

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.
11. 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.

ALLOWABLE DESIGN PRESSURE
(ALL CONDITIONS)

+/-70 PSF

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

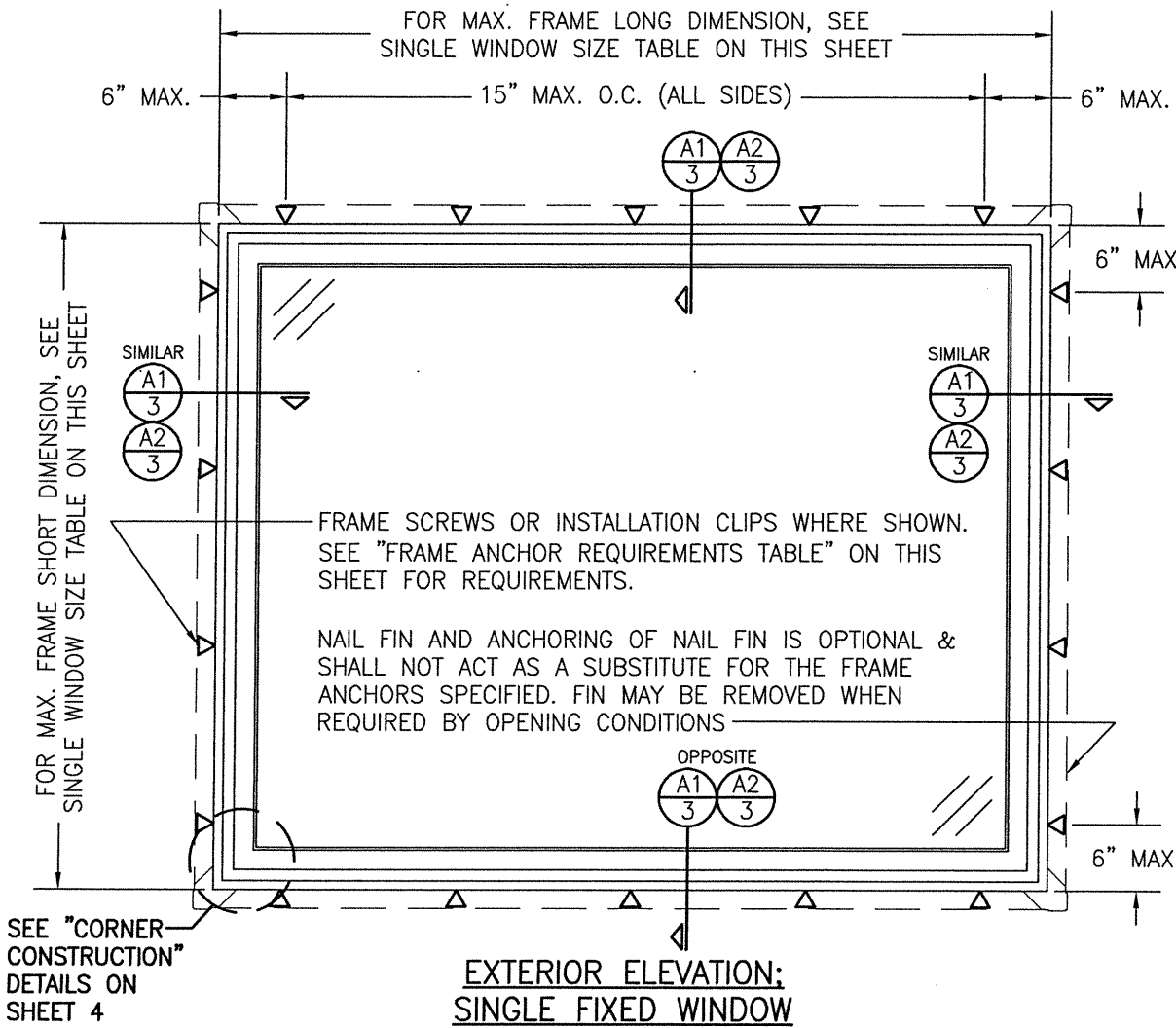
OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & $G=0.55$)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 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	1 1/4"	2"
INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & $G=0.55$)	NO. 8 SMS SCREW	1 3/8"	1/2"
MIN. 18 GA. 33 KSI METAL STUD	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
(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.).			

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.

ALLOWABLE SIZE
TABLE
(SINGLE WINDOW)

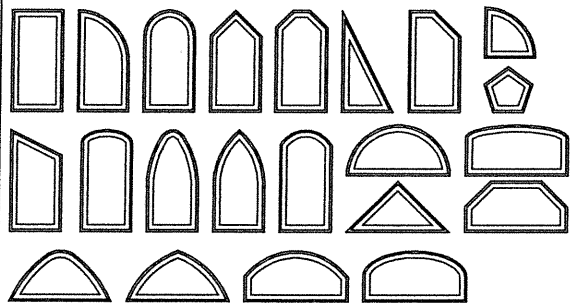
MAXIMUM FRAME LONG DIMENSION (IN.)	MAXIMUM FRAME SHORT DIMENSION (IN.)
149 1/2	30
144	31
132	34
120	37
108	41 1/2
96	46 1/2
90	49 1/2
84	53
78	57 1/2
74 5/8	60
72	62
66	66

1. ALL SIZES IN TABLE ARE BASED ON TESTED SIZES & DO NOT EXCEED THE WINDOW AREA TESTED.
2. LONG DIMENSION MAY BE HORIZONTAL OR VERTICAL
3. DIMENSIONS SHOWN ARE +/-1/2".

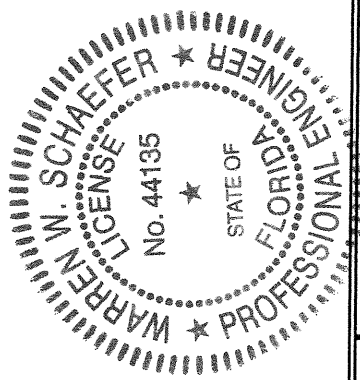


RECTANGULAR WINDOWS SHOWN. SHAPED WINDOWS ALSO APPLY PER SECTION A2/3. SEE "APPROVED SHAPES" TABLE ON THIS SHEET. ANCHORING OF SHAPED WINDOWS IS THE SAME WITH REQUIRED ANCHOR SPACING ALONG THE FRAME CIRCUMFERENCE BEING THE SAME AS SPECIFIED FOR A STRAIGHT FRAME.

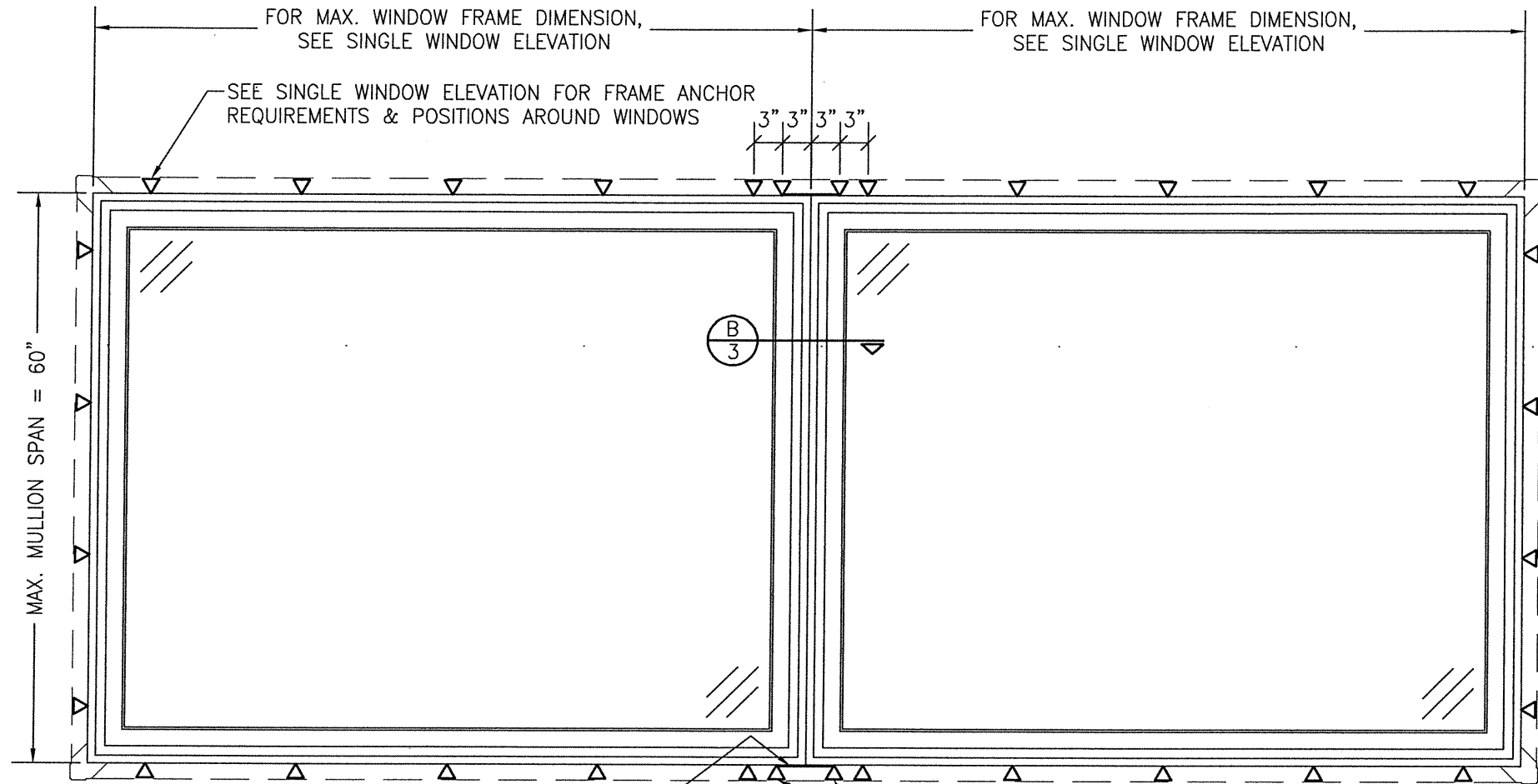
APPROVED SHAPES



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



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-16		DATE: 06/13/13	
DATE	BY	REVISION DESCRIPTION	NO.
01/06/15	W.W.S.	UPDATE TO CURRENT STANDARDS	A1
03/31/21	W.W.S.	UPDATE TO CURRENT STANDARDS	B1
DRAWING TITLE ULTRA SERIES MANOR DOOR TRANSOM IMPACT WINDOW			
MANUFACTURER KOLBE & KOLBE MILLWORK CO., INC. 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 3 1 2021 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1834		REV. B	
SHEET NO. 1 OF 5			



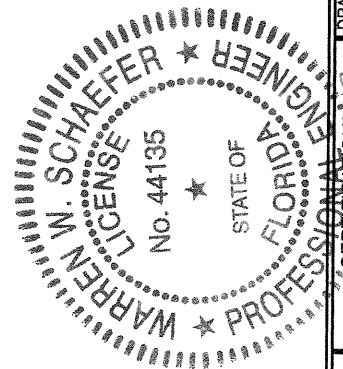
20 GAUGE X 4" X 6" GALVANIZED STEEL REINFORCEMENT PLATE AT EACH MULLION END. SECURED TO FRAME MEMBERS WITH SIX 16 GAUGE X 5/8" CROWN STAPLES (3 PER EACH FRAME).

ADDITIONAL FRAME SCREWS OR INSTALLATION CLIPS WHERE SHOWN AT MULLION ENDS. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.

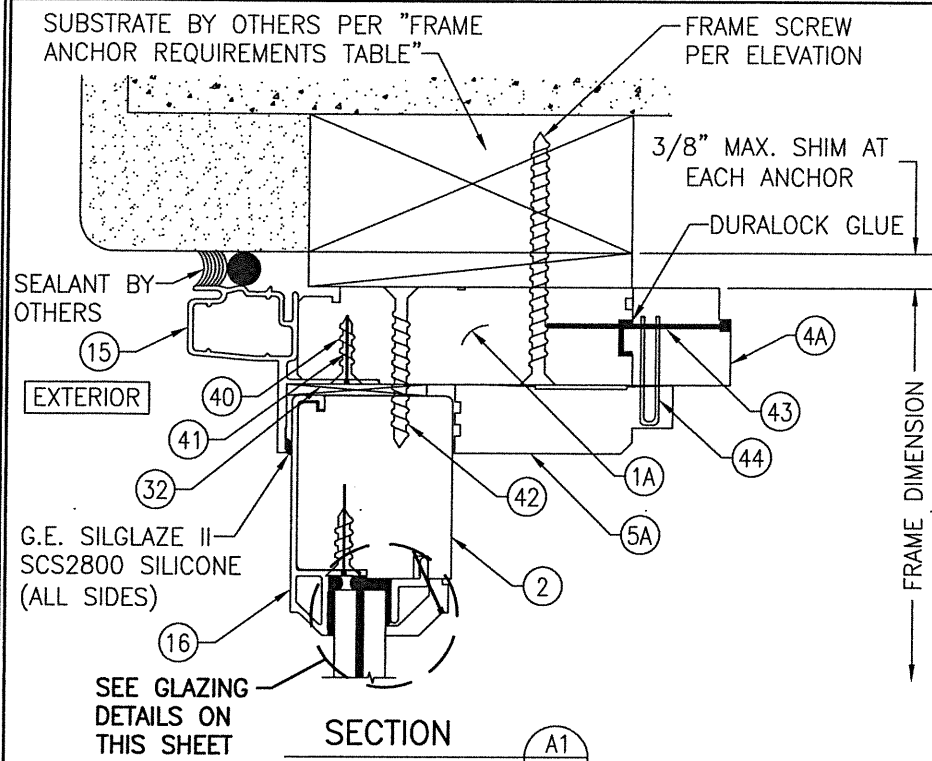
**EXTERIOR ELEVATION:
MULTIPLE FIXED WINDOWS**
SCALE: 3/4" = 1'-0"

MULTIPLE UNIT NOTES:

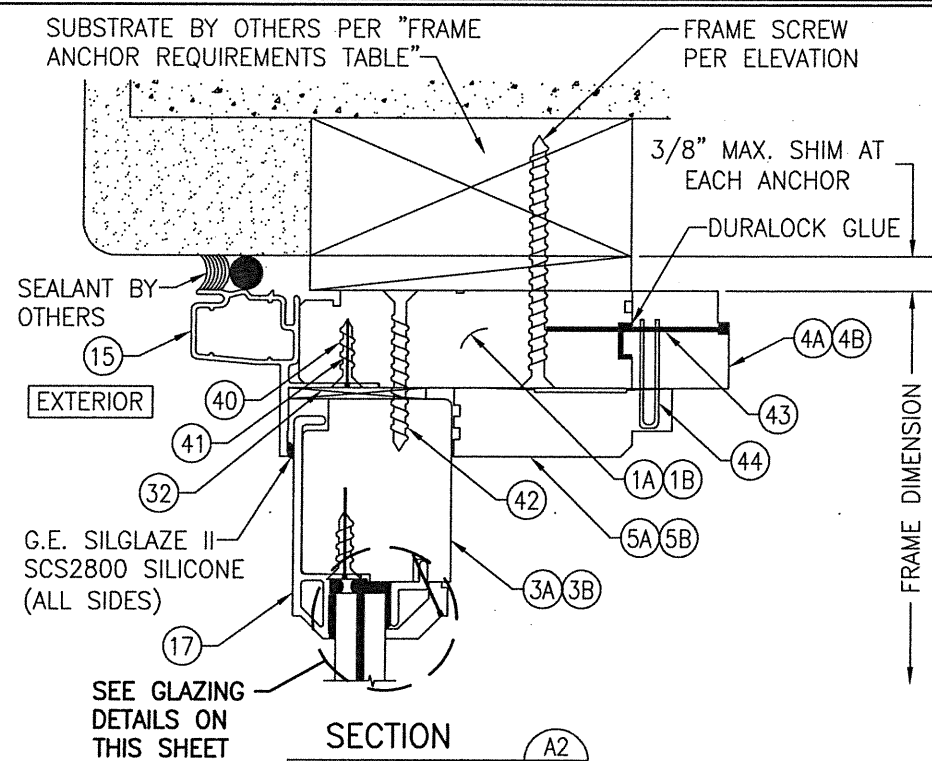
1. FOR ALL DETAIL NOT SHOWN, SEE SINGLE WINDOW ELEVATION.
2. MULLION MAY BE HORIZONTAL OR VERTICAL PROVIDING UNIT SIZES ARE RESTRICTED AS SHOWN IN THIS ELEVATION.
3. WINDOWS MAY BE STACKED HORIZONTAL OR VERTICAL. IF VERTICALLY STACKED, THE MANUFACTURER &/OR INSTALLER SHALL INSURE THAT THE DEAD LOAD WEIGHT 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 TRANSFERED 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.



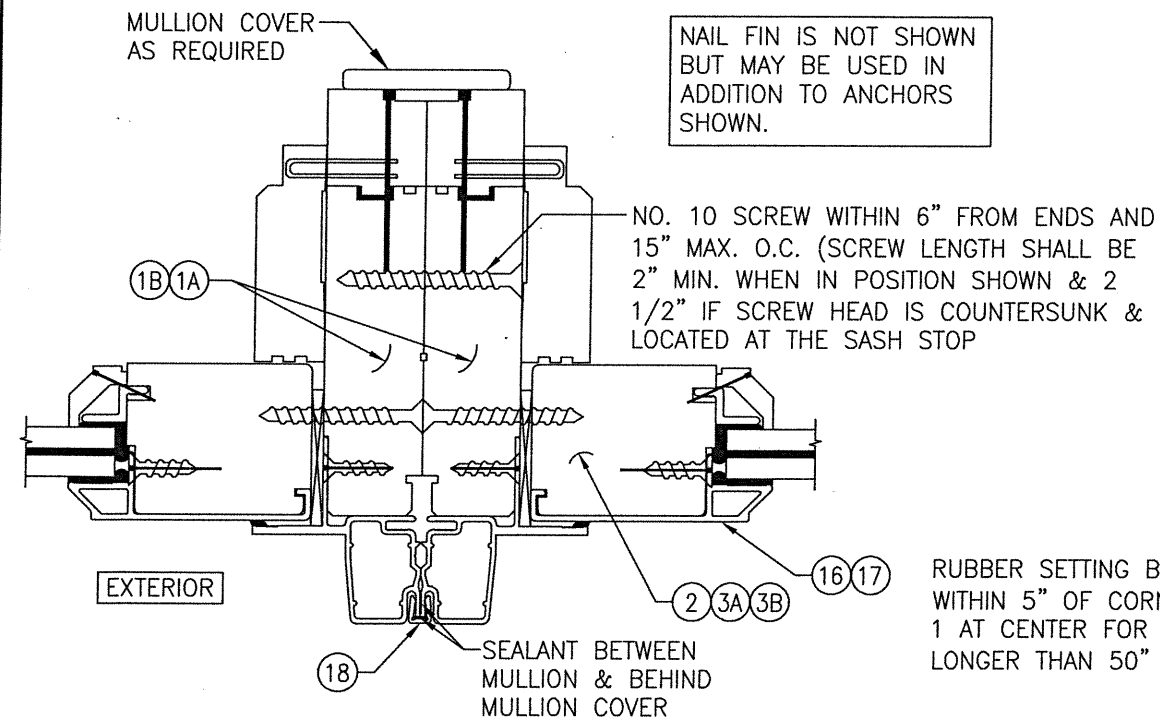
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=16		DATE: 06/13/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE ULTRA SERIES MANOR DOOR TRANSOM IMPACT WINDOW		MANUFACTURER KOLBE & KOLBE MILLWORK CO., INC. 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, 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. 1834		REV. B	
SHEET NO. 2		OF 5	



SECTION A1/3
SCALE: 1/2 FULL
(RECTANGULAR WINDOW)



SECTION A2/3
SCALE: 1/2 FULL
(RECTANGULAR AND/OR SHAPED WINDOW)

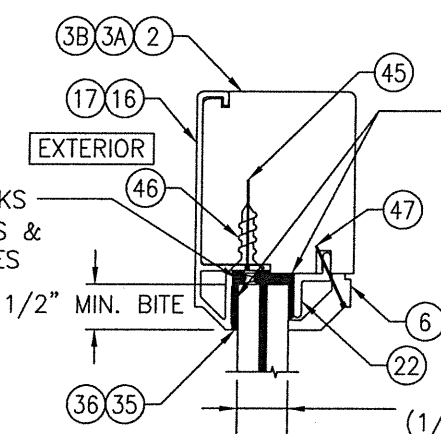


SECTION B/3
SCALE: 1/2 FULL
(FOR DETAIL NOT SHOWN, SEE SECTION A1/3 OR A2/3)

FRAME SCREW MOUNT SHOWN. SEE DETAILS ON SHEET 4 FOR DIRECT MOUNT & CLIP MOUNT DETAILS.

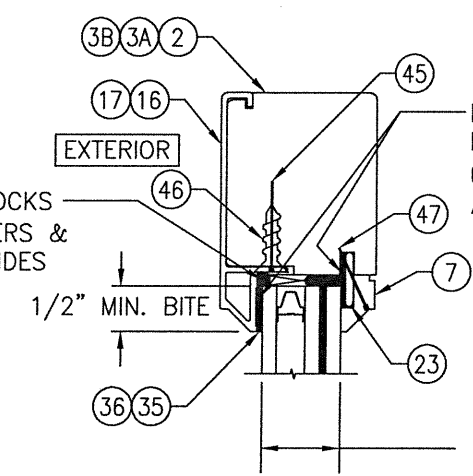
NAIL FIN IS NOT SHOWN BUT MAY BE USED IN ADDITION TO ANCHORS SHOWN.

RUBBER SETTING BLOCKS WITHIN 5" OF CORNERS & 1 AT CENTER FOR SIDES LONGER THAN 50"



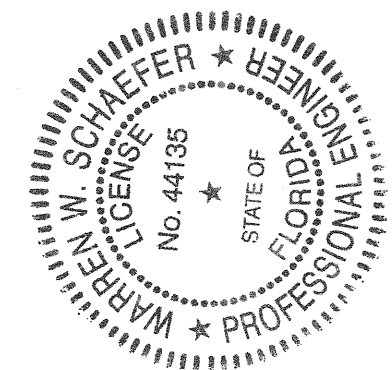
TYPICAL GLAZING DETAIL
(MONOLITHIC CONDITION)

RUBBER SETTING BLOCKS WITHIN 5" OF CORNERS & 1 AT CENTER FOR SIDES LONGER THAN 50"

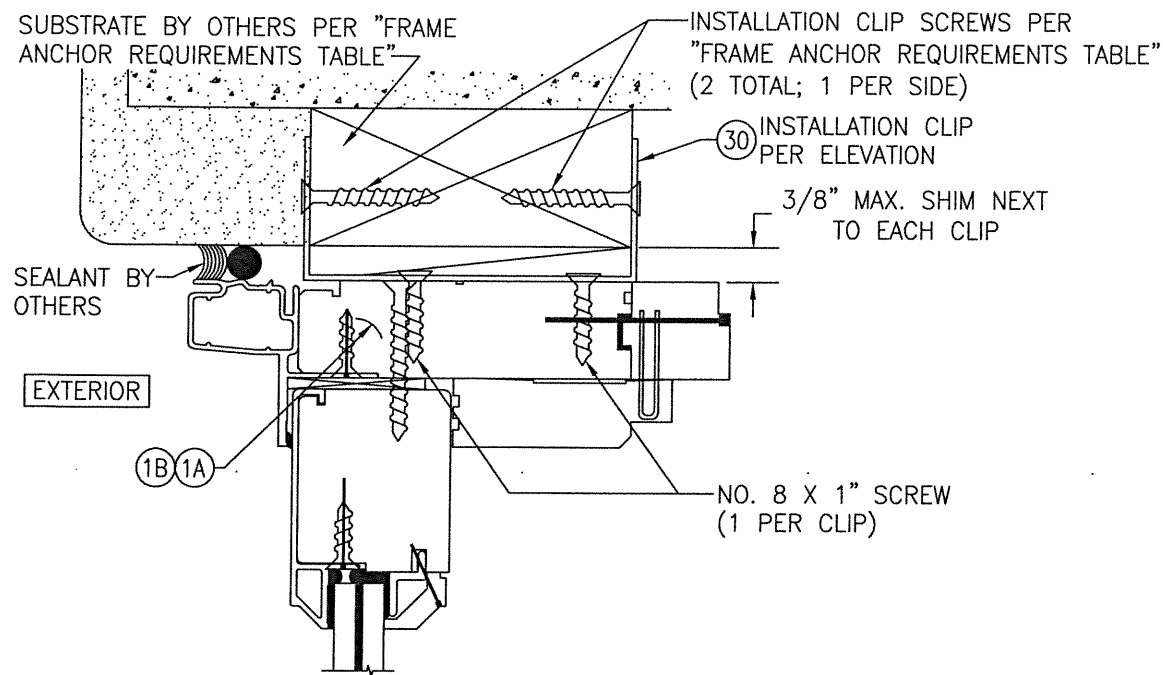


TYPICAL GLAZING DETAIL
(I.G. CONDITION)

7/8" THICK I.G. GLASS
(5/32" TEMP. EXTERIOR;
5/16" SPACER; (5/32" AN./
0.09 KURARAY SG/5/32" AN. INTERIOR)

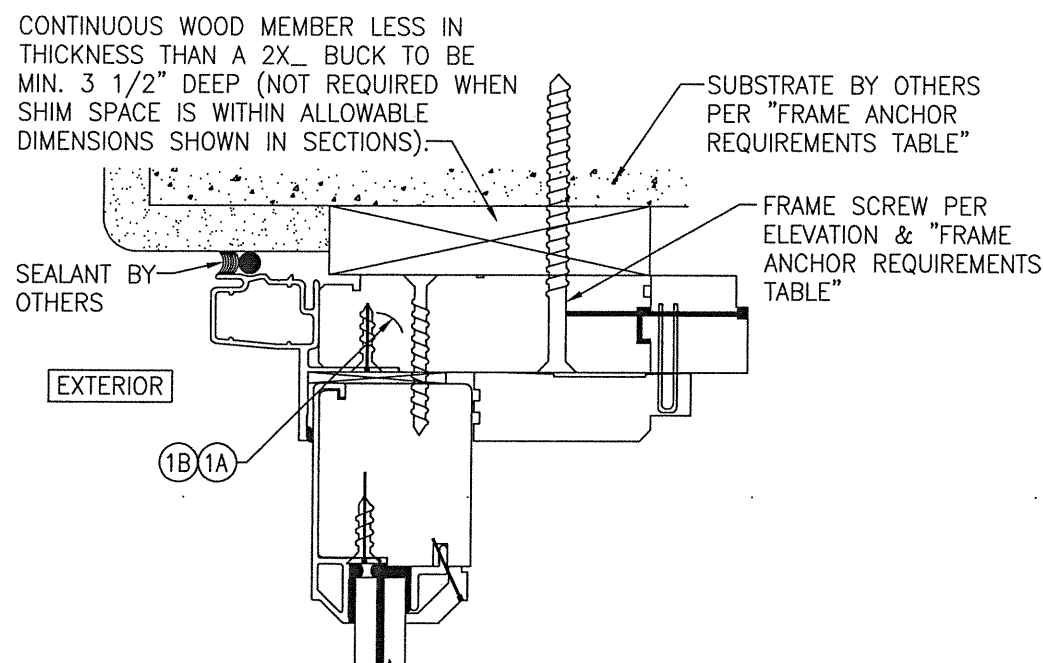


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PLOT: 1=2		DATE: 06/13/13	
NO.	REVISION	DESCRIPTION	DATE
1			
2			
3			
4			
5			
DRAWING TITLE: ULTRA SERIES MANOR DOOR TRANSOM IMPACT WINDOW			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: KOLBE & KOLBE MILLWORK CO., INC.	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666	
CERTIFICATION: MAR 31 2021		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1834		REV. B	
SHEET NO. 3		OF 5	



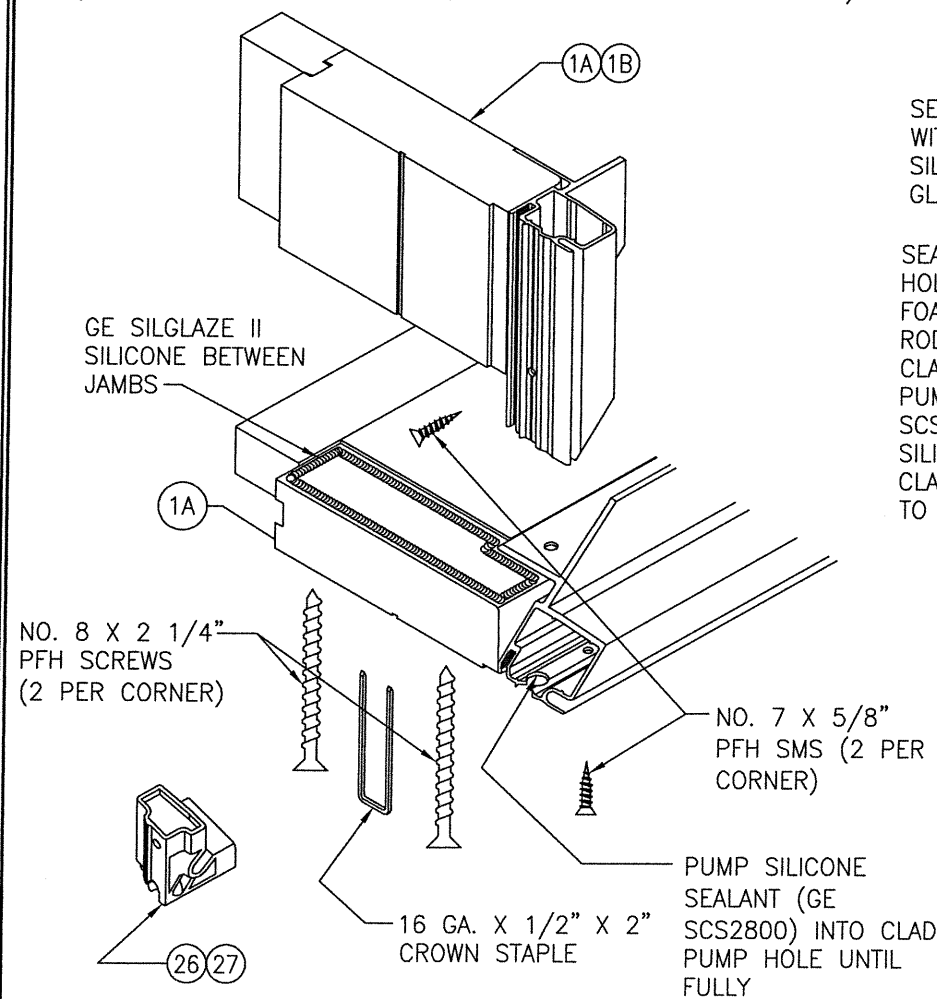
OPTIONAL INSTALLATION CLIP DETAIL

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

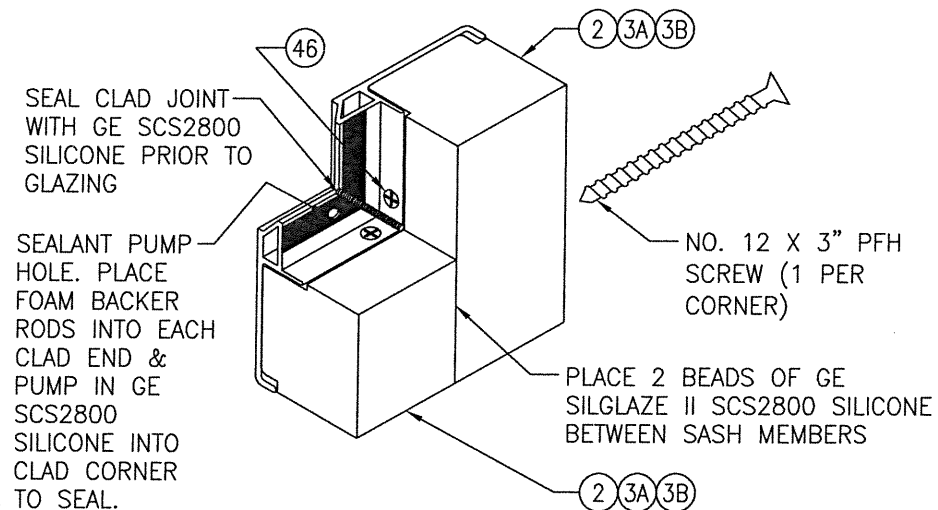


OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER

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



FRAME CORNER DETAIL

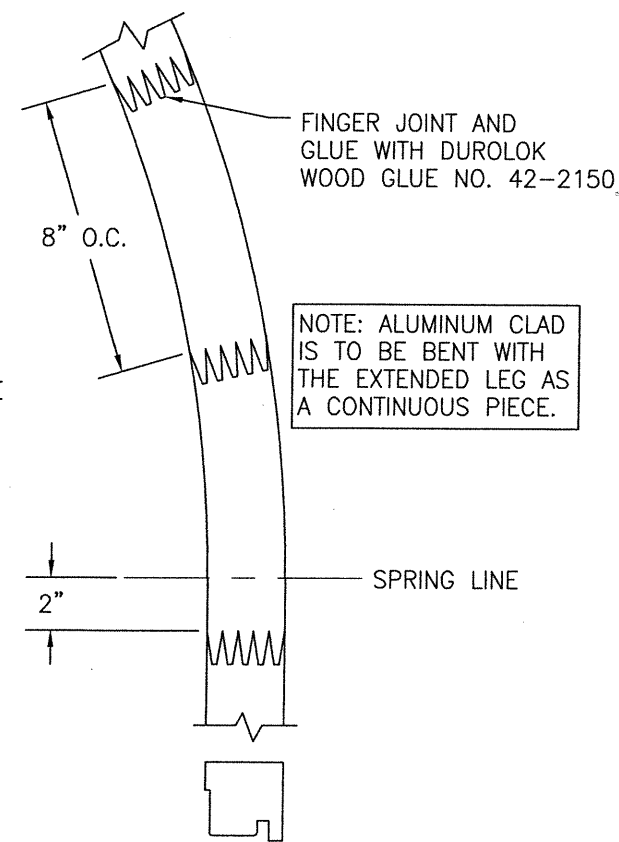


SASH CORNER DETAIL

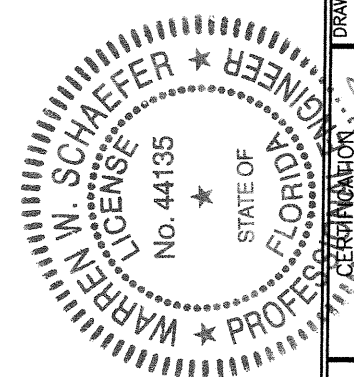
BUTT CONSTRUCTION JOINED & GLUED WITH DAP WELDWOOD GLUE.

DESCRIPTION: EXTENDED LEG IS FINGER JOINTED SIMILAR TO SASH AROUND RADIUS. AT SPRING LINE, THE RADIUS AND STRAIGHT MEMBERS ARE BUTTED TOGETHER, DOWELED WITH TWO 3/8" X 2" LONG WOOD DOWELS AND FULLY GLUED WITH PVA GLUE. A STEEL TURNBUCKLE IS ALSO ROUTED INTO THE OPENING SIDE OF THE JAMBS AT THE SPRINGLINE AND USED TO TIGHTEN DOWN THE JOINT.

TYP. EXTENDED LEG AT JAMB



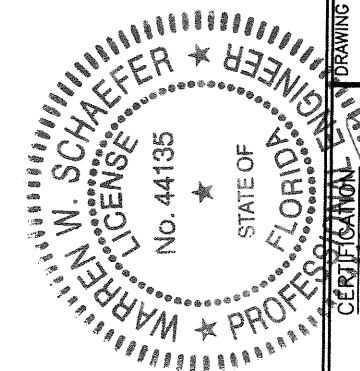
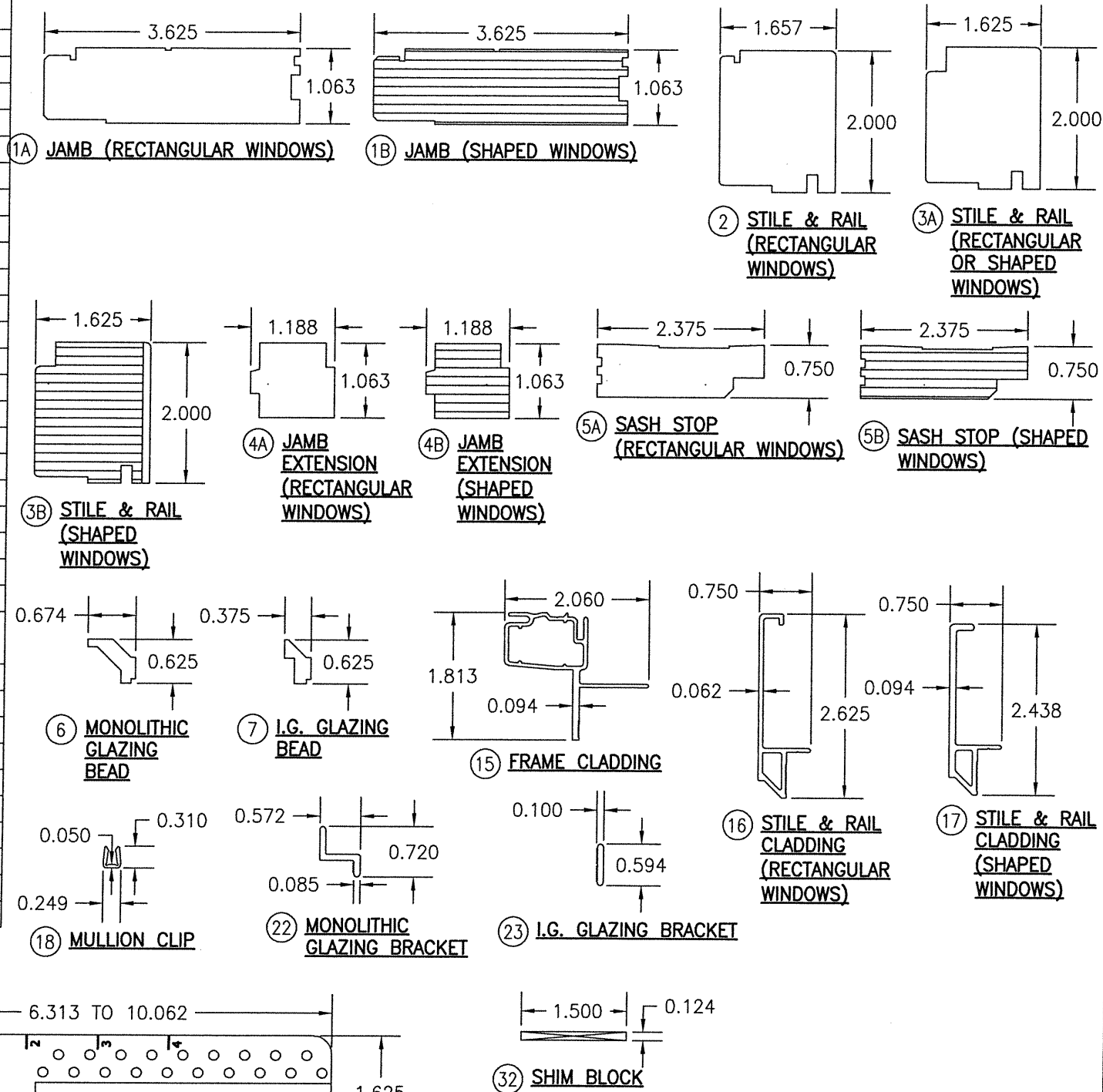
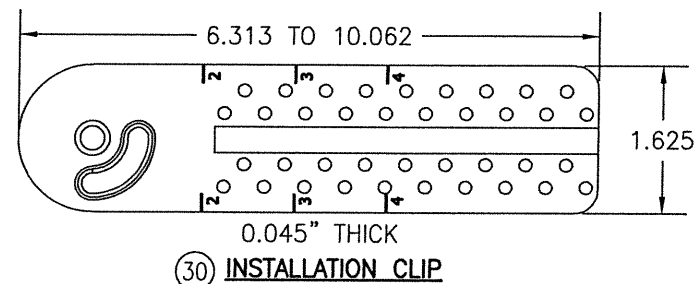
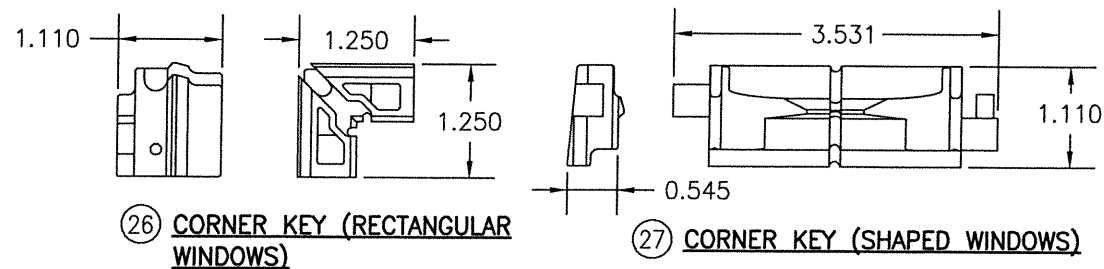
TYP. EXTENDED LEG DETAIL AT SASH



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PLOT: 1=2	DATE: 06/13/13
NO.	DATE
BY	
REVISION DESCRIPTION	
DRAWING TITLE ULTRA SERIES MANOR DOOR TRANSOM 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 KOLBE & KOLBE MILLWORK CO., INC. 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666	
CERTIFICATION MAR 31 2021 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1834	REV. B
SHEET NO. 4 OF 5	

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1A	JAMB (RECTANGULAR WINDOWS)	WOOD
1B	JAMB (SHAPED WINDOWS)	LVL
2	STILE & RAIL (RECTANGULAR WINDOWS)	WOOD
3A	STILE & RAIL (RECTANGULAR OR SHAPED WINDOWS)	WOOD
3B	STILE & RAIL (SHAPED WINDOWS)	LVL WITH WOOD VENEER
4A	JAMB EXTENSION (RECTANGULAR WINDOWS)	WOOD
4B	JAMB EXTENSION (SHAPED WINDOWS)	LVL
5A	SASH STOP (RECTANGULAR WINDOWS)	WOOD
5B	SASH STOP (SHAPED WINDOWS)	LVL
6	MONOLITHIC GLAZING BEAD	WOOD
7	I.G. GLAZING BEAD	WOOD
15	FRAME CLADDING	6063-T5 ALUMINUM
16	STILE & RAIL CLADDING (RECTANGULAR WINDOWS)	6063-T5 ALUMINUM
17	STILE & RAIL CLADDING (SHAPED WINDOWS)	6063-T5 ALUMINUM
22	MONOLITHIC GLAZING BRACKET (DUROMETER = 70)	PRESTIGE PLASTICS RIGID PVC
23	I.G. GLAZING BRACKET (DUROMETER = 70)	PRESTIGE PLASTICS RIGID PVC
26	CORNER KEY	DARTER PLASTICS POLYCARBONATE
27	CORNER KEY	DARTER PLASTICS POLYCARBONATE
30	INSTALLATION CLIP	ASTM A653 MIN. 33 KSI GALV. STEEL
32	SHIM BLOCK	RUBBER
SEALS & SEALANTS		
35	SHIM 1/16" X 1/4" X 1/2"	80 DUROMETER EPDM WITHIN 1" OF ENDS & 8" MAX. O.C.
36	GLAZING TAPE 1/16" X 1/4"	CONTINUOUS
FASTENERS		
40	NO. 6 X 3/4" PFH SMS SCREW	1" FROM ENDS
41	16 GAUGE X 3/4" BRAD NAIL	6" TO 8" MAX. O.C.
42	NO. 8 X 2 1/4" POH SCREW	WITHIN 2" FROM CORNERS & 8" MAX. O.C.
43	16 GAUGE X 2" T-NAIL	WITHIN 2" FROM CORNERS & 8" TO 10" MAX. O.C.
44	18 GA. X 3/16" X 1 1/8" CROWN STAPLE	WITHIN 2" FROM ENDS & 6" TO 8" MAX. O.C.
45	16 GAUGE X 3/4" T-NAIL	6" TO 8" MAX. O.C.
46	NO. 8 X 3/4" PFH SMS SCREW	WITHIN 1" FROM ENDS
47	18 GAUGE X 3/4" BRAD NAIL	WITHIN 1" FROM CORNERS & 5" TO 6" MAX. O.C.

NOTE: WOOD USED IN TESTING WAS PINE WITH A SPECIFIC GRAVITY OF G = 0.43 AND A MODULUS OF ELASTICITY OF E = 1,200,000 PSI. ALL WOOD IS MINIMUM GRADE 2 MILLED BY KOLBE & KOLBE TO SELECT.



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PLOT: 1=2		DATE: 06/13/13	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: ULTRA SERIES MANOR DOOR TRANSOM IMPACT WINDOW			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: KOLBE & KOLBE MILLWORK CO., INC.	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666	
MAR 3 1 2021		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1834		REV. B	
SHEET NO. 5		OF 5	