

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED 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 HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THIS PRODUCT HAS BEEN DESIGNED 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. 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 THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
10. 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.

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.

CORNER CONSTRUCTION:

FRAME: CORNERS ARE SQUARE CUT, SEALED WITH A GASKET, FASTENED WITH 4 NO. 8 X 1" SCREWS THROUGH THE JAMB INTO THE HEAD AND 8 NO. 8 X 1" SCREWS THROUGH THE JAMB INTO THE SILL AND SEALED WITH SILICONE.

SASH: EACH ARE MITERED, SEALED & SECURED WITH 2 NO. 6 X 1 3/8" SCREWS.

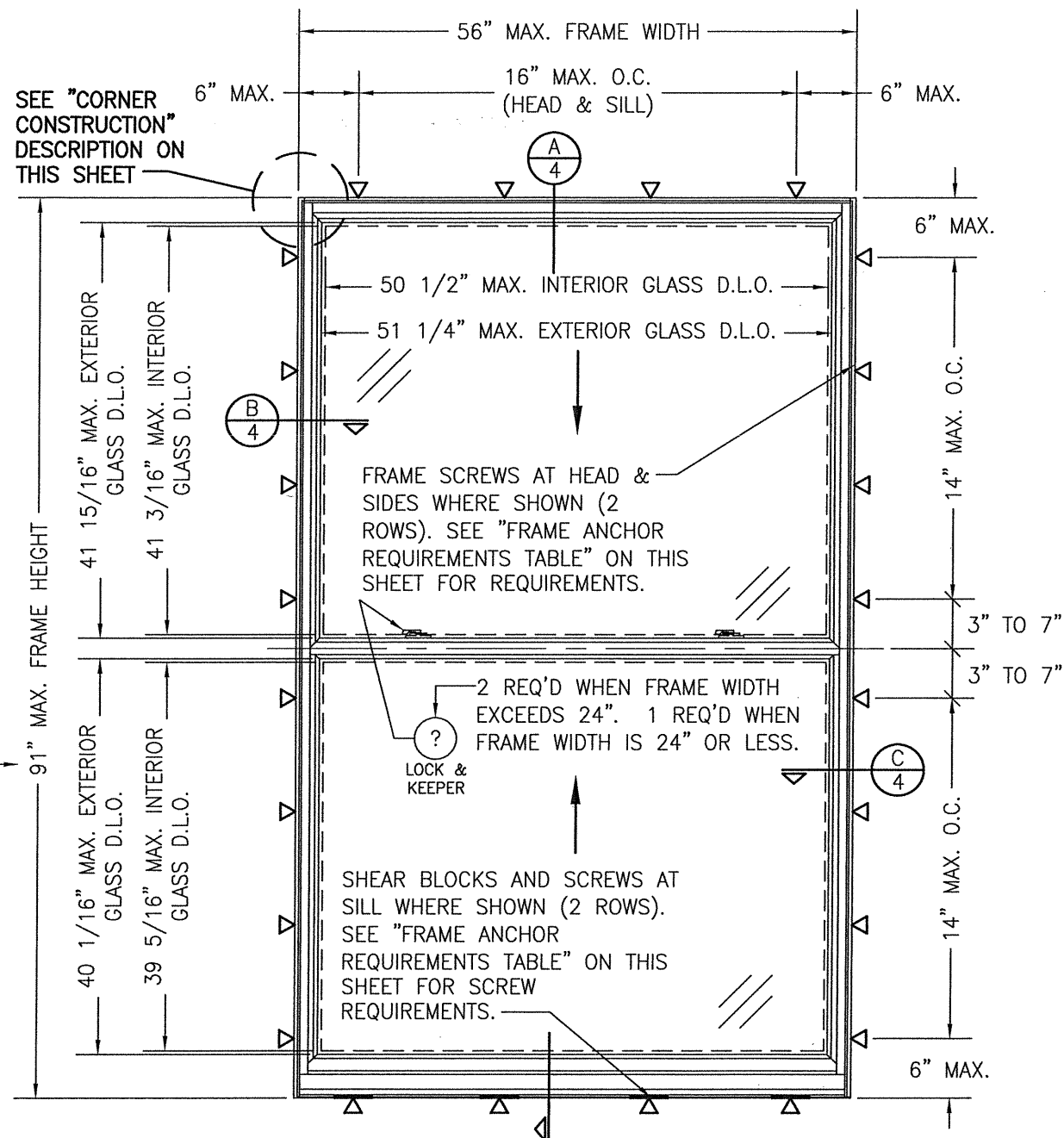
IF FRAME WIDTH IS REDUCED TO 51" OR LESS, THE FRAME HEIGHT MAY BE INCREASED TO 100". DLO DIMENSIONS WILL ADJUST ACCORDINGLY.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME & SILL SHEAR BLOCK SCREWS			
(2) MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. C-90 CMU OR 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW AT SILL; 3/16" CONCRETE SCREW AT SIDES & HEAD	1 1/4"	2"
I-BAR MULLION END CLIP SCREWS			
(2) MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	1/4-20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4-20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4-20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. C-90 CMU OR 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"

(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).

(2) 2X6 BUCKS MAY BE RIPPED DOWN TO MINIMUM 4 1/2" ACTUAL DEPTH.



**EXTERIOR ELEVATION:
SINGLE WINDOW**
SCALE: 3/4" = 1'-0"

ALLOWABLE DESIGN PRESSURE (SINGLE WINDOWS ONLY)

+/-63 PSF WHEN EXTERIOR GLASS IS ANNEALED
+/-70 PSF WHEN EXTERIOR GLASS IS TEMPERED

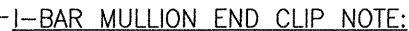
NOTE: WHEN D.L.O. AREA OF EACH EXTERIOR PANE OF GLASS = 13.6 SF OR LESS, ALLOWABLE PRESSURE WHEN EXTERIOR GLASS IS ANNEALED MAY BE INCREASED TO +/-70 PSF (RESTRICTION BY ASTM E-1300)

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=16		DATE: 10/06/10	
NO.	REVISION DESCRIPTION	DATE	BY
A1	UPDATE TO CURRENT STANDARDS	08/23/11	W.W.S.
B1	UPDATE TO CURRENT STANDARDS	01/12/15	W.W.S.
C1	CHANGED SHIM GAP TO 3/8"	11/09/17	W.W.S.
D1	EDIT SHEAR BLOCK INFO	01/21/20	W.W.S.

DRAWING TITLE 920 DOUBLE HUNG IMPACT WINDOW		MANUFACTURER ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311	
CONSULTANTS 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 JAN 21 2020	
DRAWING NO. 1718		REV. D	
SHEET NO. 1 OF 7			

MAXIMUM MULLION SPAN (IN.)	MAXIMUM LOAD WIDTH (IN.)		ALLOWABLE PRESSURE (+/- PSF)			
			WITH H-BAR MULLION		WITH I-BAR MULLION	
	H-BAR MULLION	I-BAR MULLION	HUNG TO HUNG	HUNG TO FIXED	HUNG TO HUNG	HUNG TO FIXED
82	64	64.75	N/A	47.0	N/A	64.6
	60	60.75	N/A	50.2	N/A	68.8
	56	56.75	37.5	53.8	57.7	70.0
	54	54.75	38.9	55.7	59.8	70.0
	48	48.75	43.8	62.7	67.1	70.0
	42	42.75	50.0	70.0	70.0	70.0
	36	36.75	58.3	70.0	70.0	70.0
	30	30.75	70.0	70.0	70.0	70.0
78	64	64.75	N/A	49.4	N/A	67.9
	60	60.75	N/A	52.7	N/A	70.0
	56	56.75	41.4	56.5	60.6	70.0
	54	54.75	43.0	58.6	62.8	70.0
	48	48.75	48.4	65.9	70.0	70.0
	42	42.75	55.3	70.0	70.0	70.0
	36	36.75	64.5	70.0	70.0	70.0
	33	33.75	70.0	70.0	70.0	70.0
72	64	64.75	N/A	53.6	N/A	70.0
	60	60.75	N/A	57.1	N/A	70.0
	56	56.75	48.6	61.2	65.7	70.0
	54	54.75	50.4	63.5	68.1	70.0
	48	48.75	56.7	70.0	70.0	70.0
	42	42.75	64.9	70.0	70.0	70.0
	38	38.75	70.0	70.0	70.0	70.0
66	64	64.75	N/A	58.4	N/A	70.0
	60	60.75	N/A	66.8	N/A	70.0
	56	56.75	57.9	69.3	70.0	70.0
	54	54.75	60.0	70.0	70.0	70.0
	48	48.75	67.5	70.0	70.0	70.0
	46	46.75	70.0	70.0	70.0	70.0
60	64	64.75	N/A	64.3	N/A	70.0
	60	60.75	N/A	70.0	N/A	70.0
	56	56.75	64.1	70.0	70.0	70.0
	54	54.75	66.5	70.0	70.0	70.0
	51	51.75	70.0	70.0	70.0	70.0
54	64	64.75	N/A	70.0	N/A	70.0
	60	60.75	N/A	70.0	N/A	70.0
	56	56.75	70.0	70.0	70.0	70.0

1. SEE ELEVATION FOR DIMENSIONING OF LOAD WIDTH.
2. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE INDIVIDUAL WINDOW.
3. "N/A" DESIGNATES A SIZE NOT APPLICABLE TO THAT CONDITION.

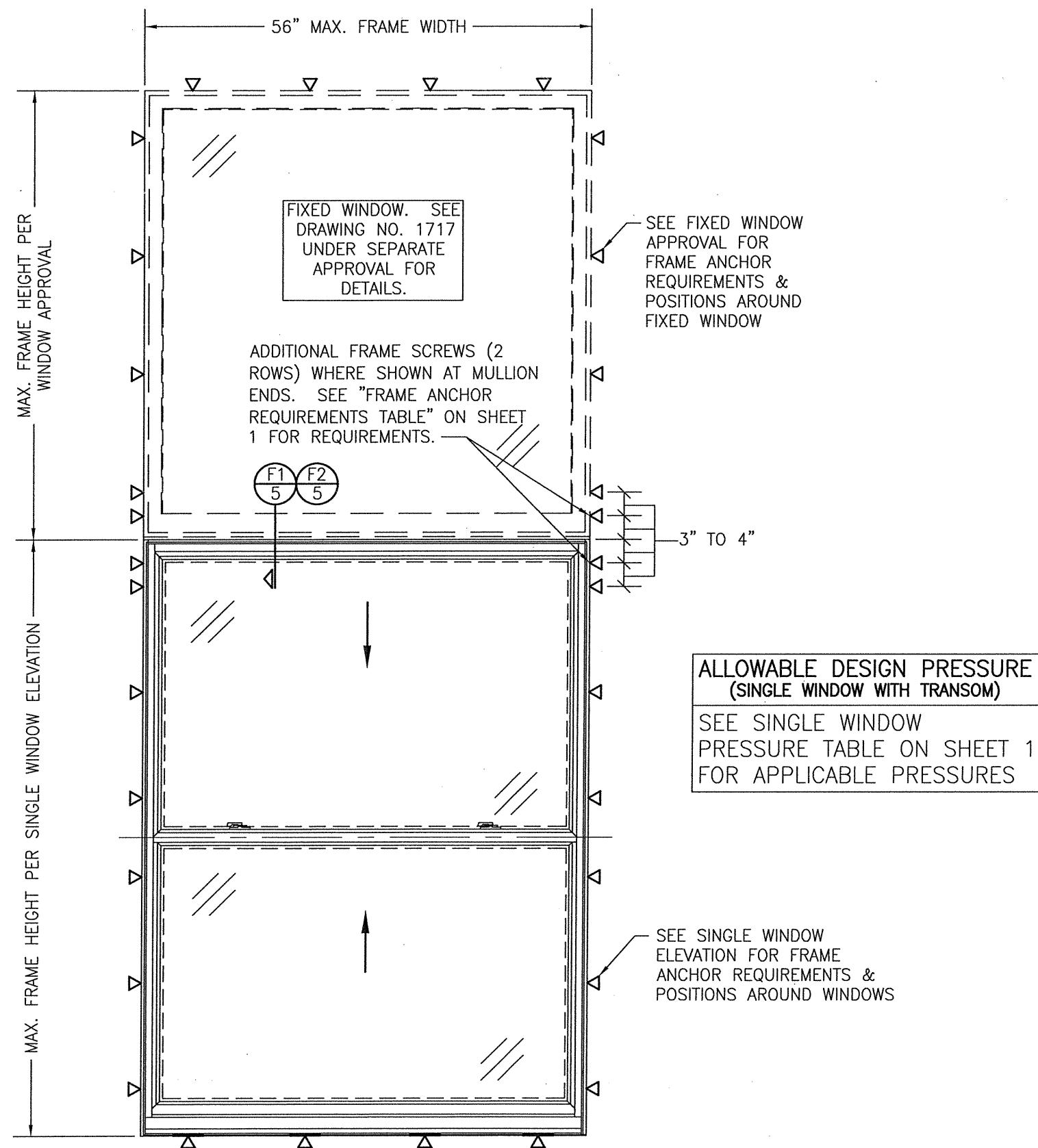


WHEN THE I-BAR MULLION IS USED UNDER THE SAME UNIT SIZE AND ALLOWABLE PRESSURE RESTRICTIONS AS THE H-BAR MULLION, NO MULLION END CLIPS ARE REQUIRED.

1. FOR ALL DETAIL NOT SHOWN, SEE SINGLE WINDOW ELEVATION.
2. THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED HORIZONTALLY IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERED FROM THE WINDOWS & THEIR MULLIONS.
3. ANY COMBINATION OF FIXED/OPERABLE WINDOWS IN ONE OPENING SHALL APPLY.
4. INDIVIDUAL WINDOW SIZES SHALL BE RESTRICTED AS SPECIFIED IN THE SINGLE WINDOW ELEVATION.

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

[illegible]

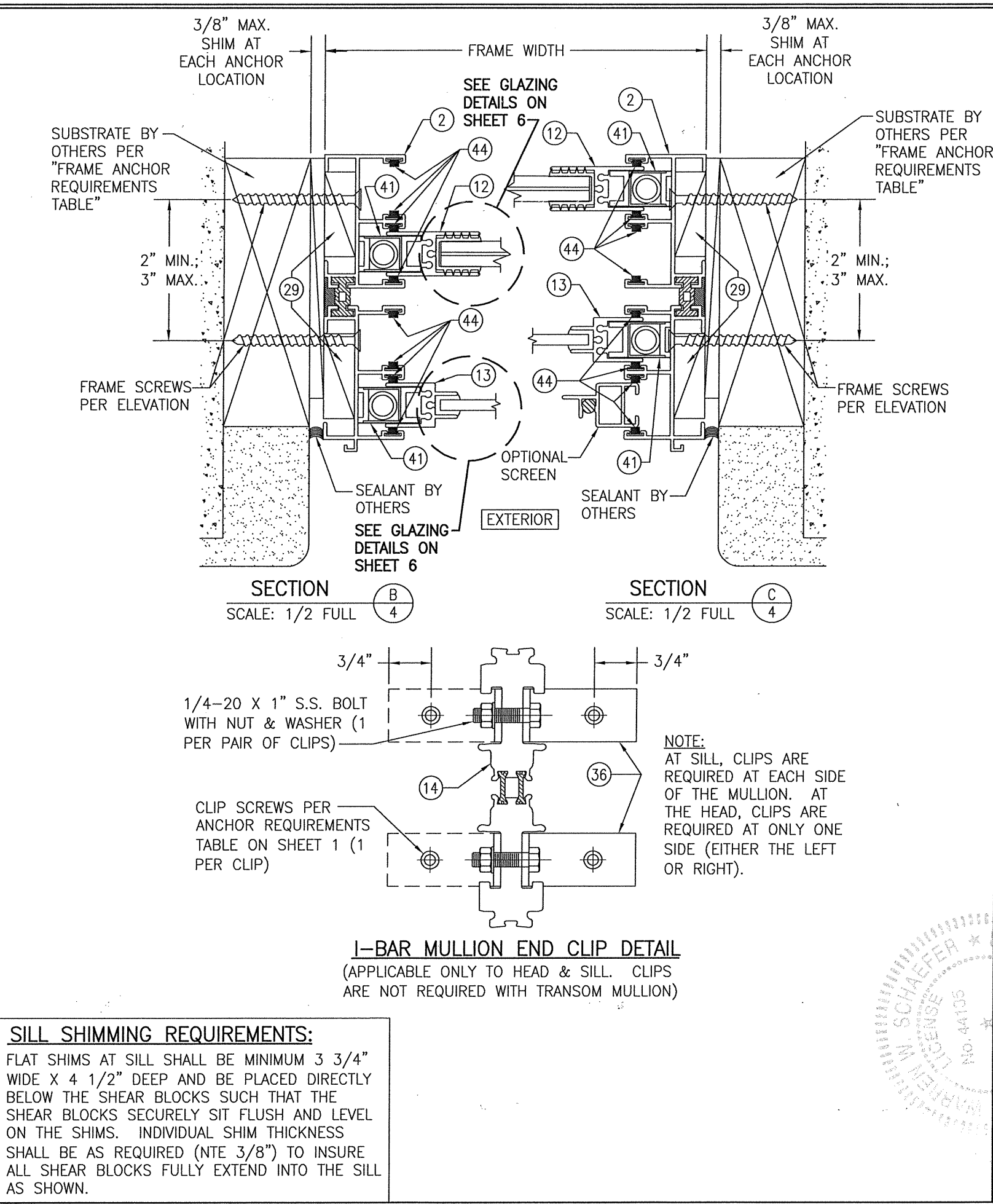
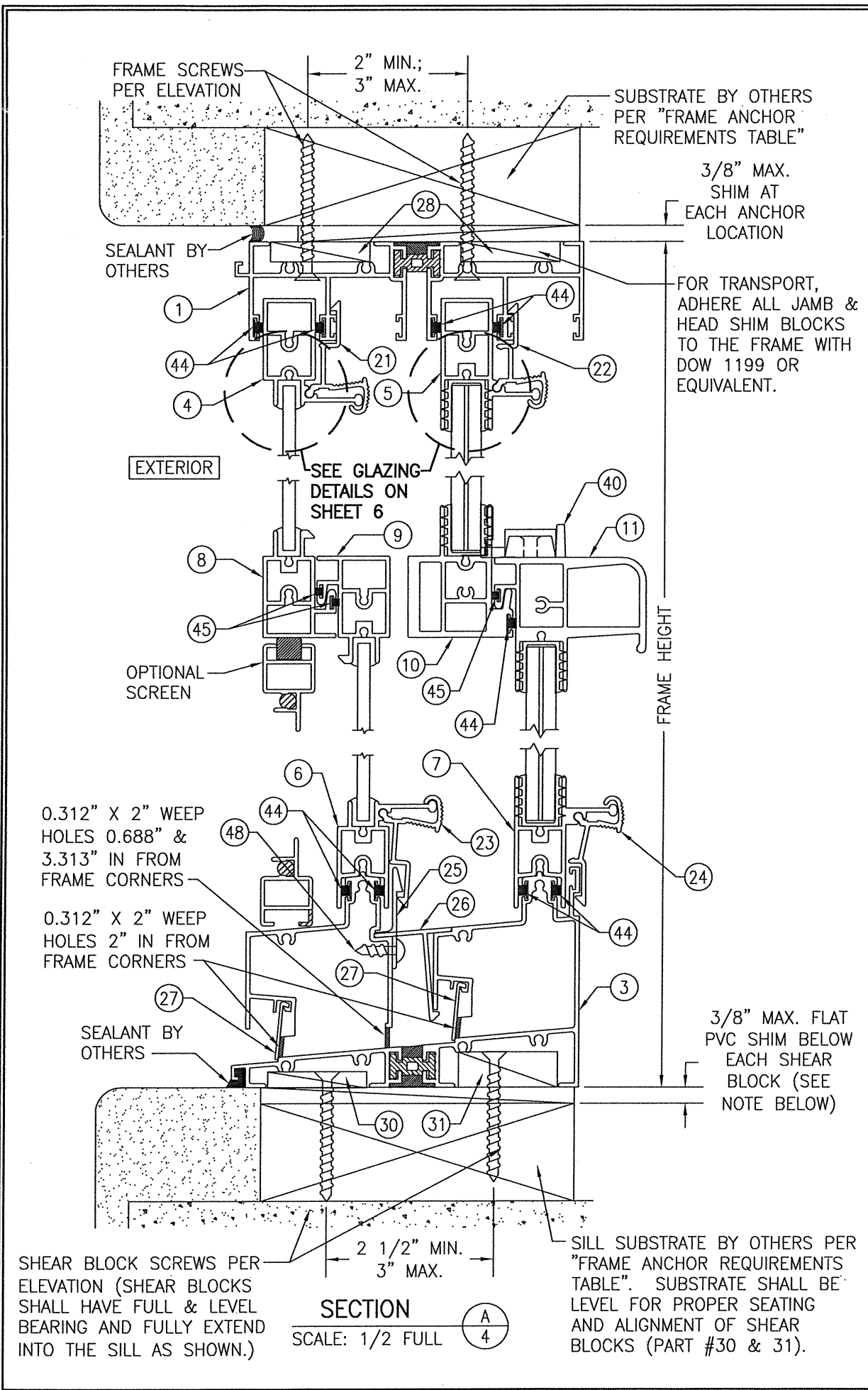


EXTERIOR ELEVATION:
SINGLE WINDOW WITH TRANSOM

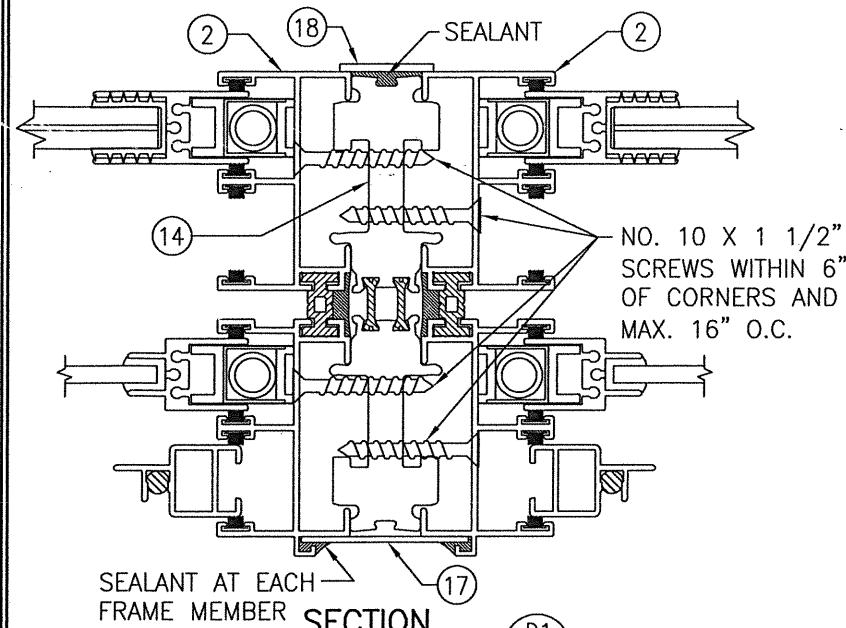
SCALE: $3/4" = 1'-0"$

(FOR ALL DETAIL NOT SHOWN, SEE SINGLE WINDOW ELEVATION)

DRAWING NO. 1718		REV. D	
SHEET NO. 3 OF 7			
CERTIFICATION 		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING TITLE 920 DOUBLE HUNG IMPACT WINDOW		MANUFACTURER ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		NO. REVISION DESCRIPTION BY DATE	
PLOT: 1=16		CHECKED BY: W.W.S.	
DRAWN BY: W.W.S.		DATE: 10/06/10	



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 10/06/10	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: 920 DOUBLE HUNG IMPACT WINDOW CONSULTANTS: ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311 MANUFACTURER: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION JAN 21 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135		DRAWING NO. 1718 REV. D SHEET NO. 4 OF 7	



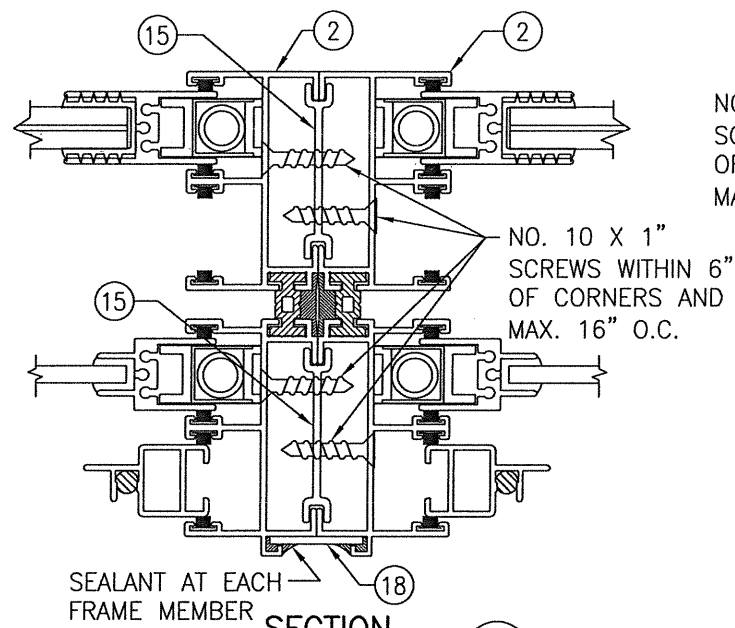
SECTION

SCALE: 1/2 FULL

(D1)
5

(I-BAR MULLION)

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



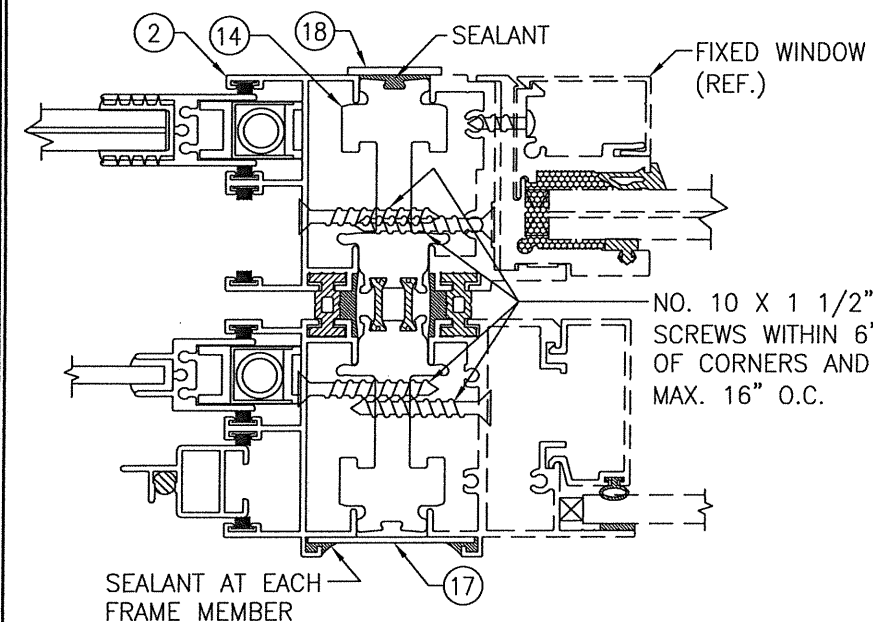
SECTION

SCALE: 1/2 FULL

(D2)
5

(H-BAR MULLION)

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



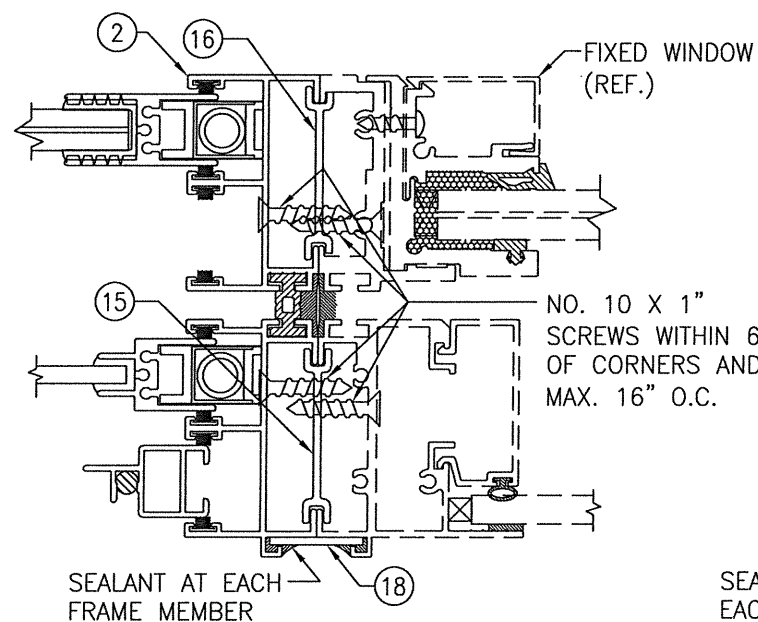
SECTION

SCALE: 1/2 FULL

(E1)
5

(I-BAR MULLION)

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



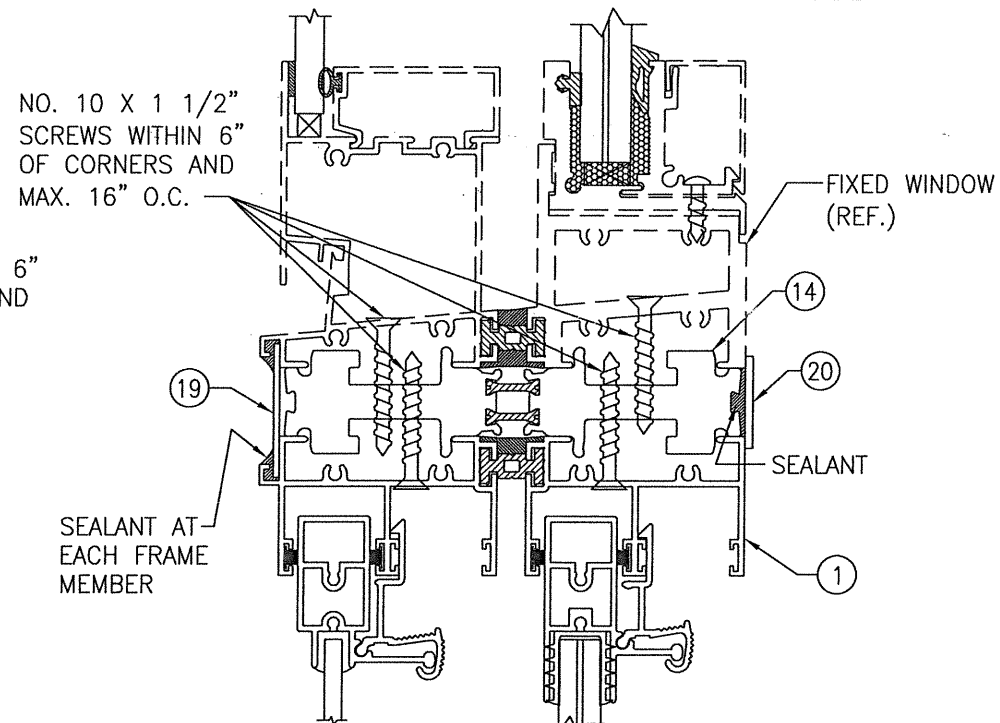
SECTION

SCALE: 1/2 FULL

(E2)
5

(H-BAR MULLION)

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



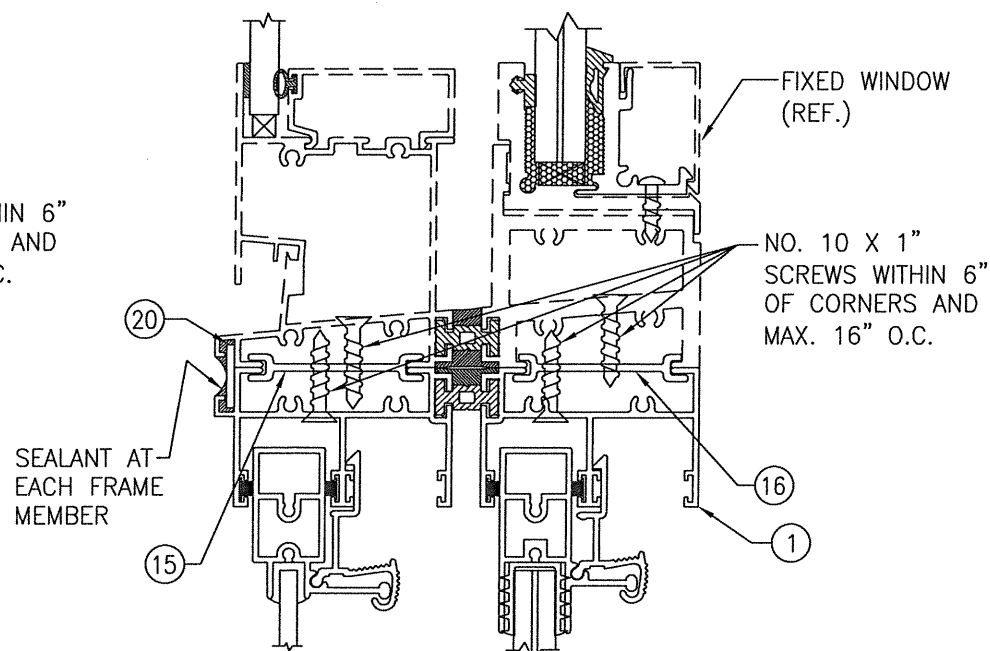
SECTION

SCALE: 1/2 FULL

(F1)
5

(I-BAR MULLION)

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION

SCALE: 1/2 FULL

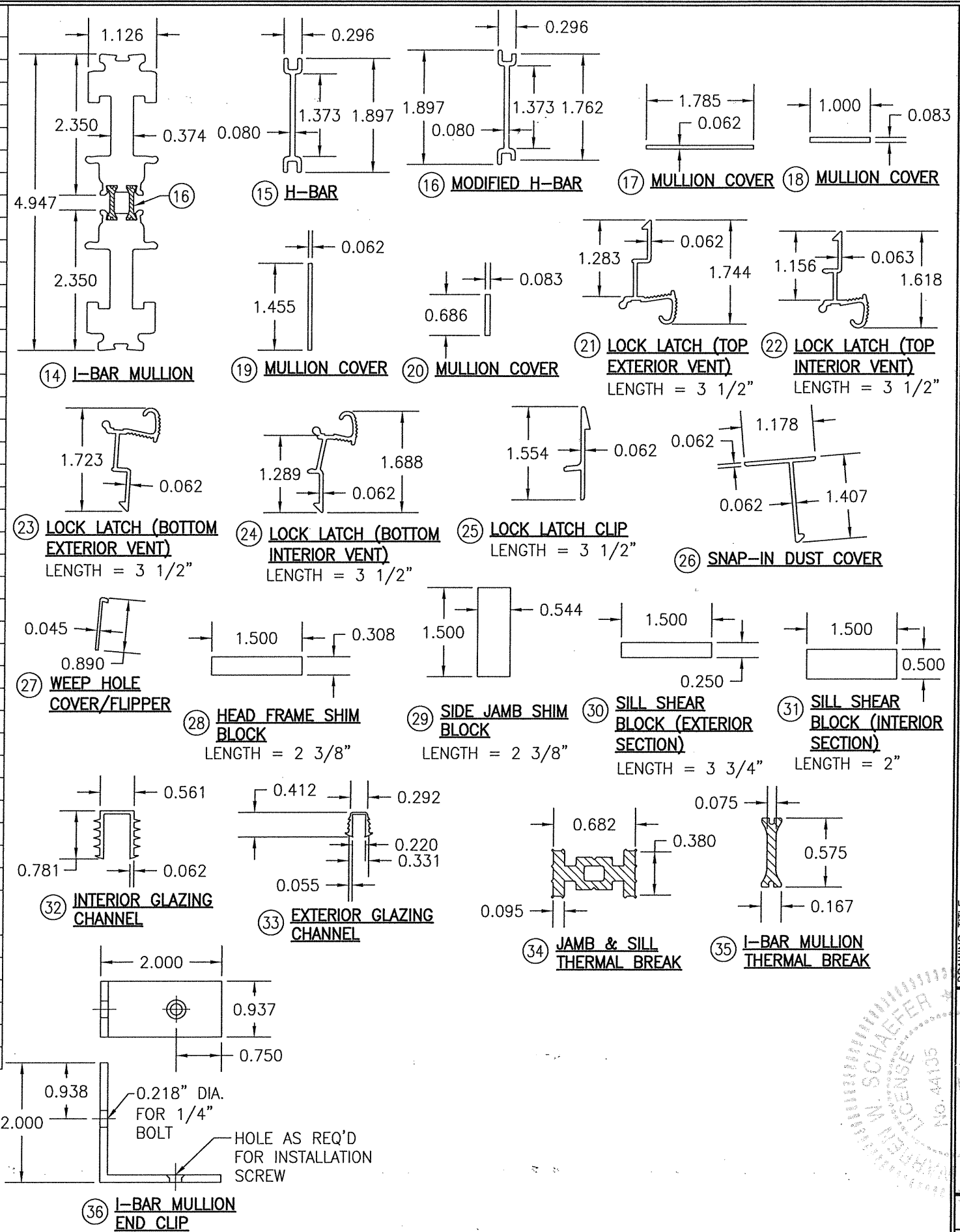
(F2)
5

(H-BAR MULLION)

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 10/08/10	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE 920 DOUBLE HUNG IMPACT WINDOW			
MANUFACTURER ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION JAN 21 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1718		REV. D	
SHEET NO. 5 OF 7			

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD JAMB	6063-T6 ALUMINUM
2	SIDE JAMB	6063-T6 ALUMINUM
3	SILL	6063-T6 ALUMINUM
4	TOP SASH (TOP EXTERIOR VENT)	6063-T6 ALUMINUM
5	TOP SASH (TOP INTERIOR VENT)	6063-T6 ALUMINUM
6	BOTTOM SASH (BOTTOM EXTERIOR VENT)	6063-T6 ALUMINUM
7	BOTTOM SASH (BOTTOM INTERIOR VENT)	6063-T6 ALUMINUM
8	BOTTOM SASH (TOP EXTERIOR VENT)	6063-T6 ALUMINUM
9	TOP SASH (BOTTOM EXTERIOR VENT)	6063-T6 ALUMINUM
10	BOTTOM SASH (TOP INTERIOR VENT)	6063-T6 ALUMINUM
11	TOP SASH (BOTTOM INTERIOR VENT)	6063-T6 ALUMINUM
12	SIDE SASH (INTERIOR VENT)	6063-T6 ALUMINUM
13	SIDE SASH (EXTERIOR VENT)	6063-T6 ALUMINUM
14	I-BAR 4-PIECE MULLION	6063-T6 ALUMINUM
15	H-BAR	6063-T6 ALUMINUM
16	H-BAR MODIFIED	6063-T6 ALUMINUM
17	MULLION COVER	6063-T6 ALUMINUM
18	MULLION COVER	6063-T6 ALUMINUM
19	MULLION COVER	6063-T6 ALUMINUM
20	MULLION COVER	6063-T6 ALUMINUM
21	LOCK LATCH (TOP EXTERIOR VENT)	6063-T6 ALUMINUM (2 PER VENT)
22	LOCK LATCH (TOP INTERIOR VENT)	6063-T6 ALUMINUM (2 PER VENT)
23	LOCK LATCH (BOTTOM EXTERIOR VENT)	6063-T6 ALUMINUM (2 PER VENT)
24	LOCK LATCH (BOTTOM INTERIOR VENT)	6063-T6 ALUMINUM (2 PER VENT)
25	LOCK LATCH CLIP	6063-T6 ALUMINUM
26	SNAP-IN DUST COVER	RIGID PVC
27	WEEP HOLE COVER/FLIPPER	6063-T6 ALUMINUM
28	HEAD FRAME SHIM BLOCK	HIGH DENSITY PVC
29	SIDE JAMB SHIM BLOCK	HIGH DENSITY PVC
30	SILL SHEAR BLOCK (EXTERIOR SECTION)	HIGH DENSITY PVC
31	SILL SHEAR BLOCK (INTERIOR SECTION)	HIGH DENSITY PVC
32	INTERIOR GLAZING CHANNEL	TREMCO EPDM PART #TX-18679E (DUROMETER = 70 +/-5)
33	EXTERIOR GLAZING CHANNEL	TREMCO EPDM PART #TX-18678E (DUROMETER = 70 +/-5)
34	JAMB & SILL THERMAL BREAK	GEON RIGID POLYVINYL CHLORIDE
35	I-BAR MULLION THERMAL BREAK	TECHNOFORM 945500
36	I-BAR MULLION END CLIPS	6063-T6 ALUMINUM
HARDWARE		
40	PRIME CHANNEL LOCK & STRIKE PLATE	6063-T6 ALUMINUM (CR LAWRENCE LOCK #2590 & AMERICAN STAMPING STRIKE PLATE #HDW-3050)
41	BALANCE	BY ST. CLOUD
SEALS & SEALANTS		
44	BRUSH SEAL	ULTRA-FAB MFG WOOL PILE STRIP #W34185NG
45	BRUSH SEAL	AMESBURY GROUP MFG WOOL PILE STRIP #16018745GYGF
FASTENERS		
48	NO 6 X 1/2" SELF TAPPING SCREW	2 PER LATCH CLIP



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 10/06/10	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: 920 DOUBLE HUNG IMPACT WINDOW			
CONSULTANTS: W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		WARREN W. SCHAEFER, P.E. NO. 44135	
CERTIFICATION	JAN 21 2020	DRAWING NO. 1718	REV. D
SHEET NO. 7 OF 7			