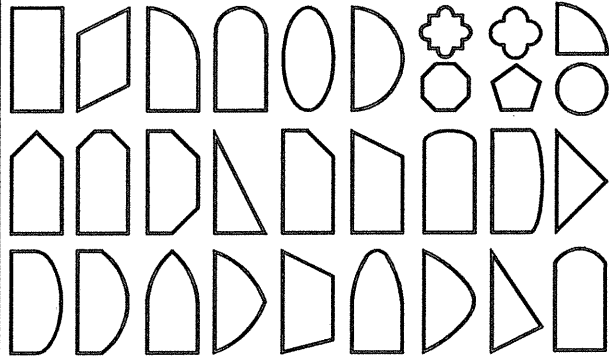


GENERAL NOTES:

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 & SMALL 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 WOOD MEMBERS OF THIS PRODUCT THAT MAY POSSIBLY COME INTO CONTACT WITH MASONRY OR CONCRETE SUBSTRATES, ARE SUBJECT TO MOISTURE &/OR ARE SUBJECT TO THE OUTSIDE ENVIRONMENT SHALL BE OF AN APPROVED DURABLE SPECIES OR BE TREATED IN AN APPROVED METHOD WITH AN APPROVED PRESERVATIVE PER FBC REQUIREMENTS.

APPROVED SHAPES



NOTES:

1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED ON THIS SHEET.
2. ALL SHAPED UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE RECTANGULAR UNITS & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE RECTANGULAR UNIT.

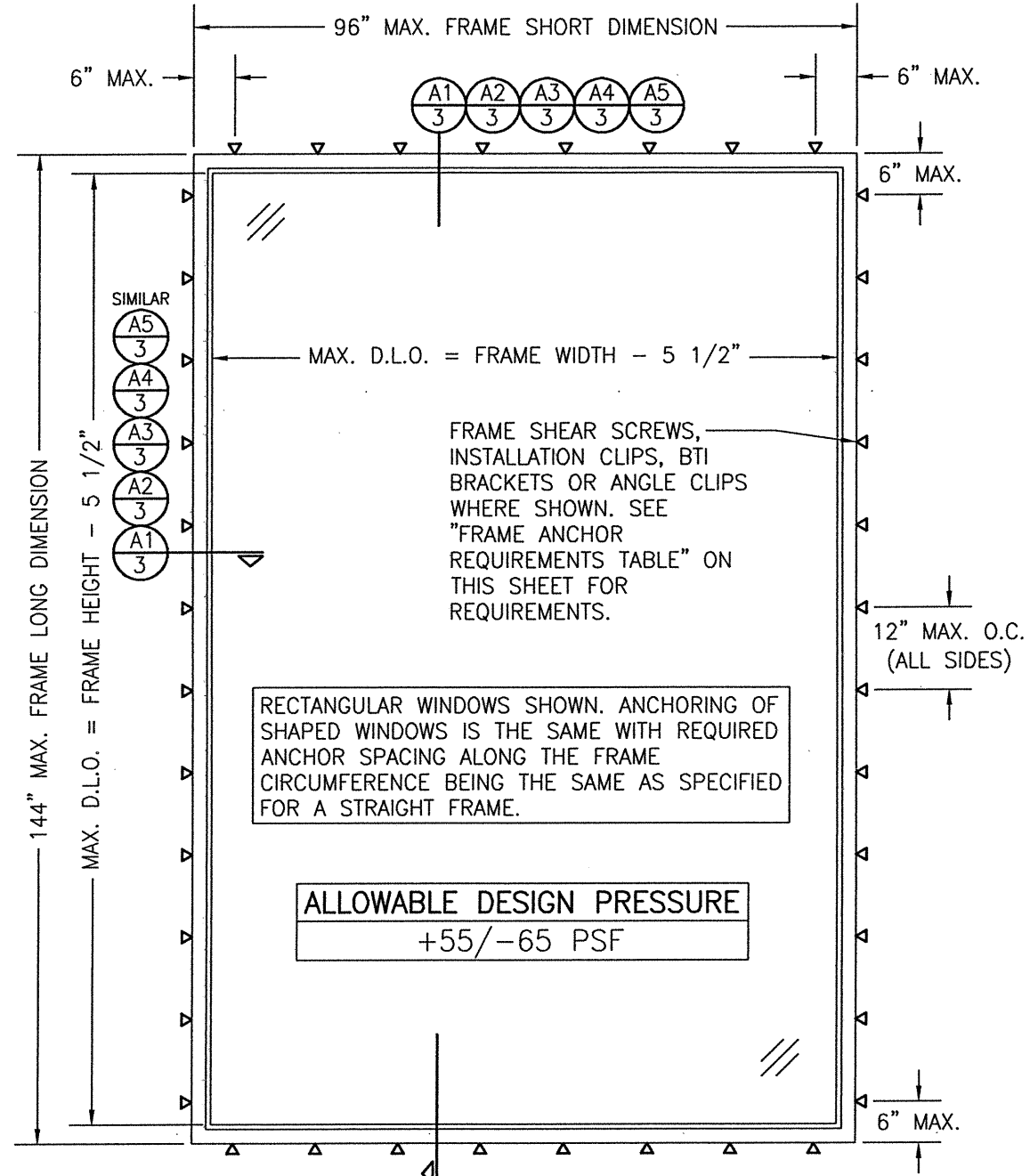
EVALUATION OF THIS PRODUCT IS BASED ON APPLICABLE STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THIS EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW 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.

ANCHOR/SUBSTRATE EVALUATION NOTE:

ALL ANCHORS IN THEIR SPECIFIED SUBSTRATES HAVE BEEN ANALYZED IN ACCORDANCE WITH THEIR APPLICABLE STANDARD(S) AND ARE FOUND TO BE CAPABLE OF SUPPORTING ALL LOADS IMPOSED ON THEM UNDER THE GUIDELINES OF THIS DOCUMENT. ANY SUBSTRATES OR CONDITIONS OUTSIDE OF WHAT IS SHOWN HERE-IN SHALL BE SUBJECT TO JOB SPECIFIC ENGINEER'S REVIEW & CERTIFICATION.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP/BACKET TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SHEAR SCREWS			
2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS/WOOD SCREW OR 1/4" BTI SCREW	1 1/4"	1"
MIN. 18 GA. 33 KSI METAL STUD	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
C-90 CMU/2500. PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
INSTALLATION CLIP SCREWS			
2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 X 1 1/2" SMS	1 3/8"	1"
MIN. 18 GA. 33 KSI METAL STUD	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
C-90 CMU/2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
BTI BRACKET & ANGLE CLIP SCREWS			
2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 X 1 1/2" SMS	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 8 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).			



EXTERIOR ELEVATION:
SINGLE FIXED WINDOW

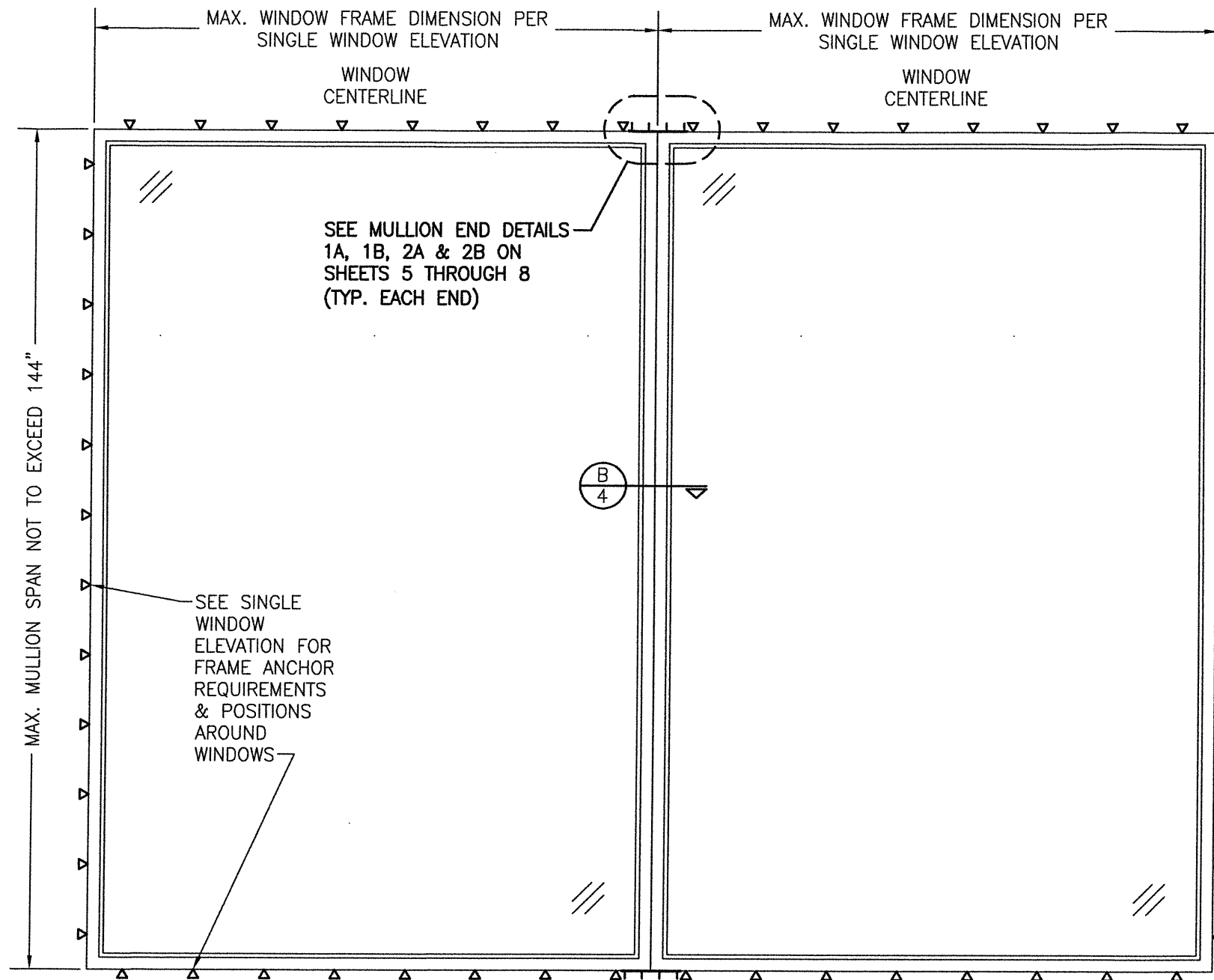
SCALE: 1/2" = 1'-0"

(RECTANGULAR WINDOW SHOWN, SHAPED WINDOWS ALSO APPLY. SEE "APPROVED SHAPES" TABLE ON THIS SHEET)

(LONG DIMENSION MAY BE HORIZONTAL OR VERTICAL)

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=24	DATE: 03/30/21		
DATE	BY	REVISION DESCRIPTION	NO.
JOB INFORMATION:			
TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
DRAWING TITLE LARGE DIRECT GLAZED FIXED IMPACT WINDOW			
CERTIFICATION STATE OF FLORIDA PROFESSIONAL ENGINEER WARREN W. SCHAEFER, P.E. No. 44135			
DRAWING NO. 1994		REV. 1 OF 8	



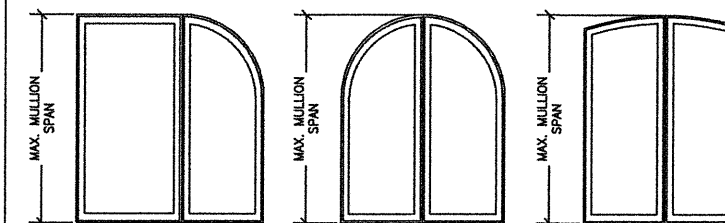
EXTERIOR ELEVATION:
MULTIPLE FIXED WINDOWS

SCALE: 3/4" = 1'-0"

MULTIPLE UNIT NOTES:

1. FOR ALL DETAIL NOT SHOWN, SEE THE SINGLE WINDOW ELEVATION.
2. MULLION MAY BE HORIZONTAL OR VERTICAL AND THE WINDOW'S SHORT VS. LONG DIMENSIONS MAY BE ROTATED PROVIDING EACH WINDOW'S SHORT & LONG DIMENSIONS DO NOT EXCEED THOSE SPECIFIED IN THE SINGLE WINDOW ELEVATION AND THE MULLION SPAN DOES NOT EXCEED 144".
3. IF VERTICALLY STACKED, THE MANUFACTURER &/OR INSTALLER SHALL INSURE THAT THE DEAD LOAD WEIGHT OF THE ABOVE WINDOWS CAN NOT CAUSE UNDO FAILURE TO THE BELOW WINDOWS.
4. THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE WINDOWS & THEIR MULLIONS.
5. INDIVIDUAL WINDOW SIZES SHALL BE RESTRICTED AS SPECIFIED IN THE SINGLE WINDOW ELEVATION.
6. RECTANGULAR WINDOWS SHOWN. SHAPED WINDOWS ALSO APPLY UNDER THE SAME CONDITIONS SHOWN FOR RECTANGULAR. SEE "SHAPED MULLIED CONDITIONS" TABLE ON THIS SHEET. NOTE THAT MULLION END PLATES SHALL BE BENT TO FIT CONTOUR OF OPENING.

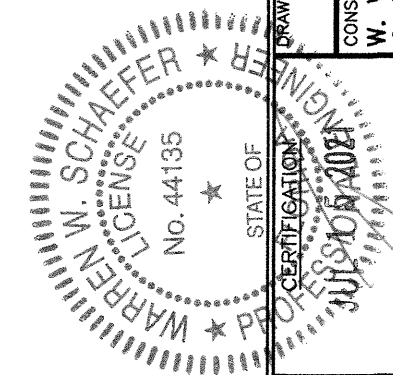
**EXAMPLES OF SIDE-BY-SIDE
SHAPED MULLIED CONDITIONS**

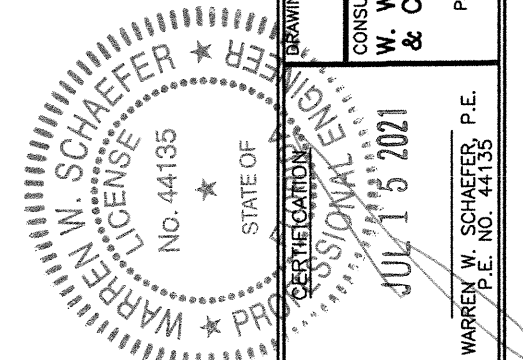
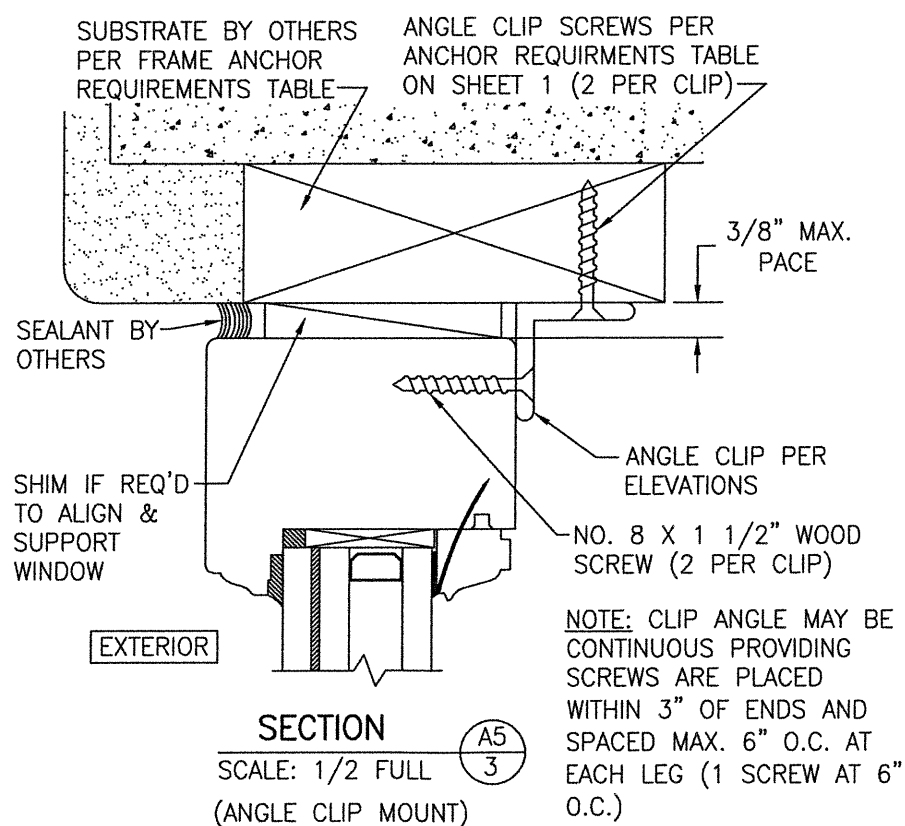
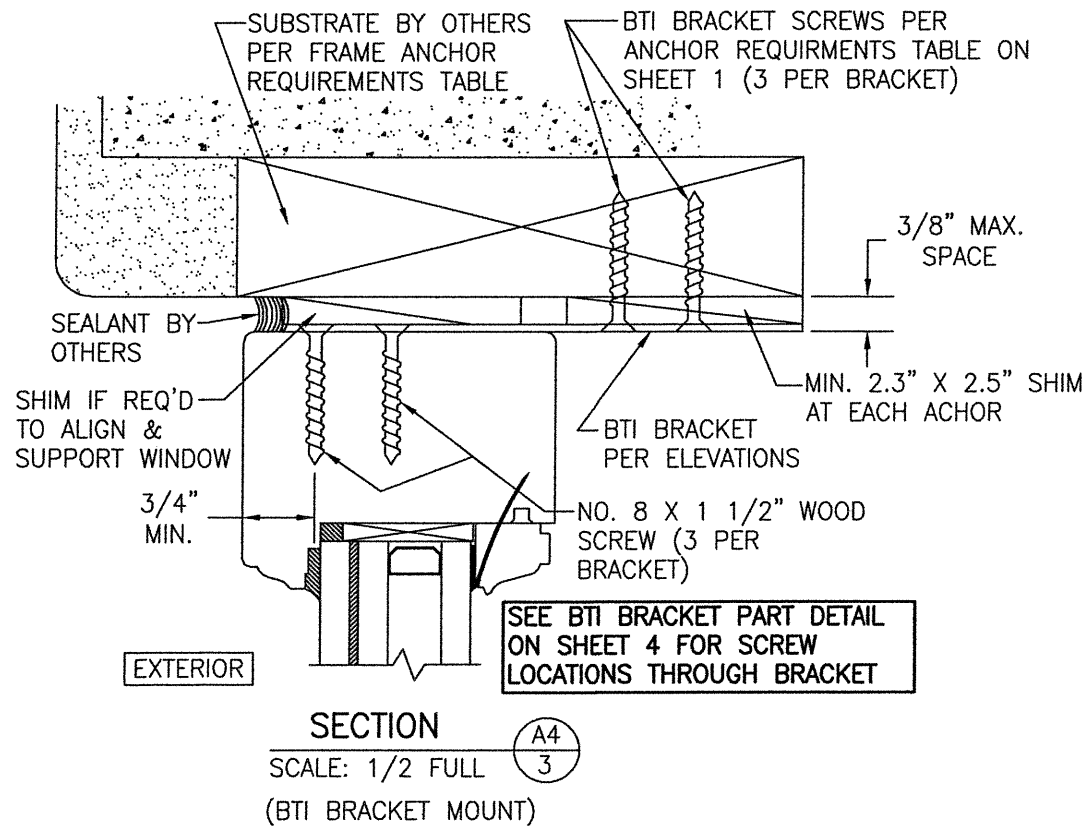
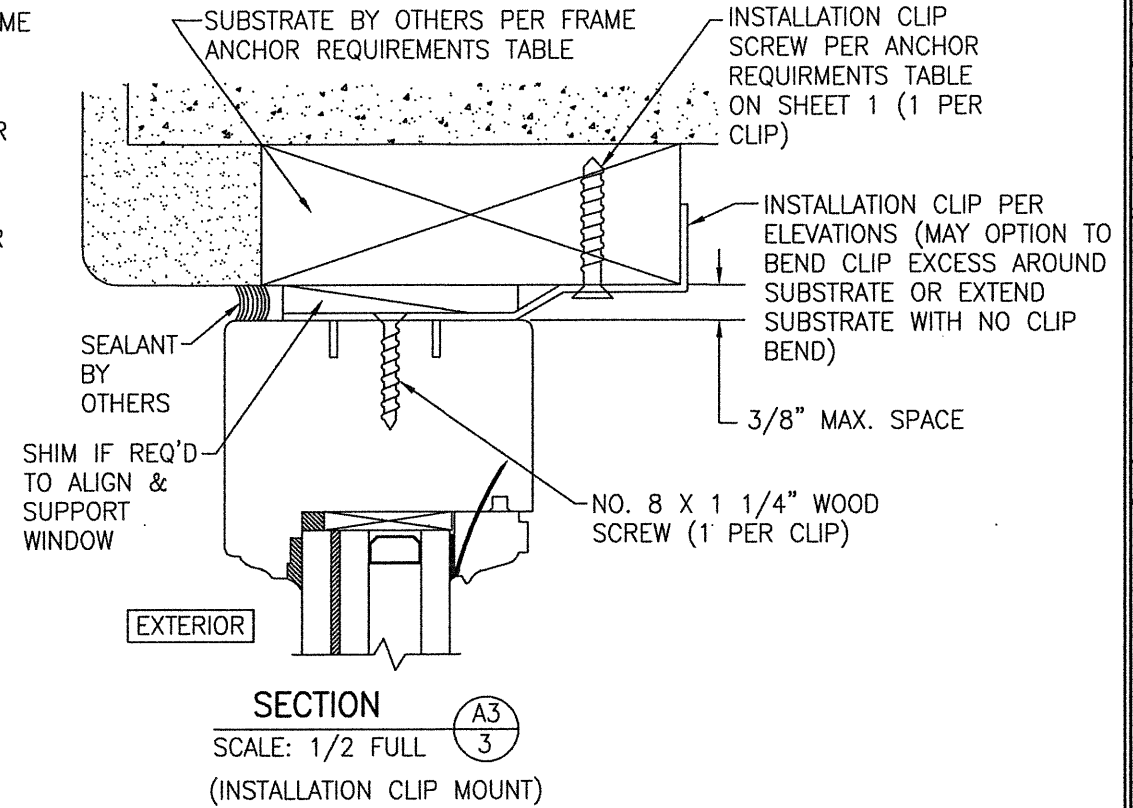
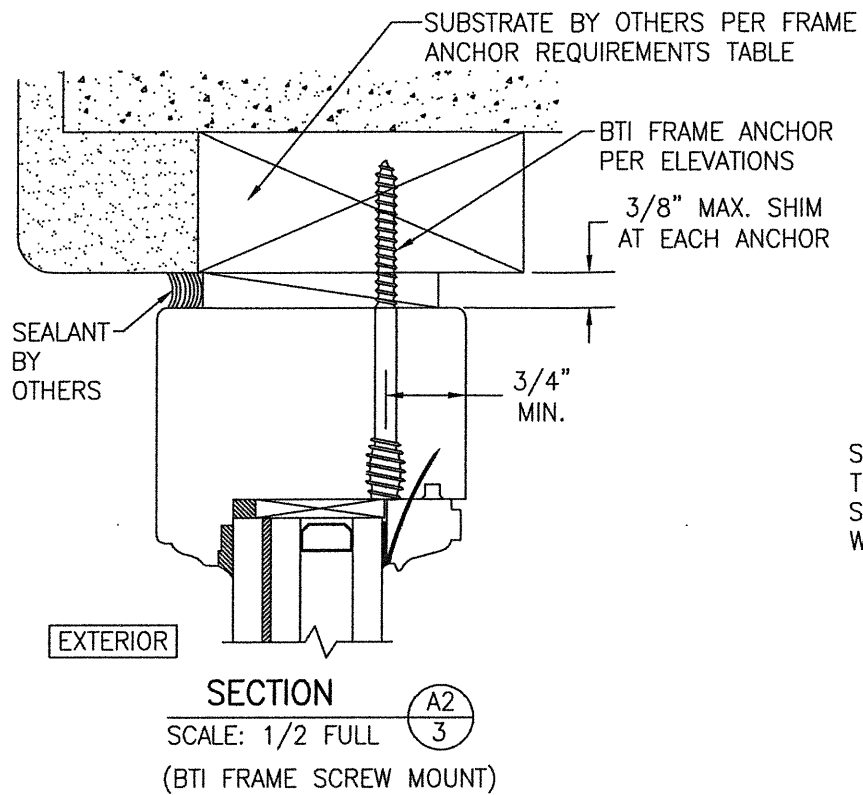
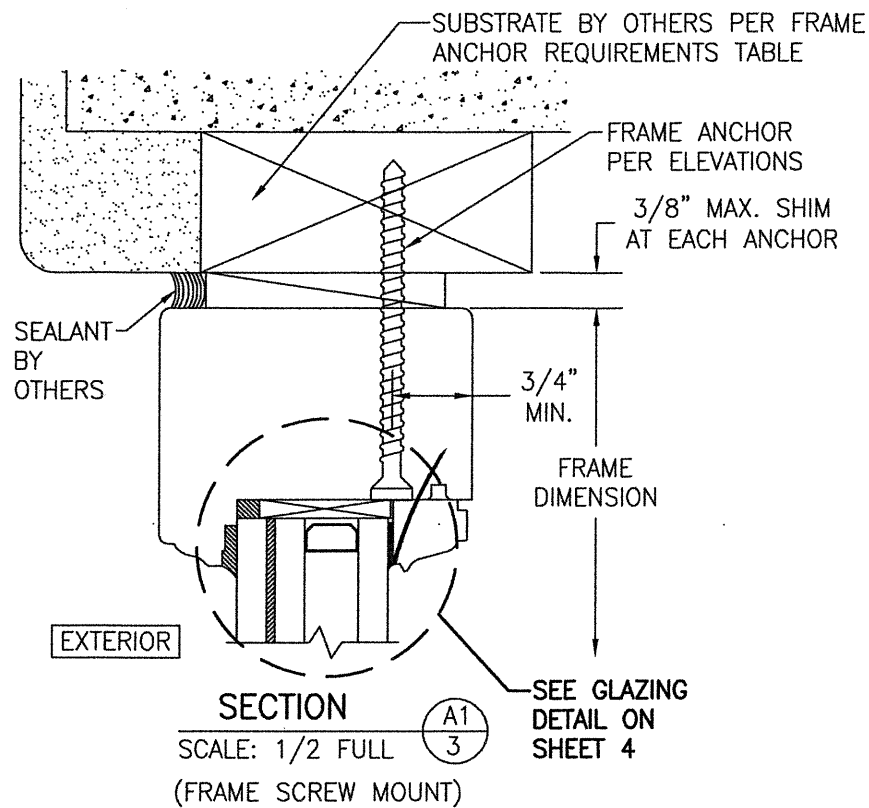


NOTES:

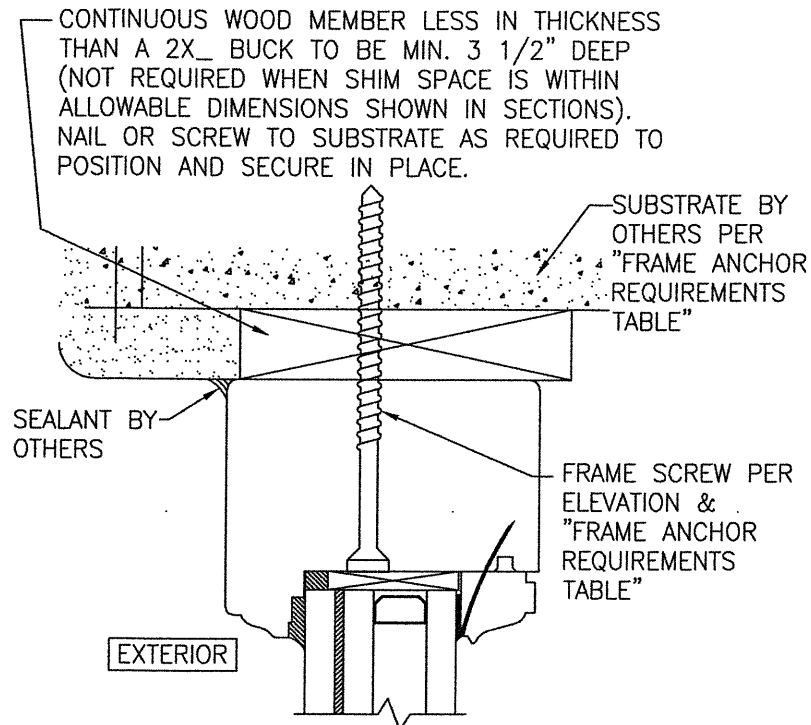
1. INDIVIDUAL WINDOW SHAPES OTHER THAN THOSE SHOWN MAY APPLY PROVIDING THEY ARE APPLICABLE TO THOSE SHOWN ON SHEET 1 & THEIR MULLION CONDITIONS ARE CONSISTENT WITH THOSE SHOWN IN THE ELEVATION ON THIS SHEET.
2. SHAPED FIXED WINDOWS MAY ALSO BE MULLIED TO RECTANGULAR WINDOWS AS TRANSOMS UNDER THE SAME RESTRICTIONS AS SIDE BY SIDE CONDITION SHOWN IN ELEVATION.

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 03/30/21	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE LARGE DIRECT GLAZED FIXED IMPACT WINDOW		JOB INFORMATION: TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1994		REV.	
SHEET NO. 2		OF 8	



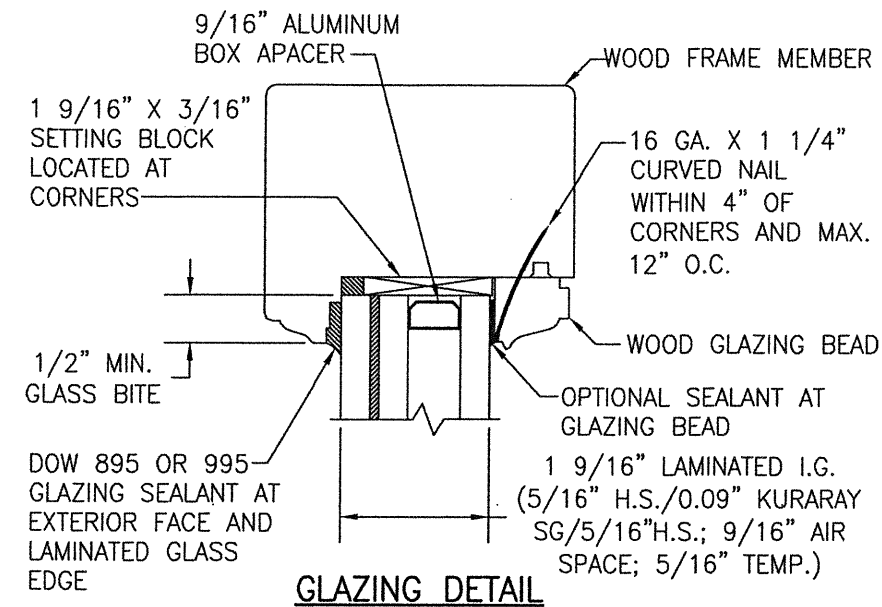


DRAWING BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/30/21	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE LARGE DIRECT GLAZED FIXED IMPACT WINDOW MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 06060 CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424 CERTIFICATION JUL 15 2021 WARREN W. SCHAEFER P.E. P.E. NO. 44135			
DRAWING NO. 1994		REV.	
SHEET NO. 3		OF 8	

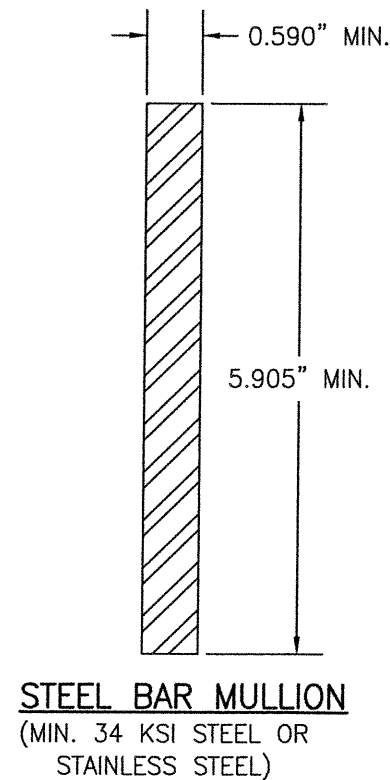
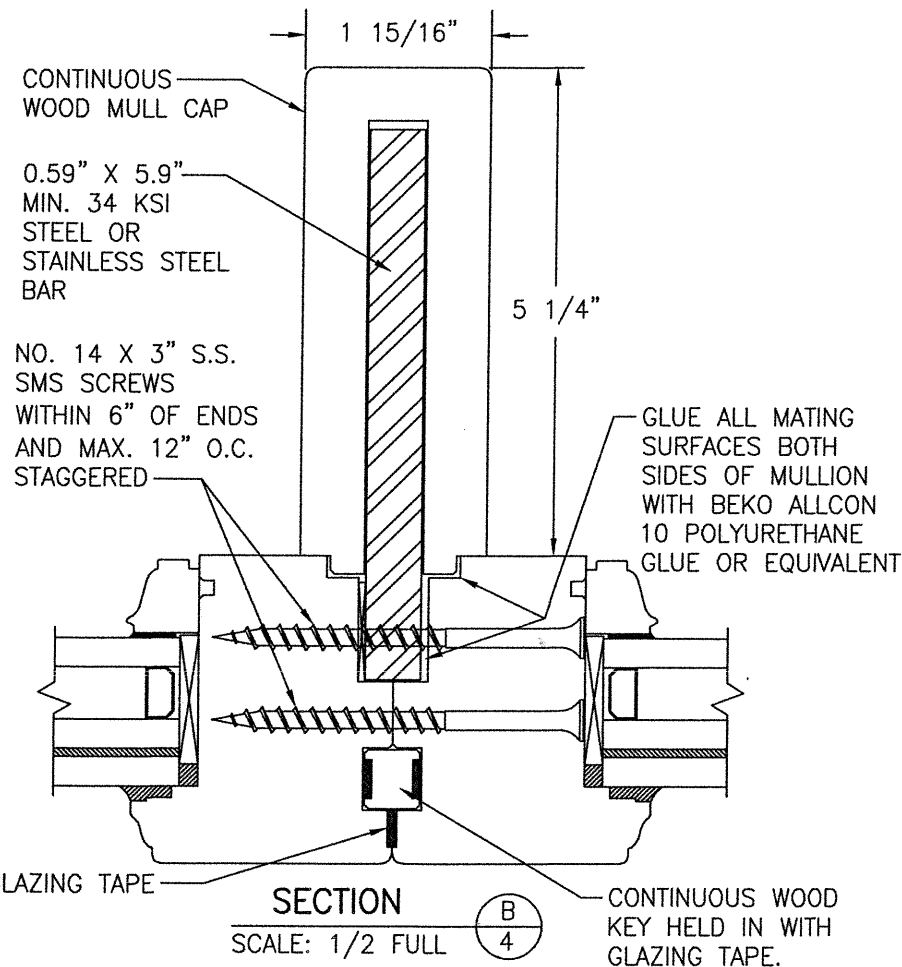
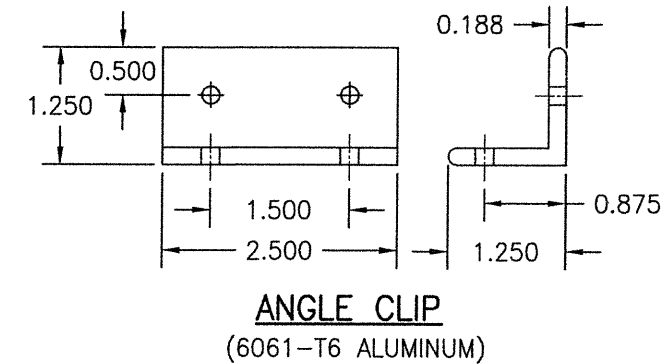
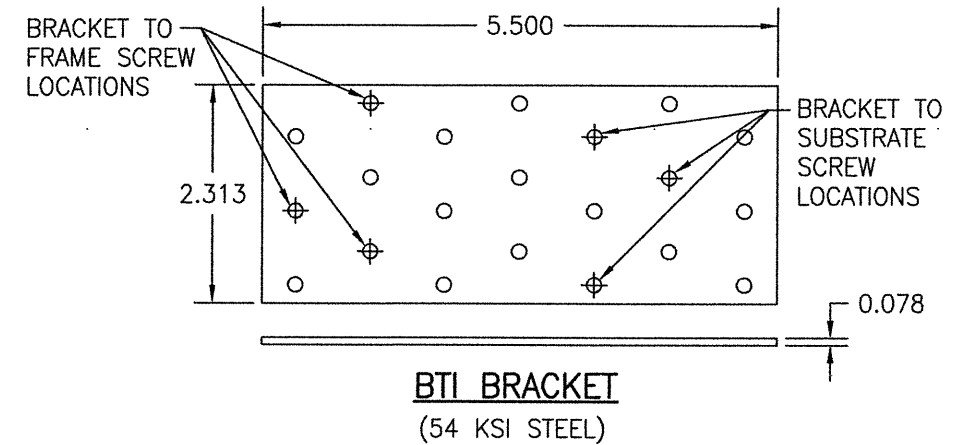
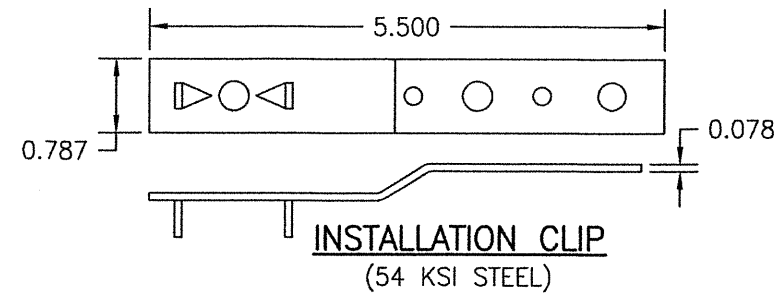


OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER

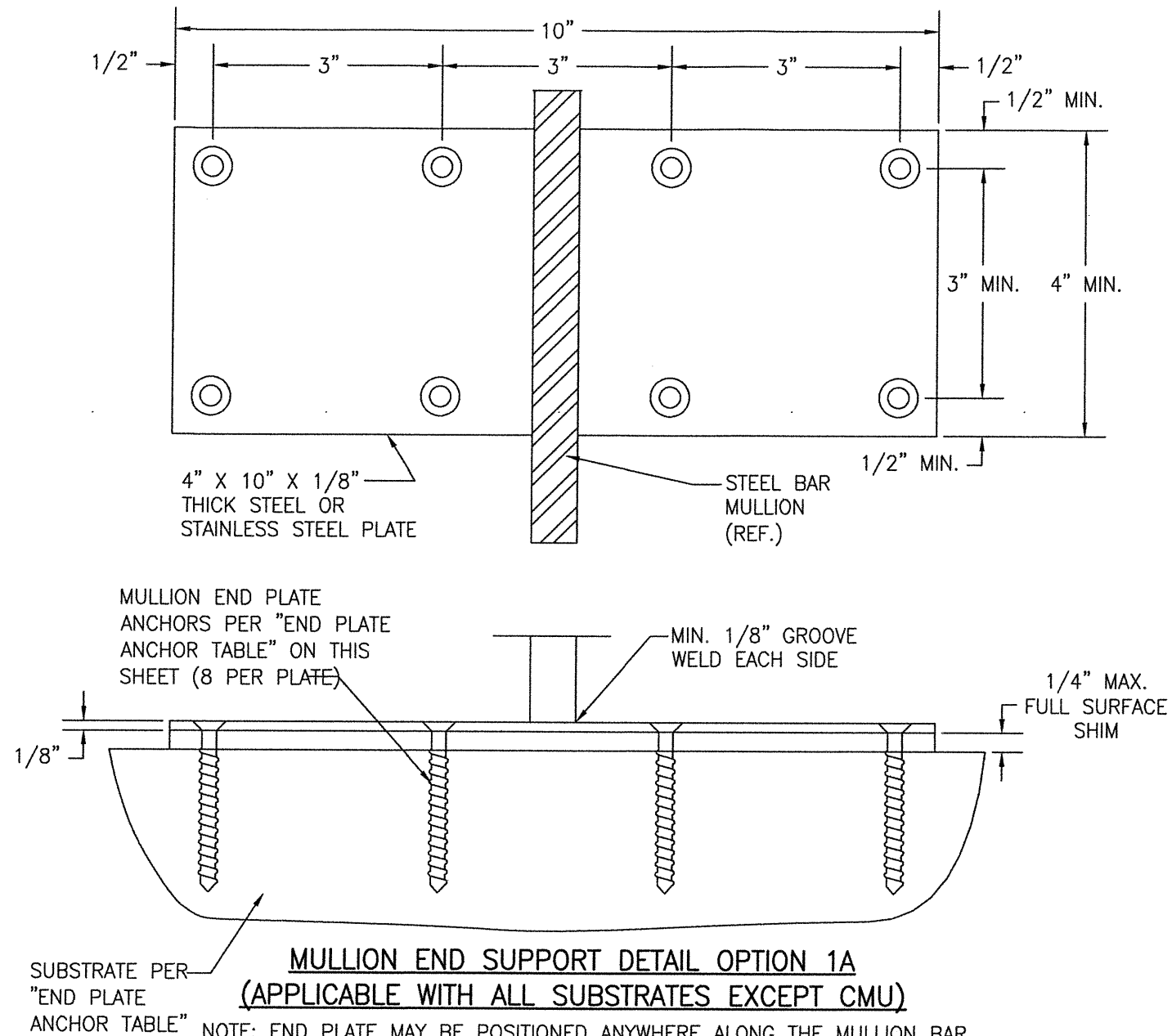
(HEAD SECTION SHOWN; SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



GLAZING DETAIL



DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/30/21
NO.	DATE
BY	
REVISION	DESCRIPTION
NO.	
DRAWING TITLE LARGE DIRECT GLAZED FIXED IMPACT WINDOW	
MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 06307-6744-0600	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
DATE JUL 15 2021	
DRAWING NO. 1994	
SHEET NO. 4 OF 8	



MULLION END SUPPORT DETAIL OPTION 1A
(APPLICABLE WITH ALL SUBSTRATES EXCEPT CMU)

NOTE: END PLATE MAY BE POSITIONED ANYWHERE ALONG THE MULLION BAR CROSS SECTIONAL LENGTH PROVIDING THE EDGE OF THE PLATE DOES NOT GO PAST NEITHER THE INTERIOR OR EXTERIOR EDGE OF THE BAR.

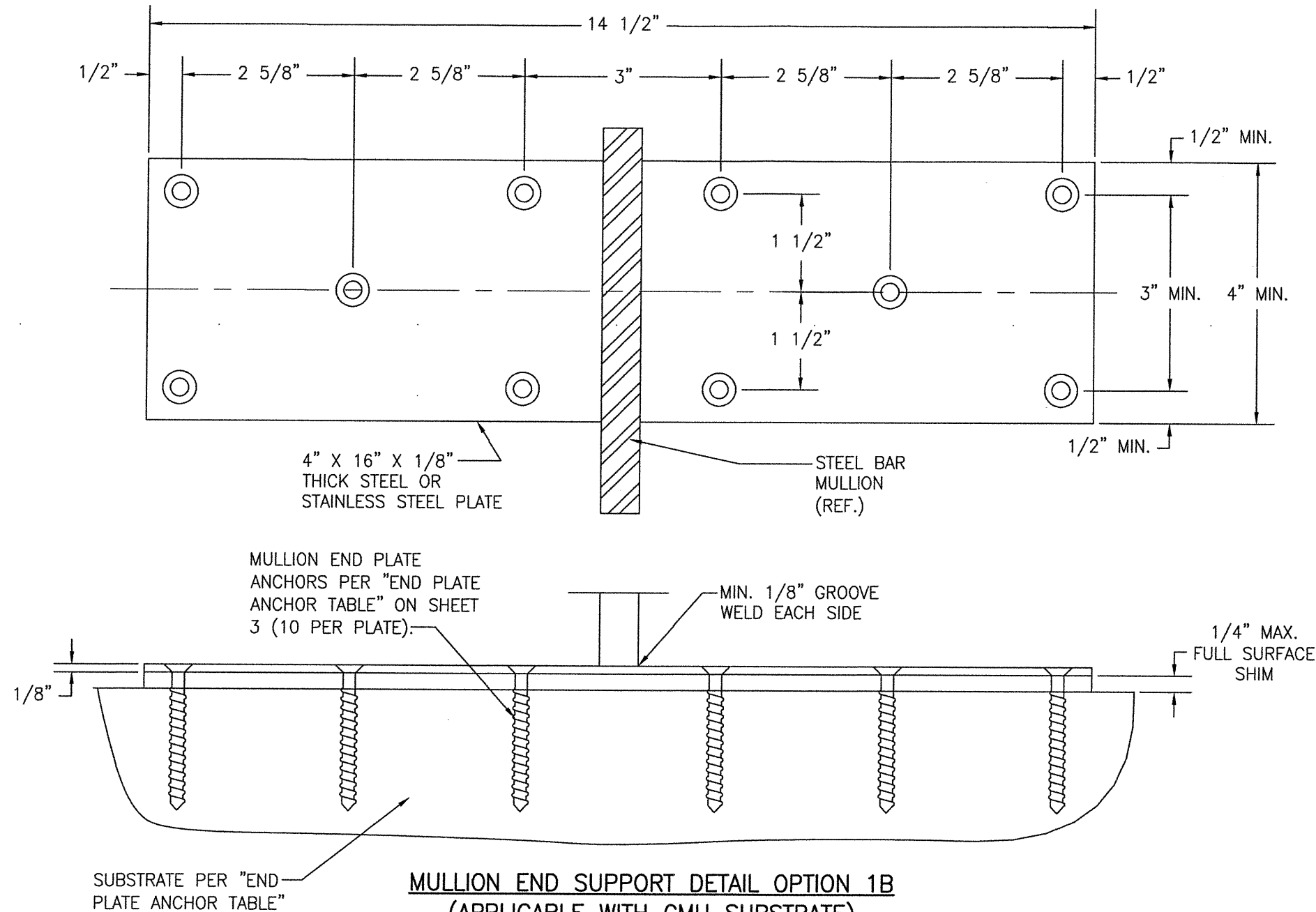
MULLION END PLATE ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP/BACKET TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SHEAR SCREWS			
2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS/WOOD SCREW	1 1/4"	1"
MIN. 18 GA. 33 KSI METAL STUD	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4" GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
CONCRETE FILLED C-90 CMU	(1) 1/4" CONCRETE SCREW	1 3/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 3/4"	2"

(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1-2		DATE: 03/30/21	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE LARGE DIRECT GLAZED FIXED IMPACT WINDOW			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 203-674-0600	
JUL 15 2021 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1994		REV.	
SHEET NO. 5		OF 8	



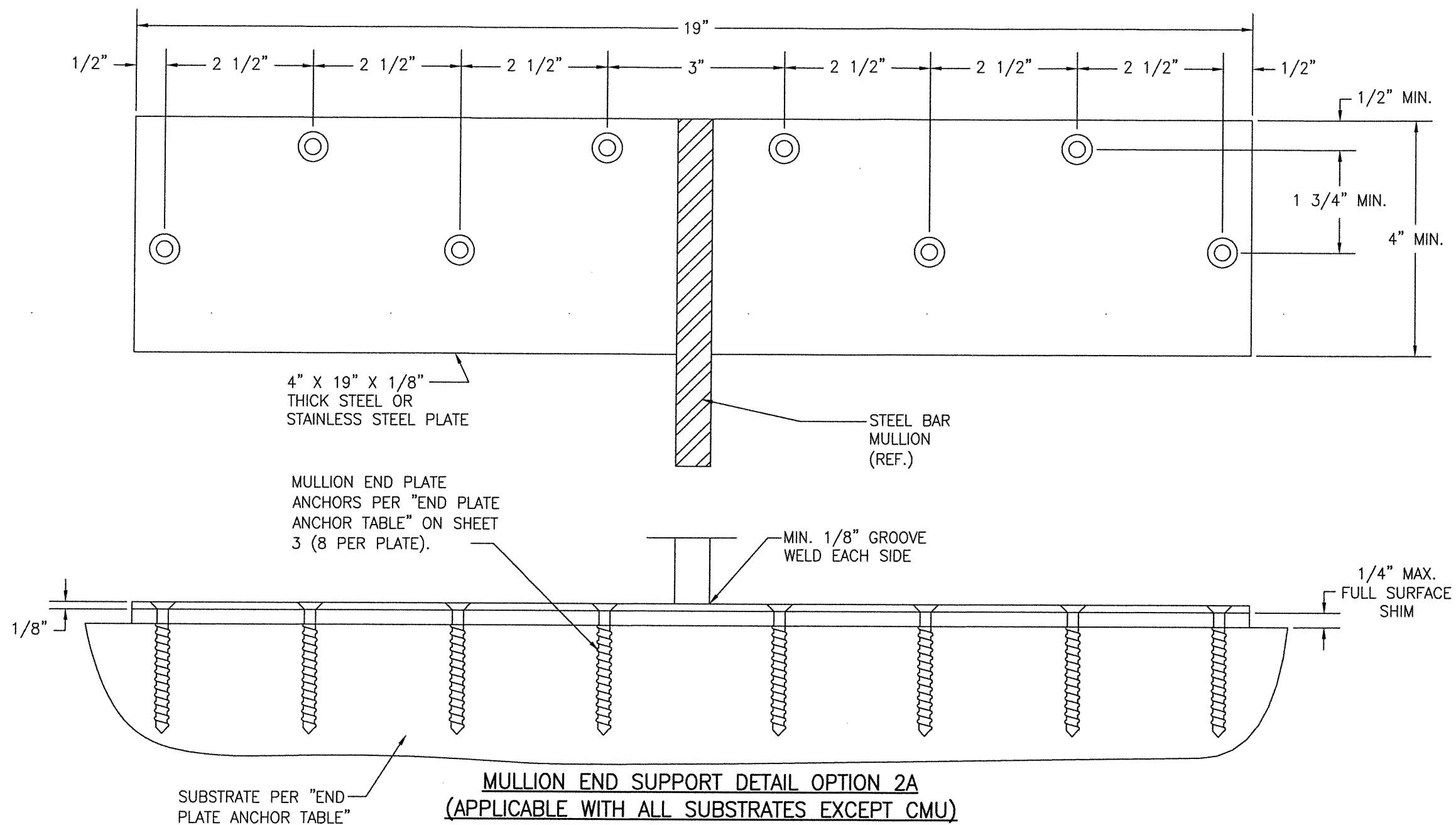


**MULLION END SUPPORT DETAIL OPTION 1B
(APPLICABLE WITH CMU SUBSTRATE)**

NOTE: END PLATE MAY BE POSITIONED ANYWHERE ALONG THE MULLION BAR CROSS SECTIONAL LENGTH PROVIDING THE EDGE OF THE PLATE DOES NOT GO PAST NEITHER THE INTERIOR OR EXTERIOR EDGE OF THE BAR.



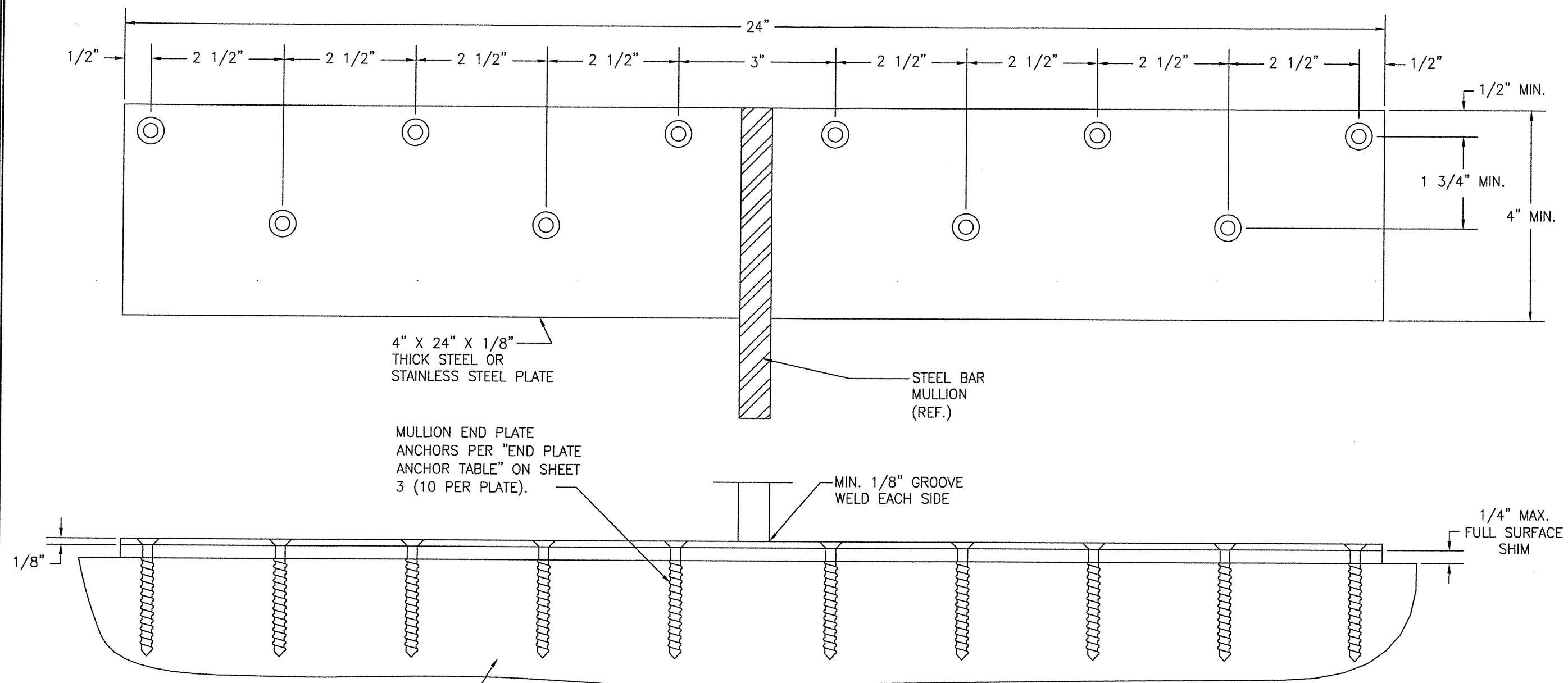
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/30/21	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE LARGE DIRECT GLAZED FIXED IMPACT WINDOW		MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 06060 203-674-0600	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		P.E. NO. 44135 WARREN W. SCHAEFER, P.E.	
DRAWING NO. 1994		REV.	
SHEET NO. 6		OF 8	



MULLION END SUPPORT DETAIL OPTION 2A
(APPLICABLE WITH ALL SUBSTRATES EXCEPT CMU)

A circular professional seal for Warren M. Schaeffer, a Professional Engineer in the State of Florida. The seal features the text "WARREN M. SCHAEFFER" around the top inner edge and "PROFESSIONAL ENGINEER" around the bottom inner edge. In the center, it reads "LICENSE No. 44135" and "STATE OF FLORIDA" separated by a five-pointed star. The seal is surrounded by a decorative border of small dots.

[illegible]



4" X 24" X 1/8"
THICK STEEL OR
STAINLESS STEEL PLATE

STEEL BAR
MULLION
(REF.)

MULLION END PLATE
ANCHORS PER "END PLATE
ANCHOR TABLE" ON SHEET
3 (10 PER PLATE).

MIN. 1/8" GROOVE
WELD EACH SIDE

1/4" MAX.
FULL SURFACE
SHIM

SUBSTRATE PER "END
PLATE ANCHOR TABLE"

**MULLION END SUPPORT DETAIL OPTION 2B
(APPLICABLE WITH CMU SUBSTRATE)**

NOTE: END PLATE MAY BE POSITIONED ANYWHERE ALONG THE MULLION BAR
CROSS SECTIONAL LENGTH PROVIDING THE EDGE OF THE PLATE DOES NOT
GO PAST NEITHER THE INTERIOR OR EXTERIOR EDGE OF THE BAR.



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/30/21	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE LARGE DIRECT GLAZED FIXED IMPACT WINDOW			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER TISCHLER UND SOHN (USA) LTD. SIX SUBURBAN AVENUE STAMFORD, CONNECTICUT 06380 203-674-0600	
DRAWING NO. 1994		REV. 	
SHEET NO. 8		OF 8	