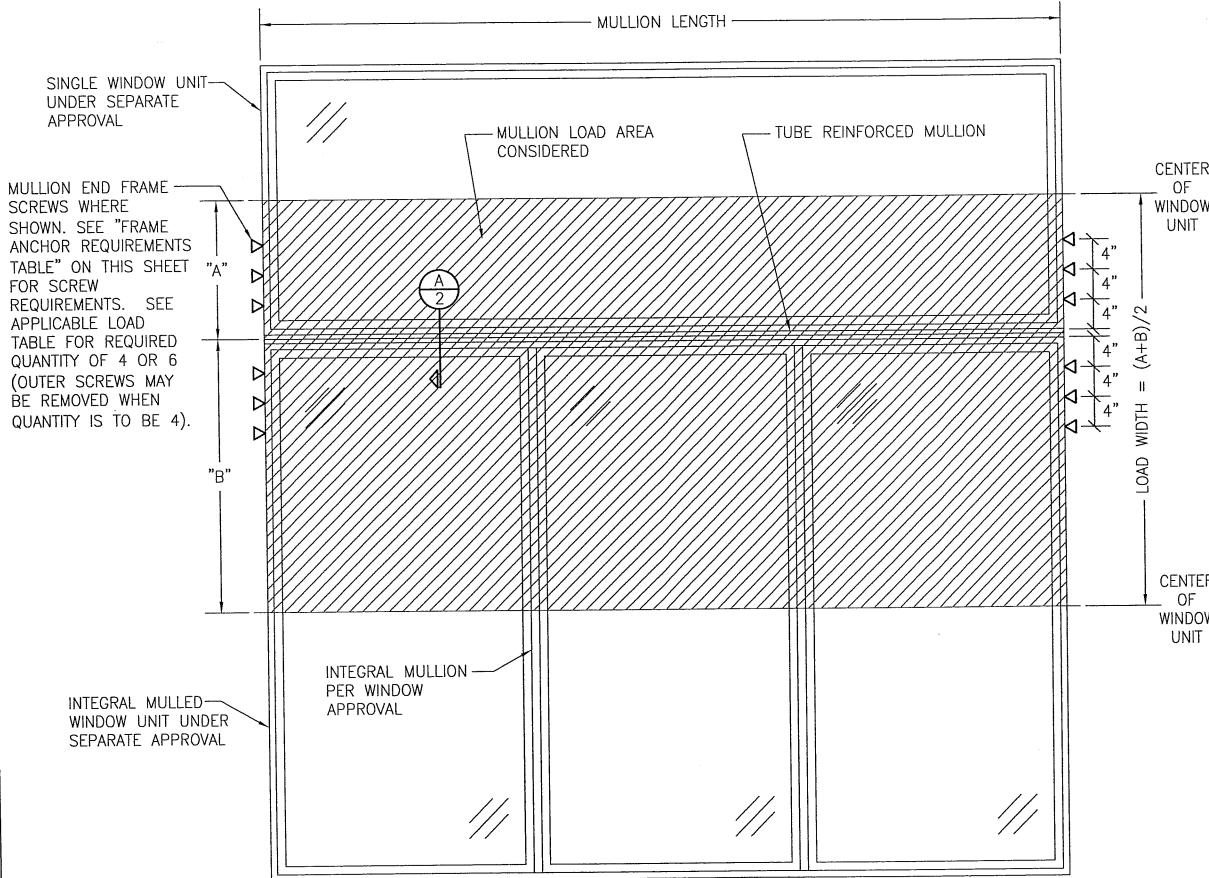


GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL FRAME ANCHORS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ) & IS LARGE MISSILE IMPACT RATED.
5. IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
6. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
7. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
8. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
9. UNLESS OTHERWISE SPECIFIED HERE-IN, PRODUCT ASSEMBLY AND ALL ASSEMBLY REQUIREMENTS/OPTIONS SHALL BE AS TESTED, ARE THE RESPONSIBILITY OF EACH THE MANUFACTURER AND THEIR APPLICABLE QUALITY ASSURANCE & ARE NOT THE RESPONSIBILITY OF THESE DOCUMENTS NOR THE CERTIFICATION OF THESE DOCUMENTS.
10. WATER PROOFING OF THE INSTALLED PRODUCT IS NOT PART OF THIS CERTIFICATION. THAT RESPONSIBILITY SHALL BE THAT OF THE MANUFACTURER &/OR INSTALLER.
11. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. PRODUCT ASSEMBLY SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
12. CERTIFICATION OF THIS PRODUCT SHALL BE CONSIDERED VOID IF IT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF IT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT.
13. ALL ALUMINUM PARTS SHOWN/SPECIFIED HERE-IN SHALL BE MINIMUM 6063-T6 ALUMINUM.
14. THIS MULLION APPROVAL IS APPLICABLE FOR USE WITH PELLA ALUMINUM CASEMENT, AWNING AND DIRECT SET WINDOWS (IMPACT & NON-IMPACT) UNDER THE CONDITIONS SHOWN HERE-IN. USE WITH OTHER PELLA PRODUCTS AND/OR OTHER CONDITIONS IS SUBJECT TO JOB SPECIFIC ENGINEER'S REVIEW AND CERTIFICATION.
15. THESE MULLIONS ARE APPLICABLE ONLY WITH CONTINUOUS WINDOW FRAMES ON EACH SIDE OF THE MULLION TUBE. WHEN A MULTIPLE WINDOW UNIT IS ON EITHER SIDE OF THE MULLION TUBE, THAT UNIT MUST BE AN INTEGRAL MULLED UNIT WITH ALL ITS WINDOWS INSIDE OF ONE SINGLE SURROUND FRAME.

EVALUATION OF THIS PRODUCT IS BASED ON APPLICABLE STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THIS EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THIS PRODUCT, PRIOR TO STATING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONFIRM WITH THE EVALUATION ENGINEER OF RECORD THAT EVERYTHING SPECIFIED HERE-IN IS CURRENT WITH ALL CURRENT TESTING, CODES AND APPLICABLE STANDARDS.



FRAME ANCHOR REQUIREMENTS TABLE			
OPENING TYPE (SUBSTRATE)	FRAME/FIN TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & C=0.55)	NO. 12 PH OR HH SMS OR WOOD SCREW	1 1/4"	7/8"
MIN. 18 GA. 33 KSI METAL STUD	NO. 12 GR. 5 PH OR HH SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 12 GR. 5 PH OR HH SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 12 GR. 5 PH OR HH SELF TAP/DRILL SCREW	FULL	1/2"
(2) MIN. C-90 CMU	(1) 1/4" HH CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" HH CONCRETE SCREW	1 1/2"	2"
(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).			
(2) CMU APPLIES TO SIDES OF OPENINGS ONLY.			

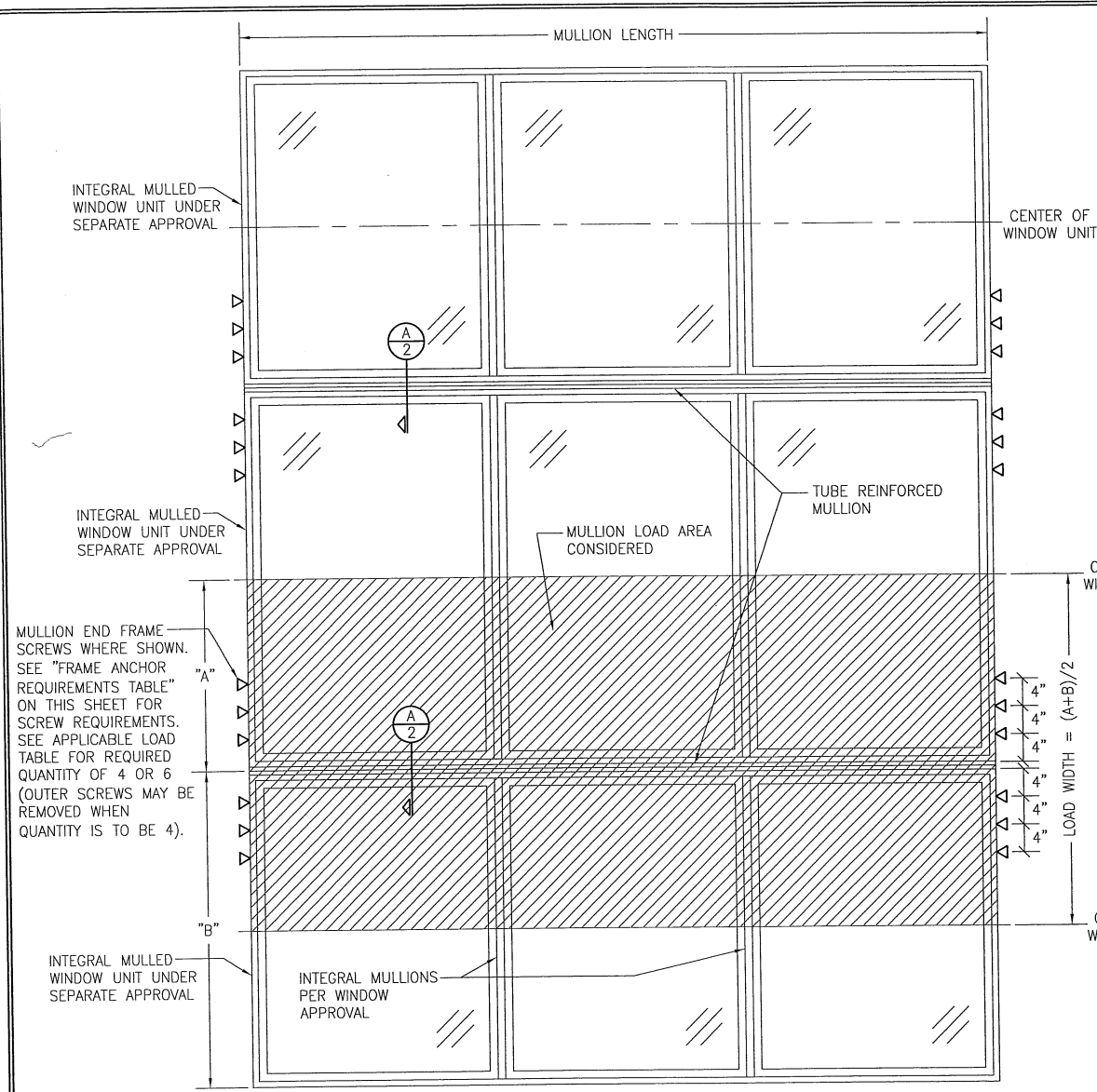
MULTIPLE WINDOW UNIT MULLION TO A SINGLE WINDOW UNIT

UNIT NOTES:

1. WINDOWS MAY BE FIXED OR OPERABLE AND ANY COMBINATION THERE-OF.
2. REINFORCED MULLION MAY BE HORIZONTAL AS SHOWN OR VERTICAL.
3. ATTACHMENT OF THE WINDOW UNITS TO THE 1X5 TUBE MULLION REINFORCEMENT SHALL BE AS REQUIRED BY THE WINDOW APPROVAL FOR ATTACHMENT TO AN ALUMINUM SUBSTRATE.
4. FOR ANCHORING OF WINDOW UNITS TO THE OPENING (NOT SHOWN), SEE THE APPLICABLE WINDOW APPROVAL.
5. MULTIPLE WINDOW UNIT MAY CONSIST OF ANY NUMBER OF WINDOWS WITHIN THE UNIT (2 OR MORE).
6. SEE PRESSURE TABLE ON SHEET 3 FOR ALLOWABLE MULLION PRESSURES.

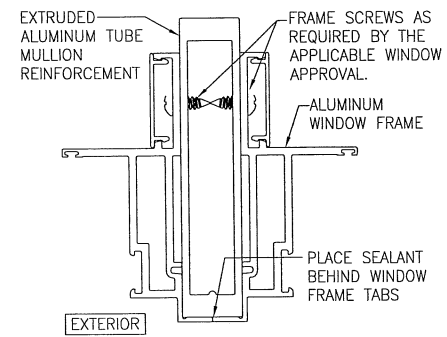
THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=16		DATE: 07/09/19	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: PELLA IMPACT 1 X 5 EXTRUDED ALUMINUM TUBE REINFORCED MULLION			
MANUFACTURER: PELLA CORPORATION		8291 FORSHEE DRIVE, UNIT 4 JACKSONVILLE, FL 32219 904-632-7400	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION: JUL 10 2019		WARREN W. SCHAEFER P.E. NO. 44135	
DRAWING NO. 1960		REV.	
SHEET NO. 1 OF 3			

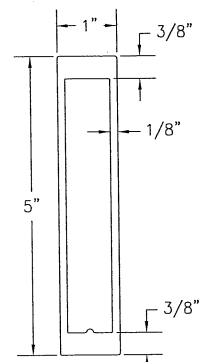


MULLION END FRAME SCREWS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON THIS SHEET FOR SCREW REQUIREMENTS. SEE APPLICABLE LOAD TABLE FOR REQUIRED QUANTITY OF 4 OR 6 (OUTER SCREWS MAY BE REMOVED WHEN QUANTITY IS TO BE 4).

- UNIT NOTES:**
1. WINDOWS MAY BE FIXED OR OPERABLE
 2. REINFORCED MULLION MAY BE HORIZONTAL AS SHOWN OR VERTICAL.
 3. ATTACHMENT OF THE WINDOW UNITS TO THE 1X5 TUBE MULLION REINFORCEMENT SHALL BE AS REQUIRED BY THE WINDOW APPROVAL FOR ATTACHMENT TO AN ALUMINUM SUBSTRATE.
 4. FOR ANCHORING OF WINDOW UNITS TO THE OPENING (NOT SHOWN), SEE THE APPLICABLE WINDOW APPROVAL.
 5. EACH INTEGRAL MULLED WINDOW UNIT MAY HAVE ANY NUMBER OF WINDOWS WITHIN.
 6. ONE INTEGRAL MULLED WINDOW UNIT DOES NOT HAVE TO HAVE AN EQUAL NUMBER OF WINDOWS WITHIN TO THAT OF THE OTHER INTEGRAL MULLED WINDOW UNIT IT IS MULLED TO.
 6. SEE PRESSURE TABLE ON SHEET 3 FOR ALLOWABLE MULLION PRESSURES.



SECTION
SCALE: 1/2 FULL



TUBE MULLION REINFORCEMENT
(6063-T6 ALUMINUM)

MULTIPLE WINDOW UNIT MULLED TO MULTIPLE WINDOW UNITS

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=16		DATE: 07/09/19	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: PELLA IMPACT 1 X 5 EXTRUDED ALUMINUM TUBE REINFORCED MULLION MANUFACTURER: PELLA CORPORATION 8291 FORSHEE DRIVE, UNIT 4 JACKSONVILLE, FL 32219 904-632-7400 CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3494 CERTIFICATION: JUL 1 0 2019 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1960		REV.	
SHEET NO. 2		OF 3	

MULLION ALLOWABLE PRESSURE TABLE													
MAXIMUM MULLION LENGTH (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)				MAXIMUM MULLION LENGTH (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)					
		4 END ANCHORS		6 END ANCHORS				4 END ANCHORS		6 END ANCHORS			
		POS.	NEG.	POS.	NEG.			POS.	NEG.	POS.	NEG.		
144	84	23.1	23.1	23.1	23.1	114	30	77.8	77.8	80.0	100.0		
	78	24.9	24.9	24.9	24.9		27	80.0	86.4	80.0	100.0		
	72	27.0	27.0	27.0	27.0		24	80.0	97.2	80.0	100.0		
	66	29.5	29.5	29.5	29.5		84	29.2	29.2	42.1	42.1		
	60	32.4	32.4	32.4	32.4		78	31.5	31.5	45.3	45.3		
	54	36.0	36.0	36.0	36.0		72	34.1	34.1	49.1	49.1		
	48	40.5	40.5	40.5	40.5		66	37.2	37.2	53.6	53.6		
	45	43.2	43.2	43.2	43.2		60	40.9	40.9	58.9	58.9		
	42	46.3	46.3	46.3	46.3		54	45.5	45.5	65.5	65.5		
	39	49.9	49.9	49.9	49.9		48	51.2	51.2	73.7	73.7		
	36	54.0	54.0	54.0	54.0		45	54.6	54.6	78.6	78.6		
	33	58.9	58.9	58.9	58.9		42	58.5	58.5	80.0	84.2		
	30	64.8	64.8	64.8	64.8		39	63.0	63.0	80.0	90.7		
	27	72.0	72.0	72.0	72.0		36	68.2	68.2	80.0	98.2		
132	24	80.0	81.0	80.0	81.0	108	33	74.4	74.4	80.0	100.0		
	84	25.2	25.2	30.1	30.1		30	80.0	81.9	80.0	100.0		
	78	27.2	27.2	32.4	32.4		27	80.0	90.9	80.0	100.0		
	72	29.5	29.5	35.1	35.1		24	80.0	100.0	80.0	100.0		
	66	32.1	32.1	38.2	38.2		84	30.9	30.9	44.4	44.4		
	60	35.3	35.3	42.1	42.1		78	33.2	33.2	47.9	47.9		
	54	39.3	39.3	46.7	46.7		72	36.0	36.0	51.9	51.9		
	48	44.2	44.2	52.6	52.6		66	39.3	39.3	56.6	56.6		
	45	47.1	47.1	56.1	56.1		60	43.2	43.2	62.2	62.2		
	42	50.5	50.5	60.1	60.1		54	48.0	48.0	69.1	69.1		
	39	54.4	54.4	64.7	64.7		48	54.0	54.0	77.8	77.8		
	36	58.9	58.9	70.1	70.1		45	57.6	57.6	80.0	83.0		
	33	64.3	64.3	76.5	76.5		42	61.7	61.7	80.0	88.9		
	30	70.7	70.7	80.0	84.1		39	66.5	66.5	80.0	95.7		
126	27	78.5	78.5	80.0	93.5	102	36	72.0	72.0	80.0	100.0		
	24	80.0	88.4	80.0	100.0		33	78.5	78.5	80.0	100.0		
	84	26.4	26.4	34.6	34.6		30	80.0	86.4	80.0	100.0		
	78	28.5	28.5	37.2	37.2		27	80.0	96.0	80.0			

1. INTERPOLATION OF PRESSURE VALUES BETWEEN MULLION SPANS LISTED IS NON-LINEAR AND IS NOT PERMITTED UNLESS CERTIFIED BY A FLORIDA LICENSED ENGINEER. UNLESS JOB SPECIFIC ENGINEER CERTIFIED, THE APPLICABLE ALLOWABLE PRESSURE FOR MULLION LENGTHS BETWEEN THOSE SHOWN SHALL BE THAT OF THE LONGER LENGTH LISTED.
2. INTERPOLATION OF PRESSURE VALUES BETWEEN LOAD WIDTHS LISTED IS LINEAR AND IS PERMITTED.
3. THE LOAD AREAS CONSIDERED FOR USE IN DETERMINING THE PRESSURE VALUES IN THIS TABLE ARE RECTANGULAR & ARE THUS POTENTIALLY CONSERVATIVE. IF NECESSARY FOR A JOB SPECIFIC CONDITION, THE PRESSURES STATED IN THIS TABLE MAY BE EVALUATED AND POTENTIALLY EDITED HIGHER BY THE ENGINEER OF RECORD FOR THIS APPROVAL TO CONSIDER THE JOB SPECIFIC ACTUAL LOAD AREA.
4. SEE ELEVATIONS FOR DETERMINING LOAD WIDTH.
5. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS MULLION PRESSURE TABLE AND THAT SPECIFIED IN THE WINDOW APPROVAL(S) FOR THE INDIVIDUAL WINDOW UNITS.

[illegible]