

# SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM FOR USE IN HURRICANE ZONES REQUIRING LARGE & SMALL MISSILE IMPACT PROTECTION. (LAMINATED OR INSULATED WET & INSULATED DRY GLAZED)

## GENERAL NOTES:

1. SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE, (I.B.C).

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE INTERNATIONAL BUILDING CODE, FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE PRODUCT WILL BE INSTALLED, AND FOR A DIRECTIONALITY FACTOR  $K_d = 0.85$ , IN ACCORDANCE WITH ASCE 7-16 STANDARD, AND SHALL NOT EXCEED THE DESIGN PRESSURE RATING INDICATED ON NOTE 2.

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 THIS SHEET.

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.

THIS PRODUCT'S ADEQUACY FOR IMPACT AND CYCLIC RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.2 OF THE ABOVE MENTIONED CODE AS PER FLORIDA BUILDING CODE HIGH VELOCITY HURRICANE ZONE PROTOCOLS TAS-201, TAS-202, TAS-203, PER CERTIFIED TESTING LABORATORIES REPORT #CTLA-1177W, ARCHITECTURAL TESTING REPORT #86107.02-401-18 & 88725.02-401-18 AND AS PER SUBMITTED STRUCTURAL CALCULATIONS, PERFORMED AS PER SECTION 1604 OF THE ABOVE MENTIONED BUILDING CODE.

2. MAXIMUM DESIGN PRESSURE RATING FOR THIS WINDOW WALL SYSTEM SHALL BE AS SHOWN ON SHEETS 6, 7, 8, 9, 10, 11, 12, 13 AND 14.

3. THIS PRODUCT WILL NOT REQUIRE A HURRICANE PROTECTION DEVICE.

4. THIS PRODUCT IS APPROVED FOR AIR/WATER INFILTRATION (15 psf).

5. SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT SHALL COMPLY WITH SECTION 2406 OF THE INTERNATIONAL BUILDING CODE.

6. PROVIDE 1 3/8" MAX. LOAD BEARING SHIM (TYP.) WHEN ALLOWED BY THIS DRAWING.

7. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE BUILDING STRUCTURE. WOOD BUCKS MUST BE SOUTHERN PINE,  $G = 0.55$ .

8. REMAINING COMPONENTS FOR THIS WINDOW WALL SYSTEM SHALL BE AS INDICATED ON BILL OF MATERIALS, SHEET 3 OF THIS DRAWING.

9. ALL ALUMINUM EXTRUSIONS IN CONTACT WITH DISSIMILAR MATERIAL SHALL COMPLY WITH SECTION III-6 OF THE ALUMINUM DESIGN MANUAL 2015 EDITION.

10. ALL SCREWS AND BOLTS INSTALLED AT SEAWARD AREAS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES AND MEET ASTM A167, OR HOT DIPPED GALVANIZED (AFTER FABRICATION) CARBON STEEL AS PER ASTM A123 OR ASTM A153, OR HOT DIPPED GALVANIZED OR GALVANNEALED (PRIOR TO FABRICATION) AND MEET ASTM A653 WITH 50 ksi YIELD STRENGTH AND 90 hsi TENSILE STRENGTH.

ALL SCREWS AND BOLTS INSTALLED AT INLAND AREAS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES AND MEET ASTM A167, OR HOT SIPPED GALVANIZED (AFTER FABRICATION) CARBON STEEL AS PER ASTM A123 OR ASTM A153, OR HOT DIPPED GALVANIZED OR GALVANNEALED (PRIOR TO FABRICATION) AND MEET ASTM A653; HOT DIP GALVANIZED OR ELECTRO GALVANIZED PER ASTM A641, MECHANICALLY DEPOSITED ZINC COATING PER ASTM B695 OR ELECTRO DEPOSITED ZINC COATINGS PER ASTM BL33.

11. SHOP DRAWINGS PREPARED BASED ON THIS T.D.I REPORT AND TAKING INTO ACCOUNT THE SPECIFIC JOB CONDITIONS, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS PART OF THE PERMIT DOCUMENTS.

12. SUBSTRATE MATERIAL NOTED ON THIS DRAWING AS EXISTING BY OTHERS, POURED CONCRETE, GROUT FILLED CONCRETE BLOCK AND WOOD MUST WITHSTAND THE LOADS IMPOSED BY THIS PRODUCT.

13. THIS PRODUCT'S INSTALLATION SHALL COMPLY WITH ALL SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

14. (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 PROFESSIONAL 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.

(e) ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

15. PRODUCT MANUFACTURE'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH TEXAS DEPARTMENT OF INSURANCE REQUIREMENTS. ONE LABEL SHALL BE PLACED FOR EVERY OPENING.


## INDEX:

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- SHEET 4: ISOMETRIC ELEVATION FOR FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM.
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- SHEET 6: MAXIMUM DESIGN PRESSURE RATING SCHEDULE FOR A GIVEN GLASS TYPE AND GLASS PANEL DIMENSIONS.
- SHEET 7: MAXIMUM DESIGN PRESSURE RATING FOR STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS.
- SHEET 8: MAXIMUM DESIGN PRESSURE RATING FOR STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS.
- SHEET 9: MAXIMUM DESIGN PRESSURE RATING FOR REINFORCED JAMB MULLION W/ LAMINATED OR INSULATED GLASS (WET GLASS).
- SHEET 10: MAXIMUM DESIGN PRESSURE RATING FOR HORIZONTAL W/ LAMINATED OR INSULATED GLASS.
- SHEET 11: MAXIMUM DESIGN PRESSURE RATING FOR MULLION CONNECTIONS.
- SHEET 12: MAXIMUM DESIGN PRESSURE RATING FOR MULLION CONNECTIONS (CONTINUED).
- SHEET 13: MAXIMUM DESIGN PRESSURE RATING FOR JAMBS FASTENED W/ 3/8"Ø FASTENERS.
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- SHEET 15: HEAD CONNECTION DETAILS.
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- SHEET 17: HORIZONTAL SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS.
- SHEET 18: HORIZONTAL SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS (WET & DRY GLAZED).
- SHEET 19: HORIZONTAL CONNECTIONS DETAIL AT JAMB.
- SHEET 20: CORNER DETAIL AT JAMB.

## INSTRUCTIONS:

- STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BUILDING HEIGHT, WIND ZONE, USING APPLICABLE ASCE 7 STANDARDS.
- STEP 2: GO TO SCHEDULE ON SHEET 6, TO DETERMINE MAXIMUM DESIGN PRESSURE RATING (psf) OF DESIRED GLASS SIZE BASED ON GLASS PANEL DIMENSIONS.
- STEP 3: DETERMINE MAXIMUM MULLION SPAN "L"(FT) FOR A GIVEN MULLION EFFECTIVE SPACING "b", ON SCHEDULE ON SHEETS 7 & 8, AND SELECT ANCHOR OPTION W/ DESIGN PRESSURE RATING EQUAL OR GREATER THAN DESIGN LOAD SPECIFIED IN STEP 1 USING SCHEDULES ON SHEETS 11 AND 12.
- STEP 4: USE SCHEDULES ON SHEETS 13 AND 14, TO SELECT JAMB ANCHOR OPTION W/ ANCHORAGE OR SHEET 9, FOR W/O ANCHORAGE WITH DESIGN PRESSURE RATING EQUAL OR GREATER THAN DESIGN LOAD SPECIFIED IN STEP 1.
- STEP 5: USE SCHEDULE ON SHEET 10, TO VERIFY MAXIMUM DESIGN PRESSURE RATING OF HORIZONTALS (IF USED), TO BE EQUAL OR GREATER THAN DESIGN LOAD SPECIFIED IN STEP 1.
- STEP 6: THE LOWEST VALUE OF DESIGN PRESSURE RATING RESULTING FROM STEPS 2, 3, 4 AND 5 SHALL APPLY TO THE ENTIRE SYSTEM.

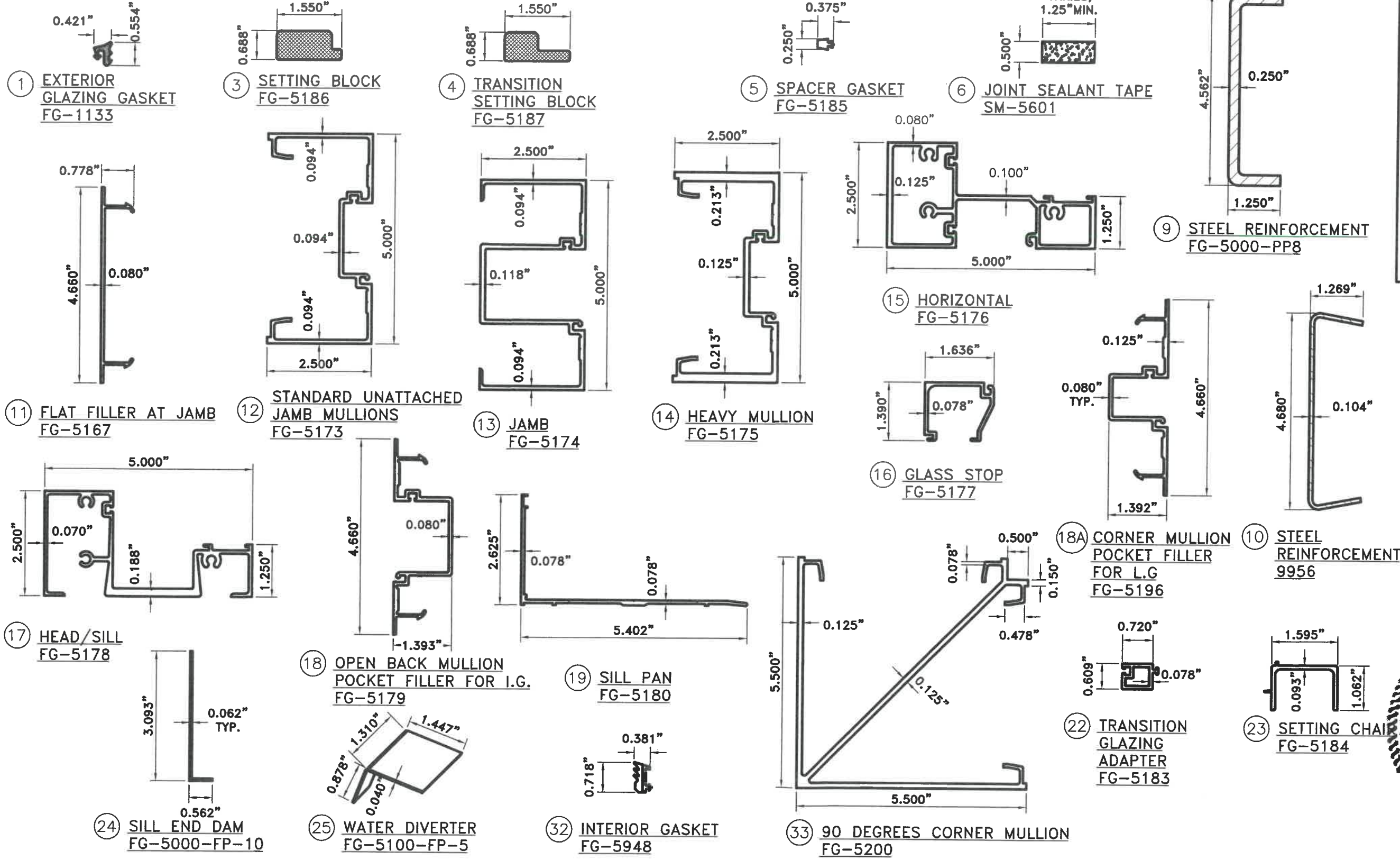
**THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS UNDER THE TEXAS DEPARTMENT OF INSURANCE JURISDICTION**

TEXAS DEPARTMENT OF INSURANCE -2018	
M.P. DRAWN BY: DATE: 2/3/2020 DRAWING No. 20-016 SHEET 1 OF 20	SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS  803 AIRPORT RD. TERRELL, TX 75160 www.OldcastleBE.com-Phone 800-869-4567
REV. NO. 1 DATE 2/3/2020 DESCRIPTION OLD 14-088	REV. NO. 2 DATE DESCRIPTION

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 FIRM REGISTRATION # F-13790



**SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM COMPONENTS:  
(LAMINATED OR INSULATED WET & INSULATED DRY GLAZED)**



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SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLAZED		Oldcastle BuildingEnvelope	803 AIRPORT RD. TERRELL, TX 75160 www.OldcastleBE.com-Phone 800-869-4567	REV. NO.	DATE
1	DESCRIPTION	REV. NO.	DATE	DESCRIPTION	DATE
1	OLD 14-086	1	2/3/2020	3	
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## BILL OF MATERIALS

ITEM No.	PART NUMBER	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1.	FG-1133	EXTERIOR GLAZING GASKET	0.421" X .554"	70 DUROMETER EPDM	TRELLEBORG OR EPG	FOR 1 5/16" OR 5/8" GLAZING FOR WET & DRY GLAZED
3.	FG-5186	SETTING BLOCK	1.550" X .688"	SILICONE	VARIES	AT SILL & HORIZONTAL
4.	FG-5187	TRANSITION SETTING BLOCK	1.550" X .688"	EPDM	VARIES	AT SILL & HORIZONTAL
5.	FG-5185	SPACER GASKET	0.375 X .250	SILICONE	VARIES	
6.	SM-5601	JOINT SEALANT TAPE	.125" X .50" VARIES	BUTYL	SCHNEE-MOREHEAD	
7.	FS-8	SPLINE ASSEMBLY SCREW	#14 X 1 HHSTS	STEEL	VARIES	ZINC COATED PER ASTM B-633
8.	FS-38	ATTACH STEEL REINFORCEMENT	1/4-20 X 1/2" HH TYPE F	STEEL	VARIES	1" FROM EACH END, ZINC COATED PER ASTM B-633
9.	FG-5000-PP8	STEEL REINFORCEMENT FOR FG-5173 STANDARD MULLION	1.250" X 4.562" X .250"	A36 STEEL	VARIES	FULL MULLION LENGTH
10.	9956	STEEL REINFORCEMENT FOR FG-5173 UNATTACHED JAMB MULLION	1.269" X 4.680" X .104" GA.	A36 STEEL	VARIES	ALT. WALL JAMB, FULL MULLION LENGTH
11.	FG-5167	FLAT FILLER @ JAMB	.778" X 4.660" X .080"	6063-T6 ALUMINUM	OLDCASTLE BE	USE @ ALT. WALL JAMB
12.	FG-5173	STANDARD /UNATTACHED JAMB MULLIONS	2.50" X 5.00" X .094"	6063-T6 ALUMINUM	OLDCASTLE BE	
13.	FG-5174	JAMB	2.50" X 5.00" X .118" X .094"	6063-T6 ALUMINUM	OLDCASTLE BE	ATTACHED TO EXISTING WALL
14.	FG-5175	HEAVY MULLION	2.50" X 5.00" X .125" X .213"	6063-T6 ALUMINUM	OLDCASTLE BE	
15.	FG-5176	HORIZONTAL	2.50" X 5.00" X .125" X .080" X .100"	6063-T6 ALUMINUM	OLDCASTLE BE	
16.	FG-5177	GLASS STOP	1.39" X 1.63" X .078"	6063-T6 ALUMINUM	OLDCASTLE BE	
17.	FG-5178	HEAD/SILL	2.50" X 5.00" X .070" X 0.188"	6063-T6 ALUMINUM	OLDCASTLE BE	
18.	FG-5179	OPEN BACK MULLION POCKET FILLER FOR I.G.	1.39" X 4.66" X .080"	6063-T6 ALUMINUM	OLDCASTLE BE	FOR CORNER OR STANDARD MULLION
18A.	FG-5196	CORNER MULLION POCKET FILLER FOR L.G.	1.39" X 4.66" X .080" X .125"	6063-T5 ALUMINUM	OLDCASTLE BE	WET GLAZED, CORNER MULLION
19.	FG-5180	SILL PAN	2.62" X 5.40" X .078"	6063-T6 ALUMINUM	OLDCASTLE BE	
22.	FG-5183	TRANSITION GLAZING ADAPTER FOR L.G.	.609" X .720" X .078"	6063-T5 ALUMINUM	OLDCASTLE BE	
23.	FG-5184	SETTING CHAIR	1.062" X 1.595" X .093"	6063-T5 ALUMINUM	OLDCASTLE BE	CUT 4" LONG, AT SILL
24.	FG-5000-FP-10	SILL END DAM	0.562" X 3.093" X .062"	6063-T5 ALUMINUM	OLDCASTLE BE	5.00" LONG
25.	FG-5100-FP-5	WATER DIVERTER	.878" X 1.447" X .040"	RIGID PVC		CUT 1.562 LONG & LOCATE @ EACH END
26.	#995	STRUCTURAL SILICONE	FILL SPACE	SILICONE	DOW CORNING	WET GLAZED
29.	FASTENER	FOR ATTACHING SILL PAN TO CONCRETE SUBSTRATE	3/8" X 2" SHWH	STAINLESS STEEL	TAPCON	1" MIN. EMBEDMENT NON-STRUCTURAL
30.	FASTENER	FOR ATTACHING SILL PAN FLASHING TO WOOD SUBSTRATE	3/8" X 2" LAG BOLT	STEEL	VARIES	1" MIN. EMBEDMENT NON-STRUCTURAL
31.	FASTENER	FOR ATTACHING SILL PAN FLASHING TO STL SUBSTRATE	3/8" X 1" DRILL FLEX #5	STEEL	VARIES	1" MIN. EMBEDMENT NON-STRUCTURAL
32.	FG-5948	INTERIOR GASKET	0.381" X 0.718"	EPDM	EPG	DRY GLAZED GASKET
33.	FG-5200	90 DEGREES CORNER MULLION	5.50" X 5.50" X 0.125"	6063-T6 ALUMINUM	OLDCASTLE BE	
38.	SPECTREM 2	STRUCTURAL SILICONE	FILL SPACE	SILICONE	TREMCO	
39.	FS-54	PHILLIPS FLAT HEAD MACHINE SCREW U.C.	#10-24 x 3/8"	STEEL	VARIES	ZINC COATED, PER ASTM B-633.
40.	#795	PERIMETER SELEANT	-	SILICONE	DOW CORNING	

TEXAS DEPARTMENT OF INSURANCE - 2018

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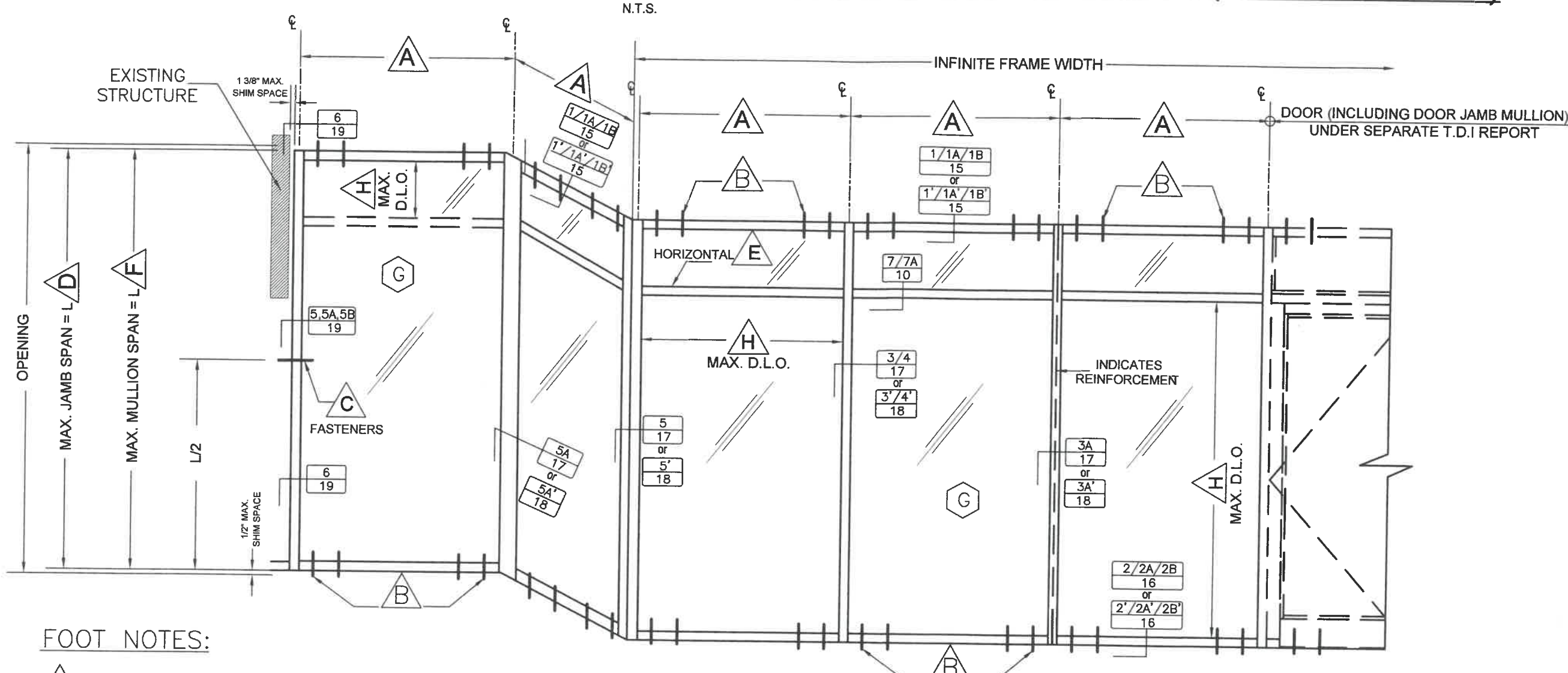
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20-016 DRAWING No.  
SHEET 3 OF 20

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 14-086	2/3/2020	3		
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# ISOMETRIC ELEVATION FOR FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM (WET & DRY GLAZED)



## FOOT NOTES:

- A** FOR MAXIMUM MULLION SPACING SEE SHEET 10.
- B** FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 11 & 12.
- C** SEE SHEETS 13 & 14 FOR MAXIMUM DESIGN PRESSURE RATING FOR JAMB CONNECTED TO EXISTING STRUCTURE.
- D** SEE SHEET 9 FOR MAXIMUM DESIGN PRESSURE RATING FOR JAMB NOT CONNECTED TO EXISTING STRUCTURE.
- E** USE OF HORIZONTALS (SEE SECTIONS 7 & 7A/10) IS LIMITED BY SCHEDULE ON SHEET 10.
- F** FOR MAXIMUM MULLION SPAN SEE SHEETS 7 & 8 SEE LIMITATIONS IN PRESSURE FOR DRY GLAZED CONDITIONS W/INSULATED GLASS ON SHEET 8.
- G** FOR GLAZING DETAILS AND GLASS SCHEDULE SEE SHEETS 5 & 6.
- H** FOR MAXIMUM D.L.O. DESIGN PRESSURE RATING FOR GLASS, SEE SCHEDULE ON SHEET 6.

TEXAS DEPARTMENT OF INSURANCE - 2018

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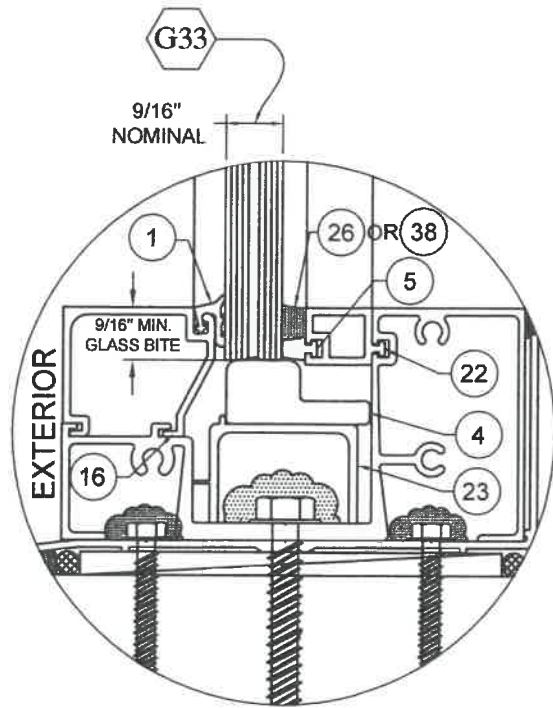
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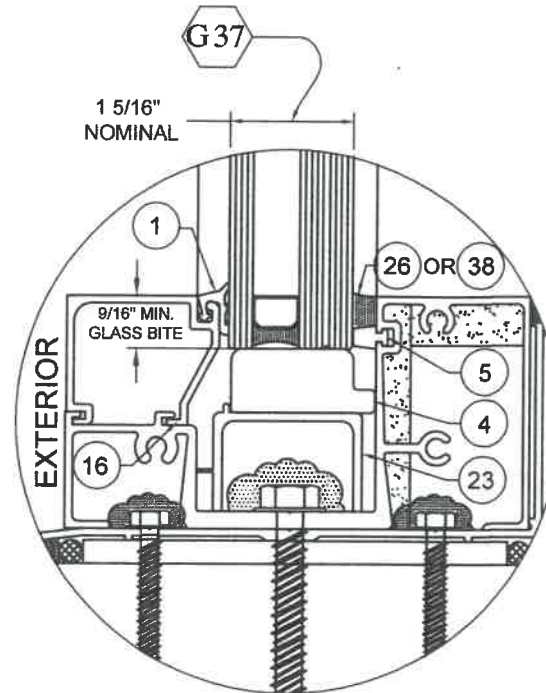
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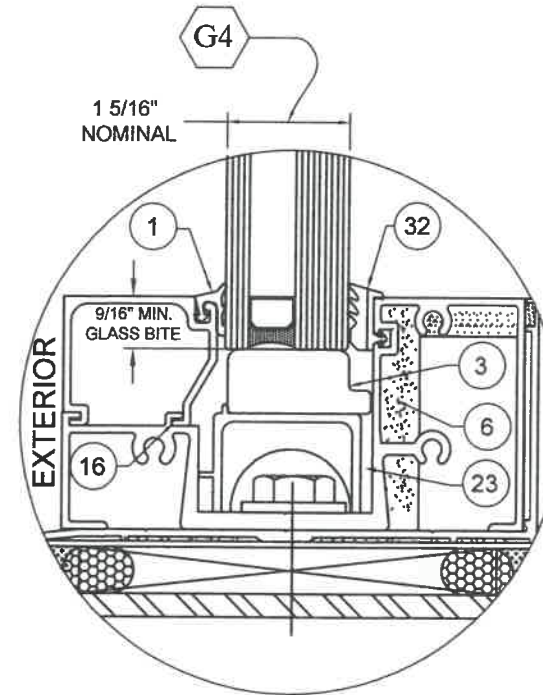
# TYPICAL GLAZING DETAILS



**LAMINATED GLASS WET GLAZED**



**INSULATED LAMINATED GLASS WET GLAZED**



**INSULATED LAMINATED GLASS DRY GLAZED\***

GLASS SCHEDULE WET GLAZED			
GLASS LABEL	GLASS COMPOSITION	MANUFACTURER NAME	MAXIMUM D.L.O.
G33	9/16" LAMINATED GLASS: 1/4" H.S. GLASS OUTBOARD .075" VANCEVA/STORMGLASS COMPOSITE INTERLAYER 1/4" H.S. GLASS INBOARD	OLDCASTLE	SEE SCHEDULE ON SHEET 6
G37	1 5/16" OVERALL THICKNESS INSULATED LAMINATED GLASS, CONSISTING OF 1/4" TEMPERED GLASS OUTBOARD 1/2" AIR SPACE 1/4" H.S. GLASS .075" VANCEVA/STORMGLASS COMPOSITE INTERLAYER 1/4" H.S. GLASS INBOARD	OLDCASTLE	SEE SCHEDULE ON SHEET 6

GLASS SCHEDULE DRY GLAZED			
GLASS LABEL	GLASS COMPOSITION	MANUFACTURER NAME	MAXIMUM D.L.O.
G4	1 5/16" OVERALL THICKNESS INSULATED LAMINATED GLASS, CONSISTING OF 1/4" HS GLASS OB 1/2" SPACER AND 1/4" HS OVER 0.090 SENTRYGLASPLUS INTERLAYER OVER 1/4" HS GLASS	KURARAY AMERICA, Inc.	SEE SCHEDULE ON SHEET 6

\* LIMITED TO +70 -70 psf. FOR MAXIMUM DESIGN PRESSURE RATING.

TEXAS DEPARTMENT OF INSURANCE -2018

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20-016 DRAWING No. SHEET 5 OF 20

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**MAXIMUM DESIGN PRESSURE RATING (psf) SCHEDULE FOR A GIVEN GLASS TYPE  
AND GLASS PANEL DIMENSIONS "a" (in) x "b" (in) (SEE LEGEND)**

**LAMINATED GLASS TYPE G33 :  
WET GLAZED**

DIMENSION "a"	DIMENSION "b"	MAXIMUM DESIGN PRESSURE RATING(psf)
24"	FROM 24" TO 120"	+70,-80
30"	FROM 30" TO 120"	+70,-80
36"	FROM 36" TO 120"	+70,-80
42"	FROM 42" TO 120"	+70,-80
48"	FROM 48" TO 108"	+70,-80
48"	62.5" TO 114"	+70,-78.5
48"	62.5" TO 120"	+70,-75.7
48"	62.5" TO 120"	+70,-73.7
54"	FROM 54" TO 96"	+70,-80
54"	62.5" TO 102"	+70,-78.3
54"	62.5" TO 108"	+70,-73.7
54"	62.5" TO 112"	+70,-71.2
62.5"	FROM 62.5" TO 90"	+70,-80

**INSULATED GLASS TYPE G37 :  
WET GLAZED**

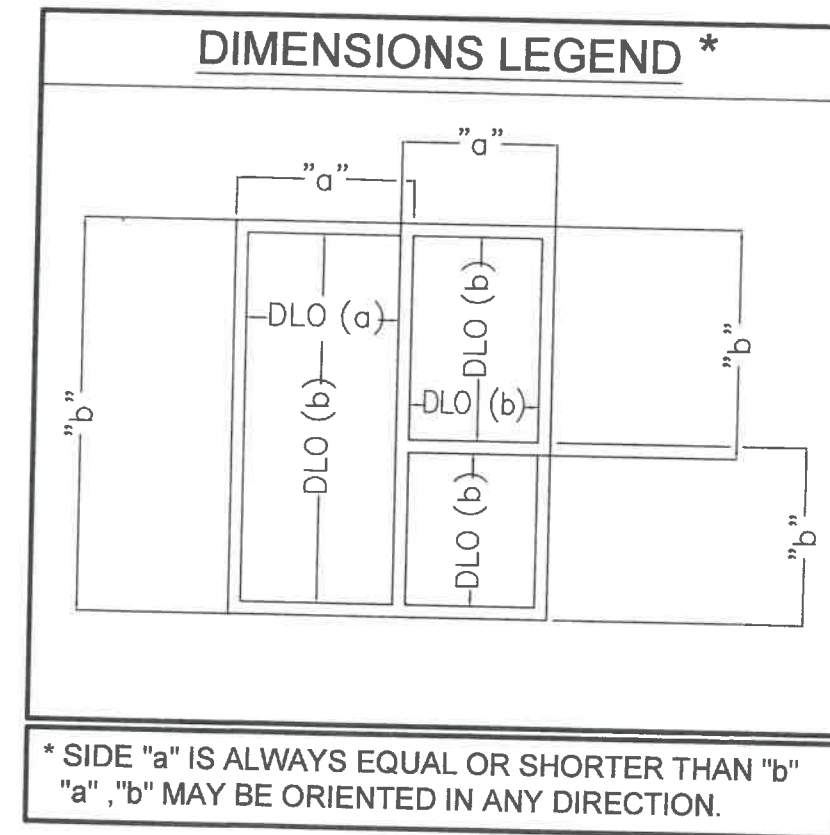
DIMENSION "a"	DIMENSION "b"	MAXIMUM DESIGN PRESSURE RATING(psf)
24"	FROM 24" TO 101"	+90,-90
30"	FROM 30" TO 101"	+90,-90
36"	FROM 36" TO 101"	+90,-90
42"	FROM 42" TO 101"	+90,-90
48"	FROM 48" TO 101"	+90,-90
54"	FROM 54" TO 101"	+90,-90
62.5"	FROM 62.5" TO 101"	+90,-90

**INSULATED GLASS TYPE G4 :  
DRY GLAZED**

DIMENSION "a"	DIMENSION "b"	MAXIMUM DESIGN PRESSURE RATING(psf)
24"	FROM 24" TO 101"	+70,-70
30"	FROM 30" TO 101"	+70,-70
36"	FROM 36" TO 101"	+70,-70
42"	FROM 42" TO 101"	+70,-70
48"	FROM 48" TO 101"	+70,-70
54"	FROM 54" TO 101"	+70,-70
62.5"	FROM 62.5" TO 101"	+70,-70

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

SIDE	MAXIMUM 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"-5.00"	"a"-5.00"
MAX. D.L.O. (b) (LONG SIDE)	"b"-5.00"	"b"-5.00"



TEXAS DEPARTMENT OF INSURANCE - 2018

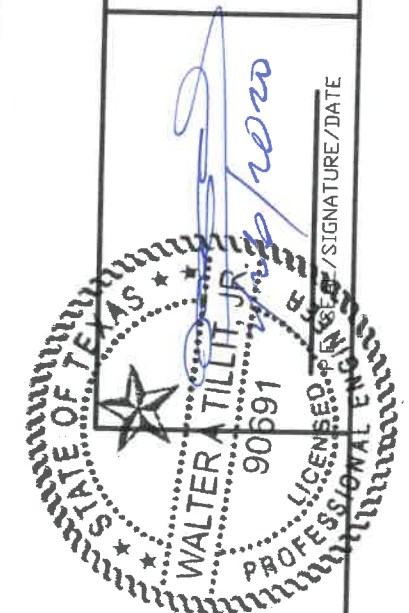
SERIES FC-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

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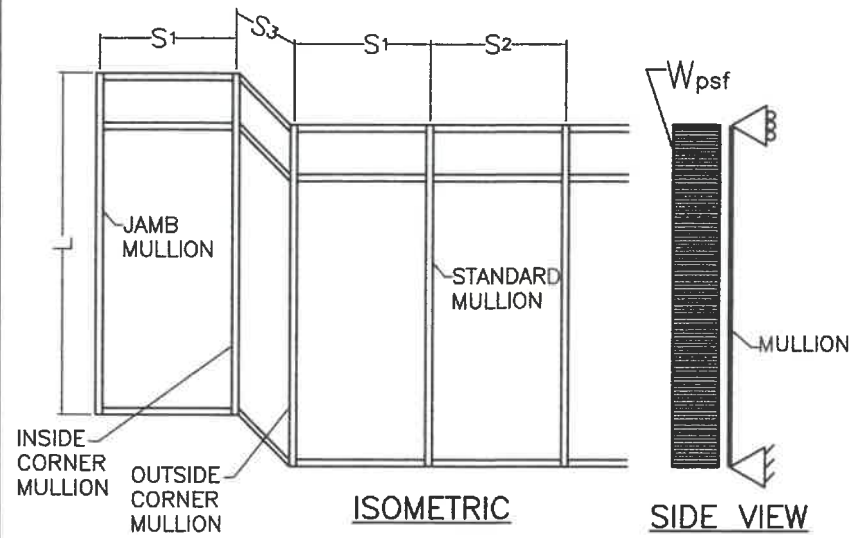
M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING No. SHEET 6 OF 20

REV. NO.	DATE	DESCRIPTION	REV. NO.	DATE	DESCRIPTION
1	OLD 14-086		3	2/7/2020	
2			4		

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Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13780



# STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS

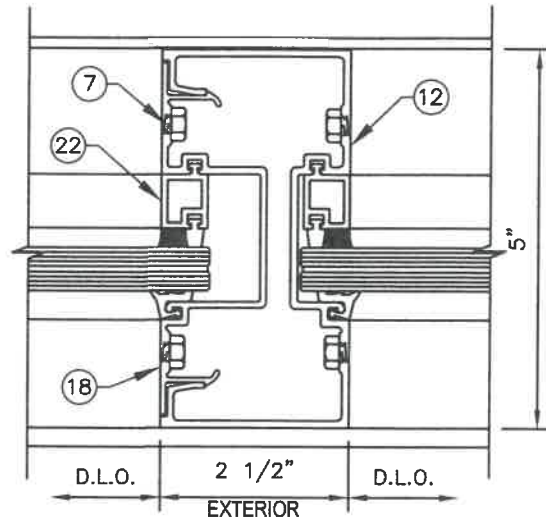


L = MULLION SPAN  
 EFFECTIVE SPACING b =  $\frac{S_1 + S_2}{2}$  (SEE SCHEDULE,) (FOR STANDARD MULLION)  
 EFFECTIVE SPACING b =  $\frac{S_1 + S_3}{2}$  (SEE SCHEDULE) (FOR CORNER MULLION)

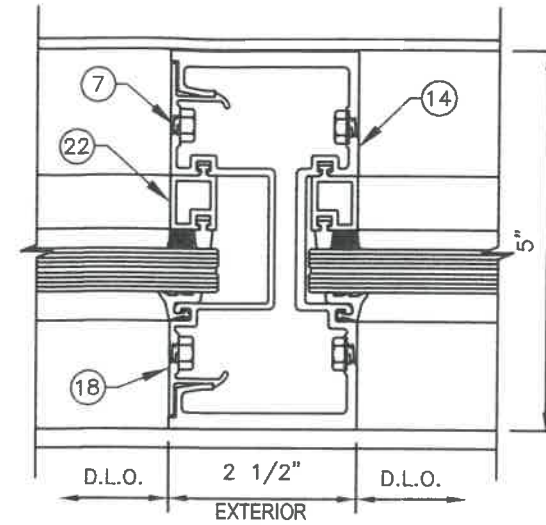
## CASE DEFINITIONS

- CASE 1 : UNREINFORCED STANDARD MULLION A.
- CASE 2 : UNREINFORCED HEAVY MULLION B.
- CASE 3 : REINFORCED STANDARD MULLION C.
- CASE 4 : OUTSIDE/INSIDE CORNER MULLION D.

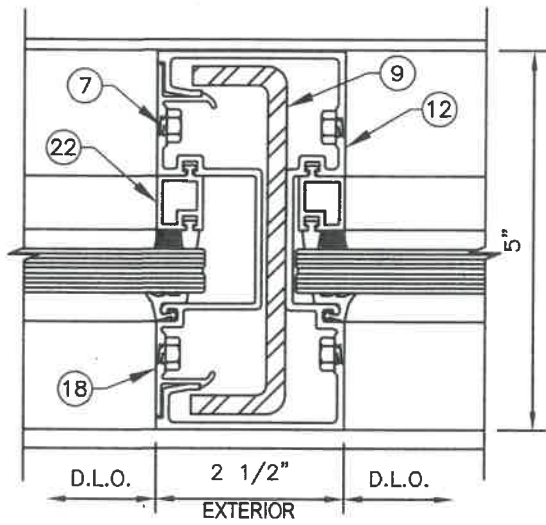
\* MAXIMUM DESIGN PRESSURE RATING FOR STANDARD & CORNER MULLION WILL AUTOMATICALLY QUALIFY DESIGN PRESSURE RATINGS FOR JAMBS W/ ANCHORAGE FOR ANY GIVEN MULLION SPACING. FOR MAX. JAMB SPAN W/O ANCHORAGE SEE SCHEDULE ON SHEET 9. JAMB ANCHORAGE (WHEN USED) SHALL BE PERFORMED AT MID HEIGHT OF JAMBS.



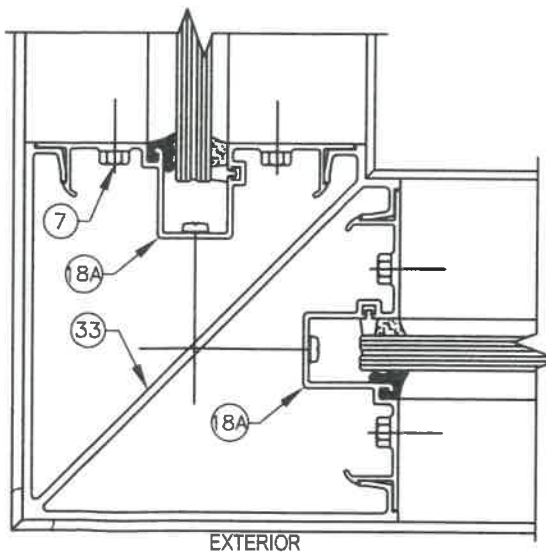
**A** CASE:1  
STANDARD MULLION  
⑫ + ⑱ + ⑳



**B** CASE:2  
HEAVY MULLION  
⑭ + ⑱ + ⑳



**C** CASE:3  
STANDARD MULLION  
⑫ + ⑱ + ⑳ W/  
STEEL REINFORCEMENT ⑨



**D** CASE:4  
OUTSIDE (SHOWN)/INSIDE  
CORNER MULLION  
⑳ + ⑳A

MAXIMUM DESIGN PRESSURE RATING FOR STANDARD, HEAVY & CORNER MULLIONS \*  
 MAXIMUM MULLION SPAN "L"(FT)  
 SCHEDULE FOR A GIVEN DESIGN PRESSURE RATING AND A GIVEN MULLION EFFECTIVE SPACING "b"

MAXIMUM DESIGN PRESSURE RATING (psf)	EFFECTIVE SPACING "b" (Ft-in)	CASE 1 UNREINFORCED STANDARD MULLION A		CASE 2 UNREINFORCED HEAVY MULLION B		CASE 3 REINFORCED STANDARD MULLION C		CASE 4 OUTSIDE/INSIDE CORNER MULLION D	
		"L" (FT-in)	"L" (FT-in)	"L" (FT-in)	"L" (FT-in)	"L" (FT-in)	"L" (FT-in)		
60.0	3'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
65.0	3'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	9'-9"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	9'-4"	10'-0"	10'-0"	10'-0"	9'-11"	10'-0"	10'-0"
70.0	3'-6"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	-	9'-11"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	-	9'-6"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
75.0	3'-6"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	-	9'-8"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	-	9'-2"	10'-0"	10'-0"	10'-0"	9'-10"	10'-0"	10'-0"
80.0	3'-6"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	-	9'-11"	10'-0"	10'-0"	10'-0"	9'-7"	10'-0"	10'-0"
	4'-6"	-	8'-11"	10'-0"	10'-0"	10'-0"	9'-10"	10'-0"	10'-0"
85.0	3'-6"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
90.0	3'-6"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	-	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"

TEXAS DEPARTMENT OF INSURANCE - 2018

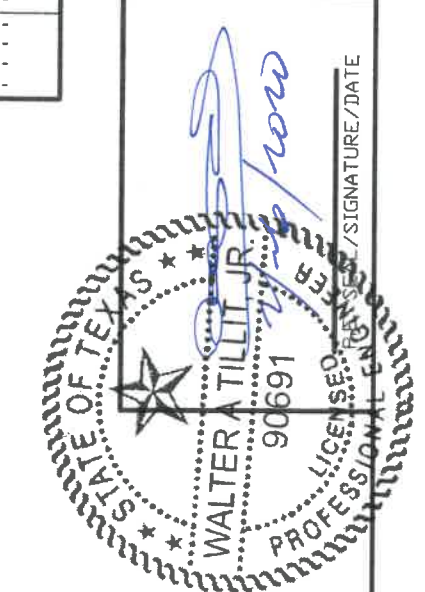
M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING No. SHEET 7 OF 20

Series FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

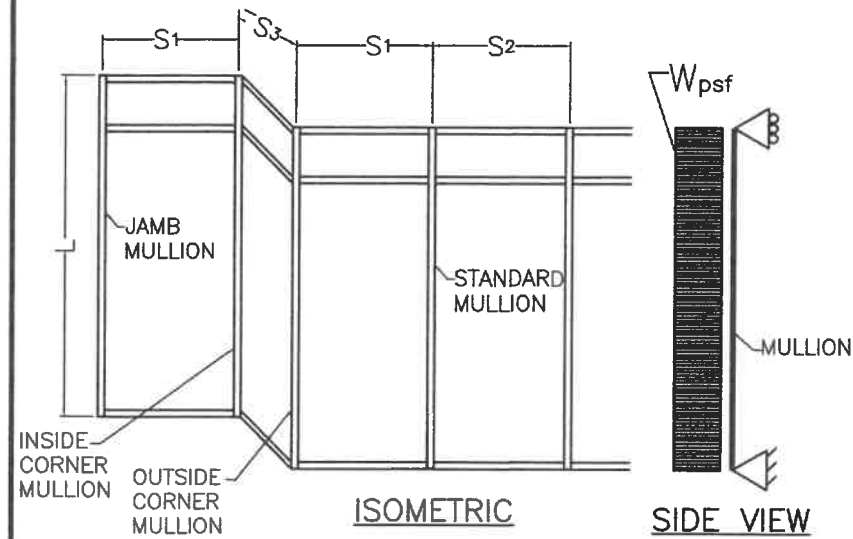
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REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 14-088	2/3/2020	3		

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 PROFESSIONAL ENGINEER  
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 Phone : (305) 871-1530  
 Fax : (305) 871-1531  
 TEXAS LIC. # 90691  
 FIRM REGISTRATION # F-13790



# STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS



L = MULLION SPAN

EFFECTIVE SPACING  $b = \frac{S_1 + S_2}{2}$  (SEE SCHEDULE,) (FOR STANDARD MULLION)

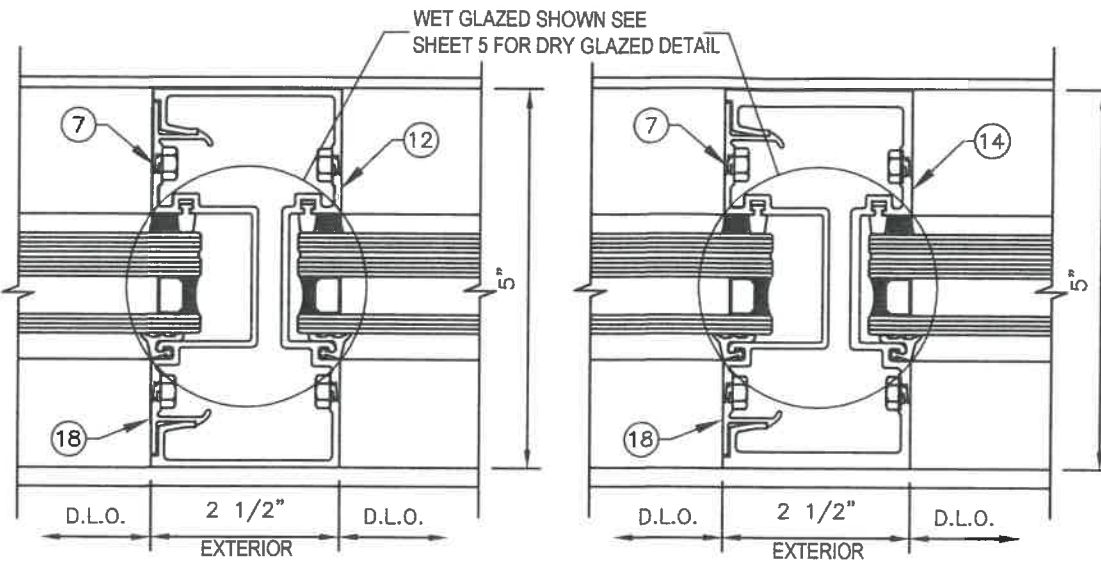
EFFECTIVE SPACING  $b = \frac{S_1 + S_3}{2}$  (SEE SCHEDULE) (FOR CORNER MULLION)

## CASE DEFINITIONS

- CASE 1 : UNREINFORCED STANDARD MULLION A'
- CASE 2 : UNREINFORCED HEAVY MULLION B'
- CASE 3 : REINFORCED STANDARD MULLION C'
- CASE 4 : OUTSIDE/INSIDE CORNER MULLION D'

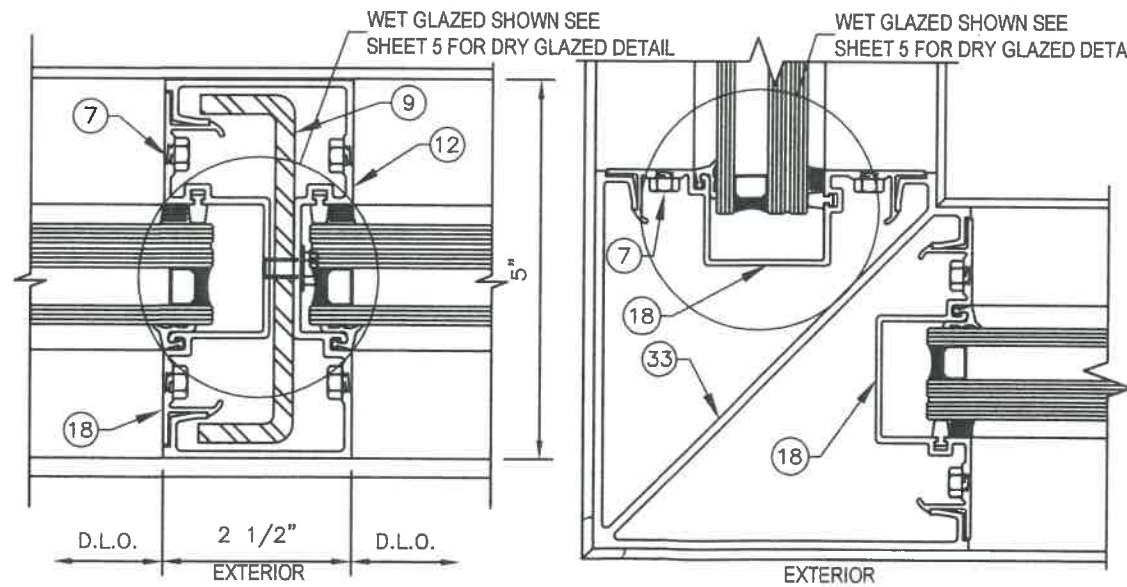
\* MAXIMUM DESIGN PRESSURE RATING FOR STANDARD & CORNER MULLION WILL AUTOMATICALLY QUALIFY DESIGN PRESSURE RATINGS FOR JAMBS W/ ANCHORAGE FOR ANY GIVEN MULLION SPACING. FOR MAX. JAMB SPAN W/O ANCHORAGE SEE SCHEDULE ON SHEET 9. JAMB ANCHORAGE (WHEN USED) SHALL BE PERFORMED AT MID HEIGHT OF JAMBS.

\*\* MAXIMUM DESIGN PRESSURE RATING FOR DRY GLAZED MULLION INSTALLATIONS IS +70, -70 psf.



**A'** CASE:1  
STANDARD MULLION  
⑫ + ⑱

**B'** CASE:2  
HEAVY MULLION  
⑭ + ⑱



**C'** CASE:3  
STANDARD MULLION  
⑫ + ⑱ W/  
STEEL REINFORCEMENT ⑨

**D'** CASE:4  
OUTSIDE (SHOWN)/INSIDE  
CORNER MULLION  
⑬ + ⑱

MAXIMUM DESIGN PRESSURE RATING FOR STANDARD, HEAVY & CORNER MULLIONS \*  
MAXIMUM MULLION SPAN "L"(FT)  
SCHEDULE FOR A GIVEN DESIGN PRESSURE RATING AND A GIVEN MULLION EFFECTIVE SPACING "b"

MAXIMUM DESIGN PRESSURE RATING (psf)	EFFECTIVE SPACING "b" (Ft-in)	CASE 1 UNREINFORCED		CASE 2 UNREINFORCED		CASE 3 REINFORCED		CASE 4 OUTSIDE/INSIDE	
		STANDARD MULLION A' "L" (FT-in)	HEAVY MULLION B' "L" (FT-in)	STANDARD MULLION C' "L" (FT-in)	CORNER MULLION D' "L" (FT-in)	STANDARD MULLION C' "L" (FT-in)	CORNER MULLION D' "L" (FT-in)	STANDARD MULLION C' "L" (FT-in)	CORNER MULLION D' "L" (FT-in)
60.0	3'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
65.0	3'-6"	7'-5"	9'-8"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	9'-8"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	9'-8"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
70.0**	3'-6"	7'-5"	9'-4"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	9'-4"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	9'-4"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
75.0	3'-6"	7'-5"	9'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	9'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	9'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
80.0	3'-6"	7'-5"	8'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	8'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	8'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
85.0	3'-6"	7'-5"	8'-11"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	8'-11"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	8'-11"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
90.0	3'-6"	7'-5"	8'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	8'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-6"	7'-5"	8'-5"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"

TEXAS DEPARTMENT OF INSURANCE - 2018

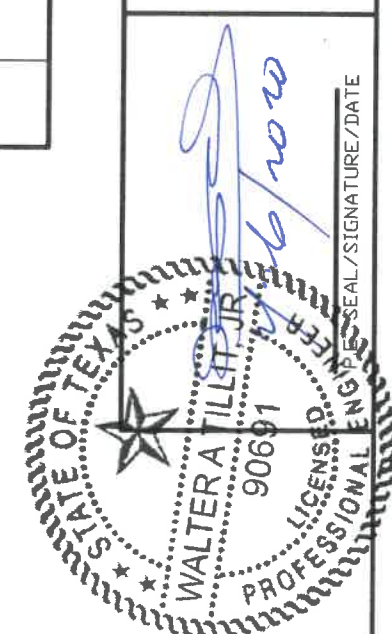
M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING NO. SHEET 8 OF 20

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REV. NO. DATE DESCRIPTION

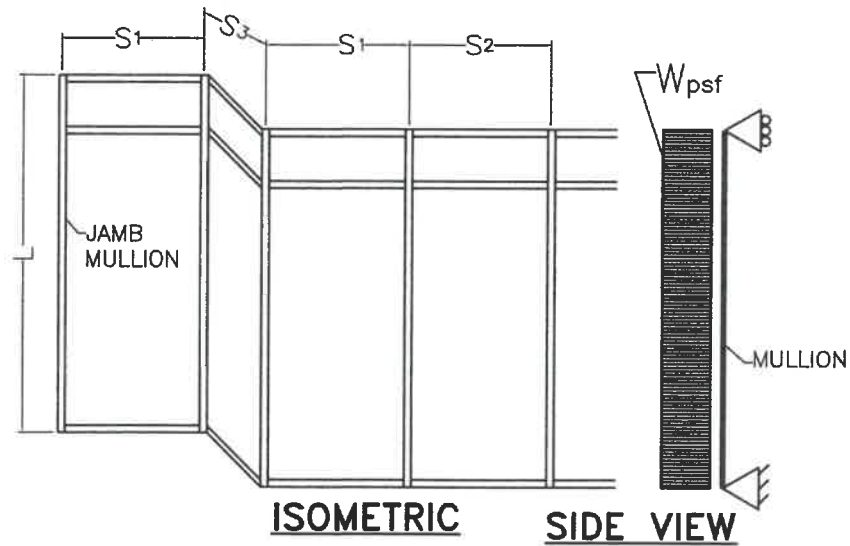
1	2/3/2020	1	1
2	12/1/2020	3	4

WALTER A. TILLIT JR. P.E.  
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TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790





# REINFORCED JAMB MULLION W/ LAMINATED OR INSULATED GLASS (WET GLAZED) \*



L = MULLION SPAN

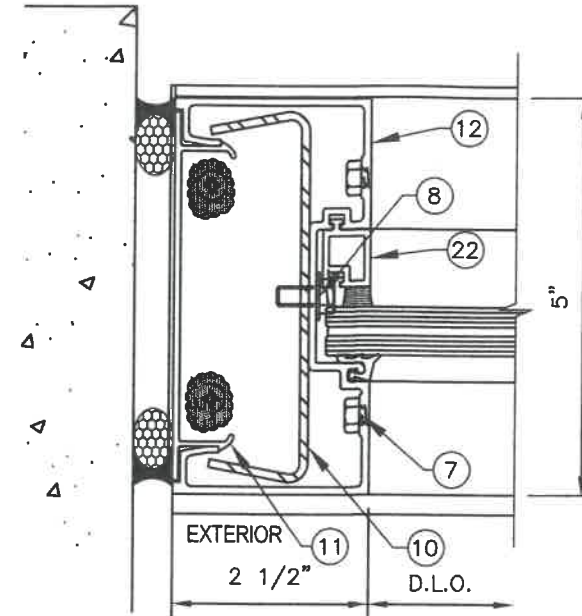
$$\text{EFFECTIVE SPACING } b = \frac{S_1}{2} \text{ (SEE SCHEDULE)}$$

## CASE DEFINITIONS

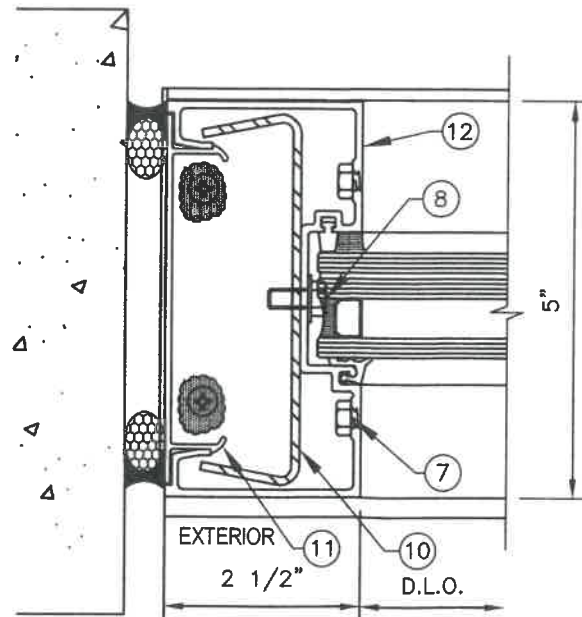
CASE 1 : REINFORCED JAMB MULLION FOR LAMINATED GLASS E.

CASE 2 : REINFORCED JAMB MULLION FOR INSULATED GLASS E'.

\* SEE SHEETS 13 & 14 FOR SPECS FOR JAMB ATTACHED TO EXISTING WALL W/WET OR DRY GLAZED WITH LAMINATED OR INSULATED GLASS.  
 -JAMBS ATTACHED TO EXISTING WALL HOLDING INSULATED GLASS MAY BE WET OR DRY GLAZED.  
 -JAMBS ATTACHED TO EXISTING WALL HOLDING LAMINATED GLASS MUST ALWAYS BE WET GLAZED.



**E** CASE:1  
 JAMB MULLION  
 (12) + (11) + (22) W/  
 STEEL REINFORCEMENT (10)



**E'** CASE:2  
 JAMB MULLION  
 (12) + (11) W/  
 STEEL REINFORCEMENT (10)

MAXIMUM DESIGN PRESSURE RATING FOR REINFORCED JAMB MULLION UNATTACHED  
 MAXIMUM JAMB MULLION SPAN "L"(FT)  
 SCHEDULE FOR A GIVEN DESIGN PRESSURE RATING AND A GIVEN JAMB MULLION EFFECTIVE SPACING "b"

MAXIMUM DESIGN PRESSURE RATING (psf)	EFFECTIVE SPACING "b" (Ft-in)	REINFORCED JAMB MULLION	
		CASE 1 REINFORCED JAMB MULLION E "L" (FT-in)	CASE 2 REINFORCED JAMB MULLION E' "L" (FT-in)
60.0	1'-9"	10'-0"	10'-0"
	2'-0"	10'-0"	10'-0"
	2'-3"	10'-0"	10'-0"
	2'-6"	10'-0"	10'-0"
65.0	1'-9"	10'-0"	10'-0"
	2'-0"	10'-0"	10'-0"
	2'-3"	10'-0"	10'-0"
	2'-6"	10'-0"	10'-0"
70.0	1'-9"	10'-0"	10'-0"
	2'-0"	10'-0"	10'-0"
	2'-3"	10'-0"	10'-0"
	2'-6"	10'-0"	10'-0"
75.0	1'-9"	10'-0"	10'-0"
	2'-0"	10'-0"	10'-0"
	2'-3"	10'-0"	10'-0"
	2'-6"	10'-0"	10'-0"
80.0	1'-9"	10'-0"	10'-0"
	2'-0"	10'-0"	10'-0"
	2'-3"	10'-0"	10'-0"
	2'-6"	10'-0"	10'-0"
85.0	1'-9"	10'-0"	10'-0"
	2'-0"	10'-0"	10'-0"
	2'-3"	10'-0"	10'-0"
	2'-6"	10'-0"	10'-0"
90.0	1'-9"	10'-0"	10'-0"
	2'-0"	10'-0"	10'-0"
	2'-3"	10'-0"	10'-0"
	2'-6"	10'-0"	10'-0"

TEXAS DEPARTMENT OF INSURANCE -2018

SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

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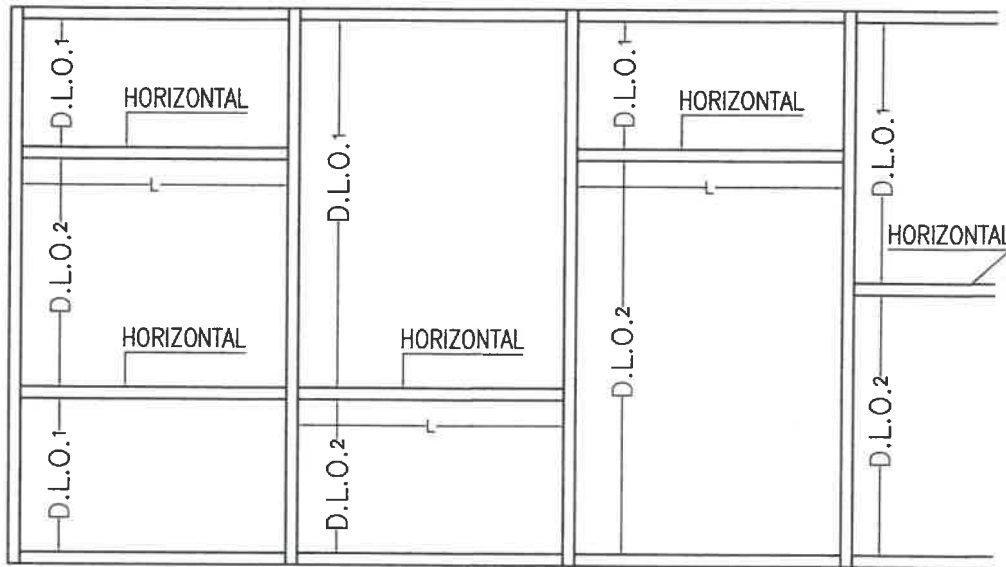
M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING No. SHEET 9 OF 20

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 14-088	2/3/2020	3		
2			4		

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 FIRM REGISTRATION # F-13790



# HORIZONTAL W/ LAMINATED OR INSULATED GLASS



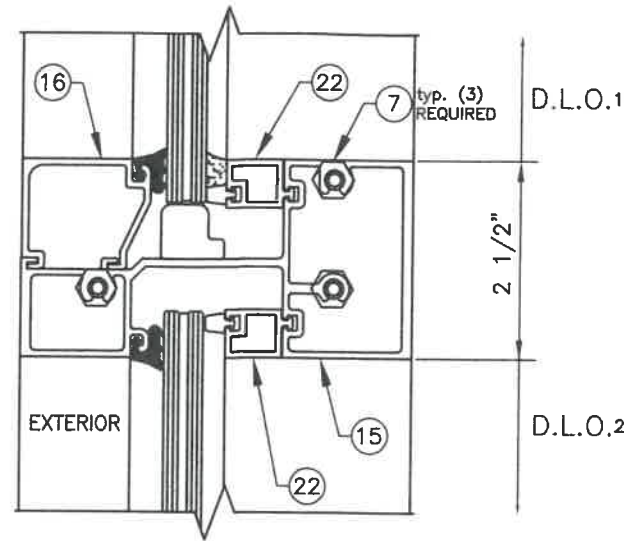
**WINDOW WALL ELEVATION W/ HORIZONTALS**

"L" = MAXIMUM SPAN FOR HORIZONTAL

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

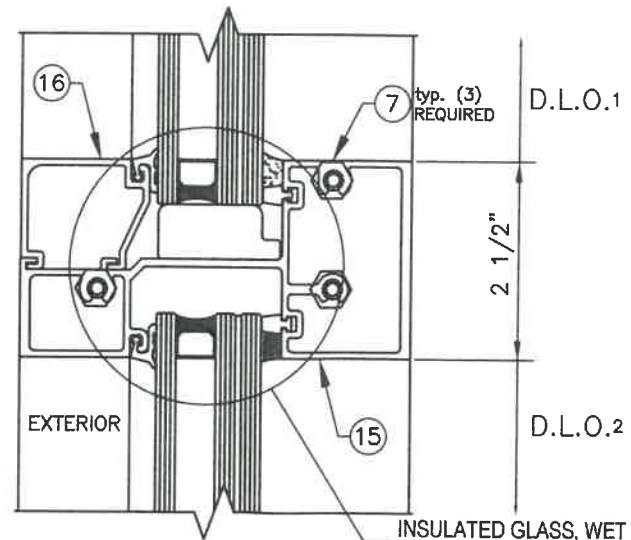
### CASE DEFINITIONS

- CASE 1 : UNREINFORCED HORIZONTAL FOR LAMINATED GLASS F.
- CASE 2 : UNREINFORCED HORIZONTAL FOR INSULATED GLASS F'.



**F** CASE:1  
STANDARD MULLION  
⑮ + ⑯ + ⑰

7  
HORIZONTAL



**F'** CASE:2  
HEAVY MULLION  
⑮ + ⑯

7A  
HORIZONTAL

INSULATED GLASS, WET  
GLAZED SHOWN, SEE SHEET  
5 FOR INSULATED GLASS,  
DRY GLAZED

## MAXIMUM DESIGN PRESSURE RATING FOR HORIZONTAL MAXIMUM SPAN "L"(FT) SCHEDULE FOR A GIVEN DESIGN PRESSURE RATING AND A GIVEN EFFECTIVE SPACING "b"

MAXIMUM DESIGN PRESSURE RATING (psf)	EFFECTIVE DAY LIGHT OPENING "DLO"(FT-in)	CASE 1 MAXIMUM UNREINFORCED		CASE 2 MAXIMUM UNREINFORCED	
		HORIZONTAL "L" (FT-in)	HORIZONTAL "L" (FT-in)	HORIZONTAL "L" (FT-in)	HORIZONTAL "L" (FT-in)
90.0	2' - 0"	5' - 0"	5' - 0"	5' - 0"	5' - 0"
	2' - 6"	5' - 0"	5' - 0"	5' - 0"	5' - 0"
	3' - 0"	5' - 0"	5' - 0"	5' - 0"	5' - 0"
	3' - 6"	5' - 0"	5' - 0"	5' - 0"	5' - 0"
	4' - 0"	5' - 0"	5' - 0"	5' - 0"	5' - 0"
	5' - 0"	5' - 0"	5' - 0"	5' - 0"	5' - 0"

TEXAS DEPARTMENT OF INSURANCE - 2018

**Series FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS**

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M.P. DRAWN BY: DATE: 2/3/2020  
DRAWING No. 20-016  
SHEET 10 OF 20

REV. NO. 1  
DESCRIPTION OLD 14-088  
DATE 2/3/2020  
REV. NO. 2  
DESCRIPTION  
DATE

WALTER A. TILLIT Jr. P.E.  
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TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790

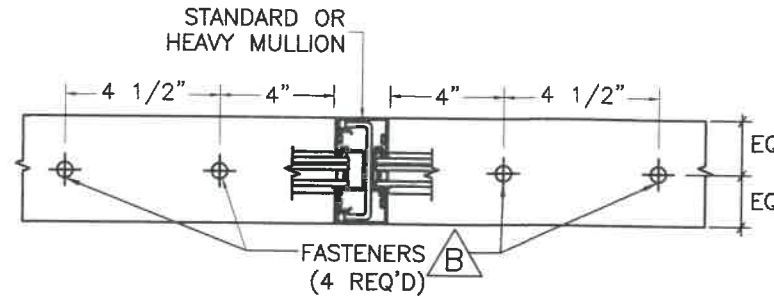


# MULLION CONNECTIONS

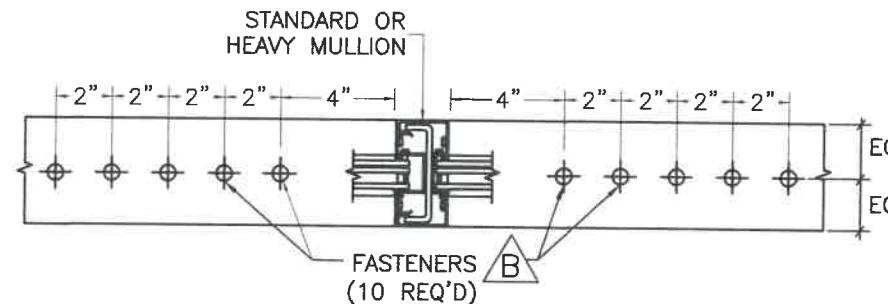
## MAXIMUM DESIGN PRESSURE RATING FOR MULLION CONNECTIONS



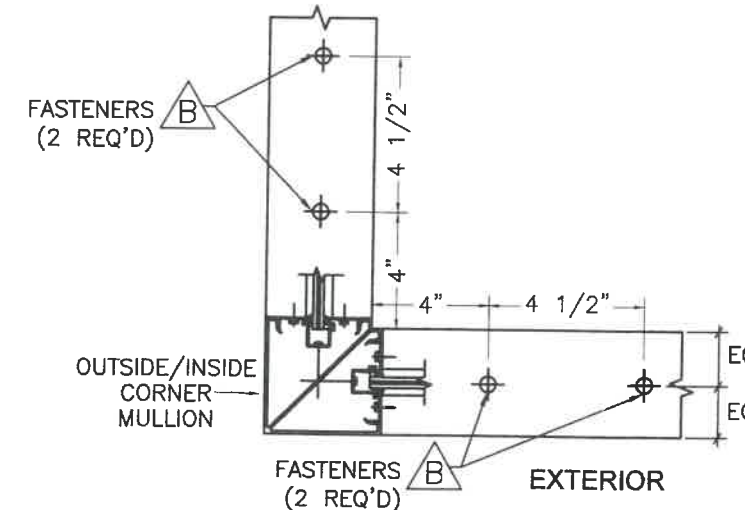
MAXIMUM MULLION SPAN "L" (Ft-in)	EFFECTIVE SPACING FOR MULLION "b" (Ft-in)	EFFECTIVE SPACING FOR JAMB MULLION "b" (Ft-in)	MAXIMUM DESIGN PRESSURE RATING (psf)					
			POURED CONCRETE (Min. fc = 3ksi) SUBSTRATE			1/4" Min. THK ASTM A-36 STEEL SUBSTRATE	DOUBLE BUCK 3" Min. THK. (G=0.55) WOOD SUBSTRATE	DOUBLE BUCK 3" Min. THK. (G=0.55) WOOD SUBSTRATE
			A	B	C	D	E	E'
6' - 2"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	90.0	90.0
6' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	90.0	90.0
7' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	90.0	90.0
7' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	90.0	90.0
8' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	90.0	90.0
8' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	90.0	90.0
9' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	90.0	90.0
9' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	90.0	90.0	89.5	90.0
10' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0
	5' - 0"	2' - 6"	90.0	90.0	87.5	90.0	85.0	90.0



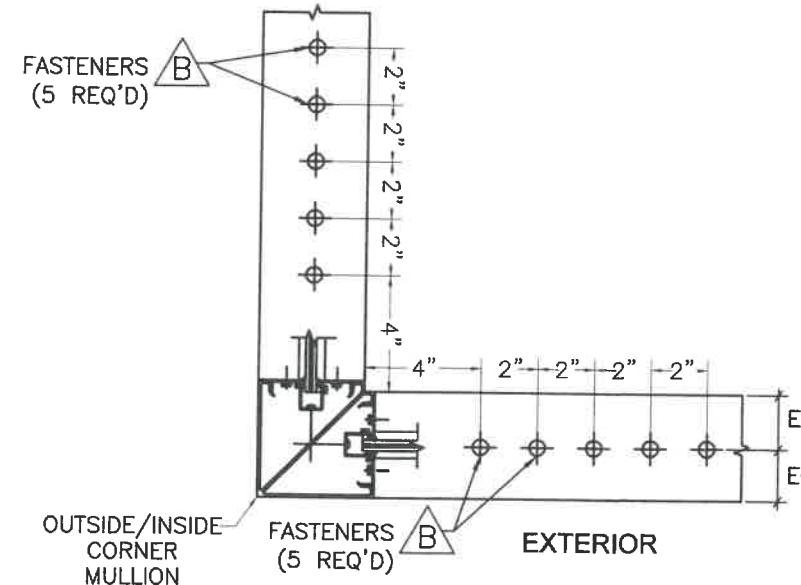
SCHMATIC CONCRETE & STEEL CONNECTION DETAIL (AT STANDARD OR HEAVY MULLION)



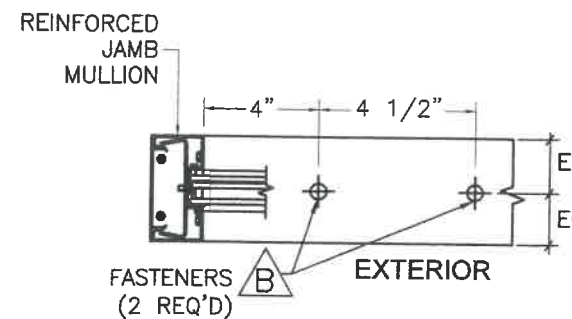
SCHMATIC WOOD CONNECTION DETAIL (AT STANDARD OR HEAVY MULLION)



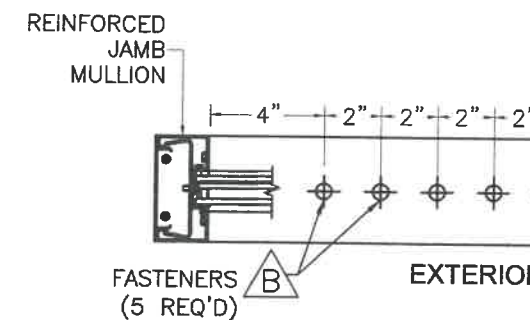
SCHMATIC CONCRETE & STEEL CONNECTION DETAIL (AT OUTSIDE/INSIDE CORNER MULLION)



SCHMATIC WOOD CONNECTION DETAIL (AT OUTSIDE/INSIDE CORNER MULLION)



SCHMATIC CONCRETE & STEEL CONNECTION DETAIL (AT JAMB MULLION)



SCHMATIC WOOD CONNECTION DETAIL (AT JAMB MULLION)

## FASTENERS TYPES AND SUBSTRATES REQUIREMENTS W/ 4 1/2" MIN. E.D., BEYOND ANY FINISH MATERIAL

- A - 3/8"Ø HILTI KWIK BOLT TZ ANCHOR W/ 2" Min. EMBEDMENT INTO 6" Min. THICK POURED CONCRETE (Min. fc = 3 ksi).
- B - 3/8"Ø POWER FASTENERS TAPPER ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. fc = 3 ksi)
- C - 3/8"Ø HILTI HUS-H SCREW ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. fc = 3 ksi)
- D - 3/8"Ø TYPE "F" BOLT OR 3/8"Ø -16 ELCO CONSTRUCTION PRODUCTS DRILL FLEX SCREW TO 1/4" Min. THK. ASTM A-36 STEEL.
- E - 3/8"Ø LAG SCREWS TO DOUBLE 2 x WOOD BUCK (G=0.55) W/ 3" Min. PENETRATION INTO WOOD.
- E' - 1/2"Ø LAG SCREWS TO DOUBLE 2 x WOOD BUCK (G=0.55) W/ 3" Min. PENETRATION INTO WOOD.

TEXAS DEPARTMENT OF INSURANCE - 2018

M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING No. SHEET 11 OF 20

SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MULLION IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

Oldcastle BuildingEnvelope  
803 AIRPORT RD. TERRELL, TX 75160  
www.OldcastleBE.com-Phone 800-869-4567

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	GLD 14-068	2/3/2020	3		
2			4		

WALTER A. TILLIT JR. P.E.  
PROFESSIONAL ENGINEER  
6355 N.W. 36th. STREET, STE. 305  
VIRGINIA GARDENS, FL 33166  
Phone : (305) 871-1530  
Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790

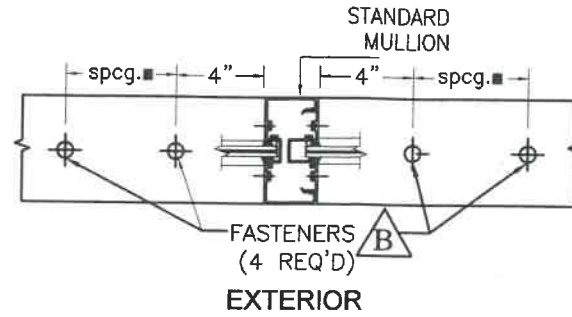


**MAXIMUM DESIGN PRESSURE RATING  
FOR MULLION CONNECTIONS**

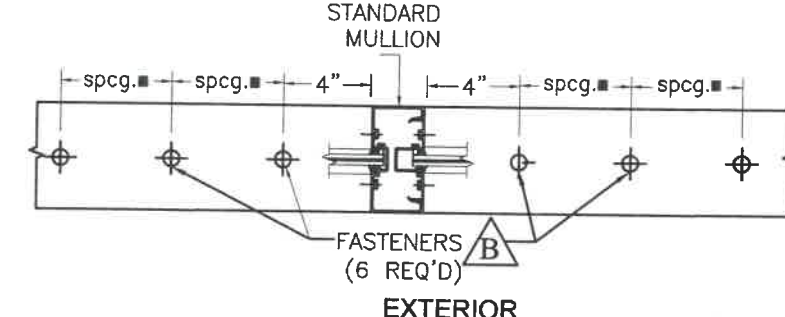


**MULLION CONNECTIONS (CONTINUED)**

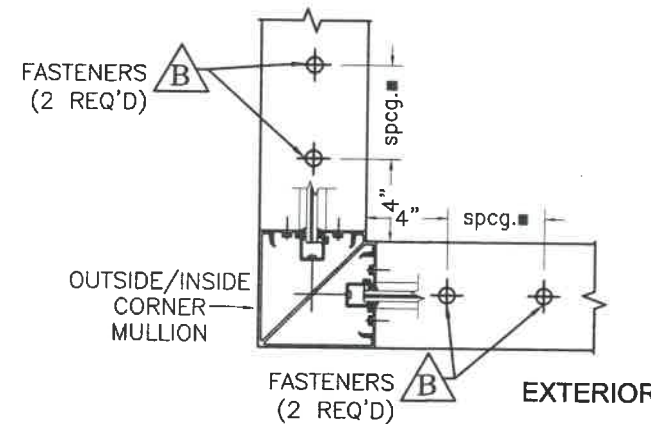
MAXIMUM MULLION SPAN "L" (Ft-in)	EFFECTIVE SPACING FOR MULLION "b" (Ft-in)	EFFECTIVE SPACING FOR JAMB MULLION "b" (Ft-in)	MAXIMUM DESIGN PRESSURE RATING (psf)						
			POURED CONCRETE (Min. fc = 3ksi) SUBSTRATE			GROUT FILLED CONCRETE BLOCK SUBSTRATE		12 GAGE (0.108" Min. THK) Fy=33 ksi STEEL SUBSTRATE	
			F	G	H	G'	H'	I	
6' - 2"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 6"	2' - 3"	90.0	90.0	90.0	90.0	90.0	90.0	
	5' - 0"	2' - 6"	90.0	90.0	90.0	87.6	90.0	90.0	
6' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 6"	2' - 3"	90.0	90.0	90.0	90.0	90.0	90.0	
	5' - 0"	2' - 6"	90.0	90.0	90.0	83.1	90.0	90.0	
7' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 6"	2' - 3"	90.0	90.0	90.0	85.7	90.0	90.0	
	5' - 0"	2' - 6"	90.0	90.0	90.0	77.1	90.0	90.0	
7' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 6"	2' - 3"	90.0	90.0	90.0	80.0	90.0	90.0	
	5' - 0"	2' - 6"	90.0	90.0	90.0	72.0	90.0	90.0	
8' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	84.4	90.0	90.0	
	4' - 6"	2' - 3"	90.0	90.0	90.0	75.0	90.0	90.0	
	5' - 0"	2' - 6"	90.0	90.0	90.0	67.5	90.0	90.0	
8' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	90.0	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	79.4	90.0	90.0	
	4' - 6"	2' - 3"	90.0	90.0	90.0	70.6	90.0	90.0	
	5' - 0"	2' - 6"	90.0	85.2	90.0	63.5	90.0	90.0	
9' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	85.7	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	75.0	90.0	90.0	
	4' - 6"	2' - 3"	90.0	89.4	90.0	66.7	90.0	90.0	
	5' - 0"	2' - 6"	90.0	80.4	90.0	60.0	90.0	90.0	
9' - 6"	3' - 6"	1' - 9"	90.0	90.0	90.0	81.2	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	71.1	90.0	90.0	
	4' - 6"	2' - 3"	90.0	84.7	90.0	63.2	90.0	90.0	
	5' - 0"	2' - 6"	90.0	76.2	90.0	56.8	90.0	90.0	
10' - 0"	3' - 6"	1' - 9"	90.0	90.0	90.0	77.1	90.0	90.0	
	4' - 0"	2' - 0"	90.0	90.0	90.0	67.5	90.0	90.0	
	4' - 6"	2' - 3"	90.0	80.4	90.0	60.0	90.0	90.0	
	5' - 0"	2' - 6"	85.7	72.4	87.5	54.0	90.0	90.0	



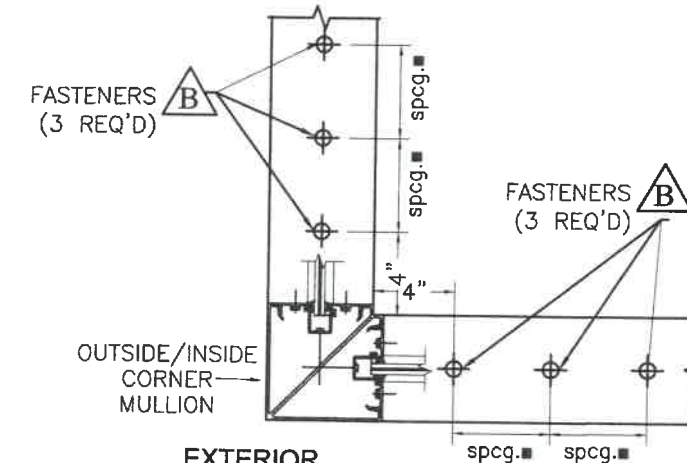
**SCHEMATIC CONCRETE & 12 GAGE STEEL CONNECTION DETAIL (AT STANDARD MULLION)**



**SCHEMATIC GROUT-FILLED CONCRETE BLOCK CONNECTION DETAIL (AT STANDARD MULLION)**



**SCHEMATIC CONCRETE & 12 GAGE STEEL CONNECTION DETAIL (AT OUTSIDE/INSIDE CORNER MULLION)**



**SCHEMATIC GROUT-FILLED CONCRETE BLOCK CONNECTION DETAIL (AT OUTSIDE/INSIDE CORNER MULLION)**



**FASTENERS TYPES AND SUBSTRATES REQUIREMENTS  
W/ 2 3/4" MIN. E.D., BEYOND ANY FINISH MATERIAL**

- F - 3/8"Ø HILTI KWIK BOLT TZ ANCHOR W/ 2" Min. EMBEDMENT INTO 6" Min. THICK POURED CONCRETE (Min. fc = 3 ksi).
- G - 3/8"Ø POWER FASTENERS TAPPER ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. fc = 3 ksi).
- H - 3/8"Ø HILTI HUS-H SCREW ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. fc = 3 ksi).
- G' - 3/8"Ø POWER FASTENERS TAPPER ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO GROUT FILLED CONCRETE BLOCK.
- H' - 3/8"Ø HILTI HUS-H SCREW ANCHOR W/ 2 3/4" Min. EMBEDMENT INTO GROUT FILLED CONCRETE BLOCK.
- I - 3/8"Ø TYPE "F" BOLT OR 3/8"Ø -13 SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER & 2" MIN. EDGE DISTANCE TO 12 GAGE (0.108" MIN THK.) Fy=33 ksi STEEL.

**MIN. SPACING (spcg.) REQUIRED FOR DIFFERENT SUBSTRATES**

- POURED CONCRETE: 4 1/2" MIN. O.C.
- GROUT FILLED C.B.: 8" MIN. O.C.
- STEEL: 4 1/2" MIN. O.C.

TEXAS DEPARTMENT OF INSURANCE - 2018

**Oldcastle BuildingEnvelope**  
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www.OldcastleBE.com-Phone 800-869-4567

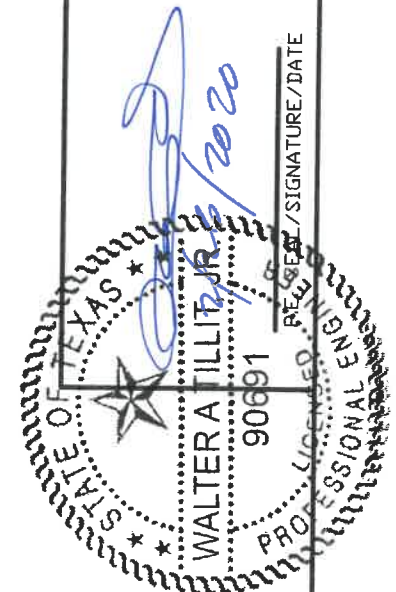
M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING NO. SHEET 12 OF 20

DATE: 2/3/2020

REV. NO. 3

DESCRIPTION: SERIES FC-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM WITH SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

WALTER A. TILLIT JR., P.E.  
PROFESSIONAL ENGINEER  
6355 N.W. 36th. STREET, STE. 305  
VIRGINIA GARDENS, FL 33166  
Phone : (305) 871-1530  
Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790



MAXIMUM DESIGN PRESSURE RATING SHEDULE FOR JAMBS FASTENED W/ 3/8"Ø FASTENERS\*

SEE SHEET 9 FOR DEFINITION OF "b"

MAXIMUM MULLION SPAN "L" (Ft-in)	EFFECTIVE SPACING FOR JAMB MULLION "b" (Ft-in)	OPTION #1 : (2) FASTENERS CONNECTION								OPTION #2 : (3) FASTENERS CONNECTION								OPTION #3 : (4) FASTENERS CONNECTION								OPTION #4 : (5) FASTENERS CONNECTION							
		POURED CONCRETE				GROUT FILLED C. BLOCK				POURED CONCRETE				GROUT FILLED C. BLOCK				POURED CONCRETE				GROUT FILLED C. BLOCK				POURED CONCRETE				GROUT FILLED C. BLOCK			
		J	K	L	M	N	O	P	Q	J	K	L	M	N	O	P	Q	J	K	L	M	N	O	P	Q	J	K	L	M	N	O	P	Q
6' - 2"	1' - 9"	90.0	90.0	85.3	83.4	90.0	85.3	90.0	59.9	90.0	90.0	90.0	90.0	90.0	90.0	89.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	90.0	90.0	74.6	73.0	90.0	74.6	90.0	52.4	90.0	90.0	90.0	90.0	90.0	90.0	78.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	82.3	90.0	66.3	64.9	82.3	66.3	90.0	46.6	90.0	90.0	90.0	90.0	90.0	90.0	69.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
6' - 6"	1' - 9"	90.0	90.0	80.9	79.1	90.0	80.9	90.0	56.6	90.0	90.0	90.0	90.0	90.0	90.0	85.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	87.9	90.0	70.8	69.2	87.9	70.8	90.0	49.7	90.0	90.0	90.0	90.0	90.0	90.0	74.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	78.1	88.4	62.9	61.5	78.1	62.9	88.4	44.2	90.0	90.0	90.0	90.0	90.0	90.0	66.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
7' - 0"	1' - 9"	90.0	90.0	75.1	73.5	90.0	75.1	90.0	52.8	90.0	90.0	90.0	90.0	90.0	90.0	79.2	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	81.6	90.0	65.7	64.3	81.6	65.7	90.0	46.2	90.0	90.0	90.0	90.0	90.0	90.0	69.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	72.5	82.1	58.4	57.1	72.5	58.4	82.1	41.1	90.0	90.0	87.7	85.7	90.0	87.7	90.0	61.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
7' - 6"	1' - 9"	87.0	90.0	70.1	68.6	87.0	70.1	90.0	49.3	90.0	90.0	90.0	90.0	90.0	90.0	73.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	76.2	86.2	61.4	60.0	76.2	61.4	86.2	43.1	90.0	90.0	90.0	90.0	90.0	90.0	64.7	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	67.7	76.6	54.5	53.3	67.7	54.5	76.6	38.3	90.0	90.0	81.8	80.0	90.0	81.8	90.0	57.5	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
8' - 0"	1' - 9"	81.6	90.0	65.7	64.3	81.6	65.7	90.0	46.2	90.0	90.0	90.0	90.0	90.0	90.0	69.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	71.4	80.8	57.5	56.3	71.4	57.5	80.8	40.4	90.0	90.0	86.3	84.4	90.0	86.3	90.0	60.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	63.5	71.8	51.1	50.0	63.5	51.1	71.8	35.9	90.0	90.0	76.7	75.0	90.0	76.7	90.0	53.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
8' - 6"	1' - 9"	76.8	86.9	61.9	60.5	76.8	61.9	86.9	43.5	90.0	90.0	90.0	90.0	90.0	90.0	65.2	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	67.2	76.1	54.1	52.9	67.2	54.1	76.1	38.0	90.0	90.0	81.2	79.4	90.0	81.2	90.0	57.1	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	59.7	67.6	48.1	47.1	59.7	48.1	67.6	33.8	89.6	90.0	72.2	70.6	89.6	72.2	90.0	50.7	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
9' - 0"	1' - 9"	72.5	82.1	58.4	57.1	72.5	58.4	82.1	41.1	90.0	90.0	87.7	85.7	90.0	87.7	90.0	61.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	63.5	71.8	51.1	50.0	63.5	51.1	71.8	35.9	90.0	90.0	76.6	75.0	90.0	76.6	90.0	53.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	56.4	63.9	45.5	44.4	56.4	45.5	63.9	31.9	84.6	90.0	68.2	66.7	84.6	68.2	90.0	47.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
9' - 6"	1' - 9"	68.7	77.8	55.4	54.1	68.7	55.4	77.8	38.9	90.0	90.0	83.0	81.2	90.0	83.0	90.0	58.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	60.1	68.1	48.4	47.4	60.1	48.4	68.1	34.0	90.0	90.0	72.7	71.1	90.0	72.7	90.0	51.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	53.4	60.5	43.1	42.1	53.4	43.1	60.5	30.2	80.2	90.0	64.6	63.2	80.2	64.6	90.0	45.4	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
10' - 0"	1' - 9"	65.3	73.9	52.6	51.4	65.3	52.6	73.9	36.9	90.0	90.0	78.9	77.1	90.0	78.9	90.0	55.4	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 0"	57.1	64.7	46.0	45.0	57.1	46.0	64.7	32.3	85.7	90.0	69.0	67.5	85.7	69.0	90.0	48.5	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	2' - 3"	50.8	57.5	40.9	40.0	50.8	40.9	57.5	28.7	76.2	86.2	61.4	60.0	76.2	61.4	86.2	43.1	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0

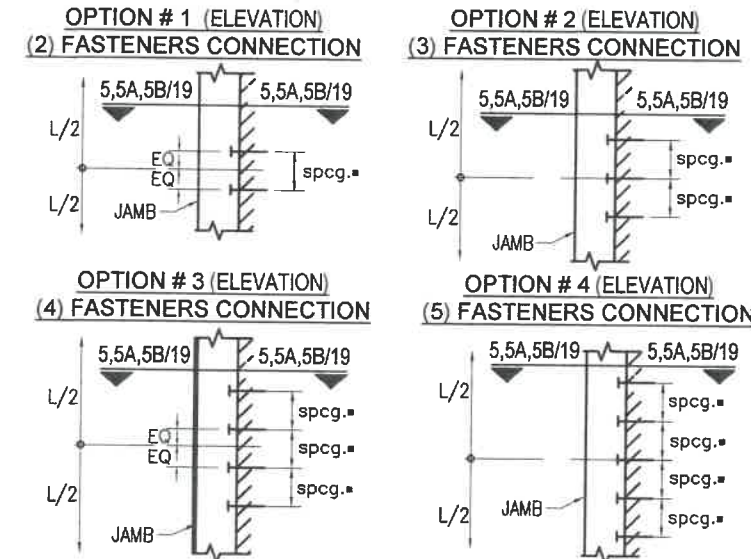
\* SEE SHEETS 13 & 14 FOR SPECS FOR JAMBS ATTACHED TO EXISTING WALL W/WET OR DRY GLAZED WITH LAMINATED OR INSULATED GLASS. JAMBS ATTACHED TO EXISTING WALL HOLDING INSULATED GLASS MAY BE WET OR DRY GLAZED. JAMBS ATTACHED TO EXISTING WALL HOLDING LAMINATED GLASS MUST ALWAYS BE WET GLAZED.

**FASTENERS TYPES AND SUBSTRATES REQUIREMENTS**  
W/ 2 3/4" MIN. E.D., BEYOND ANY FINISH MATERIAL

- J - 3/8"Ø HILTI KWIK BOLT 3 ANCHOR W/ 2" Min. EMBEDMENT INTO 6" Min. THICK POURED CONCRETE (Min. fc = 3 ksi).
- K - 3/8"Ø POWER FASTENERS TAPPER ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. fc = 3 ksi).
- L - 3/8"Ø HILTI HUS-H SCREW ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. fc = 3 ksi).
- M - 3/8"Ø POWER FASTENERS TAPPER ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO GROUT FILLED CONCRETE BLOCK.
- N - 3/8"Ø HILTI KWIK BOLT 3 ANCHOR W/ 2 1/2" Min. EMBEDMENT INTO GROUT FILLED CONCRETE BLOCK.
- O - 3/8"Ø HILTI HUS-H SCREW ANCHOR W/ 2 3/4" Min. EMBEDMENT INTO GROUT FILLED CONCRETE BLOCK.
- P - 3/8"Ø TYPE "F" BOLT OR 3/8"Ø -16 ELCO CONSTRUCTION PRODUCTS DRILL FLEX SCREW & 1 3/4" (MIN. EDGE DISTANCE TO 1/4" Min. THK. ASTM A-36 OR 12 GAGE (0.108" MIN. THK.) Fy=33 ksi STEEL.
- Q - 3/8"Ø LAG SCREWS TO DOUBLE 2 x WOOD BUCK (G=0.55) W/ 3" Min. PENETRATION INTO WOOD & 2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.

**MIN. SPACING (spcg.) REQUIRED FOR DIFFERENT SUBSTRATES**

- POURED CONCRETE: 4 1/2" MIN. O.C.
- GROUT FILLED C.B.: 8" MIN. O.C.
- STEEL: 4 1/2" MIN. O.C.
- WOOD: 2" MIN. O.C.



TEXAS DEPARTMENT OF INSURANCE - 2018

M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING No. SHEET 13 OF 20

SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

Oldcastle BuildingEnvelope®  
803 AIRPORT RD. TERRELL, TX 75160  
www.OldcastleBE.com-Phone 800-869-4567

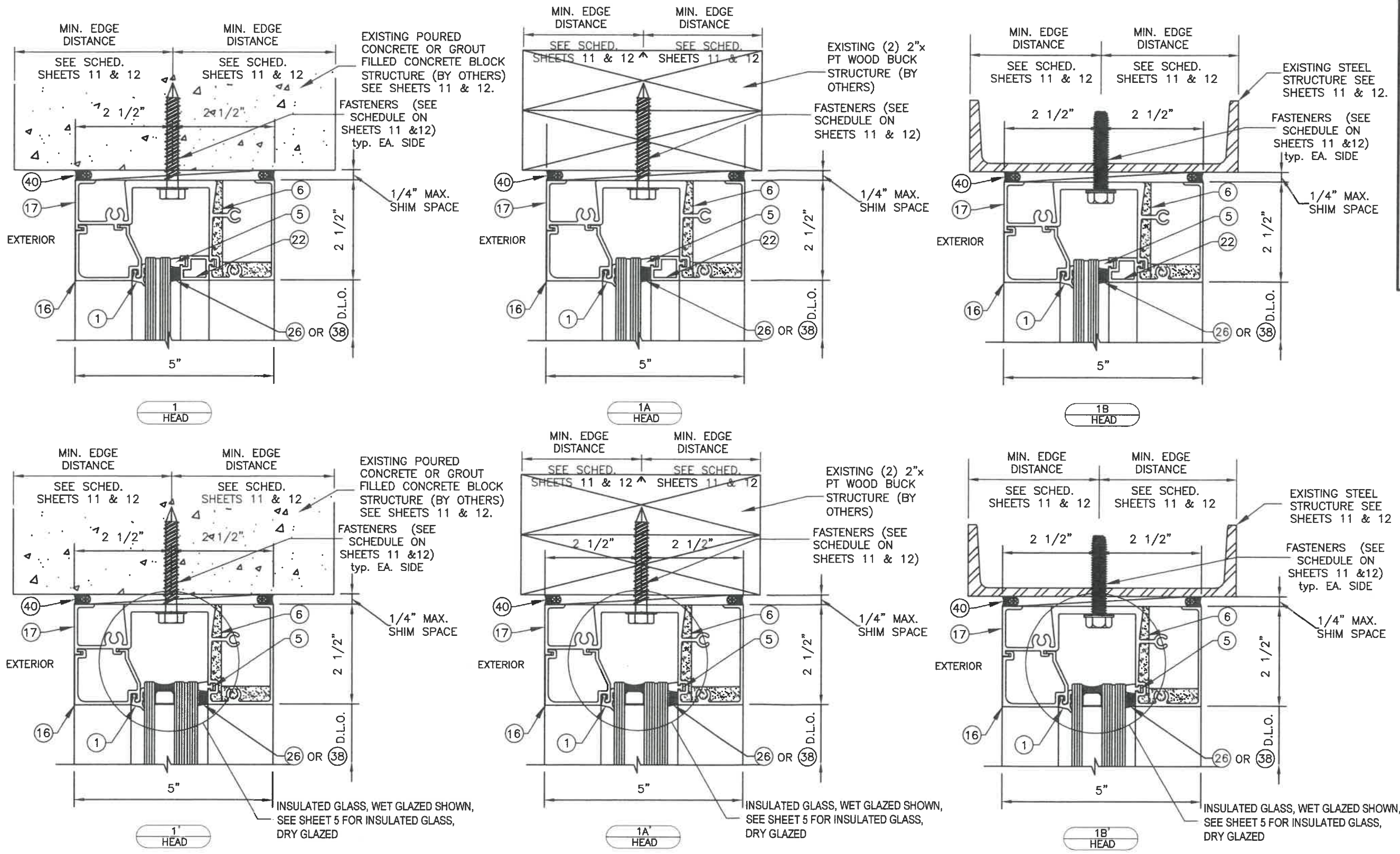
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 14-086	2/3/2020	3		
2			4		

WALTER A. TILLIT JR. P.E.  
PROFESSIONAL ENGINEER  
6355 N.W. 36th. STREET, STE. 305  
VIRGINIA GARDENS, FL 33166  
Phone : (305) 871-1530  
Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790





### HEAD CONNECTIONS DETAILS LAMINATED & INSULATED GLASS

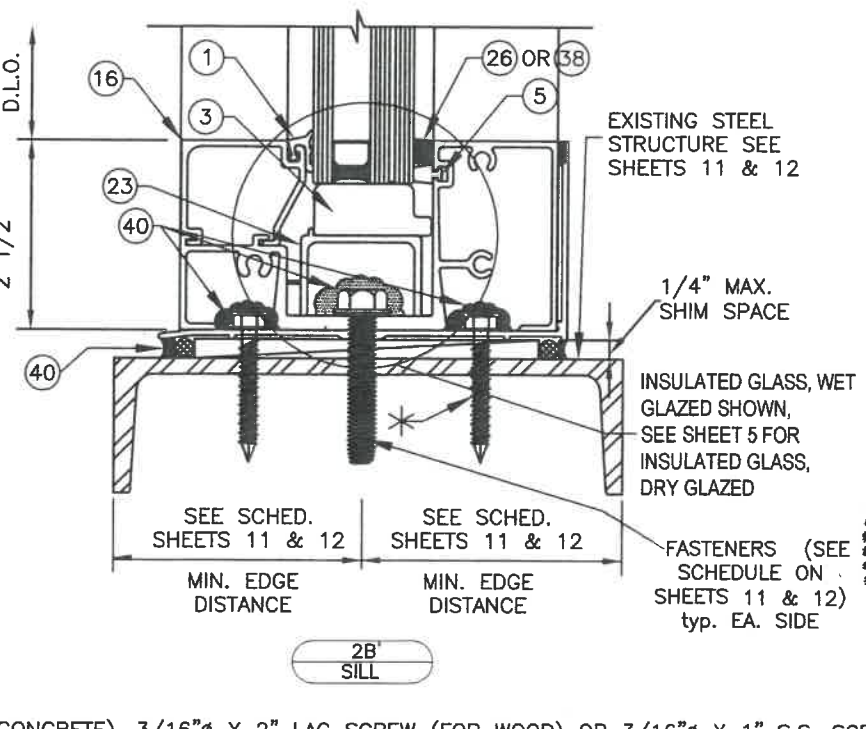
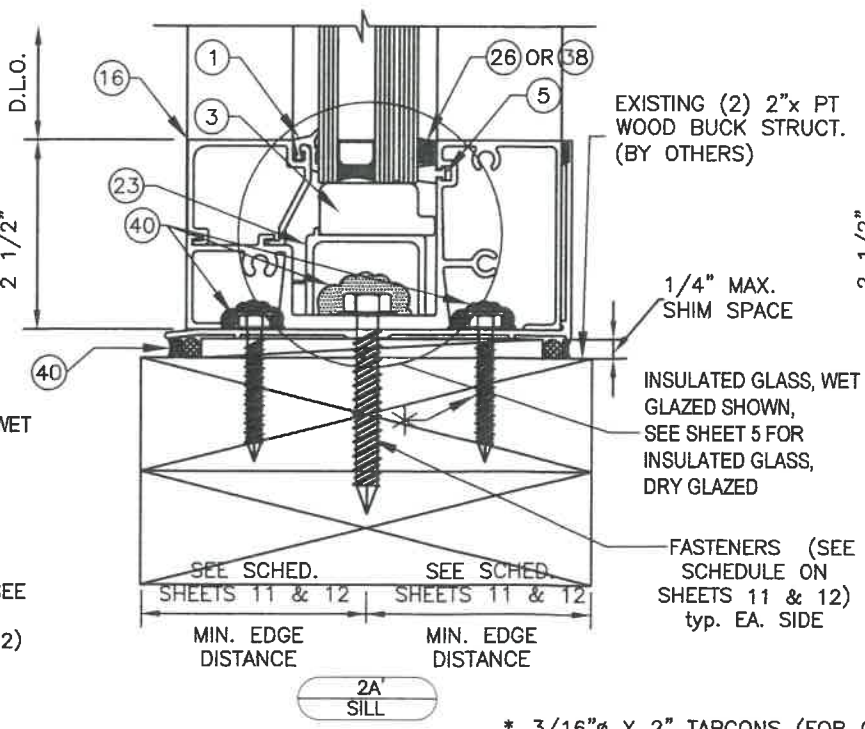
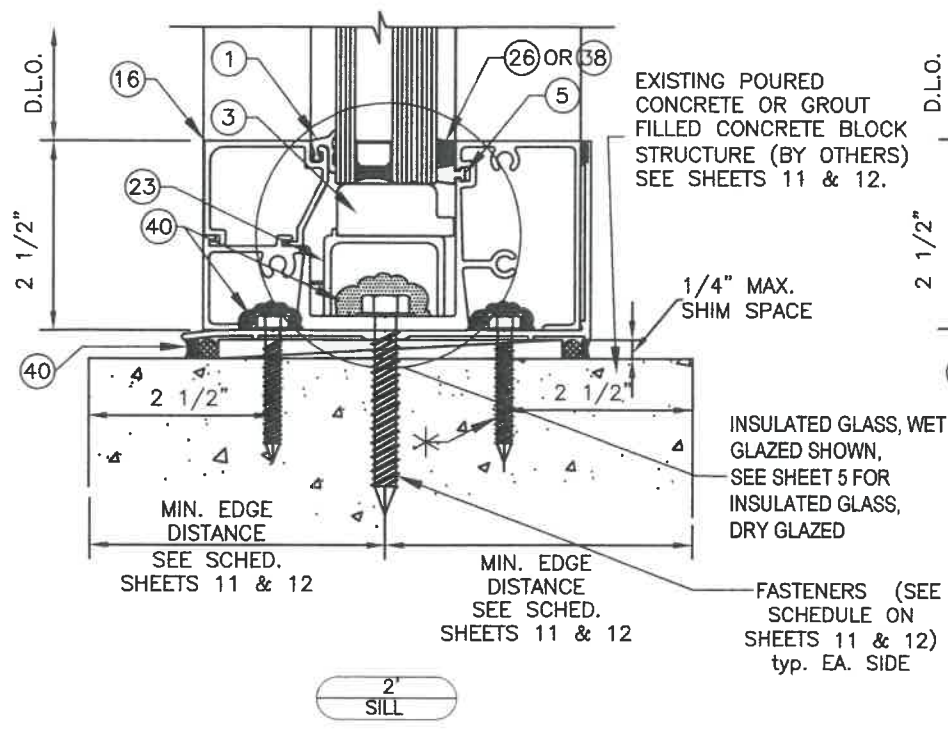
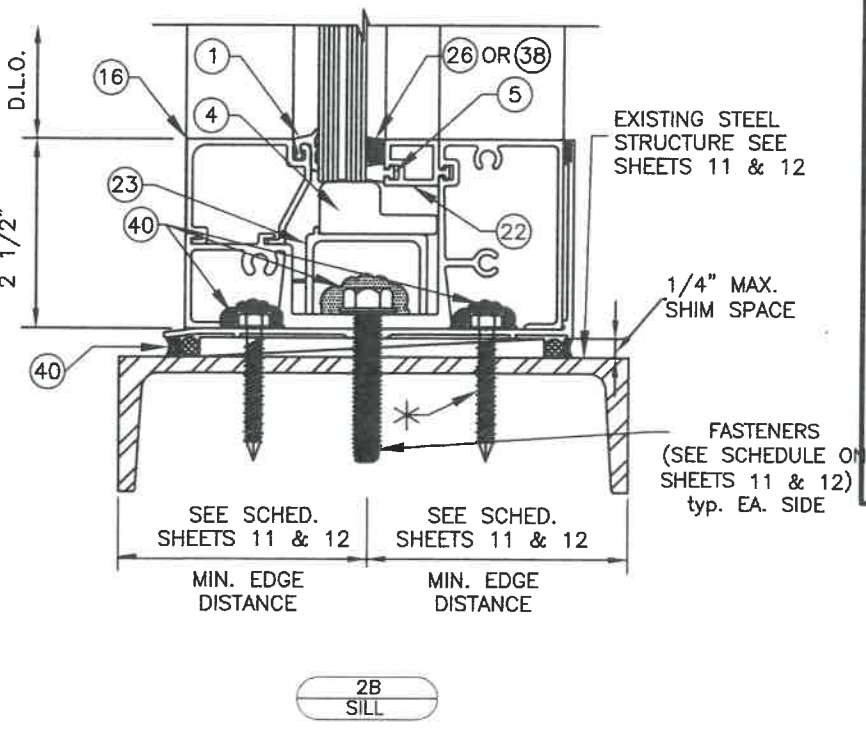
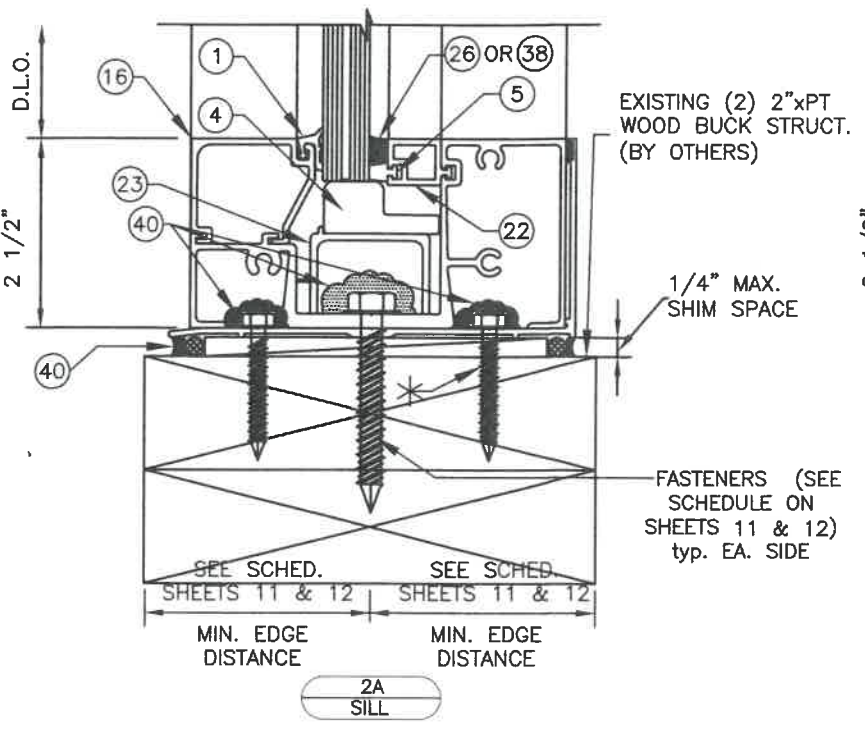
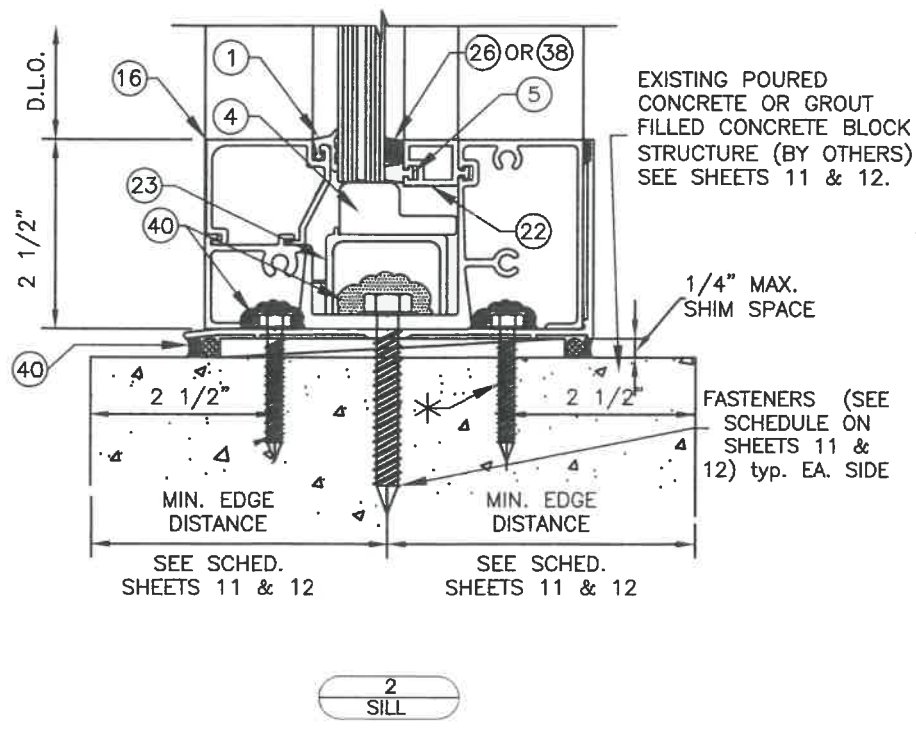


TEXAS DEPARTMENT OF INSURANCE - 2018		M.P. DRAWN BY:	2/3/2020 DATE:	20-016 DRAWING No.	SHEET 15 OF 20
SERIES FC-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS					
<b>Oldcastle BuildingEnvelope</b> 803 AIRPORT RD. TERRELL, TX 75160 www.Oldcastle.com-Phone 800-869-4567					
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 14-088	2/3/2020	3		

WALTER A. TILLIT Jr. P.E.  
 PROFESSIONAL ENGINEER  
 6355 N.W. 36th. STREET, STE. 305  
 VIRGINIA GARDENS, FL. 33166  
 Phone : (305) 871-1530  
 Fax : (305) 871-1531  
 TEXAS LIC. # 90691  
 FIRM REGISTRATION # F-13790



SILL CONNECTION DETAILS LAMINATED & INSULATED GLASS



\* 3/16"Ø X 2" TAPCONS (FOR CONCRETE), 3/16"Ø X 2" LAG SCREW (FOR WOOD) OR 3/16"Ø X 1" S.S. SCREWS NON STRUCTURAL FASTENERS, LOCATE (1) AT EACH END AND (1) AT MID LENGTH TO SECURE FLASHING UNTIL FASTENERS ARE INSTALLED.

TEXAS DEPARTMENT OF INSURANCE - 2018

M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING No. SHEET 16 OF 20

SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

Oldcastle BuildingEnvelope®  
803 AIRPORT RD. TERRELL, TX 75160  
www.OldcastleBE.com-Phone 800-869-4567

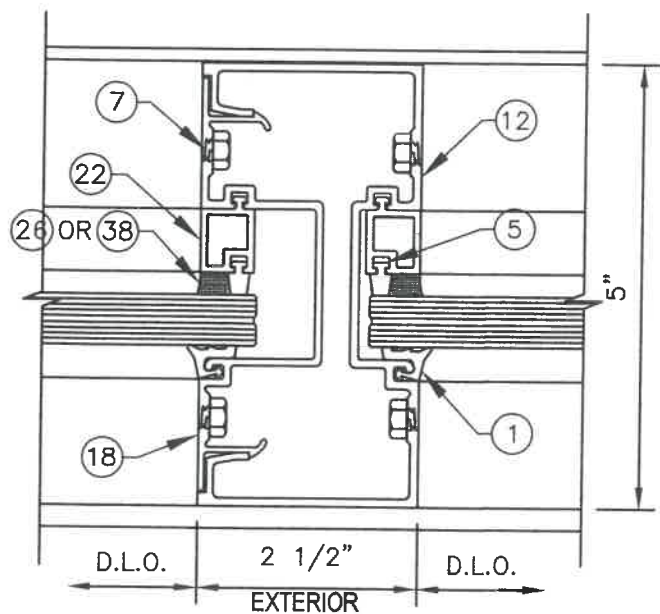
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 14-086	2/3/2020	3		
2			4		

WALTER A. TILLIT Jr. P.E.  
PROFESSIONAL ENGINEER  
6355 N.W. 36th. STREET, STE. 305  
VIRGINIA GARDENS, FL 33186  
Phone : (305) 871-1530  
Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790

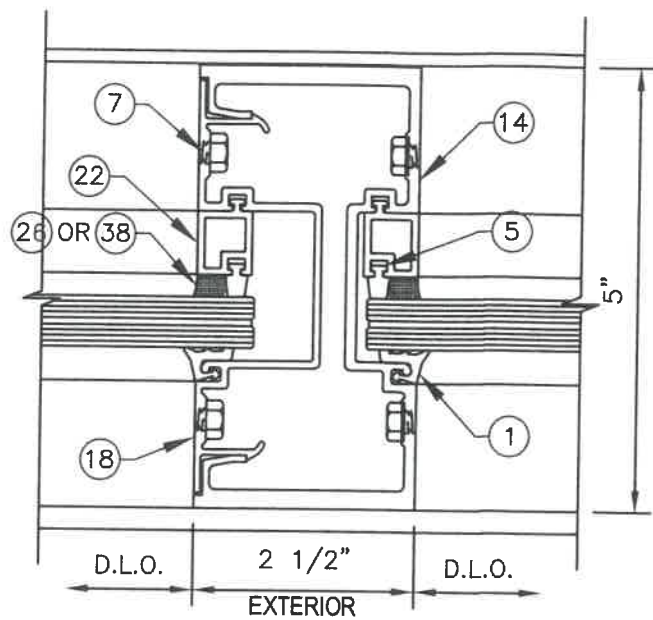




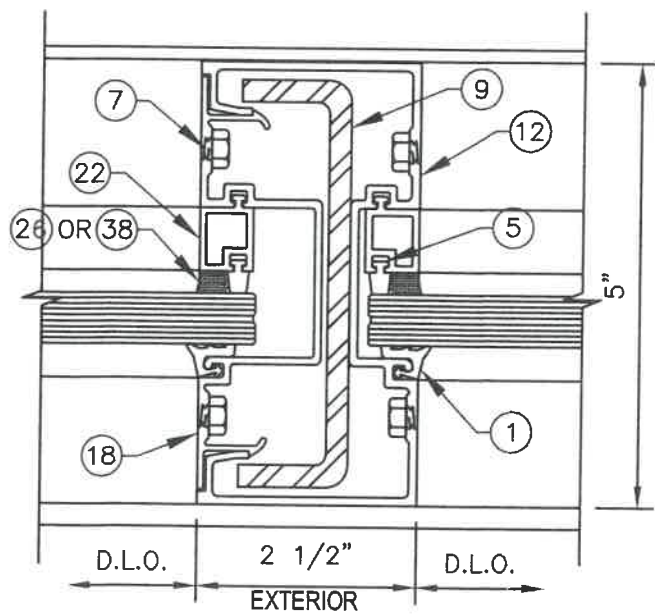
SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS (WET GLAZED)



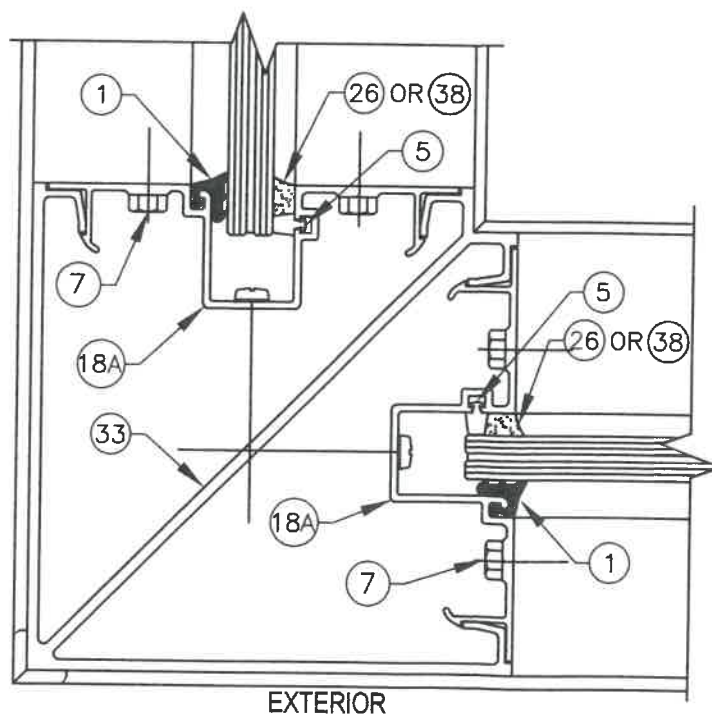
3  
MULLION PLAN



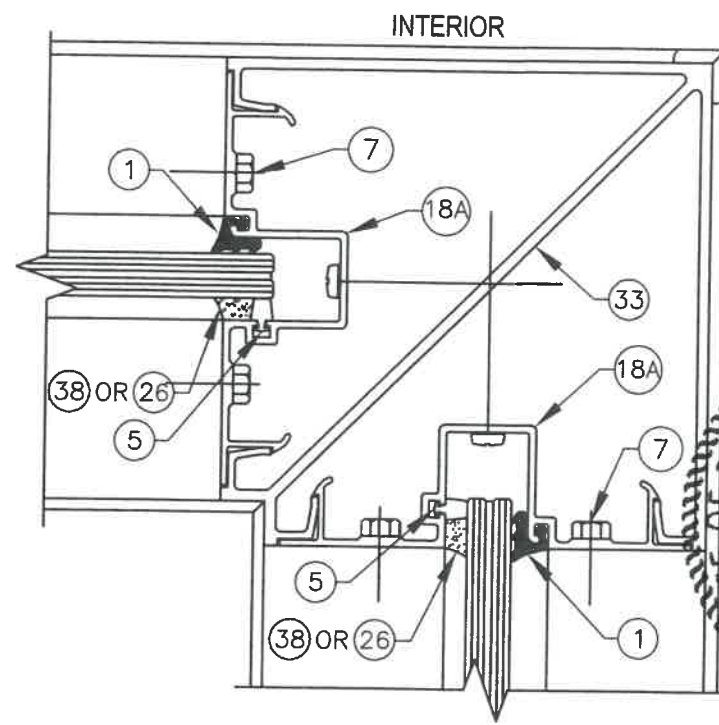
4  
MULLION PLAN



3A  
MULLION PLAN



5  
90 DEGREE OUTSIDE  
CORNER MULLION



5A  
90 DEGREE INSIDE  
CORNER MULLION

TEXAS DEPARTMENT OF INSURANCE - 2018

SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS

**Oldcastle BuildingEnvelope**  
803 AIRPORT RD. TERRELL, TX 75160  
www.OldcastleBE.com-Phone 800-869-4567

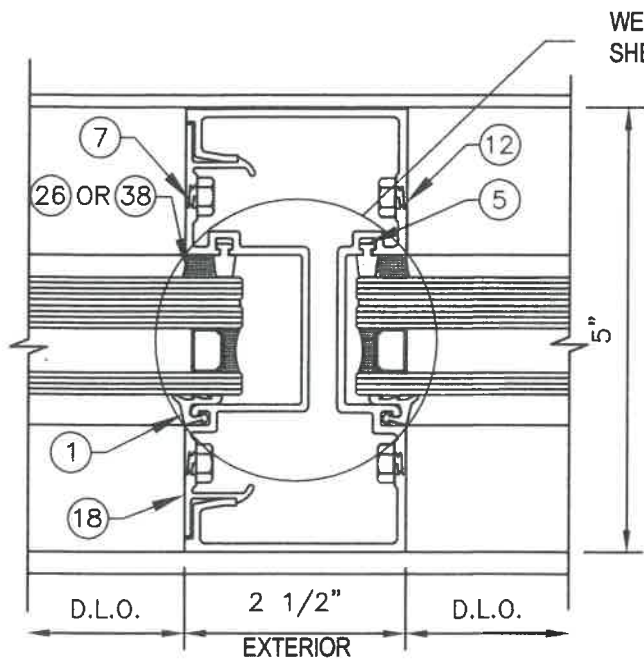
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 14-086	2/3/2020	3		
2			4		

M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING NO. SHEET 17 OF 20

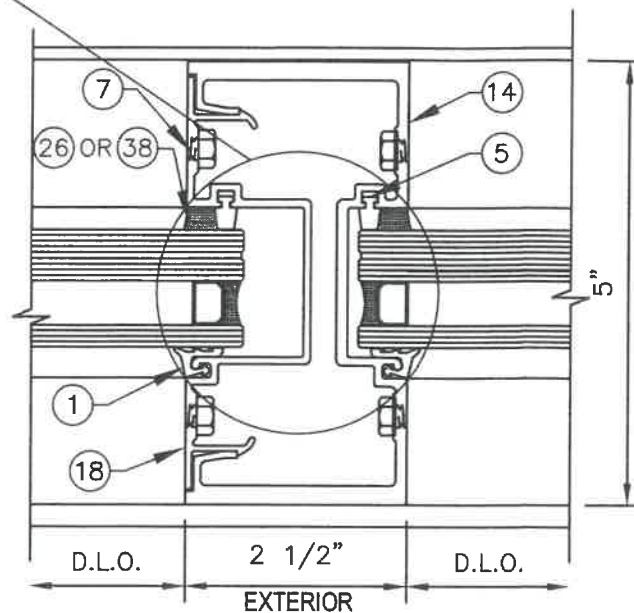
WALTER A. TILLIT JR., P.E.  
PROFESSIONAL ENGINEER  
6355 N.W. 36th STREET, STE. 305  
VIRGINIA GARDENS, FL 33166  
Phone : (305) 871-1530  
Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790



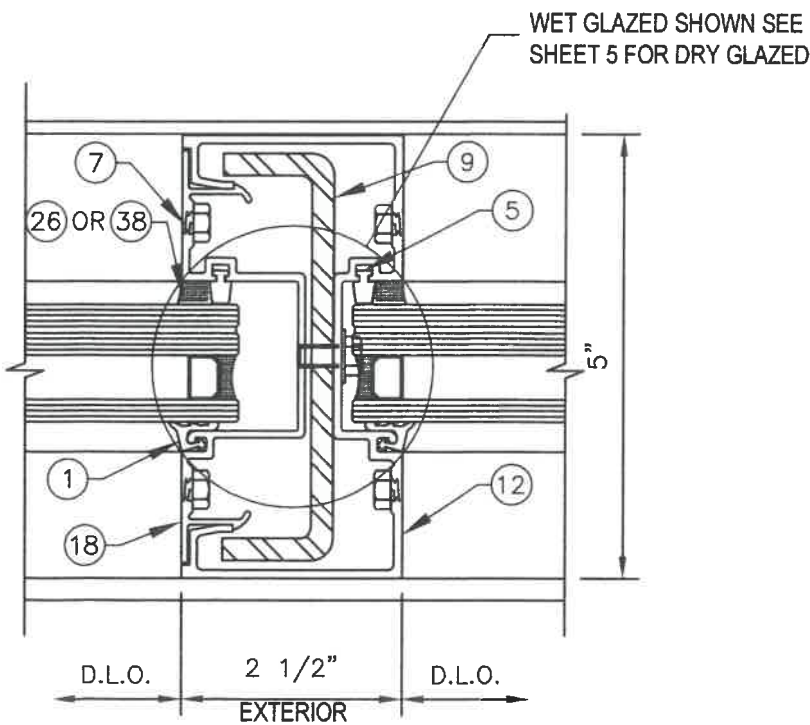
SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS (WET & DRY GLAZED)



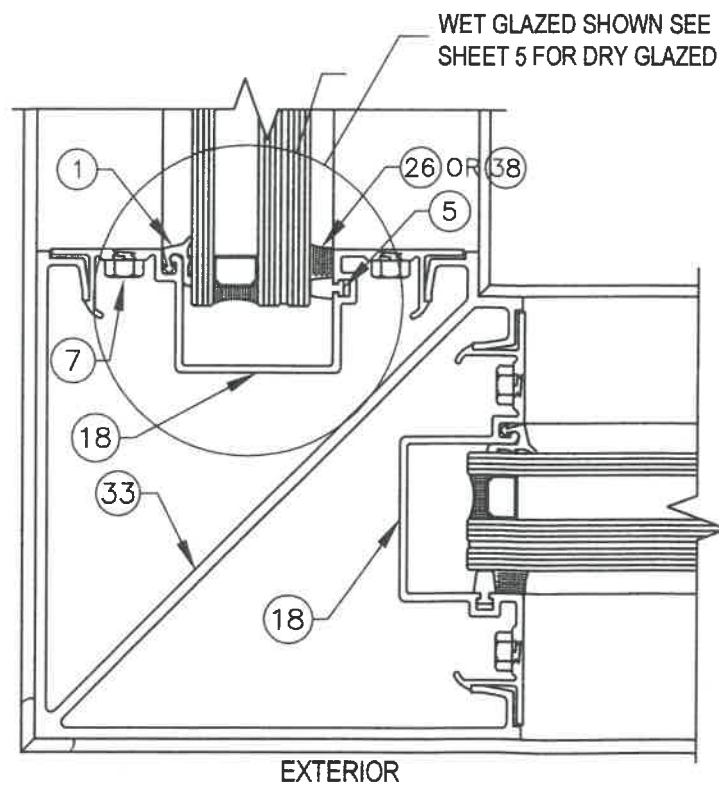
3' MULLION PLAN



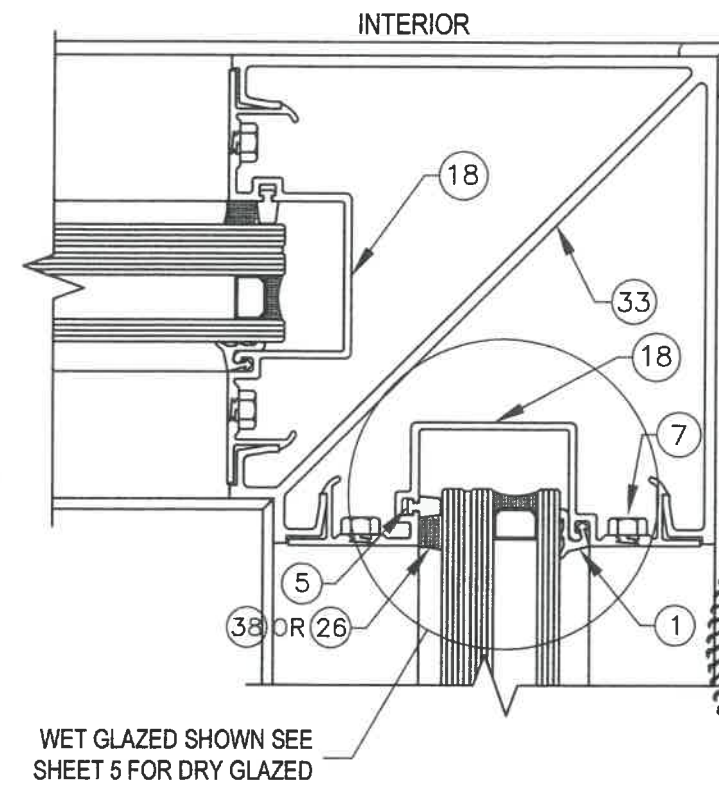
4' MULLION PLAN



3A' MULLION PLAN



5' 90 DEGREE OUTSIDE CORNER MULLION



5A' 90 DEGREE INSIDE CORNER MULLION

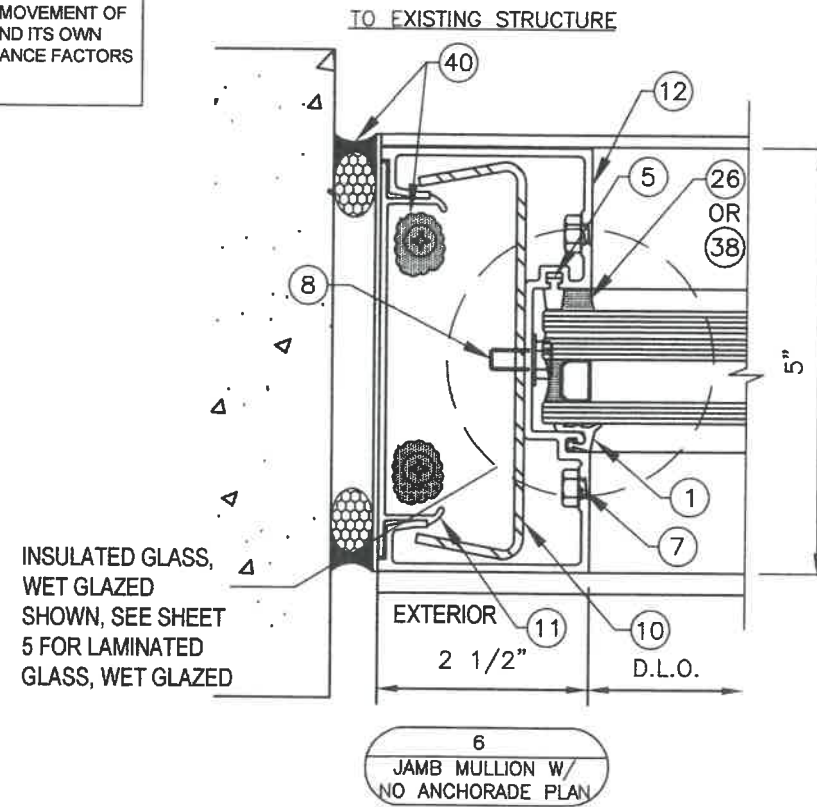
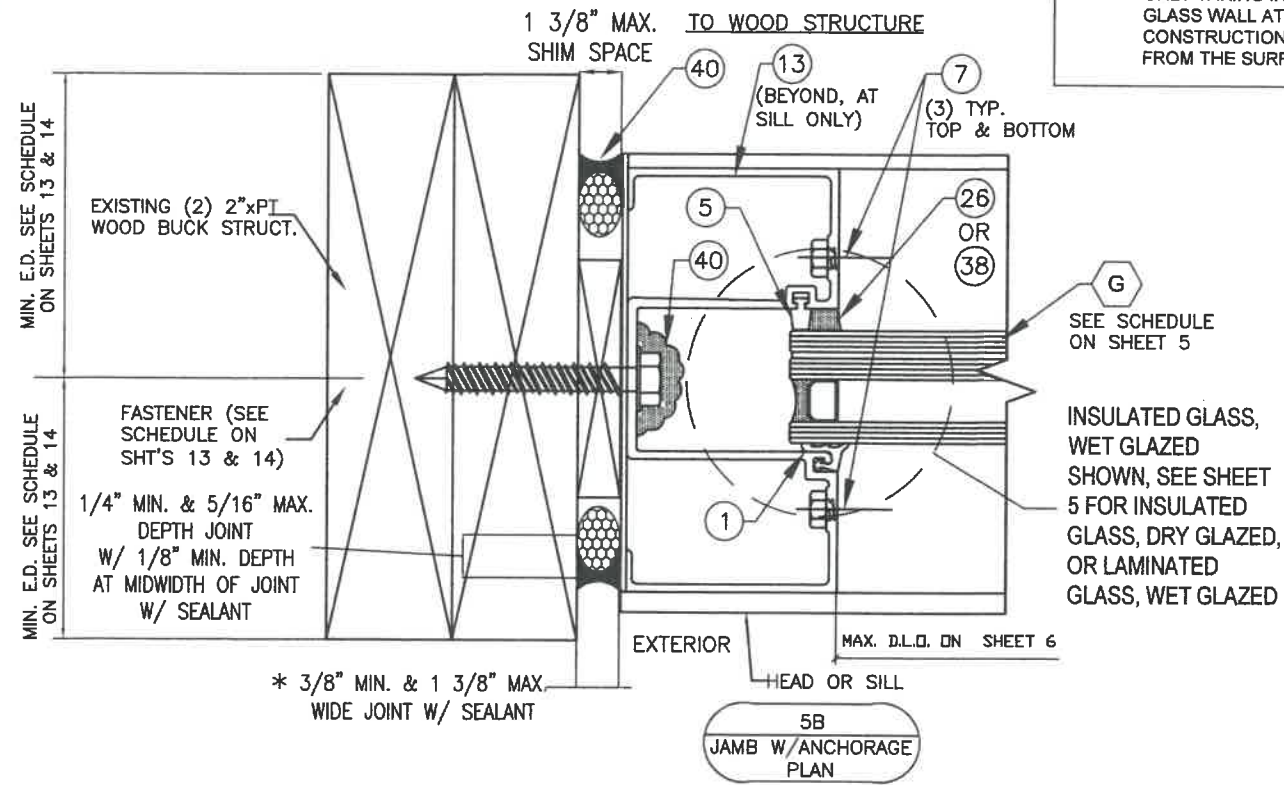
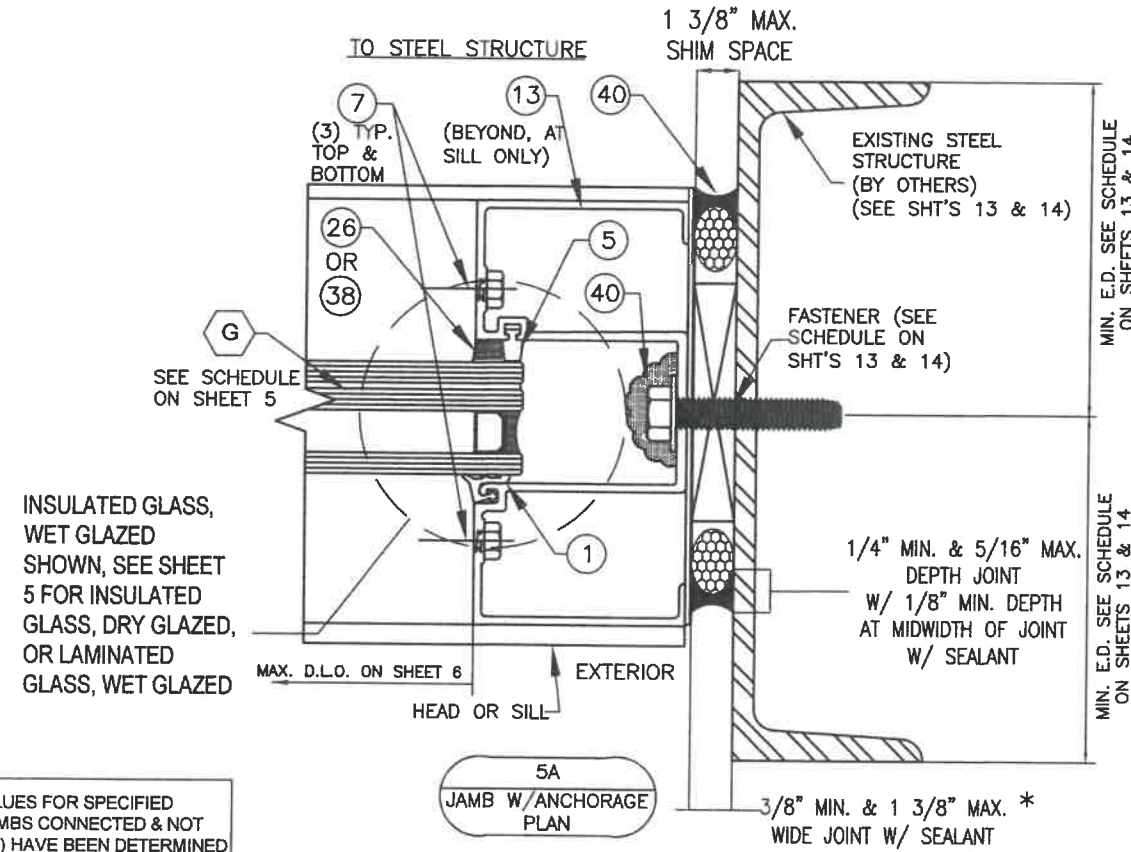
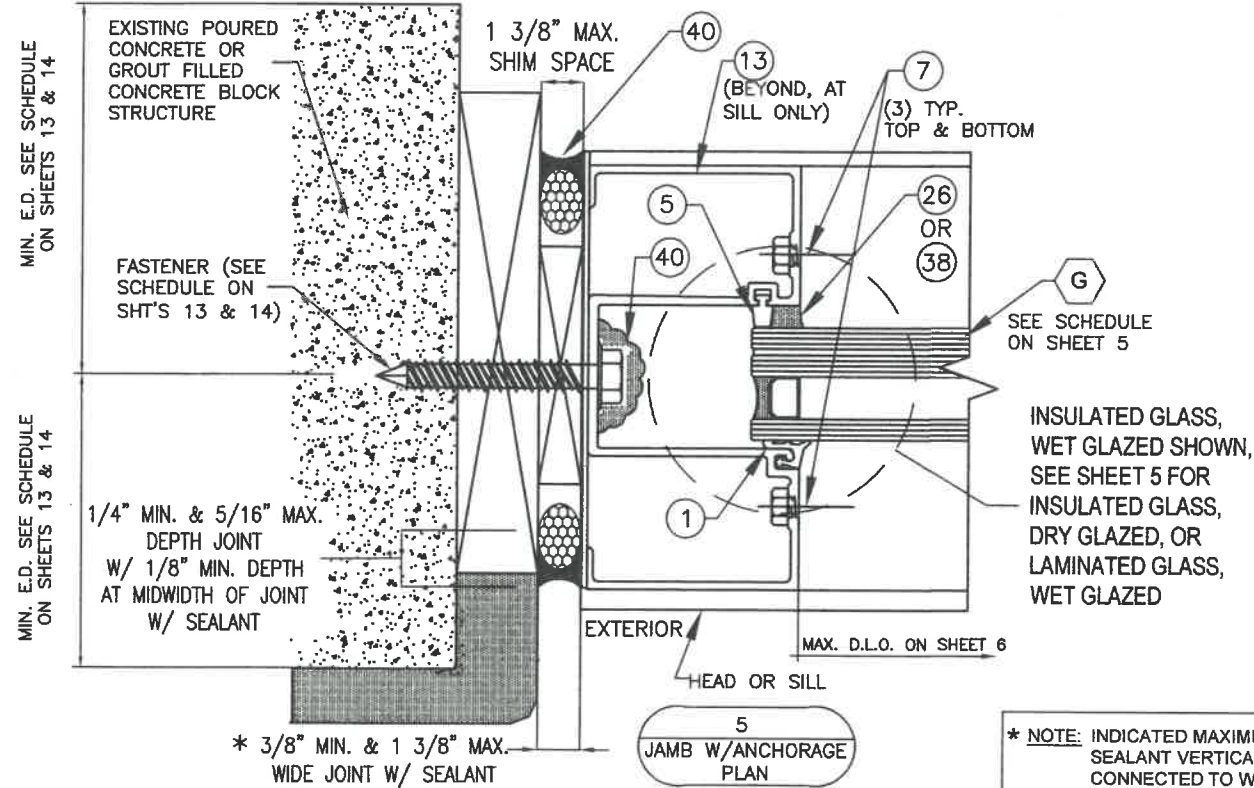
TEXAS DEPARTMENT OF INSURANCE -2018		M.P.	2/3/2020	20-016	18 OF 20
SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS		DRAWN BY:	DATE:	DRAWING NO.	SHEET
Oldcastle BuildingEnvelope® 805 AIRPORT RD. TERRELL, TX 75160 www.OldcastleBE.com-Phone 800-869-4567		REV. NO.	DATE	DESCRIPTION	DATE
1	OLD 14-088	2/3/2020	3		
2			4		

WALTER A. TILLIT Jr. P.E.  
PROFESSIONAL ENGINEER  
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VIRGINIA GARDENS, FL 33166  
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Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790



# HORIZONTAL CONNECTIONS DETAILS AT JAMB

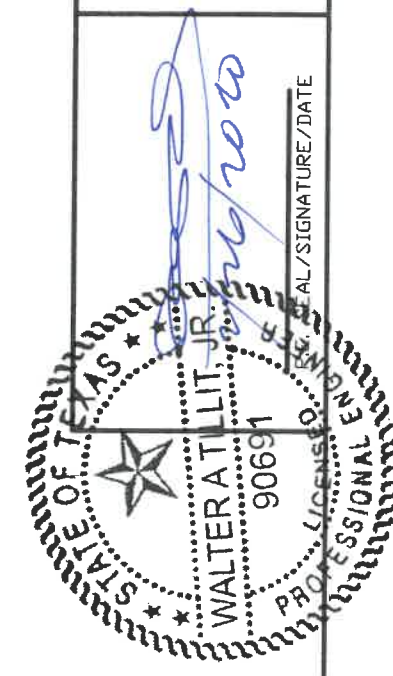
TO POURED CONCRETE OR GROUT FILLED CONCRETE BLOCK STRUCTURE



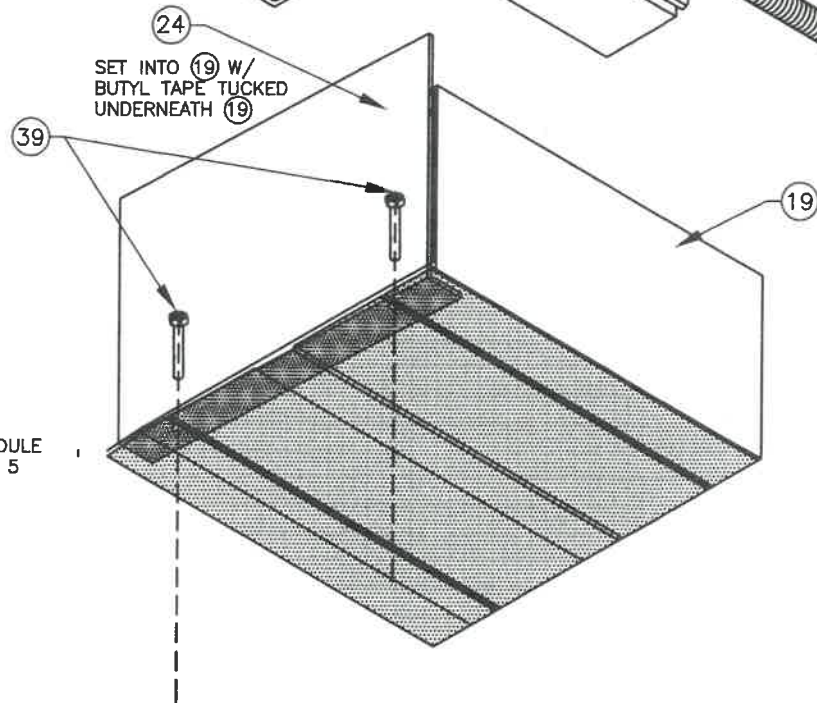
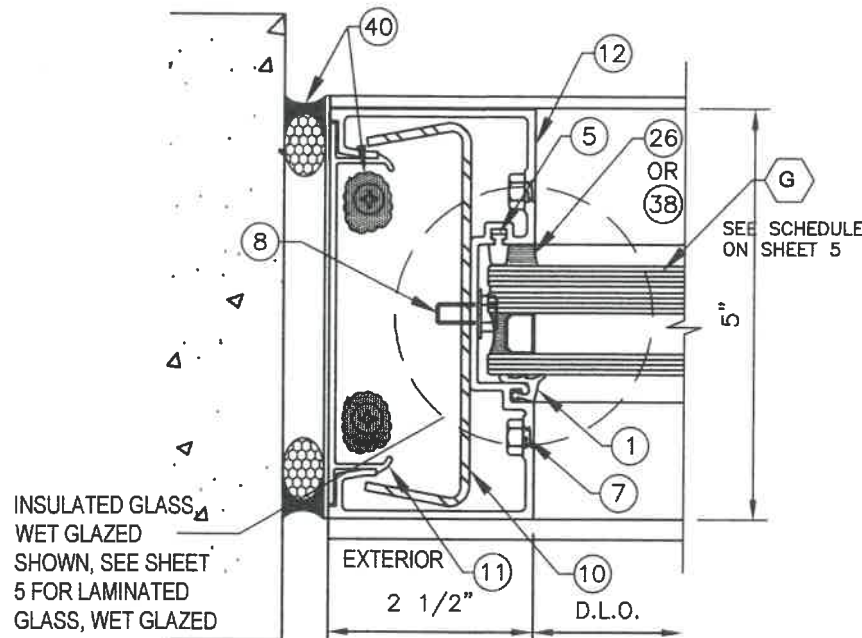
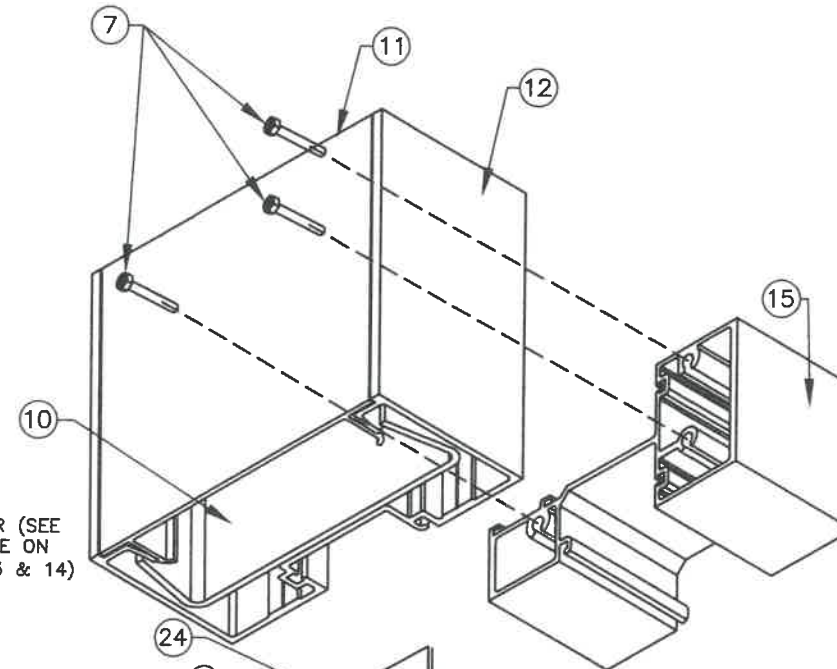
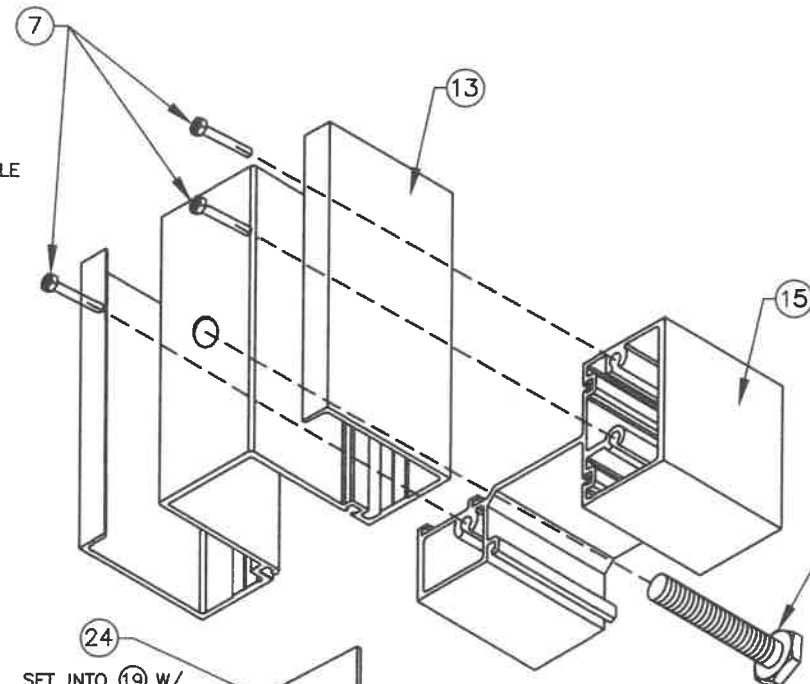
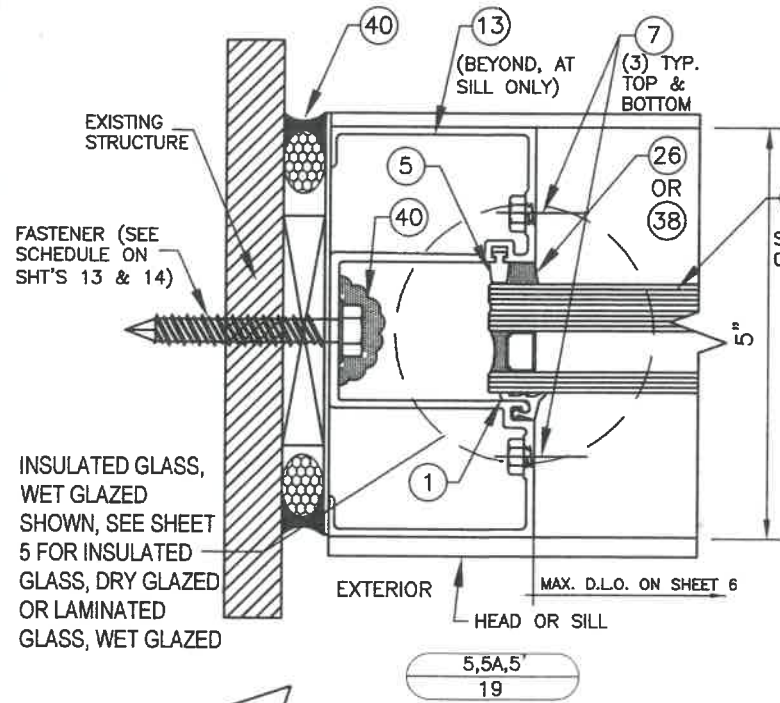
**\* NOTE:** INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS CONNECTED & NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE,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

TEXAS DEPARTMENT OF INSURANCE - 2018	
M.P. DRAWN BY:	2/3/2020
DATE:	20-016
DRAWING No.	SHEET 19 OF 20
<b>SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE &amp; SMALL MISSILE IMPACT LAMINATED OR INSULATED WET &amp; INSULATED DRY GLASS</b>	
<b>Oldcastle BuildingEnvelope®</b> 803 AIRPORT RD. TERRELL, TX 75160 www.OldcastleBE.com-Phone 800-869-4567	
REV. NO.	DESCRIPTION
1	OLD 14-086
2	DATE
3	DATE
4	DATE

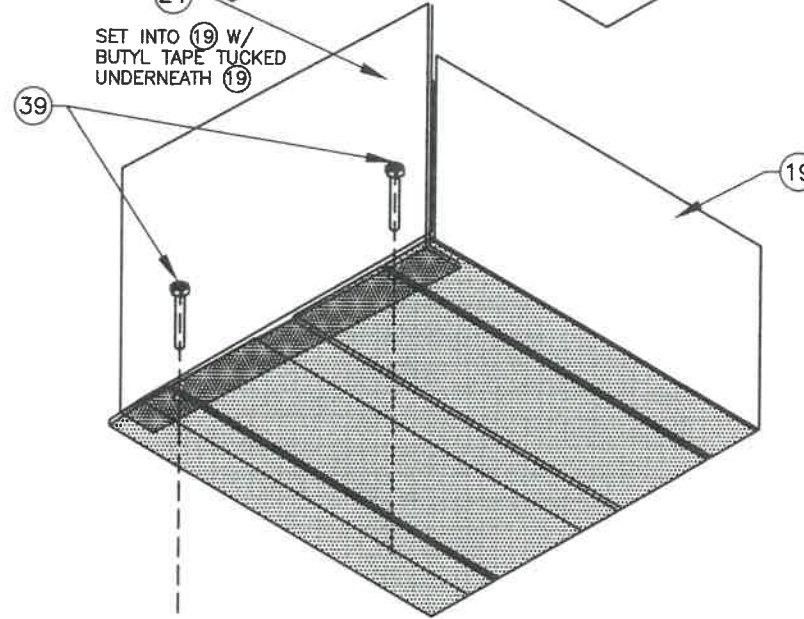
WALTER A. TILLIT Jr. P.E.  
 PROFESSIONAL ENGINEER  
 6355 N.W. 36th. STREET, STE. 305  
 VIRGINIA GARDENS, FL 33166  
 Phone : (305) 871-1530  
 Fax : (305) 871-1531  
 TEXAS LIC. # 90691  
 FIRM REGISTRATION # F-13790



# CORNER DETAIL AT JAMB



VIEW "X" (ISOMETRIC)



VIEW "Y" (ISOMETRIC)

6  
JAMB MULLION W/  
NO ANCHORAGE PLAN

TEXAS DEPARTMENT OF INSURANCE - 2018

**SERIES FC-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLASS**

**Oldcastle BuildingEnvelope**  
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REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1		2/3/2020	3		
2			4		

M.P. DRAWN BY: 2/3/2020 DATE: 20-016 DRAWING No. SHEET 20 OF 20

WALTER A. TILLIT JR. P.E.  
PROFESSIONAL ENGINEER  
6355 N.W. 36th STREET, STE. 305  
VIRGINIA GARDENS, FL 33166  
Phone : (305) 871-1530  
Fax : (305) 871-1531  
TEXAS LIC. # 90691  
FIRM REGISTRATION # F-13790

