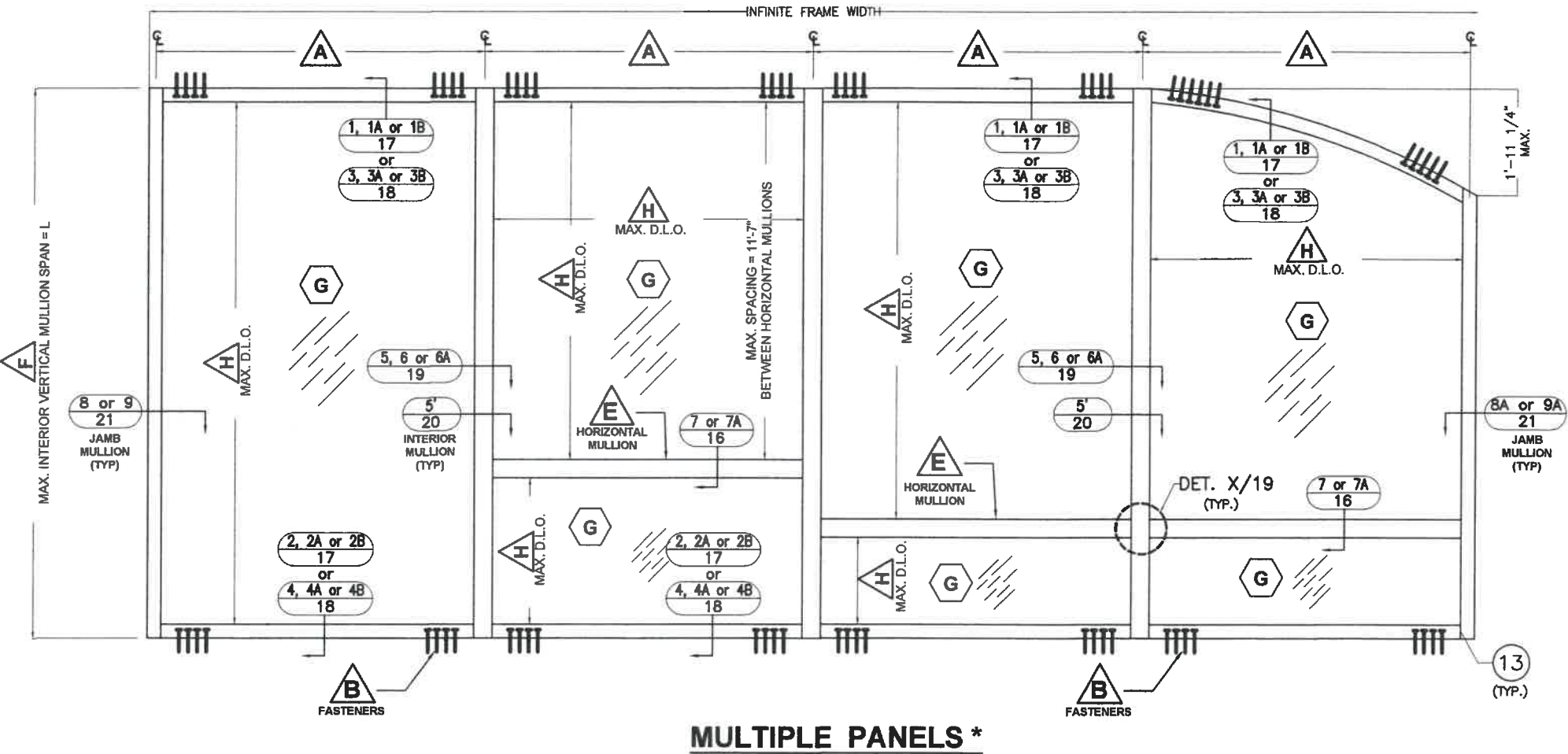
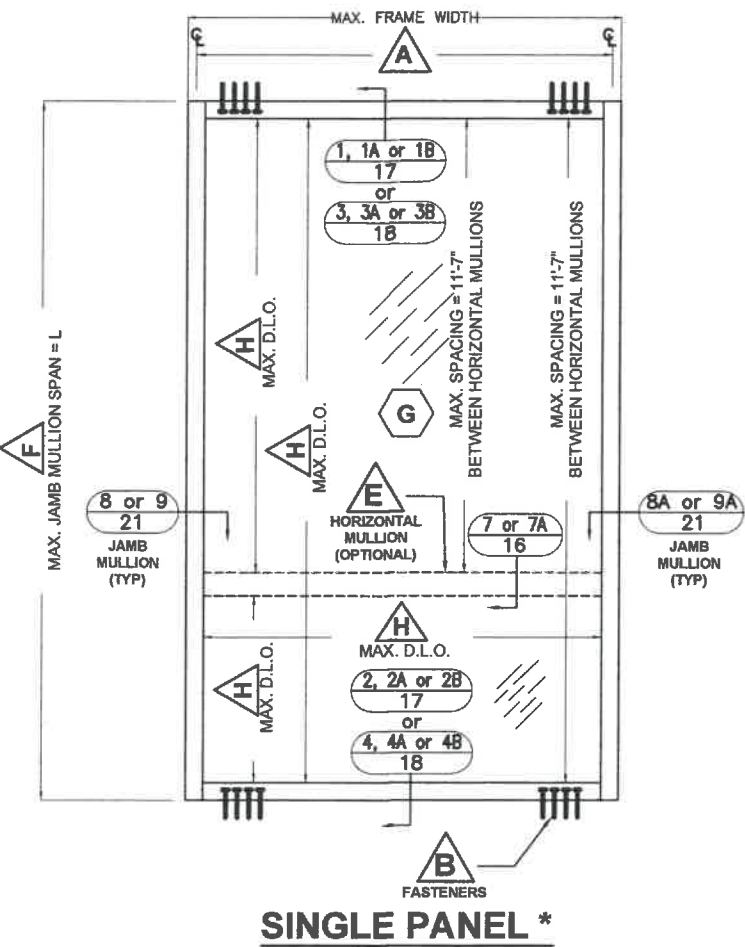
8/26/2021
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21-118
DRAWING No

SHEET 3 OF 51

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2	-	-	4	-	-

**ELEVATIONS FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000:
OPTIONAL SYSTEM # 1**



FOOT NOTES:

- A** FOR MAXIMUM INTERIOR MULLION AND JAMB MULLION SPACING SEE SHEETS 6 & 7.
- B** FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 8 THRU 13.
- E** USE OF HORIZONTAL MULLION LIMITED BY SCHEDULES ON SHEETS 14 & 15.
- F** FOR MAXIMUM INTERIOR VERTICAL MULLION AND JAMB MULLION SPAN SEE SHEETS 6 & 7.
- G** FOR GLAZING DETAILS SEE SHEET 3 AND SEE GLASS SCHEDULE ON SHEETS 5, 5A.
- H** FOR MAXIMUM D.L.O. SEE SCHEDULE ON SHEETS 5, 5A.

* NOTE: ELEVATIONS FOR SINGLE & MULTIPLE PANELS FIXED GLASS WALL SERIES 12000 MAY BE INSTALLED ROTATED 90° FROM ABOVE SHOWN ORIENTATION.



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2	-	-	4	-	-

M.P.
DRAWN BY

8/26/2021
DATE

21-118
DRAWING No

SHEET 4 OF 51

MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE *
OPTIONAL SYSTEM # 1

GLASS TYPE G1		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	+130.0 -140.0
18"	18" to 139"	+130.0 -140.0
20"	20" to 139"	+130.0 -140.0
22"	22" to 139"	+130.0 -140.0
24"	24" to 139"	+130.0 -140.0
26"	26" to 139"	+130.0 -140.0
28"	28" to 139"	+130.0 -140.0
30"	30" to 139"	+130.0 -140.0
32"	32" to 139"	+130.0 -140.0
34"	34" to 139"	+130.0 -140.0
36"	36" to 139"	+130.0 -140.0
38"	38" to 139"	+130.0 -140.0
40"	40" to 139"	+130.0 -140.0
42"	42" to 139"	+130.0 -140.0
44"	44" to 137"	+130.0 -120.0
46"	46" to 131"	+130.0 -116.0
48"	48" to 126"	+130.0 -140.0
	> 126" to 139"	±20.0
50"	50" to 121"	+130.0 -111.0
52"	52" to 116"	+130.0 -111.0
54"	54" to 112"	+130.0 -140.0
	> 112" to 139"	±20.0
56"	56" to 108"	+130.0 110.0
58"	58" to 104"	+130.0 -111.0
60"	60" to 98"	+130.0 -140.0
	> 98" to 139"	±20.0
62"	62" to 97"	+130.0 -114.0
64"	64" to 94"	+130.0 -110.4
	66" to 84"	+130.0 -140.0
66"	> 84" to 90"	±99.5
	> 90" to 139"	±20.0
68"	68" to 89"	+130.0 -103.9
70"	70" to 86"	+130.0 -101.0
	72" to 82"	+130.0 -140.0
72"	>82" to 84"	±91.0
	>84" to 139"	±20.0
74"	74" to 78"	+130.0 -95.5
76"	76" to 79.7"	+130.0 -93.0

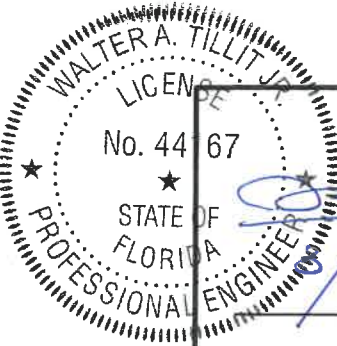
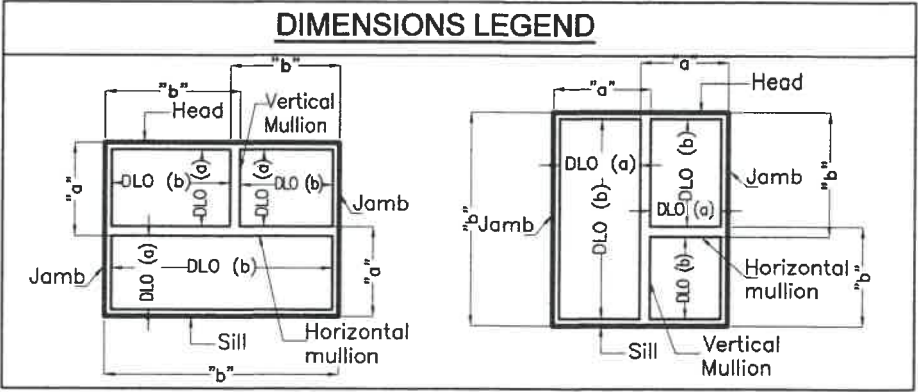
GLASS TYPE G2		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	±90.0
18"	18" to 139"	±90.0
20"	20" to 139"	±90.0
22"	22" to 139"	±90.0
24"	24" to 139"	±90.0
26"	26" to 139"	±90.0
28"	28" to 139"	±90.0
30"	30" to 139"	±90.0
32"	32" to 139"	±90.0
34"	34" to 139"	±90.0
36"	36" to 139"	±90.0
38"	38" to 132"	±90.0
40"	40" to 128"	±90.0
42"	42" to 120"	±90.0
	> 120" to 139"	±80.0
44"	44" to 117"	±90.0
	> 117" to 139"	±80.0
46"	46" to 112"	±90.0
	> 112" to 139"	±80.0
48"	48" to 107"	±90.0
	> 107" to 139"	±80.0
50"	50" to 103"	±90.0
52"	52" to 99"	±87.4
54"	54" to 95"	±84.1
56"	56" to 129"	±80.0
58"	58" to 124"	±80.0
60"	60" to 120"	±80.0
62"	62" to 116"	±80.0
64"	64" to 112"	±80.0
66"	66" to 108"	±79.6
68"	68" to 106"	±79.3
70"	70" to 103"	±79.3
72"	72" to 100"	±79.5
74"	74" to 97"	±79.8
76"	76" to 95"	±78.4
78"	78" to 92.5"	±76.4
80"	80" to 90"	±74.5
82"	82" to 88"	±72.6
84"	84" to 86"	±70.9

* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS
GIVEN "a" & "b"

SIDE	MAX. DAY LIGHT OPENING	
	(D.L.O.) Formula at vertical & horizontal mullions	(D.L.O.) Formula at jamb, head & sill frames
MAX. D.L.O. (a) (SHORT SIDE)	"a" - 6.00"	"a" - 6.00"
MAX. D.L.O. (b) (LONG SIDE)	"b" - 6.00"	"b" - 6.00"

NOTE:
1. SEE SHEET 3 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS ON BILL OF MATERIALS.

** SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b".
"a", "b", MAY BE ORIENTED IN ANY DIRECTION.



P.E. SEAL/SIGNATURE/DATE

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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8/26/2021
DATE

21-118
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 20-271	8/28/21	3	-	-
2	-	-	4	-	-

SHEET 5 OF 51

MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE *
OPTIONAL SYSTEM # 1

GLASS TYPE G3		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	+130.0 -140.0
18"	18" to 139"	+130.0 -140.0
20"	20" to 139"	+130.0 -140.0
22"	22" to 139"	+130.0 -140.0
24"	24" to 139"	+130.0 -140.0
26"	26" to 139"	+130.0 -140.0
28"	28" to 139"	+130.0 -140.0
30"	30" to 139"	+130.0 -140.0
32"	32" to 139"	+130.0 -140.0
34"	34" to 139"	+130.0 -140.0
36"	36" to 139"	+130.0 -140.0
38"	38" to 139"	+130.0 -140.0
40"	40" to 139"	+130.0 -140.0
42"	42" to 139"	+130.0 -140.0
44"	44" to 137"	+130.0 -126.0
46"	46" to 131"	+130.0 -121.0
48"	48" to 122"	+130.0 -140.0
	> 122" to 139"	±20.0
50"	50" to 121"	+130.0 -113.0
52"	52" to 116"	+130.0 -113.0
54"	54" to 108"	+130.0 -140.0
	> 108" to 139"	±20.0
56"	56" to 108"	+130.0 -108.0
58"	58" to 104"	+130.0 -117.0
60"	60" to 98"	+130.0 -140.0
	> 98" to 139"	±20.0
62"	62" to 96"	+130.0 -114.0
64"	64" to 94"	+130.0 -110.4
66"	66" to 87.5"	+130.0 -140.0
	> 87.5" to 90"	±107.1
	> 90" to 139"	±20.0
68"	68" to 89"	+130.0 -103.9
70"	70" to 86"	+130.0 -101.0
72"	72" to 80.5"	+130.0 -140.0
	>80.5" to 84"	±98.1
	>84" to 139"	±20.0
74"	74" to 81"	+130.0 -95.5
76"	76" to 79"	+130.0 -93.0

GLASS TYPE G4		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	±80.0
18"	18" to 139"	±80.0
20"	20" to 139"	±80.0
22"	22" to 139"	±80.0
24"	24" to 139"	±80.0
26"	26" to 139"	±80.0
28"	28" to 139"	±80.0
30"	30" to 139"	±80.0
32"	32" to 139"	±80.0
34"	34" to 139"	±80.0
36"	36" to 139"	±80.0
38"	38" to 139"	±80.0
40"	40" to 139"	±80.0
42"	42" to 139"	±80.0
44"	44" to 139"	±80.0
46"	46" to 139"	±80.0
48"	48" to 139"	±80.0
50"	50" to 139"	±80.0
52"	52" to 138"	±80.0
54"	54" to 133.5"	±80.0
56"	56" to 129"	±80.0
58"	58" to 124"	±80.0
60"	60" to 120"	±80.0
62"	62" to 116"	±80.0
64"	64" to 112"	±80.0
66"	66" to 108"	±80.0
	> 108" to 109.5"	±79.6
68"	68" to 106"	±79.3
70"	70" to 103"	±79.3
72"	72" to 96"	±80.0
	> 96" to 100"	±79.5
74"	74" to 97"	±79.8
76"	76" to 95"	±78.4
78"	78" to 91"	±76.1
80"	80" to 90"	±74.5
82"	82" to 88"	±72.6
84"	84" to 86"	±70.9

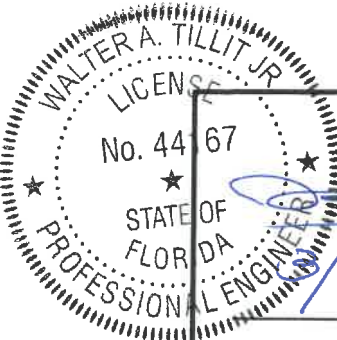
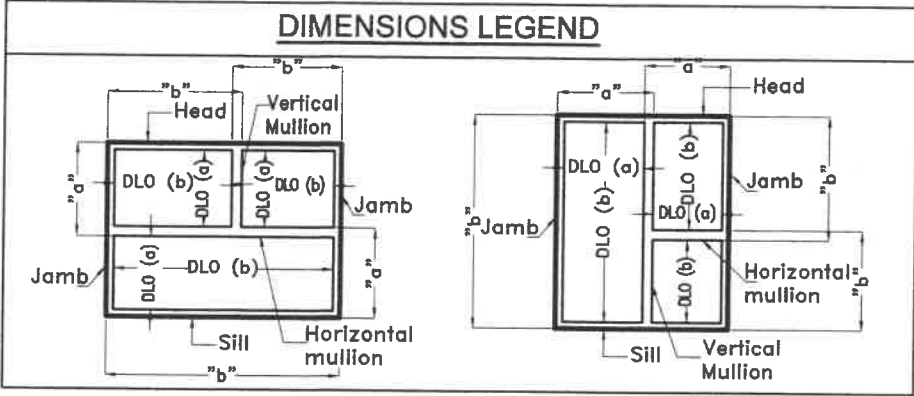
GLASS TYPE G5		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	±90.0
18"	18" to 139"	±90.0
20"	20" to 139"	±90.0
22"	22" to 139"	±90.0
24"	24" to 139"	±90.0
26"	26" to 139"	±90.0
28"	28" to 139"	±90.0
30"	30" to 139"	±90.0
32"	32" to 139"	±90.0
34"	34" to 139"	±90.0
36"	36" to 139"	±90.0
38"	38" to 132"	±90.0
40"	40" to 128"	±90.0
42"	42" to 120"	±90.0
44"	44" to 117"	±90.0
46"	46" to 111"	±90.0
48"	48" to 107"	±90.0
50"	50" to 103"	±90.0
52"	52" to 99"	±90.0
54"	54" to 95"	±84.1
56"	56" to 91"	±81.1
58"	58" to 88"	±78.3
60"	60" to 85.5"	±75.7
62"	62" to 83"	±73.3
64"	64" to 80"	±71.2
66"	66" to 78"	±68.8
68"	68" to 75"	±66.8
70"	70" to 73"	±64.3

* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b"

SIDE	MAX. DAY LIGHT OPENING	
	(D.L.O.) Formula at vertical & horizontal mullions	(D.L.O.) Formula at jamb, head & sill frames
MAX. D.L.O. (a) (SHORT SIDE)	"a" - 6.00"	"a" - 6.00"
MAX. D.L.O. (b) (LONG SIDE)	"b" - 6.00"	"b" - 6.00"

NOTE:
1. SEE SHEET 3 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS ON BILL OF MATERIALS.

** SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b".
"a", "b", MAY BE ORIENTED IN ANY DIRECTION.



P.E. SEAL/SIGNATURE/DATE

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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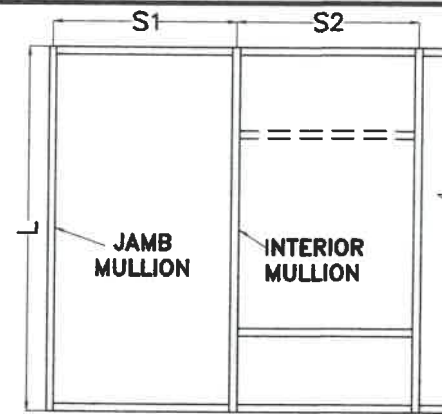
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 20-271	8/28/21	3	-	-
2	-	-	4	-	-

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8/26/2021
DATE

21-118
DRAWING No

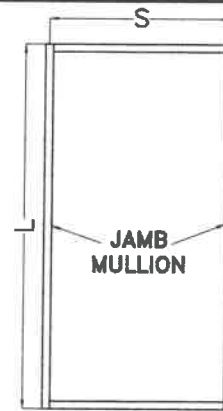
SHEET 5A OF 51



ELEVATION W/ INTERIOR MULLION @ MULTIPLE PANELS

"L" = MAXIMUM INTERIOR MULLION SPAN

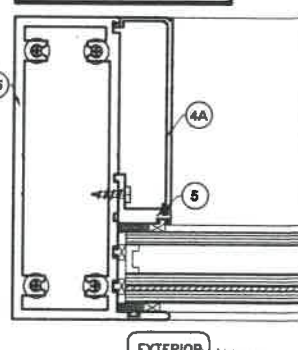
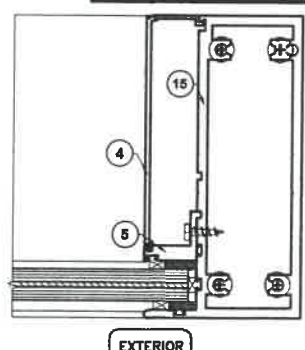
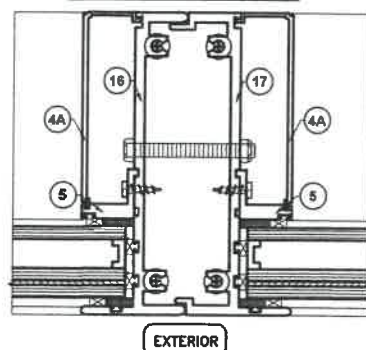
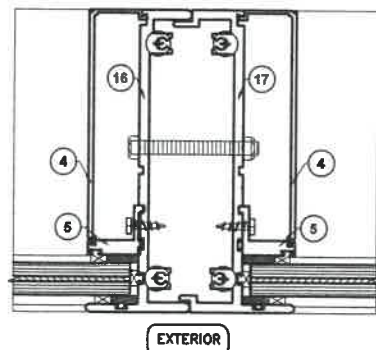
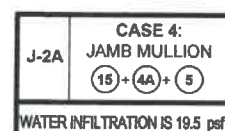
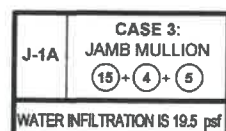
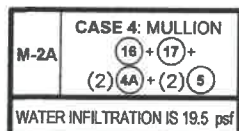
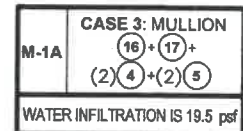
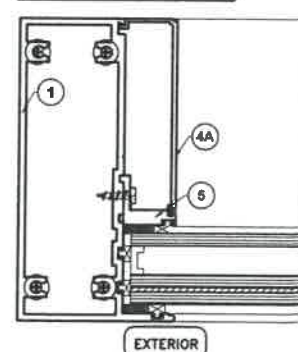
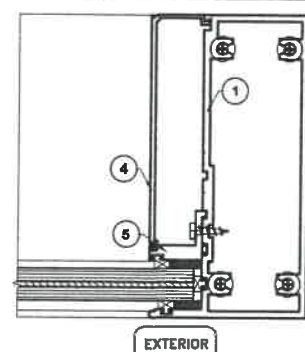
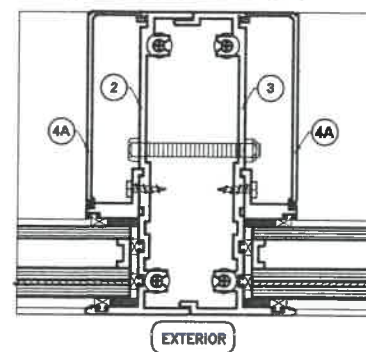
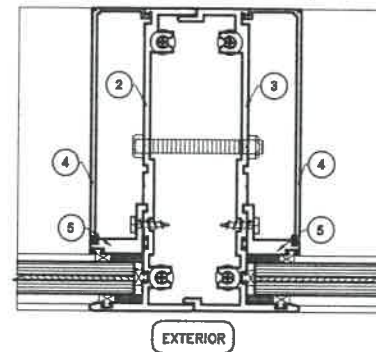
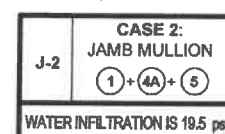
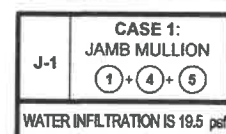
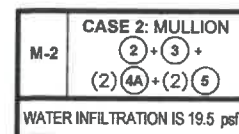
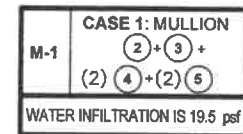
EFFECTIVE SPACING: "b" = $\frac{S_1 + S_2}{2}$, FOR MULTIPLE PANELS



ELEVATION W/ JAMB MULLION @ SINGLE PANEL

"L" = MAXIMUM JAMB MULLION SPAN

EFFECTIVE SPACING: "b" = S, FOR SINGLE PANEL.



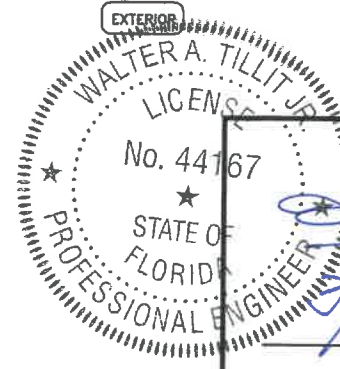
OPTIONAL SYSTEM # 1

CASES DEFINITIONS

- CASE 1: M-1** INTERIOR MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
J-1 JAMB MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 2: M-2** INTERIOR MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
J-2 JAMB MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)
- CASE 3: M-1A** INTERIOR MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
J-1A JAMB MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 4: M-2A** INTERIOR MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
J-2A JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)

MAXIMUM INTERIOR MULLION & JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b"					
MAXIMUM DESIGN PRESSURE RATING "W" (psf)	MAX. EFFECTIVE SPACING "b" (Ft-in)	MAXIMUM 1/8" THICK MULLION SPAN "L"(FT)		MAXIMUM 3/16" THICK MULLION SPAN "L"(FT)	
		Laminated	Insulated	Laminated	Insulated
		Glass	Glass	Glass	Glass
		CASE 1	CASE 2	CASE 3	CASE 4
		M-1/J-1	M-2/J-2	M-1A/J-1A	M-2A/J-2A
± 40.0	3'-6"	15'-9"	15'-9"	15'-9"	15'-9"
	4'-0"	15'-9"	15'-9"	15'-9"	15'-9"
	4'-6"	15'-9"	15'-6"	15'-9"	15'-9"
	5'-0"	15'-4"	14'-11"	15'-9"	15'-8"
	5'-6"	14'-10"	14'-6"	15'-7"	15'-3"
	6'-0"	14'-5"	14'-1"	15'-1"	14'-9"
	6'-6"	14'-0"	13'-8"	14'-9"	14'-5"
7'-0"	13'-8"	13'-4"	14'-4"	14'-0"	
± 45.0	3'-6"	15'-9"	15'-9"	15'-9"	15'-9"
	4'-0"	15'-9"	15'-6"	15'-9"	15'-9"
	4'-6"	15'-3"	14'-10"	15'-9"	15'-8"
	5'-0"	14'-9"	14'-4"	15'-5"	15'-1"
	5'-6"	14'-3"	13'-11"	15'-0"	14'-8"
	6'-0"	13'-10"	13'-6"	14'-6"	14'-3"
	6'-6"	14'-0"	13'-8"	14'-9"	14'-5"
7'-0"	13'-2"	12'-10"	13'-10"	13'-6"	
± 50.0	3'-6"	15'-9"	15'-7"	15'-9"	15'-9"
	4'-0"	15'-4"	14'-11"	15'-9"	15'-8"
	4'-6"	14'-9"	14'-4"	15'-5"	15'-1"
	5'-0"	14'-3"	13'-10"	14'-11"	14'-7"
	5'-6"	13'-9"	13'-5"	14'-5"	14'-2"
	6'-0"	13'-5"	13'-0"	14'-0"	13'-9"
	6'-6"	13'-0"	12'-8"	13'-8"	13'-4"
7'-0"	12'-7"	12'-5"	13'-4"	13'-0"	
± 55.0	3'-6"	15'-6"	15'-1"	15'-9"	15'-9"
	4'-0"	14'-10"	14'-6"	15'-7"	15'-3"
	4'-6"	14'-3"	13'-11"	15'-0"	14'-8"
	5'-0"	13'-9"	13'-5"	14'-5"	14'-2"
	5'-6"	13'-4"	13'-0"	14'-0"	13'-8"
	6'-0"	12'-11"	12'-8"	13'-7"	13'-4"
	6'-6"	12'-5"	12'-4"	13'-3"	12'-11"
7'-0"	12'-0"	11'-10"	12'-11"	12'-7"	
± 60.0	3'-6"	15'-1"	14'-8"	15'-9"	15'-5"
	4'-0"	14'-5"	14'-1"	15'-1"	14'-9"
	4'-6"	13'-10"	13'-6"	14'-6"	14'-3"
	5'-0"	13'-5"	13'-0"	14'-0"	13'-9"
	5'-6"	12'-11"	12'-8"	13'-7"	13'-4"
	6'-0"	12'-5"	12'-3"	13'-3"	12'-11"
	6'-6"	11'-11"	11'-9"	12'-10"	12'-6"
7'-0"	11'-6"	11'-4"	12'-4"	12'-0"	
± 65.0	3'-6"	14'-8"	14'-4"	15'-5"	15'-1"
	4'-0"	14'-0"	13'-8"	14'-9"	14'-5"
	4'-6"	13'-6"	13'-2"	14'-2"	13'-10"
	5'-0"	13'-0"	12'-8"	13'-8"	13'-4"
	5'-6"	12'-5"	12'-4"	13'-3"	12'-11"
	6'-0"	11'-11"	11'-9"	12'-10"	12'-6"
	6'-6"	11'-5"	11'-4"	12'-4"	12'-0"
7'-0"	11'-0"	10'-11"	11'-10"	11'-7"	

MAXIMUM INTERIOR MULLION & JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)					
MAXIMUM DESIGN PRESSURE RATING	MAX. EFFECTIVE SPACING	MAXIMUM 1/8" THICK MULLION SPAN "L"(FT)		MAXIMUM 3/16" THICK MULLION SPAN "L"(FT)	
		Laminated		Laminated	
		Glass	Glass	Glass	Glass
		CASE 1	CASE 2	CASE 3	CASE 4
"W" (psf)	"b" (Ft-in)	M-1/J-1	M-2/J-2	M-1A/J-1A	M-2A/J-2A
± 70.0	3'-6"	14'-4"	13'-11"	15'-0"	14'-8"
	4'-0"	13'-8"	13'-4"	14'-4"	14'-0"
	4'-6"	13'-2"	12'-10"	13'-10"	13'-6"
	5'-0"	12'-7"	12'-5"	13'-4"	13'-0"
	5'-6"	12'-0"	11'-10"	12'-11"	12'-7"
	6'-0"	11'-6"	11'-4"	12'-4"	12'-0"
	6'-6"	11'-0"	10'-11"	11'-10"	11'-7"
7'-0"	10'-7"	10'-8"	11'-5"	11'-2"	
± 75.0	3'-6"	14'-0"	13'-8"	14'-8"	14'-4"
	4'-0"	13'-5"	13'-0"	14'-0"	13'-9"
	4'-6"	12'-9"	12'-6"	13'-6"	13'-2"
	5'-0"	12'-2"	12'-0"	13'-0"	12'-9"
	5'-6"	11'-7"	11'-6"	12'-5"	12'-2"
	6'-0"	11'-1"	11'-0"	11'-11"	11'-7"
	6'-6"	10'-8"	10'-7"	11'-5"	11'-2"
7'-0"	10'-3"	10'-2"	11'-0"	10'-9"	
± 80.0	3'-6"	13'-8"	13'-4"	14'-4"	14'-0"
	4'-0"	13'-1"	12'-9"	13'-9"	13'-5"
	4'-6"	12'-5"	12'-3"	13'-3"	12'-11"
	5'-0"	11'-9"	11'-8"	12'-8"	12'-4"
	5'-6"	11'-2"	11'-1"	12'-1"	11'-9"
	6'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	6'-6"	10'-0"	10'-0"	10'-0"	10'-0"
7'-0"	9'-11"	9'-10"	10'-0"	10'-0"	
± 85.0	3'-6"	13'-5"	13'-1"	14'-1"	13'-9"
	4'-0"	12'-9"	12'-6"	13'-6"	13'-2"
	4'-6"	12'-0"	11'-11"	12'-11"	12'-7"
	5'-0"	11'-5"	11'-4"	12'-3"	11'-11"
	5'-6"	10'-10"	10'-9"	11'-8"	11'-5"
	6'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	6'-6"	10'-0"	9'-11"	10'-0"	10'-0"
7'-0"	9'-8"	9'-7"	10'-0"	10'-0"	
± 90.0	3'-6"	13'-2"	12'-10"	13'-10"	13'-6"
	4'-0"	12'-5"	12'-3"	13'-3"	12'-11"
	4'-6"	11'-8"	11'-7"	12'-7"	12'-3"
	5'-0"	11'-1"	11'-0"	11'-11"	11'-7"
	5'-6"	10'-7"	10'-6"	11'-4"	11'-1"
	6'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	6'-6"	9'-9"	9'-8"	10'-0"	10'-0"
7'-0"	9'-4"	9'-3"	10'-0"	9'-10"	
± 95.0	3'-6"	12'-11"	12'-7"	13'-7"	13'-3"
	4'-0"	12'-1"	11'-11"	13'-0"	12'-8"
	4'-6"	11'-4"	11'-3"	12'-3"	11'-11"
	5'-0"	10'-9"	10'-8"	11'-7"	11'-4"
	5'-6"	10'-3"	10'-2"	11'-1"	10'-9"
	6'-0"	9'-10"	9'-9"	10'-0"	10'-0"
	6'-6"	9'-5"	9'-4"	10'-0"	9'-11"
7'-0"	9'-1"	9'-0"	9'-10"	9'-7"	



P.E. SEAL/SIGNATURE/DATE

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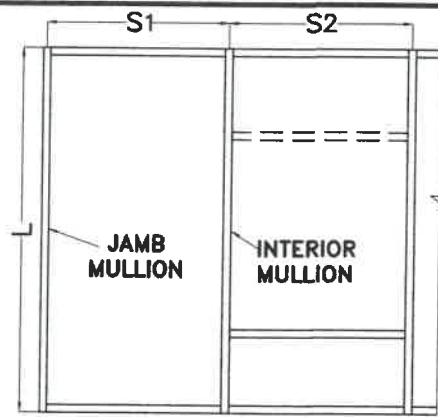
M.P.
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8/26/2021
 DATE

21-118
 DRAWING No

SHEET 6 OF 51

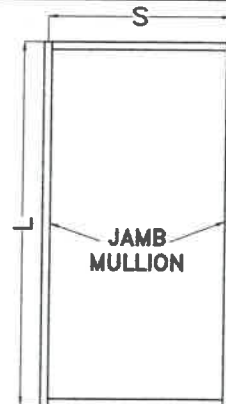
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1	OLD 20-271	8/26/21	3	-	-
2	-	-	4	-	-



ELEVATION W/ INTERIOR MULLION @ MULTIPLE PANELS

"L" = MAXIMUM INTERIOR MULLION SPAN

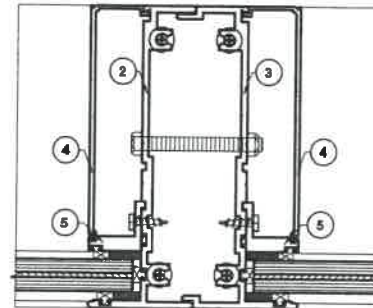
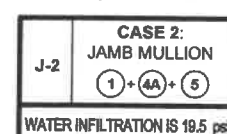
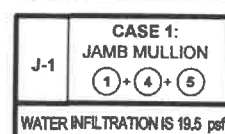
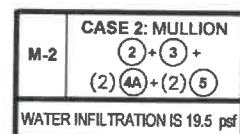
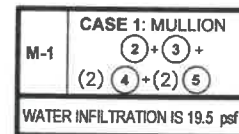
EFFECTIVE SPACING: "b" = $\frac{S_1 + S_2}{2}$, FOR MULTIPLE PANELS



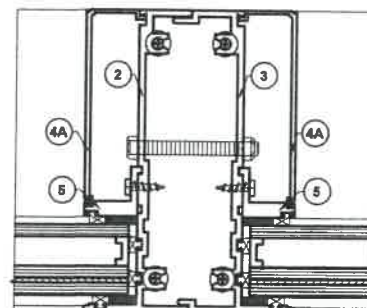
ELEVATION W/ JAMB MULLION @ SINGLE PANEL

"L" = MAXIMUM JAMB MULLION SPAN

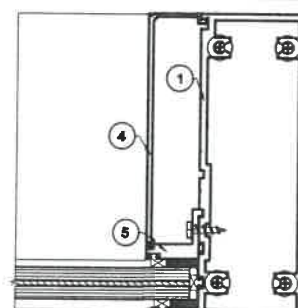
EFFECTIVE SPACING: "b" = S, FOR SINGLE PANEL



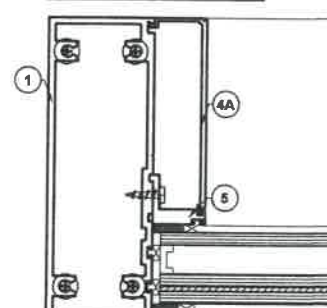
EXTERIOR



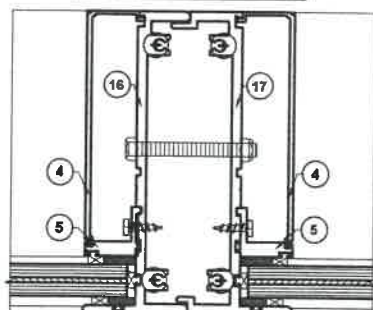
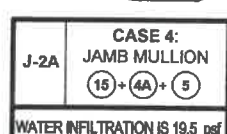
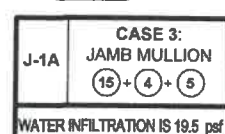
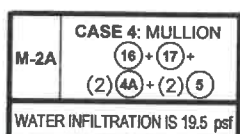
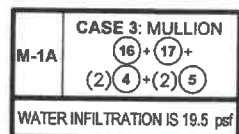
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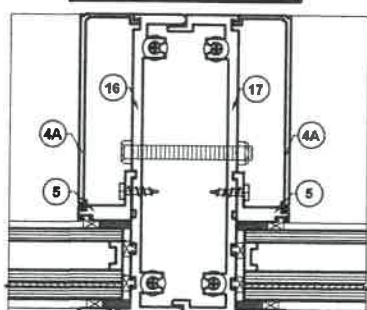
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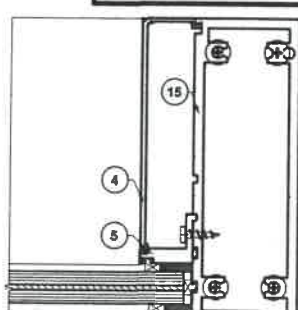
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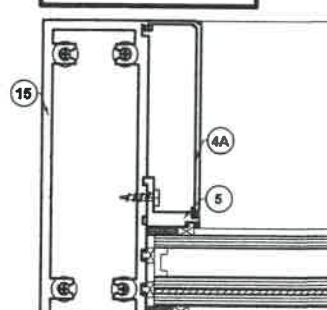
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EXTERIOR



EXTERIOR



EXTERIOR

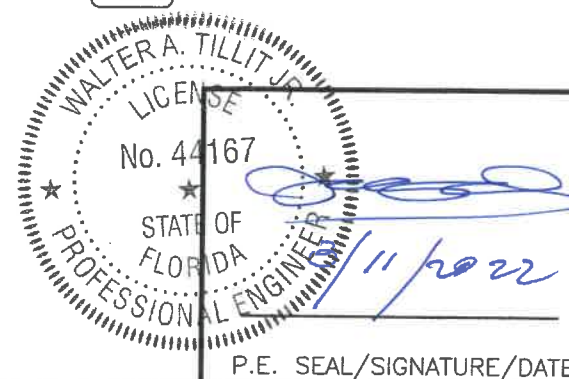
OPTIONAL SYSTEM # 1 (CONTINUED)

CASES DEFINITIONS

- CASE 1: M-1** INTERIOR MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
J-1 JAMB MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 2: M-2** INTERIOR MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
J-2 JAMB MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)
- CASE 3: M-1A** INTERIOR MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
J-1A JAMB MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 4: M-2A** INTERIOR MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
J-2A JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)

MAXIMUM INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)					
MAXIMUM DESIGN PRESSURE RATING "W" (psf)	MAX. EFFECTIVE SPACING "b" (ft-in)	MAXIMUM 1/8" THICK MULLION SPAN "L"(FT)		MAXIMUM 3/16" THICK MULLION SPAN "L"(FT)	
		Laminated Glass	Insulated Glass	Laminated Glass	Insulated Glass
		CASE 1 M-1/J-1	CASE 2 M-2/J-2	CASE 3 M-1A/J-1A	CASE 4 M-2A/J-2A
± 100.0	3'-6"	12'-7"	12'-5"	13'-4"	13'-0"
	4'-0"	11'-9"	11'-8"	12'-8"	12'-4"
	4'-6"	11'-1"	11'-0"	11'-11"	11'-7"
	5'-0"	10'-6"	10'-5"	11'-4"	11'-0"
	5'-6"	10'-0"	9'-11"	10'-9"	10'-6"
	6'-0"	9'-7"	9'-6"	10'-0"	10'-0"
	6'-6"	9'-3"	9'-2"	9'-11"	9'-8"
	7'-0"	8'-11"	8'-10"	9'-7"	9'-4"
± 105.0	3'-6"	12'-3"	12'-2"	13'-1"	12'-10"
	4'-0"	11'-6"	11'-4"	12'-4"	12'-0"
	4'-6"	10'-10"	10'-9"	11'-8"	11'-4"
	5'-0"	10'-3"	10'-2"	11'-0"	10'-9"
	5'-6"	9'-9"	9'-8"	10'-6"	10'-3"
	6'-0"	9'-4"	9'-3"	10'-0"	9'-10"
	6'-6"	9'-0"	8'-11"	9'-8"	9'-5"
	7'-0"	8'-8"	8'-7"	9'-4"	9'-1"
± 110.0	3'-6"	12'-0"	11'-10"	12'-11"	12'-7"
	4'-0"	11'-2"	11'-1"	12'-1"	11'-9"
	4'-6"	10'-7"	10'-6"	11'-4"	11'-1"
	5'-0"	10'-0"	9'-11"	10'-9"	10'-6"
	5'-6"	9'-7"	9'-6"	10'-3"	10'-0"
	6'-0"	9'-2"	9'-1"	9'-10"	9'-7"
	6'-6"	8'-9"	8'-8"	9'-6"	9'-3"
	7'-0"	8'-6"	8'-5"	9'-1"	8'-11"
± 115.0	3'-6"	11'-9"	11'-7"	12'-7"	12'-3"
	4'-0"	10'-11"	10'-10"	11'-10"	11'-6"
	4'-6"	10'-4"	10'-3"	11'-1"	10'-10"
	5'-0"	9'-10"	9'-9"	10'-7"	10'-3"
	5'-6"	9'-4"	9'-3"	10'-1"	9'-10"
	6'-0"	8'-11"	8'-10"	9'-8"	9'-5"
	6'-6"	8'-7"	8'-6"	9'-3"	9'-0"
	7'-0"	8'-3"	8'-2"	8'-10"	8'-8"
± 120.0	3'-6"	11'-6"	11'-4"	12'-4"	12'-0"
	4'-0"	10'-9"	10'-8"	11'-7"	11'-3"
	4'-6"	10'-1"	10'-0"	10'-11"	10'-7"
	5'-0"	9'-7"	9'-6"	10'-4"	10'-1"
	5'-6"	9'-2"	9'-1"	9'-10"	9'-7"
	6'-0"	8'-9"	8'-8"	9'-5"	9'-2"
	6'-6"	8'-5"	8'-4"	9'-1"	8'-10"
	7'-0"	8'-1"	8'-0"	8'-6"	8'-6"
± 125.0	3'-6"	11'-3"	11'-2"	12'-1"	11'-9"
	4'-0"	10'-6"	10'-5"	11'-4"	11'-0"
	4'-6"	9'-11"	9'-10"	10'-8"	10'-5"
	5'-0"	9'-5"	9'-4"	10'-1"	9'-10"
	5'-6"	9'-0"	8'-11"	9'-8"	9'-5"
	6'-0"	8'-7"	8'-6"	9'-3"	9'-0"
	6'-6"	8'-3"	8'-2"	8'-9"	8'-8"
	7'-0"	7'-11"	7'-10"	8'-2"	8'-2"

MAXIMUM INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)					
MAXIMUM DESIGN PRESSURE RATING "W" (psf)	MAX. EFFECTIVE SPACING "b" (ft-in)	MAXIMUM 1/8" THICK MULLION SPAN "L"(FT)		MAXIMUM 3/16" THICK MULLION SPAN "L"(FT)	
		Laminated Glass	Insulated Glass	Laminated Glass	Insulated Glass
		CASE 1 M-1/J-1	CASE 2 M-2/J-2	CASE 3 M-1A/J-1A	CASE 4 M-2A/J-2A
± 130.0	3'-6"	11'-0"	10'-11"	11'-10"	11'-7"
	4'-0"	10'-4"	10'-3"	11'-1"	10'-10"
	4'-6"	9'-9"	9'-8"	10'-6"	10'-2"
	5'-0"	9'-3"	9'-2"	9'-11"	9'-8"
	5'-6"	8'-9"	8'-8"	9'-6"	9'-3"
	6'-0"	8'-5"	8'-4"	9'-1"	8'-10"
	6'-6"	8'-1"	8'-0"	8'-5"	8'-5"
	7'-0"	7'-9"	7'-9"	7'-10"	7'-10"
+130.0, -135.0	3'-6"	10'-10"	10'-9"	11'-8"	11'-4"
	4'-0"	10'-1"	10'-0"	10'-11"	10'-7"
	4'-6"	9'-6"	9'-5"	10'-3"	10'-0"
	5'-0"	9'-0"	9'-0"	9'-9"	9'-6"
	5'-6"	8'-7"	8'-7"	9'-3"	9'-0"
	6'-0"	8'-3"	8'-2"	8'-10"	8'-8"
	6'-6"	7'-11"	7'-10"	8'-2"	8'-2"
	7'-0"	7'-7"	7'-7"	7'-7"	7'-7"
+130.0, -140.0	3'-6"	10'-7"	10'-6"	11'-5"	11'-2"
	4'-0"	9'-11"	9'-10"	10'-8"	10'-5"
	4'-6"	9'-4"	9'-3"	10'-1"	9'-10"
	5'-0"	8'-11"	8'-10"	9'-7"	9'-4"
	5'-6"	8'-6"	8'-6"	9'-1"	8'-11"
	6'-0"	8'-1"	8'-0"	8'-6"	8'-6"
	6'-6"	7'-9"	7'-9"	7'-10"	7'-10"
	7'-0"	7'-3"	7'-3"	7'-3"	7'-3"



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REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 20-271	8/28/21	3	-	-
2	-	-	4	-	-

M.P.
DRAWN BY

8/26/2021
DATE

21-118
DRAWING No

SHEET 7 OF 51

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE																									
		POURED CONCRETE SUBSTRATE												WOOD (2) 1 1/2" Min. THK. SUBSTRATE												STEEL 1/4" Min. THK.	
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					SUBSTRATE					
		A (1/4"ø)					B (3/8"ø)					C (1/4"ø)					D (3/8"ø)					E (3/8"ø)					
"L" (Ft-In)	"b" (Ft-In)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	
8' - 0"	3' - 6"	80.8	121.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	67.0	100.5	140.0	140.0	140.0	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	70.7	106.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	58.7	88.0	140.0	140.0	140.0	55.0	82.5	110.0	137.5	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	52.1	78.2	125.7	130.3	140.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	
	5' - 0"	56.6	84.8	113.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	46.9	70.4	113.1	117.3	140.0	44.0	66.0	88.0	110.0	132.0	140.0	140.0	140.0	140.0	
	5' - 6"	51.4	77.1	102.8	128.6	140.0	133.3	140.0	140.0	140.0	140.0	140.0	42.7	64.0	102.8	106.6	128.0	40.0	60.0	80.0	100.0	120.0	140.0	140.0	140.0	140.0	
	6' - 0"	47.1	70.7	94.3	117.8	140.0	122.2	140.0	140.0	140.0	140.0	140.0	39.1	58.7	94.3	97.8	117.3	36.7	55.0	73.3	91.7	110.0	140.0	140.0	140.0	140.0	
	6' - 6"	43.5	65.3	87.0	108.8	130.5	112.8	140.0	140.0	140.0	140.0	140.0	36.1	54.1	87.0	90.2	108.3	33.9	50.8	67.7	84.6	101.6	140.0	140.0	140.0	140.0	
8' - 6"	7' - 0"	40.4	60.6	80.8	101.0	121.2	104.7	140.0	140.0	140.0	140.0	140.0	33.5	50.3	80.8	83.8	100.5	31.4	47.2	62.9	78.6	94.3	130.2	140.0	140.0	140.0	
	3' - 6"	76.1	114.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	63.1	94.6	140.0	140.0	140.0	59.2	88.8	118.3	140.0	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	66.5	99.8	133.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	55.2	82.8	133.1	138.0	140.0	51.8	77.7	103.6	129.4	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	59.2	88.7	118.3	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	49.1	73.6	118.3	122.7	140.0	46.0	69.0	92.0	115.1	138.1	140.0	140.0	140.0	140.0	
	5' - 0"	53.2	79.9	106.5	133.1	140.0	138.0	140.0	140.0	140.0	140.0	140.0	44.2	66.2	106.5	110.4	132.5	41.4	62.1	82.8	103.6	124.3	140.0	140.0	140.0	140.0	
	5' - 6"	48.4	72.6	98.8	121.0	140.0	125.4	140.0	140.0	140.0	140.0	140.0	40.1	60.2	98.8	100.4	120.4	37.7	56.5	75.3	94.1	113.0	140.0	140.0	140.0	140.0	
	6' - 0"	44.4	66.5	88.7	110.9	133.1	115.0	140.0	140.0	140.0	140.0	140.0	36.8	55.2	88.7	92.0	110.4	34.5	51.8	69.0	86.3	103.6	140.0	140.0	140.0	140.0	
9' - 0"	6' - 6"	41.0	61.4	81.9	102.4	122.9	106.1	140.0	140.0	140.0	140.0	140.0	34.0	51.0	81.9	84.9	101.9	31.9	47.8	63.7	79.7	95.6	131.9	140.0	140.0	140.0	
	7' - 0"	38.0	57.0	76.1	95.1	114.1	98.6	140.0	140.0	140.0	140.0	140.0	31.5	47.3	76.1	78.9	94.6	29.6	44.4	59.2	74.0	88.8	122.5	140.0	140.0	140.0	
	3' - 6"	71.8	107.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	59.8	89.4	140.0	140.0	140.0	55.9	83.8	111.8	139.7	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	52.1	78.2	125.7	130.3	140.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	55.9	83.8	111.7	139.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	46.3	69.5	111.7	115.9	139.0	43.5	65.2	86.9	108.7	130.4	140.0	140.0	140.0	140.0	
	5' - 0"	50.3	75.4	100.6	125.7	140.0	130.3	140.0	140.0	140.0	140.0	140.0	41.7	62.6	100.6	104.3	125.1	39.1	58.7	78.2	97.8	117.4	140.0	140.0	140.0	140.0	
	5' - 6"	45.7	68.6	91.4	114.3	137.1	118.5	140.0	140.0	140.0	140.0	140.0	37.9	56.9	91.4	94.8	113.7	35.6	53.3	71.1	88.9	106.7	140.0	140.0	140.0	140.0	
9' - 6"	6' - 0"	41.9	62.9	83.8	104.8	125.7	108.6	140.0	140.0	140.0	140.0	140.0	34.8	52.1	83.8	86.9	104.3	32.6	48.9	65.2	81.5	97.8	135.0	140.0	140.0	140.0	
	6' - 6"	38.7	58.0	77.4	96.7	116.0	100.2	140.0	140.0	140.0	140.0	140.0	32.1	48.1	77.4	80.2	96.2	30.1	45.1	60.2	75.2	90.3	124.6	140.0	140.0	140.0	
	7' - 0"	35.9	53.9	71.8	89.8	107.7	93.1	139.6	140.0	140.0	140.0	140.0	29.8	44.7	71.8	74.5	89.4	27.9	41.9	55.9	69.9	83.8	115.7	140.0	140.0	140.0	
	3' - 6"	68.0	102.1	136.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	58.4	84.7	136.1	140.0	140.0	52.9	79.4	105.9	132.4	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	59.5	89.3	119.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	49.4	74.1	119.1	123.5	140.0	46.3	69.5	92.7	115.8	139.0	140.0	140.0	140.0	140.0	
	4' - 6"	52.9	79.4	105.9	132.3	140.0	137.2	140.0	140.0	140.0	140.0	140.0	43.9	65.9	105.9	109.8	131.7	41.2	61.8	82.4	102.9	123.5	140.0	140.0	140.0	140.0	
	5' - 0"	47.6	71.5	95.3	119.1	140.0	123.5	140.0	140.0	140.0	140.0	140.0	39.5	59.3	95.3	98.8	118.5	37.1	55.6	74.1	92.7	111.2	140.0	140.0	140.0	140.0	
10' - 0"	5' - 6"	43.3	65.0	86.6	108.3	129.9	112.2	140.0	140.0	140.0	140.0	140.0	35.9	53.9	86.6	89.8	107.8	33.7	50.5	67.4	84.2	101.1	139.5	140.0	140.0	140.0	
	6' - 0"	39.7	59.5	79.4	99.2	119.1	102.9	140.0	140.0	140.0	140.0	140.0	32.9	49.4	79.4	82.3	98.8	30.9	46.3	61.8	77.2	92.7	127.9	140.0	140.0	140.0	
	6' - 6"	36.6	55.0	73.3	91.6	109.9	95.0	140.0	140.0	140.0	140.0	140.0	30.4	45.6	73.3	76.0	91.2	28.5	42.8	57.0	71.3	85.5	118.0	140.0	140.0	140.0	
	7' - 0"	34.0	51.0	68.0	85.1	102.1	88.2	132.3	140.0	140.0	140.0	140.0	28.2	42.3	68.0	70.6	84.7	26.5	39.7	52.9	66.2	79.4	109.6	140.0	140.0	140.0	
	3' - 6"	64.6	97.0	129.3	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	53.8	80.4	129.3	134.1	140.0	50.3	75.4	100.6	125.7	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	56.6	84.8	113.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	46.9	70.4	113.1	117.3	140.0	44.0	66.0	88.0	110.0	132.0	140.0	140.0	140.0	140.0	
	4' - 6"	50.3	75.4	100.6	125.7	140.0	130.3	140.0	140.0	140.0	140.0	140.0	41.7	62.6	100.6	104.3	125.1	39.1	58.7	78.2	97.8	117.4	140.0	140.0	140.0	140.0	
10' - 6"	5' - 0"	45.3	67.9	90.5	113.1	135.8	117.3	140.0	140.0	140.0	140.0	140.0	37.5	56.3	90.5	93.8	112.6	35.2	52.8	70.4	88.0	105.6	140.0	140.0	140.0	140.0	
	5' - 6"	41.1	61.7	82.3	102.8	123.4	106.6	140.0	140.0	140.0	140.0	140.0	34.1	51.2	82.3	85.3	102.4	32.0	48.0	64.0	80.0	96.0	132.5	140.0	140.0	140.0	
	6' - 0"	37.7	56.6	75.4	94.3	113.1	97.7	140.0	140.0	140.0	140.0	140.0	31.3	46.9	75.4	78.2	93.8	29.3	44.0	58.7	73.3	88.0	121.5	140.0	140.0	140.0	
	6' - 6"	34.8	52.2	69.6	87.0	104.4	90.2	135.3	140.0	140.0	140.0	140.0	28.9	43.3	69.6	72.2	86.6	27.1	40.6	54.2	67.7	81.2	112.1	140.0	140.0	140.0	
	7' - 0"	32.3	48.5	64.6	80.8	97.0																					

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED)																								
		POURED CONCRETE SUBSTRATE										WOOD (2) 1 1/2" Min. THK. SUBSTRATE										STEEL 1/4" Min. THK.				
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE				
		A (1/4")					B (3/8")					C (1/4")					D (3/8")					E (3/8")				
"L" (Ft-In)	"b" (Ft-In)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12
11' - 6"	3' - 6"	56.2	84.3	112.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0	46.6	69.9	112.4	116.6	139.9	43.7	65.6	87.5	109.3	131.2	140.0	140.0	140.0	140.0	140.0
	4' - 0"	49.2	73.8	98.4	123.0	140.0	127.5	140.0	140.0	140.0	140.0	40.8	61.2	98.4	102.0	122.4	38.3	57.4	76.5	95.7	114.8	140.0	140.0	140.0	140.0	140.0
	4' - 6"	43.7	65.6	87.4	109.3	131.2	113.3	140.0	140.0	140.0	140.0	36.3	54.4	87.4	90.7	108.8	34.0	51.0	68.0	85.0	102.1	140.0	140.0	140.0	140.0	140.0
	5' - 0"	39.3	59.0	78.7	98.4	118.0	102.0	140.0	140.0	140.0	140.0	32.6	49.0	78.7	81.8	97.9	30.6	45.9	61.2	76.5	91.8	126.8	140.0	140.0	140.0	140.0
	5' - 6"	35.8	53.7	71.5	89.4	107.3	92.7	139.1	140.0	140.0	140.0	29.7	44.5	71.5	74.2	89.0	27.8	41.7	55.7	69.6	83.5	115.2	140.0	140.0	140.0	140.0
	6' - 0"	32.8	49.2	65.6	82.0	98.4	85.0	127.5	140.0	140.0	140.0	27.2	40.8	65.6	68.0	81.6	25.5	38.3	51.0	63.8	76.5	105.6	140.0	140.0	140.0	140.0
	6' - 6"	30.3	45.4	60.5	75.7	90.8	78.5	117.7	140.0	140.0	140.0	25.1	37.7	60.5	62.8	75.3	23.6	35.3	47.1	58.9	70.7	97.5	140.0	140.0	140.0	140.0
12' - 0"	7' - 0"	28.1	42.2	56.2	70.3	84.3	72.8	109.3	140.0	140.0	140.0	23.3	35.0	56.2	58.3	69.9	21.9	32.8	43.7	54.7	65.6	90.5	135.8	140.0	140.0	140.0
	3' - 6"	53.9	80.8	107.7	134.7	140.0	139.6	140.0	140.0	140.0	140.0	44.7	67.0	107.7	111.7	134.1	41.9	62.9	83.8	104.8	125.7	140.0	140.0	140.0	140.0	140.0
	4' - 0"	47.1	70.7	94.3	117.8	140.0	122.2	140.0	140.0	140.0	140.0	39.1	58.7	94.3	97.8	117.3	36.7	55.0	73.3	91.7	110.0	140.0	140.0	140.0	140.0	
	4' - 6"	41.9	62.9	83.8	104.8	125.7	108.6	140.0	140.0	140.0	140.0	34.8	52.1	83.8	86.9	104.3	32.6	48.9	65.2	81.5	97.8	135.0	140.0	140.0	140.0	140.0
	5' - 0"	37.7	56.6	75.4	94.3	113.1	97.7	140.0	140.0	140.0	140.0	31.3	46.9	75.4	78.2	93.8	29.3	44.0	58.7	73.3	88.0	121.5	140.0	140.0	140.0	140.0
	5' - 6"	34.3	51.4	68.6	85.7	102.8	88.9	133.3	140.0	140.0	140.0	28.4	42.7	68.6	71.1	85.3	26.7	40.0	53.3	66.7	80.0	110.4	140.0	140.0	140.0	140.0
	6' - 0"	31.4	47.1	62.9	78.6	94.3	81.4	122.2	140.0	140.0	140.0	26.1	39.1	62.9	65.2	78.2	24.4	36.7	48.9	61.1	73.3	101.2	140.0	140.0	140.0	140.0
12' - 6"	6' - 6"	29.0	43.5	58.0	72.5	87.0	75.2	112.8	140.0	140.0	140.0	24.1	36.1	58.0	60.2	72.2	22.6	33.9	45.1	56.4	67.7	93.4	140.0	140.0	140.0	140.0
	7' - 0"	26.9	40.4	53.9	67.3	80.8	69.8	104.7	139.6	140.0	140.0	22.3	33.5	53.9	55.9	67.0	21.0	31.4	41.9	52.4	62.9	88.8	130.2	140.0	140.0	140.0
	3' - 6"	51.7	77.6	103.4	129.3	140.0	134.0	140.0	140.0	140.0	140.0	42.9	64.3	103.4	107.2	128.7	40.2	60.4	80.5	100.6	120.7	140.0	140.0	140.0	140.0	140.0
	4' - 0"	45.3	67.9	90.5	113.1	135.8	117.3	140.0	140.0	140.0	140.0	37.5	56.3	90.5	93.8	112.6	35.2	52.8	70.4	88.0	105.6	140.0	140.0	140.0	140.0	140.0
	4' - 6"	40.2	60.3	80.4	100.6	120.7	104.3	140.0	140.0	140.0	140.0	33.4	50.0	80.4	83.4	100.1	31.3	46.9	62.6	78.2	93.9	129.6	140.0	140.0	140.0	140.0
	5' - 0"	36.2	54.3	72.4	90.5	108.6	93.8	140.0	140.0	140.0	140.0	30.0	45.0	72.4	75.1	90.1	28.2	42.2	56.3	70.4	84.5	116.6	140.0	140.0	140.0	140.0
	5' - 6"	32.9	49.4	65.8	82.3	98.7	85.3	127.9	140.0	140.0	140.0	27.3	40.9	65.8	68.2	81.9	25.6	38.4	51.2	64.0	76.8	106.0	140.0	140.0	140.0	140.0
13' - 0"	6' - 0"	30.2	45.3	60.3	75.4	90.5	78.2	117.3	140.0	140.0	140.0	25.0	37.5	60.3	62.6	75.1	23.5	35.2	46.9	58.7	70.4	97.2	140.0	140.0	140.0	140.0
	6' - 6"	27.8	41.8	55.7	69.6	83.5	72.2	108.3	140.0	140.0	140.0	23.1	34.6	55.7	57.7	69.3	21.7	32.5	43.3	54.2	65.0	89.7	134.6	140.0	140.0	140.0
	7' - 0"	25.9	38.8	51.7	64.6	77.6	67.0	100.5	134.0	140.0	140.0	21.4	32.2	51.7	53.6	64.3	20.1	30.2	40.2	50.3	60.4	83.3	124.9	140.0	140.0	140.0
	3' - 6"	49.7	74.6	99.5	124.3	140.0	128.9	140.0	140.0	140.0	140.0	41.2	61.9	99.5	103.1	123.7	38.7	58.0	77.4	96.7	116.1	140.0	140.0	140.0	140.0	140.0
	4' - 0"	43.5	65.3	87.0	108.8	130.5	112.8	140.0	140.0	140.0	140.0	36.1	54.1	87.0	90.2	108.3	33.9	50.8	67.7	84.6	101.6	140.0	140.0	140.0	140.0	140.0
	4' - 6"	38.7	58.0	77.4	96.7	116.0	100.2	140.0	140.0	140.0	140.0	32.1	48.1	77.4	80.2	96.2	30.1	45.1	60.2	75.2	90.3	124.6	140.0	140.0	140.0	140.0
	5' - 0"	34.8	52.2	69.6	87.0	104.4	90.2	135.3	140.0	140.0	140.0	28.9	43.3	69.6	72.2	86.6	27.1	40.6	54.2	67.7	81.2	112.1	140.0	140.0	140.0	140.0
13' - 6"	5' - 6"	31.6	47.5	63.3	79.1	94.9	82.0	123.0	140.0	140.0	140.0	26.2	39.4	63.3	65.6	78.7	24.6	36.9	49.2	61.6	73.9	101.9	140.0	140.0	140.0	140.0
	6' - 0"	29.0	43.5	58.0	72.5	87.0	75.2	112.8	140.0	140.0	140.0	24.1	36.1	58.0	60.2	72.2	22.6	33.9	45.1	56.4	67.7	93.4	140.0	140.0	140.0	140.0
	6' - 6"	26.8	40.2	53.6	66.9	80.3	69.4	104.1	138.8	140.0	140.0	22.2	33.3	53.6	55.5	66.6	20.8	31.2	41.7	52.1	62.5	86.3	129.4	140.0	140.0	140.0
	7' - 0"	24.9	37.3	49.7	62.2	74.6	64.4	96.7	128.9	140.0	140.0	20.6	30.9	49.7	51.6	61.9	19.3	29.0	38.7	48.4	58.0	80.1	120.1	140.0	140.0	140.0
	3' - 6"	47.9	71.8	95.8	119.7	140.0	124.1	140.0	140.0	140.0	140.0	39.7	59.6	95.8	99.3	119.2	37.3	55.9	74.5	93.1	111.8	140.0	140.0	140.0	140.0	140.0
	4' - 0"	41.9	62.9	83.8	104.8	125.7	108.6	140.0	140.0	140.0	140.0	34.8	52.1	83.8	86.9	104.3	32.6	48.9	65.2	81.5	97.8	135.0	140.0	140.0	140.0	140.0
	4' - 6"	37.2	55.9	74.5	93.1	111.7	96.5	140.0	140.0	140.0	140.0	30.9	46.3	74.5	77.2	92.7	29.0	43.5	58.0	72.4	86.9	120.0	140.0	140.0	140.0	140.0
14' - 0"	5' - 0"	33.5	50.3	67.0	83.8	100.6	86.9	130.3	140.0	140.0	140.0	27.8	41.7	67.0	69.5	83.4	26.1	39.1	52.2	65.2	78.2	108.0	140.0	140.0	140.0	140.0
	5' - 6"	30.5	45.7	60.9	76.2	91.4	78.0	118.5	140.0	140.0	140.0	25.3	37.9	60.9	63.2	75.8	23.7	35.6	47.4	59.3	71.1	98.2	140.0	140.0	140.0	140.0
	6' - 0"	27.9	41.9	55.9	69.8	83.8	72.4	108.6	140.0	140.0	140.0	23.2	34.8	55.9	57.9	69.5	21.7	32.6	43.5	54.3	65.2	90.0	135.0	140.0	140.0	140.0
	6' - 6"	25.8	38.7	51.6	64.5	77.4	66.8	100.2	133.7	140.0	140.0	21.4	32.1	51.6	53.5	64.2	20.1	30.1	40.1	50.2	60.2	83.1	124.6	140.0	140.0	140.0
	7' - 0"	23.9	35.9	47.9	59.9	71.8	62.1	93.1	124.1	140.0	140.0	19.9	29.8	47.9	49.7	59.6	18.6	27.9	37.3	46.6	55.9	77.1	115.7	140.0	140.0	140.0
	3' - 6"	46.2	69.3	92.4																						

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED)																			
		POURED CONCRETE SUBSTRATE										WOOD (2) 1 1/2" Min. THK. SUBSTRATE									
		FASTENERS TYPE A (1/4")					FASTENERS TYPE B (3/8")					FASTENERS TYPE C (1/4")					FASTENERS TYPE D (3/8")				
		n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12
15' - 0"	3' - 6"	43.1	64.6	86.2	107.7	129.3	111.7	140.0	140.0	140.0	140.0	35.7	53.6	86.2	89.4	107.2	33.5	50.3	67.1	83.8	100.6
	4' - 0"	37.7	56.6	75.4	94.3	113.1	97.7	140.0	140.0	140.0	140.0	31.3	46.9	75.4	78.2	93.8	29.3	44.0	58.7	73.3	88.0
	4' - 6"	33.5	50.3	67.0	83.8	100.6	86.9	130.3	140.0	140.0	140.0	27.8	41.7	67.0	69.5	83.4	26.1	39.1	52.2	65.2	78.2
	5' - 0"	30.2	45.3	60.3	75.4	90.5	78.2	117.3	140.0	140.0	140.0	25.0	37.5	60.3	62.6	75.1	23.5	35.2	46.9	58.7	70.4
	5' - 6"	27.4	41.1	54.9	68.6	82.3	71.1	106.6	140.0	140.0	140.0	22.7	34.1	54.9	56.9	68.2	21.3	32.0	42.7	53.3	64.0
	6' - 0"	25.1	37.7	50.3	62.9	75.4	65.2	97.7	130.3	140.0	140.0	20.9	31.3	50.3	52.1	62.6	19.6	29.3	39.1	48.9	58.7
	6' - 6"	23.2	34.8	46.4	58.0	69.6	60.1	90.2	120.3	140.0	140.0	19.2	28.9	46.4	48.1	57.7	18.1	27.1	36.1	45.1	54.2
15' - 6"	3' - 6"	41.7	62.6	83.4	104.3	125.1	108.1	140.0	140.0	140.0	140.0	34.6	51.9	83.4	86.5	103.8	32.4	48.7	64.9	81.1	97.3
	4' - 0"	36.5	54.7	73.0	91.2	109.5	94.6	140.0	140.0	140.0	140.0	30.3	45.4	73.0	75.7	90.8	28.4	42.6	56.8	71.0	85.2
	4' - 6"	32.4	48.7	64.9	81.1	97.3	84.1	126.1	140.0	140.0	140.0	26.9	40.4	64.9	67.3	80.7	25.2	37.9	50.5	63.1	75.7
	5' - 0"	29.2	43.8	58.4	73.0	87.6	75.7	113.5	140.0	140.0	140.0	24.2	36.3	58.4	60.5	72.7	22.7	34.1	45.4	56.8	68.1
	5' - 6"	26.5	39.8	53.1	66.4	79.6	68.8	103.2	137.6	140.0	140.0	22.0	33.0	53.1	55.0	66.0	20.6	31.0	41.3	51.6	61.9
	6' - 0"	24.3	36.5	48.7	60.8	73.0	63.1	94.6	126.1	140.0	140.0	20.2	30.3	48.7	50.5	60.5	18.9	28.4	37.9	47.3	56.8
	6' - 6"	22.5	33.7	44.9	56.1	67.4	58.2	87.3	116.4	140.0	140.0	18.6	27.9	44.9	46.6	55.9	17.5	26.2	34.9	43.7	52.4
15' - 9"	3' - 6"	41.0	61.8	82.1	102.6	123.1	106.4	140.0	140.0	140.0	140.0	34.0	51.1	82.1	85.1	102.1	31.9	47.9	63.9	79.8	95.8
	4' - 0"	35.9	53.9	71.8	89.8	107.7	93.1	139.6	140.0	140.0	140.0	29.8	44.7	71.8	74.5	89.4	27.9	41.9	55.9	69.9	83.8
	4' - 6"	31.9	47.9	63.8	79.8	95.8	82.7	124.1	140.0	140.0	140.0	26.5	39.7	63.8	66.2	79.4	24.8	37.3	49.7	62.1	74.5
	5' - 0"	28.7	43.1	57.5	71.8	86.2	74.5	111.7	140.0	140.0	140.0	23.8	35.7	57.5	59.6	71.5	22.4	33.5	44.7	55.9	67.1
	5' - 6"	26.1	39.2	52.2	65.3	78.4	67.7	101.5	135.4	140.0	140.0	21.7	32.5	52.2	54.2	65.0	20.3	30.5	40.6	50.8	61.0
	6' - 0"	23.9	35.9	47.9	59.9	71.8	62.1	93.1	124.1	140.0	140.0	19.9	29.8	47.9	49.7	59.6	18.6	27.9	37.3	46.6	55.9
	6' - 6"	22.1	33.2	44.2	55.3	66.3	57.3	85.9	114.6	140.0	140.0	18.3	27.5	44.2	45.8	55.0	17.2	25.8	34.4	43.0	51.6
15' - 12"	3' - 6"	40.5	61.3	81.5	102.0	122.5	105.8	140.0	140.0	140.0	140.0	33.5	50.6	81.5	84.6	101.6	31.4	47.4	63.4	79.3	95.3
	4' - 0"	35.4	53.4	71.3	89.3	107.2	92.6	139.1	140.0	140.0	140.0	29.3	44.4	71.3	74.0	88.9	27.4	41.4	55.4	69.4	83.3
	4' - 6"	31.4	47.4	63.3	79.3	95.3	82.2	123.6	140.0	140.0	140.0	26.2	39.2	63.3	65.7	78.6	24.3	36.8	48.8	60.8	72.8
	5' - 0"	28.2	42.6	57.0	71.4	85.8	73.6	112.2	140.0	140.0	140.0	23.0	34.9	57.0	59.4	70.4	22.0	33.0	44.0	55.0	66.0
	5' - 6"	25.6	38.9	52.1	65.4	78.7	67.0	101.0	134.9	140.0	140.0	20.8	31.8	52.1	54.1	64.1	19.8	28.8	37.8	46.8	55.8
	6' - 0"	23.4	35.4	47.4	59.4	71.4	61.4	92.4	123.4	140.0	140.0	18.6	29.6	47.4	49.4	59.4	17.6	26.6	35.6	44.6	53.6
	6' - 6"	21.6	32.6	43.6	54.6	65.6	55.6	86.6	117.6	140.0	140.0	16.4	27.4	43.6	45.6	55.6	15.4	24.4	33.4	42.4	51.4

FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

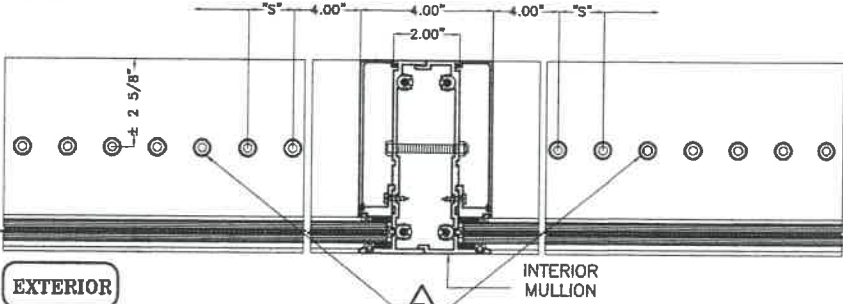
A - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 2,730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

B - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

C - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

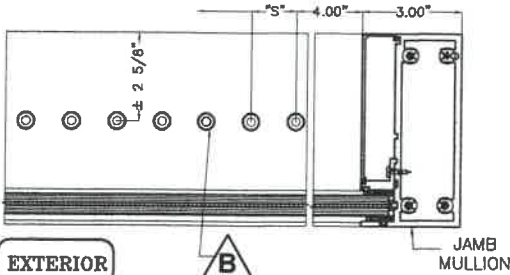
E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.



"n" FASTENERS
n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR MULLION

SILL OR HEAD CONNECTION DETAIL @ INTERIOR MULLION

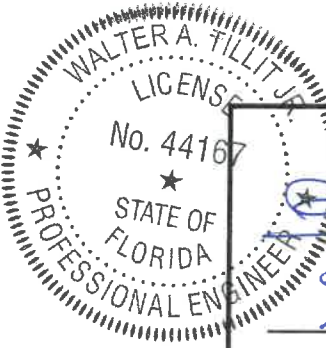
(PLAN VIEW)
N.T.S.



"n/2" FASTENERS
n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF JAMB MULLION

SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION

(PLAN VIEW)
N.T.S.



P.E. SEAL/SIGNATURE/DATE

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TILTECO INC.

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REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE																											
		POURED CONCRETE SUBSTRATE												WOOD (2) 2" x THK. SUBSTRATE												STEEL 1/4" Min. THK. SUBSTRATE			
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE												
		A (1/4")					B (3/8")					C (1/4")					D (3/8")					E (3/8")							
"L" (Ft.-in)	"b" (Ft.-in)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12			
8' - 0" OR LESS	3' - 6"	58.7	88.0	117.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0	58.7	88.0	117.4	140.0	140.0	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 0"	51.4	77.0	102.7	128.4	140.0	140.0	140.0	140.0	140.0	140.0	51.4	77.0	102.7	128.4	140.0	55.0	82.5	110.0	137.5	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 6"	45.7	68.5	91.3	114.1	137.0	135.1	140.0	140.0	140.0	140.0	45.7	68.5	91.3	114.1	137.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	5' - 0"	41.1	61.6	82.2	102.7	123.3	121.6	140.0	140.0	140.0	140.0	41.1	61.6	82.2	102.7	123.3	44.0	66.0	88.0	110.0	132.0	138.5	140.0	140.0	140.0	140.0	140.0		
	5' - 6"	37.4	56.0	74.7	93.4	112.1	110.5	140.0	140.0	140.0	140.0	37.4	56.0	74.7	93.4	112.1	40.0	60.0	80.0	100.0	120.0	125.9	140.0	140.0	140.0	140.0	140.0		
	6' - 0	34.2	51.4	68.5	85.6	102.7	101.3	140.0	140.0	140.0	140.0	34.2	51.4	68.5	85.6	102.7	36.7	55.0	73.3	91.7	110.0	115.4	140.0	140.0	140.0	140.0	140.0		
	6' - 6"	31.6	47.4	63.2	79.0	94.8	93.5	140.0	140.0	140.0	140.0	31.6	47.4	63.2	79.0	94.8	33.9	50.8	67.7	84.5	101.6	106.5	140.0	140.0	140.0	140.0	140.0		
8' - 6"	7' - 0"	29.3	44.0	58.7	73.4	88.0	86.8	130.3	140.0	140.0	140.0	29.3	44.0	58.7	73.4	88.0	31.4	47.2	62.9	78.6	94.3	98.9	140.0	140.0	140.0	140.0	140.0		
	3' - 6"	55.2	82.9	110.5	138.1	140.0	140.0	140.0	140.0	140.0	140.0	55.2	82.9	110.5	138.1	140.0	59.2	88.8	118.3	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 0"	48.3	72.5	96.7	120.8	140.0	140.0	140.0	140.0	140.0	140.0	48.3	72.5	96.7	120.8	140.0	51.8	77.7	103.6	129.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 6"	43.0	64.5	85.9	107.4	128.9	127.1	140.0	140.0	140.0	140.0	43.0	64.5	85.9	107.4	128.9	46.0	69.0	92.0	115.1	138.1	140.0	140.0	140.0	140.0	140.0	140.0		
	5' - 0"	38.7	58.0	77.3	96.7	116.0	114.4	140.0	140.0	140.0	140.0	38.7	58.0	77.3	96.7	116.0	41.4	62.1	82.8	103.6	124.3	130.3	140.0	140.0	140.0	140.0	140.0		
	5' - 6"	35.2	52.7	70.3	87.9	105.5	104.0	140.0	140.0	140.0	140.0	35.2	52.7	70.3	87.9	105.5	37.7	56.5	75.3	94.1	113.0	118.5	140.0	140.0	140.0	140.0	140.0		
	6' - 0	32.2	48.3	64.5	80.6	96.7	95.4	140.0	140.0	140.0	140.0	32.2	48.3	64.5	80.6	96.7	34.5	51.8	69.0	86.3	103.6	108.6	140.0	140.0	140.0	140.0	140.0		
9' - 0"	6' - 6"	29.7	44.6	59.5	74.4	89.2	88.0	132.0	140.0	140.0	140.0	29.7	44.6	59.5	74.4	89.2	31.9	47.8	63.7	79.7	95.6	100.3	140.0	140.0	140.0	140.0	140.0		
	7' - 0"	27.6	41.4	55.2	69.1	82.9	81.7	122.6	140.0	140.0	140.0	27.6	41.4	55.2	69.1	82.9	29.6	44.4	59.2	74.0	88.8	93.1	139.7	140.0	140.0	140.0	140.0		
	3' - 6"	52.2	78.3	104.4	130.4	140.0	140.0	140.0	140.0	140.0	140.0	52.2	78.3	104.4	130.4	140.0	55.9	83.8	111.8	139.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 0"	45.7	68.5	91.3	114.1	137.0	135.1	140.0	140.0	140.0	140.0	45.7	68.5	91.3	114.1	137.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 6"	40.6	60.9	81.2	101.5	121.7	120.1	140.0	140.0	140.0	140.0	40.6	60.9	81.2	101.5	121.7	43.5	65.2	86.9	108.7	130.4	136.8	140.0	140.0	140.0	140.0	140.0		
	5' - 0"	36.5	54.8	73.0	91.3	109.6	108.1	140.0	140.0	140.0	140.0	36.5	54.8	73.0	91.3	109.6	39.1	58.7	78.2	97.8	117.4	123.1	140.0	140.0	140.0	140.0	140.0		
	5' - 6"	33.2	49.8	66.4	83.0	99.6	98.3	140.0	140.0	140.0	140.0	33.2	49.8	66.4	83.0	99.6	35.6	53.3	71.1	88.9	106.7	111.9	140.0	140.0	140.0	140.0	140.0		
9' - 6"	6' - 0"	30.4	45.7	60.9	76.1	91.3	90.1	135.1	140.0	140.0	140.0	30.4	45.7	60.9	76.1	91.3	32.6	48.9	65.2	81.5	97.8	102.6	140.0	140.0	140.0	140.0	140.0		
	6' - 6"	28.1	42.1	56.2	70.2	84.3	83.1	124.7	140.0	140.0	140.0	28.1	42.1	56.2	70.2	84.3	30.1	45.1	60.2	75.2	90.3	94.7	140.0	140.0	140.0	140.0	140.0		
	7' - 0"	26.1	39.1	52.2	65.2	78.3	77.2	115.8	140.0	140.0	140.0	26.1	39.1	52.2	65.2	78.3	27.9	41.9	55.9	69.9	83.8	87.9	131.9	140.0	140.0	140.0	140.0		
	3' - 6"	49.4	74.1	98.9	123.6	140.0	140.0	140.0	140.0	140.0	140.0	49.4	74.1	98.9	123.6	140.0	52.9	79.4	105.9	132.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 0"	43.3	64.9	86.5	108.1	129.8	128.0	140.0	140.0	140.0	140.0	43.3	64.9	86.5	108.1	129.8	46.3	69.5	92.7	115.8	139.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 6"	38.4	57.7	76.9	96.1	115.3	113.8	140.0	140.0	140.0	140.0	38.4	57.7	76.9	96.1	115.3	41.2	61.8	82.4	102.9	123.5	129.6	140.0	140.0	140.0	140.0	140.0		
	5' - 0"	34.6	51.9	69.2	86.5	103.8	102.4	140.0	140.0	140.0	140.0	34.6	51.9	69.2	86.5	103.8	37.1	55.6	74.1	92.7	111.2	116.6	140.0	140.0	140.0	140.0	140.0		
10' - 0"	5' - 6"	31.5	47.2	62.9	78.6	94.4	93.1	139.6	140.0	140.0	140.0	31.5	47.2	62.9	78.6	94.4	33.7	50.5	67.4	84.2	101.1	106.0	140.0	140.0	140.0	140.0	140.0		
	6' - 0	28.8	43.3	57.7	72.1	86.5	85.3	128.0	140.0	140.0	140.0	28.8	43.3	57.7	72.1	86.5	30.9	46.3	61.8	77.2	92.7	97.2	140.0	140.0	140.0	140.0	140.0		
	6' - 6"	26.6	39.9	53.2	66.5	79.8	78.8	118.1	140.0	140.0	140.0	26.6	39.9	53.2	66.5	79.8	28.5	42.8	57.0	71.3	85.5	89.7	134.6	140.0	140.0	140.0	140.0		
	7' - 0"	24.7	37.1	49.4	61.8	74.1	73.1	109.7	140.0	140.0	140.0	24.7	37.1	49.4	61.8	74.1	26.5	39.7	52.9	66.2	79.4	83.3	125.0	140.0	140.0	140.0	140.0		
	3' - 6"	47.0	70.4	93.9	117.4	140.0	139.0	140.0	140.0	140.0	140.0	47.0	70.4	93.9	117.4	140.0	50.3	75.4	100.6	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0		
	4' - 0"	41.1	61.6	82.2	102.7	123.3	121.6	140.0	140.0	140.0	140.0	41.1	61.6	82.2	102.7	123.3	44.0	66.0	88.0	110.0	132.0	138.5	140.0	140.0	140.0	140.0	140.0		
	4' - 6"	36.5	54.8	73.0	91.3	109.6	108.1	140.0	140.0	140.0	140.0	36.5	54.8	73.0	91.3	109.6	39.1	58.7	78.2	97.8	117.4	123.1	140.0	140.0	140.0	140.0	140.0		
10' - 6"	5' - 0"	32.9	49.3	65.7	82.2	98.6	97.3	140.0	140.0	140.0	140.0	32.9	49.3	65.7	82.2	98.6	35.2	52.8	70.4	88.0	105.6	110.8	140.0	140.0	140.0	140.0	140.0		
	5' - 6"	29.9	44.8	59.8	74.7	89.6	88.4	132.6	140.0	140.0	140.0	29.9	44.8	59.8	74.7	89.6	32.0	48.0	64.0	80.0	96.0	100.7	140.0	140.0	140.0	140.0	140.0		
	6' - 0"	27.4	41.1	54.8	68.5	82.2	81.1	121.6	140.0	140.0	140.0	27.4	41.1	54.8	68.5	82.2	29.3	44.0	58.7	73.3	88.0	92.3	138.5	140.0	140.0	140.0	140.0		
	6' - 6"	25.3	37.9	50.6	63.2	75.9	74.8	112.2	140.0	140.0	140.0	25.3	37.9	50.6															

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

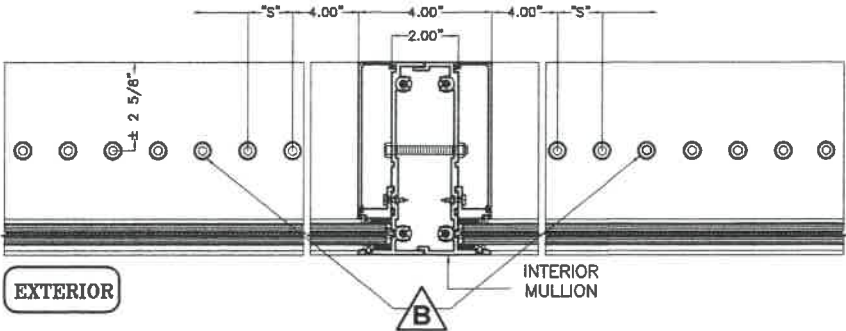
MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED)																										
		POURED CONCRETE SUBSTRATE												WOOD (2) 2" x THK. SUBSTRATE														
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE				FASTENERS TYPE				STEEL 1/4" Min. THK.								
		A (1/4"e)					B (3/8"e)					C (1/4"e)				D (3/8"e)				E (3/8"e)								
"L" (Ft-in)	"b" (Ft-in)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12		
11' - 6"	3' - 6"	40.8	61.2	81.7	102.1	122.5	120.8	140.0	140.0	140.0	140.0	40.8	61.2	81.7	102.1	122.5	43.7	65.6	87.5	109.3	131.2	137.6	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	35.7	53.6	71.5	89.3	107.2	105.7	140.0	140.0	140.0	140.0	35.7	53.6	71.5	89.3	107.2	38.3	57.4	76.5	95.7	114.8	120.4	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	31.8	47.6	63.5	79.4	95.3	94.0	140.0	140.0	140.0	140.0	31.8	47.6	63.5	79.4	95.3	34.0	51.0	68.0	85.0	102.1	107.0	140.0	140.0	140.0	140.0	140.0	
	5' - 0"	28.6	42.9	57.2	71.5	85.7	84.6	126.9	140.0	140.0	140.0	28.6	42.9	57.2	71.5	85.7	30.6	45.9	61.2	76.5	91.8	98.3	140.0	140.0	140.0	140.0	140.0	
	5' - 6"	26.0	39.0	52.0	65.0	78.0	76.9	115.3	140.0	140.0	140.0	26.0	39.0	52.0	65.0	78.0	27.8	41.7	55.7	69.6	83.5	87.6	131.4	140.0	140.0	140.0	140.0	
	6' - 0"	23.8	35.7	47.6	59.5	71.5	70.5	105.7	140.0	140.0	140.0	23.8	35.7	47.6	59.5	71.5	25.5	38.3	51.0	63.8	76.5	80.3	120.4	140.0	140.0	140.0	140.0	
	6' - 6"	22.0	33.0	44.0	55.0	66.0	65.1	97.6	130.1	140.0	140.0	22.0	33.0	44.0	55.0	66.0	23.6	35.3	47.1	58.9	70.7	74.1	111.2	140.0	140.0	140.0	140.0	
12' - 0"	7' - 0"	20.4	30.6	40.8	51.0	61.2	60.4	90.6	120.8	140.0	140.0	20.4	30.6	40.8	51.0	61.2	21.9	32.8	43.7	54.7	65.6	68.8	103.2	137.6	140.0	140.0	140.0	140.0
	3' - 6"	39.1	58.7	78.3	97.8	117.4	115.8	140.0	140.0	140.0	140.0	39.1	58.7	78.3	97.8	117.4	41.9	62.9	83.8	104.8	125.7	131.9	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	34.2	51.4	68.5	85.6	102.7	101.3	140.0	140.0	140.0	140.0	34.2	51.4	68.5	85.6	102.7	36.7	55.0	73.3	91.7	110.0	115.4	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	30.4	45.7	60.9	76.1	91.3	90.1	135.1	140.0	140.0	140.0	30.4	45.7	60.9	76.1	91.3	32.6	48.9	65.2	81.5	97.8	102.6	140.0	140.0	140.0	140.0	140.0	
	5' - 0"	27.4	41.1	54.8	68.5	82.2	81.1	121.6	140.0	140.0	140.0	27.4	41.1	54.8	68.5	82.2	29.3	44.0	58.7	73.3	88.0	92.3	138.5	140.0	140.0	140.0	140.0	
	5' - 6"	24.9	37.4	49.8	62.3	74.7	73.7	110.5	140.0	140.0	140.0	24.9	37.4	49.8	62.3	74.7	26.7	40.0	53.3	66.7	80.0	83.9	125.9	140.0	140.0	140.0	140.0	
	6' - 0"	22.8	34.2	45.7	57.1	68.5	67.5	101.3	135.1	140.0	140.0	22.8	34.2	45.7	57.1	68.5	24.4	36.7	48.9	61.1	73.3	76.9	115.4	140.0	140.0	140.0	140.0	
12' - 6"	6' - 6"	21.1	31.6	42.1	52.7	63.2	62.4	93.5	124.7	140.0	140.0	21.1	31.6	42.1	52.7	63.2	22.6	33.9	45.1	56.4	67.7	71.0	106.5	140.0	140.0	140.0	140.0	
	7' - 0"	19.6	29.3	39.1	48.9	58.7	57.9	86.8	115.8	140.0	140.0	19.6	29.3	39.1	48.9	58.7	21.0	31.4	41.9	52.4	62.9	65.9	98.9	131.9	140.0	140.0	140.0	140.0
	3' - 6"	37.6	56.3	75.1	93.9	112.7	111.2	140.0	140.0	140.0	140.0	37.6	56.3	75.1	93.9	112.7	40.2	60.4	80.5	100.6	120.7	126.6	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	32.9	49.3	65.7	82.2	98.6	97.3	140.0	140.0	140.0	140.0	32.9	49.3	65.7	82.2	98.6	35.2	52.8	70.4	88.0	105.6	110.8	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	29.2	43.8	58.4	73.0	87.7	86.5	129.7	140.0	140.0	140.0	29.2	43.8	58.4	73.0	87.7	31.3	46.9	62.6	78.2	93.9	98.5	140.0	140.0	140.0	140.0	140.0	
	5' - 0"	26.3	39.4	52.6	65.7	78.9	77.8	116.7	140.0	140.0	140.0	26.3	39.4	52.6	65.7	78.9	28.2	42.2	56.3	70.4	84.5	88.6	132.9	140.0	140.0	140.0	140.0	
	5' - 6"	23.9	35.9	47.8	59.8	71.7	70.7	106.1	140.0	140.0	140.0	23.9	35.9	47.8	59.8	71.7	25.6	38.4	51.2	64.0	76.8	80.6	120.9	140.0	140.0	140.0	140.0	
13' - 0"	6' - 0"	21.9	32.9	43.8	54.8	65.7	64.8	97.3	129.7	140.0	140.0	21.9	32.9	43.8	54.8	65.7	23.5	35.2	46.9	58.7	70.4	73.9	110.8	140.0	140.0	140.0	140.0	
	6' - 6"	20.2	30.3	40.5	50.6	60.7	59.9	89.8	119.7	140.0	140.0	20.2	30.3	40.5	50.6	60.7	21.7	32.5	43.3	54.2	65.0	68.2	102.3	136.4	140.0	140.0	140.0	
	7' - 0"	18.1	27.1	36.1	45.2	54.2	53.4	80.2	106.9	133.6	140.0	18.1	27.1	36.1	45.2	54.2	19.3	29.0	38.7	48.4	58.0	60.9	91.3	121.7	140.0	140.0	140.0	
	3' - 6"	36.1	54.2	72.2	90.3	108.4	106.9	140.0	140.0	140.0	140.0	36.1	54.2	72.2	90.3	108.4	38.7	58.0	77.4	96.7	116.1	121.7	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	31.6	47.4	63.2	79.0	94.8	93.5	140.0	140.0	140.0	140.0	31.6	47.4	63.2	79.0	94.8	33.9	50.8	67.7	84.6	101.6	106.5	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	28.1	42.1	56.2	70.2	84.3	83.1	124.7	140.0	140.0	140.0	28.1	42.1	56.2	70.2	84.3	30.1	45.1	60.2	75.2	90.3	94.7	140.0	140.0	140.0	140.0	140.0	
	5' - 0"	25.3	37.9	50.6	63.2	75.9	74.8	112.2	140.0	140.0	140.0	25.3	37.9	50.6	63.2	75.9	27.1	40.6	54.2	67.7	81.2	85.2	127.8	140.0	140.0	140.0	140.0	
13' - 6"	5' - 6"	23.0	34.5	46.0	57.5	69.0	68.0	102.0	136.0	140.0	140.0	23.0	34.5	46.0	57.5	69.0	24.6	36.9	49.2	61.6	73.9	77.5	116.2	140.0	140.0	140.0	140.0	
	6' - 0"	21.1	31.6	42.1	52.7	63.2	62.4	93.5	124.7	140.0	140.0	21.1	31.6	42.1	52.7	63.2	22.6	33.9	45.1	56.4	67.7	71.0	106.5	140.0	140.0	140.0	140.0	
	6' - 6"	18.7	28.1	37.5	46.8	56.2	55.4	83.1	110.8	138.6	140.0	18.7	28.1	37.5	46.8	56.2	20.1	30.1	40.1	50.2	60.2	63.1	94.7	126.3	140.0	140.0	140.0	
	7' - 0"	17.4	26.1	34.8	43.5	52.2	51.5	77.2	102.9	128.7	140.0	17.4	26.1	34.8	43.5	52.2	18.6	27.9	37.3	46.6	55.9	58.6	87.9	117.2	140.0	140.0	140.0	
	3' - 6"	34.8	52.2	69.6	87.0	104.4	102.9	140.0	140.0	140.0	140.0	34.8	52.2	69.6	87.0	104.4	37.3	55.9	74.5	93.1	111.8	117.2	140.0	140.0	140.0	140.0	140.0	
	4' - 0"	30.4	45.7	60.9	76.1	91.3	90.1	135.1	140.0	140.0	140.0	30.4	45.7	60.9	76.1	91.3	32.6	48.9	65.2	81.5	97.8	102.6	140.0	140.0	140.0	140.0	140.0	
	4' - 6"	27.1	40.6	54.1	67.6	81.2	80.1	120.1	140.0	140.0	140.0	27.1	40.6	54.1	67.6	81.2	29.0	43.5	58.0	72.4	86.9	91.2	136.8	140.0	140.0	140.0	140.0	
14' - 0"	5' - 0"	24.3	36.5	48.7	60.9	73.0	72.1	108.1	140.0	140.0	140.0	24.3	36.5	48.7	60.9	73.0	26.1	39.1	52.2	65.2	78.2	82.1	123.1	140.0	140.0	140.0	140.0	
	5' - 6"	22.1	33.2	44.3	55.3	66.4	65.5	98.3	131.0	140.0	140.0	22.1	33.2	44.3	55.3	66.4	23.7	35.6	47.4	59.3	71.1	74.6	111.9	140.0	140.0	140.0	140.0	
	6' - 0"	18.9	28.3	37.8	47.2	56.7	55.9	83.9	111.8	139.8	140.0	18.9	28.3	37.8	47.2	56.7	20.2	30.4	40.5	50.6	60.7	63.7	95.5	127.3	140.0	140.0	140.0	
	6' - 6"	17.4	26.2	34.9	43.6	52.3	51.6	77.4	103.2	129.0	140.0	17.4	26.2	34.9	43.6	52.3	18.7	28.0	37.4	46.7	56.0	58.8	88.2	117.6	140.0	140.0	140.0	
	7' - 0"	16.2	24.3	32.4	40.5	48.6	47.9	71.9	95.8	119.8	140.0	16.2	24.3	32.4	40.5	48.6	17.3	26.0	34.7	43.4	52.0	54.6	81.9	10				

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED)																												
		POURED CONCRETE SUBSTRATE												WOOD (2) 2" x THK. SUBSTRATE												STEEL 1/4" Min. THK.				
		FASTENERS TYPE						FASTENERS TYPE						FASTENERS TYPE						FASTENERS TYPE						FASTENERS TYPE				
		A (1/4")						B (3/8")						C (1/4")						D (3/8")						E (3/8")				
"L" (Ft-in)	"b" (Ft-in)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12				
15' - 0"	3' - 6"	31.3	47.0	62.6	78.3	93.9	92.6	139.0	140.0	140.0	140.0	31.3	47.0	62.6	78.3	93.9	33.5	50.3	67.1	83.8	100.6	105.5	140.0	140.0	140.0	140.0				
	4' - 0"	27.4	41.1	54.8	68.5	82.2	81.1	121.6	140.0	140.0	140.0	27.4	41.1	54.8	68.5	82.2	29.3	44.0	58.7	73.3	88.0	92.3	138.5	140.0	140.0	140.0				
	4' - 6"	24.3	36.5	48.7	60.9	73.0	72.1	108.1	140.0	140.0	140.0	24.3	36.5	48.7	60.9	73.0	26.1	39.1	52.2	65.2	78.2	82.1	123.1	140.0	140.0	140.0				
	5' - 0"	21.2	31.8	42.4	53.0	63.6	62.8	94.1	125.5	140.0	140.0	21.2	31.8	42.4	53.0	63.6	22.7	34.1	45.4	56.8	68.1	71.5	107.2	140.0	140.0	140.0				
	5' - 6"	19.3	28.9	38.6	48.2	57.8	57.0	85.6	114.1	140.0	140.0	19.3	28.9	38.6	48.2	57.8	20.6	31.0	41.3	51.6	61.9	65.0	97.5	130.0	140.0	140.0				
	6' - 0"	17.7	26.5	35.3	44.2	53.0	52.3	78.4	104.6	130.7	140.0	17.7	26.5	35.3	44.2	53.0	18.9	28.4	37.9	47.3	56.8	59.6	89.3	119.1	140.0	140.0				
	6' - 6"	16.3	24.5	32.6	40.8	48.9	48.3	72.4	96.5	120.7	140.0	16.3	24.5	32.6	40.8	48.9	17.5	26.2	34.9	43.7	52.4	55.0	82.5	110.0	137.5	140.0				
7' - 0"	15.1	22.7	30.3	37.9	45.4	44.8	67.2	89.6	112.1	134.5	15.1	22.7	30.3	37.9	45.4	16.2	24.3	32.4	40.6	48.7	51.1	76.6	102.1	127.6	140.0					
15' - 6"	3' - 6"	30.3	45.4	60.6	75.7	90.9	89.6	134.5	140.0	140.0	140.0	30.3	45.4	60.6	75.7	90.9	32.4	48.7	64.9	81.1	97.3	102.1	140.0	140.0	140.0	140.0				
	4' - 0"	26.5	39.8	53.0	66.3	79.5	78.4	117.7	140.0	140.0	140.0	26.5	39.8	53.0	66.3	79.5	28.4	42.6	56.8	71.0	85.2	89.3	134.0	140.0	140.0	140.0				
	4' - 6"	23.2	34.8	46.4	58.0	69.6	68.6	102.9	137.2	140.0	140.0	23.2	34.8	46.4	58.0	69.6	24.8	37.3	49.7	62.1	74.5	78.2	117.2	140.0	140.0	140.0				
	5' - 0"	20.9	31.3	41.7	52.2	62.6	61.8	92.6	123.5	140.0	140.0	20.9	31.3	41.7	52.2	62.6	22.4	33.5	44.7	55.9	67.1	70.3	105.5	140.0	140.0	140.0				
	5' - 6"	19.0	28.5	37.9	47.4	56.9	56.1	84.2	112.3	140.0	140.0	19.0	28.5	37.9	47.4	56.9	20.3	30.5	40.6	50.8	61.0	63.9	95.9	127.9	140.0	140.0				
	6' - 0"	17.4	26.1	34.8	43.5	52.2	51.5	77.2	102.9	128.7	140.0	17.4	26.1	34.8	43.5	52.2	18.6	27.9	37.3	46.6	55.9	58.6	87.9	117.2	140.0	140.0				
	6' - 6"	16.1	24.1	32.1	40.1	48.2	47.5	71.3	95.0	118.8	140.0	16.1	24.1	32.1	40.1	48.2	17.2	25.8	34.4	43.0	51.6	54.1	81.2	108.2	135.3	140.0				
7' - 0"	14.9	22.4	29.8	37.3	44.7	44.1	66.2	88.2	110.3	132.3	14.9	22.4	29.8	37.3	44.7	16.0	24.0	31.9	39.9	47.9	50.2	75.4	100.5	125.6	140.0					
15' - 9"	3' - 6"	29.8	44.7	59.6	74.5	89.4	88.2	132.3	140.0	140.0	140.0	29.8	44.7	59.6	74.5	89.4	31.9	47.9	63.9	79.8	95.8	100.5	140.0	140.0	140.0	140.0				
	4' - 0"	26.1	39.1	52.2	65.2	78.3	77.2	115.8	140.0	140.0	140.0	26.1	39.1	52.2	65.2	78.3	27.9	41.9	55.9	69.9	83.8	87.9	131.9	140.0	140.0	140.0				
	4' - 6"	23.2	34.8	46.4	58.0	69.6	68.6	102.9	137.2	140.0	140.0	23.2	34.8	46.4	58.0	69.6	24.8	37.3	49.7	62.1	74.5	78.2	117.2	140.0	140.0	140.0				
	5' - 0"	20.9	31.3	41.7	52.2	62.6	61.8	92.6	123.5	140.0	140.0	20.9	31.3	41.7	52.2	62.6	22.4	33.5	44.7	55.9	67.1	70.3	105.5	140.0	140.0	140.0				
	5' - 6"	19.0	28.5	37.9	47.4	56.9	56.1	84.2	112.3	140.0	140.0	19.0	28.5	37.9	47.4	56.9	20.3	30.5	40.6	50.8	61.0	63.9	95.9	127.9	140.0	140.0				
	6' - 0"	17.4	26.1	34.8	43.5	52.2	51.5	77.2	102.9	128.7	140.0	17.4	26.1	34.8	43.5	52.2	18.6	27.9	37.3	46.6	55.9	58.6	87.9	117.2	140.0	140.0				
	6' - 6"	16.1	24.1	32.1	40.1	48.2	47.5	71.3	95.0	118.8	140.0	16.1	24.1	32.1	40.1	48.2	17.2	25.8	34.4	43.0	51.6	54.1	81.2	108.2	135.3	140.0				
7' - 0"	14.9	22.4	29.8	37.3	44.7	44.1	66.2	88.2	110.3	132.3	14.9	22.4	29.8	37.3	44.7	16.0	24.0	31.9	39.9	47.9	50.2	75.4	100.5	125.6	140.0					

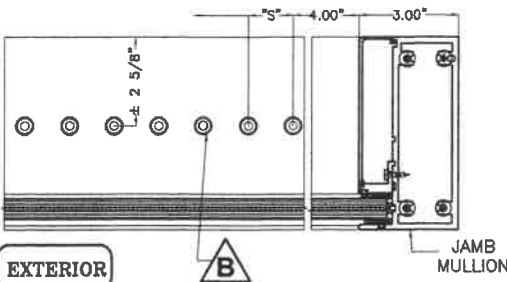
FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

- A - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HMB THRU BOLT W/ NUT & LOCK WASHER.



"n" FASTENERS
n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL,
EQUALLY INSTALLED AT EACH SIDE OF INTERIOR MULLION

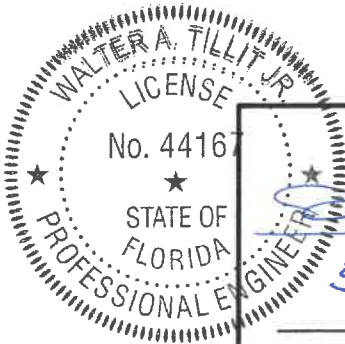
SILL OR HEAD CONNECTION DETAIL @
INTERIOR MULLION
(PLAN VIEW)
N.T.S.



"n/2" FASTENERS
n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT
HEAD/SILL, INSTALLED AT ONE SIDE OF JAMB MULLION

SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION
(PLAN VIEW)
N.T.S.

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)



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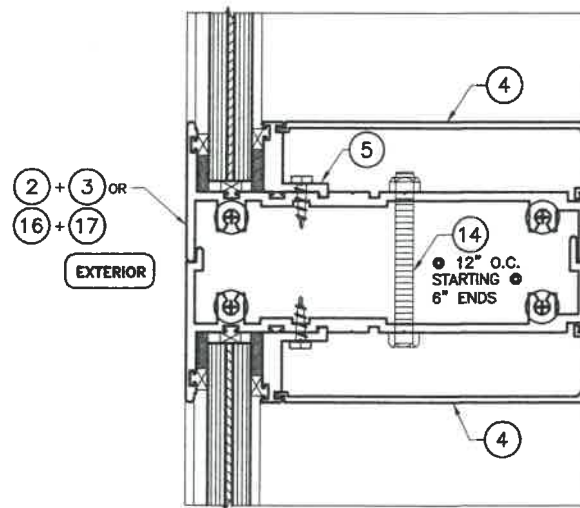
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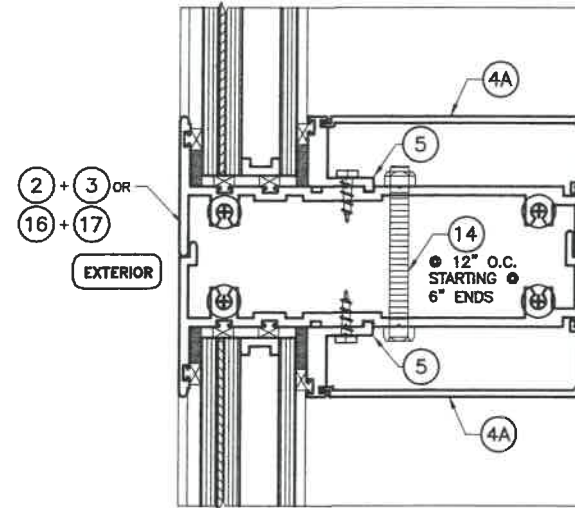
8/26/2021
DATE

21-118
DRAWING No

SHEET 13 OF 51

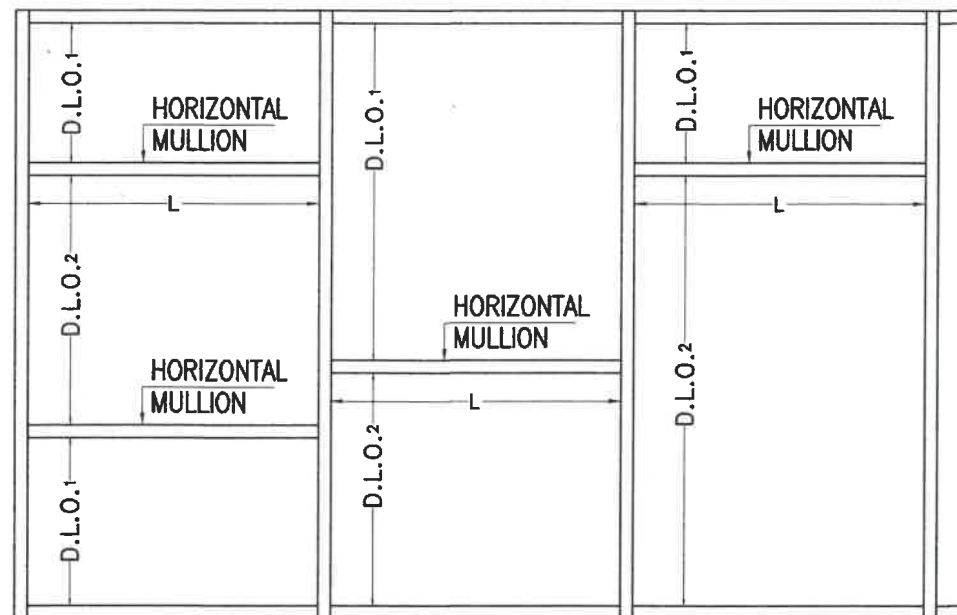


LAMINATED GLASS CASE

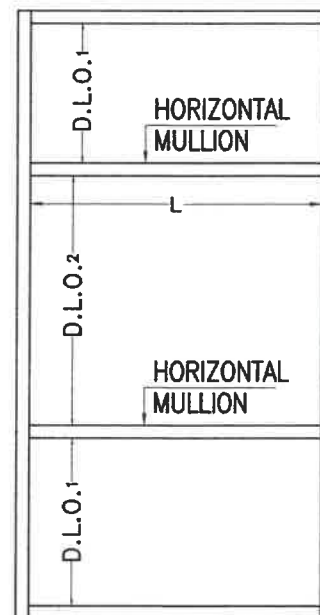


INSULATED GLASS CASE

SECTION AT HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1



MULTIPLE PANELS



SINGLE PANEL

ELEVATIONS W/ HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1

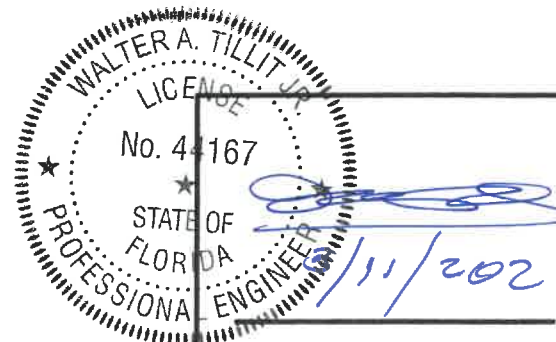
"L" = MAXIMUM HORIZONTAL MULLION SPAN

"D.L.O." = HORIZONTAL MULLION MAX. EFFECTIVE DAY LIGHT OPENING = $\frac{D.L.O.1 + D.L.O.2}{2}$

MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf)		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM 1/8" & 3/16" THICK HORIZONTAL MULLION SPAN
		LAMINATED/INSULATED GLASS "L" (Ft)
± 40.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
± 45.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
± 50.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
± 55.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"

MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM 1/8" & 3/16" THICK HORIZONTAL MULLION SPAN
		LAMINATED/INSULATED GLASS "L" (Ft)
± 60.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
± 65.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
± 70.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
± 75.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"

MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM 1/8" & 3/16" THICK HORIZONTAL MULLION SPAN
		LAMINATED/INSULATED GLASS "L" (Ft)
± 80.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
± 85.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	6'-10"
± 90.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	6'-11"
	6'-6"	6'-5"
± 95.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	6'-7"
	6'-6"	6'-1"



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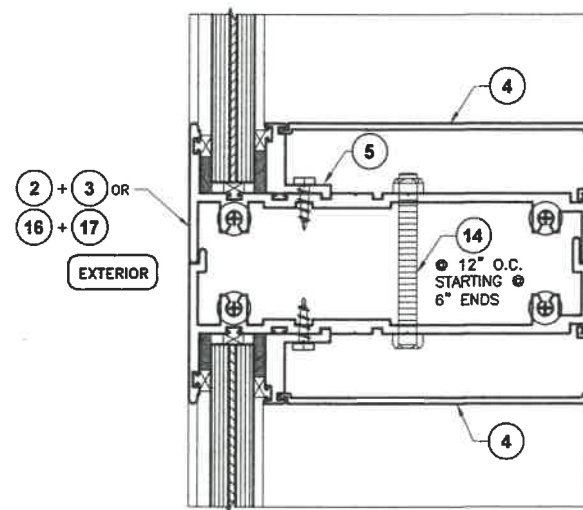
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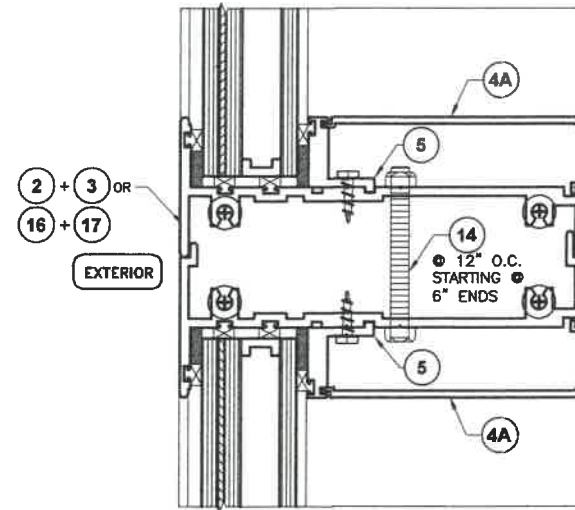
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SHEET 14 OF 51

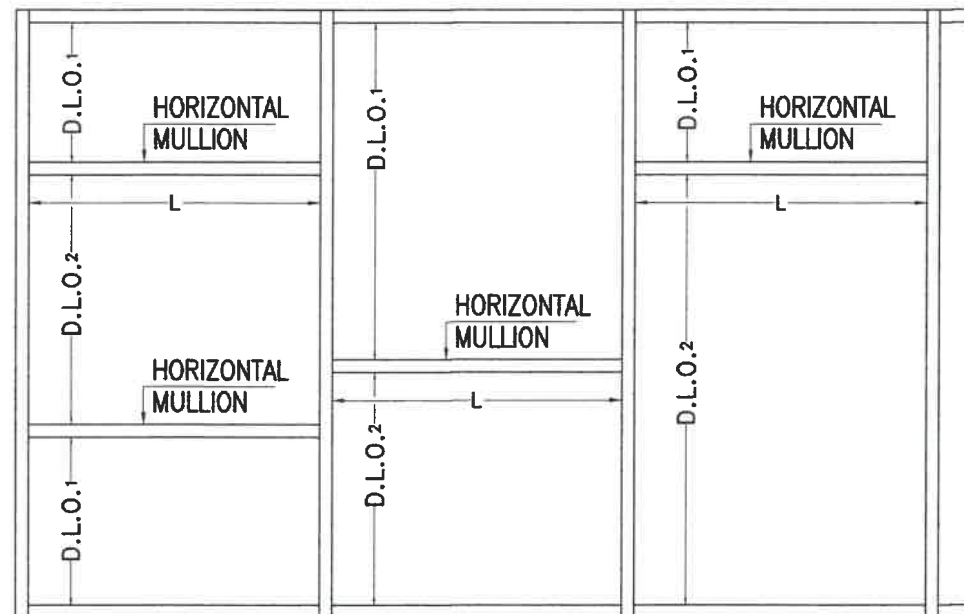


LAMINATED GLASS CASE

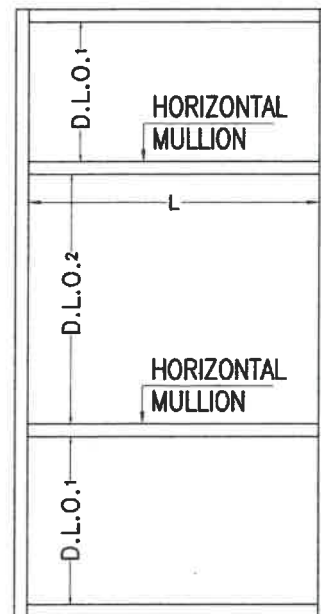


INSULATED GLASS CASE

SECTION AT HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1



MULTIPLE PANELS



SINGLE PANEL

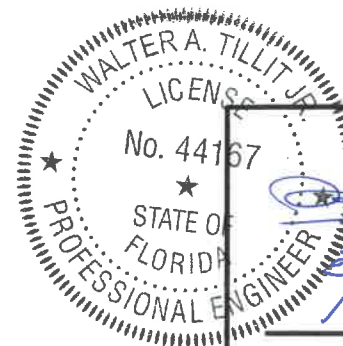
ELEVATIONS W/ HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1

"L" = MAXIMUM HORIZONTAL MULLION SPAN

"D.L.O." = HORIZONTAL MULLION EFFECTIVE DAY LIGHT OPENING = $\frac{D.L.O.1 + D.L.O.2}{2}$

MAXIMUM HORIZONTAL SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft)	MAXIMUM 1/8" & 3/16" THICK HORIZONTAL RAILS SPAN
		LAMINATED/INSULATED GLASS "L" (Ft)
± 100.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	7' - 0"
	4' - 6"	7' - 0"
	5' - 0"	7' - 0"
	6' - 0"	6' - 3"
	6' - 6"	5' - 9"
	7' - 0"	5' - 4"
± 105.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	7' - 0"
	4' - 6"	7' - 0"
	5' - 0"	7' - 0"
	6' - 0"	6' - 0"
	6' - 6"	5' - 8"
	7' - 0"	5' - 1"
± 110.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	7' - 0"
	4' - 6"	7' - 0"
	5' - 0"	6' - 10"
	6' - 0"	5' - 8"
	6' - 6"	5' - 3"
	7' - 0"	4' - 11"
± 115.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	7' - 0"
	4' - 6"	7' - 0"
	5' - 0"	6' - 6"
	6' - 0"	5' - 5"
	6' - 6"	5' - 0"
	7' - 0"	4' - 8"

MAXIMUM HORIZONTAL SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft)	MAXIMUM 1/8" & 3/16" THICK HORIZONTAL RAILS SPAN
		LAMINATED/INSULATED GLASS "L" (Ft)
± 120.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	7' - 0"
	4' - 6"	6' - 11"
	5' - 0"	6' - 3"
	6' - 0"	5' - 3"
	6' - 6"	4' - 10"
	7' - 0"	4' - 6"
± 125.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	7' - 0"
	4' - 6"	6' - 8"
	5' - 0"	6' - 0"
	6' - 0"	5' - 0"
	6' - 6"	4' - 7"
	7' - 0"	4' - 4"
± 130.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	7' - 0"
	4' - 6"	6' - 5"
	5' - 0"	5' - 9"
	6' - 0"	4' - 10"
	6' - 6"	4' - 5"
	7' - 0"	4' - 2"
+130.0,- 135.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	6' - 11"
	4' - 6"	6' - 2"
	5' - 0"	5' - 7"
	6' - 0"	4' - 8"
	6' - 6"	4' - 3"
	7' - 0"	4' - 0"
+130.0,- 140.0	2' - 0"	7' - 0"
	2' - 6"	7' - 0"
	3' - 0"	7' - 0"
	3' - 6"	7' - 0"
	4' - 0"	6' - 8"
	4' - 6"	6' - 0"
	5' - 0"	5' - 4"
	6' - 0"	4' - 6"
	6' - 6"	4' - 2"
	7' - 0"	3' - 10"



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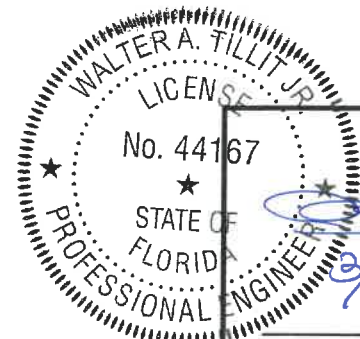
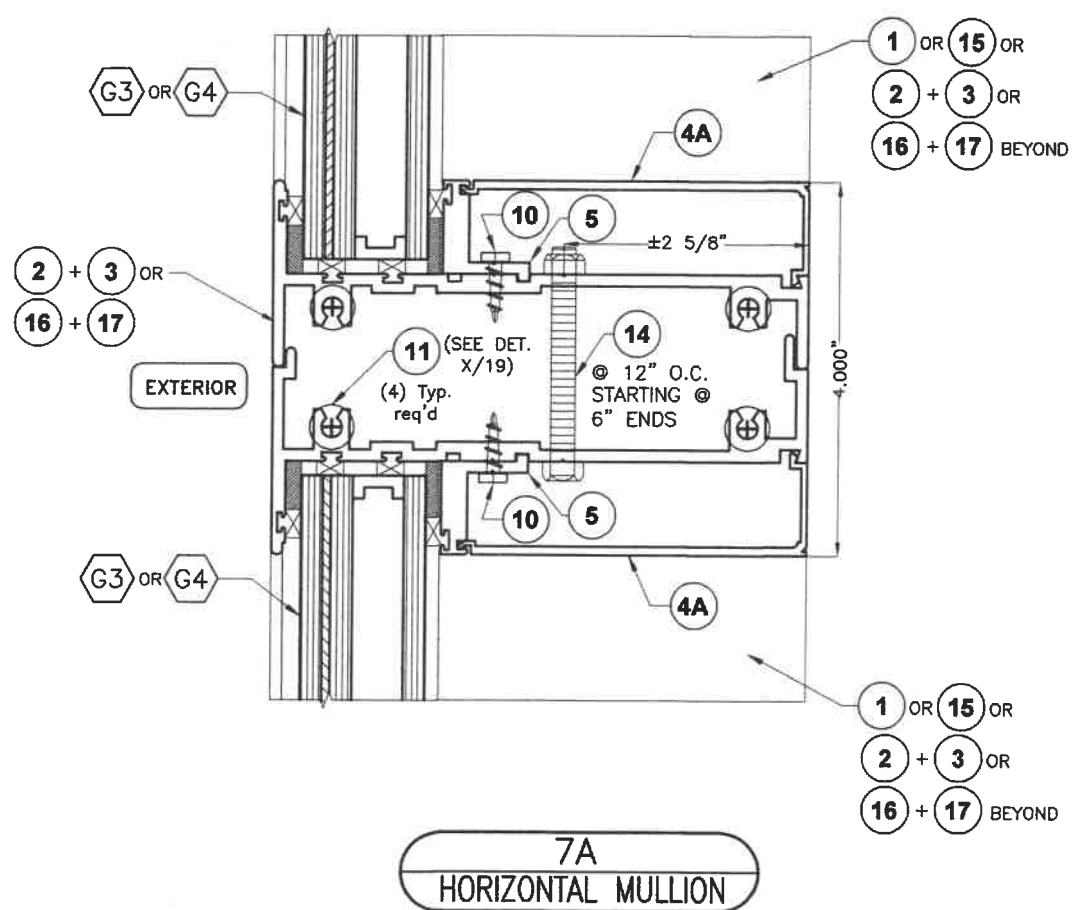
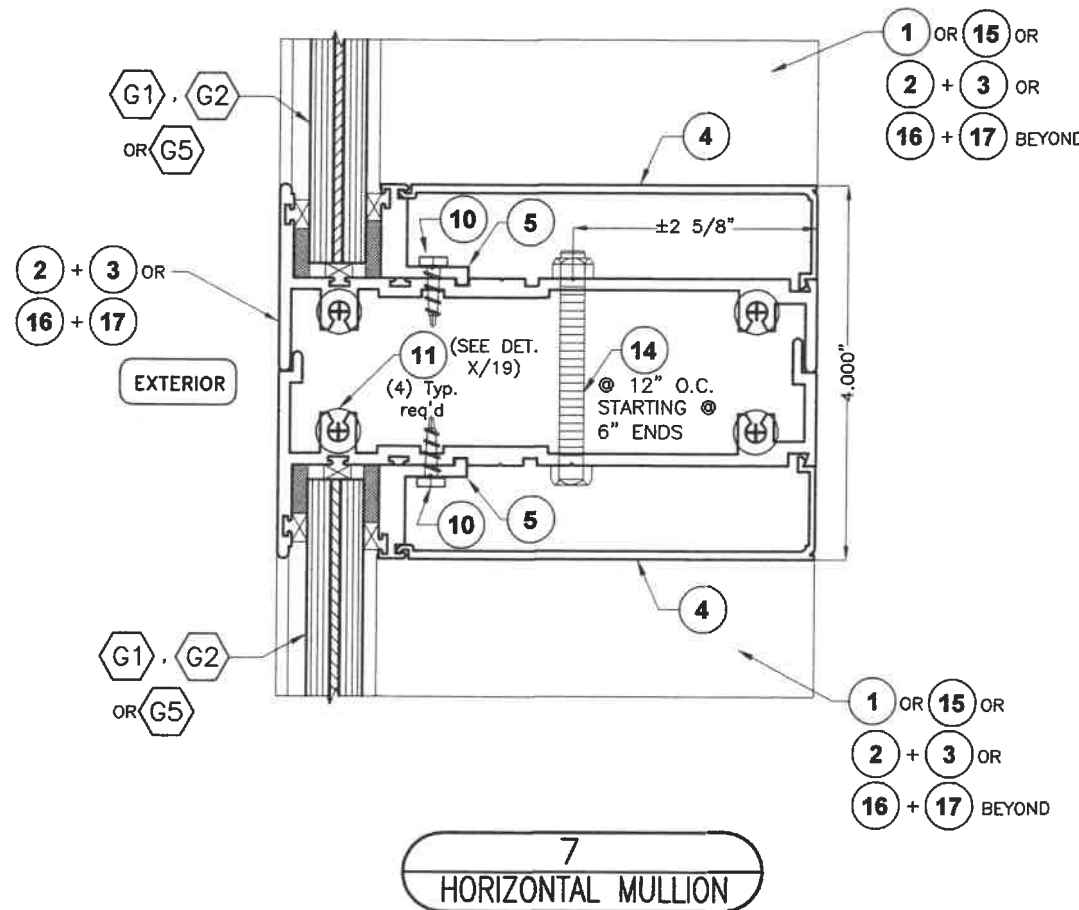
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HORIZONTAL MULLION DETAILS

OPTIONAL SYSTEM # 1



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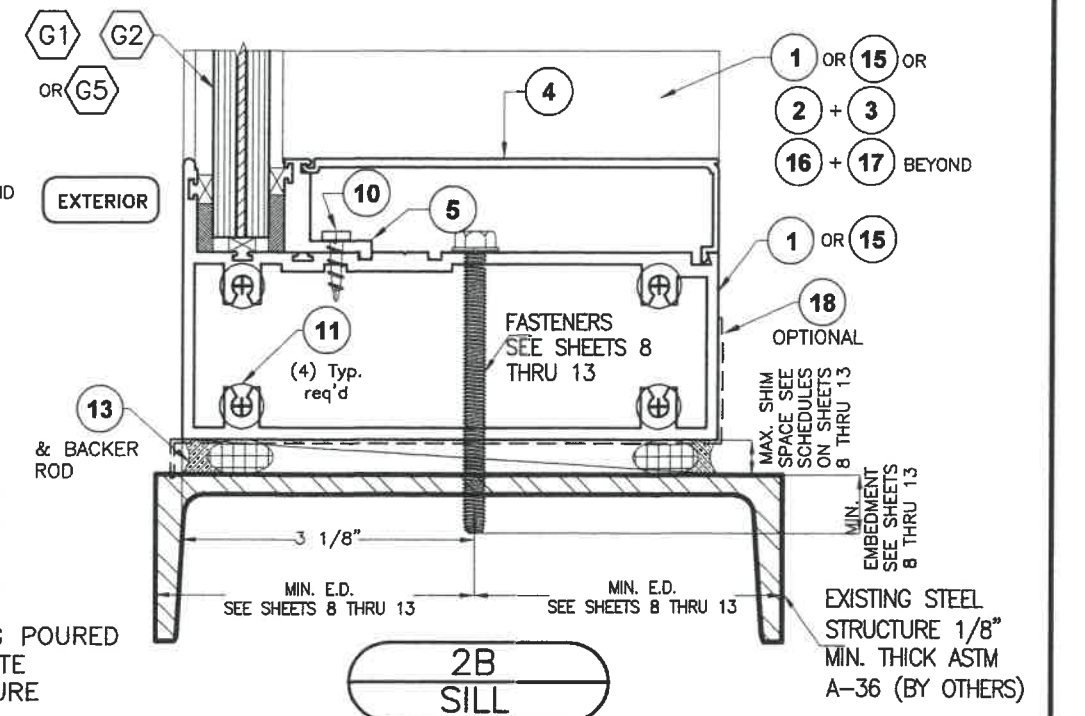
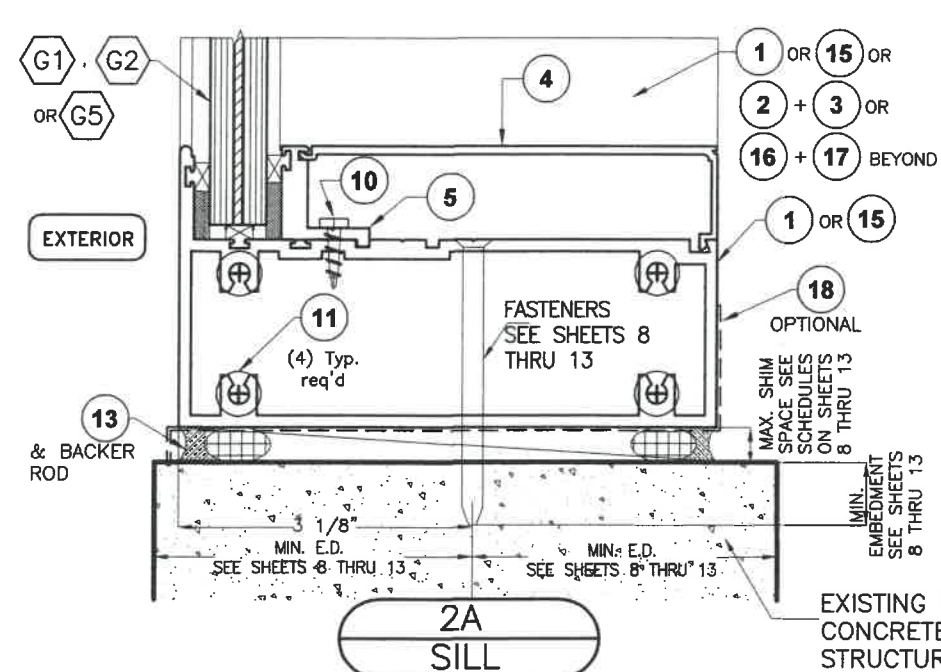
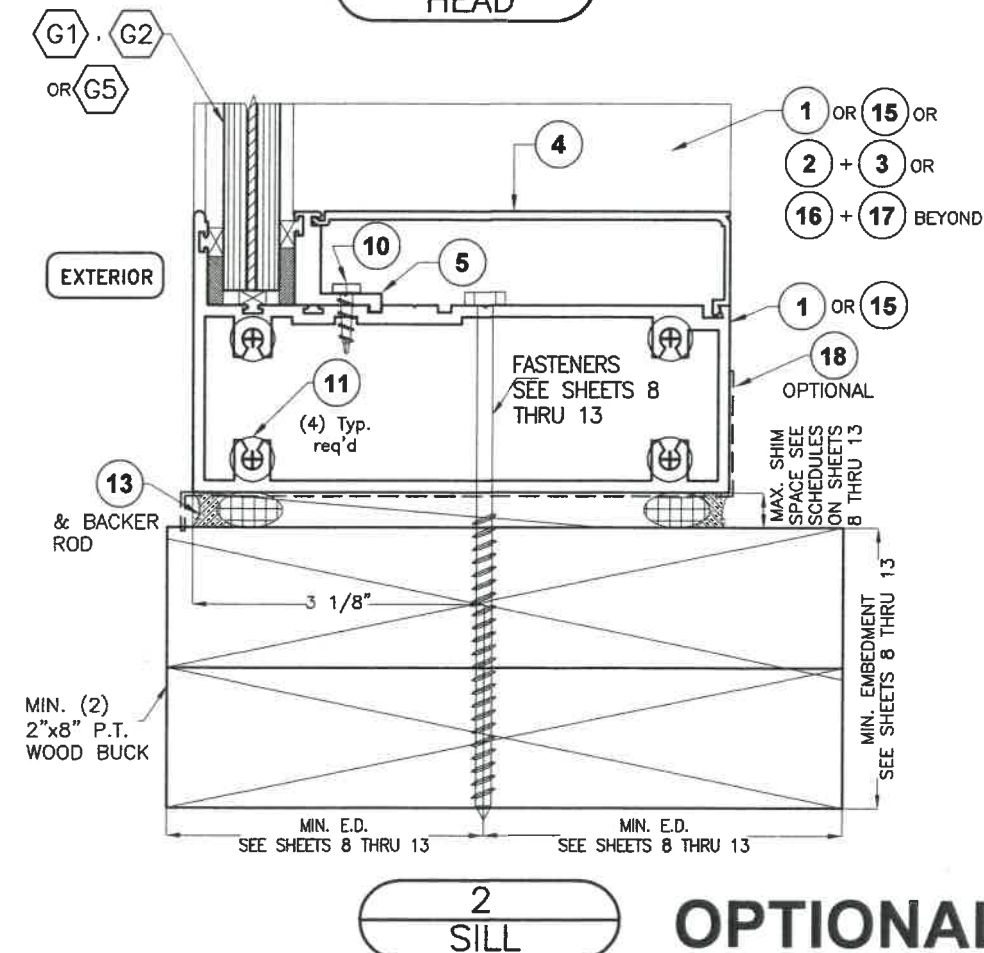
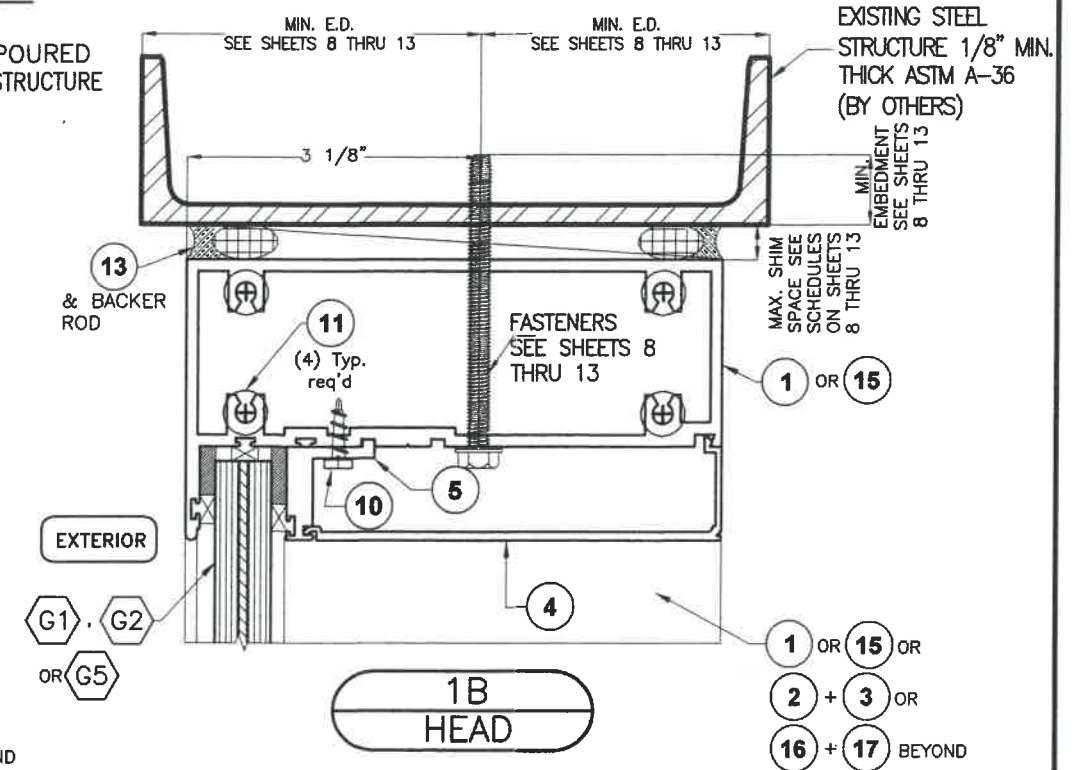
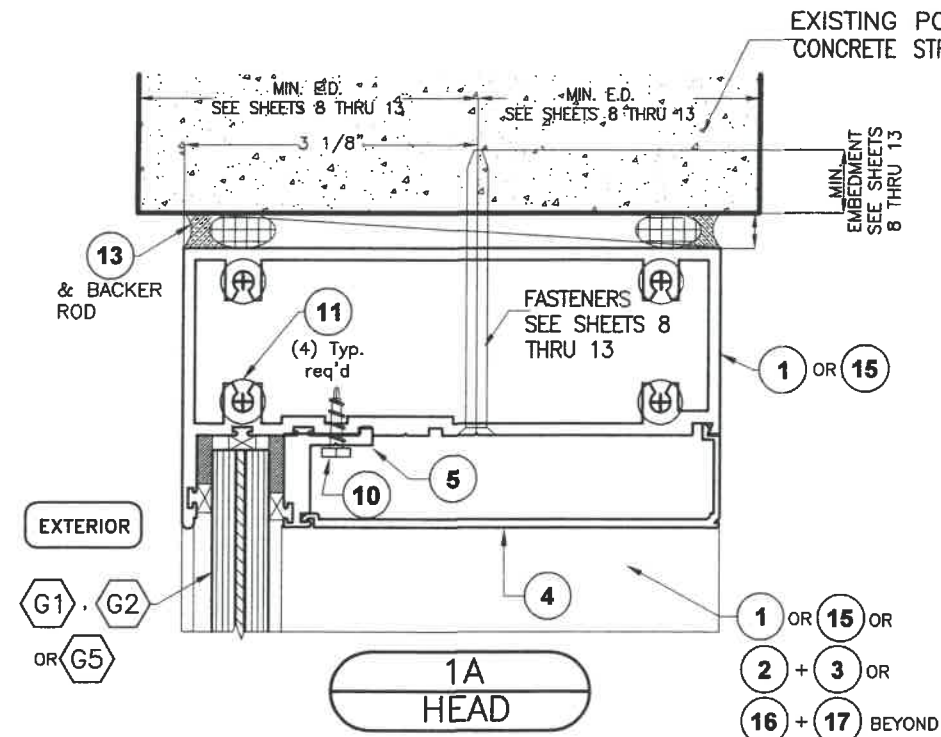
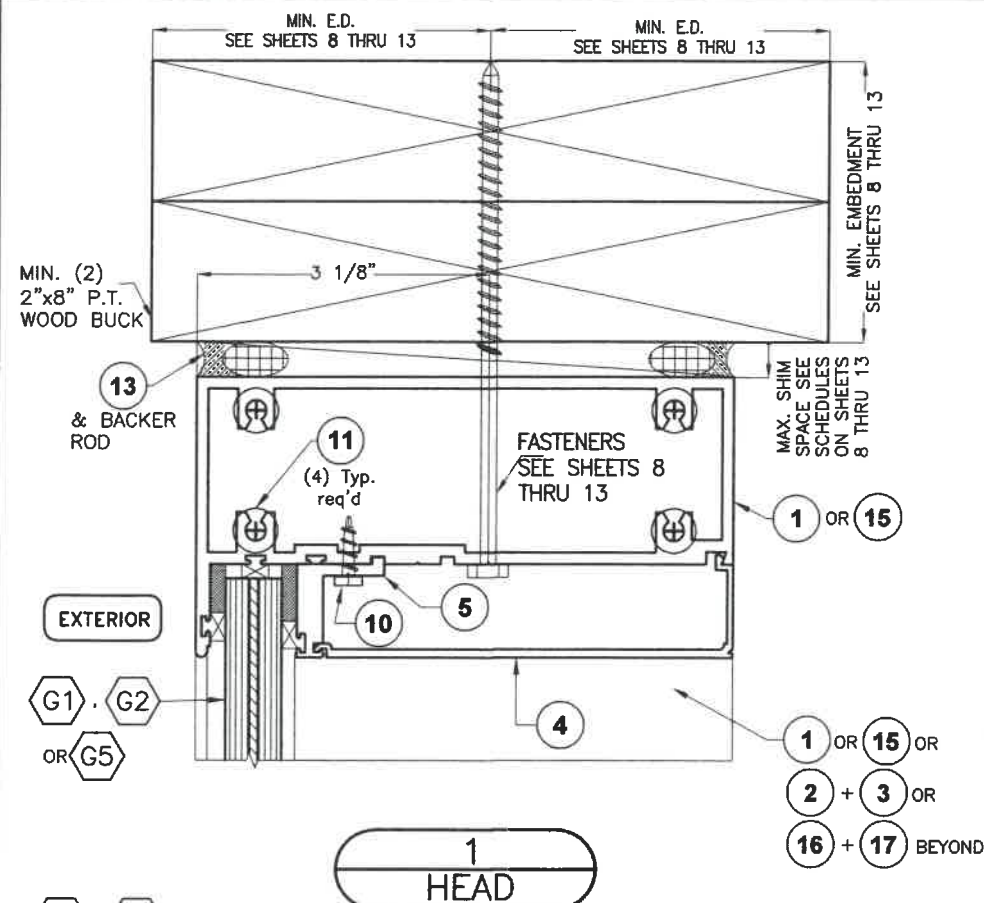
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SHEET 16 OF 51

HEAD & SILL CONNECTIONS DETAILS



OPTIONAL SYSTEM #1

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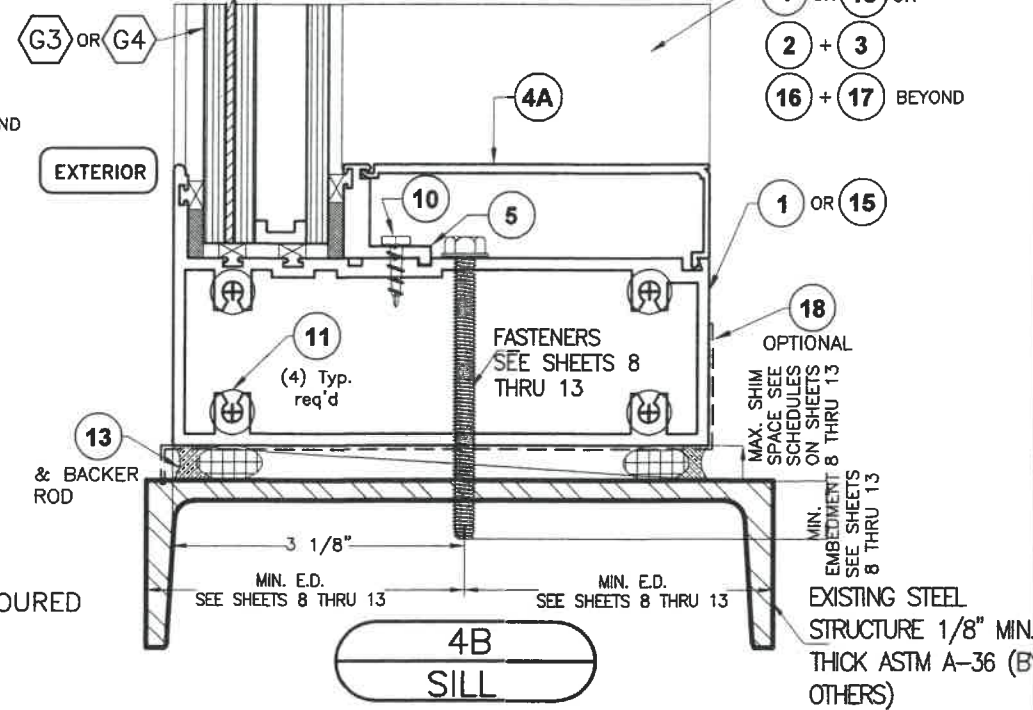
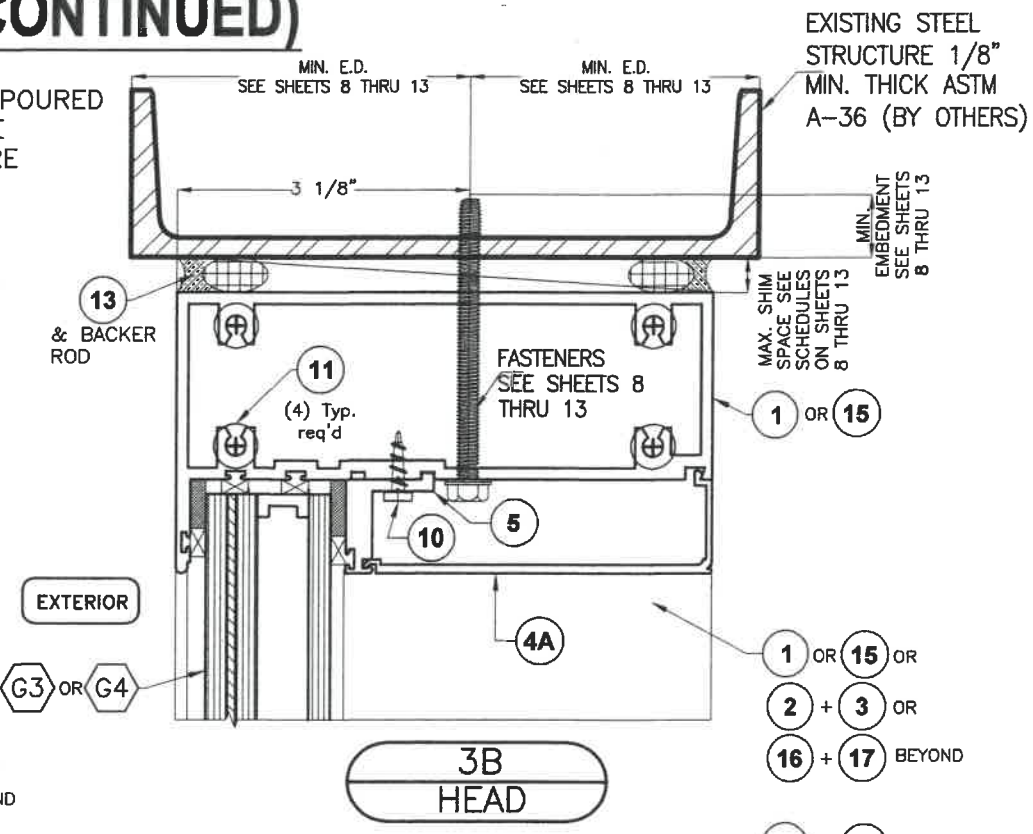
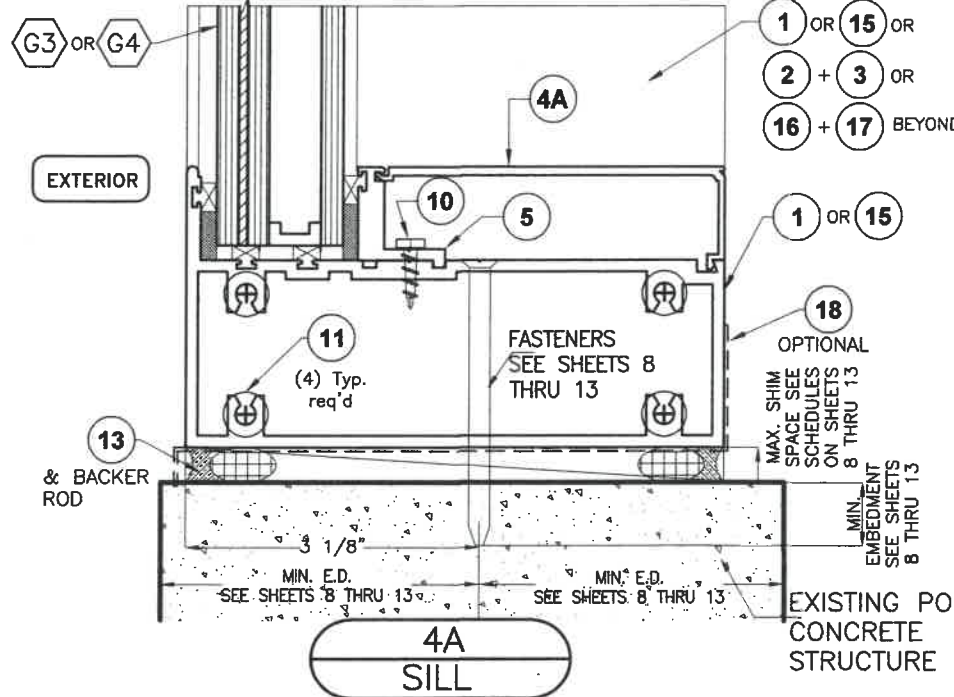
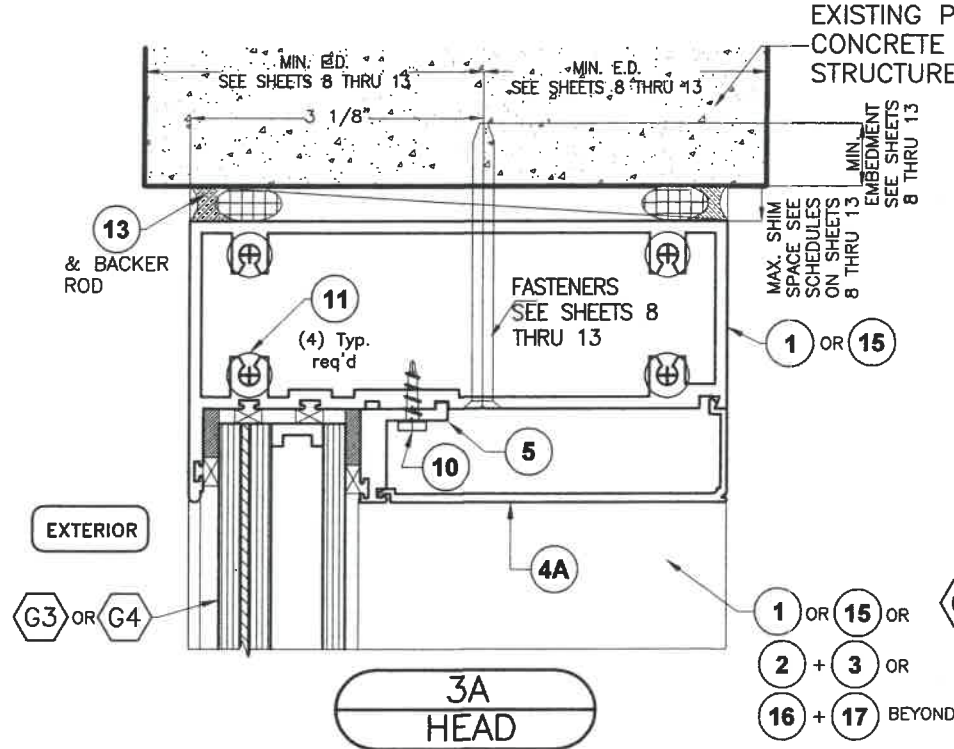
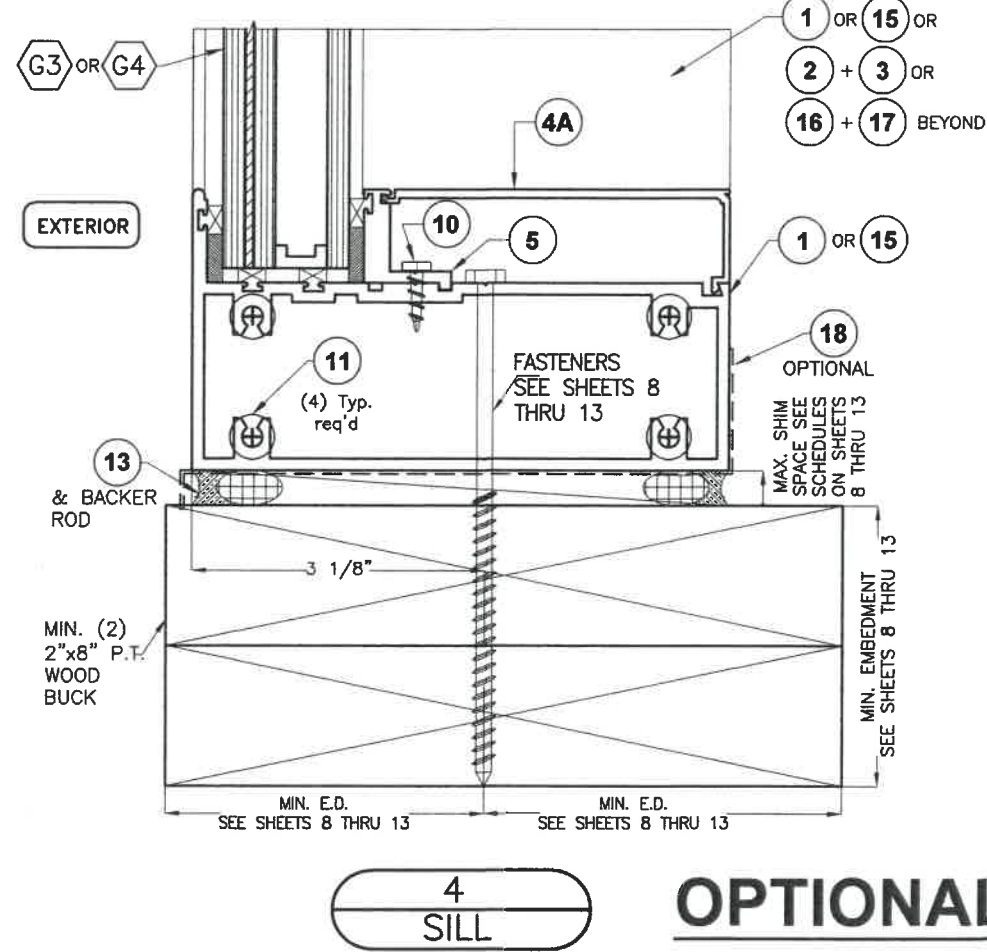
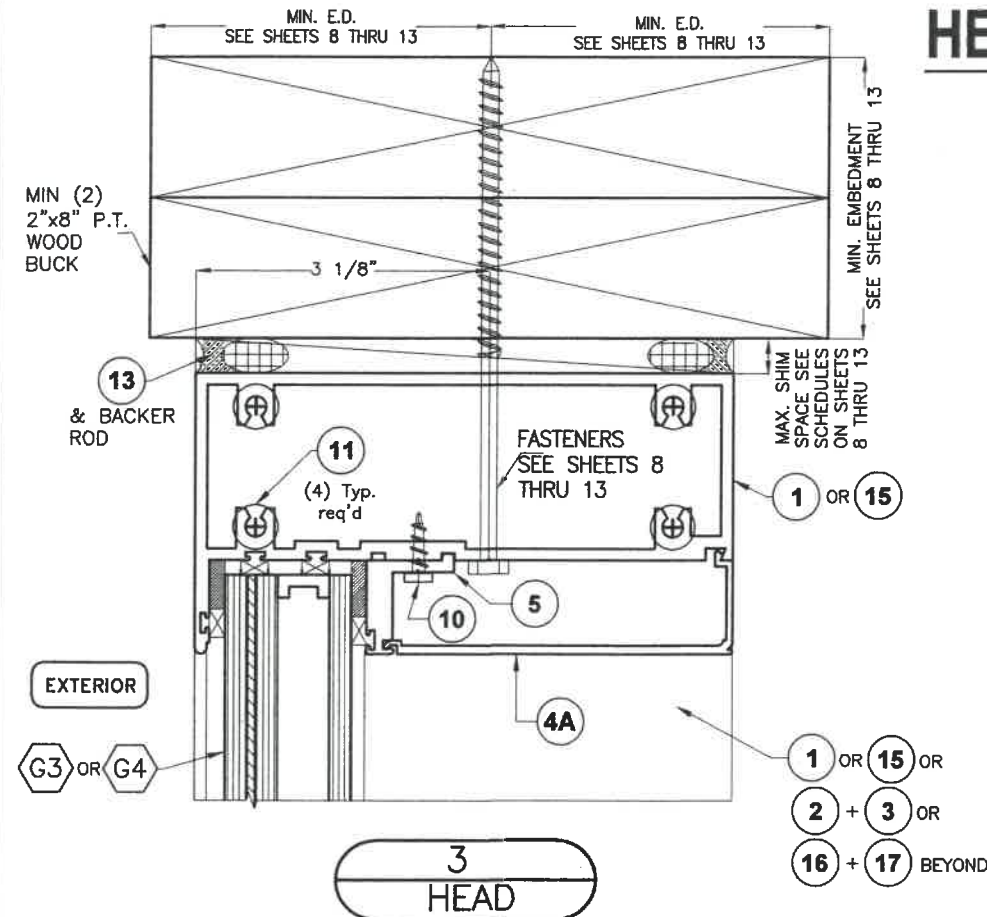
8/26/2021
DATE

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DRAWING No

SHEET 17 OF 51

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

HEAD & SILL CONNECTIONS DETAILS (CONTINUED)



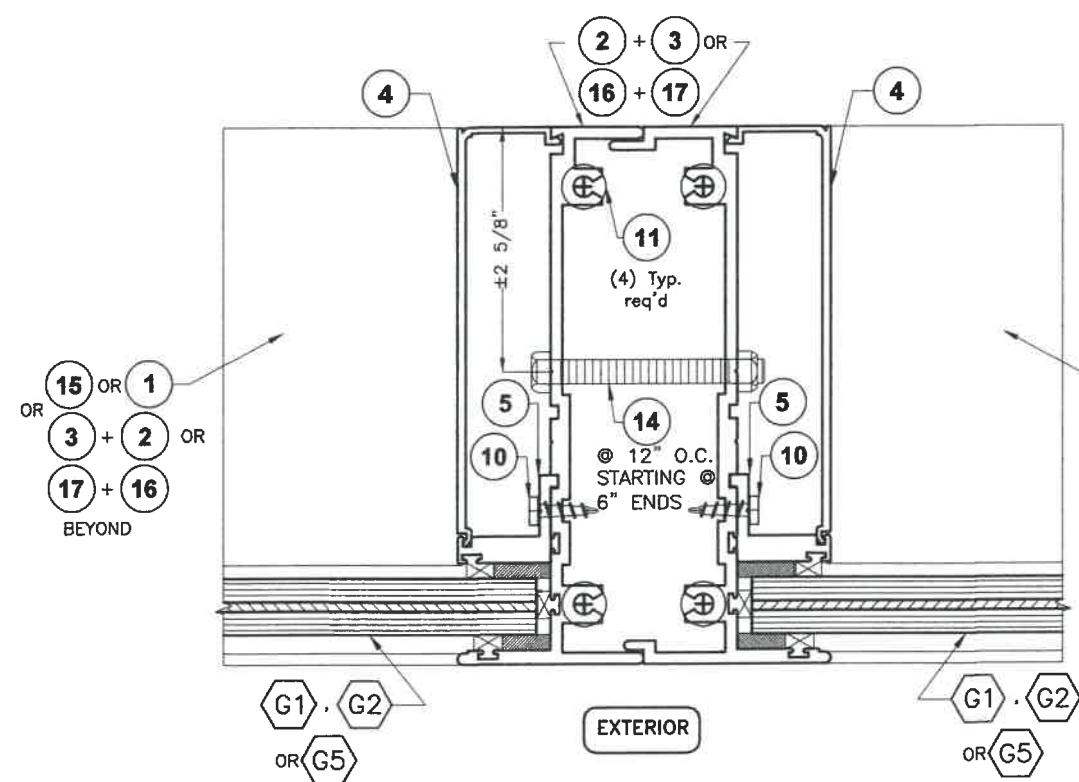
OPTIONAL SYSTEM # 1

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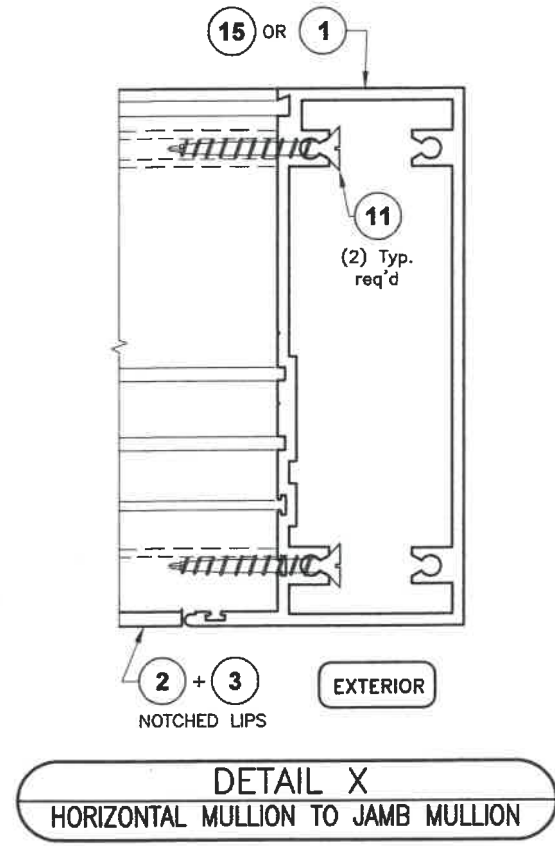
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FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)					
HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS				M.P. DRAWN BY	
 290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com				8/26/2021 DATE	
				21-118 DRAWING No	
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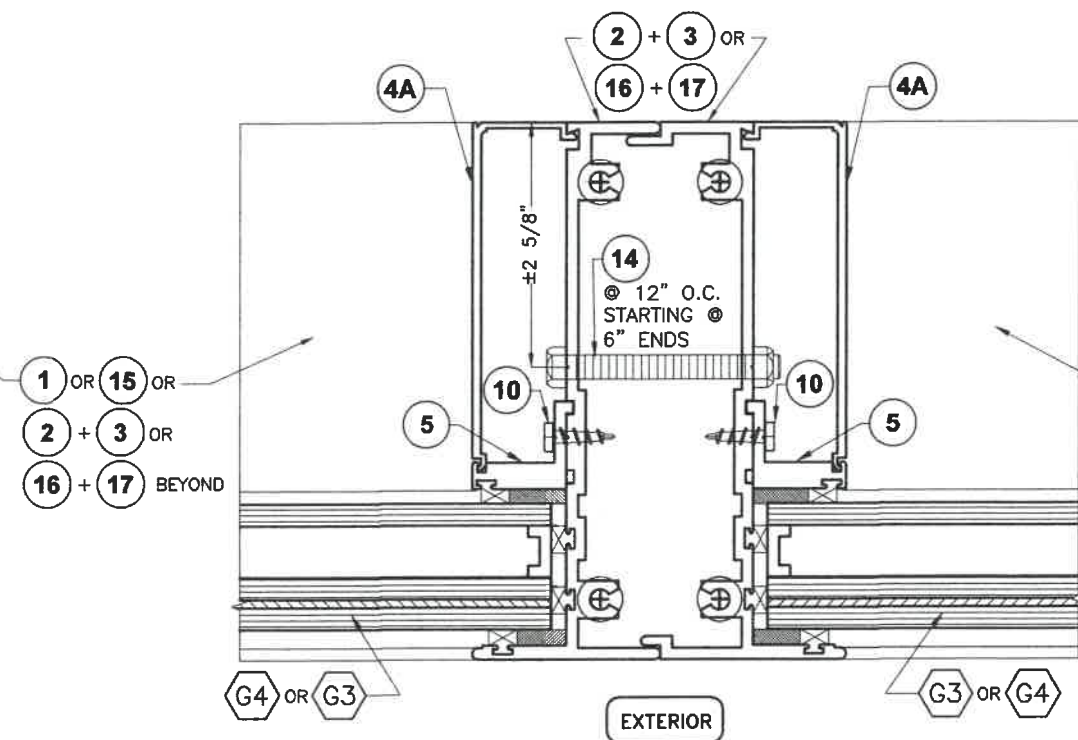
HORIZONTAL SECTIONS AT INTERIOR VERTICAL MULLIONS AT STRAIGHT GLASS WALL APPLICATIONS
OPTIONAL SYSTEM # 1



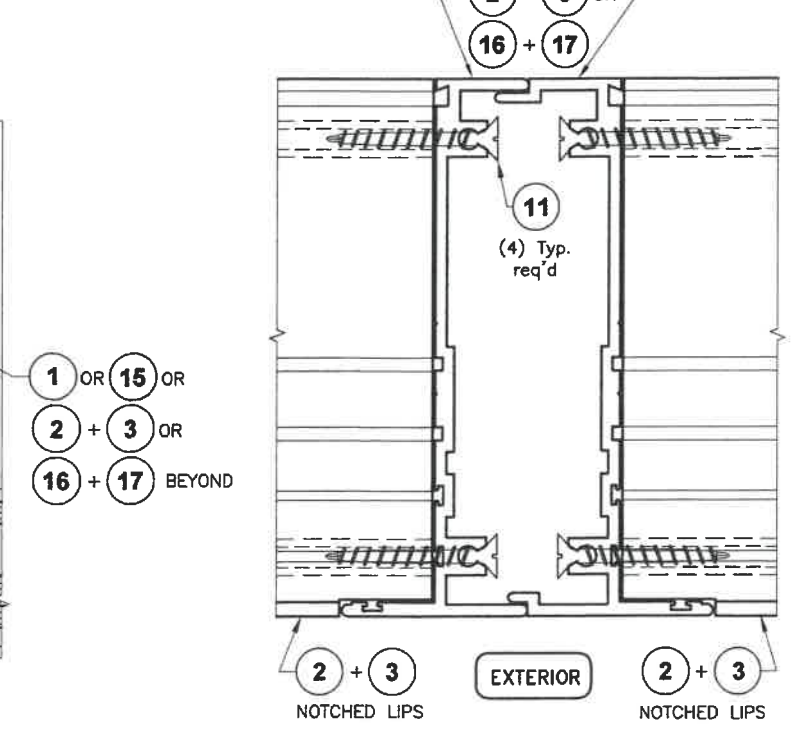
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INTERIOR VERTICAL MULLION



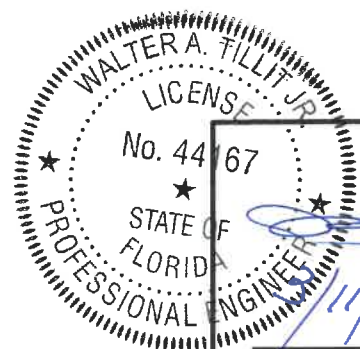
DETAIL X
HORIZONTAL MULLION TO JAMB MULLION



6
INTERIOR VERTICAL MULLION



DETAIL X
HORIZONTAL MULLION TO
INTERIOR VERTICAL MULLION



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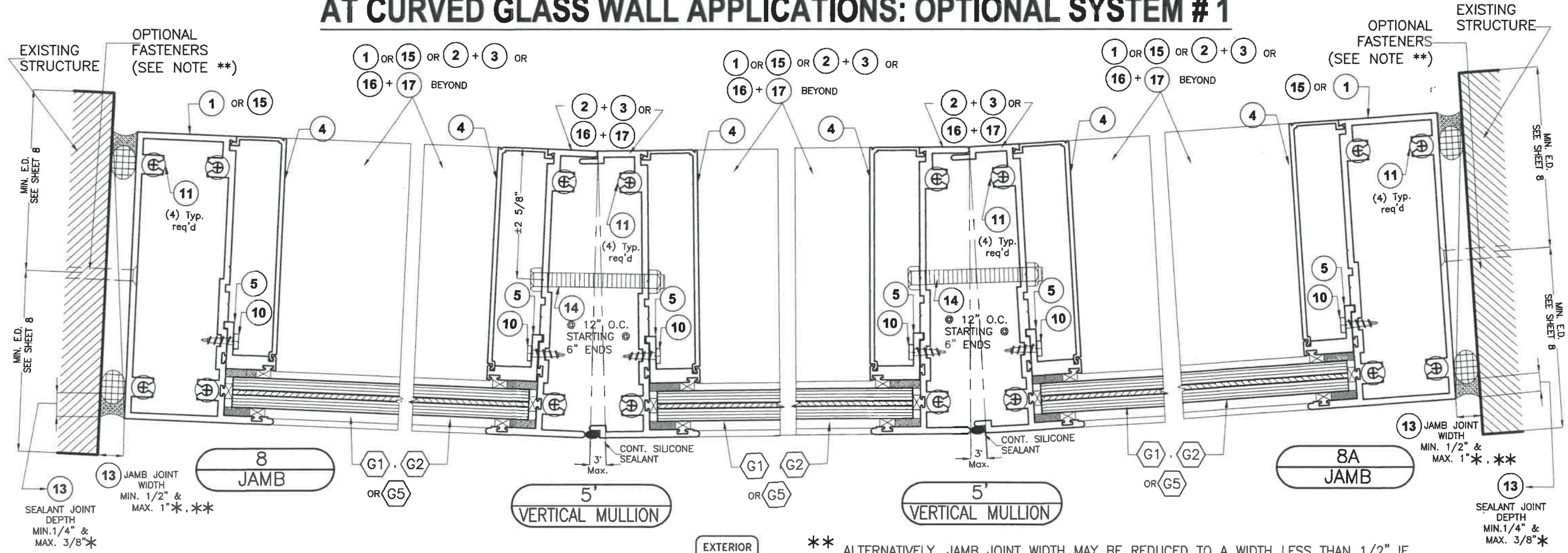
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						8/26/2021 DATE	
						21-118 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 19 OF 51	
1	OLD 20-271	8/26/21	3	-	-		
2	-	-	4	-	-		

HORIZONTAL SECTIONS AT INTERIOR VERTICAL MULLIONS PLUS JAMB MULLIONS
AT CURVED GLASS WALL APPLICATIONS: OPTIONAL SYSTEM # 1



* NOTE: ABOVE INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.

** ALTERNATIVELY, JAMB JOINT WIDTH MAY BE REDUCED TO A WIDTH LESS THAN 1/2" IF JAMB PROFILE IS ATTACHED TO WALL FULL HEIGHT W/ THE FOLLOWING FASTENERS.

SUBSTRATE Δ	FASTENERS TYPES Δ		SPACING
	3/8" SHIM SPACE OR LESS	>3/8" , <1/2" SHIM SPACE	
POURED CONCRETE	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
2500 psi GROUT FILLED ASTM C-90 CONCRETE BLOCK	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
STEEL OR ALUMINUM	FASTENER TYPE E	FASTENER TYPE E	6" O.C.
WOOD	FASTENER TYPES C & D	FASTENER TYPE D	5" O.C.

Δ CORRESPONDS TO FASTENERS TYPES AND SUBSTRATES CHARACTERISTICS (AS APPLICABLE) DESCRIBED ON SHEETS 8 THRU 13.

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REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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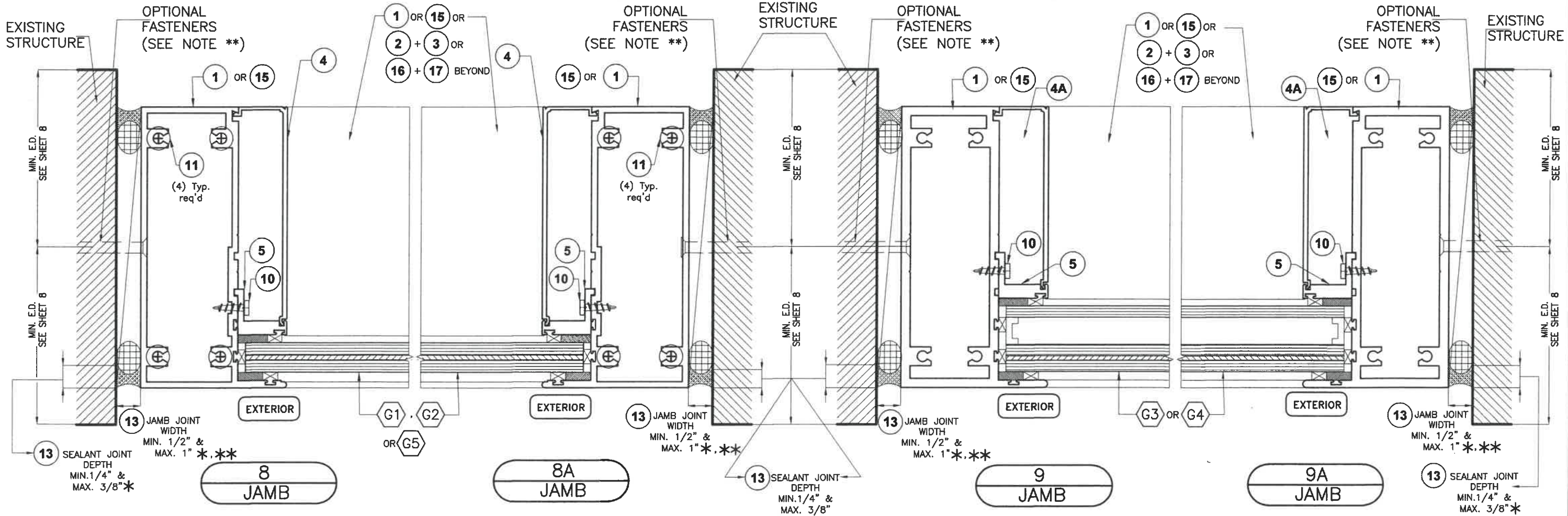
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8/26/2021
DATE

21-118
DRAWING No

SHEET 20 OF 51

HORIZONTAL SECTIONS AT JAMBS AT STRAIGHT GLASS WALL APPLICATIONS: OPTIONAL SYSTEM # 1

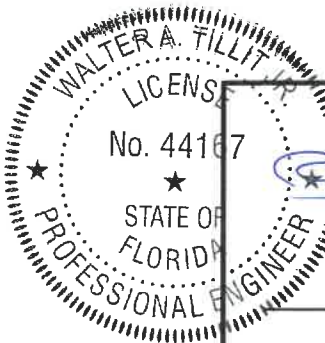


** ALTERNATIVELY, JAMB JOINT WIDTH MAY BE REDUCED TO A WIDTH LESS THAN 1/2" IF JAMB PROFILE IS ATTACHED TO WALL FULL HEIGHT W/ THE FOLLOWING FASTENERS.

* NOTE: ABOVE INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.

SUBSTRATE Δ	FASTENERS TYPES Δ		SPACING
	3/8" SHIM SPACE OR LESS	>3/8" , <1/2" SHIM SPACE	
POURED CONCRETE	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
2500 psi GROUT FILLED ASTM C-90 CONCRETE BLOCK	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
STEEL OR ALUMINUM	FASTENER TYPE E	FASTENER TYPE E	6" O.C.
WOOD	FASTENER TYPES C & D	FASTENER TYPE D	5" O.C.

Δ CORRESPONDS TO FASTENERS TYPES AND SUBSTRATES CHARACTERISTICS (AS APPLICABLE) DESCRIBED ON SHEET'S B THRU 13.



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REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

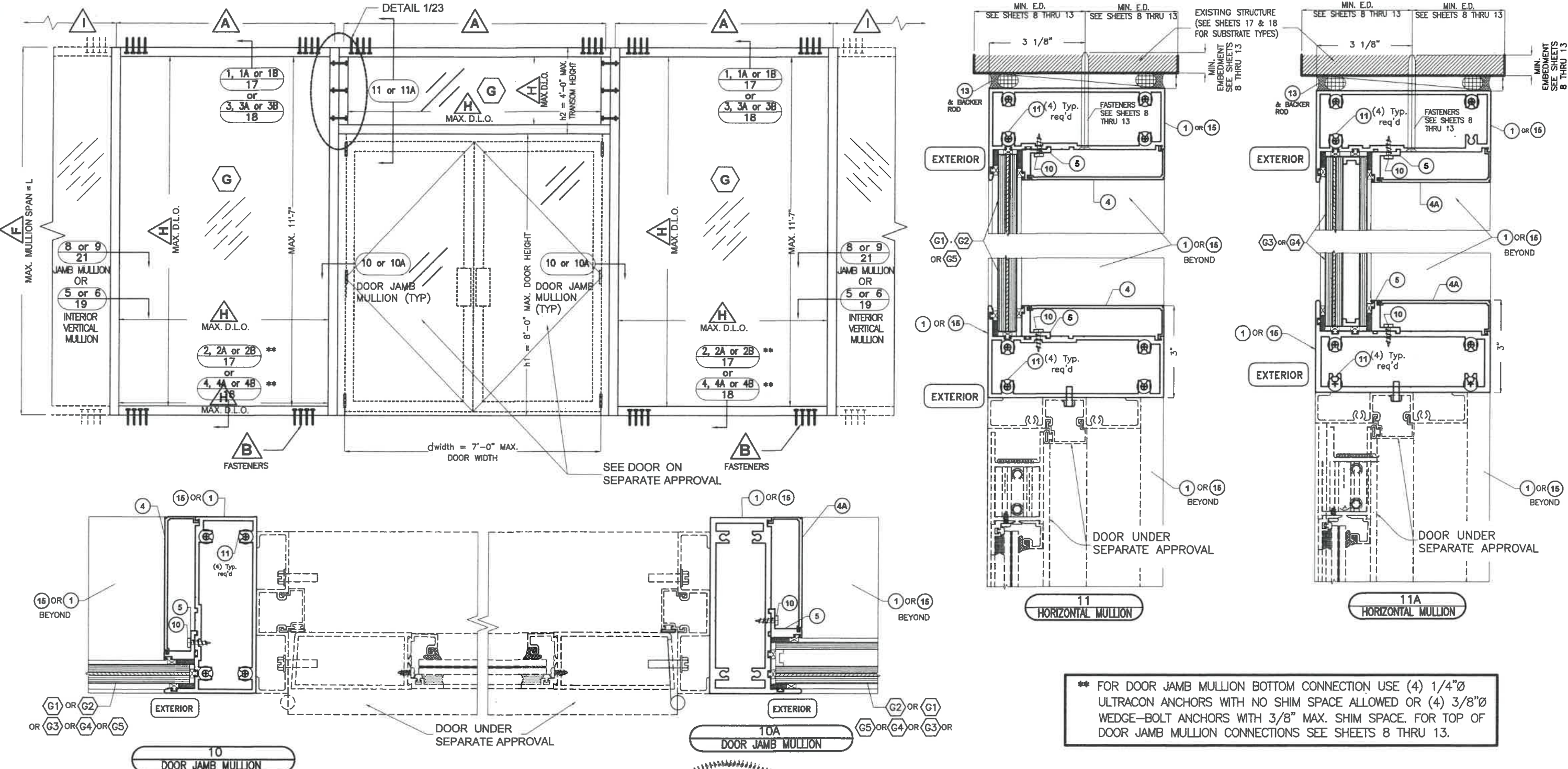
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8/26/2021
DATE

21-118
DRAWING No

SHEET 21 OF 51

ELEVATION FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 ADJACENT TO APPROVED DOOR (ON SEPARATE APPROVAL): OPTIONAL SYSTEM # 1



FOOT NOTES:

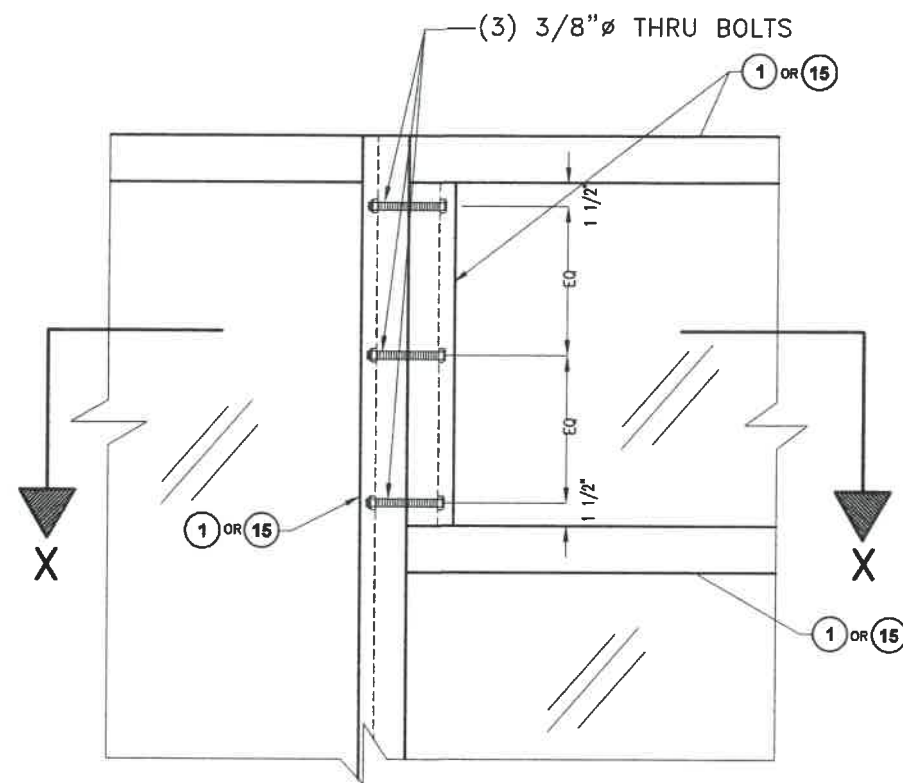
- A FOR MAXIMUM DOOR JAMB MULLION SPACING ON CENTERS SEE SHEET 23.
- B FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 8 THRU 13.
- F FOR MAXIMUM VERTICAL MULLION SPAN SEE SHEET 23.
- G FOR GLAZING DETAILS SEE SHEET 3 AND FOR GLASS SCHEDULE SEE SHEETS 5, 5A.
- H FOR MAXIMUM D.L.O. SEE SCHEDULE ON SHEETS 5, 5A.
- I FOR MAXIMUM INTERIOR VERTICAL MULLION SPACING ON CENTERS SEE SHEETS 6 & 7.

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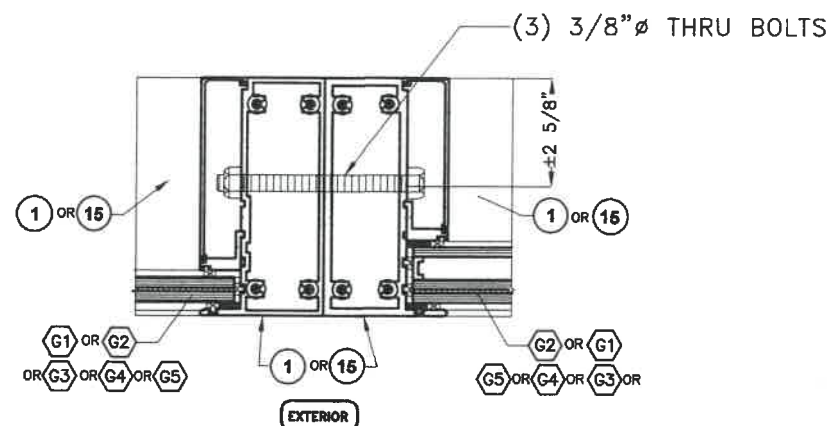
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						21-118 DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 22 OF 51
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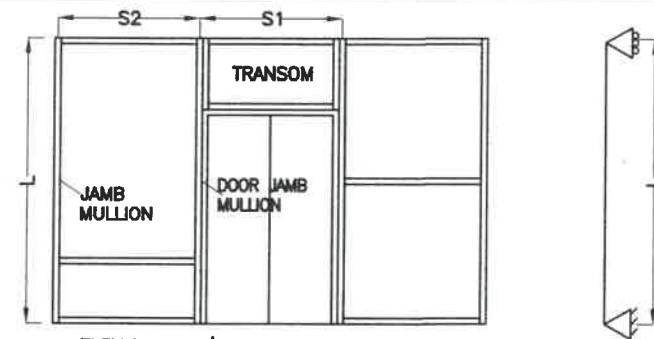
ELEVATION DETAIL 1

SCALE: 1"=1'-0"



SECTION X-X

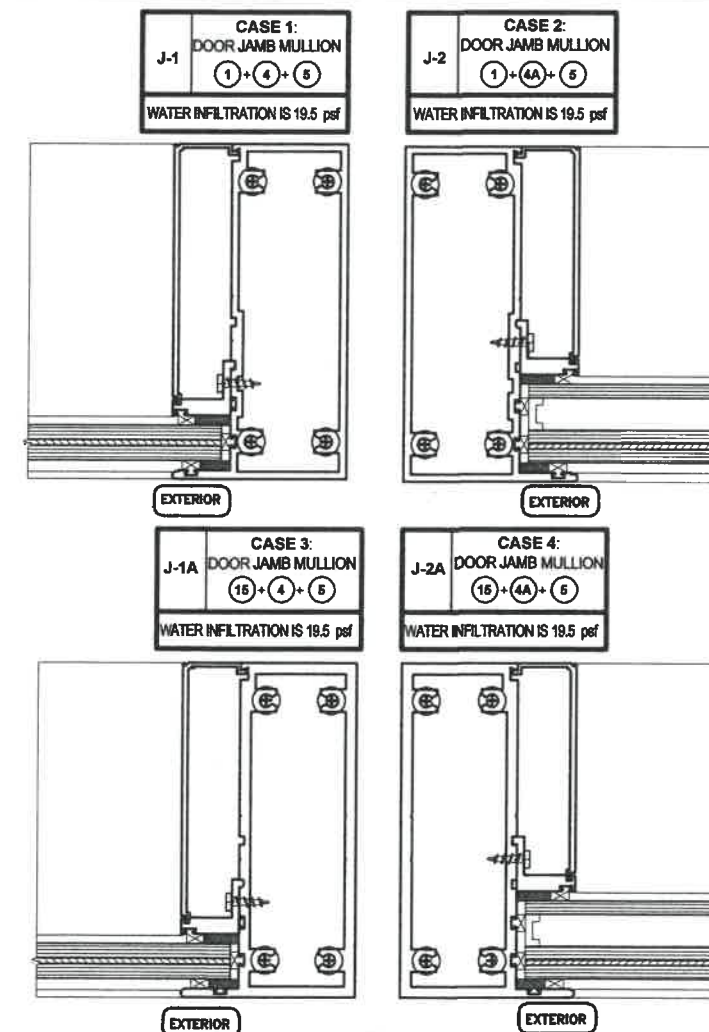
SCALE: 3/8"=1'-0"



ELEVATION W/ DOOR JAMB MULLION

"L" = MAXIMUM DOOR JAMB MULLION SPAN
DOOR JAMB MULLION EFFECTIVE SPACING: "b" = $\frac{S1+S2}{2}$

* MAXIMUM DESIGN PRESSURE RATING FOR DOOR JAMB MULLION WILL AUTOMATICALLY QUALIFY DESIGN PRESSURE RATINGS FOR JAMB MULLIONS FOR ANY GIVEN MULLION SPACING & PRESSURE RATING.



SIDE VIEW DOOR JAMB MULLION

**** MAXIMUM DOOR JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf), DOOR JAMB MULLION EFFECTIVE SPACING "b"**

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX EFFECTIVE SPACING "b" (Ft-in)	1/8" or 3/16" THICK INTERIOR DOOR JAMB MULLION SPAN "L"(FT)
		Laminated/Insulated Glass
		CASES: 1,2,3,4 J-1, J2, J-1A & J-2A
± 40.0	3'-6"	12'-0"
	4'-0"	12'-0"
	4'-6"	12'-0"
	5'-0"	12'-0"
	5'-6"	11'-9"
	6'-0"	11'-3"
± 45.0	6'-6"	10'-10"
	7'-0"	10'-5"
	3'-6"	12'-0"
	4'-0"	12'-0"
	4'-6"	12'-0"
	5'-0"	11'-7"
± 50.0	5'-6"	11'-1"
	6'-0"	10'-7"
	6'-6"	10'-10"
	7'-0"	9'-10"
	3'-6"	12'-0"
	4'-0"	12'-0"
± 55.0	4'-6"	11'-7"
	5'-0"	11'-0"
	5'-6"	10'-6"
	6'-0"	10'-0"
	6'-6"	9'-7"
	7'-0"	9'-3"
± 60.0	7'-0"	8'-11"
	3'-6"	12'-0"
	4'-0"	11'-3"
	4'-6"	10'-7"
	5'-0"	10'-1"
	5'-6"	9'-7"
± 65.0	6'-0"	9'-2"
	6'-6"	8'-10"
	7'-0"	8'-6"
	3'-6"	11'-7"
	4'-0"	10'-10"
	4'-6"	10'-2"

**** MAXIMUM DOOR JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & DOOR GIVEN JAMB MULLION EFFECTIVE SPACING "b" (CONTINUED)**

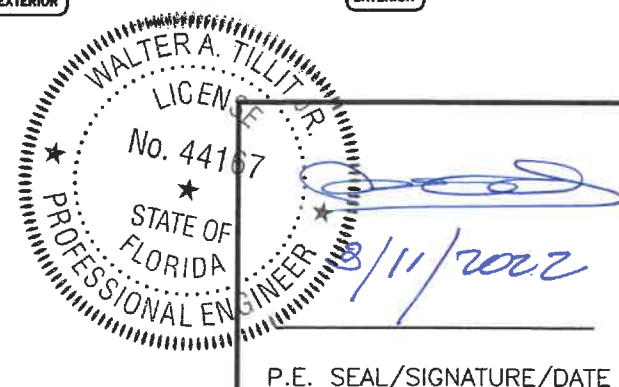
MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE SPACING "b" (Ft-in)	1/8" or 3/16" THICK INTERIOR DOOR JAMB MULLION SPAN "L"(FT)
		Laminated/Insulated Glass
		CASES: 1,2,3,4 J-1, J2, J-1A & J-2A
± 70.0	3'-6"	11'-2"
	4'-0"	10'-5"
	4'-6"	9'-10"
	5'-0"	9'-4"
	5'-6"	8'-11"
	6'-0"	8'-6"
± 75.0	6'-6"	7'-10"
	7'-0"	7'-3"
	3'-6"	10'-9"
	4'-0"	10'-1"
	4'-6"	9'-6"
	5'-0"	9'-0"
± 80.0	5'-6"	8'-7"
	6'-0"	7'-11"
	6'-6"	7'-4"
	7'-0"	6'-9"
	3'-6"	10'-5"
	4'-0"	9'-9"
± 85.0	4'-6"	9'-2"
	5'-0"	8'-9"
	5'-6"	8'-1"
	6'-0"	7'-5"
	6'-6"	6'-10"
	7'-0"	6'-4"

** FOR DOOR JAMB MULLION BOTTOM CONNECTION USE (4) 1/4" ULTRACON ANCHORS WITH NO SHIM SPACE ALLOWED OR (4) 3/8" WEDGE-BOLT ANCHORS WITH 3/8" MAX. SHIM SPACE. FOR TOP OF DOOR JAMB MULLION CONNECTIONS SEE SHEETS 8 THRU 13.

CASES DEFINITIONS

- CASE 1: J-1** JAMB MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 8/ 21 & 10/22)
CASE 2: J-2 JAMB MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 8A / 21 & 10/22)
CASE 3: J-1A JAMB MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 9/ 21 & 10A/22)
CASE 4: J-2A JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 9A/21 & 10A/22)

OPTIONAL SYSTEM # 1



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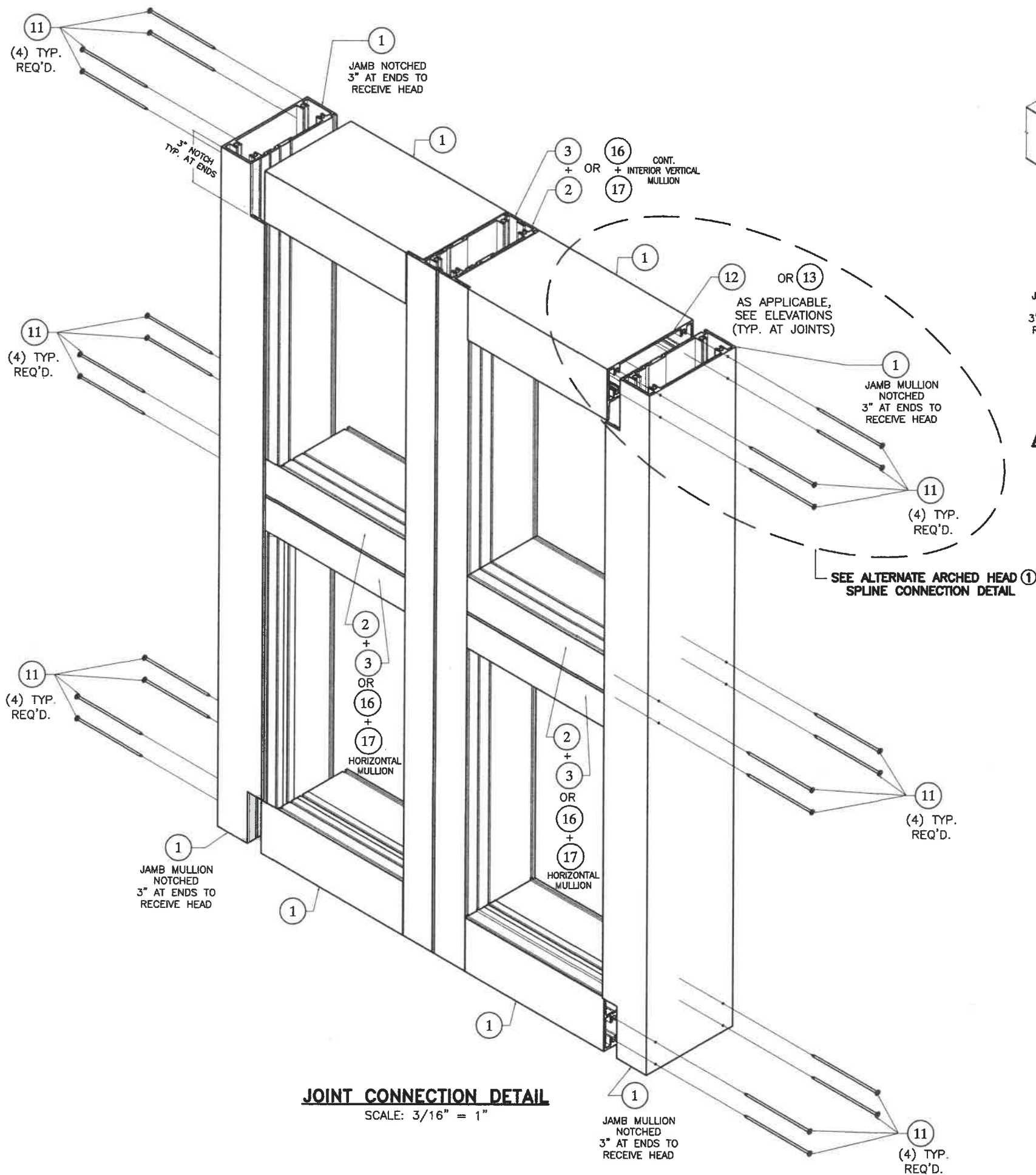
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

M.P.
DRAWN BY

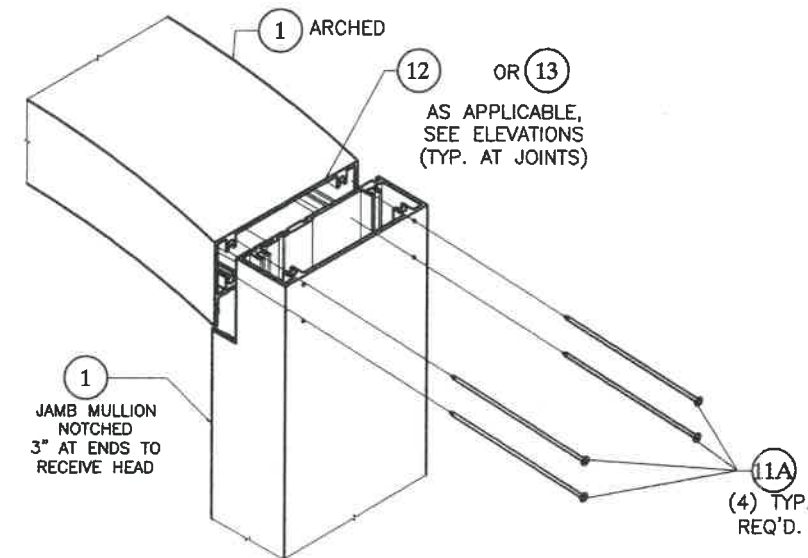
8/26/2021
DATE

21-118
DRAWING No

SHEET 23 OF 51



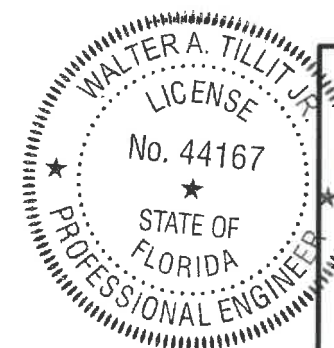
JOINT CONNECTION DETAIL
SCALE: 3/16" = 1"



ARCHED HEAD ① SPLINE CONNECTION DETAIL
SCALE: 3/16" = 1"

OPTIONAL SYSTEM # 1 (ISOMETRIC)

NTS



[Signature]
3/11/2022

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CA-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

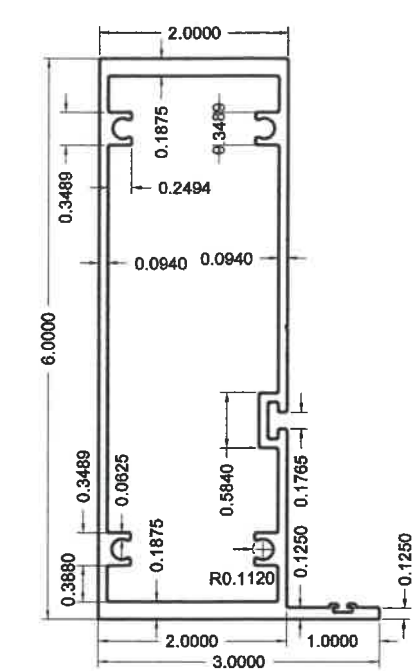
HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES
12000 LARGE MISSILE LAMINATED & INSULATED GLASS



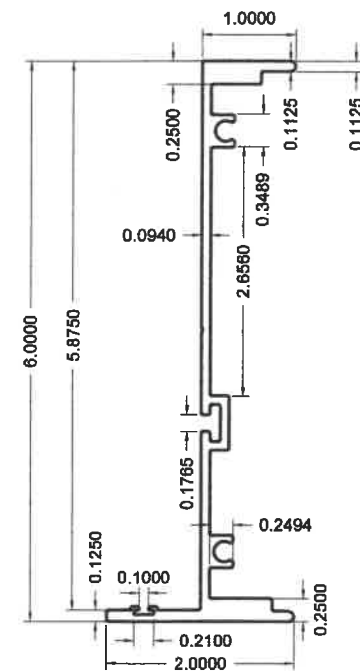
290 WEST 78 ROAD
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2	-	-	4	-	-

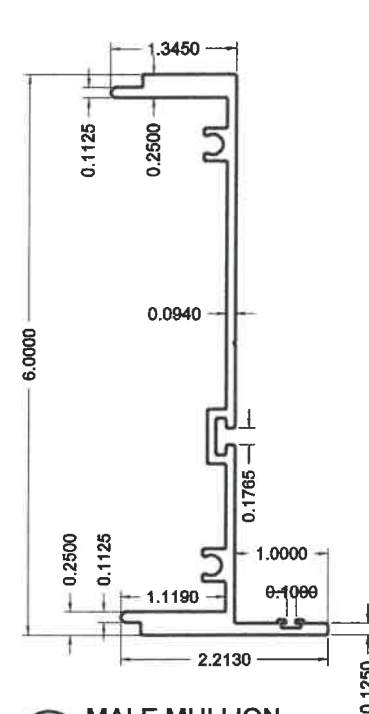
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21-118
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SHEET 24 OF 51



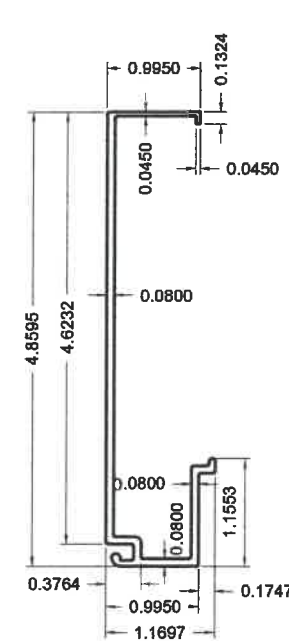
1 FRAME HEAD, SILL, JAMB



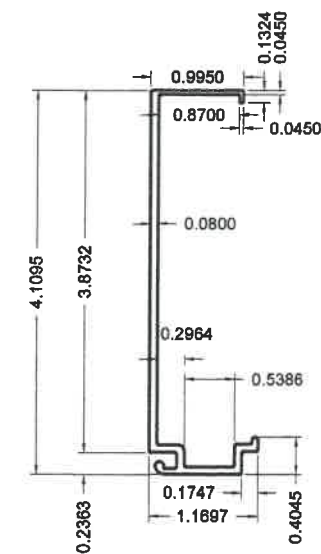
2 FEMALE MULLION



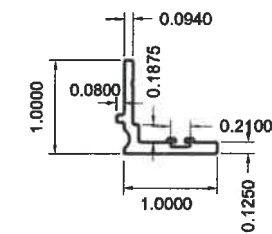
3 MALE MULLION



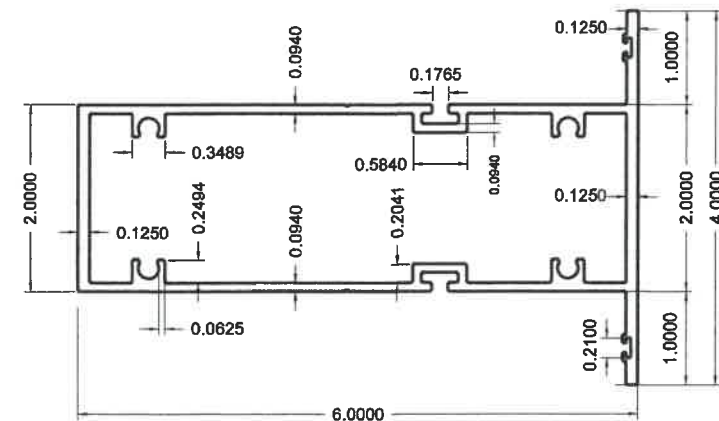
4 LAMINATED WINDOW COVER



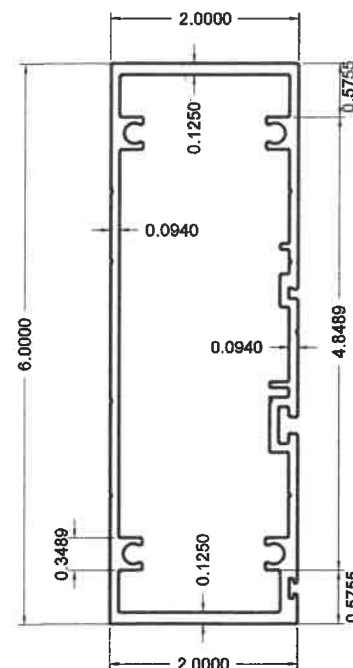
4A INSULATED WINDOW COVER



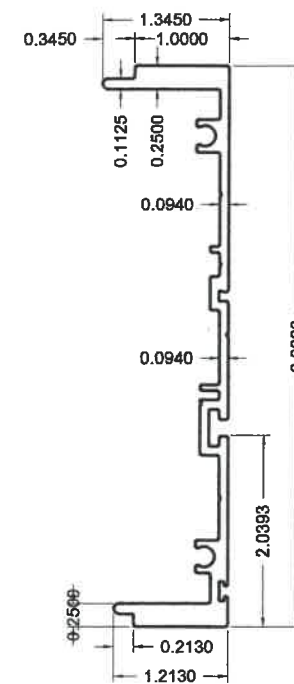
17 DOOR JAMB TRANSOM ADAPT



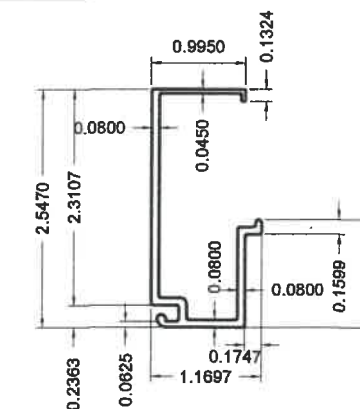
5 INTERMEDIATE HORIZONTAL



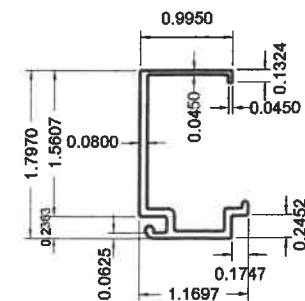
15 END DOOR JAMB MULLION



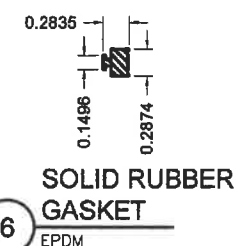
16 MALE INTERIOR DOOR JAMB MULLION & MALE TRANSOM BAR



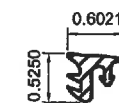
4B LAMINATED WINDOW COVER



4C INSULATED WINDOW COVER



6 SOLID RUBBER GASKET EPDM



6A WEDGE GASKET EPDM

COMPONENTS: OPTIONAL SYSTEM # 2

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

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WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

HIGH IMPACT GREEN WORLD FIXED GLASS WALL
SERIES 12000 LARGE MISSILE LAMINATED &
INSULATED GLASS



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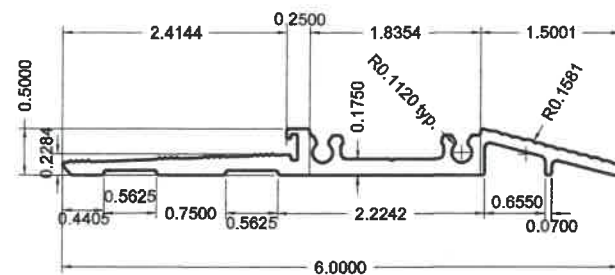
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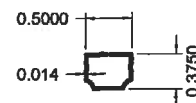
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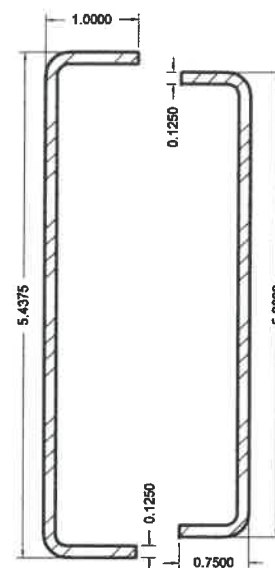
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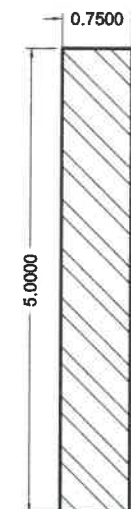
22 ADA THRESHOLD



28 INSULATED GLASS UNIT SPACER

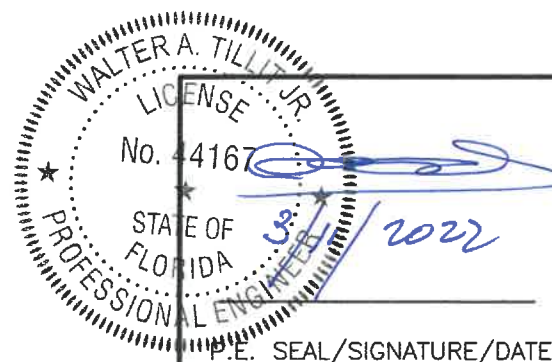


40 STEEL REINFORCEMENT
STEEL



41 OPTIONAL ALUMINUM REINFORCEMENT TO 40
6063-T6 ALLOY

COMPONENTS CONT'. : OPTIONAL SYSTEM # 2



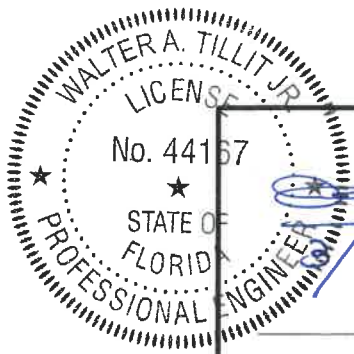
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WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS						M.P. DRAWN BY
 290 WEST 78 ROAD HIALEAH, FL. 33014 PHONE: (305) 558-8103 FAX: (305) 558-6865 www.generalimpact.com						8/26/2021 DATE
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1	OLD 20-271	8/26/21	3	-	-	
2	-	-	4	-	-	

BILL OF MATERIALS: OPTIONAL SYSTEM # 2

ITEM #	DESCRIPTION	DIMENSIONS & REMARKS	MATERIAL
①	FRAME JAMB, HEAD & SILL	6"x3"xVARIES THK.	6063-T6 ALUMINUM
②	FEMALE MULLION	6"x2"xVARIES THK.	6063-T6 ALUMINUM
③	MALE MULLION	6"x2.213"xVARIES THK.	6063-T6 ALUMINUM
④	LAMINATED WINDOW COVER	4.8595"x1.1697"xVARIES THK.	6063-T6 ALUMINUM
④A	INSULATED WINDOW COVER	4.1095"x1.1697"xVARIES THK.	6063-T6 ALUMINUM
④B	LAMINATED WINDOW COVER	2.5470"x1.1697"xVARIES THK.	6063-T6 ALUMINUM
④C	INSULATED WINDOW COVER	1.7970"x1.1697"xVARIES THK.	6063-T6 ALUMINUM
⑤	INTERMEDIATE HORIZONTAL	6"x4"xVARIES THK.	6063-T6 ALUMINUM
⑥	SOLID RUBBER GASKET	0.2874"x0.2835"xVARIES THK.	EPDM
⑥A	WEDGE GASKET	0.6021"x0.5250"xVARIES THK.	EPDM
⑧	STRUCTURAL SILICONE SIKASIL SG-500 CN OR DOWSIL 983	ALL AROUND GLASS	SILICONE
⑩	DOOR JAMB TRANSOM ADAPT. ASSEMBLY SCREW	#10x5/8" F.H. SCREW (START 3" & 8 O.C.)	S.S.
⑪	FRAME ASSEMBLY SCREW	#14x2 1/2" H.H. SCREW	STEEL
⑫	JOINT DETAIL (METAL TO METAL) GASKET 1/16 XLP W/ RUBBER BASED PSA	OPTIONAL TO ⑬ FOR INTERNAL JOINT. MANUFACTURED BY FRANK LOWE RUBBER & GASKET CO.	CLOSED CELL POLYETHYLENE FOAM TAPE COATED IN ONE SIDE
⑬	NON STRUCTURAL SILICONE	OPTIONAL TO ⑫ FOR INTERNAL JOINT, PLUS EXTERIOR FRAME SEALANT ALL AROUND PERIMETER	SILICONE
⑭	MULLION ASSEMBLY BOLT	1/4"-20x2 1/2" THRU BOLT W/NUT • 12" O.C. (START • 6" O.C. FROM TOP/BOT)	STAINLESS STEEL AISI 304 SERIES
⑮	END DOOR JAMB MULLION	6"x2"xVARIES THK.	6063-T6 ALUMINUM
⑮	MALE INTERIOR DOOR JAMB MULLION & MALE TRANSOM BAR	6"x1.2130"xVARIES THK.	6063-T6 ALUMINUM
⑰	DOOR JAMB TRANSOM ADAPT.	1"x1.0798"xVARIES THK.	6063-T6 ALUMINUM
⑱	SILL FLASHING (OPTIONAL)	1.340" MIN.x5.915" MIN.x0.415" MIN.x0.040" THK.	3105-H24 ALUMINUM
⑳	INSULATED GLASS UNIT SPACER	0.5"x0.375"x0.014" THK.	3105-H24 ALUMINUM
㉔	ANCHORS: SEE SHEETS 34 THRU 43	-	STEEL
㉙	SETTING BLOCK	0.133"x0.5" (ULTRAFAB)	EPDM
④①	STEEL REINFORCEMENT	VARIES	ASTM A-36 ZINC PLATED OR G-60 GALVANIZED STEEL
④①	OPTIONAL ALUMINUM REINFORCEMENT TO ④①	0.75"x5"	6061-T6 ALUMINUM



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 SERIES 12000 LARGE MISSILE LAMINATED &
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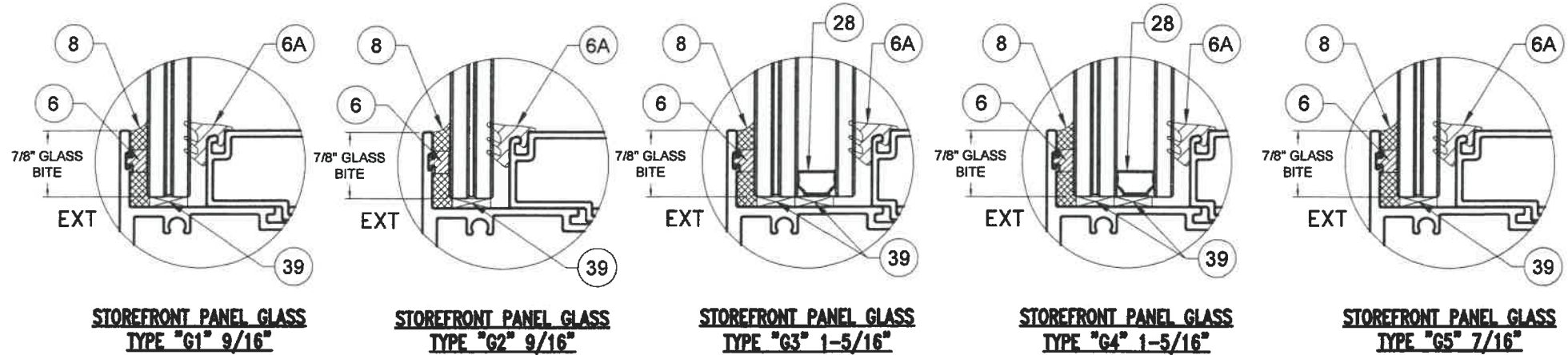
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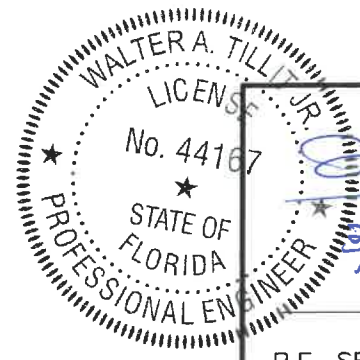
SHEET 27 OF 51

BILL OF MATERIALS FOR GLASS : OPTIONAL SYSTEM # 2

COMP.#	DESCRIPTION	ALLOWED MISSILE TYPE
G1	9/16" NOMINAL LAMINATED GLASS W/ 1/4" H.S. GLASS + 0.090" KURARAY SENTRYGLAS® INTERLAYER BY KURARAY AMERICA, INC. + 1/4" H.S. GLASS.	LARGE & SMALL MISSILE
G2	9/16" NOMINAL LAMINATED GLASS W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA INC. + 1/4" H.S. GLASS.	LARGE & SMALL MISSILE
G3	1 5/16" NOMINAL INSULATED GLASS W/ 1/4" H.S. GLASS + 0.090" KURARAY SENTRYGLAS® INTERLAYER BY KURARAY AMERICA, INC. + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS	LARGE & SMALL MISSILE
G4	1 5/16" NOMINAL INSULATED GLASS W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA, INC. + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS	LARGE & SMALL MISSILE
G5	7/16" NOMINAL LAMINATED GLASS W/ 3/16" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA, INC. + 3/16" H.S. GLASS.	LARGE & SMALL MISSILE



GLASS CONFIGURATION
NTS



[Signature]
3/11/2022

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HIGH IMPACT GREEN WORLD FIXED GLASS WALL
SERIES 12000 LARGE MISSILE LAMINATED &
INSULATED GLASS

GENERAL
IMPACT GLASS & WINDOWS

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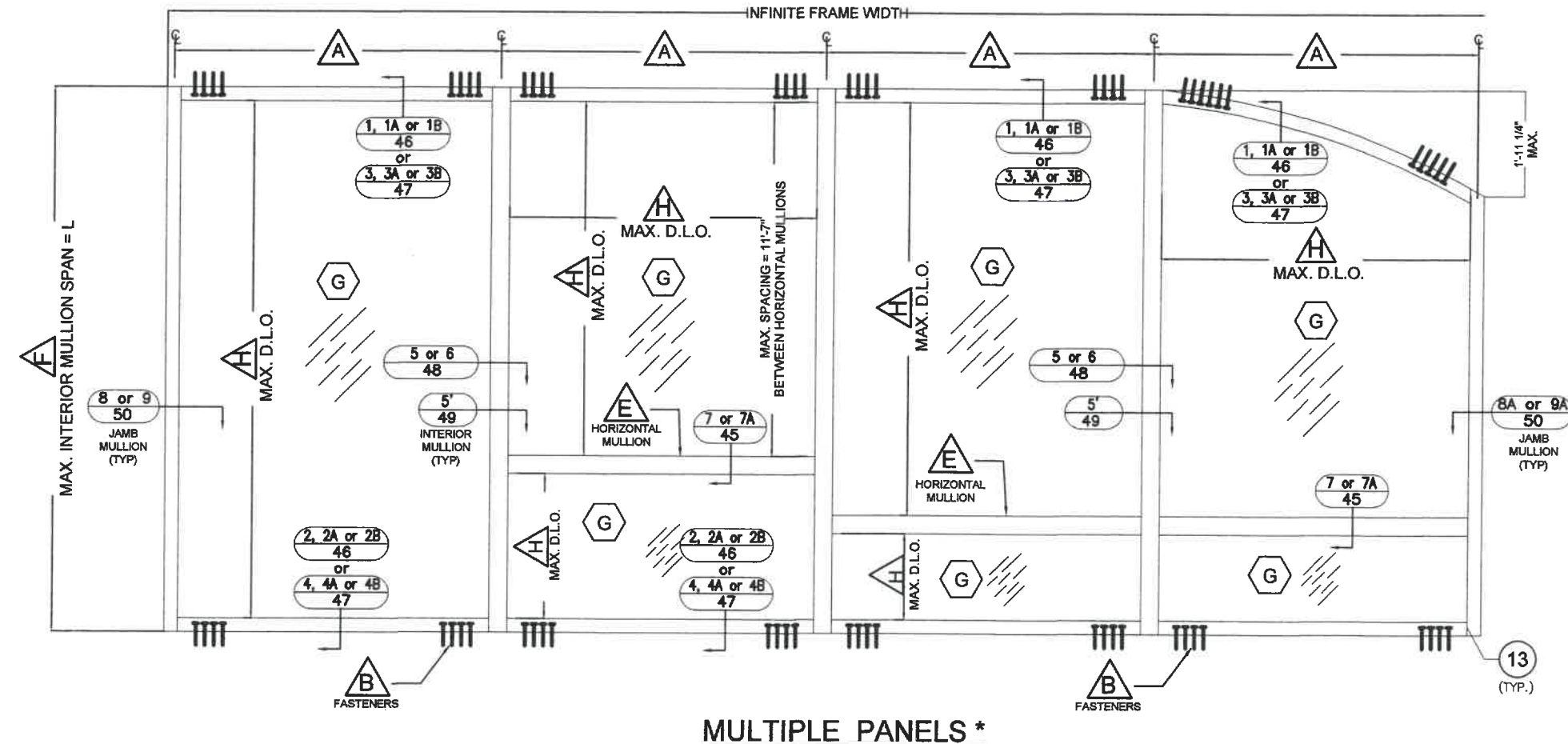
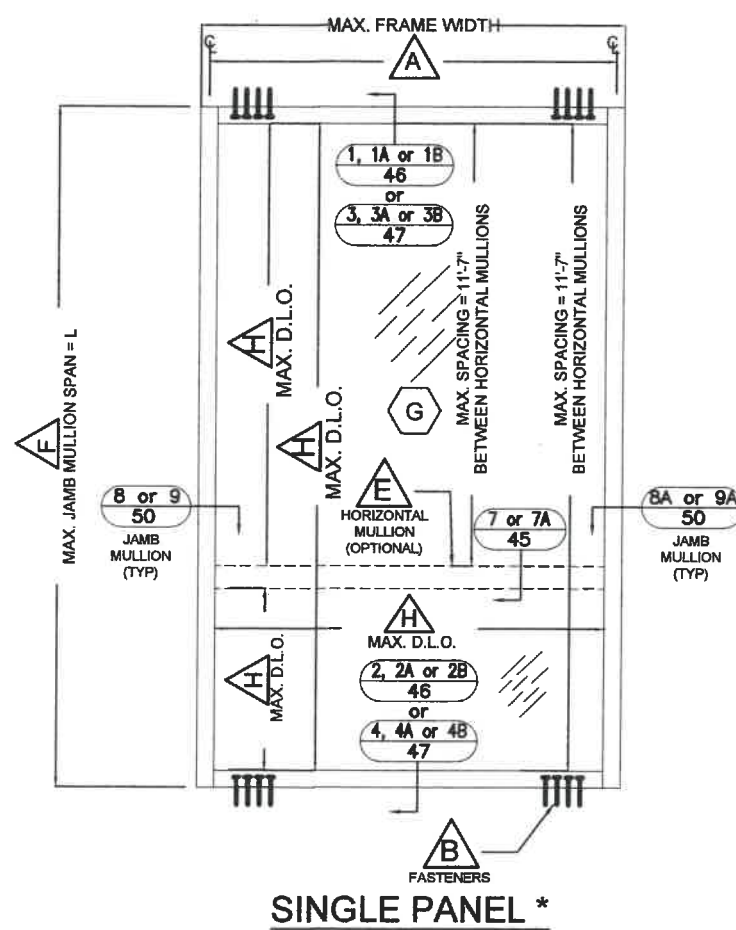
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SHEET 28 OF 51

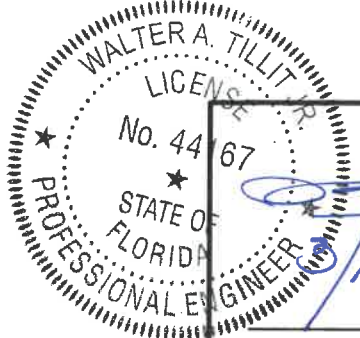
ELEVATIONS FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 :
OPTIONAL SYSTEM # 2



FOOT NOTES:

- A** FOR MAXIMUM REINFORCED OR UNREINFORCED INTERIOR MULLION & JAMB MULLION SPACING AT MULTIPLE PANELS OR BETWEEN JAMB MULLIONS AT SINGLE PANELS SEE SHEETS 32 , 32A.
- B** FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 34 THRU 39.
- E** USE OF HORIZONTAL MULLION LIMITED BY SCHEDULES ON SHEETS 44 & 44A.
- F** FOR MAXIMUM REINFORCED OR UNREINFORCED INTERIOR DOOR AND END DOOR JAMB MULLION SPAN SEE SHEET 33.
- G** FOR GLAZING DETAILS SEE SHEET 28 AND FOR GLASS SCHEDULE SEE SHEETS 31, 31A.
- H** FOR MAXIMUM D.L.O. SEE SCHEDULE ON SHEETS 31, 31A.

* NOTE: SINGLE & MULTIPLE PANELS FIXED GLASS WALL SERIES 12000 MAY BE INSTALLED ROTATED 90° FROM ABOVE SHOWN ORIENTATION.



[Signature]
11/11/2022

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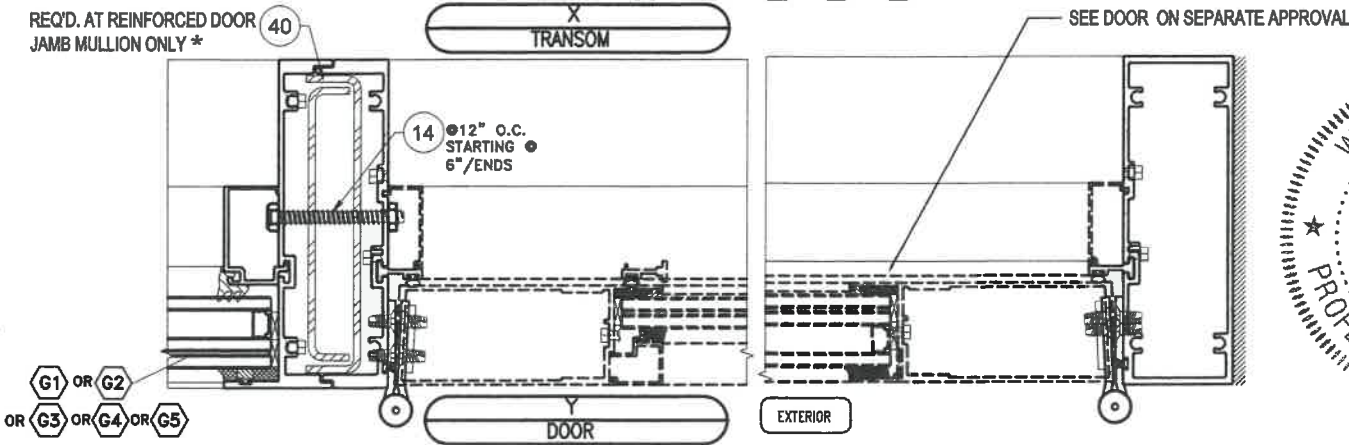
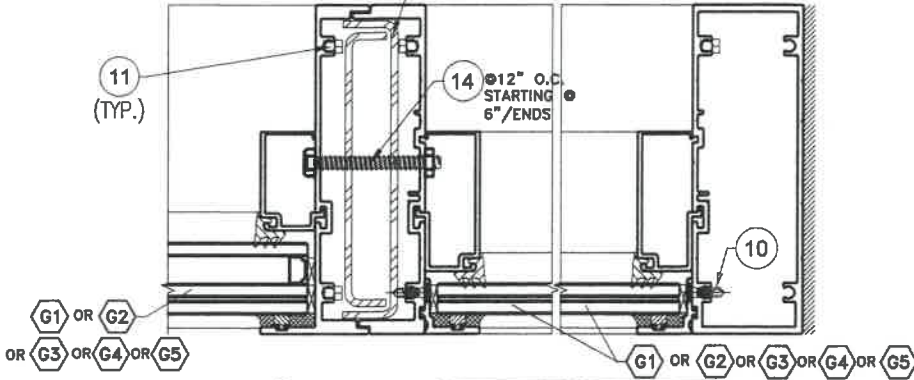
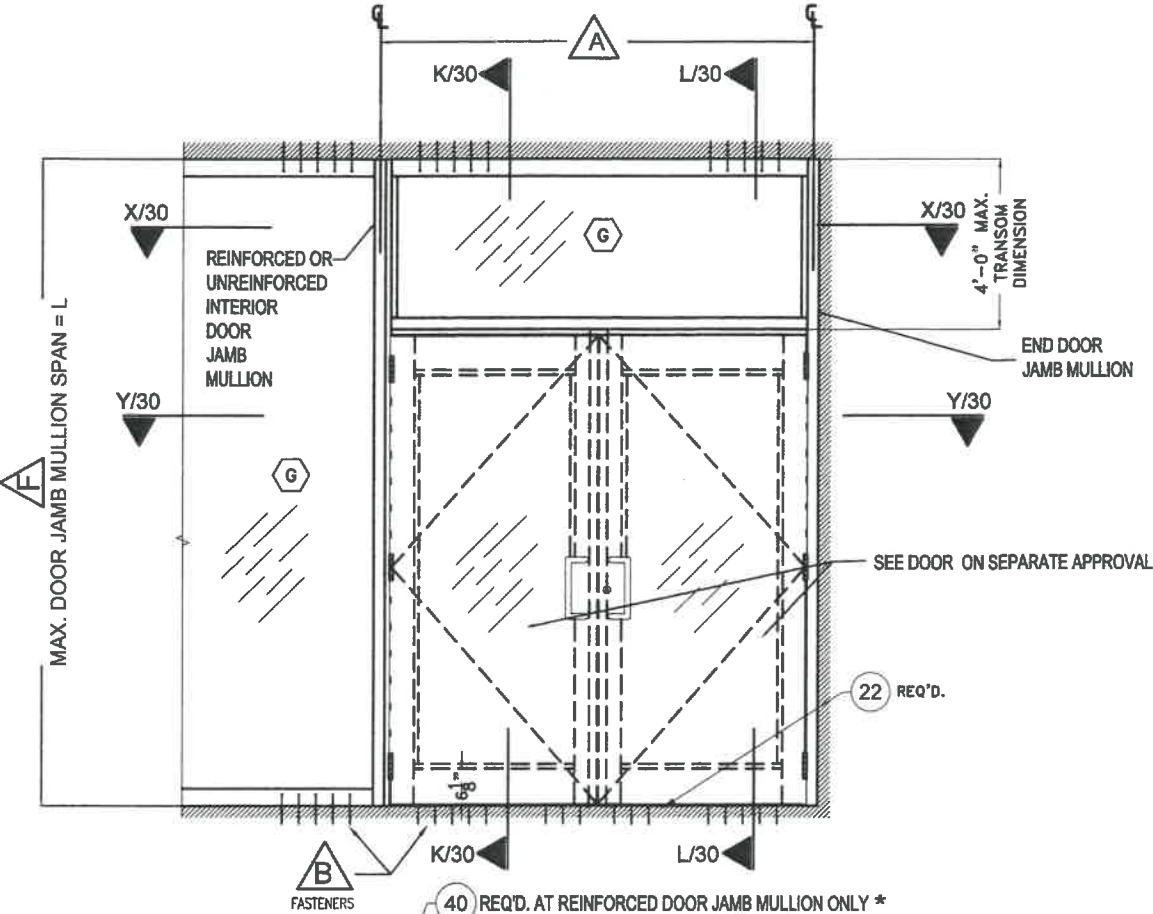
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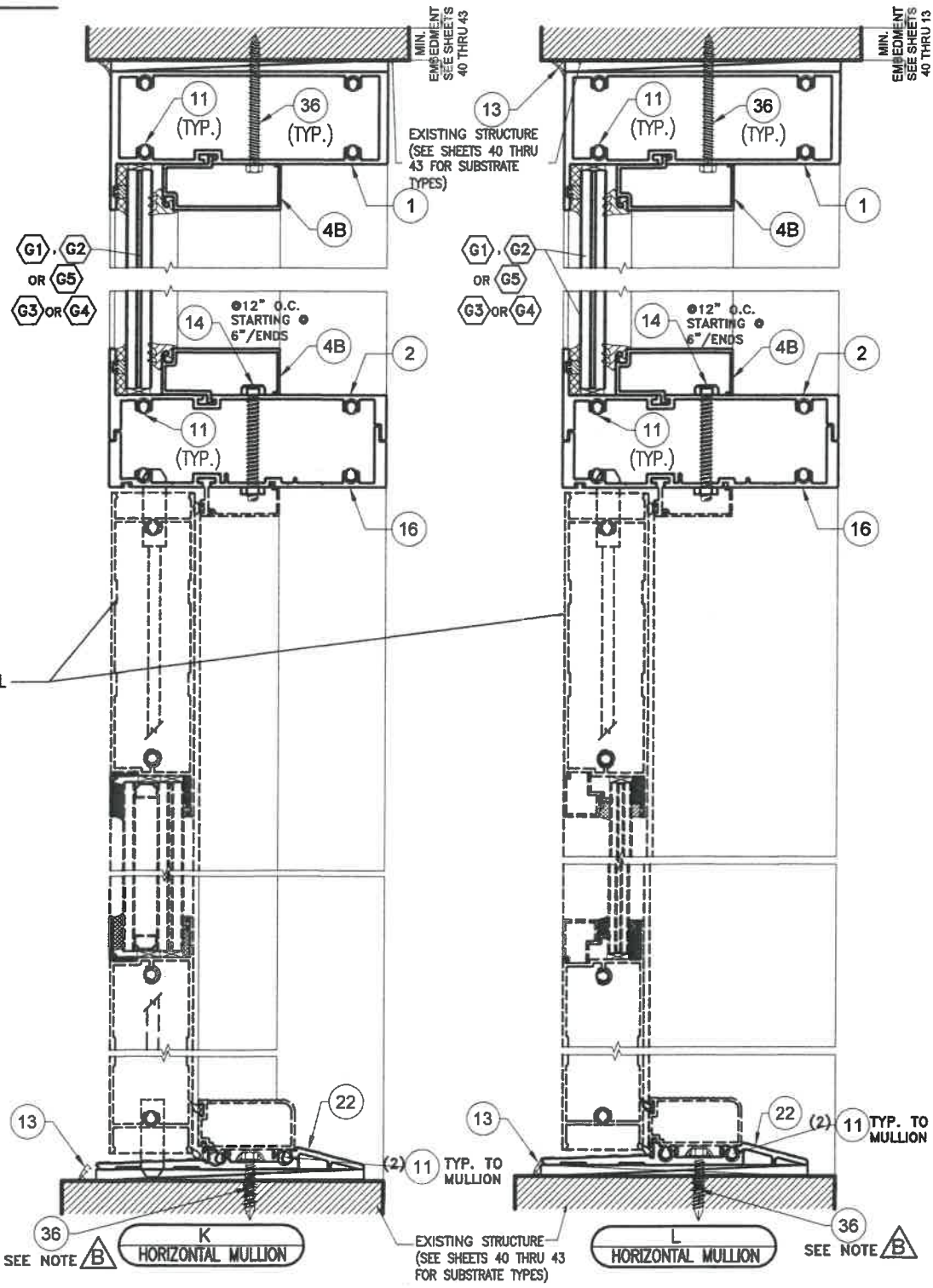
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SHEET 29 OF 51

ELEVATION FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000
ADJACENT TO APPROVED DOOR (ON SEPARATE APPROVAL)
OPTIONAL SYSTEM # 2 CONTINUED



FOOT NOTES:
A MAXIMUM ON CENTERS BETWEEN INTERIOR DOOR JAMB MULLION & END DOOR JAMB MULLION IS 6'-4".
B FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 40 THRU 43.
F FOR MAXIMUM INTERIOR & END DOOR JAMB MULLION SPAN SEE SHEET 33.
G FOR GLAZING DETAILS SEE SHEET 28 AND FOR GLASS SCHEDULE SEE SHEETS 31 & 31A.
* COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).



WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

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2	-	-	4	-	-

MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE *
OPTIONAL SYSTEM # 2

GLASS TYPE G1		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	+130.0 -140.0
18"	18" to 139"	+130.0 -140.0
20"	20" to 139"	+130.0 -140.0
22"	22" to 139"	+130.0 -140.0
24"	24" to 139"	+130.0 -140.0
26"	26" to 139"	+130.0 -140.0
28"	28" to 139"	+130.0 -140.0
30"	30" to 139"	+130.0 -140.0
32"	32" to 139"	+130.0 -140.0
34"	34" to 139"	+130.0 -140.0
36"	36" to 139"	+130.0 -140.0
38"	38" to 139"	+130.0 -140.0
40"	40" to 139"	+130.0 -140.0
42"	42" to 139"	+130.0 -140.0
44"	44" to 137"	+130.0 -120.0
46"	46" to 131"	+130.0 -116.0
48"	48" to 126"	+130.0 -140.0
	> 126" to 139"	±20.0
50"	50" to 121"	+130.0 -111.0
52"	52" to 116"	+130.0 -111.0
54"	54" to 112"	+130.0 -140.0
	> 112" to 139"	±20.0
56"	56" to 108"	+130.0 110.0
58"	58" to 104"	+130.0 -111.0
60"	60" to 98"	+130.0 -140.0
	> 98" to 139"	±20.0
62"	62" to 97"	+130.0 -114.0
64"	64" to 94"	+130.0 -110.4
	66" to 84"	+130.0 -140.0
66"	> 84" to 90"	±99.5
	> 90" to 139"	±20.0
68"	68" to 89"	+130.0 -103.9
70"	70" to 86"	+130.0 -101.0
	72" to 82"	+130.0 -140.0
72"	>82" to 84"	±91.0
	>84" to 139"	±20.0
74"	74" to 78"	+130.0 -95.5
76"	76" to 79.7"	+130.0 -93.0

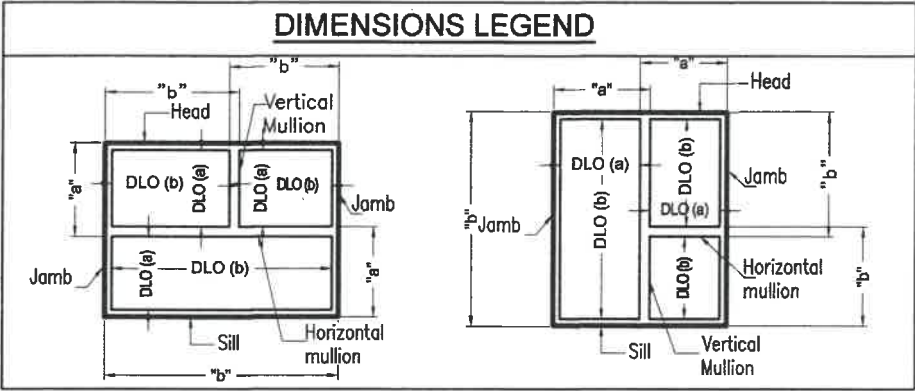
GLASS TYPE G2		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	±90.0
18"	18" to 139"	±90.0
20"	20" to 139"	±90.0
22"	22" to 139"	±90.0
24"	24" to 139"	±90.0
26"	26" to 139"	±90.0
28"	28" to 139"	±90.0
30"	30" to 139"	±90.0
32"	32" to 139"	±90.0
34"	34" to 139"	±90.0
36"	36" to 139"	±90.0
38"	38" to 132"	±90.0
40"	40" to 128"	±90.0
42"	42" to 120"	±90.0
	> 120" to 139"	±80.0
44"	44" to 117"	±90.0
	> 117" to 139"	±80.0
46"	46" to 112"	±90.0
	> 112" to 139"	±80.0
48"	48" to 107"	±90.0
	> 107" to 139"	±80.0
50"	50" to 103"	±90.0
52"	52" to 99"	±87.4
54"	54" to 95"	±84.1
56"	56" to 129"	±80.0
58"	58" to 124"	±80.0
60"	60" to 120"	±80.0
62"	62" to 116"	±80.0
64"	64" to 112"	±80.0
66"	66" to 108"	±79.6
68"	68" to 106"	±79.3
70"	70" to 103"	±79.3
72"	72" to 100"	±79.5
74"	74" to 97"	±79.8
76"	76" to 95"	±78.4
78"	78" to 92.5"	±76.4
80"	80" to 90"	±74.5
82"	82" to 88"	±72.6
84"	84" to 86"	±70.9

* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b"

SIDE	MAX. DAY LIGHT OPENING	
	(D.L.O.) Formula at vertical & horizontal mullions	(D.L.O.) Formula at jamb, head & sill frames
MAX. D.L.O. (a) (SHORT SIDE)	"a"-6.00"	"a"-6.00"
MAX. D.L.O. (b) (LONG SIDE)	"b"-6.00"	"b"-6.00"

NOTE:
1. SEE SHEET 28 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS.

** SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b".
"a", "b", MAY BE ORIENTED IN ANY DIRECTION.



WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
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1	OLD 20-271	8/26/21	3	-	-
2	-	-	4	-	-

SHEET 31 OF 51

MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE *
OPTIONAL SYSTEM # 2

GLASS TYPE G3		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	+130.0 -140.0
18"	18" to 139"	+130.0 -140.0
20"	20" to 139"	+130.0 -140.0
22"	22" to 139"	+130.0 -140.0
24"	24" to 139"	+130.0 -140.0
26"	26" to 139"	+130.0 -140.0
28"	28" to 139"	+130.0 -140.0
30"	30" to 139"	+130.0 -140.0
32"	32" to 139"	+130.0 -140.0
34"	34" to 139"	+130.0 -140.0
36"	36" to 139"	+130.0 -140.0
38"	38" to 139"	+130.0 -140.0
40"	40" to 139"	+130.0 -140.0
42"	42" to 139"	+130.0 -140.0
44"	44" to 137"	+130.0 -126.0
46"	46" to 131"	+130.0 -121.0
48"	48" to 122"	+130.0 -140.0
	> 122" to 139"	±20.0
50"	50" to 121"	+130.0 -113.0
52"	52" to 116"	+130.0 -113.0
54"	54" to 108"	+130.0 -140.0
	> 108" to 139"	±20.0
56"	56" to 108"	+130.0 -108.0
58"	58" to 104"	+130.0 -117.0
60"	60" to 98"	+130.0 -140.0
	> 98" to 139"	±20.0
62"	62" to 96"	+130.0 -114.0
64"	64" to 94"	+130.0 -110.4
66"	66" to 87.5"	+130.0 -140.0
	> 87.5" to 90"	±107.1
	> 90" to 139"	±20.0
68"	68" to 89"	+130.0 -103.9
70"	70" to 86"	+130.0 -101.0
72"	72" to 80.5"	+130.0 -140.0
	>80.5" to 84"	±98.1
	>84" to 139"	±20.0
74"	74" to 81"	+130.0 -95.5
76"	76" to 79"	+130.0 -93.0

GLASS TYPE G4		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	±80.0
18"	18" to 139"	±80.0
20"	20" to 139"	±80.0
22"	22" to 139"	±80.0
24"	24" to 139"	±80.0
26"	26" to 139"	±80.0
28"	28" to 139"	±80.0
30"	30" to 139"	±80.0
32"	32" to 139"	±80.0
34"	34" to 139"	±80.0
36"	36" to 139"	±80.0
38"	38" to 139"	±80.0
40"	40" to 139"	±80.0
42"	42" to 139"	±80.0
44"	44" to 139"	±80.0
46"	46" to 139"	±80.0
48"	48" to 139"	±80.0
50"	50" to 139"	±80.0
52"	52" to 138"	±80.0
54"	54" to 133.5"	±80.0
56"	56" to 129"	±80.0
58"	58" to 124"	±80.0
60"	60" to 120"	±80.0
62"	62" to 116"	±80.0
64"	64" to 112"	±80.0
66"	66" to 108"	±80.0
	> 108" to 109.5"	±79.6
68"	68" to 106"	±79.3
70"	70" to 103"	±79.3
72"	72" to 96"	±80.0
	> 96" to 100"	±79.5
74"	74" to 97"	±79.8
76"	76" to 95"	±78.4
78"	78" to 91"	±76.1
80"	80" to 90"	±74.5
82"	82" to 88"	±72.6
84"	84" to 86"	±70.9

GLASS TYPE G5		
DIMENSION "a"	DIMENSION "b"	MAX.A.S.D. DESIGN PRESSURE RATING (psf)
18" or less	18" or less	±90.0
18"	18" to 139"	±90.0
20"	20" to 139"	±90.0
22"	22" to 139"	±90.0
24"	24" to 139"	±90.0
26"	26" to 139"	±90.0
28"	28" to 139"	±90.0
30"	30" to 139"	±90.0
32"	32" to 139"	±90.0
34"	34" to 139"	±90.0
36"	36" to 139"	±90.0
38"	38" to 132"	±90.0
40"	40" to 128"	±90.0
42"	42" to 120"	±90.0
44"	44" to 117"	±90.0
46"	46" to 111"	±90.0
48"	48" to 107"	±90.0
50"	50" to 103"	±90.0
52"	52" to 99"	±90.0
54"	54" to 95"	±84.1
56"	56" to 91"	±81.1
58"	58" to 88"	±78.3
60"	60" to 85.5"	±75.7
62"	62" to 83"	±73.3
64"	64" to 80"	±71.2
66"	66" to 78"	±68.8
68"	68" to 75"	±66.8
70"	70" to 73"	±64.3

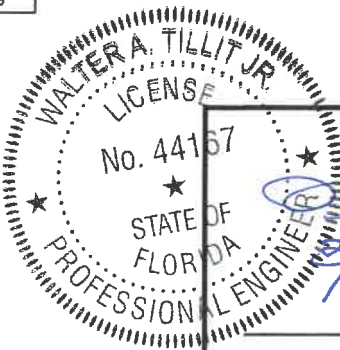
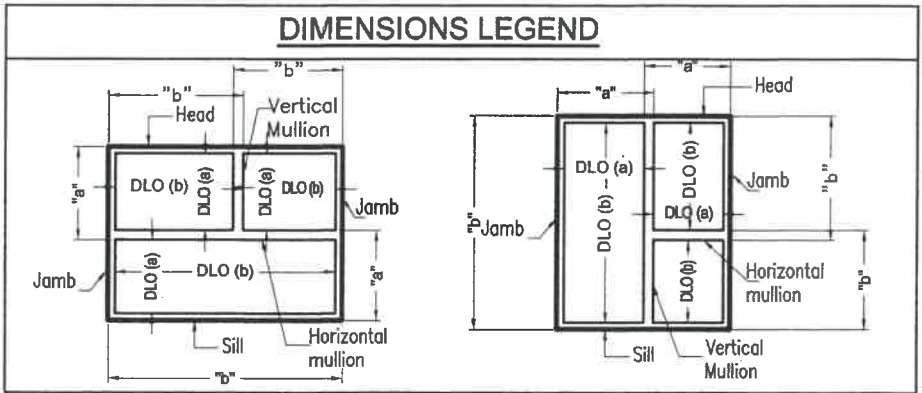
* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b"

SIDE	MAX. DAY LIGHT OPENING	
	(D.L.O.) Formula at vertical & horizontal mullions	(D.L.O.) Formula at jamb, head & sill frames
MAX. D.L.O. (a) (SHORT SIDE)	"a"-6.00"	"a"-6.00"
MAX. D.L.O. (b) (LONG SIDE)	"b"-6.00"	"b"-6.00"

NOTE:

1. SEE SHEET 28 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS.

** SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b".
"a", "b", MAY BE ORIENTED IN ANY DIRECTION.



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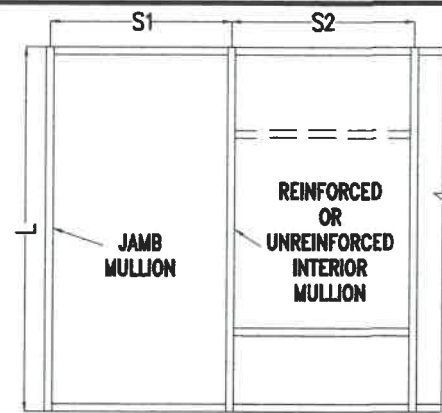
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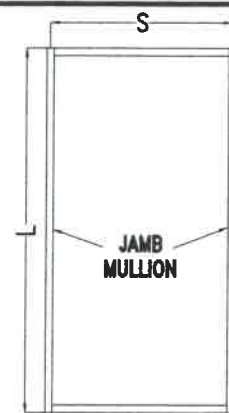
21-118
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1	OLD 20-271	8/28/21	3	-	-
2	-	-	4	-	-

SHEET 31A OF 51



ELEVATION W/ REINFORCED OR UNREINFORCED
INTERIOR MULLION @ MULTIPLE PANELS



ELEVATION W/ JAMB MULLION @
SINGLE PANEL

"L" = MAXIMUM INTERIOR MULLION SPAN
EFFECTIVE
SPACING: "b" = $S_1 + S_2$ FOR MULTIPLE PANELS
2

"L" = MAXIMUM JAMB MULLION SPAN
EFFECTIVE
SPACING: "b" = S FOR SINGLE PANEL.

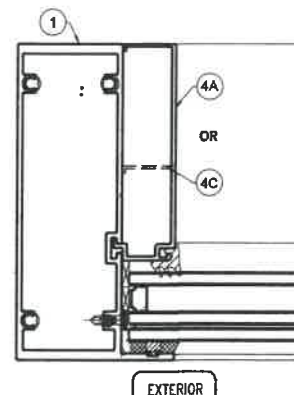
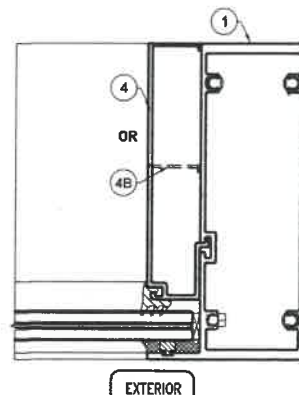
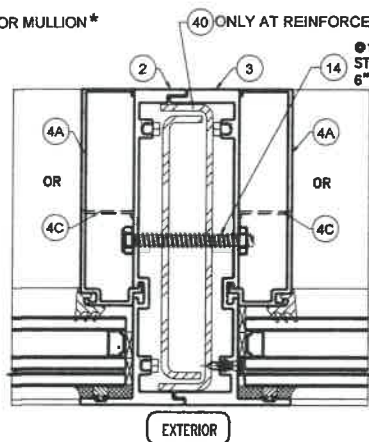
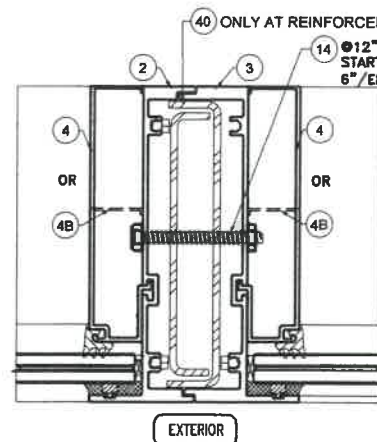
*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

CASE 1: INTERIOR MULLION	
M-1A	(2) + (3) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR MULLION(*) + (2) (4) OR (2) (4B)

CASE 2: INTERIOR MULLION	
M-2A	(2) + (3) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR MULLION(*) + (2) (4A) OR (2) (4C)

CASE 1: JAMB MULLION	
J-1A	(1) + (4) OR (4B)

CASE 2: JAMB MULLION	
J-2A	(1) + (4A) OR (4C)



OPTIONAL SYSTEM # 2

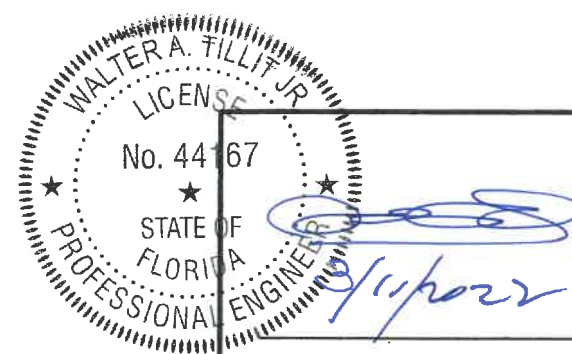
CASES DEFINITIONS

- CASE 1: M-1A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 48)
J-1A JAMB MULLION: W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEET 50)
- CASE 2: M-2A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ INSULATED GLASS (SEE DET. 6 ON SHEET 48)
J-2A JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 9 OR 9A ON SHEET 50)

MAXIMUM UNREINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)		
MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(ft-in)	LAMINATED GLASS OR INSULATED GLASS CASE 1 OR CASE 2 M-1A/J-1A M-2A/J-2A
+103.0 , -94.0	5'-0"	9'-6"

MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)		
MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(ft-in)	LAMINATED GLASS OR INSULATED GLASS CASE 1 OR CASE 2 M-1A/J-1A M-2A/J-2A
± 40.0	3'-6"	15'-9"
	4'-0"	15'-9"
	4'-6"	15'-9"
	5'-0"	15'-9"
	5'-6"	15'-7"
	6'-0"	15'-1"
± 45.0	6'-6"	14'-9"
	7'-0"	14'-4"
	3'-6"	15'-9"
	4'-0"	15'-9"
	4'-6"	15'-9"
	5'-0"	15'-5"
± 50.0	5'-6"	15'-0"
	6'-0"	14'-9"
	6'-6"	14'-6"
	7'-0"	13'-10"
	3'-6"	15'-9"
	4'-0"	15'-9"
± 55.0	4'-6"	15'-5"
	5'-0"	14'-11"
	5'-6"	14'-5"
	6'-0"	14'-0"
	6'-6"	13'-7"
	7'-0"	13'-3"
± 60.0	7'-0"	12'-11"
	3'-6"	15'-9"
	4'-0"	15'-1"
	4'-6"	14'-6"
	5'-0"	14'-0"
	5'-6"	13'-7"
± 65.0	6'-0"	13'-3"
	6'-6"	12'-10"
	7'-0"	12'-4"
	3'-6"	15'-5"
	4'-0"	14'-9"
	4'-6"	14'-2"
± 70.0	5'-0"	13'-8"
	5'-6"	13'-3"
	6'-0"	12'-10"
	6'-6"	12'-4"
	7'-0"	11'-10"
	3'-6"	14'-8"
± 75.0	4'-0"	14'-0"
	4'-6"	13'-6"
	5'-0"	13'-0"
	5'-6"	12'-5"
	6'-0"	11'-11"
	6'-6"	11'-5"
± 80.0	7'-0"	11'-0"
	3'-6"	14'-4"
	4'-0"	13'-9"
	4'-6"	13'-3"
	5'-0"	12'-8"
	5'-6"	12'-1"
± 85.0	6'-0"	10'-0"
	6'-6"	10'-0"
	7'-0"	10'-0"
	3'-6"	14'-1"
	4'-0"	13'-6"
	4'-6"	12'-11"
± 90.0	5'-0"	12'-3"
	5'-6"	11'-8"
	6'-0"	10'-0"
	6'-6"	10'-0"
	7'-0"	10'-0"
	3'-6"	13'-10"
± 95.0	4'-0"	13'-3"
	4'-6"	12'-7"
	5'-0"	11'-11"
	5'-6"	11'-4"
	6'-0"	10'-0"
	6'-6"	10'-0"
± 100.0	7'-0"	10'-0"
	3'-6"	13'-7"
	4'-0"	13'-0"
	4'-6"	12'-3"
	5'-0"	11'-7"
	5'-6"	11'-1"
± 105.0	6'-0"	10'-0"
	6'-6"	10'-0"
	7'-0"	9'-10"
	3'-6"	13'-0"
	4'-0"	12'-3"
	4'-6"	11'-7"
± 110.0	5'-0"	11'-1"
	5'-6"	10'-0"
	6'-0"	10'-0"
	6'-6"	9'-10"
	7'-0"	9'-10"
	3'-6"	12'-10"

MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)		
MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(ft-in)	LAMINATED GLASS OR INSULATED GLASS CASE 1 OR CASE 2 M-1A/J-1A M-2A/J-2A
± 70.0	3'-6"	15'-0"
	4'-0"	14'-4"
	4'-6"	13'-10"
	5'-0"	13'-4"
	5'-6"	12'-11"
	6'-0"	12'-4"
± 75.0	6'-6"	11'-10"
	7'-0"	11'-5"
	3'-6"	14'-8"
	4'-0"	14'-0"
	4'-6"	13'-6"
	5'-0"	13'-0"
± 80.0	5'-6"	12'-5"
	6'-0"	11'-11"
	6'-6"	11'-5"
	7'-0"	11'-0"
	3'-6"	14'-4"
	4'-0"	13'-9"
± 85.0	4'-6"	13'-3"
	5'-0"	12'-8"
	5'-6"	12'-1"
	6'-0"	10'-0"
	6'-6"	10'-0"
	7'-0"	10'-0"
± 90.0	3'-6"	13'-10"
	4'-0"	13'-3"
	4'-6"	12'-7"
	5'-0"	11'-11"
	5'-6"	11'-4"
	6'-0"	10'-0"
± 95.0	6'-6"	10'-0"
	7'-0"	10'-0"
	3'-6"	13'-7"
	4'-0"	13'-0"
	4'-6"	12'-3"
	5'-0"	11'-7"
± 100.0	5'-6"	11'-1"
	6'-0"	10'-0"
	6'-6"	10'-0"
	7'-0"	9'-10"
	3'-6"	13'-0"
	4'-0"	12'-3"
± 105.0	4'-6"	11'-7"
	5'-0"	11'-1"
	5'-6"	10'-0"
	6'-0"	10'-0"
	6'-6"	9'-10"
	7'-0"	9'-10"



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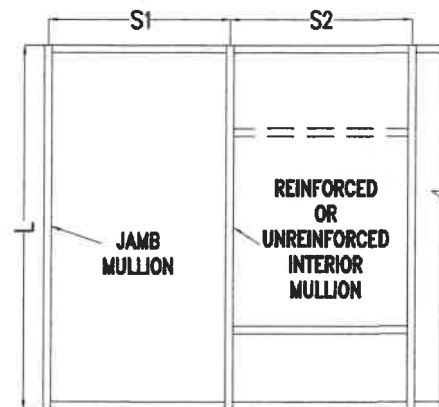
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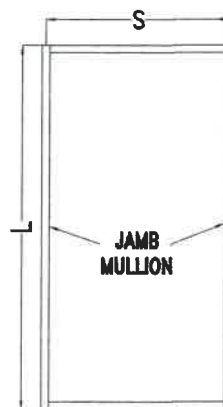
SHEET 32 OF 51

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 20-271	8/26/21	3	-	-
2	-	-	4	-	-



ELEVATION W/ REINFORCED OR UNREINFORCED INTERIOR MULLION @ MULTIPLE PANELS

"L" = MAXIMUM INTERIOR MULLION SPAN EFFECTIVE SPACING: "b" = $\frac{S_1 + S_2}{2}$ FOR MULTIPLE PANELS



ELEVATION W/ JAMB MULLION @ SINGLE PANEL

"L" = MAXIMUM JAMB MULLION SPAN EFFECTIVE SPACING: "b" = S FOR SINGLE PANEL.

MAXIMUM UNREINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)

MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(Ft-in)	LAMINATED GLASS OR INSULATED GLASS CASE 1 M-1A/J-1A OR CASE 2 M-2A/J-2A
+103.0, -94.0	5'-0"	9'-6"

MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)

MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(Ft-in)	LAMINATED GLASS OR INSULATED GLASS CASE 1 M-1A/J-1A OR CASE 2 M-2A/J-2A
± 100.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	13'-4" 12'-8" 11'-11" 11'-4" 10'-9" 10'-0" 9'-11" 9'-7"
± 105.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	13'-1" 12'-4" 11'-8" 11'-0" 10'-6" 10'-0" 9'-8" 9'-4"
± 110.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	12'-11" 12'-1" 11'-4" 10'-9" 10'-3" 9'-10" 9'-6" 9'-1"
± 115.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	12'-7" 11'-10" 11'-1" 10'-7" 10'-1" 9'-8" 9'-3" 8'-10"
± 120.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	12'-4" 11'-7" 10'-11" 10'-4" 9'-10" 9'-5" 9'-1" 8'-6"
± 125.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	12'-1" 11'-4" 10'-8" 10'-1" 9'-8" 9'-3" 8'-9" 8'-2"

MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)

MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(Ft-in)	LAMINATED GLASS OR INSULATED GLASS CASE 1 M-1A/J-1A OR CASE 2 M-2A/J-2A
± 130.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	11'-10" 11'-1" 10'-6" 9'-11" 9'-6" 9'-1" 8'-5" 7'-10"
+130.0, -135.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	11'-8" 11'-0" 10'-3" 9'-9" 9'-3" 8'-10" 8'-2" 7'-7"
+130.0, -140.0	3'-6" 4'-0" 4'-6" 5'-0" 5'-6" 6'-0" 6'-6" 7'-0"	11'-5" 11'-0" 10'-1" 9'-6" 9'-1" 8'-6" 7'-10" 7'-3"

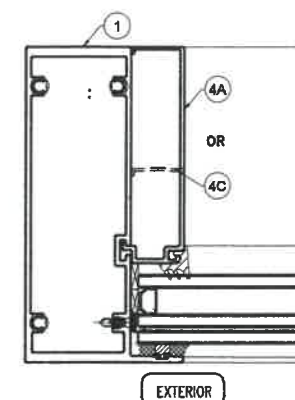
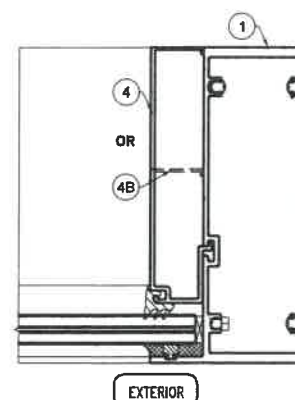
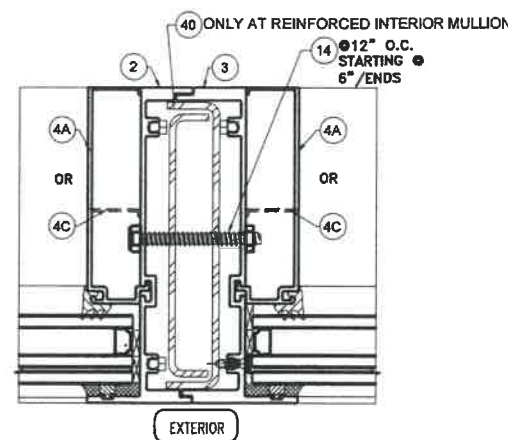
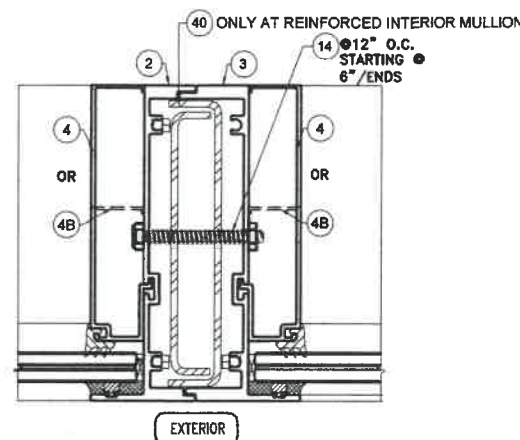
* COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

CASE 1: INTERIOR MULLION
M-1A (2)+(3) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR MULLION (+) (2) (4) OR (2) (4B)

CASE 2: INTERIOR MULLION
M-2A (2)+(3) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR MULLION (+) (2) (4A) OR (2) (4C)

CASE 1: JAMB MULLION
J-1A (1)+(4) OR (4B)

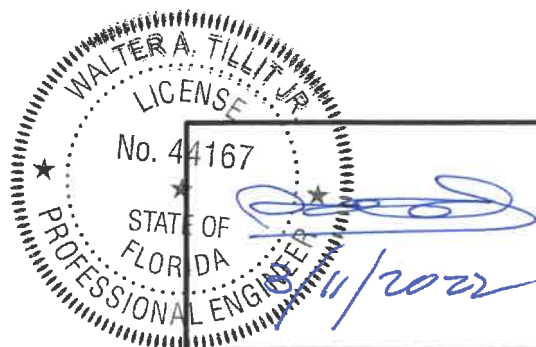
CASE 2: JAMB MULLION
J-2A (1)+(4A) OR (4C)



OPTIONAL SYSTEM # 2 (CONTINUED)

CASES DEFINITIONS

- CASE 1: M-1A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 48)
J-1A JAMB MULLION: W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEET 50)
- CASE 2: M-2A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ INSULATED GLASS (SEE DET. 6 ON SHEET 48)
J-2A JAMB MULLION: W/ INSULATED GLASS (SEE DET. 9 OR 9A ON SHEET 50)



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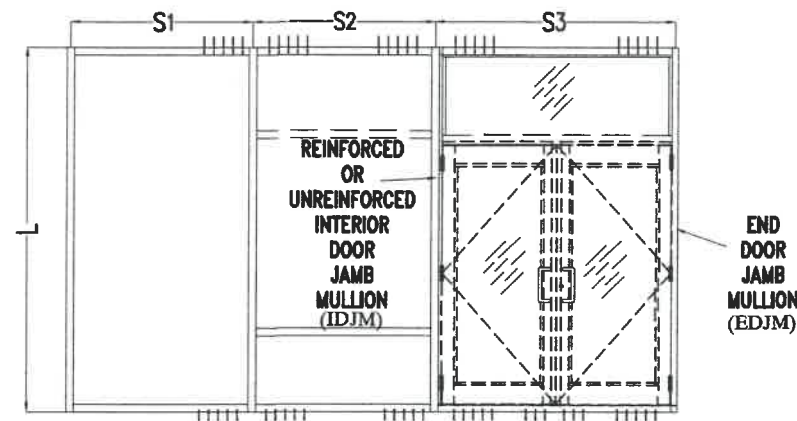
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DRAWING No

SHEET 32A OF 51

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 20-271	8/26/21	3	-	-
2	-	-	4	-	-



ELEVATION W/ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION AND END DOOR JAMB MULLION @ MULTIPLE PANELS

"L" = MAXIMUM INTERIOR MULLION SPAN

EFFECTIVE SPACING FOR INTERIOR DOOR JAMB MULLION: "b" = $\frac{S_3 + S_2}{2}$

EFFECTIVE SPACING FOR END DOOR JAMB MULLION: "b" = $\frac{S_3}{2} \leq 3'-2"$

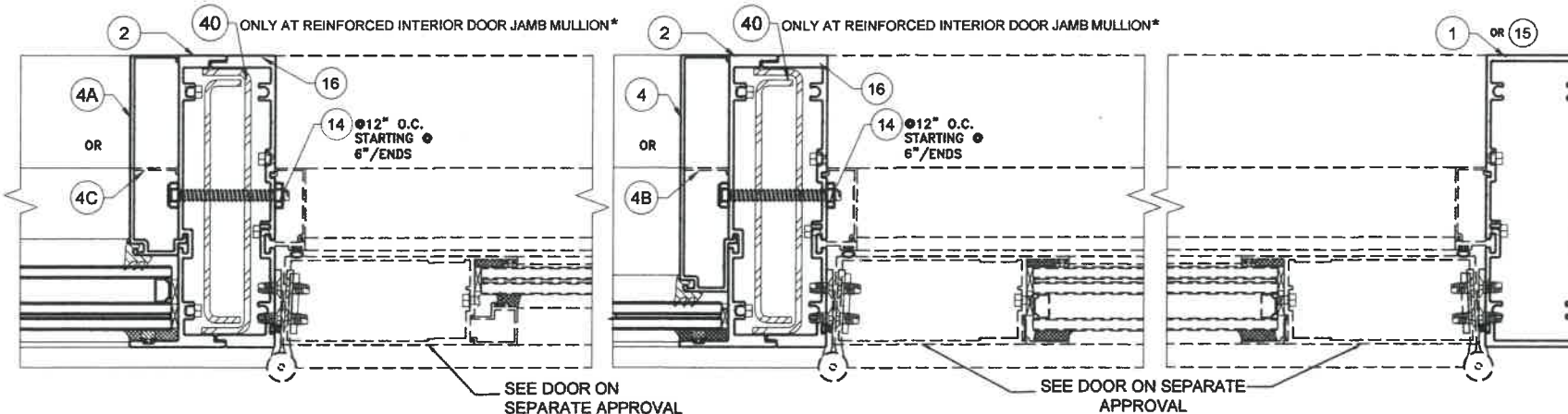
: OPTIONAL SYSTEM # 2

*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

CASE 1: INTERIOR DOOR JAMB MULLION	
IDJM-1	(2) + (16) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION (*) + (4A) OR (4C)

CASE 2: INTERIOR DOOR JAMB MULLION	
IDJM-2	(2) + (16) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION (*) + (4) OR (4B)

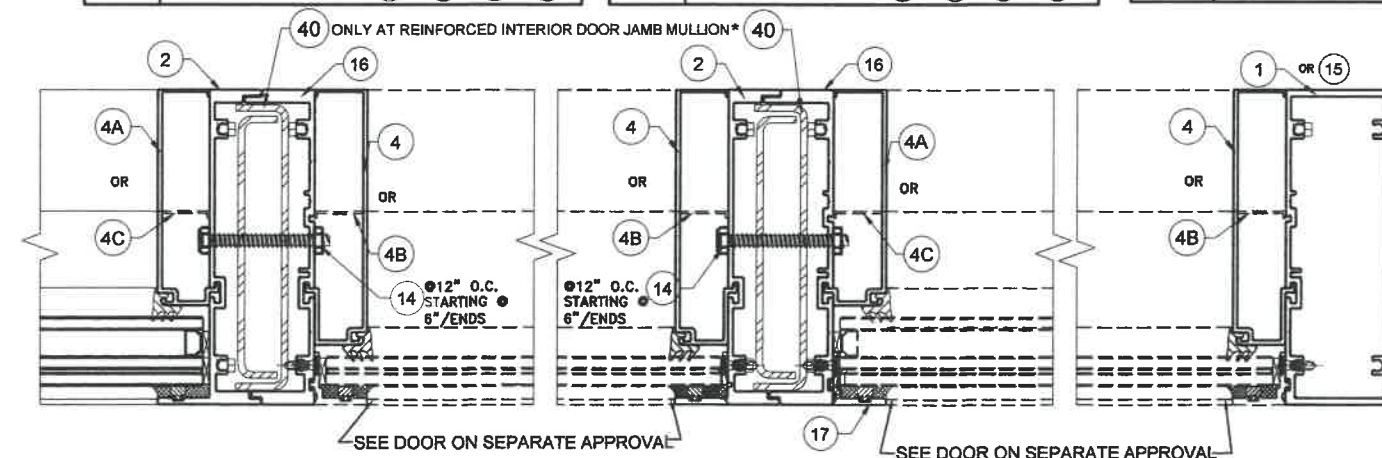
CASE 1: END DOOR JAMB MULLION W/ INSULATED GLASS	
EDJM-1	(1) OR (15)



CASE 3: INTERIOR DOOR JAMB MULLION & DOOR TRANSOM	
IDJM-3	(2) + (16) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION (*) + (4A) OR (4C) + (4) OR (4B)

CASE 4: INTERIOR DOOR JAMB MULLION & DOOR TRANSOM	
IDJM-4	(2) + (16) W/ (40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION (*) + (4) OR (4B) + (4A) OR (4C)

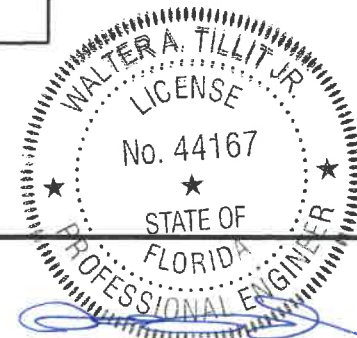
CASE 2: END DOOR JAMB MULLION W/ LAMINATED GLASS	
EDJM-2	(15) + (17) + (4) OR (4B)



MAXIMUM UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM) SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b"		
MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(Ft-in)	LAMINATED & INSULATED GLASS CASE 1/CASE 2 IDJM-1/IDJM-2 & CASE 3/CASE 4 IDJM-3/IDJM-4
+103.0 , -94.0	5'-8"	9'-6"

MAXIMUM REINFORCED INTERIOR DOOR JAMB MULLION (IDJM) SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b"		
MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(Ft-in)	LAMINATED & INSULATED GLASS CASE 1/CASE 2 IDJM-1/IDJM-2 & CASE 3/CASE 4 IDJM-3/IDJM-4
± 40.0	5'-2"	15'-9"
± 40.0	5'-8"	15'-9"
± 45.0	5'-2"	15'-9"
± 45.0	5'-8"	15'-5"
± 50.0	5'-2"	15'-9"
± 50.0	5'-8"	14'-11"
± 55.0	5'-2"	15'-7"
± 55.0	5'-8"	14'-5"
± 60.0	5'-2"	15'-1"
± 60.0	5'-8"	14'-0"
± 65.0	5'-2"	14'-9"
± 65.0	5'-8"	13'-8"
± 70.0	5'-2"	14'-4"
± 70.0	5'-8"	13'-4"
± 75.0	5'-2"	14'-0"
± 75.0	5'-8"	13'-0"
± 80.0	5'-2"	13'-9"
± 80.0	5'-8"	12'-8"
± 85.0	5'-2"	13'-6"
± 85.0	5'-8"	12'-3"
± 90.0	5'-2"	13'-3"
± 90.0	5'-8"	11'-11"
± 95.0	5'-2"	13'-0"
± 95.0	5'-8"	11'-7"
± 100.0	5'-2"	12'-8"
± 100.0	5'-8"	11'-4"
± 105.0	5'-2"	12'-4"
± 105.0	5'-8"	11'-0"
± 110.0	5'-2"	12'-1"
± 110.0	5'-8"	10'-9"
± 115.0	5'-2"	11'-10"
± 115.0	5'-8"	10'-7"
± 120.0	5'-2"	11'-7"
± 120.0	5'-8"	10'-4"
± 125.0	5'-2"	11'-4"
± 125.0	5'-8"	10'-1"
± 130.0	5'-2"	11'-1"
± 130.0	5'-8"	9'-11"
+130.0, -135.0	5'-2"	11'-0"
+130.0, -135.0	5'-8"	9'-9"
+130.0, -140.0	5'-2"	11'-0"
+130.0, -140.0	5'-8"	9'-6"

MAXIMUM END DOOR JAMB MULLION (EDJM) SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b"		
MAXIMUM DESIGN PRESSURE RATING "W"(psf)	MAX. EFFECTIVE SPACING "b"(Ft-in)	LAMINATED & INSULATED GLASS CASE 1 EDJM-1 & CASE 2 EDJM-2
± 40.0	3'-2"	15'-9"
± 45.0	3'-2"	15'-9"
± 50.0	3'-2"	15'-9"
± 55.0	3'-2"	15'-7"
± 60.0	3'-2"	15'-1"
± 65.0	3'-2"	14'-9"
± 70.0	3'-2"	14'-4"
± 75.0	3'-2"	14'-0"
± 80.0	3'-2"	13'-9"
± 85.0	3'-2"	13'-4"
± 90.0	3'-2"	13'-3"
± 95.0	3'-2"	13'-0"
± 100.0	3'-2"	12'-8"
± 105.0	3'-2"	12'-4"
± 110.0	3'-2"	12'-1"
± 115.0	3'-2"	11'-10"
± 120.0	3'-2"	11'-7"
± 125.0	3'-2"	11'-4"
± 130.0	3'-2"	11'-1"
+130.0, -135.0	3'-2"	11'-0"
+130.0, -140.0	3'-2"	11'-0"



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1	OLD 20-271	8/28/21	3	-	-
2	-	-	4	-	-

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DRAWING No

SHEET 33 OF 51

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MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE																									
		POURED CONCRETE SUBSTRATE										WOOD (2) 1 1/2" Min. THK. SUBSTRATE										STEEL 1/4" Min. THK. SUBSTRATE					
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					
		A (1/4"ø)					B (3/8"ø)					C (1/4"ø)					D (3/8"ø)					E (3/8"ø)					
"L" (Ft-In)	"b" (Ft-In)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	
8'-0"	3'-6"	80.8	121.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	87.0	100.5	140.0	140.0	140.0	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-0"	70.7	106.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	58.7	88.0	140.0	140.0	140.0	55.0	82.5	110.0	137.5	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-6"	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	52.1	78.2	125.7	130.3	140.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	5'-0"	56.6	84.8	113.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	46.9	70.4	113.1	117.3	140.0	44.0	66.0	88.0	110.0	132.0	140.0	140.0	140.0	140.0	140.0	140.0
	5'-6"	51.4	77.1	102.8	128.6	140.0	133.3	140.0	140.0	140.0	140.0	42.7	64.0	102.8	106.6	128.0	40.0	60.0	80.0	100.0	120.0	140.0	140.0	140.0	140.0	140.0	140.0
	6'-0"	47.1	70.7	94.3	117.8	140.0	122.2	140.0	140.0	140.0	140.0	39.1	58.7	94.3	97.8	117.3	36.7	55.0	73.3	91.7	110.0	140.0	140.0	140.0	140.0	140.0	140.0
	6'-6"	43.5	65.3	87.0	108.8	130.5	112.8	140.0	140.0	140.0	140.0	36.1	54.1	87.0	90.2	108.3	33.9	50.8	67.7	84.6	101.6	140.0	140.0	140.0	140.0	140.0	140.0
7'-0"	40.4	60.6	80.8	101.0	121.2	104.7	140.0	140.0	140.0	140.0	33.5	50.3	80.8	83.8	100.5	31.4	47.2	62.9	78.6	94.3	130.2	140.0	140.0	140.0	140.0	140.0	
8'-6"	3'-6"	76.1	114.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	63.1	94.6	140.0	140.0	140.0	59.2	88.8	118.3	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-0"	66.5	99.8	133.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	55.2	82.8	133.1	138.0	140.0	51.8	77.7	103.6	129.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-6"	59.2	88.7	118.3	140.0	140.0	140.0	140.0	140.0	140.0	140.0	49.1	73.6	118.3	122.7	140.0	46.0	69.0	92.0	115.1	138.1	140.0	140.0	140.0	140.0	140.0	140.0
	5'-0"	53.2	79.9	106.5	133.1	140.0	138.0	140.0	140.0	140.0	140.0	44.2	66.2	106.5	110.4	132.5	41.4	62.1	82.8	103.6	124.3	140.0	140.0	140.0	140.0	140.0	140.0
	5'-6"	48.4	72.6	96.8	121.0	140.0	125.4	140.0	140.0	140.0	140.0	40.1	60.2	96.8	100.4	120.4	37.7	56.5	75.3	94.1	113.0	140.0	140.0	140.0	140.0	140.0	140.0
	6'-0"	44.4	66.5	88.7	110.9	133.1	115.0	140.0	140.0	140.0	140.0	36.8	55.2	88.7	92.0	110.4	34.5	51.8	69.0	86.3	103.6	140.0	140.0	140.0	140.0	140.0	140.0
	6'-6"	41.0	61.4	81.9	102.4	122.9	106.1	140.0	140.0	140.0	140.0	34.0	51.0	81.9	84.9	101.9	31.9	47.8	63.7	79.7	95.6	131.9	140.0	140.0	140.0	140.0	140.0
7'-0"	38.0	57.0	76.1	95.1	114.1	98.6	140.0	140.0	140.0	140.0	31.5	47.3	76.1	78.9	94.6	29.6	44.4	59.2	74.0	88.8	122.5	140.0	140.0	140.0	140.0	140.0	
9'-0"	3'-6"	71.8	107.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	59.6	89.4	140.0	140.0	140.0	55.9	83.8	111.8	139.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-0"	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	52.1	78.2	125.7	130.3	140.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-6"	55.9	83.8	111.7	139.7	140.0	140.0	140.0	140.0	140.0	140.0	46.3	69.5	111.7	115.9	139.0	43.5	65.2	86.9	108.7	130.4	140.0	140.0	140.0	140.0	140.0	140.0
	5'-0"	50.3	75.4	100.6	125.7	140.0	130.3	140.0	140.0	140.0	140.0	41.7	62.6	100.6	104.3	125.1	39.1	58.7	78.2	97.8	117.4	140.0	140.0	140.0	140.0	140.0	140.0
	5'-6"	45.7	68.6	91.4	114.3	137.1	118.5	140.0	140.0	140.0	140.0	37.9	56.9	91.4	94.8	113.7	35.6	53.3	71.1	88.9	106.7	140.0	140.0	140.0	140.0	140.0	140.0
	6'-0"	41.9	62.9	83.8	104.8	125.7	108.6	140.0	140.0	140.0	140.0	34.8	52.1	83.8	86.9	104.3	32.6	48.9	65.2	81.5	97.8	135.0	140.0	140.0	140.0	140.0	140.0
	6'-6"	38.7	58.0	77.4	96.7	116.0	100.2	140.0	140.0	140.0	140.0	32.1	48.1	77.4	80.2	96.2	30.1	45.1	60.2	75.2	90.3	124.6	140.0	140.0	140.0	140.0	140.0
7'-0"	35.9	53.9	71.8	89.8	107.7	93.1	139.6	140.0	140.0	140.0	29.8	44.7	71.8	74.5	89.4	27.9	41.9	55.9	69.9	83.8	115.7	140.0	140.0	140.0	140.0	140.0	
9'-6"	3'-6"	68.0	102.1	136.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	56.4	84.7	136.1	140.0	140.0	52.9	79.4	105.9	132.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-0"	59.5	89.3	119.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	49.4	74.1	119.1	123.5	140.0	46.3	69.5	92.7	115.8	139.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-6"	52.9	79.4	105.9	132.3	140.0	137.2	140.0	140.0	140.0	140.0	43.9	65.9	105.9	109.8	131.7	41.2	61.8	82.4	102.9	123.5	140.0	140.0	140.0	140.0	140.0	140.0
	5'-0"	47.6	71.5	95.3	119.1	140.0	123.5	140.0	140.0	140.0	140.0	39.5	59.3	95.3	98.8	118.5	37.1	55.6	74.1	92.7	111.2	140.0	140.0	140.0	140.0	140.0	140.0
	5'-6"	43.3	65.0	86.6	108.3	129.9	112.2	140.0	140.0	140.0	140.0	35.9	53.9	86.6	89.8	107.8	33.7	50.5	67.4	84.2	101.1	139.5	140.0	140.0	140.0	140.0	140.0
	6'-0"	39.7	59.5	79.4	99.2	119.1	102.9	140.0	140.0	140.0	140.0	32.9	49.4	79.4	82.3	98.8	30.9	46.3	61.8	77.2	92.7	127.9	140.0	140.0	140.0	140.0	140.0
	6'-6"	36.6	55.0	73.3	91.6	109.9	95.0	140.0	140.0	140.0	140.0	30.4	45.6	73.3	76.0	91.2	28.5	42.8	57.0	71.3	85.5	118.0	140.0	140.0	140.0	140.0	140.0
7'-0"	34.0	51.0	68.0	85.1	102.1	88.2	132.3	140.0	140.0	140.0	28.2	42.3	68.0	70.6	84.7	26.5	39.7	52.9	66.2	79.4	109.6	140.0	140.0	140.0	140.0	140.0	
10'-0"	3'-6"	64.6	97.0	129.3	140.0	140.0	140.0	140.0	140.0	140.0	140.0	53.6	80.4	129.3	134.1	140.0	50.3	75.4	100.6	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-0"	56.6	84.8	113.1	140.0	140.0	140.0	140.0	140.0	140.0	140.0	46.9	70.4	113.1	117.3	140.0	44.0	66.0	88.0	110.0	132.0	140.0	140.0	140.0	140.0	140.0	140.0
	4'-6"	50.3	75.4	100.6	125.7	140.0	130.3	140.0	140.0	140.0	140.0	41.7	62.6	100.6	104.3	125.1	39.1	58.7	78.2	97.8	117.4	140.0	140.0	140.0	140.0	140.0	140.0
	5'-0"	45.3	67.9	90.5	113.1	135.8	117.3	140.0	140.0	140.0	140.0	37.5	56.3	90.5	93.8	112.6	35.2	52.8	70.4	88.0	105.6	140.0	140.0	140.0	140.0	140.0	140.0
	5'-6"	41.1	61.7	82.3	102.8	123.4	106.6	140.0	140.0	140.0	140.0	34.1	51.2	82.3	85.3	102.4	32.0	48.0	64.0	80.0	96.0	132.5	140.0	140.0	140.0	140.0	140.0
	6'-0"	37.7	56.6	75.4	94.3	113.1	97.7	140.0	140.0	140.0	140.0	31.3	46.9	75.4	78.2	93.8	29.3	44.0	58.7	73.3	88.0	121.5	140.0	140.0	140.0	140.0	140.0
	6'-6"	34.8	52.2	69.6	87.0	104.4	90.2	135.3	140.0	140.0	140.0	28.9	43.3	69.6	72.2	86.6	27.1	40.6	54.2	67.7	81.2	112.1	140.0	140.0	140.0	140.0	140.0
7'-0"	32.3	48.5	64.6	80.8	97.0	83.8	125.7	140.0	140.0	140.0	26.8	40.2	64.6	67.0	80.4	25.1	37.7	50.3	62.9	75.4	104.1	140.0	140.0	140.0	140.0		

- FASTENERS TYPES & SUBSTRATES REQUIREMENTS:**
- A** - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B** - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C** - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

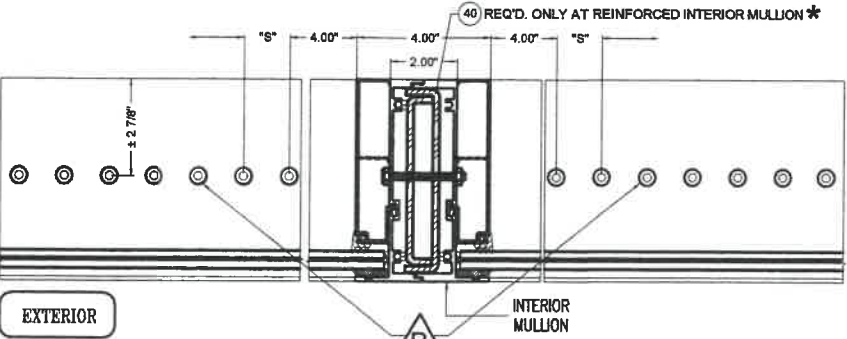
MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED)																											
		POURED CONCRETE SUBSTRATE												WOOD (2) 1 1/2" Min. THK. SUBSTRATE												STEEL 1/4" Min. THK.			
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE							
		A (1/4")					B (3/8")					C (1/4")					D (3/8")					E (3/8")							
"L" (Ft-In)	"b" (Ft-In)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12			
11' - 6"	3' - 6"	56.2	84.3	112.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0	46.6	69.9	112.4	116.6	139.9	43.7	65.6	87.5	109.3	131.2	140.0	140.0	140.0	140.0	140.0			
	4' - 0"	49.2	73.8	98.4	123.0	140.0	127.5	140.0	140.0	140.0	140.0	40.8	61.2	98.4	102.0	122.4	38.3	57.4	76.5	95.7	114.8	140.0	140.0	140.0	140.0	140.0			
	4' - 6"	43.7	65.6	87.4	109.3	131.2	113.3	140.0	140.0	140.0	140.0	36.3	54.4	87.4	90.7	108.8	34.0	51.0	68.0	85.0	102.1	140.0	140.0	140.0	140.0	140.0			
	5' - 0"	39.3	59.0	78.7	98.4	118.0	102.0	140.0	140.0	140.0	140.0	32.6	49.0	78.7	81.6	97.9	30.6	45.9	61.2	76.5	91.8	126.8	140.0	140.0	140.0	140.0			
	5' - 6"	35.8	53.7	71.5	89.4	107.3	92.7	139.1	140.0	140.0	140.0	29.7	44.5	71.5	74.2	89.0	27.8	41.7	55.7	69.6	83.5	115.2	140.0	140.0	140.0	140.0			
	6' - 0"	32.8	49.2	65.6	82.0	98.4	85.0	127.5	140.0	140.0	140.0	27.2	40.8	65.6	68.0	81.6	25.5	38.3	51.0	63.8	76.5	105.6	140.0	140.0	140.0	140.0			
	7' - 0"	30.3	45.4	60.5	75.7	90.8	78.5	117.7	140.0	140.0	140.0	25.1	37.7	60.5	62.8	75.3	23.6	35.3	47.1	58.9	70.7	97.5	140.0	140.0	140.0	140.0			
12' - 0"	3' - 6"	28.1	42.2	56.2	70.3	84.3	72.8	109.3	140.0	140.0	140.0	23.3	35.0	56.2	58.3	69.9	21.9	32.8	43.7	54.7	65.6	90.5	135.8	140.0	140.0	140.0			
	4' - 0"	53.9	80.8	107.7	134.7	140.0	139.6	140.0	140.0	140.0	140.0	44.7	67.0	107.7	111.7	134.1	41.9	62.9	83.8	104.8	125.7	140.0	140.0	140.0	140.0	140.0			
	4' - 6"	47.1	70.7	94.3	117.8	140.0	122.2	140.0	140.0	140.0	140.0	39.1	58.7	94.3	97.8	117.3	36.7	55.0	73.3	91.7	110.0	140.0	140.0	140.0	140.0	140.0			
	5' - 0"	41.9	62.9	83.8	104.8	125.7	108.6	140.0	140.0	140.0	140.0	34.8	52.1	83.8	86.9	104.3	32.6	48.9	65.2	81.5	97.8	135.0	140.0	140.0	140.0	140.0			
	5' - 6"	37.7	56.8	75.4	94.3	113.1	97.7	140.0	140.0	140.0	140.0	31.3	46.9	75.4	78.2	93.8	29.3	44.0	58.7	73.3	88.0	121.5	140.0	140.0	140.0	140.0			
	6' - 0"	34.3	51.4	68.6	85.7	102.8	88.9	133.3	140.0	140.0	140.0	28.4	42.7	68.6	71.1	85.3	26.7	40.0	53.3	66.7	80.0	110.4	140.0	140.0	140.0	140.0			
	7' - 0"	31.4	47.1	62.9	78.6	94.3	81.4	122.2	140.0	140.0	140.0	26.1	39.1	62.9	65.2	78.2	24.4	36.7	48.9	61.1	73.3	101.2	140.0	140.0	140.0	140.0			
12' - 6"	6' - 6"	29.0	43.5	58.0	72.5	87.0	75.2	112.8	140.0	140.0	140.0	24.1	36.1	58.0	60.2	72.2	22.6	33.9	45.1	56.4	67.7	93.4	140.0	140.0	140.0	140.0			
	7' - 0"	26.9	40.4	53.9	67.3	80.8	69.8	104.7	139.6	140.0	140.0	22.3	33.5	53.9	55.9	67.0	21.0	31.4	41.9	52.4	62.9	86.8	130.2	140.0	140.0	140.0			
	3' - 6"	51.7	77.8	103.4	129.3	140.0	134.0	140.0	140.0	140.0	140.0	42.9	64.3	103.4	107.2	128.7	40.2	60.4	80.5	100.6	120.7	140.0	140.0	140.0	140.0	140.0			
	4' - 0"	45.3	67.9	90.5	113.1	135.8	117.3	140.0	140.0	140.0	140.0	37.5	56.3	90.5	93.8	112.6	35.2	52.8	70.4	88.0	105.6	140.0	140.0	140.0	140.0	140.0			
	4' - 6"	40.2	60.3	80.4	100.6	120.7	104.3	140.0	140.0	140.0	140.0	33.4	50.0	80.4	83.4	100.1	31.3	46.9	62.6	78.2	93.9	129.6	140.0	140.0	140.0	140.0			
	5' - 0"	36.2	54.3	72.4	90.5	108.6	93.8	140.0	140.0	140.0	140.0	30.0	45.0	72.4	75.1	90.1	28.2	42.2	56.3	70.4	84.5	116.6	140.0	140.0	140.0	140.0			
	5' - 6"	32.9	49.4	65.8	82.3	98.7	85.3	127.9	140.0	140.0	140.0	27.3	40.9	65.8	68.2	81.9	25.6	38.4	51.2	64.0	76.8	106.0	140.0	140.0	140.0	140.0			
13' - 0"	6' - 0"	30.2	45.3	60.3	75.4	90.5	78.2	117.3	140.0	140.0	140.0	25.0	37.5	60.3	62.6	75.1	23.5	35.2	46.9	58.7	70.4	97.2	140.0	140.0	140.0	140.0			
	6' - 6"	27.8	41.8	55.7	69.6	83.5	72.2	108.3	140.0	140.0	140.0	23.1	34.6	55.7	57.7	69.3	21.7	32.5	43.3	54.2	65.0	89.7	134.6	140.0	140.0	140.0			
	7' - 0"	25.9	38.8	51.7	64.6	77.6	67.0	100.5	134.0	140.0	140.0	21.4	32.2	51.7	53.6	64.3	20.1	30.2	40.2	50.3	60.4	83.3	124.9	140.0	140.0	140.0			
	3' - 6"	49.7	74.6	99.5	124.3	140.0	128.9	140.0	140.0	140.0	140.0	41.2	61.9	99.5	103.1	123.7	38.7	58.0	77.4	96.7	116.1	140.0	140.0	140.0	140.0	140.0			
	4' - 0"	43.5	65.3	87.0	108.8	130.5	112.8	140.0	140.0	140.0	140.0	36.1	54.1	87.0	90.2	108.3	33.9	50.8	67.7	84.6	101.6	140.0	140.0	140.0	140.0	140.0			
	4' - 6"	38.7	58.0	77.4	96.7	116.0	100.2	140.0	140.0	140.0	140.0	32.1	48.1	77.4	80.2	96.2	30.1	45.1	60.2	75.2	90.3	124.6	140.0	140.0	140.0	140.0			
	5' - 0"	34.8	52.2	69.6	86.7	104.4	90.2	135.3	140.0	140.0	140.0	28.9	43.3	69.6	72.2	86.6	27.1	40.6	54.2	67.7	81.2	112.1	140.0	140.0	140.0	140.0			
13' - 6"	5' - 6"	31.6	47.5	63.3	79.1	94.9	82.0	123.0	140.0	140.0	140.0	26.2	39.4	63.3	65.6	78.7	24.6	36.9	49.2	61.6	73.9	101.9	140.0	140.0	140.0	140.0			
	6' - 0"	29.0	43.5	58.0	72.5	87.0	75.2	112.8	140.0	140.0	140.0	24.1	36.1	58.0	60.2	72.2	22.6	33.9	45.1	56.4	67.7	93.4	140.0	140.0	140.0	140.0			
	6' - 6"	26.8	40.2	53.6	66.9	80.3	69.4	104.1	138.8	140.0	140.0	22.2	33.3	53.6	55.5	66.6	20.8	31.2	41.7	52.1	62.5	86.3	129.4	140.0	140.0	140.0			
	7' - 0"	24.9	37.3	49.7	62.2	74.6	64.4	96.7	128.9	140.0	140.0	20.6	30.9	49.7	51.6	61.9	19.3	29.0	38.7	48.4	58.0	80.1	120.1	140.0	140.0	140.0			
	3' - 6"	47.9	71.8	95.8	119.7	140.0	124.1	140.0	140.0	140.0	140.0	39.7	59.6	95.8	99.3	119.2	37.3	55.9	74.5	93.1	111.8	140.0	140.0	140.0	140.0	140.0			
	4' - 0"	41.9	62.9	83.8	104.8	125.7	108.6	140.0	140.0	140.0	140.0	34.8	52.1	83.8	86.9	104.3	32.6	48.9	65.2	81.5	97.8	135.0	140.0	140.0	140.0	140.0			
	4' - 6"	37.2	55.9	74.5	93.1	111.7	96.5	140.0	140.0	140.0	140.0	30.9	46.3	74.5	77.2	92.7	29.0	43.5	58.0	72.4	86.9	120.0	140.0	140.0	140.0	140.0			
14' - 0"	5' - 0"	33.5	50.3	67.0	83.8	100.6	86.9	130.3	140.0	140.0	140.0	27.8	41.7	67.0	69.5	83.4	26.1	39.1	52.2	65.2	78.2	108.0	140.0	140.0	140.0	140.0			
	5' - 6"	30.5	45.7	60.9	76.2	91.4	79.0	118.5	140.0	140.0	140.0	25.3	37.9	60.9	63.2	75.8	23.7	35.6	47.4	59.3	71.1	98.2	140.0	140.0	140.0	140.0			
	6' - 0"	27.9	41.9	55.9	69.8	83.8	72.4	108.6	140.0	140.0	140.0	23.2	34.8	55.9	57.9	69.5	21.7	32.6	43.5	54.3	65.2	90.0	135.0	140.0	140.0	140.0			
	6' - 6"	25.8	38.7	51.6	64.5	77.4	66.8	100.2	133.7	140.0	140.0	21.4	32.1	51.6	53.5	64.2	20.1	30.1	40.1	50.2	60.2	83.1	124.6	140.0	140.0	140.0			
	7' - 0"	23.9	35.9	47.9	59.9	71.8	62.1	93.1	124.1	140.0	140.0	19.9	29.8	47.9	49.7	59.6	18.6	27.9	37.3	46.6	55.9	77.1	115.7	140.0	140.0	140.0			
	3' - 6"	46.2	69.3	92.4	115.4																								

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

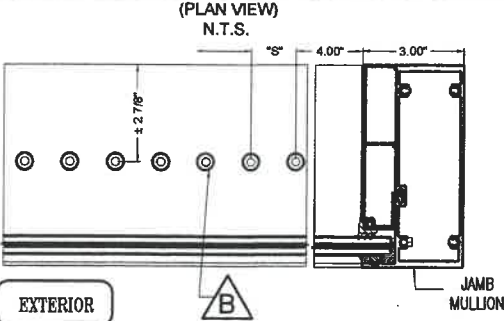
FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

- A - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HMB THRU BOLT W/ NUT & LOCK WASHER.

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED)																													
		POURED CONCRETE SUBSTRATE												WOOD (2) 1 1/2" Min. THK. SUBSTRATE												STEEL 1/4" Min. THK.					
		FASTENERS TYPE A (1/4"ø)					FASTENERS TYPE B (3/8"ø)					FASTENERS TYPE C (1/4"ø)					FASTENERS TYPE D (3/8"ø)					FASTENERS TYPE E (3/8"ø)									
		n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12					
"L" (Ft-in)	"b" (Ft-in)	3' - 6"	43.1	64.6	86.2	107.7	129.3	111.7	140.0	140.0	140.0	140.0	35.7	53.6	86.2	89.4	107.2	33.5	50.3	67.1	83.8	100.6	138.8	140.0	140.0	140.0	140.0				
15' - 0"	4' - 0"	37.7	56.6	75.4	94.3	113.1	97.7	140.0	140.0	140.0	140.0	140.0	31.3	46.9	75.4	78.2	93.8	29.3	44.0	58.7	73.3	88.0	121.5	140.0	140.0	140.0	140.0				
	4' - 6"	33.5	50.3	67.0	83.8	100.6	86.9	130.3	140.0	140.0	140.0	140.0	27.8	41.7	67.0	69.5	83.4	26.1	39.1	52.2	65.2	78.2	108.0	140.0	140.0	140.0	140.0				
	5' - 0"	30.2	45.3	60.3	75.4	90.5	78.2	117.3	140.0	140.0	140.0	140.0	25.0	37.5	60.3	62.6	75.1	23.5	35.2	46.9	58.7	70.4	97.2	140.0	140.0	140.0	140.0				
	5' - 6"	27.4	41.1	54.9	68.6	82.3	71.1	106.6	140.0	140.0	140.0	140.0	22.7	34.1	54.9	56.9	68.2	21.3	32.0	42.7	53.3	64.0	88.3	132.5	140.0	140.0	140.0				
	6' - 0"	25.1	37.7	50.3	62.9	75.4	65.2	97.7	130.3	140.0	140.0	140.0	20.9	31.3	50.3	52.1	62.6	19.6	29.3	39.1	48.9	58.7	81.0	121.5	140.0	140.0	140.0				
	6' - 6"	23.2	34.8	46.4	58.0	69.6	60.1	90.2	120.3	140.0	140.0	140.0	19.2	28.9	46.4	48.1	57.7	18.1	27.1	36.1	45.1	54.2	74.8	112.1	140.0	140.0	140.0				
	7' - 0"	21.5	32.3	43.1	53.9	64.6	55.9	83.8	111.7	139.6	140.0	140.0	17.9	26.8	43.1	44.7	53.6	16.8	25.1	33.5	41.9	50.3	69.4	104.1	138.8	140.0	140.0				
15' - 6"	3' - 6"	41.7	62.6	83.4	104.3	125.1	108.1	140.0	140.0	140.0	140.0	34.6	51.9	83.4	86.5	103.8	32.4	48.7	64.9	81.1	97.3	134.4	140.0	140.0	140.0	140.0					
	4' - 0"	36.5	54.7	73.0	91.2	109.5	94.6	140.0	140.0	140.0	140.0	30.3	45.4	73.0	75.7	90.8	28.4	42.6	58.8	71.0	85.2	117.6	140.0	140.0	140.0	140.0					
	4' - 6"	32.4	48.7	64.9	81.1	97.3	84.1	126.1	140.0	140.0	140.0	26.9	40.4	64.9	67.3	80.7	25.2	37.9	50.5	63.1	75.7	104.5	140.0	140.0	140.0	140.0					
	5' - 0"	29.2	43.8	58.4	73.0	87.6	75.7	113.5	140.0	140.0	140.0	24.2	36.3	58.4	60.5	72.7	22.7	34.1	45.4	56.8	68.1	94.0	140.0	140.0	140.0	140.0					
	5' - 6"	26.5	39.8	53.1	66.4	79.6	68.8	103.2	137.6	140.0	140.0	22.0	33.0	53.1	55.0	66.0	20.6	31.0	41.3	51.6	61.9	85.5	128.2	140.0	140.0	140.0					
	6' - 0"	24.3	36.5	48.7	60.8	73.0	63.1	94.6	126.1	140.0	140.0	20.2	30.3	48.7	50.5	60.5	18.9	28.4	37.9	47.3	56.8	78.4	117.6	140.0	140.0	140.0					
	6' - 6"	22.5	33.7	44.9	56.1	67.4	58.2	87.3	116.4	140.0	140.0	18.6	27.9	44.9	46.6	55.9	17.5	26.2	34.9	43.7	52.4	72.3	108.5	140.0	140.0	140.0					
7' - 0"	20.9	31.3	41.7	52.1	62.6	54.0	81.1	108.1	135.1	140.0	17.3	25.9	41.7	43.2	51.9	16.2	24.3	32.4	40.6	48.7	67.2	100.8	134.4	140.0	140.0						
15' - 9"	3' - 6"	41.0	61.6	82.1	102.6	123.1	106.4	140.0	140.0	140.0	140.0	34.0	51.1	82.1	85.1	102.1	31.9	47.9	63.9	79.8	95.8	132.2	140.0	140.0	140.0	140.0					
	4' - 0"	35.9	53.9	71.8	89.8	107.7	93.1	139.6	140.0	140.0	140.0	29.8	44.7	71.8	74.5	89.4	27.9	41.9	55.9	69.9	83.8	115.7	140.0	140.0	140.0	140.0					
	4' - 6"	31.9	47.9	63.8	79.8	95.8	82.7	124.1	140.0	140.0	140.0	26.5	39.7	63.8	66.2	79.4	24.8	37.3	49.7	62.1	74.5	102.8	140.0	140.0	140.0	140.0					
	5' - 0"	28.7	43.1	57.5	71.8	86.2	74.5	111.7	140.0	140.0	140.0	23.8	35.7	57.5	59.6	71.5	22.4	33.5	44.7	55.9	67.1	92.6	138.8	140.0	140.0	140.0					
	5' - 6"	26.1	39.2	52.2	65.3	78.4	67.7	101.5	135.4	140.0	140.0	21.7	32.5	52.2	54.2	65.0	20.3	30.5	40.6	50.8	61.0	84.1	126.2	140.0	140.0	140.0					
	6' - 0"	23.9	35.9	47.9	59.9	71.8	62.1	93.1	124.1	140.0	140.0	19.9	29.8	47.9	49.7	59.6	18.6	27.9	37.3	46.6	55.9	77.1	115.7	140.0	140.0	140.0					
	6' - 6"	22.1	33.2	44.2	55.3	66.3	57.3	85.9	114.6	140.0	140.0	18.3	27.5	44.2	45.8	55.0	17.2	25.8	34.4	43.0	51.6	71.2	106.8	140.0	140.0	140.0					
7' - 0"	20.5	30.8	41.0	51.3	61.6	53.2	79.8	106.4	133.0	140.0	17.0	25.5	41.0	42.6	51.1	16.0	24.0	31.9	39.9	47.9	66.1	99.2	132.2	140.0	140.0						

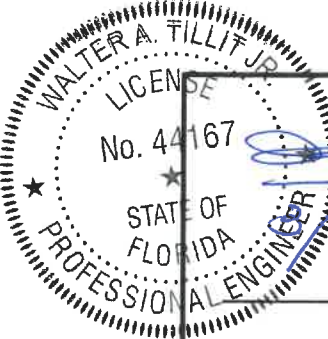


SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR MULLION



SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION

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1	OLD 20-271	8/28/21	3	-	-
2	-	-	4	-	-

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8/26/2021
DATE

21-118
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SHEET 36 OF 51

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE																									
		POURED CONCRETE SUBSTRATE										WOOD (2) 2" x THK. SUBSTRATE										STEEL 1/4" Min. THK. SUBSTRATE					
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					
		A (1/4")					B (3/8")					C (1/4")					D (3/8")					E (3/8")					
"L" (ft-in)	"b" (ft-in)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	
8' - 0" OR LESS	3' - 6"	58.7	88.0	117.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0	58.7	88.0	117.4	140.0	140.0	62.9	94.3	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 0"	51.4	77.0	102.7	128.4	140.0	140.0	140.0	140.0	140.0	140.0	51.4	77.0	102.7	128.4	140.0	55.0	82.5	110.0	137.5	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 6"	45.7	68.5	91.3	114.1	137.0	135.1	140.0	140.0	140.0	140.0	45.7	68.5	91.3	114.1	137.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	5' - 0"	41.1	61.6	82.2	102.7	123.3	121.6	140.0	140.0	140.0	140.0	41.1	61.6	82.2	102.7	123.3	44.0	66.0	88.0	110.0	132.0	138.5	140.0	140.0	140.0	140.0	140.0
	5' - 6"	37.4	56.0	74.7	93.4	112.1	110.5	140.0	140.0	140.0	140.0	37.4	56.0	74.7	93.4	112.1	40.0	60.0	80.0	100.0	120.0	125.9	140.0	140.0	140.0	140.0	140.0
	6' - 0"	34.2	51.4	68.5	85.6	102.7	101.3	140.0	140.0	140.0	140.0	34.2	51.4	68.5	85.6	102.7	36.7	55.0	73.3	91.7	110.0	115.4	140.0	140.0	140.0	140.0	140.0
	6' - 6"	31.6	47.4	63.2	79.0	94.8	93.5	140.0	140.0	140.0	140.0	31.6	47.4	63.2	79.0	94.8	33.9	50.8	67.7	84.6	101.6	106.5	140.0	140.0	140.0	140.0	140.0
7' - 0"	29.3	44.0	58.7	73.4	88.0	86.8	130.3	140.0	140.0	140.0	29.3	44.0	58.7	73.4	88.0	31.4	47.2	62.9	78.6	94.3	98.9	140.0	140.0	140.0	140.0	140.0	
8' - 6"	3' - 6"	55.2	82.9	110.5	138.1	140.0	140.0	140.0	140.0	140.0	140.0	55.2	82.9	110.5	138.1	140.0	59.2	88.8	118.3	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 0"	48.3	72.5	96.7	120.8	140.0	140.0	140.0	140.0	140.0	140.0	48.3	72.5	96.7	120.8	140.0	51.8	77.7	103.6	129.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 6"	43.0	64.5	85.9	107.4	128.9	127.1	140.0	140.0	140.0	140.0	43.0	64.5	85.9	107.4	128.9	46.0	69.0	92.0	115.1	138.1	140.0	140.0	140.0	140.0	140.0	140.0
	5' - 0"	38.7	58.0	77.3	96.7	116.0	114.4	140.0	140.0	140.0	140.0	38.7	58.0	77.3	96.7	116.0	41.4	62.1	82.8	103.6	124.3	130.3	140.0	140.0	140.0	140.0	140.0
	5' - 6"	35.2	52.7	70.3	87.9	105.5	104.0	140.0	140.0	140.0	140.0	35.2	52.7	70.3	87.9	105.5	37.7	56.5	75.3	94.1	113.0	118.5	140.0	140.0	140.0	140.0	140.0
	6' - 0"	32.2	48.3	64.5	80.6	96.7	95.4	140.0	140.0	140.0	140.0	32.2	48.3	64.5	80.6	96.7	34.5	51.8	69.0	86.3	103.6	108.6	140.0	140.0	140.0	140.0	140.0
	6' - 6"	29.7	44.6	59.5	74.4	89.2	88.0	132.0	140.0	140.0	140.0	29.7	44.6	59.5	74.4	89.2	31.9	47.8	63.7	79.7	95.6	100.3	140.0	140.0	140.0	140.0	140.0
7' - 0"	27.6	41.4	55.2	69.1	82.9	81.7	122.6	140.0	140.0	140.0	27.6	41.4	55.2	69.1	82.9	29.6	44.4	59.2	74.0	88.8	93.1	139.7	140.0	140.0	140.0	140.0	
9' - 0"	3' - 6"	52.2	78.3	104.4	130.4	140.0	140.0	140.0	140.0	140.0	140.0	52.2	78.3	104.4	130.4	140.0	55.9	83.8	111.8	139.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 0"	45.7	68.5	91.3	114.1	137.0	135.1	140.0	140.0	140.0	140.0	45.7	68.5	91.3	114.1	137.0	48.9	73.3	97.8	122.2	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 6"	40.6	60.9	81.2	101.5	121.7	120.1	140.0	140.0	140.0	140.0	40.6	60.9	81.2	101.5	121.7	43.5	65.2	86.9	108.7	130.4	136.8	140.0	140.0	140.0	140.0	140.0
	5' - 0"	36.5	54.8	73.0	91.3	109.6	108.1	140.0	140.0	140.0	140.0	36.5	54.8	73.0	91.3	109.6	39.1	58.7	78.2	97.8	117.4	123.1	140.0	140.0	140.0	140.0	140.0
	5' - 6"	33.2	49.8	66.4	83.0	99.6	98.3	140.0	140.0	140.0	140.0	33.2	49.8	66.4	83.0	99.6	35.6	53.3	71.1	88.9	106.7	111.9	140.0	140.0	140.0	140.0	140.0
	6' - 0"	30.4	45.7	60.9	76.1	91.3	90.1	135.1	140.0	140.0	140.0	30.4	45.7	60.9	76.1	91.3	32.6	48.9	65.2	81.5	97.8	102.6	140.0	140.0	140.0	140.0	140.0
	6' - 6"	28.1	42.1	56.2	70.2	84.3	83.1	124.7	140.0	140.0	140.0	28.1	42.1	56.2	70.2	84.3	30.1	45.1	60.2	75.2	90.3	94.7	140.0	140.0	140.0	140.0	140.0
7' - 0"	26.1	39.1	52.2	65.2	78.3	77.2	115.8	140.0	140.0	140.0	26.1	39.1	52.2	65.2	78.3	27.9	41.9	55.9	69.9	83.8	87.9	131.9	140.0	140.0	140.0	140.0	
9' - 6"	3' - 6"	49.4	74.1	98.9	123.6	140.0	140.0	140.0	140.0	140.0	140.0	49.4	74.1	98.9	123.6	140.0	52.9	79.4	105.9	132.4	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 0"	43.3	64.9	86.5	108.1	129.8	128.0	140.0	140.0	140.0	140.0	43.3	64.9	86.5	108.1	129.8	46.3	69.5	92.7	115.8	139.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 6"	38.4	57.7	76.9	96.1	115.3	113.8	140.0	140.0	140.0	140.0	38.4	57.7	76.9	96.1	115.3	41.2	61.8	82.4	102.9	123.5	129.6	140.0	140.0	140.0	140.0	140.0
	5' - 0"	34.6	51.9	69.2	86.5	103.8	102.4	140.0	140.0	140.0	140.0	34.6	51.9	69.2	86.5	103.8	37.1	55.6	74.1	92.7	111.2	116.6	140.0	140.0	140.0	140.0	140.0
	5' - 6"	31.5	47.2	62.9	78.6	94.4	93.1	139.6	140.0	140.0	140.0	31.5	47.2	62.9	78.6	94.4	33.7	50.5	67.4	84.2	101.1	106.0	140.0	140.0	140.0	140.0	140.0
	6' - 0"	28.8	43.3	57.7	72.1	86.5	85.3	128.0	140.0	140.0	140.0	28.8	43.3	57.7	72.1	86.5	30.9	46.3	61.8	77.2	92.7	97.2	140.0	140.0	140.0	140.0	140.0
	6' - 6"	26.6	39.9	53.2	66.5	79.8	78.8	118.1	140.0	140.0	140.0	26.6	39.9	53.2	66.5	79.8	28.5	42.8	57.0	71.3	85.5	89.7	134.6	140.0	140.0	140.0	140.0
7' - 0"	24.7	37.1	49.4	61.8	74.1	73.1	109.7	140.0	140.0	140.0	24.7	37.1	49.4	61.8	74.1	26.5	39.7	52.9	66.2	79.4	83.3	125.0	140.0	140.0	140.0	140.0	
10' - 0"	3' - 6"	47.0	70.4	93.9	117.4	140.0	139.0	140.0	140.0	140.0	140.0	47.0	70.4	93.9	117.4	140.0	50.3	75.4	100.6	125.7	140.0	140.0	140.0	140.0	140.0	140.0	140.0
	4' - 0"	41.1	61.6	82.2	102.7	123.3	121.6	140.0	140.0	140.0	140.0	41.1	61.6	82.2	102.7	123.3	44.0	66.0	88.0	110.0	132.0	138.5	140.0	140.0	140.0	140.0	140.0
	4' - 6"	36.5	54.8	73.0	91.3	109.6	108.1	140.0	140.0	140.0	140.0	36.5	54.8	73.0	91.3	109.6	39.1	58.7	78.2	97.8	117.4	123.1	140.0	140.0	140.0	140.0	140.0
	5' - 0"	32.9	49.3	65.7	82.2	98.6	97.3	140.0	140.0	140.0	140.0	32.9	49.3	65.7	82.2	98.6	35.2	52.8	70.4	88.0	105.6	110.8	140.0	140.0	140.0	140.0	140.0
	5' - 6"	29.9	44.8	59.8	74.7	89.6	88.4	132.6	140.0	140.0	140.0	29.9	44.8	59.8	74.7	89.6	32.0	48.0	64.0	80.0	96.0	100.7	140.0	140.0	140.0	140.0	140.0
	6' - 0"	27.4	41.1	54.8	68.5	82.2	81.1	121.6	140.0	140.0	140.0	27.4	41.1	54.8	68.5	82.2	29.3	44.0	58.7	73.3	88.0	92.3	138.5	140.0	140.0	140.0	140.0
	6' - 6"	25.3	37.9	50.6	63.2	75.9	74.8	112.2	140.0	140.0	140.0	25.3	37.9	50.6	63.2	75.9	27.1	40.6	54.2	67.7	81.2	85.2	127.8	140.0	140.0	140.0	140.0
7' - 0"	23.5	35.2	47.0	58.7	70.4	69.5	104.2	139.0	140.0	140.1																	

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

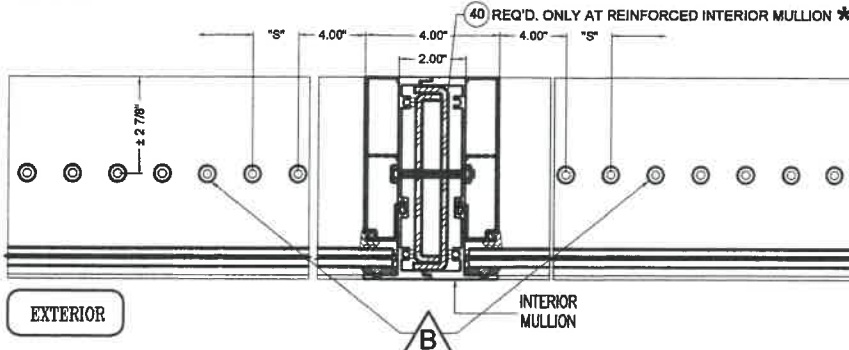
MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED)																												
		POURED CONCRETE SUBSTRATE												WOOD (2" 2" x THK. SUBSTRATE												STEEL 1/4" Min. THK.				
		FASTENERS TYPE A (1/4")					FASTENERS TYPE B (3/8")					FASTENERS TYPE C (1/4")					FASTENERS TYPE D (3/8")					FASTENERS TYPE E (3/8")								
"L" (Ft-in)	"b" (Ft-in)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12				
11' - 6"	3' - 6"	40.8	61.2	81.7	102.1	122.5	120.8	140.0	140.0	140.0	140.0	40.8	61.2	81.7	102.1	122.5	43.7	65.6	87.5	109.3	131.2	137.6	140.0	140.0	140.0	140.0				
	4' - 0"	35.7	53.6	71.5	89.3	107.2	105.7	140.0	140.0	140.0	140.0	35.7	53.6	71.5	89.3	107.2	38.3	57.4	76.5	95.7	114.8	120.4	140.0	140.0	140.0	140.0				
	4' - 6"	31.8	47.6	63.5	79.4	95.3	94.0	140.0	140.0	140.0	140.0	31.8	47.6	63.5	79.4	95.3	34.0	51.0	68.0	85.0	102.1	107.0	140.0	140.0	140.0	140.0				
	5' - 0"	28.6	42.9	57.2	71.5	85.7	84.6	126.9	140.0	140.0	140.0	28.6	42.9	57.2	71.5	85.7	30.6	45.9	61.2	76.5	91.8	96.3	140.0	140.0	140.0	140.0				
	5' - 6"	26.0	39.0	52.0	65.0	78.0	76.9	115.3	140.0	140.0	140.0	26.0	39.0	52.0	65.0	78.0	27.8	41.7	55.7	69.6	83.5	87.6	131.4	140.0	140.0	140.0				
	6' - 0"	23.8	35.7	47.6	59.5	71.5	70.5	105.7	140.0	140.0	140.0	23.8	35.7	47.6	59.5	71.5	25.5	38.3	51.0	63.8	76.5	80.3	120.4	140.0	140.0	140.0				
	6' - 6"	22.0	33.0	44.0	55.0	66.0	65.1	97.6	130.1	140.0	140.0	22.0	33.0	44.0	55.0	66.0	23.6	35.3	47.1	58.9	70.7	74.1	111.2	140.0	140.0	140.0				
12' - 0"	3' - 6"	38.1	58.7	78.3	97.8	117.4	115.8	140.0	140.0	140.0	140.0	39.1	58.7	78.3	97.8	117.4	41.9	62.9	83.8	104.8	125.7	131.9	140.0	140.0	140.0	140.0				
	4' - 0"	34.2	51.4	68.5	85.6	102.7	101.3	140.0	140.0	140.0	140.0	34.2	51.4	68.5	85.6	102.7	36.7	55.0	73.3	91.7	110.0	115.4	140.0	140.0	140.0	140.0				
	4' - 6"	30.4	45.7	60.9	76.1	91.3	90.1	135.1	140.0	140.0	140.0	30.4	45.7	60.9	76.1	91.3	32.6	48.9	65.2	81.5	97.8	102.6	140.0	140.0	140.0	140.0				
	5' - 0"	27.4	41.1	54.8	68.5	82.2	81.1	121.6	140.0	140.0	140.0	27.4	41.1	54.8	68.5	82.2	29.3	44.0	58.7	73.3	88.0	92.3	138.5	140.0	140.0	140.0				
	5' - 6"	24.9	37.4	49.8	62.3	74.7	73.7	110.5	140.0	140.0	140.0	24.9	37.4	49.8	62.3	74.7	26.7	40.0	53.3	66.7	80.0	83.9	125.9	140.0	140.0	140.0				
	6' - 0"	22.8	34.2	45.7	57.1	68.5	67.5	101.3	135.1	140.0	140.0	22.8	34.2	45.7	57.1	68.5	24.4	36.7	48.9	61.1	73.3	76.9	115.4	140.0	140.0	140.0				
	6' - 6"	21.1	31.6	42.1	52.7	63.2	62.4	93.5	124.7	140.0	140.0	21.1	31.6	42.1	52.7	63.2	22.6	33.9	45.1	56.4	67.7	71.0	106.5	140.0	140.0	140.0				
12' - 6"	3' - 6"	37.6	56.3	75.1	93.9	112.7	111.2	140.0	140.0	140.0	140.0	37.6	56.3	75.1	93.9	112.7	40.2	60.4	80.5	100.6	120.7	126.6	140.0	140.0	140.0	140.0				
	4' - 0"	32.9	49.3	65.7	82.2	98.6	97.3	140.0	140.0	140.0	140.0	32.9	49.3	65.7	82.2	98.6	35.2	52.8	70.4	88.0	105.6	110.8	140.0	140.0	140.0	140.0				
	4' - 6"	29.2	43.8	58.4	73.0	87.7	86.5	129.7	140.0	140.0	140.0	29.2	43.8	58.4	73.0	87.7	31.3	46.9	62.6	78.2	93.9	98.5	140.0	140.0	140.0	140.0				
	5' - 0"	26.3	39.4	52.6	65.7	78.9	77.8	116.7	140.0	140.0	140.0	26.3	39.4	52.6	65.7	78.9	28.2	42.2	56.3	70.4	84.5	88.6	132.9	140.0	140.0	140.0				
	5' - 6"	23.9	35.9	47.8	59.8	71.7	70.7	106.1	140.0	140.0	140.0	23.9	35.9	47.8	59.8	71.7	25.6	38.4	51.2	64.0	76.8	80.6	120.9	140.0	140.0	140.0				
	6' - 0"	21.9	32.9	43.8	54.8	65.7	64.8	97.3	129.7	140.0	140.0	21.9	32.9	43.8	54.8	65.7	23.5	35.2	46.9	58.7	70.4	73.9	110.8	140.0	140.0	140.0				
	6' - 6"	20.2	30.3	40.5	50.6	60.7	59.9	89.8	119.7	140.0	140.0	20.2	30.3	40.5	50.6	60.7	21.7	32.5	43.3	54.2	65.0	68.2	102.3	136.4	140.0	140.0				
13' - 0"	3' - 6"	36.1	54.2	72.2	90.3	108.4	106.9	140.0	140.0	140.0	140.0	36.1	54.2	72.2	90.3	108.4	38.7	58.0	77.4	96.7	116.1	121.7	140.0	140.0	140.0	140.0				
	4' - 0"	31.6	47.4	63.2	79.0	94.8	93.5	140.0	140.0	140.0	140.0	31.6	47.4	63.2	79.0	94.8	33.9	50.8	67.7	84.6	101.6	106.5	140.0	140.0	140.0	140.0				
	4' - 6"	28.1	42.1	56.2	70.2	84.3	83.1	124.7	140.0	140.0	140.0	28.1	42.1	56.2	70.2	84.3	30.1	45.1	60.2	75.2	90.3	94.7	140.0	140.0	140.0	140.0				
	5' - 0"	25.3	37.9	50.6	63.2	75.9	74.8	112.2	140.0	140.0	140.0	25.3	37.9	50.6	63.2	75.9	27.1	40.6	54.2	67.7	81.2	85.2	127.8	140.0	140.0	140.0				
	5' - 6"	23.0	34.5	46.0	57.5	69.0	68.0	102.0	136.0	140.0	140.0	23.0	34.5	46.0	57.5	69.0	24.6	36.9	49.2	61.6	73.9	77.5	116.2	140.0	140.0	140.0				
	6' - 0"	21.1	31.6	42.1	52.7	63.2	62.4	93.5	124.7	140.0	140.0	21.1	31.6	42.1	52.7	63.2	22.6	33.9	45.1	56.4	67.7	71.0	106.5	140.0	140.0	140.0				
	6' - 6"	18.7	28.1	37.5	46.8	56.2	55.4	83.1	110.8	138.6	140.0	18.7	28.1	37.5	46.8	56.2	20.1	30.1	40.1	50.2	60.2	63.1	94.7	126.3	140.0	140.0				
13' - 6"	3' - 6"	34.8	52.2	69.6	87.0	104.4	102.9	140.0	140.0	140.0	140.0	34.8	52.2	69.6	87.0	104.4	37.3	55.9	74.5	93.1	111.8	117.2	140.0	140.0	140.0	140.0				
	4' - 0"	30.4	45.7	60.9	76.1	91.3	90.1	135.1	140.0	140.0	140.0	30.4	45.7	60.9	76.1	91.3	32.6	48.9	65.2	81.5	97.8	102.6	140.0	140.0	140.0	140.0				
	4' - 6"	27.1	40.6	54.1	67.6	81.2	80.1	120.1	140.0	140.0	140.0	27.1	40.6	54.1	67.6	81.2	29.0	43.5	58.0	72.4	86.9	91.2	136.8	140.0	140.0	140.0				
	5' - 0"	24.3	36.5	48.7	60.9	73.0	72.1	108.1	140.0	140.0	140.0	24.3	36.5	48.7	60.9	73.0	26.1	39.1	52.2	65.2	78.2	82.1	123.1	140.0	140.0	140.0				
	5' - 6"	22.1	33.2	44.3	55.3	66.4	65.5	98.3	131.0	140.0	140.0	22.1	33.2	44.3	55.3	66.4	23.7	35.6	47.4	59.3	71.1	74.6	111.9	140.0	140.0	140.0				
	6' - 0"	18.9	28.3	37.8	47.2	56.7	55.9	83.9	111.8	139.8	140.0	18.9	28.3	37.8	47.2	56.7	20.2	30.4	40.5	50.6	60.7	63.7	95.5	127.3	140.0	140.0				
	6' - 6"	17.4	26.2	34.9	43.6	52.3	51.6	77.4	103.2	129.0	140.0	17.4	26.2	34.9	43.6	52.3	18.7	28.0	37.4	46.7	56.0	58.8	88.2	117.6	140.0	140.0				
14' - 6"	3' - 6"	32.4	48.6	64.8	81.0	97.2	95.8	140.0	140.0	140.0	140.0	32.4	48.6	64.8	81.0	97.2	34.7	52.0	69.4	86.7	104.1	109.2	140.0	140.0	140.0	140.0				
	4' - 0"	28.3	42.5	56.7	70.8	85.0	83.9	125.8	140.0	140.0	140.0	28.3	42.5	56.7	70.8	85.0	30.4	45.5	60.7	75.9	91.1	95.5	140.0	140.0	140.0	140.0				
	4' - 6"	25.2	37.8	50.4	63.0	75.6	74.5	111.8	140.0	140.0	140.0	25.2	37.8	50.4	63.0	75.6	27.0	40.5	54.0	67.4	80.9	84.9	127.3	140.0	140.0	140.0				
	5' - 0"	22.7	34.0	45.3	56.7	68.0	67.1	100.6	134.2	140.0	140.0	22.7	34.0	45.3	56.7	68.0	24.3	36.4	48.6	60.7	72.8	76.4	114.6	140.0	140.0	140.0				
	5' - 6"	19.9	29.9	39.8	49.8	59.8	59.0	88.4	117.9	140.0	140.0	19.9	29.9	39.8	49.8	59.8	21.3	32.0	42.7	53.3	64.0	67.1	100.7	134.3	140.0	140.0				
	6' - 0"	18.3	27.4	36.5	45.7	54.8	54.0	81.1	108.1	135.1	140.0	18.3	27.4	36.5	45.7	54.8	19.6	29.3	39.1	48.9	58.7	61.6	92.3	123.1	140.0	140.0				
	6' - 6"	16.9	25.3	33.7	42.1	50.6	49.9	74.8	99.8	124.7	140.0	16.9	25.3	33.7	42.1	50.6	18.1	2												

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

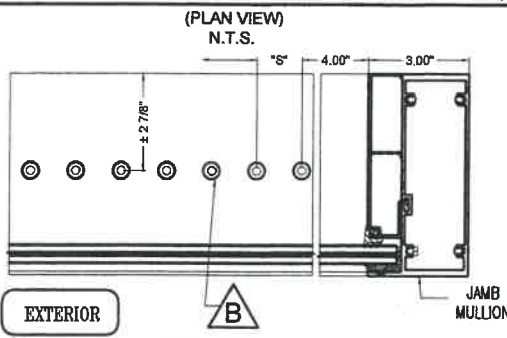
- A - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HMB THRU BOLT W/ NUT & LOCK WASHER.

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED)																								
		POURED CONCRETE SUBSTRATE												WOOD (2) 2" x THK. SUBSTRATE												
		FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					FASTENERS TYPE					STEEL 1/4" Min. THK.				
		A (1/4"ø)					B (3/8"ø)					C (1/4"ø)					D (3/8"ø)					E (3/8"ø)				
"L" (Ft-in)	"b" (Ft-in)	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12
15' - 0"	3' - 6"	31.3	47.0	62.6	78.3	93.9	92.6	139.0	140.0	140.0	140.0	31.3	47.0	62.6	78.3	93.9	33.5	50.3	67.1	83.8	100.6	105.5	140.0	140.0	140.0	140.0
	4' - 0"	27.4	41.1	54.8	68.5	82.2	81.1	121.6	140.0	140.0	140.0	27.4	41.1	54.8	68.5	82.2	29.3	44.0	58.7	73.3	88.0	92.3	138.5	140.0	140.0	140.0
	4' - 6"	24.3	36.5	48.7	60.9	73.0	72.1	108.1	140.0	140.0	140.0	24.3	36.5	48.7	60.9	73.0	26.1	39.1	52.2	65.2	78.2	82.1	123.1	140.0	140.0	140.0
	5' - 0"	21.2	31.8	42.4	53.0	63.6	62.8	94.1	125.5	140.0	140.0	21.2	31.8	42.4	53.0	63.6	22.7	34.1	45.4	56.8	68.1	71.5	107.2	140.0	140.0	140.0
	5' - 6"	19.3	28.9	38.6	48.2	57.8	57.0	85.6	114.1	140.0	140.0	19.3	28.9	38.6	48.2	57.8	20.6	31.0	41.3	51.6	61.9	65.0	97.5	130.0	140.0	140.0
	6' - 0"	17.7	26.5	35.3	44.2	53.0	52.3	78.4	104.6	130.7	140.0	17.7	26.5	35.3	44.2	53.0	18.9	28.4	37.9	47.3	56.8	59.6	89.3	119.1	140.0	140.0
	6' - 6"	16.3	24.5	32.6	40.8	48.9	48.3	72.4	96.5	120.7	140.0	16.3	24.5	32.6	40.8	48.9	17.5	26.2	34.9	43.7	52.4	55.0	82.5	110.0	137.5	140.0
	7' - 0"	15.1	22.7	30.3	37.9	45.4	44.8	67.2	89.6	112.1	134.5	15.1	22.7	30.3	37.9	45.4	16.2	24.3	32.4	40.6	48.7	51.1	76.6	102.1	127.6	140.0
15' - 6"	3' - 6"	30.3	45.4	60.6	75.7	90.9	89.6	134.5	140.0	140.0	140.0	30.3	45.4	60.6	75.7	90.9	32.4	48.7	64.9	81.1	97.3	102.1	140.0	140.0	140.0	140.0
	4' - 0"	26.5	39.8	53.0	66.3	79.5	78.4	117.7	140.0	140.0	140.0	26.5	39.8	53.0	66.3	79.5	28.4	42.6	56.8	71.0	85.2	89.3	134.0	140.0	140.0	140.0
	4' - 6"	23.2	34.8	46.4	58.0	69.6	68.6	102.9	137.2	140.0	140.0	23.2	34.8	46.4	58.0	69.6	24.8	37.3	49.7	62.1	74.5	78.2	117.2	140.0	140.0	140.0
	5' - 0"	20.9	31.3	41.7	52.2	62.6	61.8	92.6	123.5	140.0	140.0	20.9	31.3	41.7	52.2	62.6	22.4	33.5	44.7	55.9	67.1	70.3	105.5	140.0	140.0	140.0
	5' - 6"	19.0	28.5	37.9	47.4	56.9	56.1	84.2	112.3	140.0	140.0	19.0	28.5	37.9	47.4	56.9	20.3	30.5	40.6	50.8	61.0	63.9	95.9	127.9	140.0	140.0
	6' - 0"	17.4	26.1	34.8	43.5	52.2	51.5	77.2	102.9	128.7	140.0	17.4	26.1	34.8	43.5	52.2	18.6	27.9	37.3	46.6	55.9	58.6	87.9	117.2	140.0	140.0
	6' - 6"	16.1	24.1	32.1	40.1	48.2	47.5	71.3	95.0	118.8	140.0	16.1	24.1	32.1	40.1	48.2	17.2	25.8	34.4	43.0	51.6	54.1	81.2	108.2	135.3	140.0
	7' - 0"	14.9	22.4	29.8	37.3	44.7	44.1	66.2	88.2	110.3	132.3	14.9	22.4	29.8	37.3	44.7	16.0	24.0	31.9	39.9	47.9	50.2	75.4	100.5	125.6	140.0
15' - 9"	3' - 6"	29.8	44.7	59.6	74.5	89.4	88.2	132.3	140.0	140.0	140.0	29.8	44.7	59.6	74.5	89.4	31.9	47.9	63.9	79.8	95.8	100.5	140.0	140.0	140.0	140.0
	4' - 0"	26.1	39.1	52.2	65.2	78.3	77.2	115.8	140.0	140.0	140.0	26.1	39.1	52.2	65.2	78.3	27.9	41.9	55.9	69.9	83.8	87.9	131.9	140.0	140.0	140.0
	4' - 6"	23.2	34.8	46.4	58.0	69.6	68.6	102.9	137.2	140.0	140.0	23.2	34.8	46.4	58.0	69.6	24.8	37.3	49.7	62.1	74.5	78.2	117.2	140.0	140.0	140.0
	5' - 0"	20.9	31.3	41.7	52.2	62.6	61.8	92.6	123.5	140.0	140.0	20.9	31.3	41.7	52.2	62.6	22.4	33.5	44.7	55.9	67.1	70.3	105.5	140.0	140.0	140.0
	5' - 6"	19.0	28.5	37.9	47.4	56.9	56.1	84.2	112.3	140.0	140.0	19.0	28.5	37.9	47.4	56.9	20.3	30.5	40.6	50.8	61.0	63.9	95.9	127.9	140.0	140.0
	6' - 0"	17.4	26.1	34.8	43.5	52.2	51.5	77.2	102.9	128.7	140.0	17.4	26.1	34.8	43.5	52.2	18.6	27.9	37.3	46.6	55.9	58.6	87.9	117.2	140.0	140.0
	6' - 6"	16.1	24.1	32.1	40.1	48.2	47.5	71.3	95.0	118.8	140.0	16.1	24.1	32.1	40.1	48.2	17.2	25.8	34.4	43.0	51.6	54.1	81.2	108.2	135.3	140.0
	7' - 0"	14.9	22.4	29.8	37.3	44.7	44.1	66.2	88.2	110.3	132.3	14.9	22.4	29.8	37.3	44.7	16.0	24.0	31.9	39.9	47.9	50.2	75.4	100.5	125.6	140.0



*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR MULLION



SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

WALTER A. TILLIT, JR.
LICENSE
No. 44 67
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

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WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS				M.P. DRAWN BY	
290 WEST 78 ROAD HIALEAH, FL. 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com				8/26/2021 DATE	
GENERAL IMPACT GLASS & WINDOWS				21-118 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 20-271	8/26/21	3	-	-
2	-	-	4	-	-

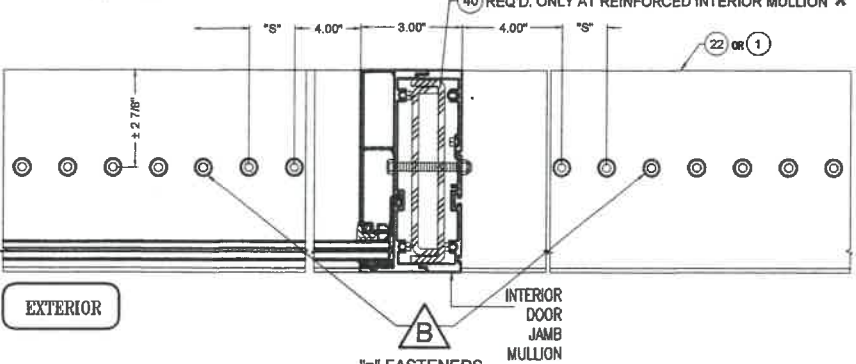
SHEET 39 OF 51

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED
INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS:
OPTIONAL SYSTEM # 2

MAXIMUM MULLION SPAN	EFFECTIVE SPACING	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE																			
		POURED CONCRETE SUBSTRATE										WOOD (2) 1 1/2" MIN. THK. SUBSTRATE									
		FASTENERS TYPE A (1/4"Ø)					FASTENERS TYPE B (3/8"Ø)					FASTENERS TYPE C (1/4"Ø)					FASTENERS TYPE D (3/8"Ø)				
		n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12
8'-0"	5'-2"	51.4	77.1	102.8	128.6	140.0	133.3	140.0	140.0	140.0	140.0	42.7	64.0	102.8	106.6	128.0	40.0	60.0	80.0	100.0	120.0
	5'-8"	47.1	70.7	94.3	117.8	140.0	122.2	140.0	140.0	140.0	140.0	39.1	58.7	94.3	97.8	117.3	36.7	55.0	73.3	91.7	110.0
8'-6"	5'-2"	48.4	72.8	96.8	121.0	140.0	125.4	140.0	140.0	140.0	140.0	40.1	60.2	96.8	100.4	120.4	37.7	58.5	75.3	94.1	113.0
	5'-8"	44.4	66.5	88.7	110.9	133.1	115.0	140.0	140.0	140.0	140.0	36.8	55.2	88.7	92.0	110.4	34.5	51.8	69.0	86.3	103.6
9'-0"	5'-2"	45.7	68.6	91.4	104.3	137.1	118.5	140.0	140.0	140.0	140.0	37.9	56.9	91.4	94.8	113.7	35.6	53.3	71.1	88.9	106.7
	5'-8"	41.9	62.9	83.8	104.8	125.7	108.8	140.0	140.0	140.0	140.0	34.8	52.1	83.8	86.9	104.3	32.6	48.9	65.2	81.5	97.8
9'-6"	5'-2"	43.3	65.0	86.6	108.3	129.9	112.2	140.0	140.0	140.0	140.0	36.9	53.9	86.6	89.8	107.8	33.7	50.5	67.4	84.2	101.1
	5'-8"	39.7	59.5	79.4	99.2	119.1	102.9	140.0	140.0	140.0	140.0	32.9	49.4	79.4	82.3	98.8	30.9	46.3	61.8	77.2	92.7
10'-0"	5'-2"	41.1	61.7	82.3	102.8	123.4	106.6	140.0	140.0	140.0	140.0	34.1	51.2	82.3	85.3	102.4	32.0	48.0	64.0	80.0	96.0
	5'-8"	37.7	56.6	75.4	94.3	113.1	97.7	140.0	140.0	140.0	140.0	31.3	46.9	75.4	78.2	93.8	29.3	44.0	58.7	73.3	88.0
10'-6"	5'-2"	43.1	64.6	86.2	107.7	129.3	111.7	140.0	140.0	140.0	140.0	35.7	53.6	86.2	89.4	107.2	33.5	50.3	67.1	83.8	100.6
	5'-8"	39.2	58.8	78.4	97.9	117.5	101.5	140.0	140.0	140.0	140.0	32.5	48.7	78.4	81.2	97.5	30.5	45.7	61.0	76.2	91.4
11'-0"	5'-2"	41.1	61.7	82.3	102.8	123.4	106.6	140.0	140.0	140.0	140.0	34.1	51.2	82.3	85.3	102.4	32.0	48.0	64.0	80.0	96.0
	5'-8"	37.4	56.1	74.8	93.5	112.2	96.9	140.0	140.0	140.0	140.0	31.0	46.5	74.8	77.6	93.1	29.1	43.8	58.2	72.7	87.3
11'-6"	5'-2"	35.8	53.7	71.5	89.4	107.3	92.7	139.1	140.0	140.0	140.0	29.7	44.5	71.5	74.2	89.0	27.8	41.7	55.7	69.6	83.5
	5'-8"	32.8	49.2	65.6	82.0	98.4	85.0	127.5	140.0	140.0	140.0	27.2	40.8	65.6	68.0	91.6	25.5	38.3	51.0	63.8	76.5
12'-0"	5'-2"	34.3	51.4	68.6	85.7	102.8	88.9	133.3	140.0	140.0	140.0	28.4	42.7	68.6	71.1	85.3	26.7	40.0	53.3	66.7	80.0
	5'-8"	31.4	47.1	62.9	78.6	84.3	81.4	122.2	140.0	140.0	140.0	26.1	39.1	62.9	65.2	78.2	24.4	36.7	48.9	61.1	73.3
12'-6"	5'-2"	32.9	49.4	65.8	82.3	98.7	85.3	127.9	140.0	140.0	140.0	27.3	40.9	65.8	68.2	81.9	25.6	38.4	51.2	64.0	76.8
	5'-8"	30.2	45.3	60.3	75.4	90.5	78.2	117.3	140.0	140.0	140.0	25.0	37.5	60.3	62.6	75.1	23.5	35.2	46.9	58.7	70.4
13'-0"	5'-2"	31.6	47.5	63.3	79.1	94.9	82.0	123.0	140.0	140.0	140.0	26.2	39.4	63.3	65.6	78.7	24.6	36.9	49.2	61.6	73.9
	5'-8"	29.0	43.5	58.0	72.5	87.0	75.2	112.8	140.0	140.0	140.0	24.1	36.1	58.0	60.2	72.2	22.6	33.9	45.1	56.4	67.7
13'-6"	5'-2"	30.5	45.7	60.9	76.2	91.4	79.0	118.5	140.0	140.0	140.0	25.3	37.9	60.9	63.2	75.8	23.7	35.6	47.4	59.3	71.1
	5'-8"	27.9	41.9	55.9	69.8	83.8	72.4	108.6	140.0	140.0	140.0	23.2	34.8	55.9	57.9	69.5	21.7	32.5	43.5	54.3	65.2

FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

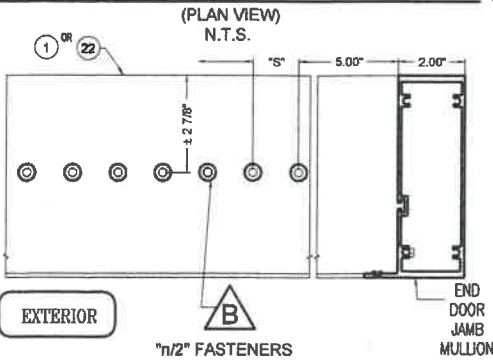
- A - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL OR 1/4" 6063-T6 ALUMINUM (ALLOWED ONLY AT JAMBS) PER SHEET 21 W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HMB THRU BOLT W/ NUT & LOCK WASHER.



n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR DOOR JAMB MULLION

*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM 1 & 2)



n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF END DOOR JAMB MULLION

SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

WALTER A. TILLIT JR.
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

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TILTECO INC.

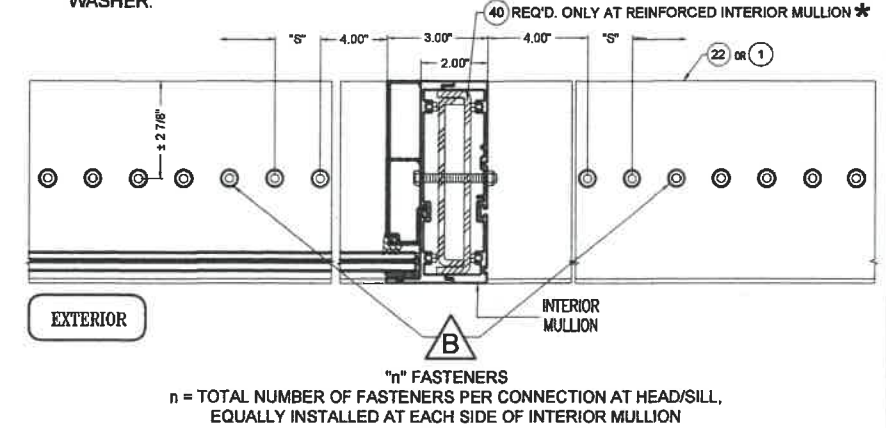
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
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CA-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS			M.P. DRAWN BY		
290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com			8/26/2021 DATE		
21-118 DRAWING No			SHEET 40 OF 51		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 20-271	8/26/21	3	-	-
2	-	-	4	-	-

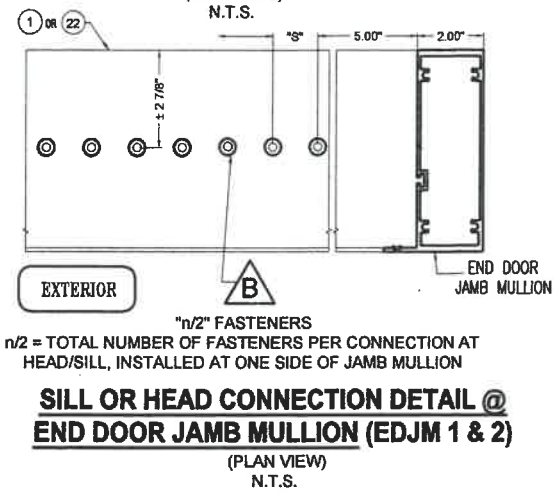
MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS:
OPTIONAL SYSTEM # 2

Table with columns: MAXIMUM MULLION SPAN, EFFECTIVE SPACING, MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE, POURED CONCRETE SUBSTRATE, WOOD (2) 1 1/2" MIN. THK. SUBSTRATE, STEEL 1/4" MIN. THK. SUBSTRATE. Rows include spans from 14'-0" to 15'-9" and spacings from 5'-2" to 5'-8".

- FASTENERS TYPES & SUBSTRATES REQUIREMENTS:
A - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE
B - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE
C - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS
D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS
E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL OR 1/4" 6063-T6 ALUMINUM



SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR MULLION (IDJM 1 & 2)
(PPLAN VIEW)
N.T.S.



SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)
(PPLAN VIEW)
N.T.S.

Professional Engineer Seal for Walter A. Tillit Jr., State of Florida, License No. 44167.

P.E. SEAL/SIGNATURE/DATE

TILTECO INC. logo and contact information: 6355 N.W. 36th St., Ste. 305, Virginia Gardens, FL 33166. Phone: (305) 871-1530. Fax: (305) 871-1531. Email: tiltco@aol.com. CA-0006719. Walter A. Tillit Jr., P.E. Florida Lic. # 44167.

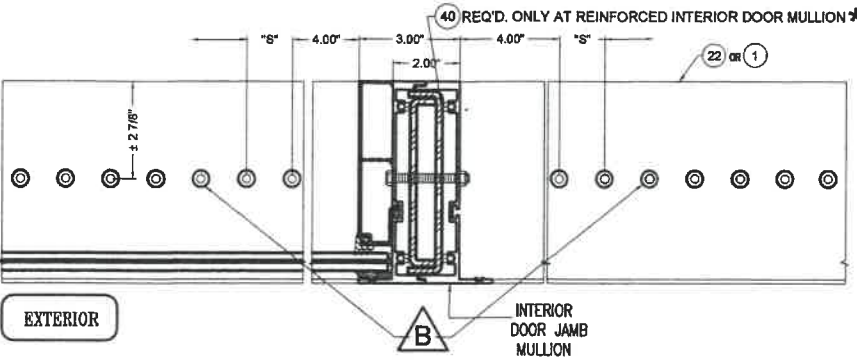
FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)
HIGH IMPACT GREEN WORLD FIXED GLASS WALL
SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS
GENERAL logo and address: 290 WEST 78 ROAD HIALEAH, FL. 33014. Phone: (305) 558-8103. Fax: (305) 558-6665. www.generalimpact.com.
Drawing No: 21-118. SHEET 41 OF 51.

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED
INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS:
OPTIONAL SYSTEM # 2

MAXIMUM MULLION SPAN "L"(Ft-In)	EFFECTIVE SPACING "b"(Ft-In)	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. SHIM SPACE																								
		POURED CONCRETE SUBSTRATE										WOOD (2) 1 1/2" MIN. THK. SUBSTRATE										STEEL 1/4" MIN. THK. SUBSTRATE				
		FASTENERS TYPE A (1/4"Ø)					FASTENERS TYPE B (3/8"Ø)					FASTENERS TYPE C (1/4"Ø)					FASTENERS TYPE D (3/8"Ø)					FASTENERS TYPE E (3/8"Ø)				
		n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12
8'-0" OR LESS	5'-2"	37.4	56.0	74.7	93.4	112.1	110.5	140.0	140.0	140.0	140.0	37.4	64.0	102.8	106.6	128.0	40.0	60.0	80.0	100.0	120.0	25.9	140.0	140.0	140.0	140.0
	5'-8"	34.2	51.4	68.5	85.6	102.7	101.3	140.0	140.0	140.0	140.0	34.2	58.7	94.3	97.8	117.3	36.7	55.0	73.3	91.7	110.0	15.4	140.0	140.0	140.0	140.0
8'-6"	5'-2"	35.2	52.7	70.3	87.9	105.5	104.0	140.0	140.0	140.0	140.0	35.2	52.7	70.3	87.9	105.5	37.7	56.5	75.3	94.1	113.0	18.5	140.0	140.0	140.0	140.0
	5'-8"	32.2	48.3	64.5	80.6	96.7	95.4	140.0	140.0	140.0	140.0	32.2	48.3	64.5	80.6	96.7	34.5	51.8	69.0	86.3	103.6	108.6	140.0	140.0	140.0	140.0
9'-0"	5'-2"	33.2	49.8	66.4	83.0	99.6	98.3	140.0	140.0	140.0	140.0	33.2	49.8	66.4	83.0	99.6	35.6	53.3	71.1	88.9	106.7	111.9	140.0	140.0	140.0	140.0
	5'-8"	30.4	45.7	60.9	76.1	91.3	90.1	135.1	140.0	140.0	140.0	30.4	45.7	60.9	76.1	91.3	32.6	48.9	65.2	81.5	97.8	102.6	140.0	140.0	140.0	140.0
9'-6"	5'-2"	31.5	47.2	62.9	78.6	94.4	93.1	139.6	140.0	140.0	140.0	31.5	47.2	62.9	78.6	94.4	33.7	50.5	67.4	84.2	101.1	139.5	140.0	140.0	140.0	140.0
	5'-8"	28.8	43.3	57.7	72.1	86.5	85.3	128.0	140.0	140.0	140.0	28.8	43.3	57.7	72.1	86.5	30.9	46.3	61.8	77.2	92.7	127.9	140.0	140.0	140.0	140.0
10'-0"	5'-2"	29.9	44.8	59.8	74.7	89.6	88.4	132.6	140.0	140.0	140.0	29.9	44.8	59.8	74.7	89.6	32.0	48.0	64.0	80.0	96.0	132.5	140.0	140.0	140.0	140.0
	5'-8"	27.4	41.1	54.8	68.5	82.2	81.1	121.6	140.0	140.0	140.0	27.4	41.1	54.8	68.5	82.2	29.3	44.0	58.7	73.3	88.0	121.9	140.0	140.0	140.0	140.0
10'-6"	5'-2"	28.5	42.7	56.9	71.1	85.4	84.2	126.3	140.0	140.0	140.0	28.5	42.7	56.9	71.1	85.4	30.5	45.7	61.0	76.2	91.4	95.9	140.0	140.0	140.0	140.0
	5'-8"	26.1	39.1	52.2	65.2	78.3	77.2	115.8	140.0	140.0	140.0	26.1	39.1	52.2	65.2	78.3	27.9	41.9	55.9	69.9	83.8	87.9	131.0	140.0	140.0	140.0
11'-0"	5'-2"	27.2	40.7	54.3	67.9	81.5	80.4	120.6	140.0	140.0	140.0	27.2	40.7	54.3	67.9	81.5	29.1	43.6	58.2	72.7	87.3	91.6	137.3	140.0	140.0	140.0
	5'-8"	24.9	37.4	49.8	62.3	74.7	73.7	110.5	140.0	140.0	140.0	24.9	37.4	49.8	62.3	74.7	26.7	40.0	53.3	66.7	80.0	83.9	125.9	140.0	140.0	140.0
11'-6"	5'-2"	26.0	39.0	52.0	65.0	78.0	76.9	115.3	140.0	140.0	140.0	26.0	39.0	52.0	65.0	78.0	27.8	41.7	55.7	69.6	83.5	115.2	140.0	140.0	140.0	140.0
	5'-8"	23.8	35.7	47.6	59.5	71.5	70.5	105.7	140.0	140.0	140.0	23.8	35.7	47.6	59.5	71.5	25.5	38.3	51.0	63.8	76.5	105.6	140.0	140.0	140.0	140.0
12'-0"	5'-2"	24.9	37.4	49.8	62.3	74.7	73.7	110.5	140.0	140.0	140.0	24.9	37.4	49.8	62.3	74.7	26.7	40.0	53.3	66.7	80.0	110.4	140.0	140.0	140.0	140.0
	5'-8"	22.8	34.2	45.7	57.1	68.5	67.5	101.3	135.1	140.0	140.0	22.8	34.2	45.7	57.1	68.5	24.4	36.7	48.9	61.1	73.3	101.2	140.0	140.0	140.0	140.0
12'-6"	5'-2"	23.9	35.9	47.8	59.8	71.7	70.7	106.1	140.0	140.0	140.0	23.9	35.9	47.8	59.8	71.7	25.6	38.4	51.2	64.0	76.8	80.6	120.9	140.0	140.0	140.0
	5'-8"	21.9	32.9	43.8	54.8	65.7	64.8	97.3	129.7	140.0	140.0	21.9	32.9	43.8	54.8	65.7	23.5	35.2	46.9	58.7	70.4	73.9	110.8	140.0	140.0	140.0
13'-0"	5'-2"	23.0	34.5	46.0	57.5	69.0	68.0	102.0	136.0	140.0	140.0	23.0	34.5	46.0	57.5	69.0	24.6	36.9	49.2	61.6	73.9	77.5	116.2	140.0	140.0	140.0
	5'-8"	21.1	31.6	42.1	52.7	63.2	62.4	93.5	124.7	140.0	140.0	21.1	31.6	42.1	52.7	63.2	22.6	33.9	45.1	56.4	67.7	71.0	106.5	140.0	140.0	140.0
13'-6"	5'-2"	22.1	33.2	44.3	55.3	66.4	65.5	98.3	131.0	140.0	140.0	22.1	33.2	44.3	55.3	66.4	23.7	35.6	47.4	59.3	71.1	74.6	111.0	140.0	140.0	140.0
	5'-8"	18.9	28.3	37.8	47.2	56.7	55.9	83.9	111.8	140.0	140.0	18.9	28.3	37.8	47.2	56.7	20.2	30.4	40.5	50.6	60.7	63.7	95.5	127.3	140.0	140.0

FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

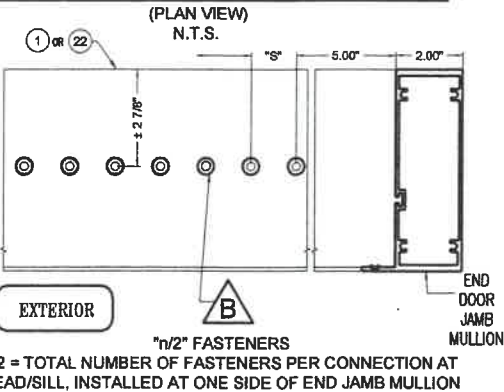
- A - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. $f_c = 2,730$ ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. $f_c = 3.0$ ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.



n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR DOOR JAMB MULLION

*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM 1 & 2)



SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)

(PLAN VIEW)
N.T.S.

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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PROFESSIONAL ENGINEER
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REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

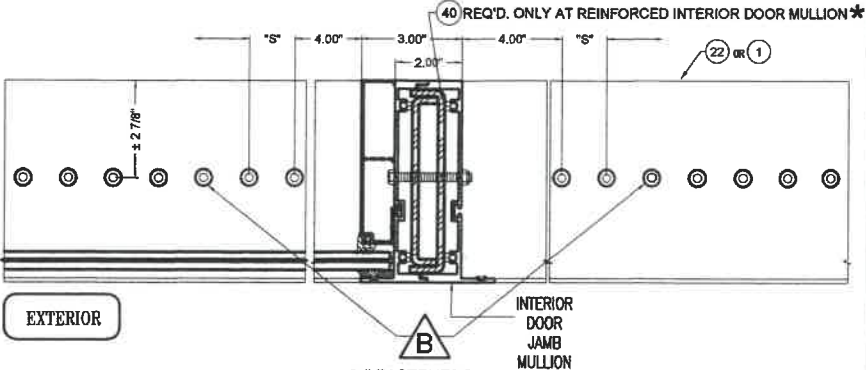
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DATE
21-118
DRAWING No
SHEET 42 OF 51

MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED
INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS:
OPTIONAL SYSTEM # 2

MAXIMUM MULLION SPAN "L"(Ft-in)	EFFECTIVE SPACING "b"(Ft-in)	MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. SHIM SPACE																								
		POURED CONCRETE SUBSTRATE										WOOD (2) 1 1/2" MIN. THK. SUBSTRATE										STEEL 1/4" MIN. THK. SUBSTRATE				
		FASTENERS TYPE A (1/4"Ø)					FASTENERS TYPE B (3/8"Ø)					FASTENERS TYPE C (1/4"Ø)					FASTENERS TYPE D (3/8"Ø)					FASTENERS TYPE E (3/8"Ø)				
		n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12	n=4	n=6	n=8	n=10	n=12
14'-6"	5'-2"	19.9	29.9	39.8	49.8	59.8	59.0	88.4	117.9	140.0	140.0	19.9	29.9	39.8	49.8	59.8	21.3	32.0	42.7	53.3	64.0	67.1	100.7	134.3	140.0	140.0
	5'-8"	18.3	27.4	36.5	45.7	54.8	54.0	81.1	108.1	135.1	140.0	18.3	27.4	36.5	45.7	54.8	19.6	29.3	39.1	48.9	58.7	61.6	92.3	123.1	140.0	140.0
15'-0"	5'-2"	19.3	28.9	38.6	48.2	57.8	57.0	85.6	114.1	140.0	140.0	19.3	28.9	38.6	48.2	57.8	20.6	31.0	41.3	51.6	61.9	65.0	97.5	130.0	140.0	140.0
	5'-8"	17.7	26.5	35.3	44.2	53.0	52.3	78.4	104.6	130.7	140.0	17.7	26.5	35.3	44.2	53.0	18.9	28.4	37.9	47.3	56.8	59.6	89.3	119.1	140.0	140.0
15'-6"	5'-2"	19.0	28.5	37.9	47.4	56.9	56.1	84.2	112.3	140.0	140.0	19.0	28.5	37.9	47.4	56.9	20.3	30.5	40.6	50.8	61.0	63.9	95.9	127.9	140.0	140.0
	5'-8"	17.4	26.1	34.8	43.5	52.2	51.5	77.2	102.9	128.7	140.0	17.4	26.1	34.8	43.5	52.2	18.6	27.9	37.3	46.6	55.9	58.6	87.9	117.2	140.0	140.0
15'-9"	5'-2"	19.0	28.5	37.9	47.4	56.9	56.1	84.2	112.3	140.0	140.0	19.0	28.5	37.9	47.4	56.9	20.3	30.5	40.6	50.8	61.0	63.9	95.9	127.9	140.0	140.0
	5'-8"	17.4	26.1	34.8	43.5	52.2	51.5	77.2	102.9	128.7	140.0	17.4	26.1	34.8	43.5	52.2	18.6	27.9	37.3	46.6	55.9	58.6	87.9	117.2	140.0	140.0

FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

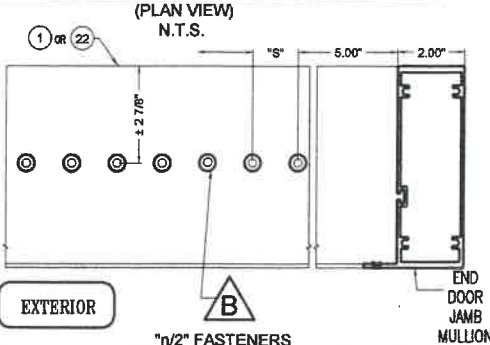
- A** - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B** - 3/8"Ø POWERS FASTENERS, WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C** - 1/4"Ø ELCO CONSTRUCTION PRODUCTS, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D** - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E** - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.



n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR DOOR JAMB MULLION

*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

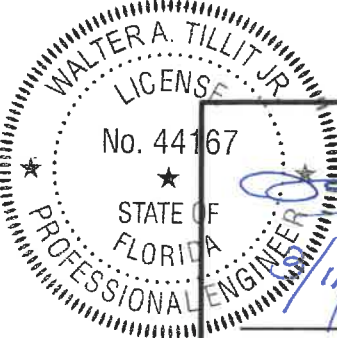
SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM 1 & 2)



n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF END JAMB MULLION

SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)



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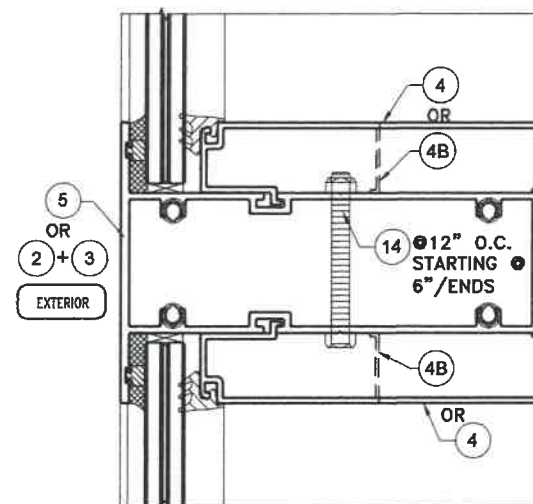
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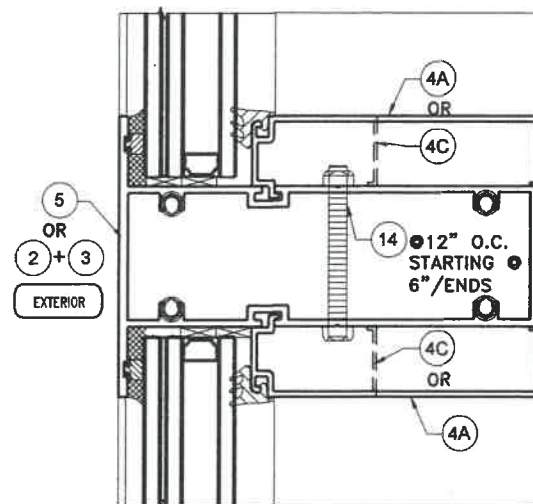
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SHEET 43 OF 51

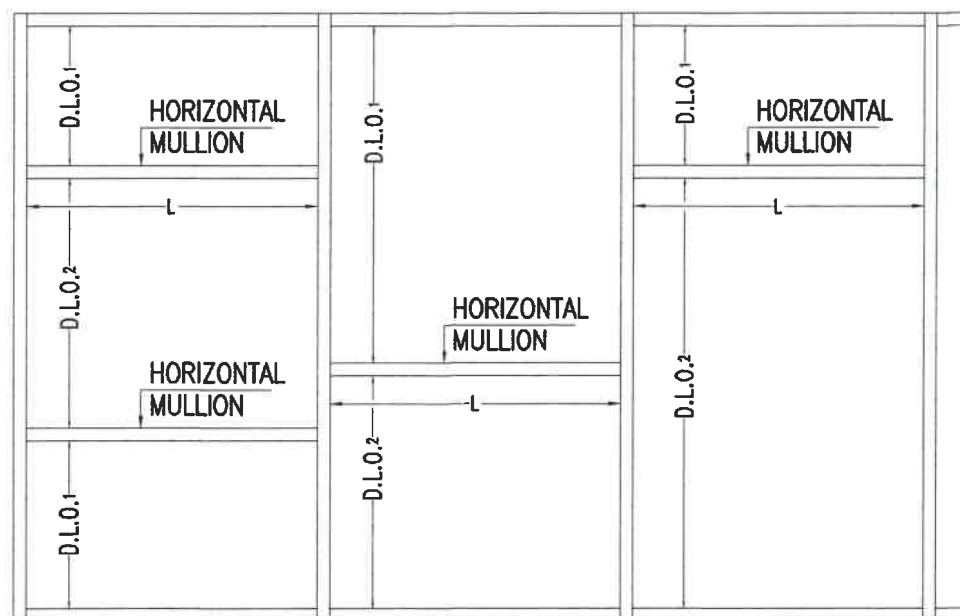


LAMINATED GLASS CASE

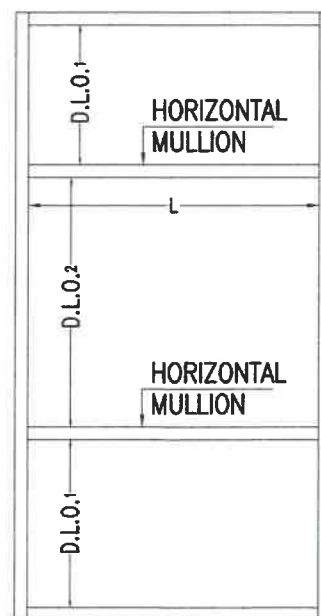


INSULATED GLASS CASE

SECTION AT HORIZONTAL MULLIONS



MULTIPLE PANELS



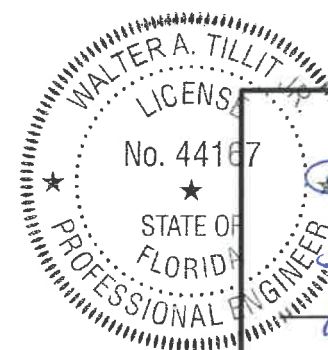
SINGLE PANEL

ELEVATIONS W/ HORIZONTAL MULLIONS

"L" = MAXIMUM HORIZONTAL MULLION SPAN

"D.L.O." = HORIZONTAL MULLION MAX. EFFECTIVE DAY LIGHT OPENING = $\frac{D.L.O.1 + D.L.O.2}{2}$

OPTIONAL SYSTEM # 2



P.E. SEAL/SIGNATURE/DATE

MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf)

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM HORIZONTAL MULLION SPAN LAMINATED/INSULATED GLASS "L" (Ft)
± 40.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	7'-0"
± 45.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	7'-0"
± 50.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	7'-0"
± 55.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	7'-0"

MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM HORIZONTAL MULLION SPAN LAMINATED/INSULATED GLASS "L" (Ft)
± 60.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	7'-0"
± 65.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	7'-0"
± 70.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	7'-0"
± 75.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	7'-0"
	7'-6"	6'-8"

MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM HORIZONTAL MULLION SPAN LAMINATED/INSULATED GLASS "L" (Ft)
± 80.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	7'-0"
	7'-0"	6'-8"
	7'-6"	6'-3"
± 85.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	7'-0"
	6'-6"	6'-10"
	7'-0"	6'-4"
	7'-6"	5'-11"
± 90.0	2'-0"	7'-0"
	2'-6"	7'-0"
	3'-0"	7'-0"
	3'-6"	7'-0"
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	4'-6"	7'-0"
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	6'-0"	6'-11"
	6'-6"	6'-5"
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± 95.0	2'-0"	7'-0"
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	3'-6"	7'-0"
	4'-0"	7'-0"
	4'-6"	7'-0"
	5'-0"	7'-0"
	5'-6"	7'-0"
	6'-0"	6'-7"
	6'-6"	6'-1"
	7'-0"	5'-8"
	7'-6"	5'-3"

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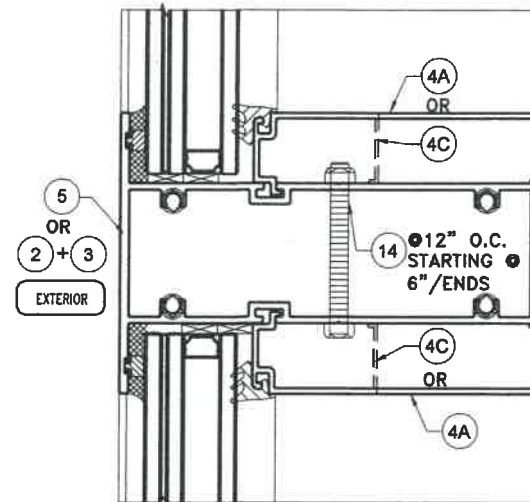
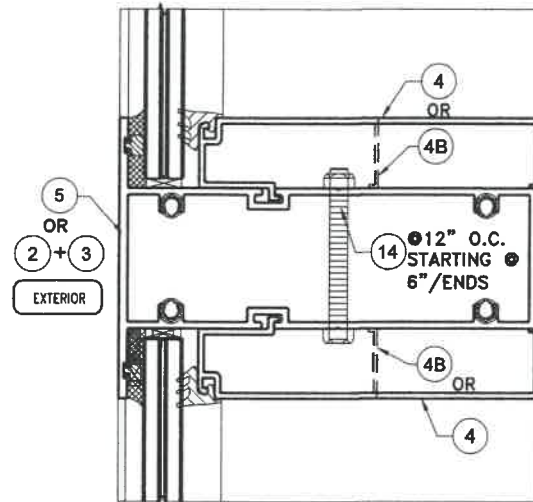
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2	-	-	4	-	-

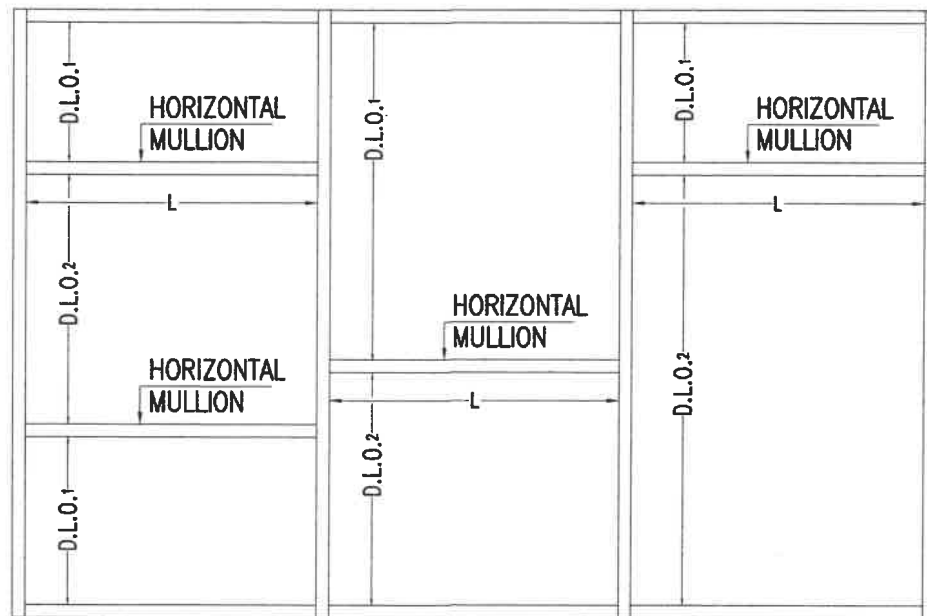
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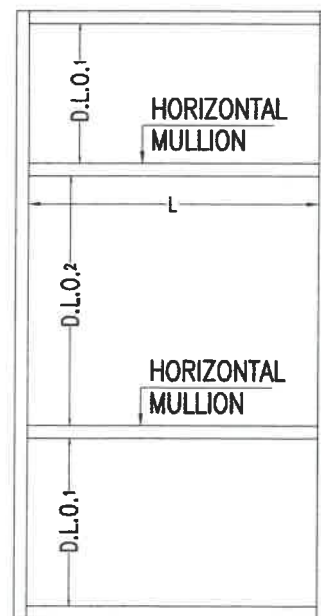
LAMINATED GLASS CASE

INSULATED GLASS CASE

SECTION AT HORIZONTAL MULLIONS



MULTIPLE PANELS



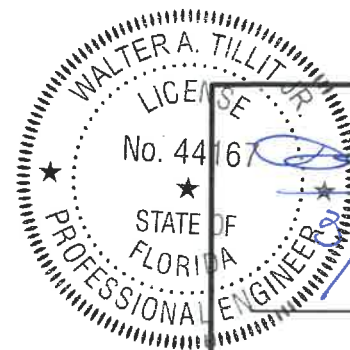
SINGLE PANEL

ELEVATIONS W/ HORIZONTAL MULLIONS

"L" = MAXIMUM HORIZONTAL MULLION SPAN

"D.L.O." = HORIZONTAL MULLION EFFECTIVE DAY LIGHT OPENING = $\frac{D.L.O.1 + D.L.O.2}{2}$

OPTIONAL SYSTEM # 2



P.E. SEAL/SIGNATURE/DATE

MAXIMUM HORIZONTAL SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM HORIZONTAL RAILS SPAN
		LAMINATED/INSULATED GLASS "L" (Ft)
± 100.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	7'- 0"
	4'- 6"	7'- 0"
	5'- 0"	7'- 0"
	6'- 0"	6'- 3"
	6'- 6"	5'- 9"
	7'- 0"	5'- 4"
± 105.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	7'- 0"
	4'- 6"	7'- 0"
	5'- 0"	7'- 0"
	6'- 0"	6'- 0"
	6'- 6"	5'- 6"
	7'- 0"	5'- 1"
± 110.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	7'- 0"
	4'- 6"	7'- 0"
	5'- 0"	6'- 10"
	6'- 0"	5'- 8"
	6'- 6"	5'- 3"
	7'- 0"	4'- 11"
± 115.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	7'- 0"
	4'- 6"	7'- 0"
	5'- 0"	6'- 6"
	6'- 0"	5'- 5"
	6'- 6"	5'- 0"
	7'- 0"	4'- 8"

MAXIMUM HORIZONTAL SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN DESIGN PRESSURE RATING (psf) (CONTINUED)		
(psf)	MAXIMUM EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in)	MAXIMUM HORIZONTAL RAILS SPAN
		LAMINATED/INSULATED GLASS "L" (Ft)
± 120.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	7'- 0"
	4'- 6"	6'- 11"
	5'- 0"	6'- 3"
	6'- 0"	5'- 3"
	6'- 6"	4'- 10"
	7'- 0"	4'- 6"
± 125.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	7'- 0"
	4'- 6"	6'- 8"
	5'- 0"	6'- 0"
	6'- 0"	5'- 0"
	6'- 6"	4'- 7"
	7'- 0"	4'- 4"
± 130.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	7'- 0"
	4'- 6"	6'- 5"
	5'- 0"	5'- 9"
	6'- 0"	4'- 10"
	6'- 6"	4'- 5"
	7'- 0"	4'- 2"
+130.0,- 135.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	6'- 11"
	4'- 6"	6'- 2"
	5'- 0"	5'- 7"
	6'- 0"	4'- 8"
	6'- 6"	4'- 3"
	7'- 0"	4'- 0"
+130.0,- 140.0	2'- 0"	7'- 0"
	2'- 6"	7'- 0"
	3'- 0"	7'- 0"
	3'- 6"	7'- 0"
	4'- 0"	6'- 8"
	4'- 6"	6'- 0"
	5'- 0"	5'- 4"
	6'- 0"	4'- 6"
	6'- 6"	4'- 2"
	7'- 0"	3'- 10"

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FLORIDA Lic. # 44167

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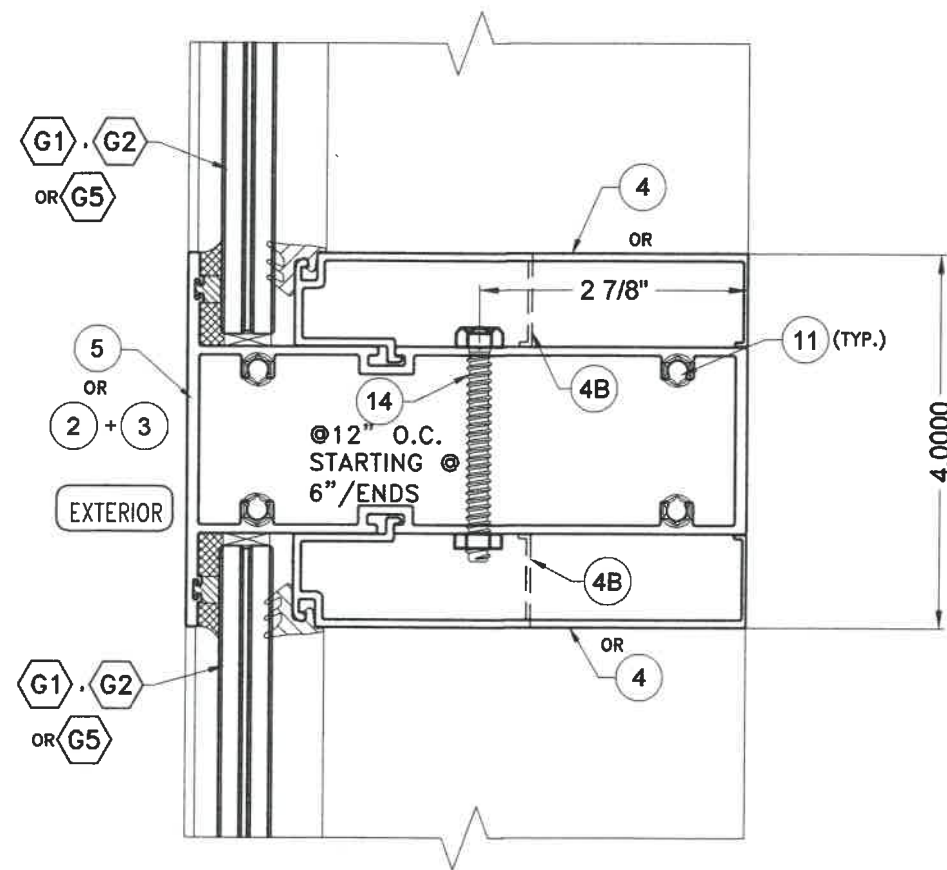
8/26/2021
DATE

21-118
DRAWING No

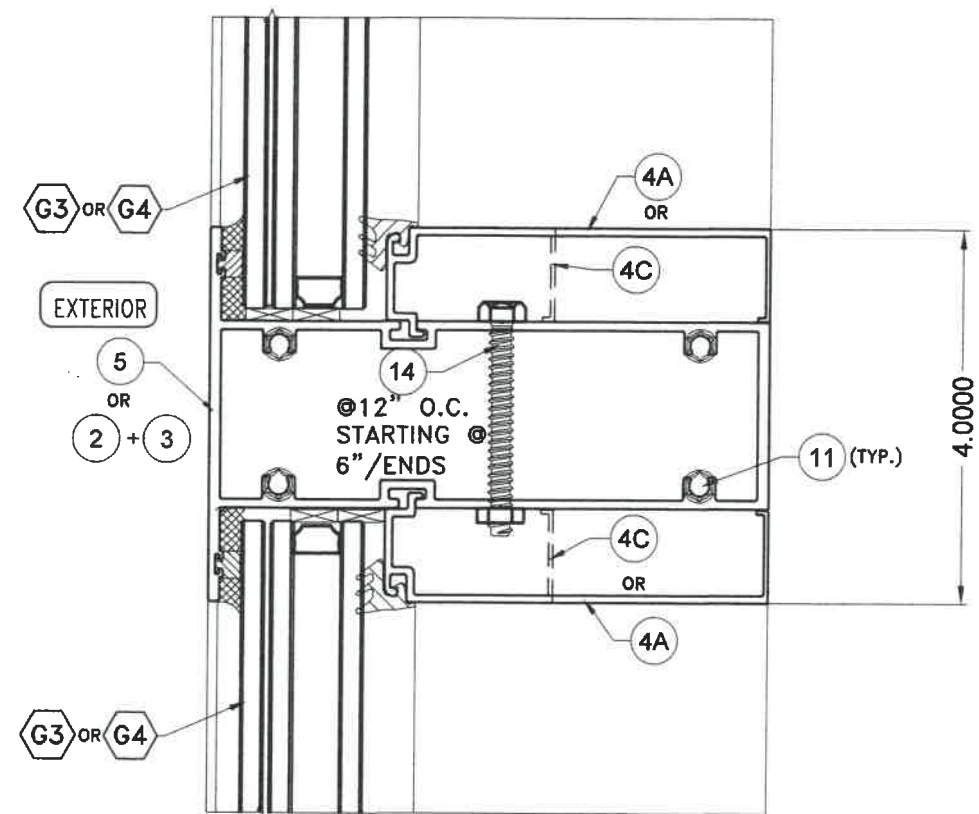
SHEET 44A OF 51

HORIZONTAL MULLION DETAILS

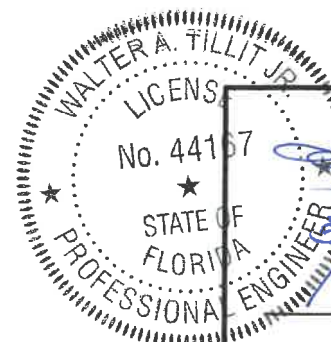
OPTIONAL SYSTEM # 2



7
HORIZONTAL MULLION



7A
HORIZONTAL MULLION



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REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

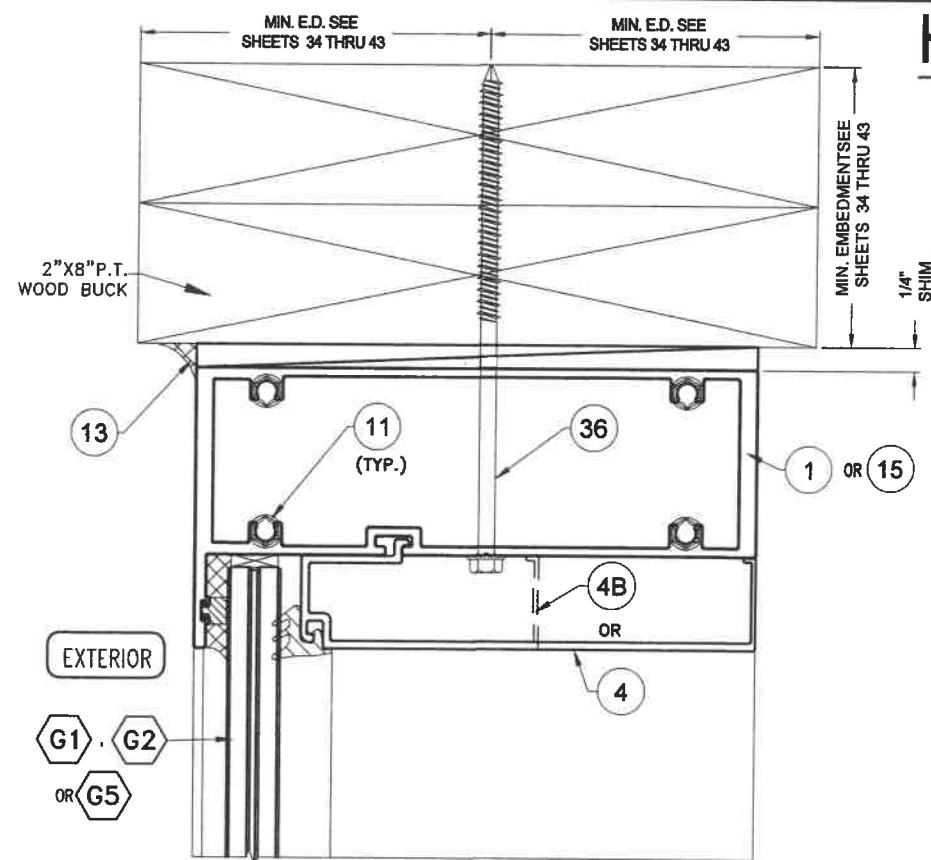
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DRAWN BY

8/26/2021
DATE

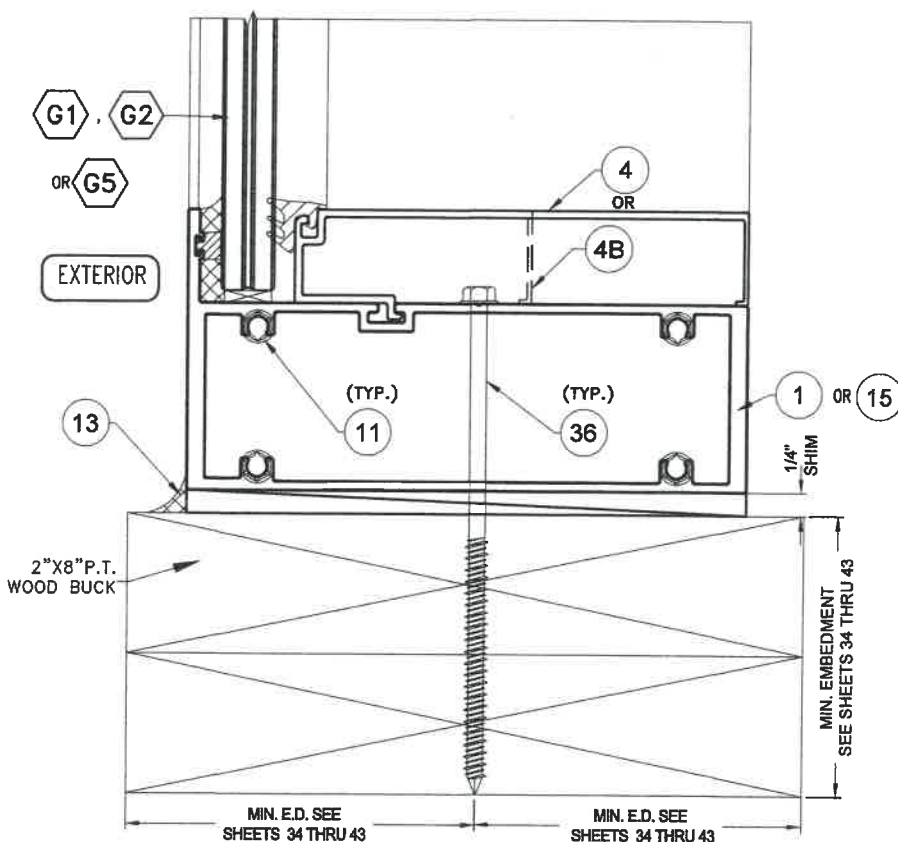
21-118
DRAWING No

SHEET 45 OF 51

HEAD & SILL CONNECTIONS DETAILS

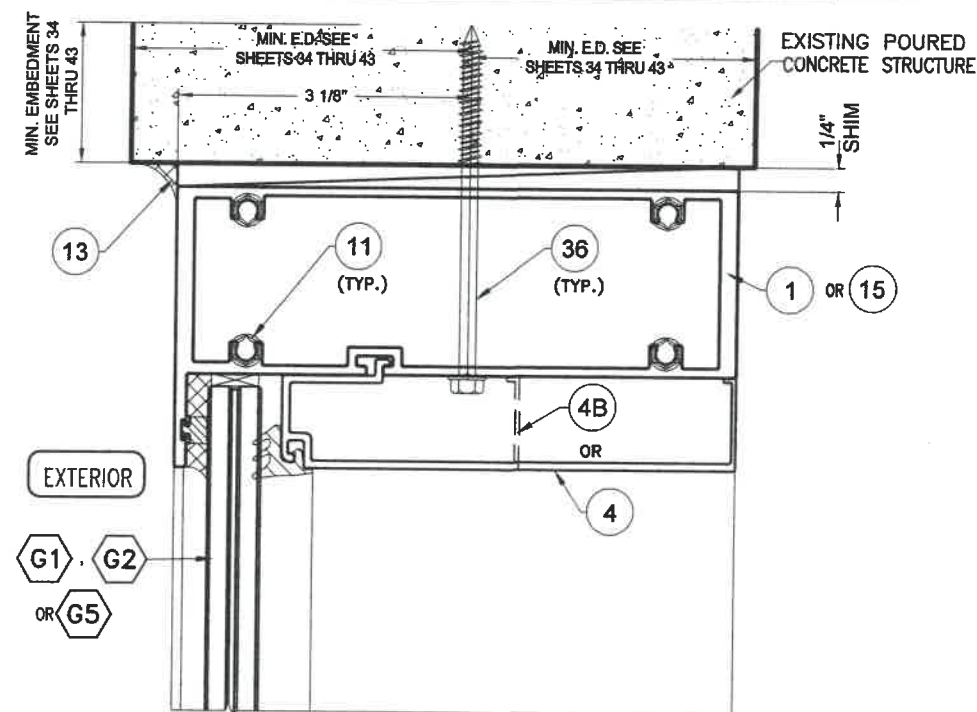


1 HEAD

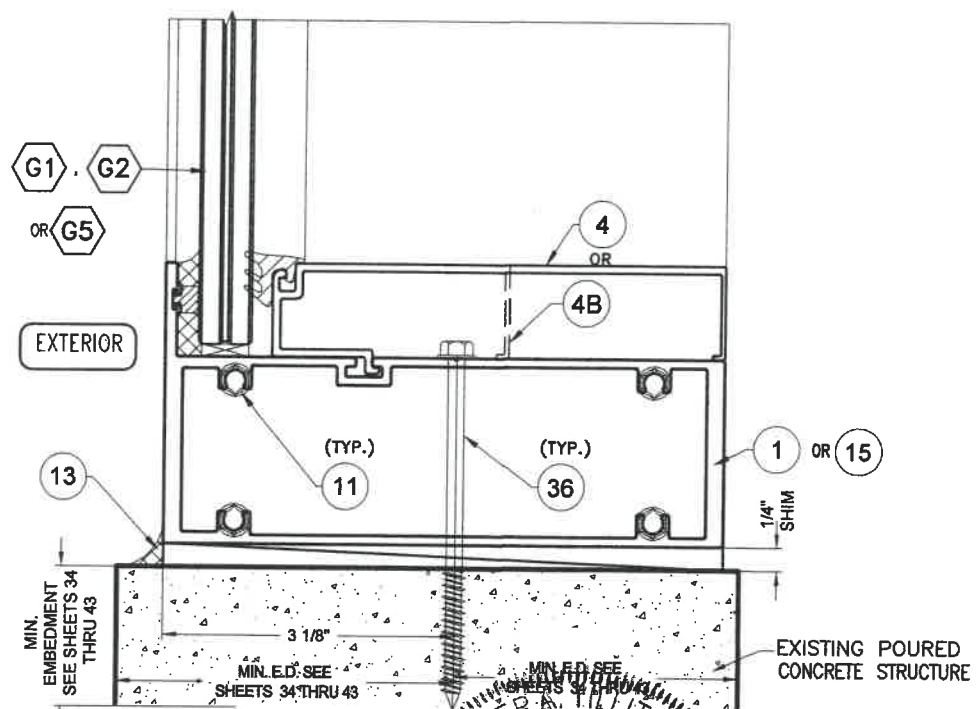


2 SILL

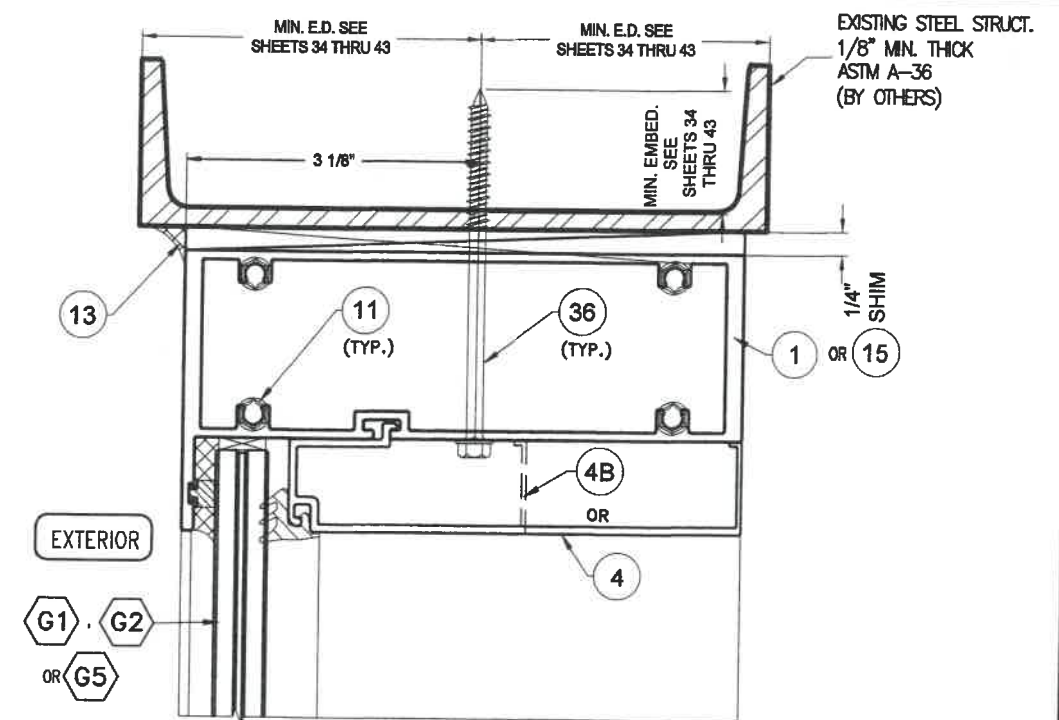
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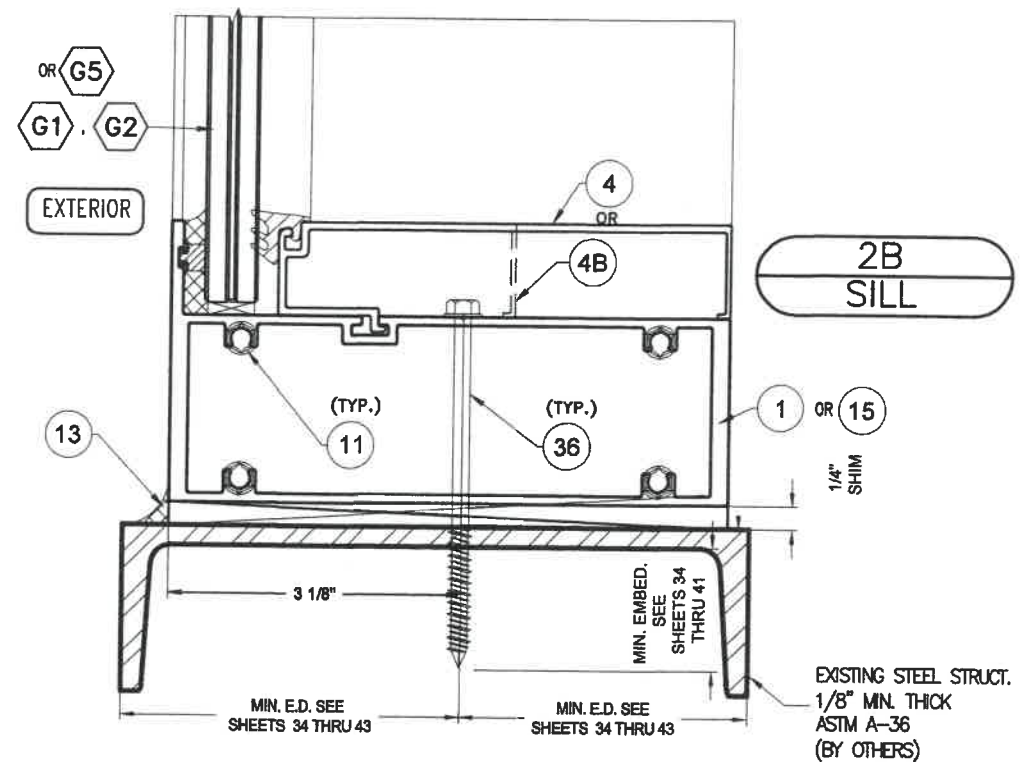
1A HEAD



2A SILL



1B HEAD



2B SILL

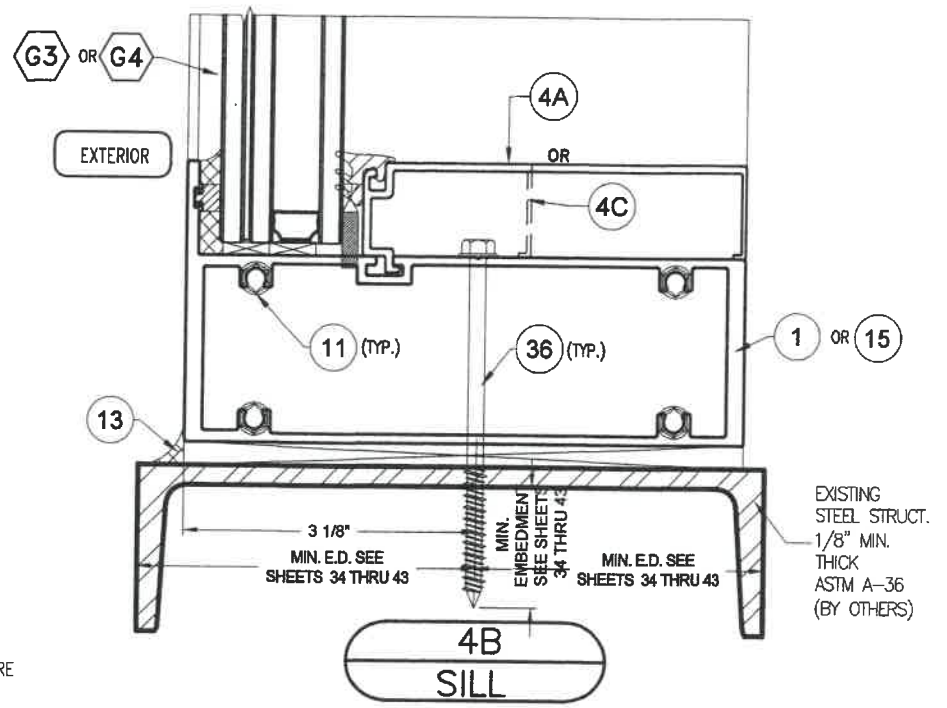
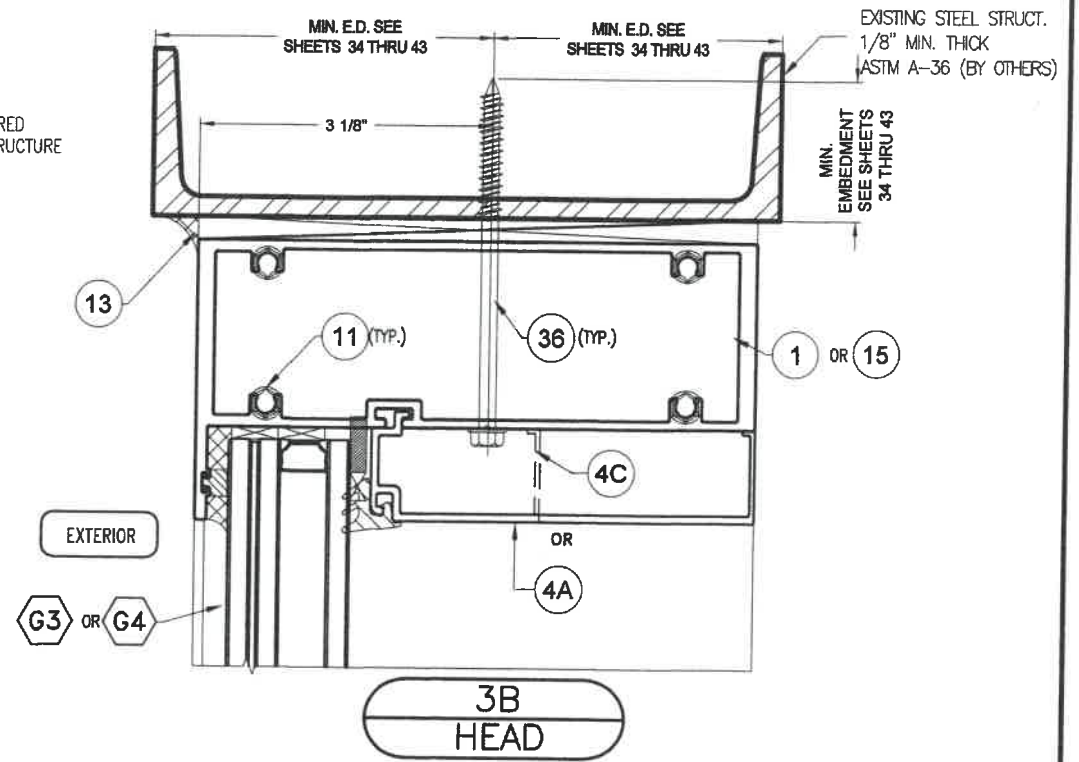
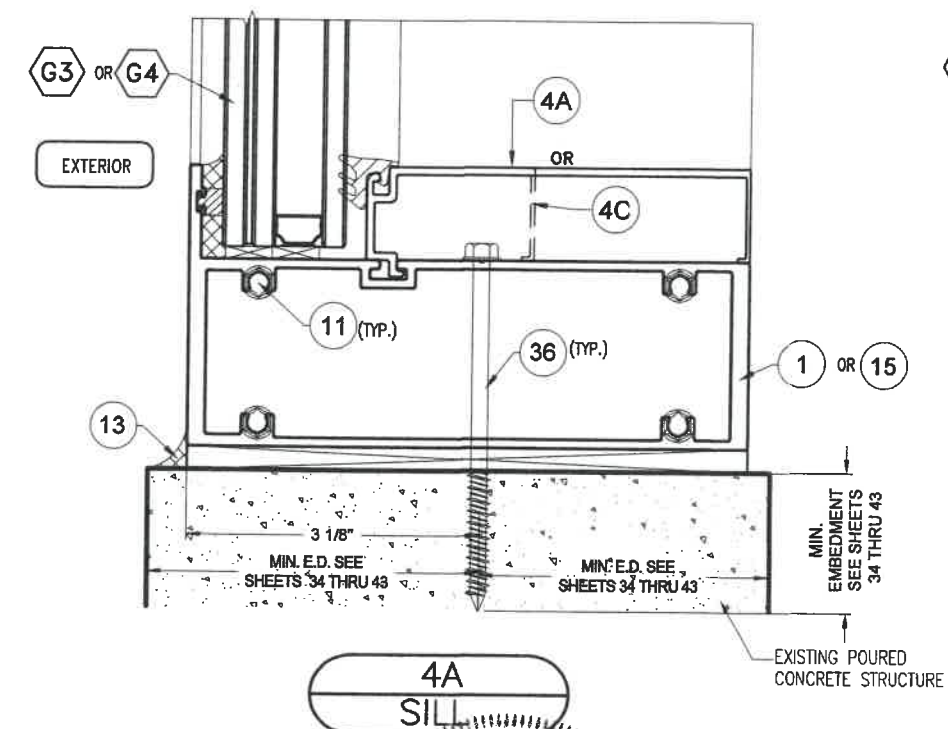
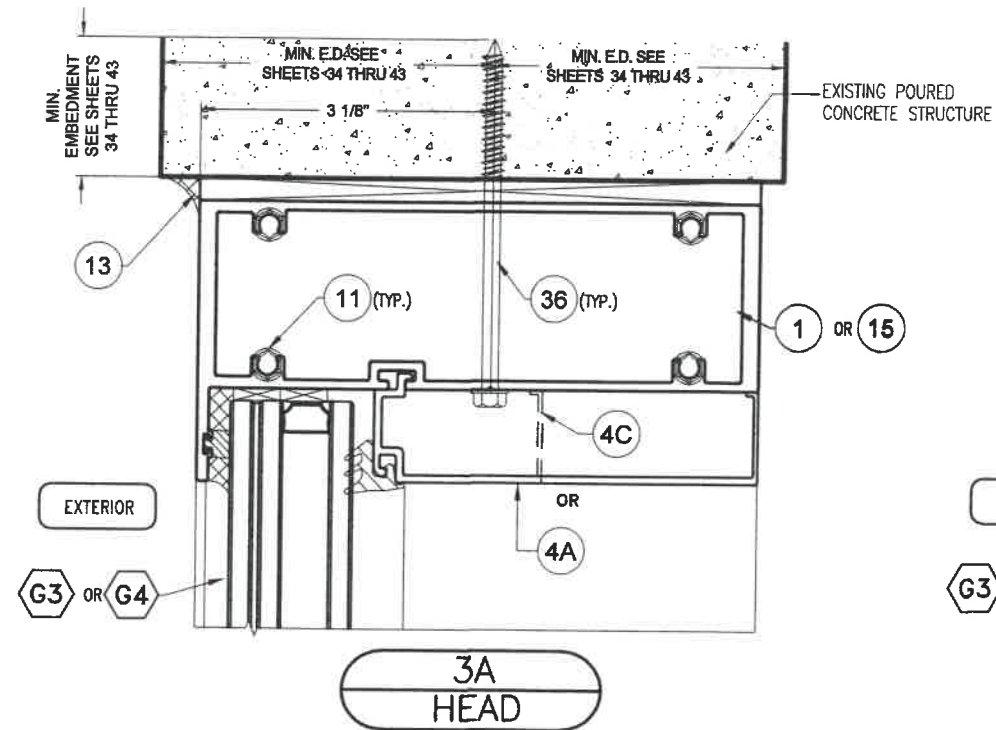
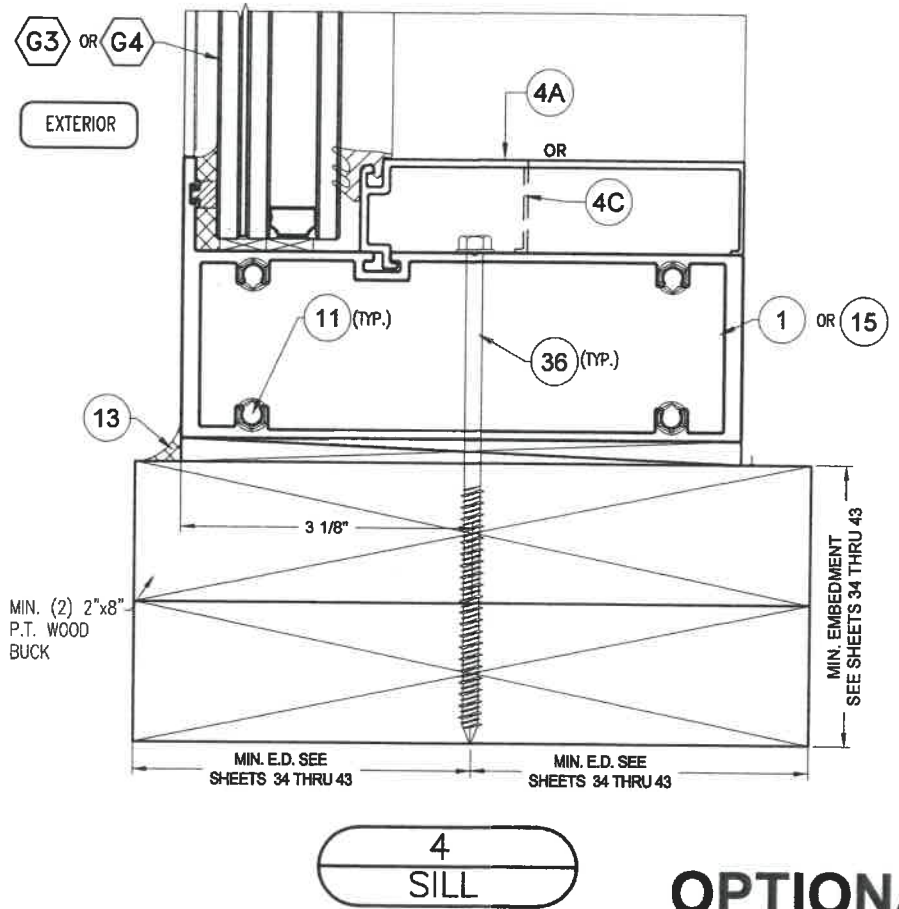
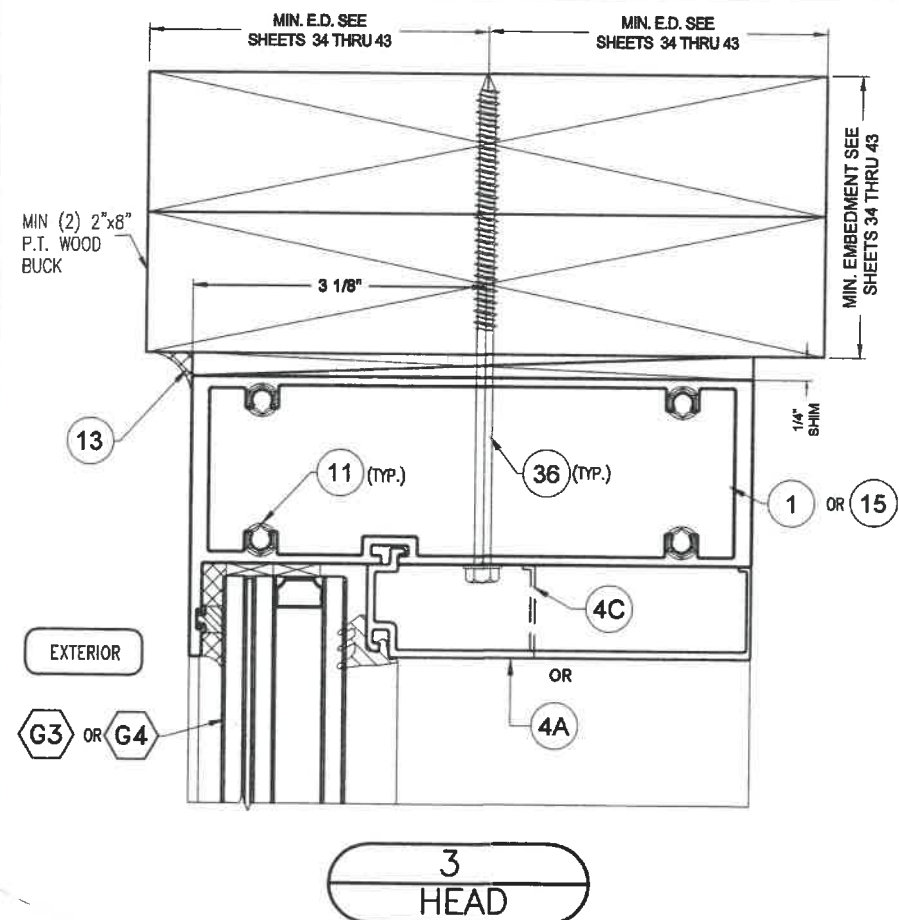
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LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

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						21-118 DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	
1	OLD 20-271	8/26/21	3	-	-	
2	-	-	4	-	-	

HEAD & SILL CONNECTIONS DETAILS (CONTINUED)



OPTIONAL SYSTEM # 2

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IMPACT GLASS & WINDOWS

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

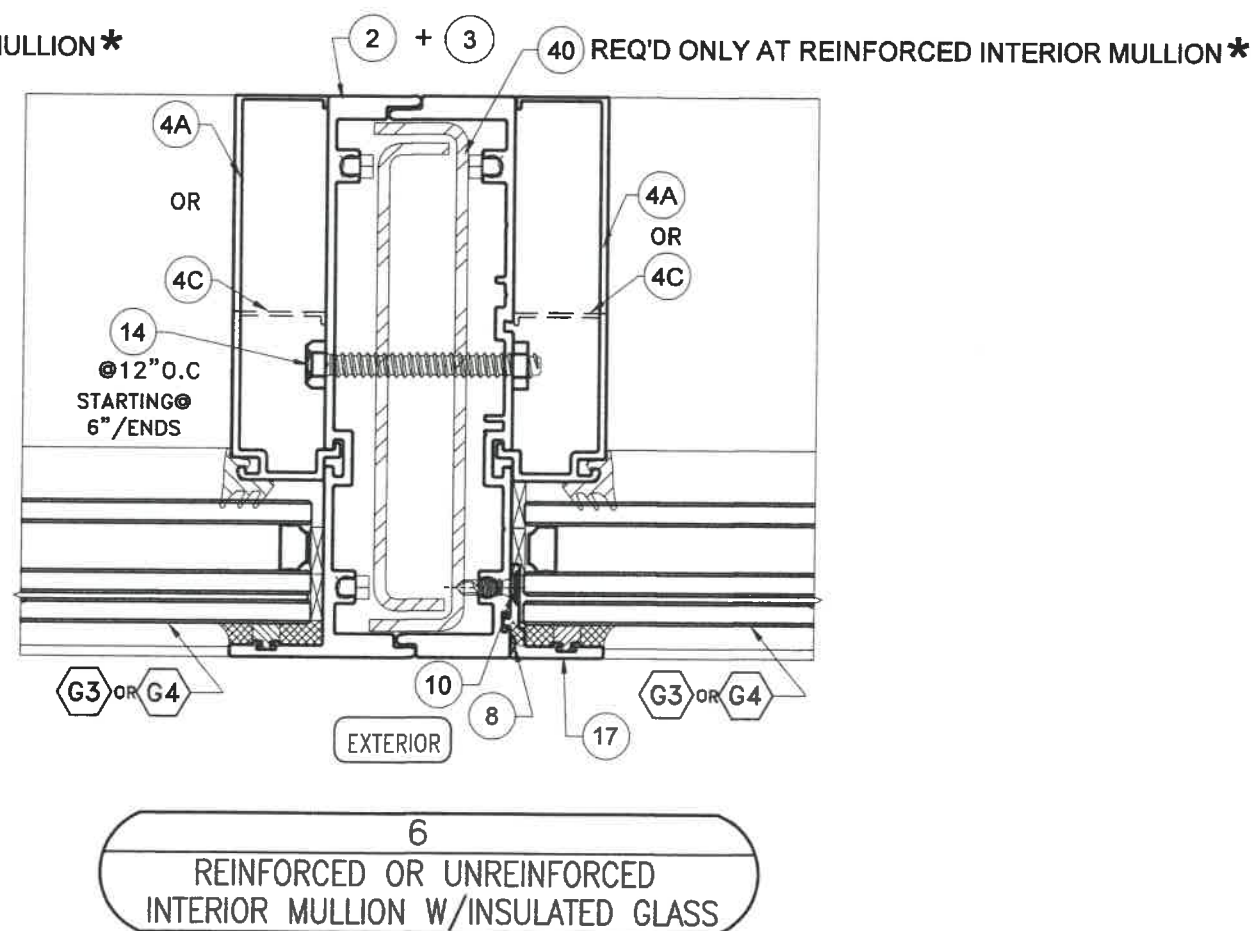
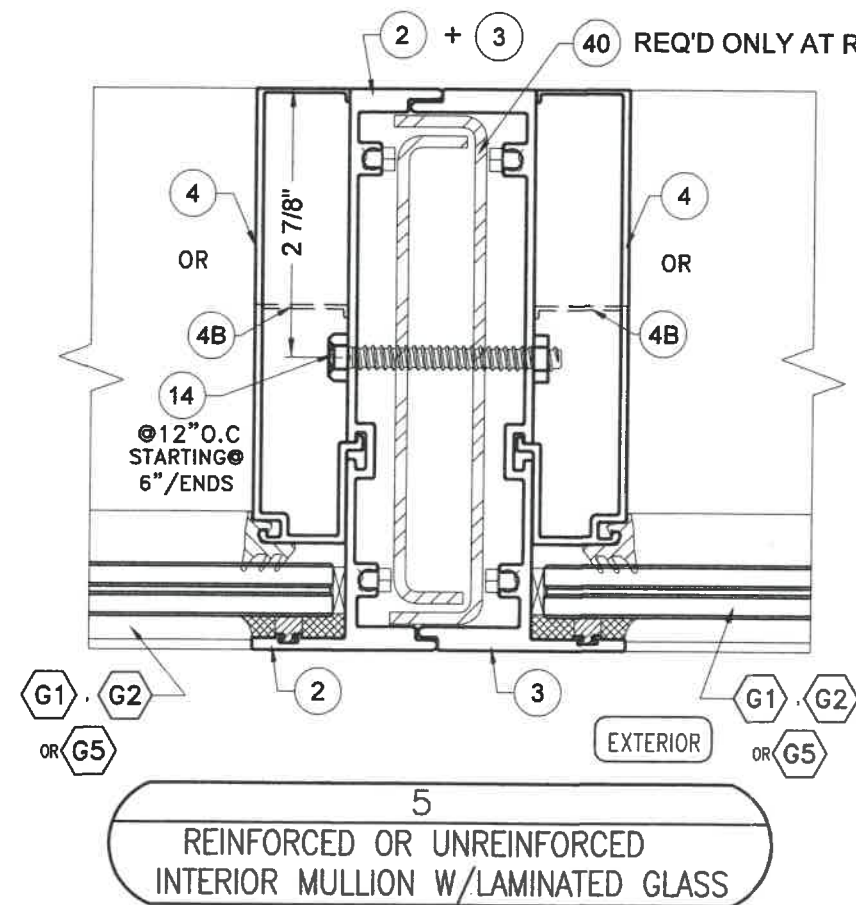
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DATE

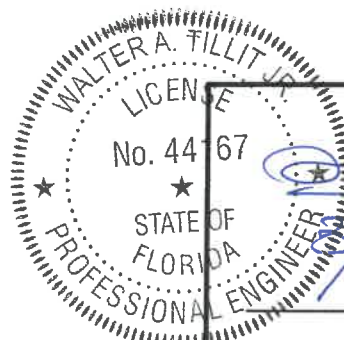
21-118
DRAWING No

SHEET 47 OF 51

HORIZONTAL SECTIONS AT REINFORCED OR UNREINFORCED INTERIOR MULLIONS
AT STRAIGHT GLASS WALL APPLICATIONS
OPTIONAL SYSTEM # 2



*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).



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GENERAL
IMPACT GLASS & WINDOWS

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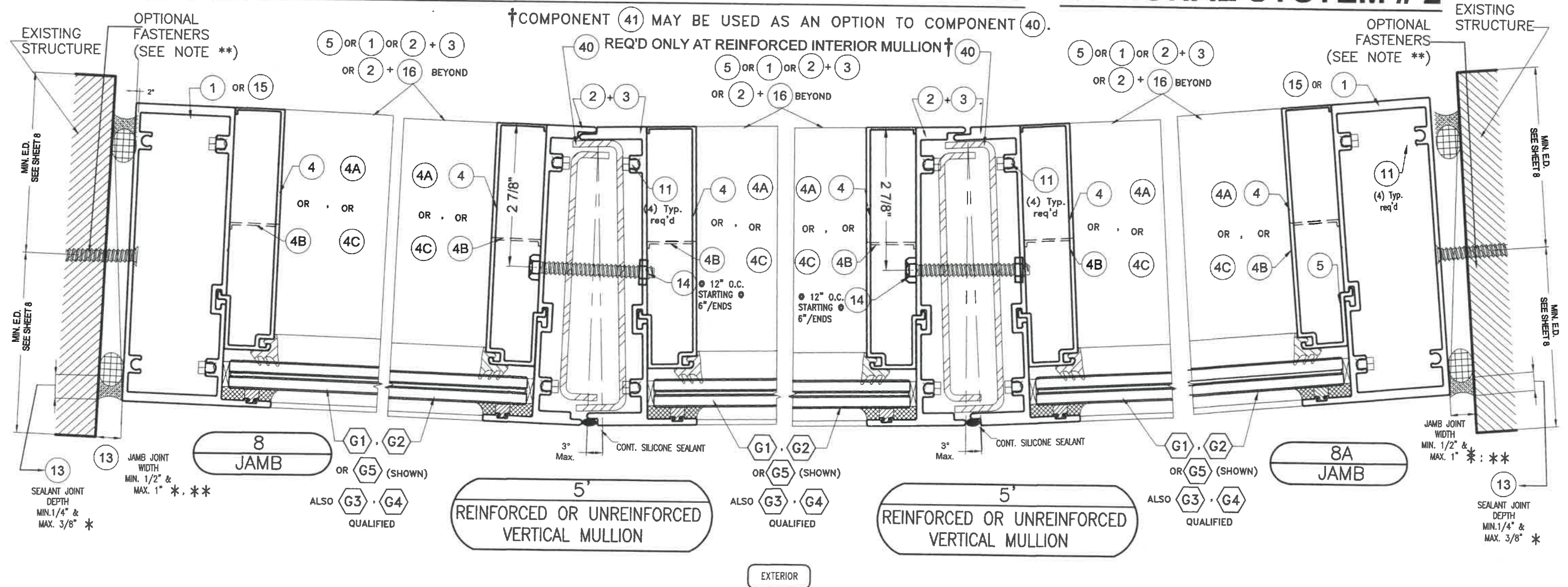
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8/26/2021
DATE

21-118
DRAWING No

SHEET 48 OF 51

HORIZONTAL SECTIONS AT REINFORCED OR UNREINFORCED INTERIOR VERTICAL MULLIONS
PLUS JAMB MULLIONS AT CURVED GLASS WALL APPLICATIONS : **OPTIONAL SYSTEM # 2**

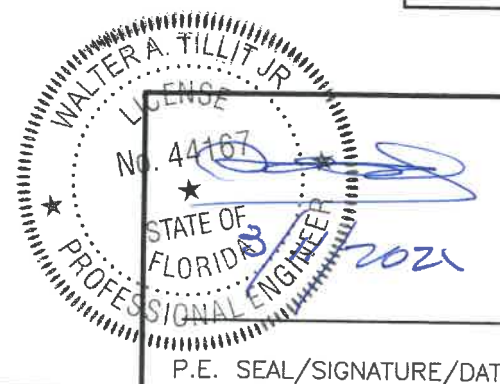


** ALTERNATIVELY, JAMB JOINT WIDTH MAY BE REDUCED TO A WIDTH LESS THAN 1/2" IF JAMB PROFILE IS ATTACHED TO WALL FULL HEIGHT W/ THE FOLLOWING FASTENERS.

* NOTE: ABOVE INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.

SUBSTRATE Δ	FASTENERS TYPES Δ		SPACING
	3/8" SHIM SPACE OR LESS	>3/8" , <1/2" SHIM SPACE	
POURED CONCRETE	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
2500 psi GROUT FILLED ASTM C-90 CONCRETE BLOCK	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
STEEL OR ALUMINUM	FASTENER TYPE E	FASTENER TYPE E	6" O.C.
WOOD	FASTENER TYPES C & D	FASTENER TYPE D	5" O.C.

Δ CORRESPONDS TO FASTENERS TYPES AND SUBSTRATES CHARACTERISTICS (AS APPLICABLE) DESCRIBED ON SHEET'S 34 THRU 43.



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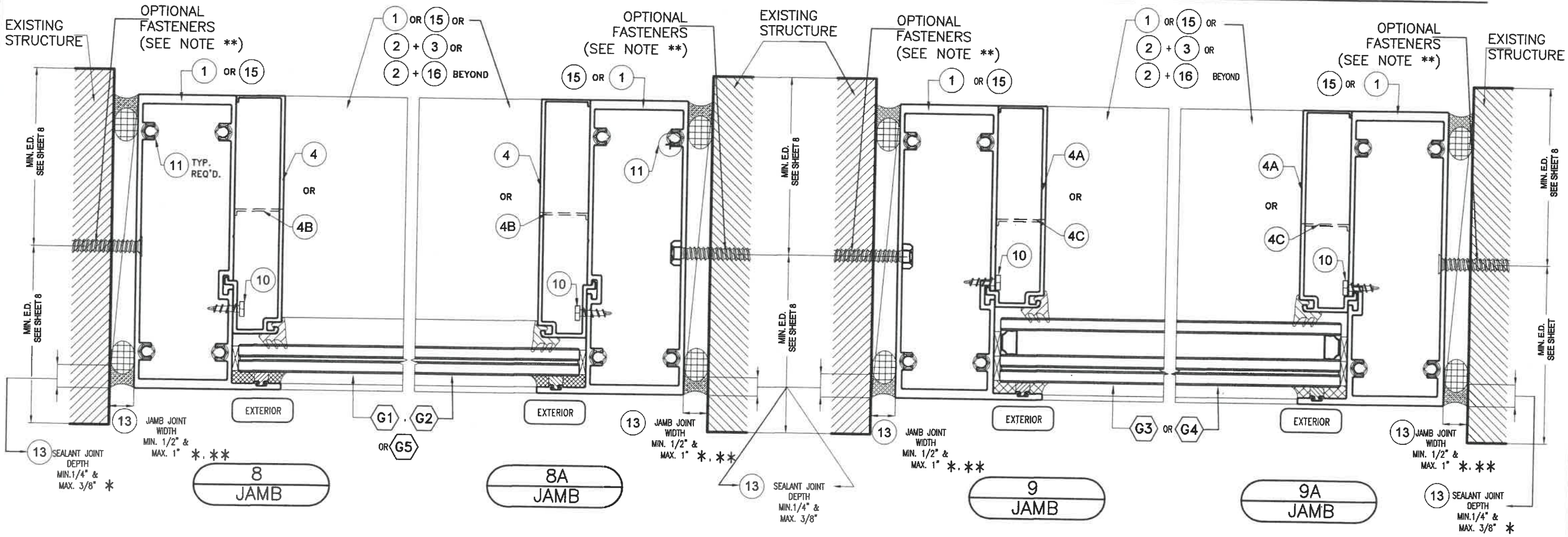
8/26/2021
DATE

21-118
DRAWING No.

SHEET 49 OF 51

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

HORIZONTAL SECTIONS AT JAMB MULLION AT STRAIGHT GLASS WALL APPLICATIONS : **OPTIONAL SYSTEM # 2**



** ALTERNATIVELY, JAMB JOINT WIDTH MAY BE REDUCED TO A WIDTH LESS THAN 1/2" IF JAMB PROFILE IS ATTACHED TO WALL FULL HEIGHT W/ THE FOLLOWING FASTENERS.

* **NOTE:** ABOVE INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.

SUBSTRATE Δ	FASTENERS TYPES Δ		SPACING
	3/8" SHIM SPACE OR LESS	>3/8" , <1/2" SHIM SPACE	
POURED CONCRETE	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
2500 psi GROUT FILLED ASTM C-90 CONCRETE BLOCK	FASTENER TYPE A	FASTENER TYPE B	6" O.C.
STEEL OR ALUMINUM	FASTENER TYPE E	FASTENER TYPE E	6" O.C.
WOOD	FASTENER TYPES C & D	FASTENER TYPE D	5" O.C.

Δ CORRESPONDS TO FASTENERS TYPES AND SUBSTRATES CHARACTERISTICS (AS APPLICABLE) DESCRIBED ON SHEET'S 34 THRU 43.

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LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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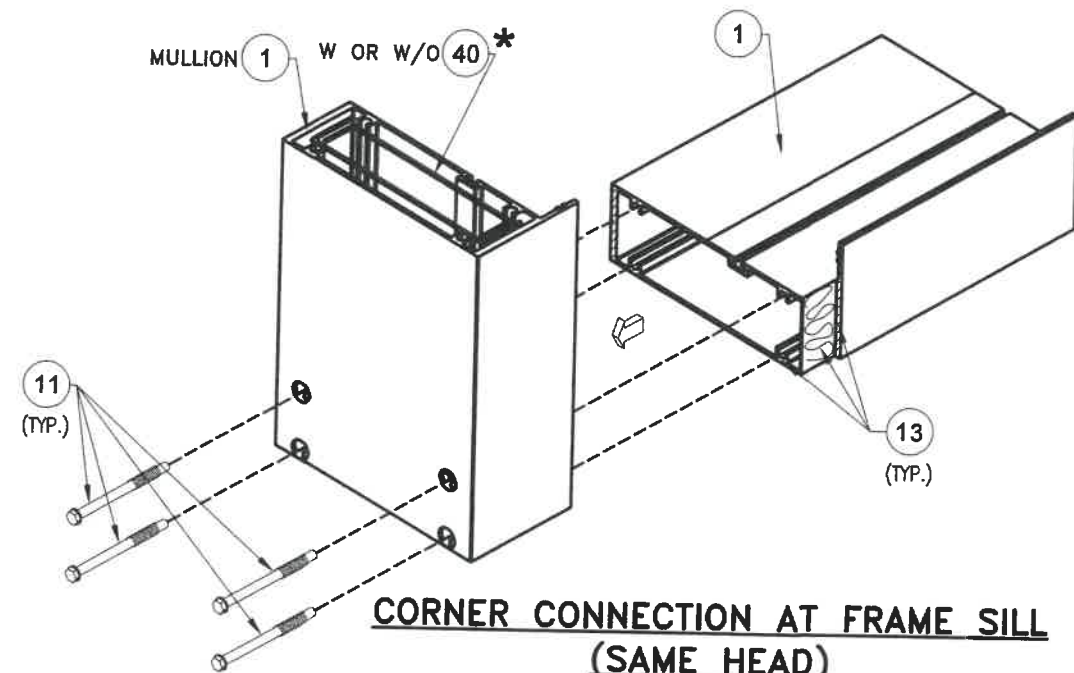
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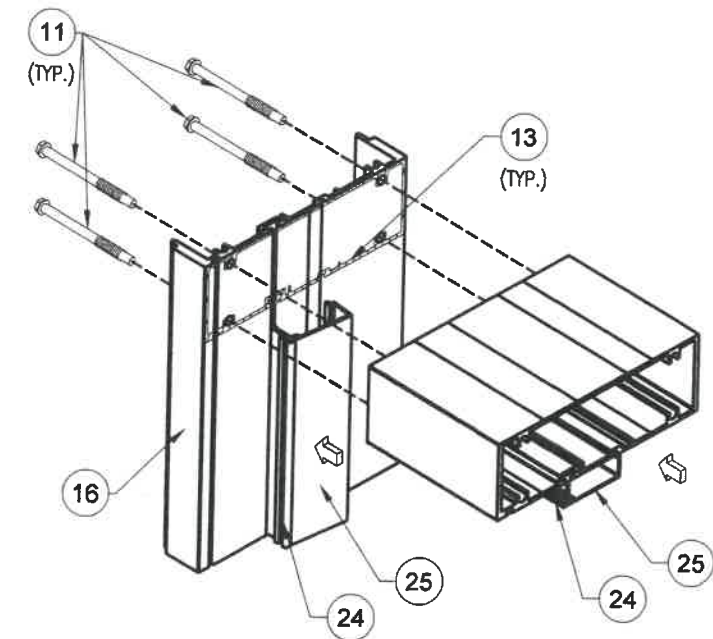
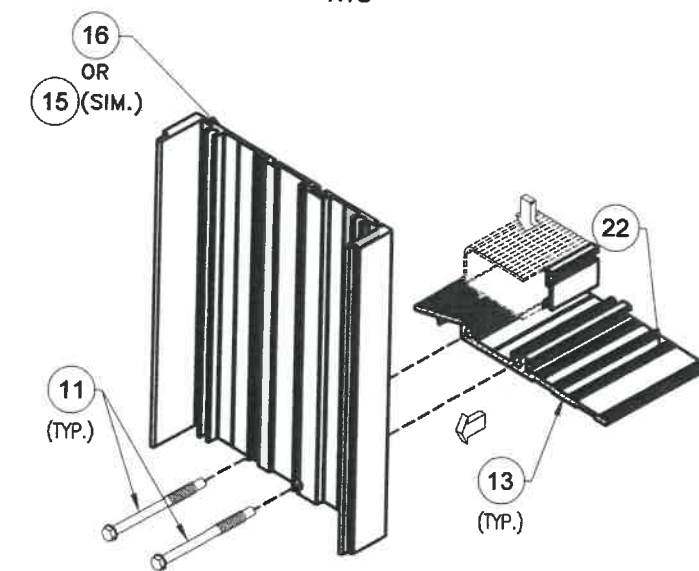
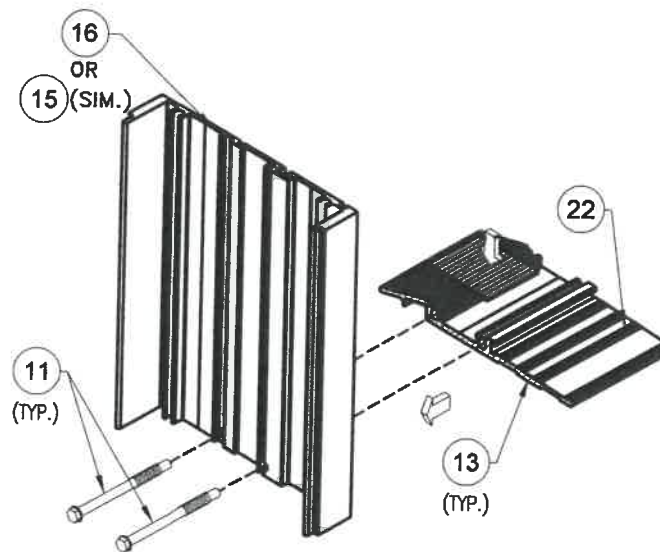
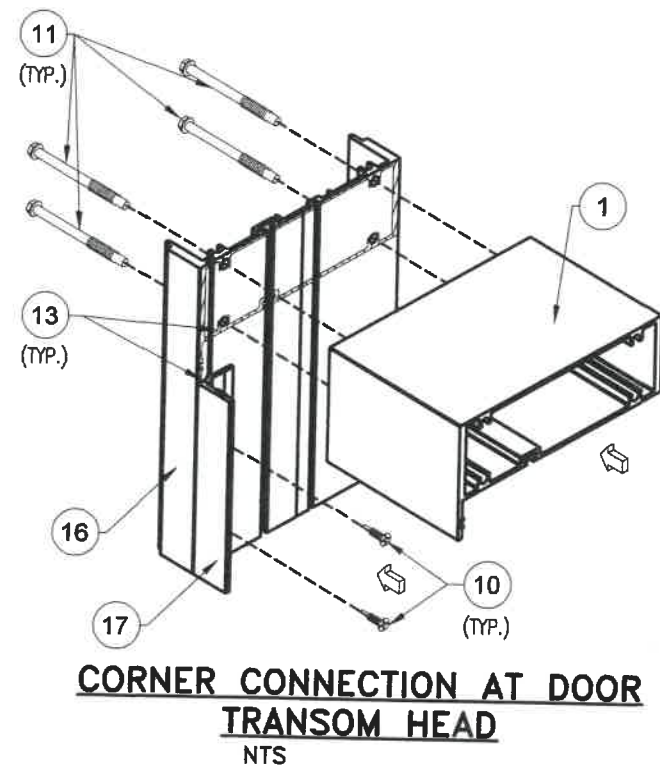
21-118
DRAWING No

SHEET 50 OF 51

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-



*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).



CORNER DETAILS: OPTIONAL SYSTEM # 2 (ISOMETRIC)

CORNER CONNECTION AT DOOR FRAME SILL
(WATER RESISTANT)
NTS

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LICENSED PROFESSIONAL ENGINEER
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STATE OF FLORIDA
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						21-118 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 51 OF 51	
1	OLD 20-271	8/28/21	3	-	-		
2	-	-	4	-	-		