

GENERAL NOTES:

- THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
- OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
- 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.
- 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.
- IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
- 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.
- 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.
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
- TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/OA ENTRY & 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.
- 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.
- 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.

CORNER CONSTRUCTION:

FRAME (RECTANGULAR WINDOWS): MEMBERS ARE COPEDED, BUTTED AND JOINED WITH THREE(3) 16GA. X 7/16" X 1 3/4" STAPLES & 3 NO. 6 X 2" SMS SCREWS THROUGH THE VERTICAL FRAME MEMBERS INTO THE HORIZONTAL MEMBERS & TWO(2) 16GA. X 7/16" X 1 3/4" STAPLES THROUGH THE HORIZONTAL MEMBERS INTO THE VERTICAL MEMBERS. CORNERS ARE SEALED WITH POLYURETHANE SEALANT. FRAME (SHAPED WINDOWS): MEMBERS ARE ARE MITER CUT, BUTTED TOGETHER AND JOINED WITH 4 NO. 8 X 2" WOOD SCREWS. TWO INTO EACH MEMBER. CORNERS ARE SEALED WITH POLYURETHANE SEALANT. FRAME CLAD: MEMBERS ARE MITERED TOGETHER & JOINED VIA A CORNER KEY (ITEM #39) & WITH 1 NO. 6 X 1 1/2" SMS SCREW PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT. SASH (RECTANGULAR WINDOWS): MORTISE & TENON CONSTRUCTION JOINED WITH WOOD GLUE AND TWO(2) 16GA. X 1 1/4" FINISH NAILS & A 3/16" X 1 1/4" STAPLE PER CORNER. TOP SASH (SHAPED WINDOWS): WOOD MEMBERS ARE MITER CUT, BUTTED TOGETHER AND JOINED WITH WOOD GLUE AND 1 NO. 8 X 2" WOOD SCREWS. ONE INTO EACH MEMBER. BOTTOM SASH (SHAPED WINDOWS): WOOD MEMBERS ARE MITER CUT, BUTTED TOGETHER AND JOINED WITH WOOD GLUE AND TWO(3) 16GA. X 1 1/4" FINISH NAILS. SASH CLAD (RECTANGULAR WINDOWS): RAIL CLADDING IS COPEDED INTO STILE CLADDING & MEMBERS ARE SECURED TO THE SASH. SASH CLAD (SHAPED WINDOWS): CLADDING MEMBERS ARE MITER CUT, BUTTED TOGETHER AND ARE SECURED TO THE SASH. MULLION ENDS: THE OPPOSING JAMBS AT THE MULLION ENDS SHALL BE JOINED WITH THREE(3) 1/2" X 1" CORRUGATED FASTENERS SPACED 1 1/2" APART & A SINGLE 0.039" X 2 3/4" X 10" 50 KSI GALVANIZED STEEL MULLION END REINFORCEMENT PLATE. THE PLATE IS SECURED TO EACH JAMB MEMBER WITH SIX(6) 16 GA. X 7/16" X 1/2" LONG STAPLES. NOTE THAT WHEN A WOOD REINFORCEMENT IS USED BETWEEN THE JAMBS, EACH JAMB IS JOINED TO THAT REINFORCEMENT WITH 3 CORRUGATED FASTENERS.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/NAIL FIN/BRICK MOLD/HINGE 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"
C-90 CMU	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/2"	2"

NAILING FIN & BRICK MOLD FASTENERS

MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 SMS SCREW	1 3/8"	1/2"
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	(2) 10 GA. ROOFING NAIL	1 7/8"	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"
	HINGE SCREWS		
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 SMS OR WOOD SCREW	1 1/4"	3/4"
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"
C-90 CMU/2500 PSI CONCRETE	(1) 3/16" CONCRETE SCREW	1 1/4"	2"

SNUBBER REQUIREMENT

(APPLICABLE WITH ALL RECTANGULAR STANDARD & PUSH-OUT WINDOWS WITH SCISSOR HINGES. NOT APPLICABLE WHEN BUTT HINGES ARE USED)

MAX. FRAME HEIGHT	QUANTITY PER PANEL
96"	5
70 7/8"	4
54 5/8"	3
36 3/8"	2

BUTT HINGE REQUIREMENTS

BOTTOM HINGE

POSITION CENTER OF HINGE MAXIMUM 7" UP FROM BASE OF SILL.

TOP HINGE

POSITION CENTER OF HINGE MAXIMUM 3" BELOW SPRING LINE WITH HALF & QUARTER ROUND TOP WINDOWS & MAXIMUM 7" FOR RECTANGULAR & EYEBROW TOP WINDOWS.

SINGLE INTERMEDIATE HINGE

TO BE PLACED & CENTERED BETWEEN TOP & BOTTOM HINGE WHEN WINDOW FRAME HEIGHT IS BETWEEN 42" & 70 7/8" (ALL SHAPES)

2ND INTERMEDIATE HINGE

ADDED WHEN WINDOW FRAME HEIGHT EXCEEDS 70 7/8" (ALL SHAPES)

MULTI-POINT LOCK QUANTITY REQUIREMENTS

(RECTANGULAR & QUARTER ROUND TOP WINDOWS)

MAX. FRAME HEIGHT

(1) STANDARD WINDOW

96"	5
82 11/16"	4
62 13/16"	3
50 5/8"	2

(2) PUSH-OUT WINDOW

96"	7
66 7/8"	6
47 1/4"	5

(1) STANDARD WINDOW LOCK SYSTEM CONSISTS OF SIDE ONLY LOCKING POINTS.

(2) PUSH-OUT

RECTANGULAR & QUARTER ROUND TOP WINDOW LOCK SYSTEM CONSISTS OF SIDE LOCK POINTS PLUS LOCK ROD EXTENSION SHOOT BOLTS INTO HEAD & SILL.

MULTI-POINT LOCK QUANTITY REQUIREMENTS

(EYEBROW & HALF-ROUND TOP WINDOWS)

MAX. FRAME HEIGHT TO SPRING LINE

(EYEBROW TOP WINDOW)

96"	5
82 11/16"	4
62 13/16"	3
50 5/8"	2

(1) STANDARD WINDOW

96"	7
66 7/8"	6
47 1/4"	5

(1) STANDARD WINDOW LOCK SYSTEM CONSISTS OF SIDE ONLY LOCKING POINTS.

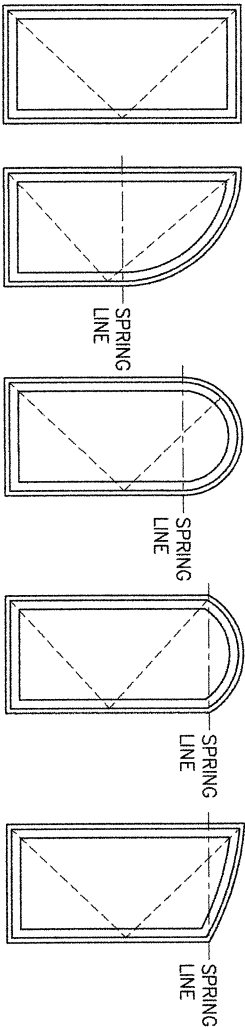
(2) PUSH-OUT

(HALF ROUND TOP WINDOW)

(1) STANDARD WINDOW	OVER 82 11/16"	5
	82 11/16"	4
	62 13/16"	3
	50 5/8"	2
(3) PUSH-OUT WINDOW	OVER 66 7/8"	6
	66 7/8"	5
	47 1/4"	4

- (1) STANDARD WINDOW LOCK SYSTEM CONSISTS OF SIDE ONLY LOCKING POINTS.
- (2) PUSH-OUT EYEBROW TOP WINDOW LOCK SYSTEM CONSISTS OF SIDE LOCK POINTS PLUS LOCK ROD EXTENSION SHOOT BOLTS INTO HEAD & SILL.
- (3) PUSH-OUT HALF-ROUND TOP WINDOW LOCK SYSTEM CONSISTS OF SIDE LOCK POINTS PLUS A LOCK ROD EXTENSION SHOOT BOLT INTO THE SILL.

APPROVED SHAPES



NOTES:

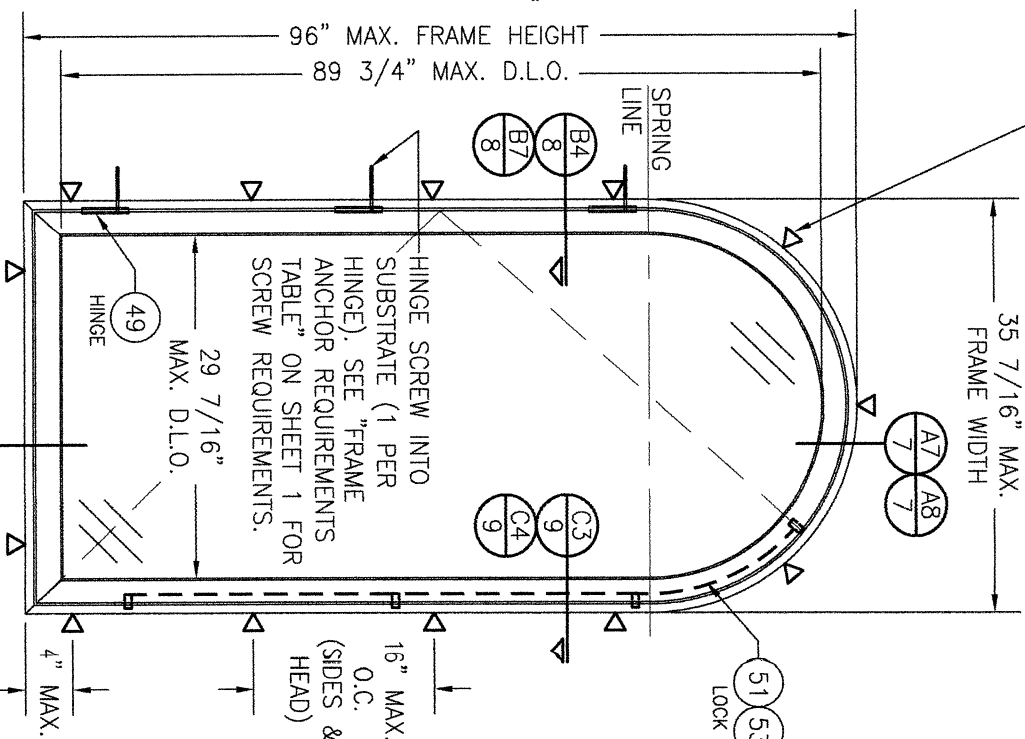
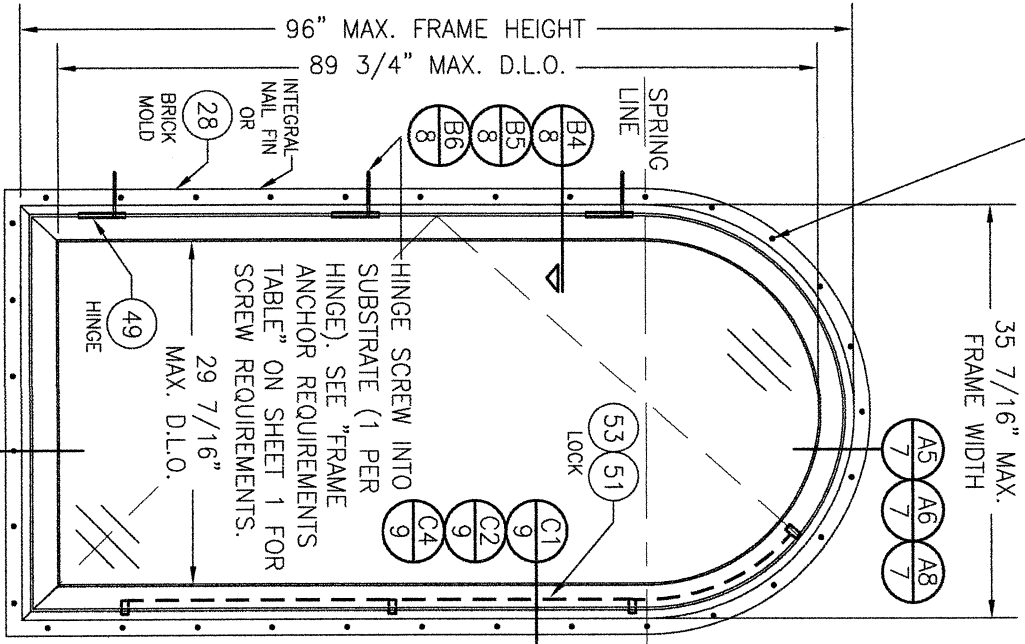
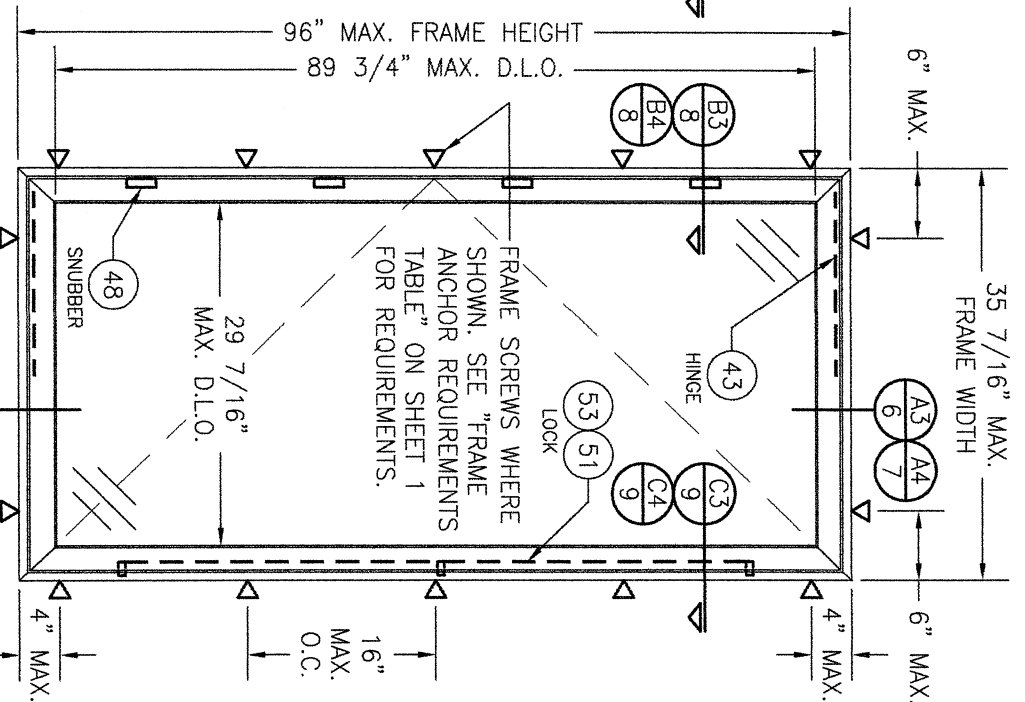
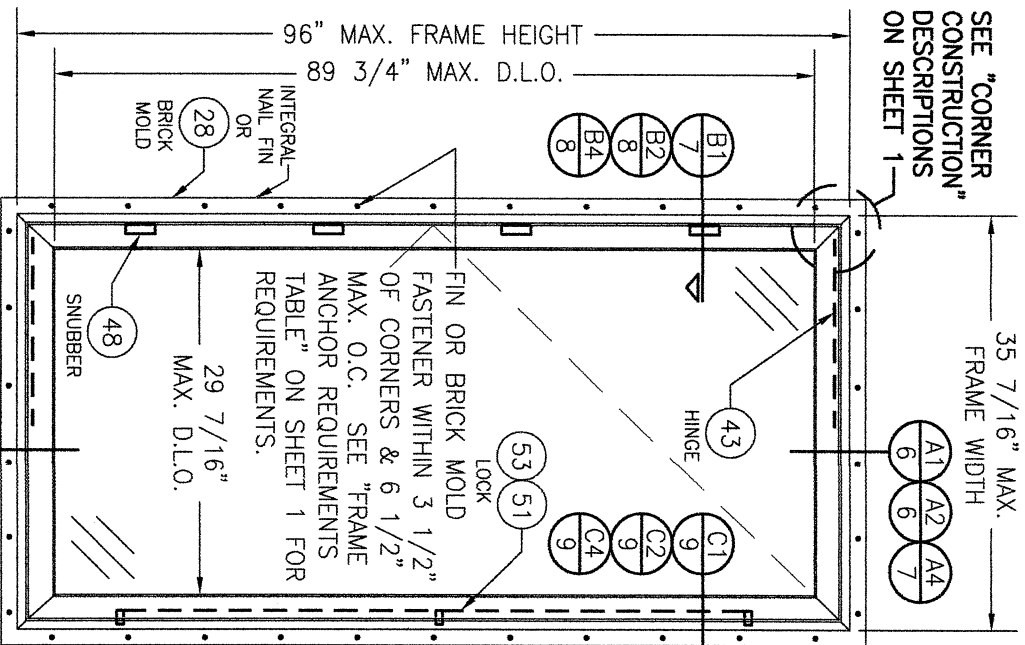
- OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED IN THIS DRAWING.
- ALL SHAPED UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE RECTANGULAR UNITS & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE RECTANGULAR UNIT.



Digitally signed
by Warren W
Schaefer
Date:
2025.10.02
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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.R.M.		CHECKED BY: W.W.S.	
PLT:	DATE:	DATE:	DATE:
1=16	05/13/09		
A1	UPDATE PER NEW TESTING	W.R.M.	04/28/11
B1	UPDATED NEW FRAME AND FRAME CLADDING	W.R.M.	06/26/12
C1	UPDATE TO CURRENT STANDARDS	W.W.S.	01/08/15
D1	UPDATE TO CURRENT STANDARDS	W.W.S.	08/18/17
E1	INCREASED MAX WINDOW HEIGHT	W.W.S.	09/24/25
REVISION DESCRIPTION			
BY			
DATE			
DRAWING NO. 1637			
SHEET NO. 1 OF 13			
CERTIFICATION			
WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING TITLE			
ALUMINUM CLAD WOOD CASEMENT WINDOW			
CONSULTANTS		MANUFACTURER	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424		C.P. LOEWEN ENTERPRISES 77 HWY 52 WEST STEINBACH, MB, CANADA R5G 1B2 204-326-6446	



FIN OR BRICK MOLD FASTENER WITHIN 3 1/2" OF CORNERS & 6 1/2" MAX. O.C. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.

FRAME SCREWS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.

**EXTERIOR ELEVATION:
RECTANGULAR SINGLE WINDOW**

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

(NAIL FIN & BRICK MOLD MOUNT
CONDITIONS)
(STANDARD WINDOW SHOWN. PUSH-OUT
WINDOW ALSO APPLIES.)

**EXTERIOR ELEVATION:
RECTANGULAR SINGLE WINDOW**

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

(FRAME SCREW MOUNT CONDITION)
(STANDARD WINDOW SHOWN. PUSH-OUT
WINDOW ALSO APPLIES.)

**EXTERIOR ELEVATION:
HALF-ROUND SINGLE WINDOW**

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

(NAIL FIN & BRICK MOLD MOUNT
CONDITIONS)
(STANDARD WINDOW SHOWN. PUSH-OUT
WINDOW ALSO APPLIES.)

**EXTERIOR ELEVATION:
HALF ROUND SINGLE WINDOW**

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

(FRAME SCREW MOUNT CONDITION)
(STANDARD WINDOW SHOWN. PUSH-OUT
WINDOW ALSO APPLIES.)

INSTALLATION NOTE:
WHEN NECESSARY, INSTALLATION METHODS MAY BE MIXED WITH ANY ONE WINDOW SUCH THAT INDIVIDUAL SIDES OF THE WINDOW MAY USE ONE OR THE OTHER ANCHOR METHOD (EXAMPLE: SILL MAY USE FRAME SCREWS METHOD WHILE OTHER SIDES USE FIN)

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.

**ALLOWABLE DESIGN PRESSURE
(SINGLE WINDOW WITH FRAME HEIGHT
UP TO 70 7/8")**

MAX. FRAME WIDTH	ALLOWABLE PRESSURE
29 7/16" OR LESS	+85/-85 PSF
32 7/16"	+77/-77 PSF
GREATER THAN 32 7/16"	+70/-70 PSF

OTHER SIZE CONDITIONS MAY BE EVALUATED TO PRESSURES BETWEEN +/-70 & +/-85 PSF FOR A LOCAL JOB APPROVAL BUT MUST BE CERTIFIED BY A FLORIDA REGISTERED ENGINEER.

**ALLOWABLE DESIGN PRESSURE
(SINGLE WINDOW WITH FRAME HEIGHT
GREATER THAN 70 7/8")**

MAX. FRAME WIDTH	ALLOWABLE PRESSURE
36 7/16"	+65/-65 PSF

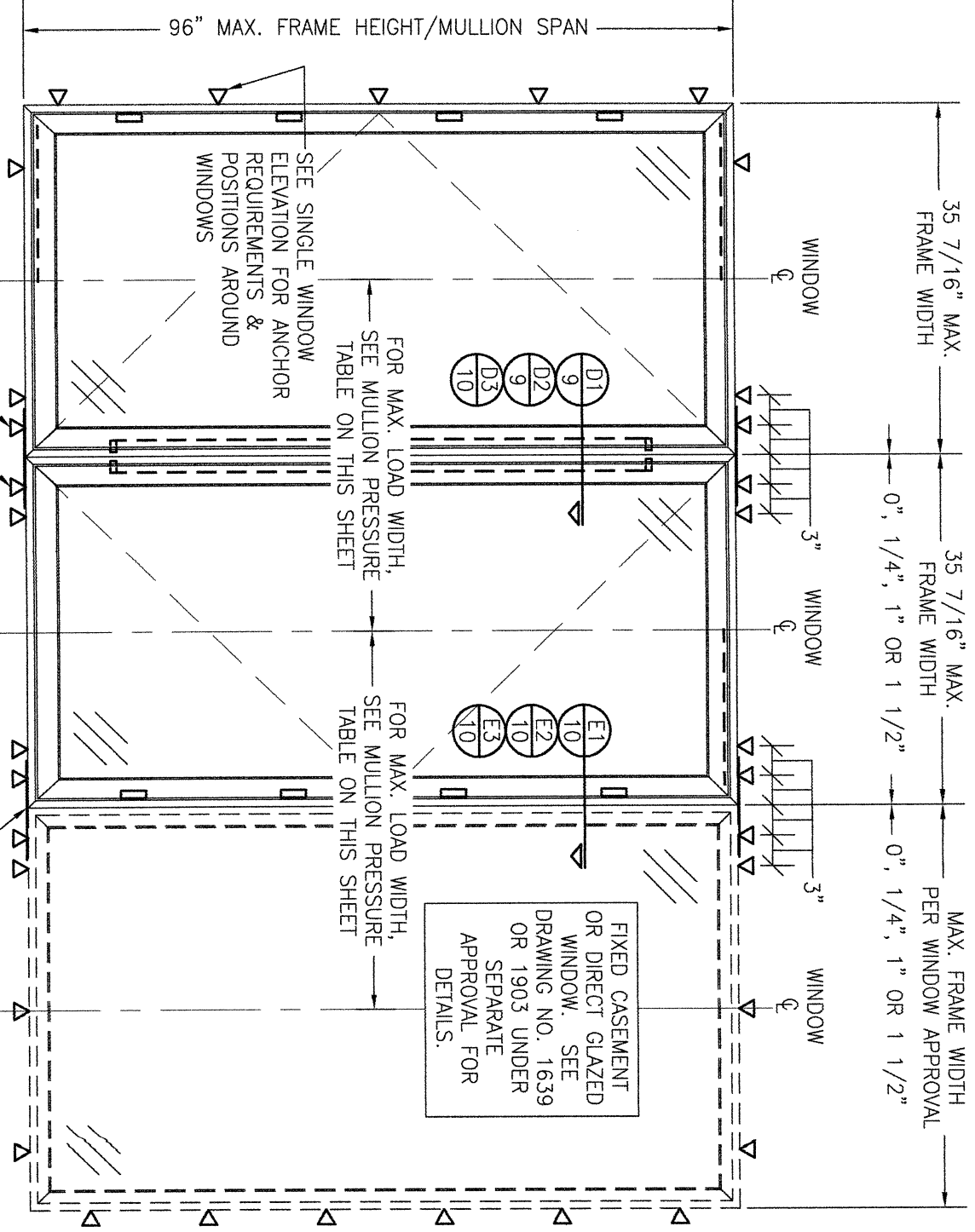
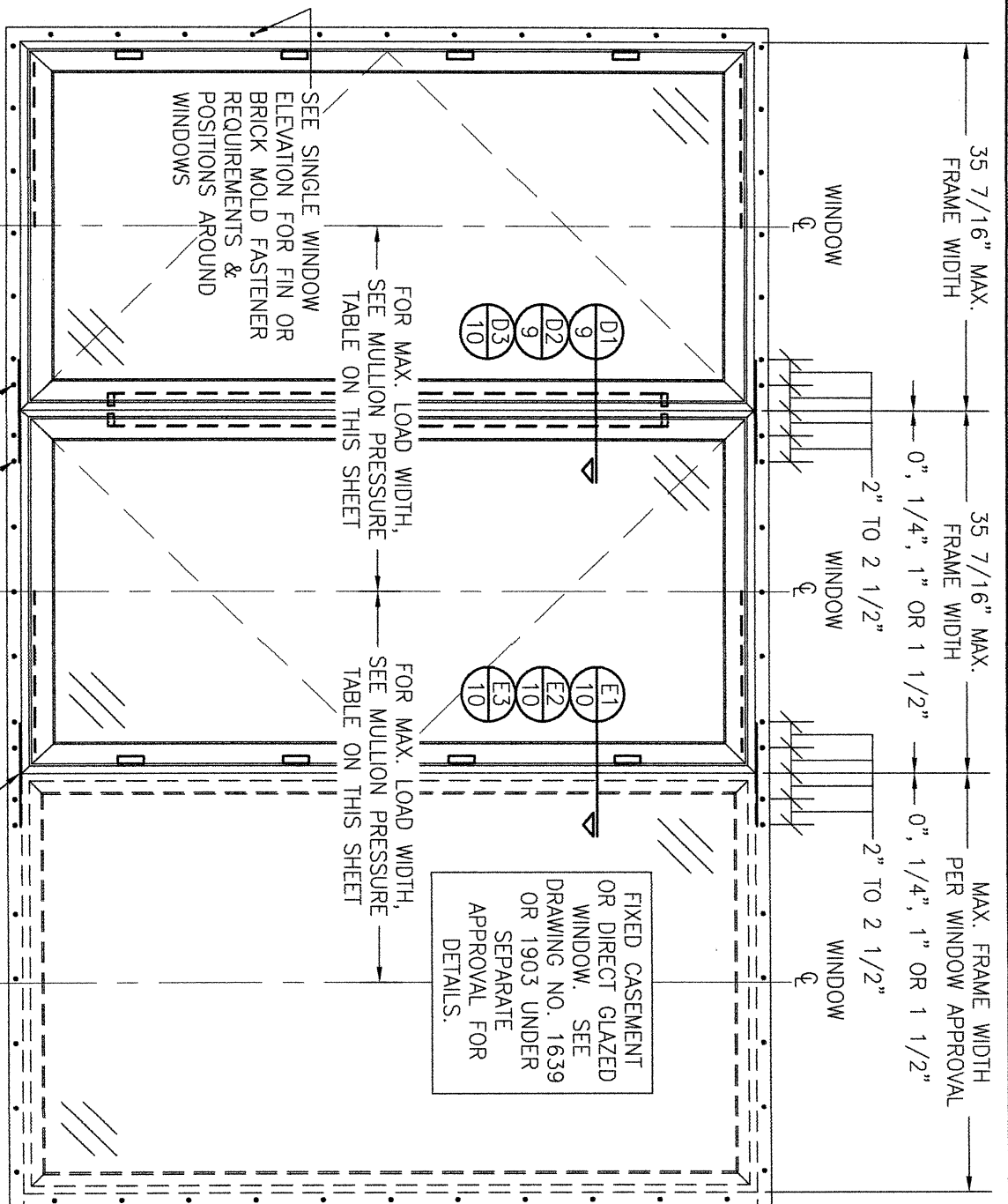
NO.	REVISION	DESCRIPTION	BY	DATE

CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	C.P. LOEWEN ENTERPRISES 77 HWY 52 WEST STEINBACH, MB, CANADA R5G 1B2 204-326-6446

DRAWING TITLE
ALUMINUM CLAD WOOD CASEMENT WINDOW

CERTIFICATION
WARREN W. SCHAEFER, P.E. P.E. NO. 44135

DRAWING NO.	REV.
1637	E
SHEET NO.	2 OF 13



CLUSTER FIN OR BRICK MOLD FASTENERS AT MULLION ENDS SUCH THAT THERE ARE A TOTAL OF 4 POSITIONED AS SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS

(SCREWS SHALL BE USED AT MULLION ENDS. NAILS ARE NOT APPLICABLE AT MULLION ENDS).

EXTERIOR ELEVATION:
MULTIPLE CASEMENT/FIXED WINDOW
SCALE: 3/4" = 1'-0"
(NAIL FIN & BRICK MOLD MOUNT CONDITIONS)

(SEE SINGLE WINDOW ELEVATION ON SHEET 2 FOR CASEMENT WINDOW DETAIL NOT SHOWN)

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

EXTERIOR ELEVATION:
MULTIPLE CASEMENT/FIXED WINDOW
SCALE: 3/4" = 1'-0"
(FRAME SCREW MOUNT CONDITION)

(SEE SINGLE WINDOW ELEVATION ON SHEET 2 FOR CASEMENT WINDOW DETAIL NOT SHOWN)

MULTIPLE UNIT NOTES (SIDE-BY-SIDE WINDOWS):

- FOR ALL DETAIL NOT SHOWN, SEE INDIVIDUAL WINDOW ELEVATIONS.
- 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 TRANSFERRED FROM THE WINDOWS & THEIR MULLIONS.
- ANY COMBINATION OF FIXED/OPERABLE WINDOWS IN ONE OPENING SHALL APPLY.
- INDIVIDUAL WINDOW SIZES SHALL BE RESTRICTED AS SPECIFIED IN THE SINGLE UNIT ELEVATION.
- RECTANGULAR WINDOW CONDITION SHOWN. SHAPED WINDOWS MULLIED SIDE-BY-SIDE ALSO APPLY UNDER THE SAME CONDITIONS AS SHOWN FOR THE RECTANGULAR WINDOWS.

CASEMENT TO CASEMENT					CASEMENT TO FIXED				
MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)	MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)	MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)	MAXIMUM FRAME HEIGHT (IN.)
96	35 1/2	65.0	96	53 1/4	43.3	96	48 1/4	47.8	96
-	-	-	96	43 1/4	53.3	96	35 1/2	65.0	96
-	-	-	96	53 1/4	43.3	96	48 1/4	47.8	96
70 7/8	35 1/2	70.0	70 7/8	53 1/4	70.0	70 7/8	48 1/4	77.0	70 7/8
70 7/8	32 1/2	77.0	70 7/8	48 1/4	77.0	70 7/8	43 1/4	85.0	70 7/8
70 7/8	29 1/2	85.0	70 7/8	43 1/4	85.0	70 7/8	35 1/2	65.0	70 7/8

MULLION ALLOWABLE DESIGN PRESSURE (SIDE BY SIDE WINDOWS)

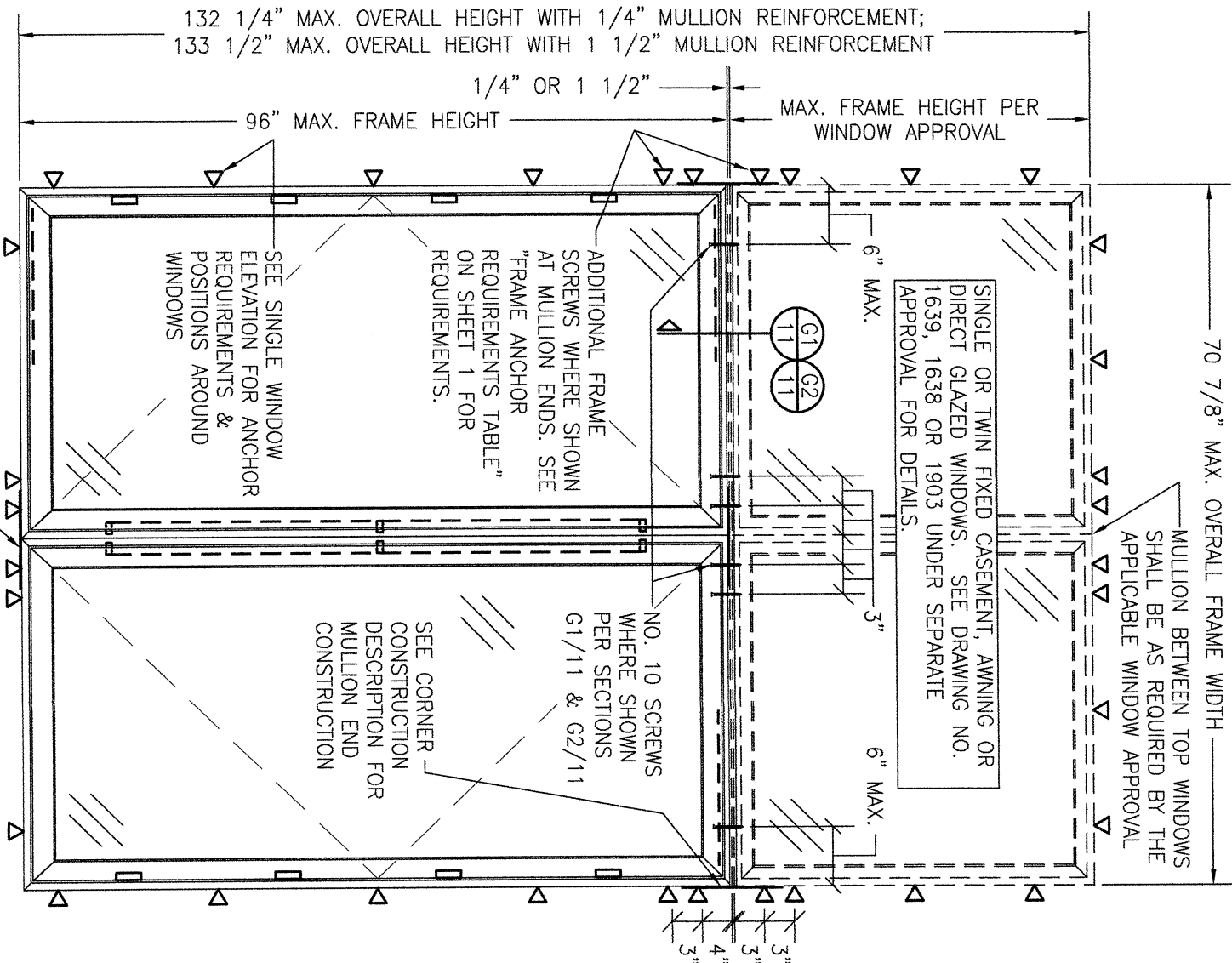
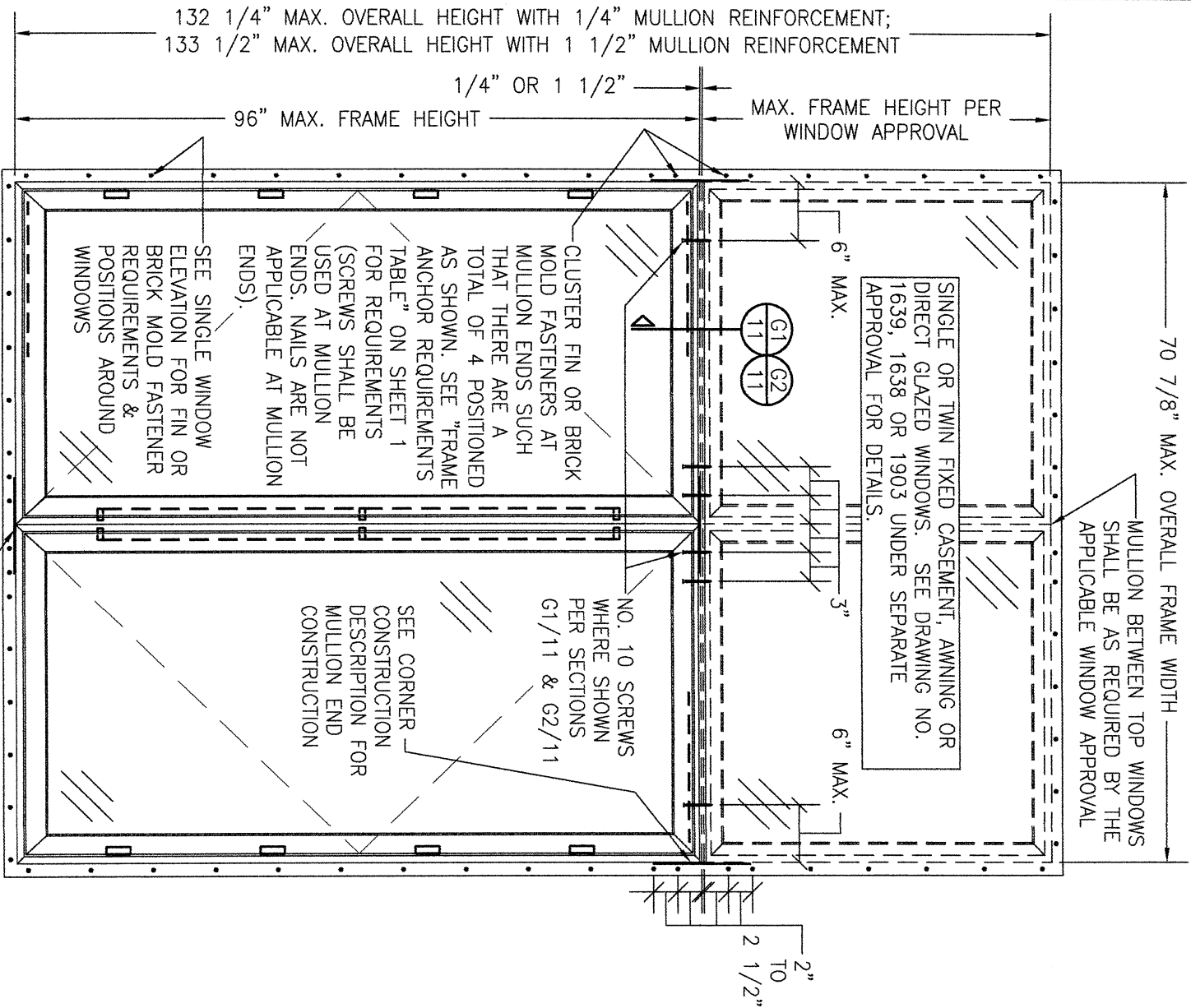
NOTES:
1. SEE ELEVATIONS FOR DIMENSIONING OF LOAD WIDTH.
2. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE INDIVIDUAL WINDOW.
3. SIZE VALUES IN TABLE ARE +/-1/2"
4. OTHER SIZE CONDITIONS MAY BE EVALUATED TO PRESSURES BETWEEN THOSE SHOWN FOR A LOCAL JOB APPROVAL BUT MUST BE CERTIFIED BY A FLORIDA REGISTERED ENGINEER.

NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE ALUMINUM CLAD WOOD CASEMENT WINDOW	MANUFACTURER C.P. LOEWEN ENTERPRISES 77 HWY 52 WEST STEINBACH, MB, CANADA R5G 1B2 204-326-6446
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CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424
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CERTIFICATION WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING NO. 1637 SHEET NO. 3 OF 13
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**EXTERIOR ELEVATION:
TWO WINDOWS WITH TRANSOM**

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

(NAIL FIN & BRICK MOLD MOUNT CONDITIONS)
(SEE SINGLE WINDOW ELEVATION ON SHEET 2 FOR CASEMENT WINDOW DETAIL NOT SHOWN)

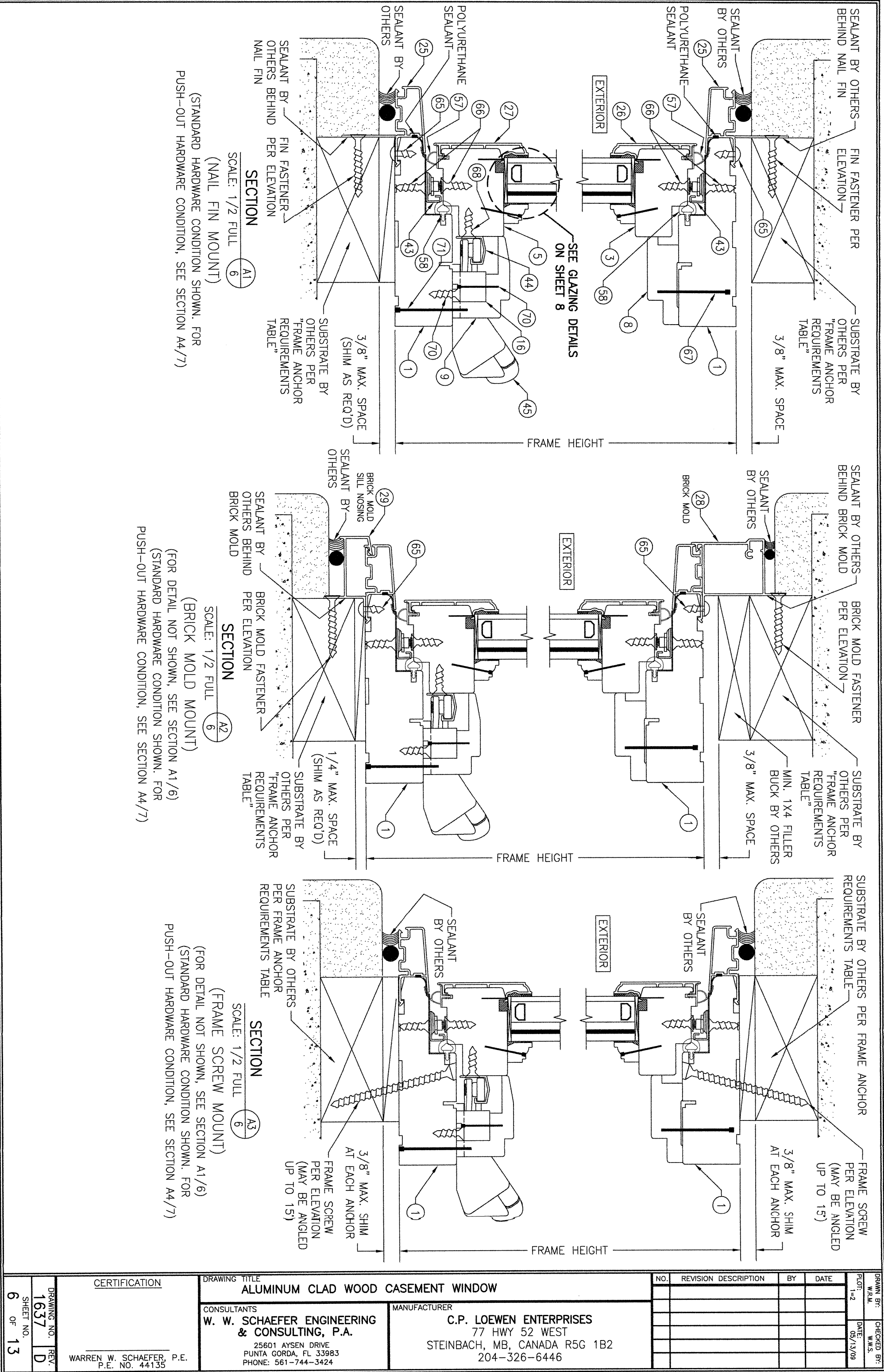
**EXTERIOR ELEVATION:
TWO WINDOWS WITH TRANSOM**

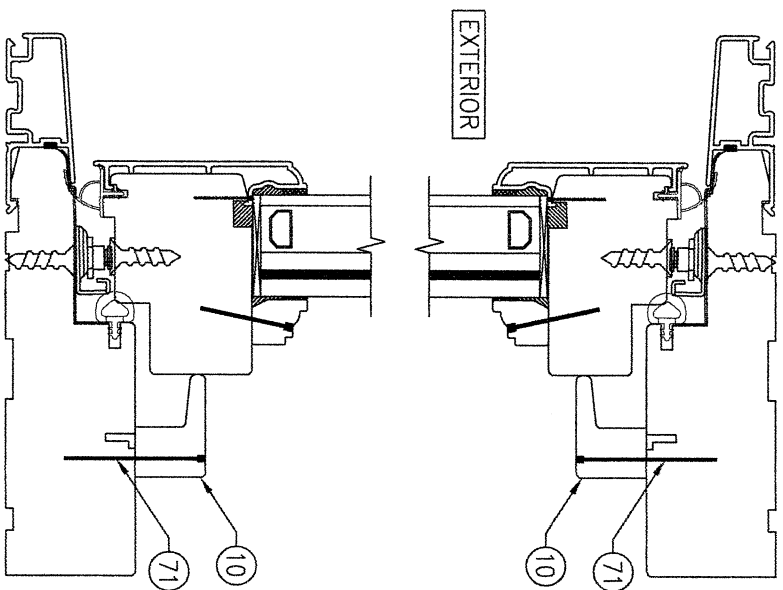
SCALE: 3/4" = 1'-0"

(FRAME SCREW MOUNT CONDITION)
(SEE SINGLE WINDOW ELEVATION ON SHEET 2 FOR CASEMENT WINDOW DETAIL NOT SHOWN)

TRANSOM MULLION ALLOWABLE DESIGN PRESSURE (DOUBLE WINDOW WITH TRANSOM)				
MAX. OVERALL FRAME HEIGHT (IN.)	MAX. OVERALL FRAME WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)		NOTES:
		POS.	NEG.	
133 1/2	70 7/8	65.0	65.0	1. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE INDIVIDUAL WINDOWS. 2. OTHER SIZE CONDITIONS MAY BE EVALUATED TO PRESSURES BETWEEN THOSE SHOWN FOR A LOCAL JOB APPROVAL BUT MUST BE CERTIFIED BY A FLORIDA REGISTERED ENGINEER.
108 3/8	70 7/8	70.0	70.0	
108 3/8	64 7/8	77.0	77.0	
108 3/8	58 7/8	85.0	85.0	

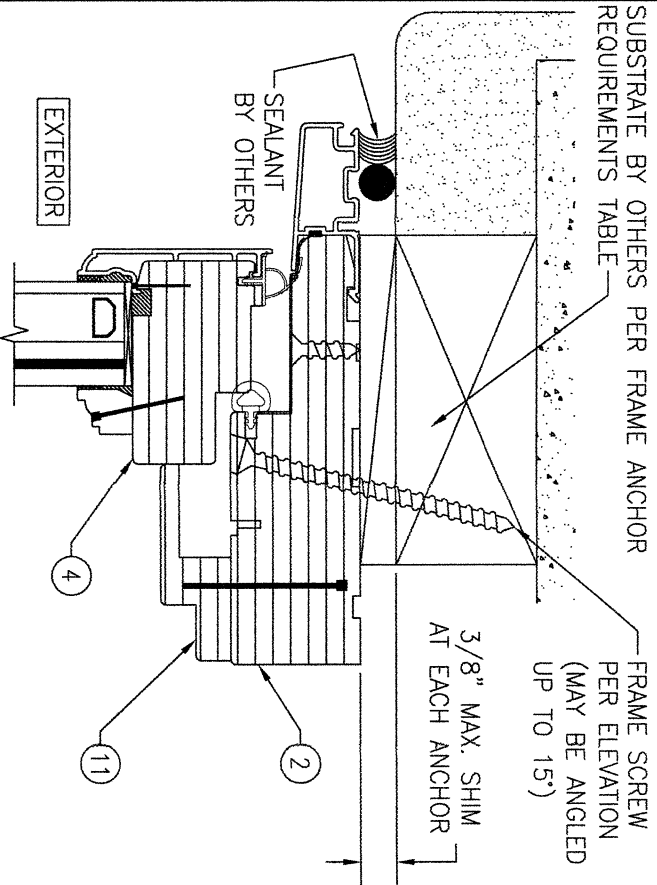
DRAWING BY: W.W.M. CHECKED BY: W.W.M.	
PLOT: 1=16 DATE: 05/13/09	
DRAWING NO. 1637 REV. E	
SHEET NO. 5 OF 13	
CERTIFICATION	
DRAWING TITLE: ALUMINUM CLAD WOOD CASEMENT WINDOW	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	MANUFACTURER: C.P. LOEWEN ENTERPRISES 77 HWY 52 WEST STEINBACH, MB, CANADA R5G 1B2 204-326-6446
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	





SECTION A4
SCALE: 1/2 FULL 7

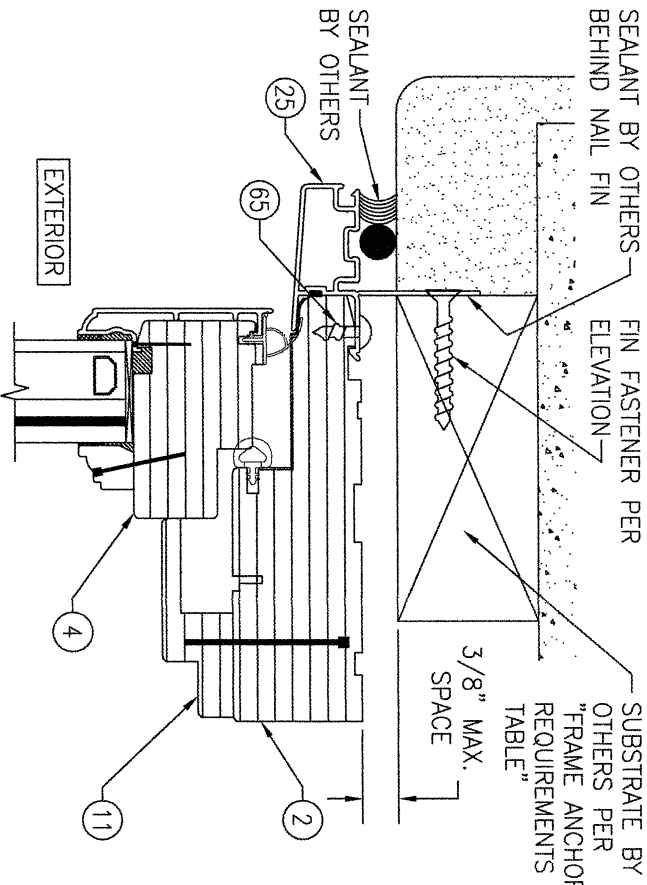
(PUSH-OUT HARDWARE CONDITION)
(FOR DETAIL AND INSTALLATIONS NOT SHOWN,
SEE SECTIONS A1/6, A2/6 & A3/6)



SECTION A7
SCALE: 1/2 FULL 7

(FRAME SCREW MOUNT)

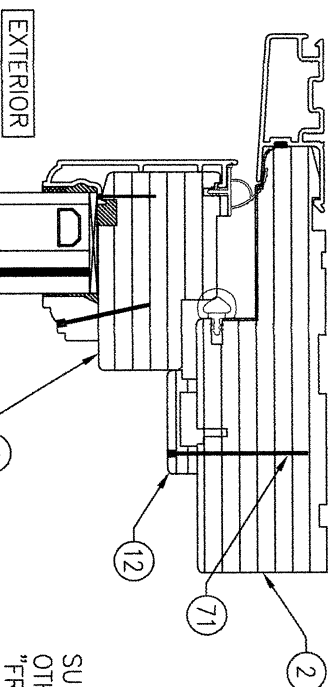
(FOR DETAIL NOT SHOWN, SEE SECTION A1/6. FOR SILL SECTION NOT
SHOWN, SEE SECTION A3/6)
(STANDARD HARDWARE CONDITION SHOWN. FOR PUSH-OUT HARDWARE
CONDITION, SEE SECTION A8/7)



SECTION A5
SCALE: 1/2 FULL 7

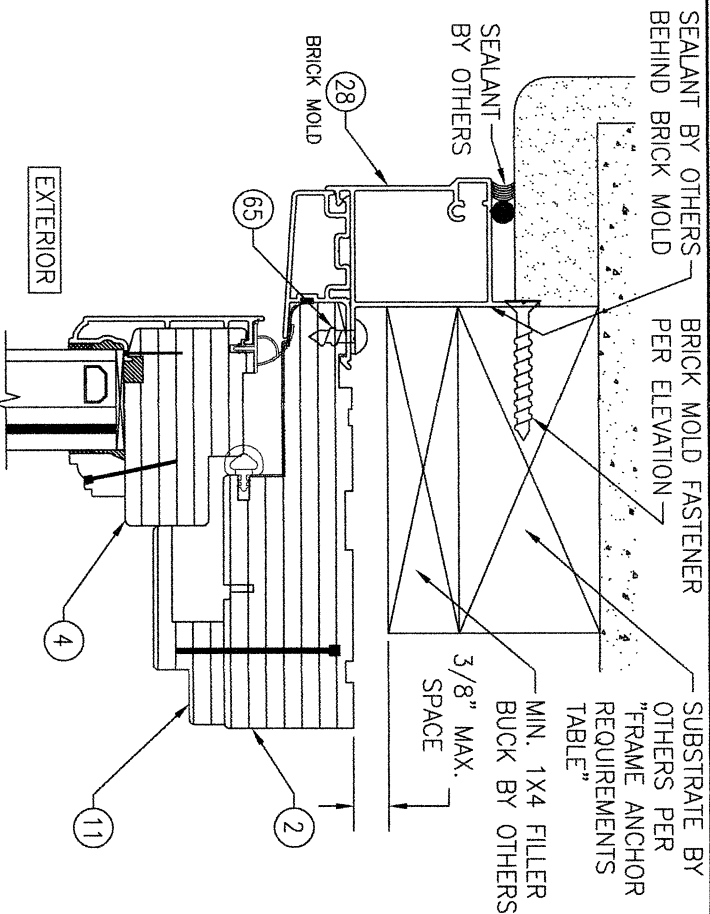
(NAIL FIN MOUNT)

(FOR SILL SECTION AND DETAIL NOT SHOWN, SEE SECTION A1/6)
(STANDARD HARDWARE CONDITION SHOWN. FOR PUSH-OUT HARDWARE
CONDITION, SEE SECTION A8/7)



SECTION A8
SCALE: 1/2 FULL 7

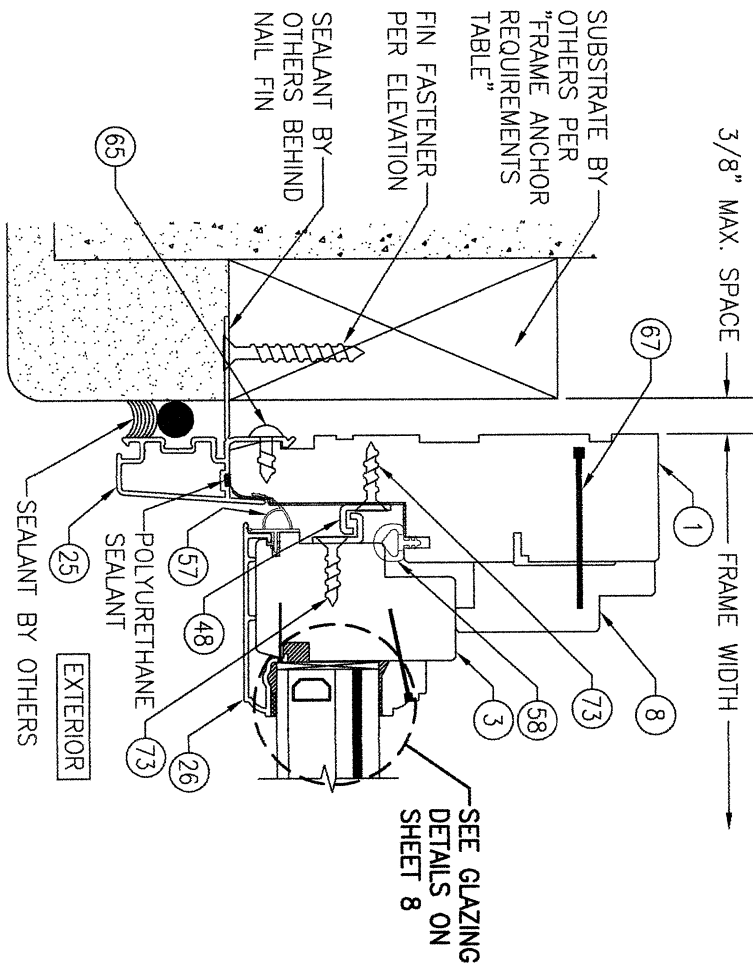
(SHAPED WINDOW WITH PUSH-OUT
HARDWARE CONDITION)
(FOR SILL SECTION, DETAIL AND INSTALLATIONS
NOT SHOWN, SEE OTHER SECTIONS)



SECTION A6
SCALE: 1/2 FULL 7

(BRICK MOLD MOUNT)

(FOR DETAIL NOT SHOWN, SEE SECTION A1/6. FOR SILL SECTION
NOT SHOWN, SEE SECTION A2/6.)
(STANDARD HARDWARE CONDITION SHOWN. FOR PUSH-OUT
HARDWARE CONDITION, SEE SECTION A8/7)



SECTION B1
SCALE: 1/2 FULL 7

(NAIL FIN MOUNT)

(STANDARD HARDWARE CONDITION SHOWN. FOR PUSH-OUT
HARDWARE CONDITION, SEE SECTION B4/8)

DRAWN BY: W.R.M.	CHECKED BY: W.M.S.	DATE: 05/13/09	BY	REVISION DESCRIPTION	NO.
1-2					

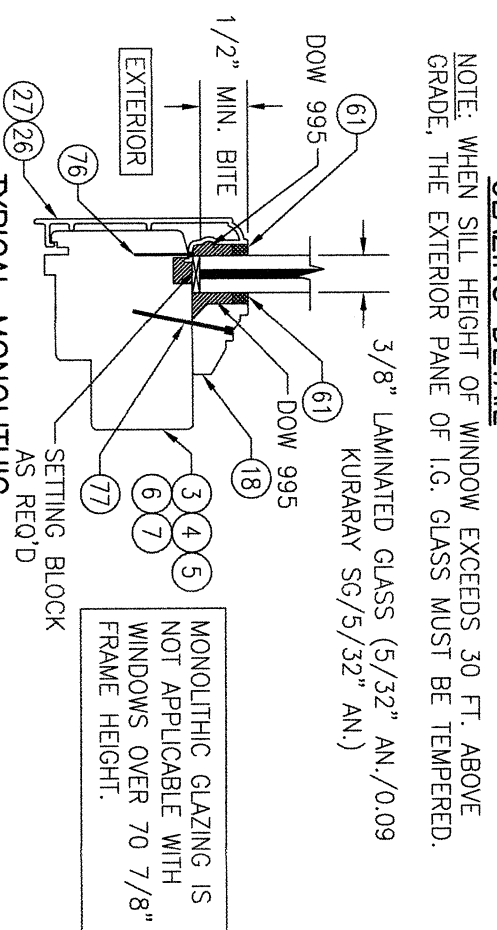
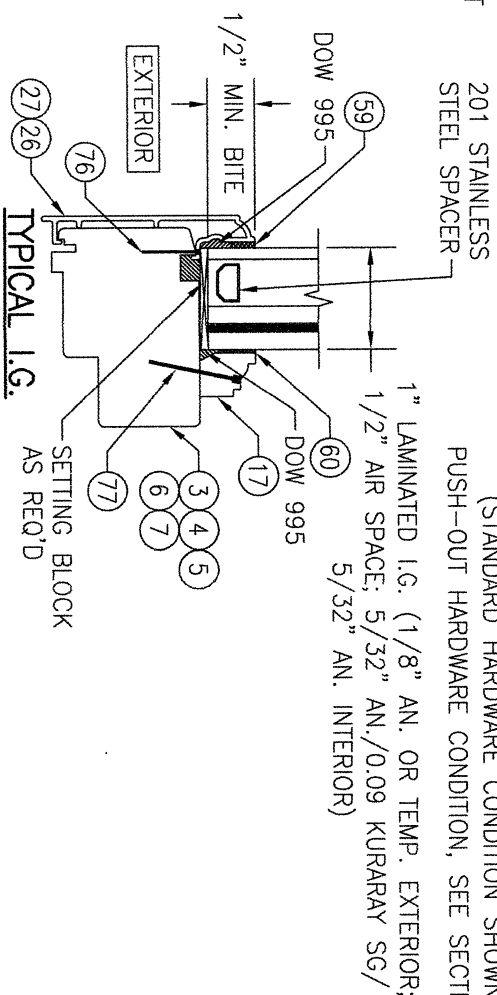
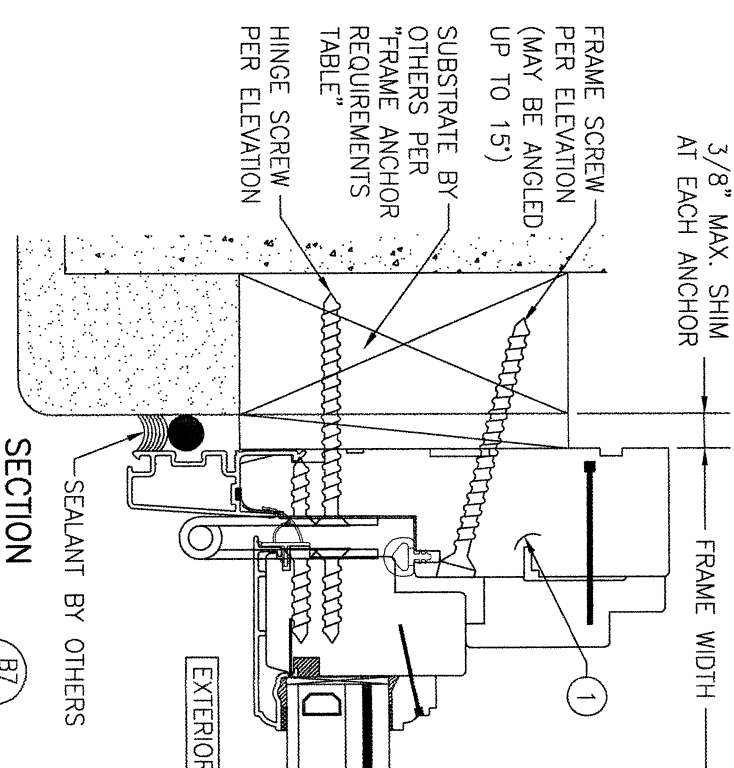
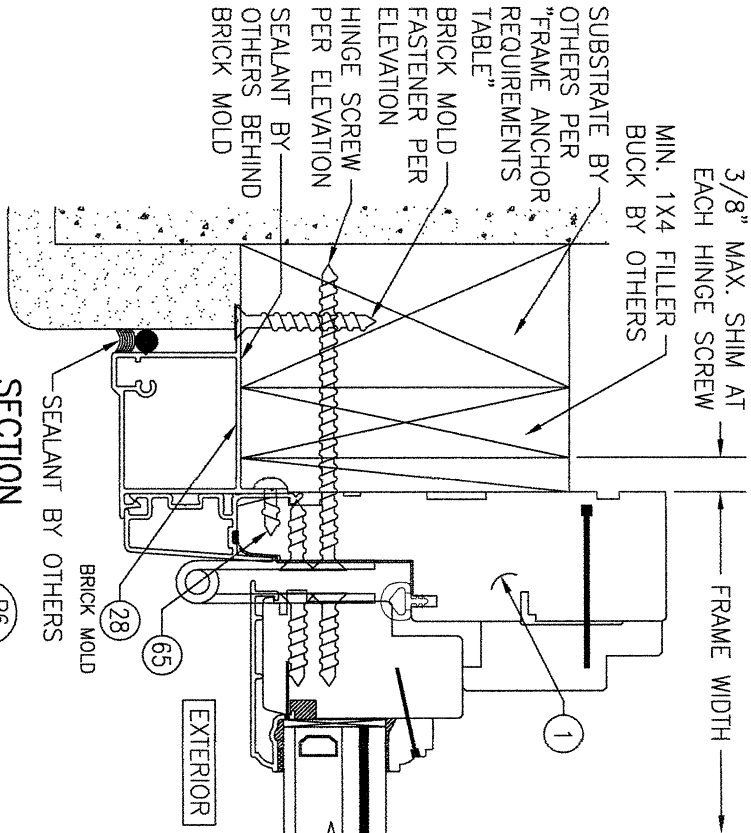
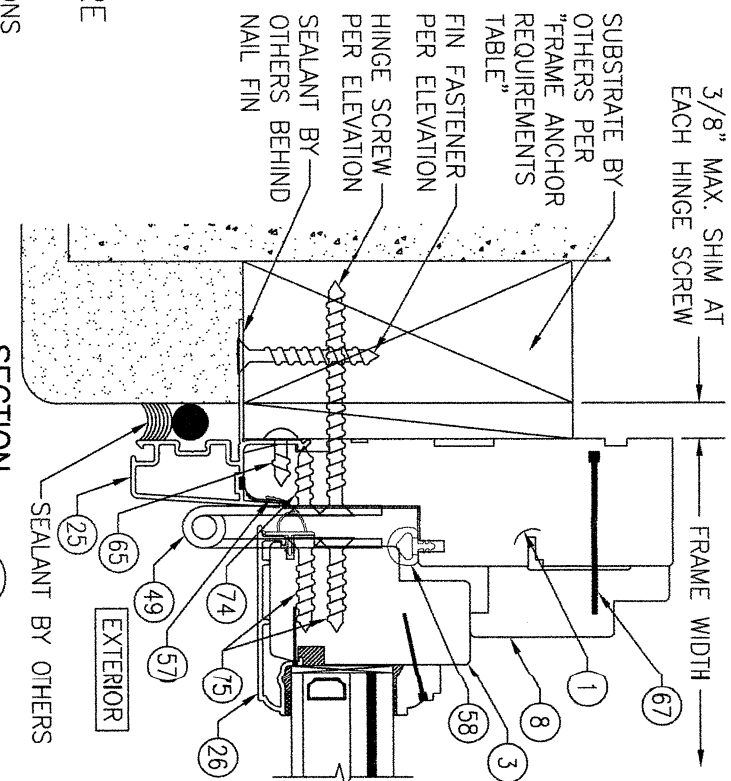
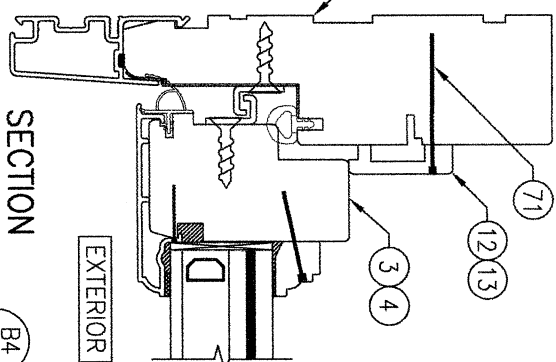
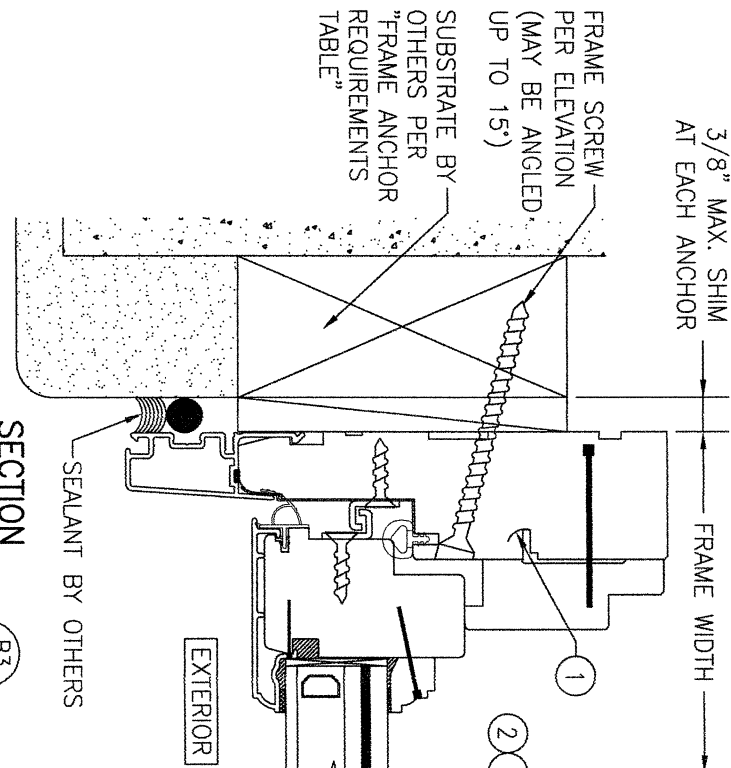
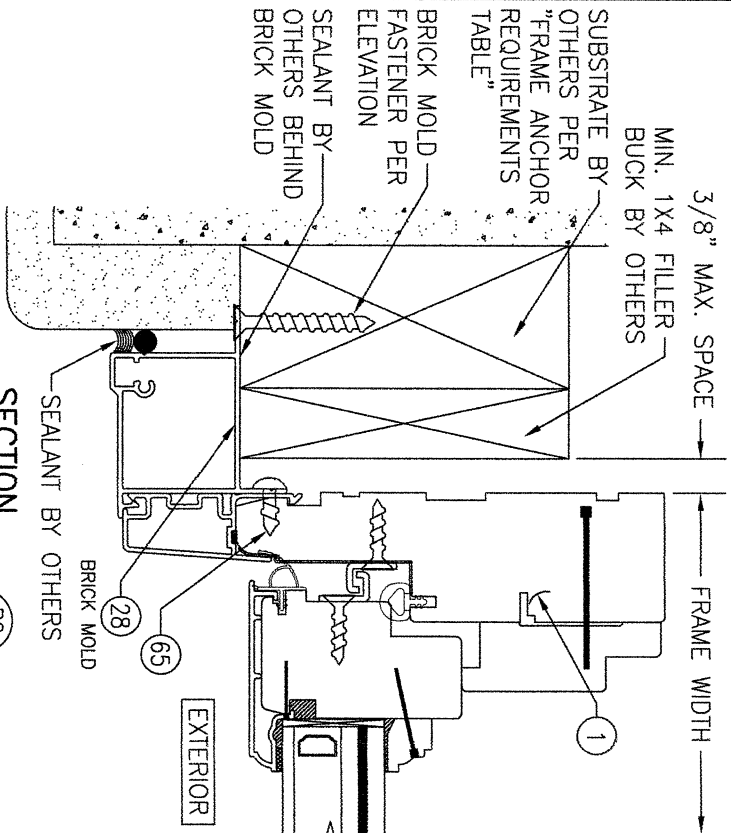
MANUFACTURER
C.P. LOEWEN ENTERPRISES
77 HWY 52 WEST
STEINBACH, MB, CANADA R5G 1B2
204-326-6446

DRAWING TITLE
ALUMINUM CLAD WOOD CASEMENT WINDOW

CONSULTANTS
**W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.**
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

CERTIFICATION
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. REV.
1637 D
SHEET NO.
7 OF 13



DRAWN BY:		CHECKED BY:		
W.R.M.		W.M.S.		
DATE:		DATE:		
05/13/09				
NO.	REVISION	DESCRIPTION	BY	DATE

MANUFACTURER
C.P. LOEWEN ENTERPRISES
77 HWY 52 WEST
STEINBACH, MB, CANADA R5G 1B2
204-326-6446

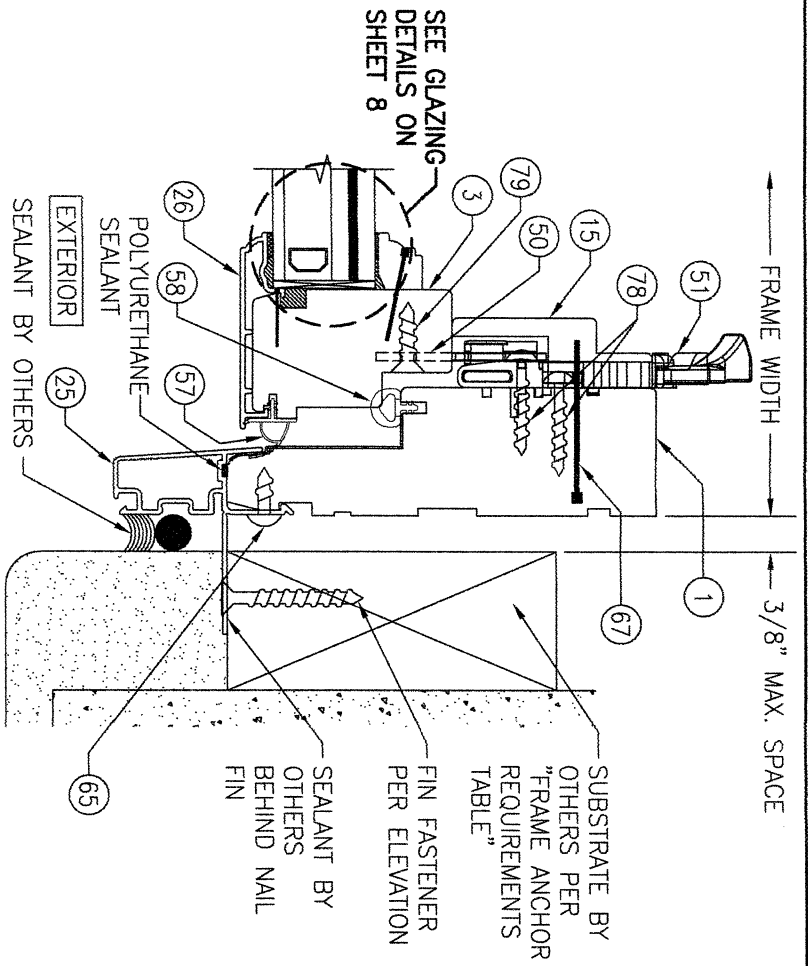
DRAWING TITLE
ALUMINUM CLAD WOOD CASEMENT WINDOW

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

CERTIFICATION
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

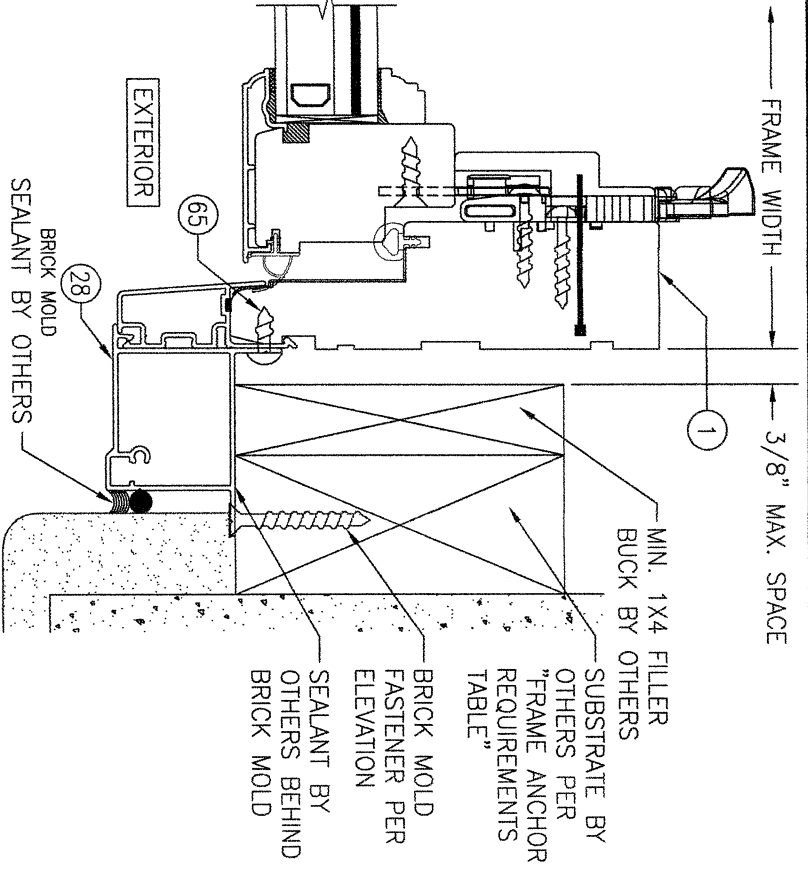
DRAWING NO. REV.
1637 **D**

SHEET NO.
8 OF **13**



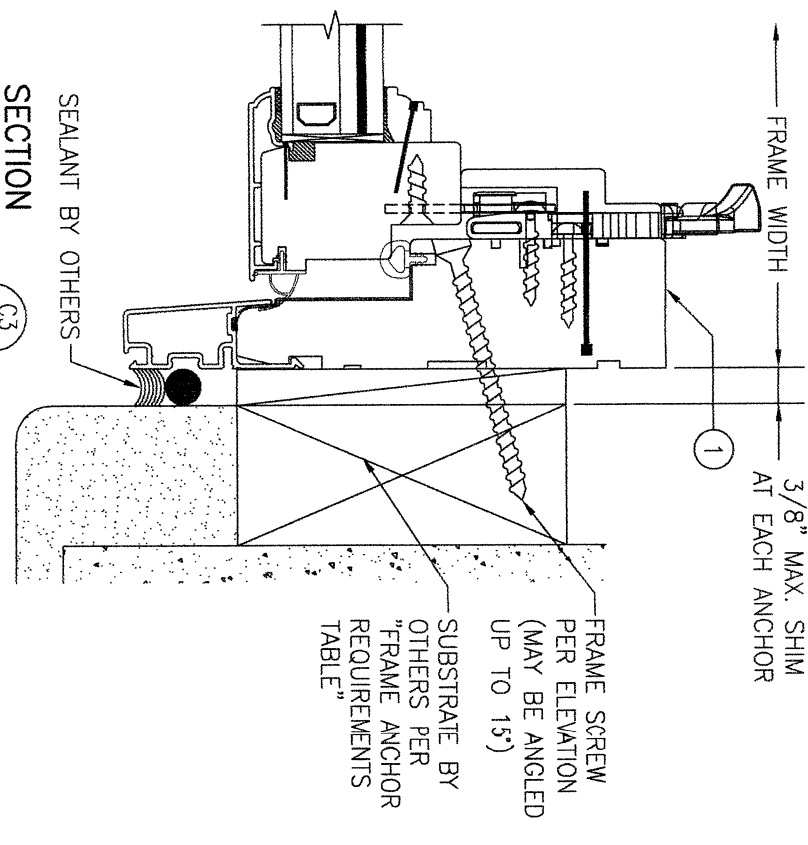
SECTION C1
SCALE: 1/2 FULL
(NAIL FIN MOUNT)

(STANDARD HARDWARE CONDITION SHOWN, FOR
PUSH-OUT HARDWARE CONDITION, SEE SECTION C4/9)



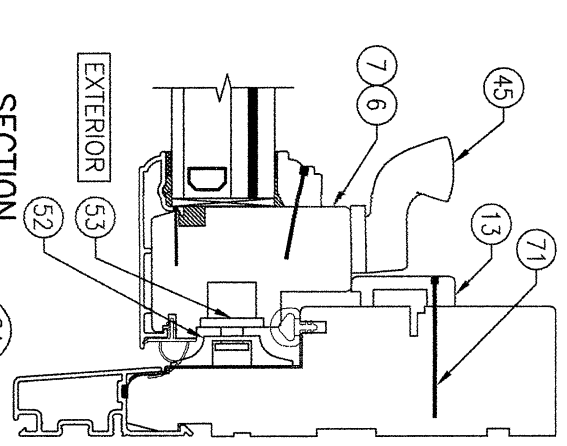
SECTION C2
SCALE: 1/2 FULL
(BRICK MOLD MOUNT)

(FOR DETAIL NOT SHOWN, SEE SECTION C1/9)
(STANDARD HARDWARE CONDITION SHOWN, FOR PUSH-OUT
HARDWARE CONDITION, SEE SECTION C4/9)



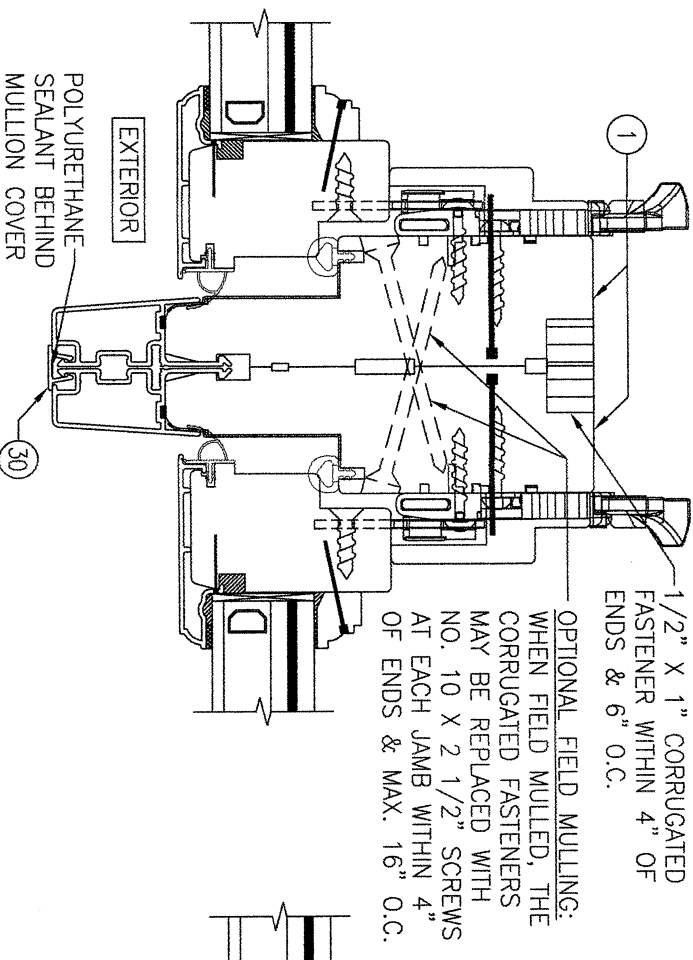
SECTION C3
SCALE: 1/2 FULL
(FRAME SCREW MOUNT)

(FOR DETAIL NOT SHOWN, SEE SECTION C1/9)
(STANDARD HARDWARE CONDITION SHOWN, FOR PUSH-OUT HARDWARE
CONDITION, SEE SECTION C4/9)

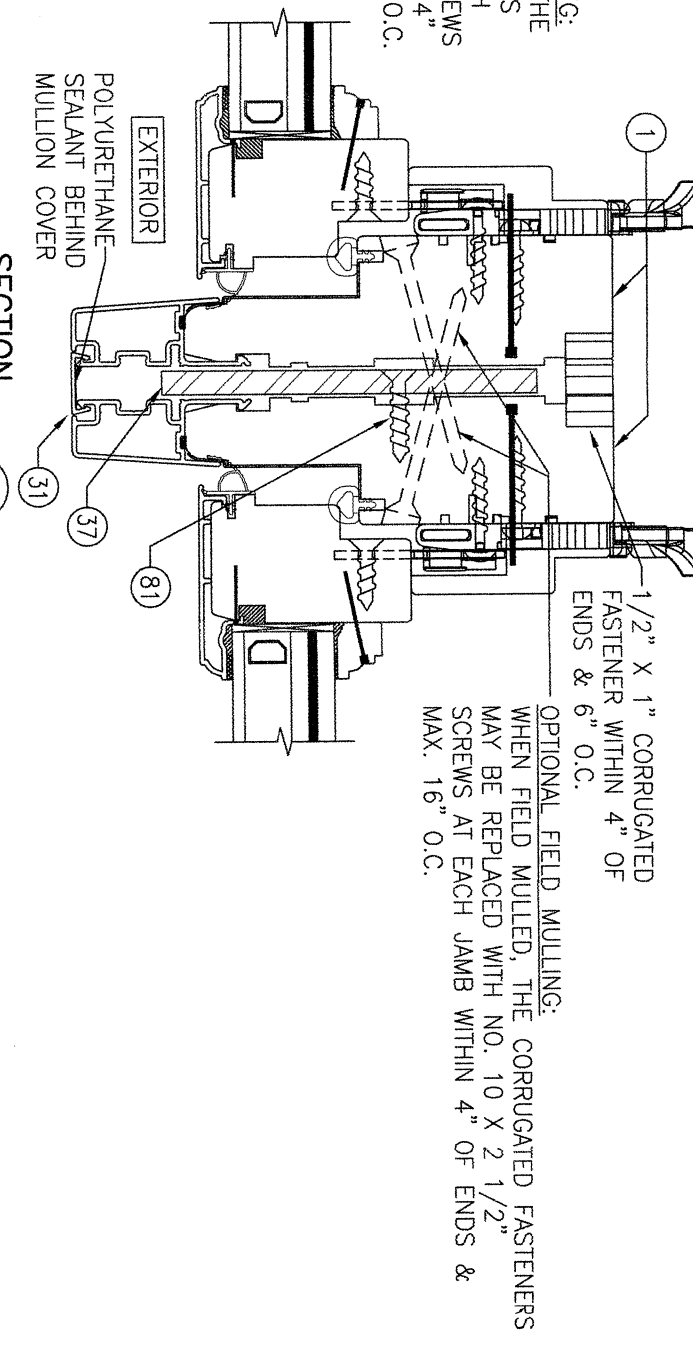


SECTION C4
SCALE: 1/2 FULL
(PUSH-OUT HARDWARE
CONDITION)

(FOR DETAIL AND INSTALLATIONS
NOT SHOWN, SEE SECTIONS C1/9,
C2/9 & C3/9)



SECTION D1
SCALE: 1/2 FULL
(CASEMENT TO CASEMENT WITH NON-REINFORCED MULLION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(STANDARD HARDWARE CONDITION SHOWN, PUSH-OUT
HARDWARE CONDITION ALSO APPLIES)

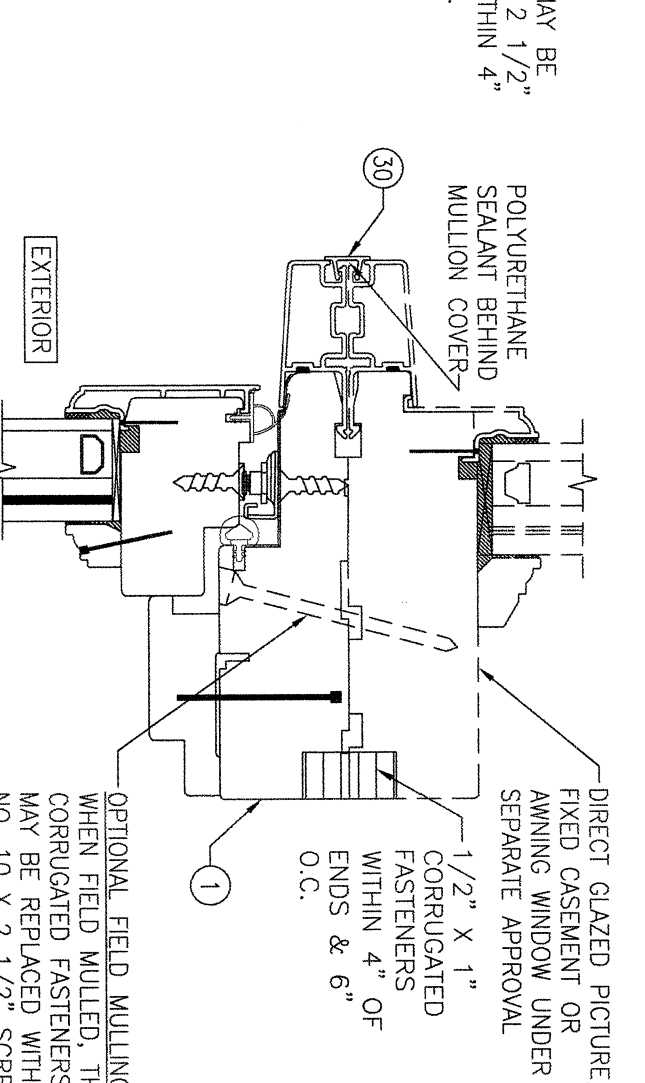
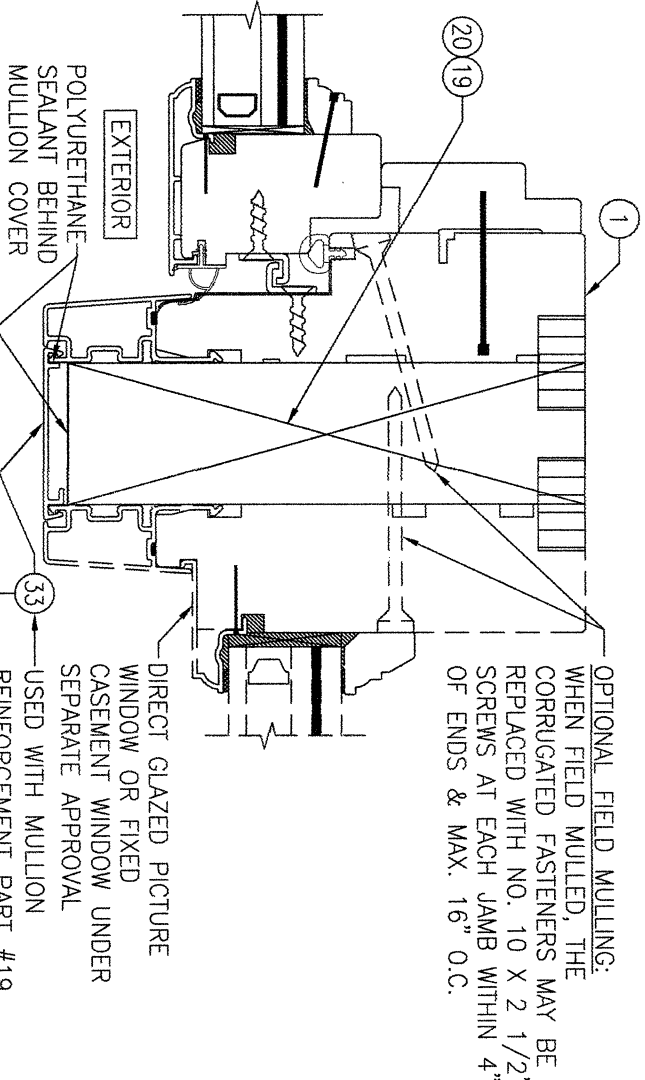
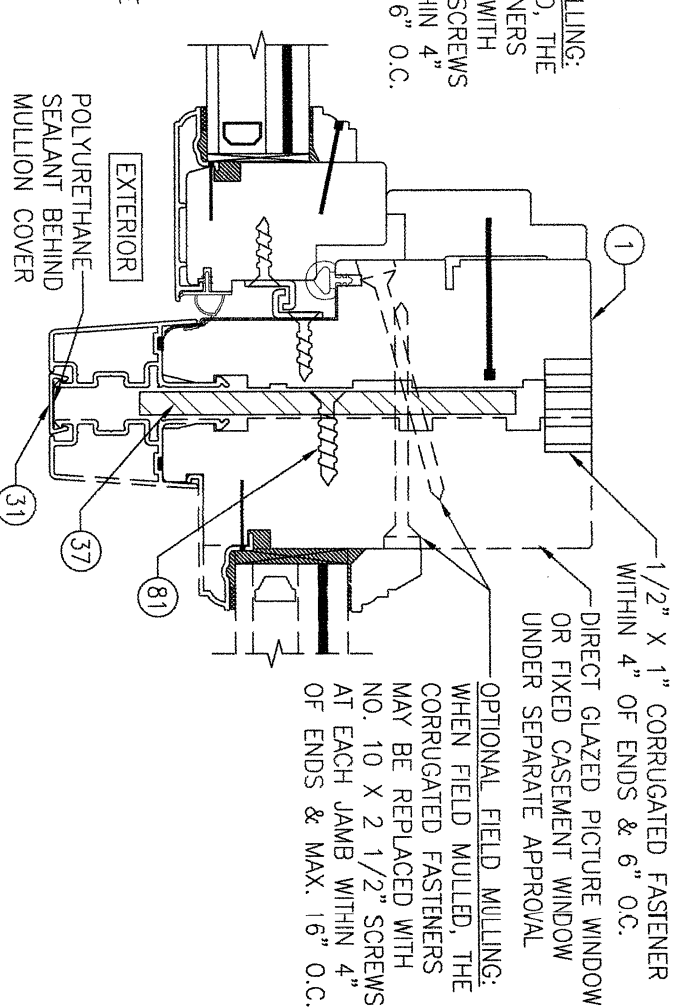
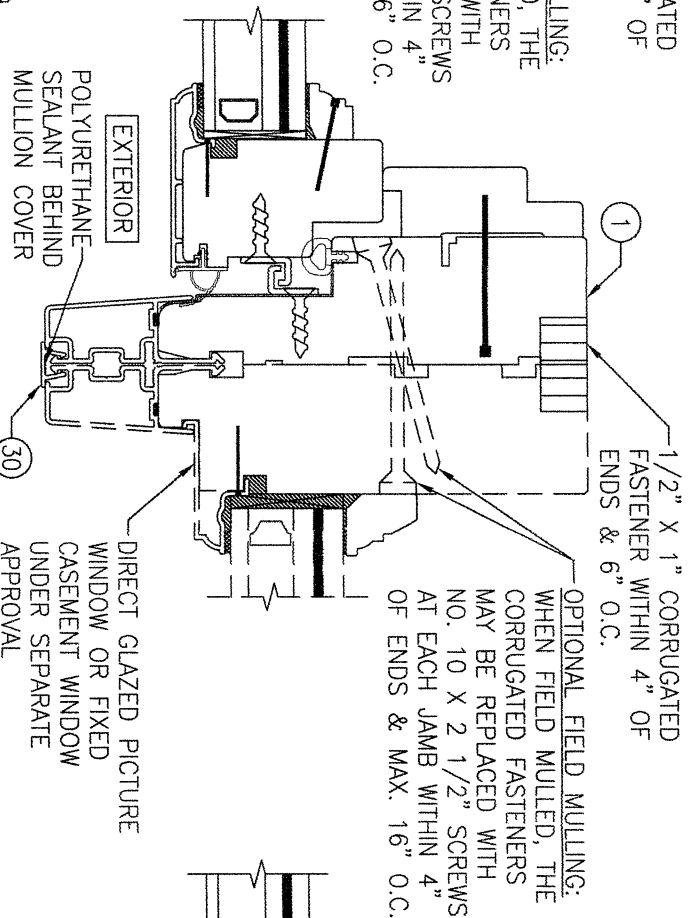
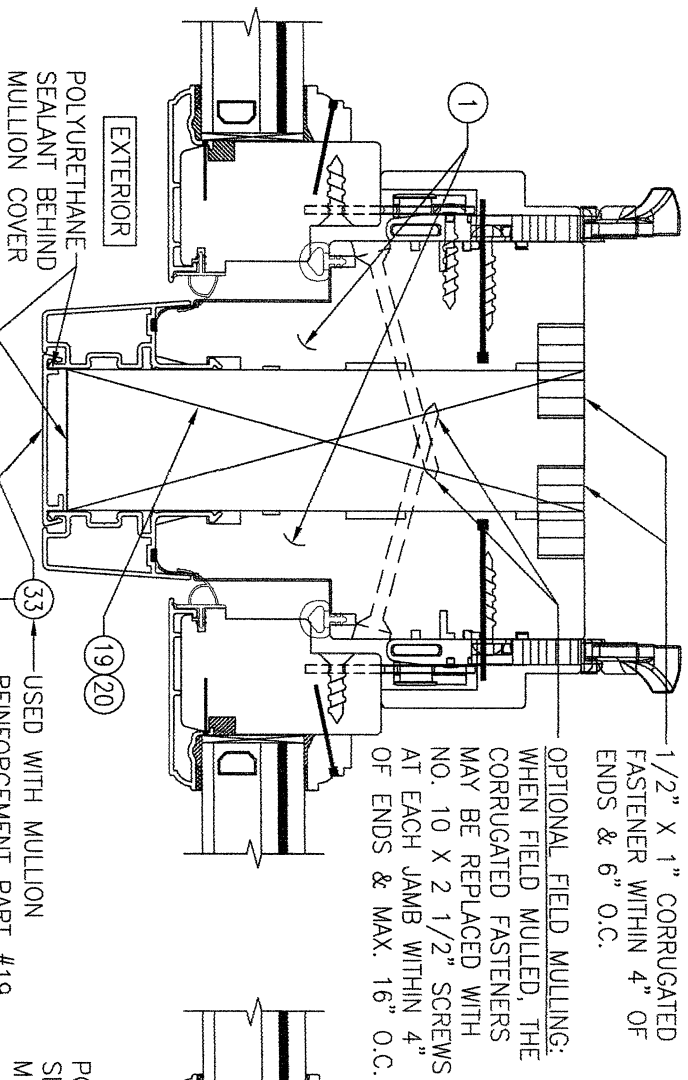


SECTION D2
SCALE: 1/2 FULL
(CASEMENT TO CASEMENT WITH OPTIONAL BAR REINFORCED MULLION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(STANDARD HARDWARE CONDITION SHOWN, PUSH-OUT HARDWARE
CONDITION ALSO APPLIES)

DRAWN BY:				CHECKED BY:	
W.R.M.				W.M.S.	
PLOT:				DATE:	
1=2				05/13/09	
NO.	REVISION	DESCRIPTION	BY	DATE	
	</				

DRAWING TITLE	
ALUMINUM CLAD WOOD CASEMENT WINDOW	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	C.P. LOEWEN ENTERPRISES 77 HWY 52 WEST STEINBACH, MB, CANADA R5G 1B2 204-326-6446

CERTIFICATION	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	REV.
1637	D
SHEET NO.	OF
9	13

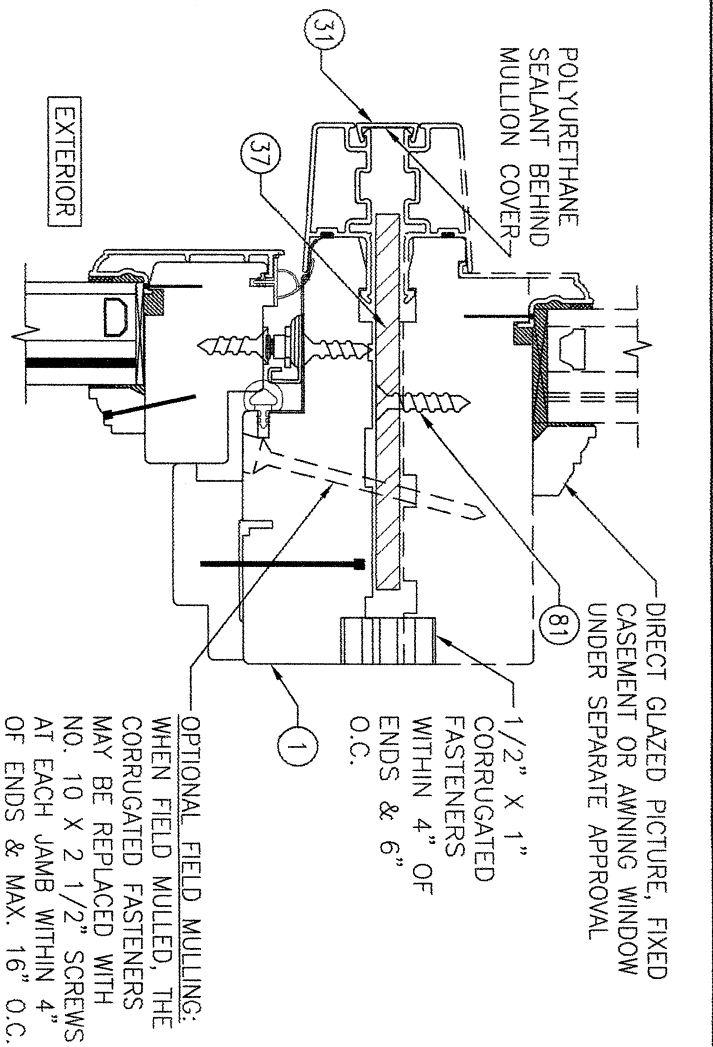


NO.	REVISION	DESCRIPTION	BY	DATE
1	2			

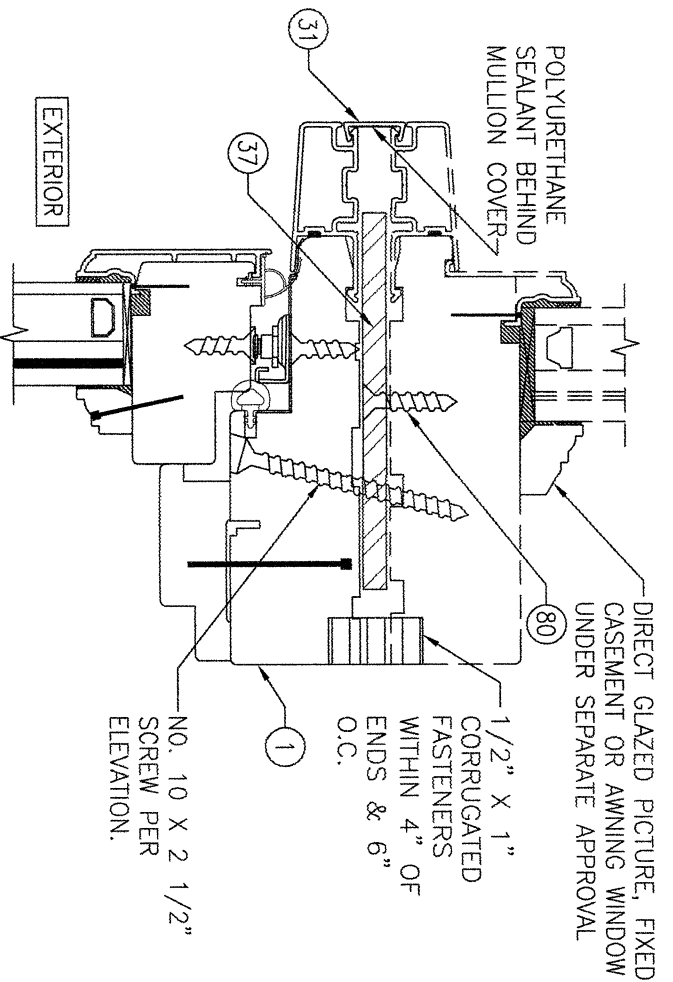
DRAWING NO. 1637	REV. D
SHEET NO. 10 OF 13	

DRAWING TITLE	ALUMINUM CLAD WOOD CASEMENT WINDOW
CONSULTANTS	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
MANUFACTURER	C.P. LOEWEN ENTERPRISES

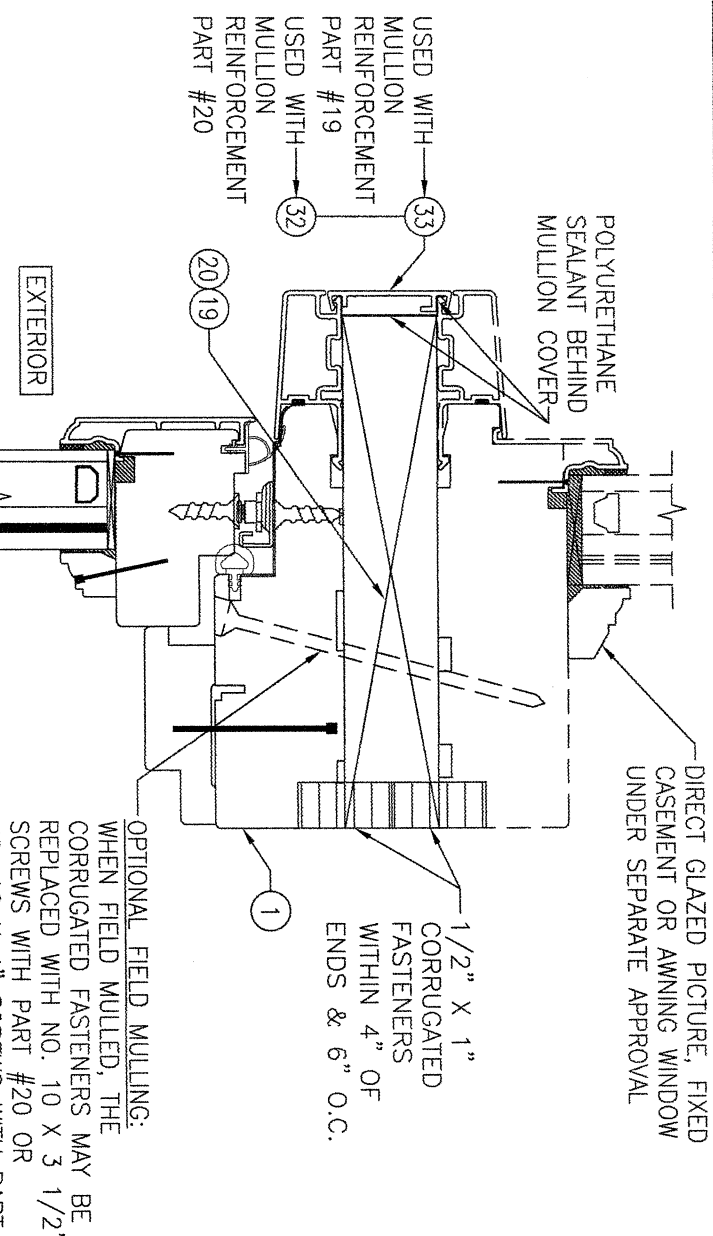
CERTIFICATION	WARREN W. SCHAEFER, P.E.
	P.E. NO. 44-135



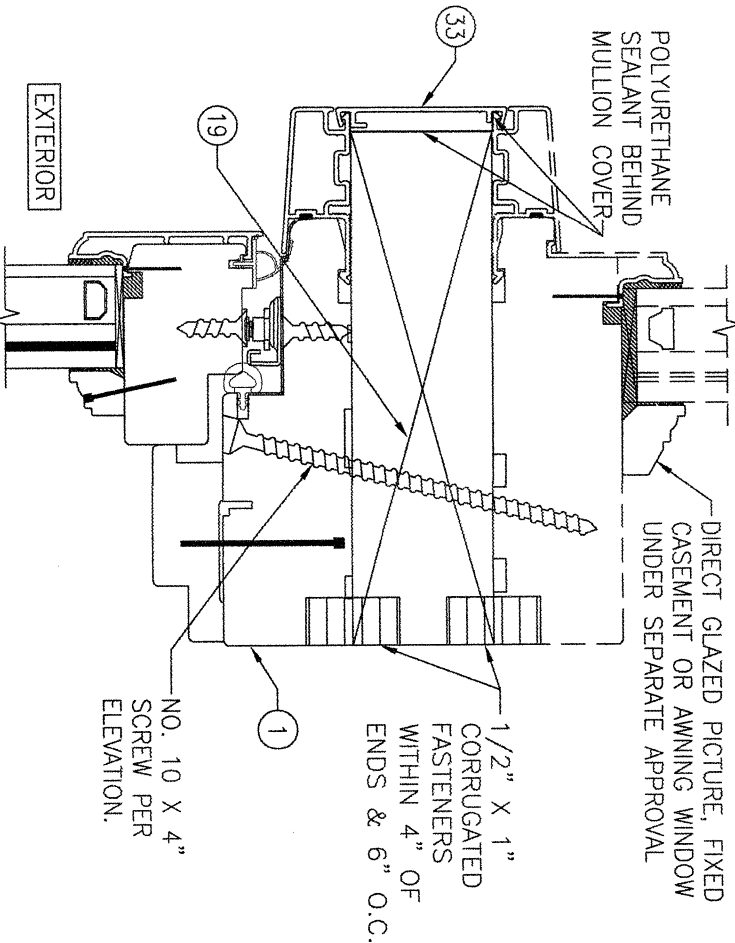
SECTION F2
SCALE: 1/2 FULL 11
(SINGLE WINDOW WITH OPTIONAL BAR REINFORCED MULLION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(STANDARD HARDWARE CONDITION SHOWN, PUSH-OUT HARDWARE CONDITION ALSO APPLIES)



SECTION G1
SCALE: 1/2 FULL 11
(DOUBLE WINDOW WITH BAR REINFORCED MULLION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(STANDARD HARDWARE CONDITION SHOWN, PUSH-OUT HARDWARE CONDITION ALSO APPLIES)



SECTION F3
SCALE: 1/2 FULL 11
(SINGLE WINDOW WITH OPTIONAL WOOD REINFORCED MULLION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(STANDARD HARDWARE CONDITION SHOWN, PUSH-OUT HARDWARE CONDITION ALSO APPLIES)



SECTION G2
SCALE: 1/2 FULL 11
(DOUBLE WINDOW WITH WOOD REINFORCED MULLION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(STANDARD HARDWARE CONDITION SHOWN, PUSH-OUT HARDWARE CONDITION ALSO APPLIES)

NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE
ALUMINUM CLAD WOOD CASEMENT WINDOW

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

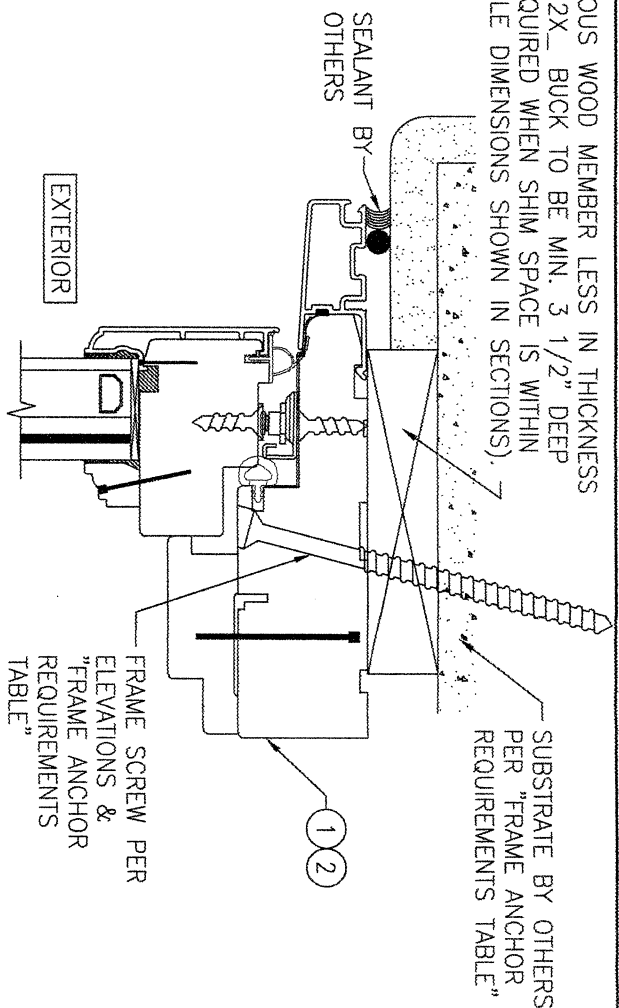
MANUFACTURER
C.P. LOEWEN ENTERPRISES
77 HWY 52 WEST
STEINBACH, MB, CANADA R5G 1B2
204-326-6446

CERTIFICATION
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

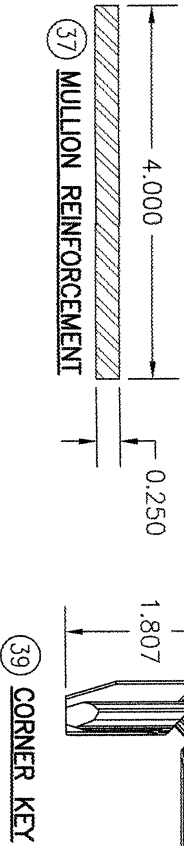
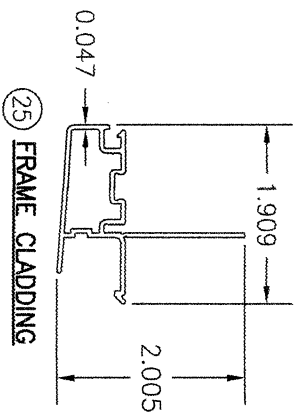
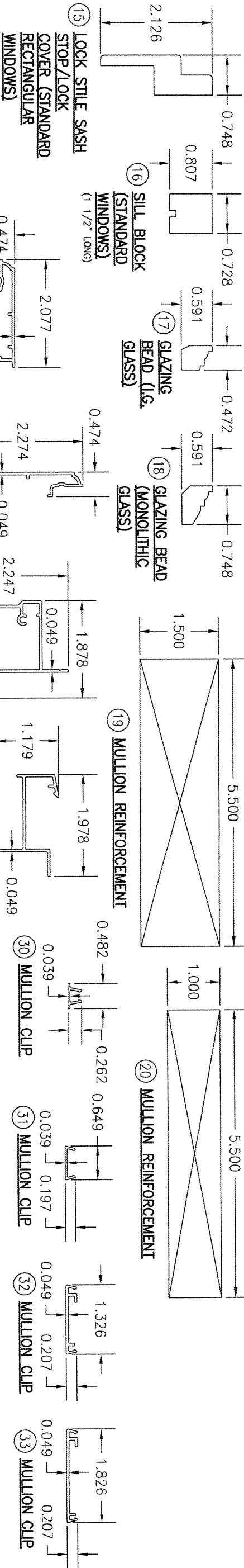
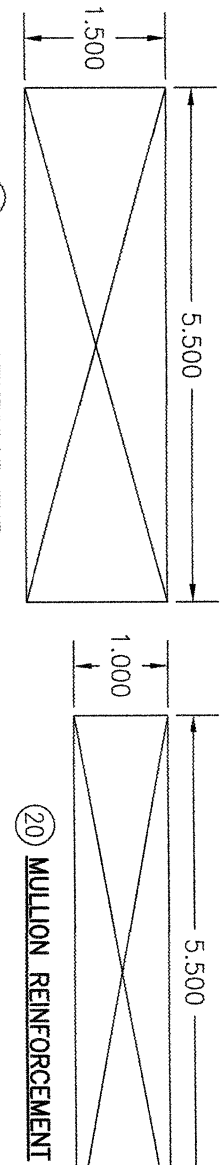
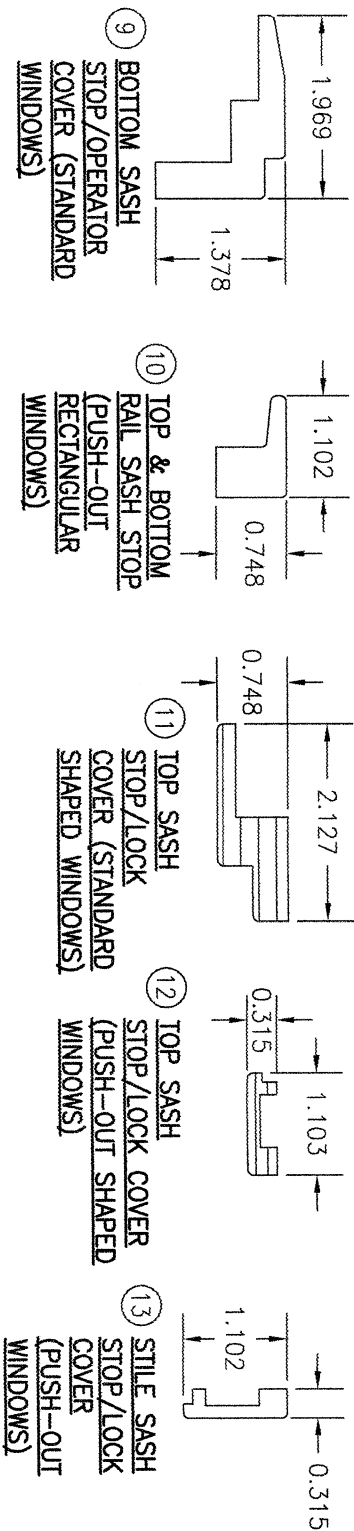
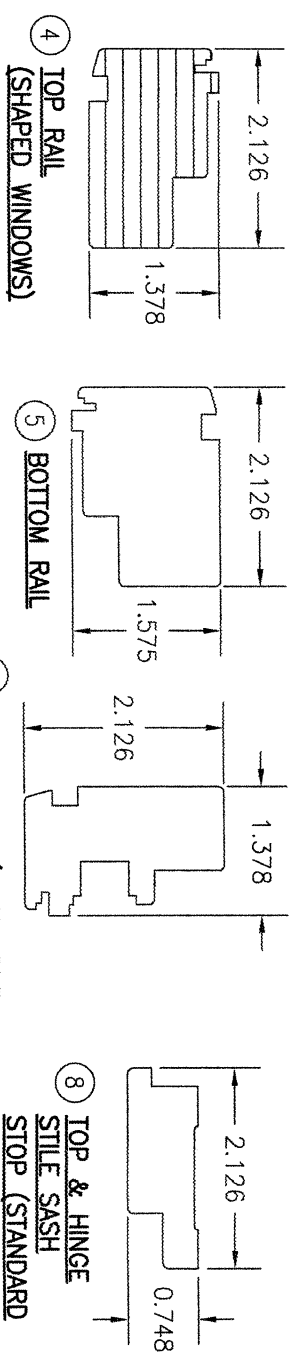
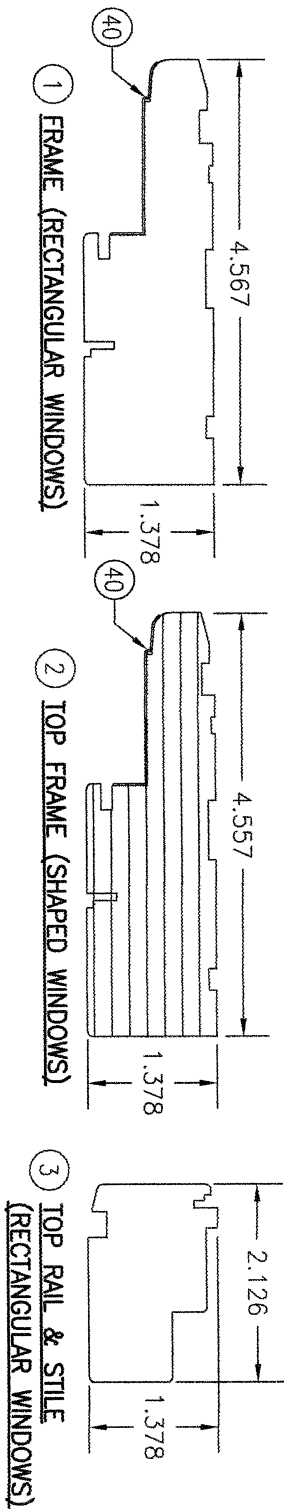
DRAWING NO.
1637
REV. D

SHEET NO.
11 OF 13

CONTINUOUS WOOD MEMBER LESS IN THICKNESS THAN A 2X. BUCK TO BE MIN. 3 1/2" DEEP (NOT REQUIRED WHEN SHIM SPACE IS WITHIN ALLOWABLE DIMENSIONS SHOWN IN SECTIONS).



OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



NO.	REVISION	DESCRIPTION	BY	DATE
1	2			

MANUFACTURER
C.P. LOEWEN ENTERPRISES
77 HWY 52 WEST
STEINBACH, MB, CANADA R5G 1B2
204-326-6446

DRAWING TITLE
ALUMINUM CLAD WOOD CASEMENT WINDOW

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

CERTIFICATION

WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. 1637
SHEET NO. 12 OF 13

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	FRAME (RECTANGULAR WINDOWS)	WOOD
2	TOP FRAME (SHAPED WINDOWS)	WOOD (LAMINATED)
3	TOP RAIL & STILE (RECTANGULAR WINDOWS)	WOOD
4	TOP RAIL (SHAPED WINDOWS)	WOOD (LAMINATED)
5	BOTTOM RAIL	WOOD
6	LOCK STILE (PUSH-OUT RECTANGULAR WINDOWS)	WOOD
8	TOP & HINGE STILE SASH STOP (STANDARD WINDOWS)	WOOD
9	BOTTOM SASH STOP/OPERATOR COVER (STANDARD WINDOWS)	WOOD WOOD
10	TOP & BOTTOM RAIL SASH STOP (PUSH-OUT RECTANGULAR WINDOWS)	WOOD
11	TOP SASH STOP/LOCK COVER (STANDARD SHAPED WINDOWS)	WOOD (LAMINATED)
12	TOP SASH STOP/LOCK COVER (PUSH-OUT SHAPED WINDOWS)	WOOD (LAMINATED)
13	STILE SASH STOP/LOCK COVER (PUSH-OUT WINDOWS)	WOOD
14	HINGE STILE SASH STOP (STANDARD SHAPED WINDOWS)	WOOD (LAMINATED)
15	LOCK STILE SASH STOP/LOCK COVER (STANDARD WINDOWS)	WOOD
16	SILL BLOCK (STANDARD WINDOWS)	WOOD
17	GLAZING BEAD (I.G. GLASS)	WOOD
18	GLAZING BEAD (MONOLITHIC GLASS)	WOOD
19	MULLION REINFORCEMENT	WOOD
20	MULLION REINFORCEMENT	WOOD
25	FRAME CLADDING	6060-T5 ALUMINUM
26	TOP RAIL & STILE SASH CLADDING	6060-T5 ALUMINUM
27	BOTTOM RAIL SASH CLADDING	6060-T5 ALUMINUM
28	BRICK MOLD (HEAD & SIDES)	6060-T5 ALUMINUM
29	BRICK MOLD SILL NOSING	6060-T5 ALUMINUM
30	MULLION CLIP	6060-T5 ALUMINUM
31	MULLION CLIP	6060-T5 ALUMINUM
32	MULLION CLIP	6060-T5 ALUMINUM
33	MULLION CLIP	6060-T5 ALUMINUM
37	MULLION REINFORCEMENT	A-36 STEEL
39	CORNER KEY	NYLON
40	JAMB LINER	VINYL
HARDWARE		
43	SCISSOR HINGE	TRUTH 14.97
44	OPERATOR (STANDARD WINDOWS)	TRUTH 50.10
45	OPERATOR HANDLE	AS REQ'D TO OPERATE OPERATOR
48	SNUBBER	TRUTH 21642-92
49	BUTT HINGE	DIVERSIFIED PRODUCTS OF CANADA DP3535R14C32DN S.S.
50	LOCK KEEPER (STANDARD WINDOW)	TRUTH 41341.00.0500
51	MULTI-POINT LOCK (STANDARD WINDOWS)	TRUTH 312152
52	LOCK KEEPER (PUSH-OUT WINDOWS)	GU G-20489
53	MULTI-POINT LOCK (PUSH-OUT WINDOWS)	GU G-20489

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
SEALS & SEALANTS		
57	WEATHERSTRIP	VINYL INTEK 50345
58	WEATHERSTRIP	LAUREN 5394
59	1/16" X 1/4" GLAZING TAPE	CLOSED CELL FOAM; VENTURE VG1116B
60	1/32" X 3/8" GLAZING TAPE	CLOSED CELL FOAM; VENTURE VG1116B
61	1/8" X 3/16" GLAZING TAPE	CLOSED CELL FOAM; VENTURE VG308B-L314
FASTENERS		
65	NO. 8 X 1/2" P.H. SELF TAPPING SCREW	WITHIN 1" FROM CORNERS & 6" MAX. O.C.
66	NO. 7 X 3/4" SMS SCREW	4 PER HINGE INTO EACH SASH & JAMB
67	16 GA. X 1 1/2" BRAD NAIL	WITHIN 6" FROM CORNERS & 6" MAX. O.C.
68	NO. 7 X 3/4" SMS SCREW	2 PER OPERATOR INTO SASH
69	18 GA. X 1" BRAD NAIL	1 PER SILL BLOCK
70	NO. 7 X 3/4" SMS SCREW	3 PER OPERATOR INTO FRAME
71	16 GA. X 1 1/2" BRAD NAIL	WITHIN 6" FROM CORNERS & 6" MAX. O.C.
73	NO. 6 X 3/4" SMS SCREW	2 PER SNUBBER INTO EACH SASH & FRAME
74	NO. 8 X 3/4" SMS SCREW	2 PER HINGE INTO JAMB
75	NO. 10 X 1" SMS SCREW	3 PER HINGE INTO SASH
76	18 GA. X 5/8" BRAD NAIL	WITHIN 1" FROM CORNERS & 6" MAX. O.C.
77	16 GA. X 1" FINISH NAIL	WITHIN 1" FROM CORNERS & 6" MAX. O.C.
78	NO. 6 X 1" PH SMS SCREW	4 PER LOCK
79	NO. 8 X 3/4" SMS SCREW	2 PER LOCK
80	NO. 8 X 1" SMS SCREW	AS REQ'D TO SET BAR IN PLACE
81	NO. 8 X 1" SMS SCREW	WITHIN 6" OF ENDS & MAX. 15" O.C.

NOTE: WOOD USED IN TESTING WAS DOUGLAS FIR WITH A SPECIFIC GRAVITY OF G = 0.49 AND A MODULUS OF ELASTICITY OF E = 1,600,000 PSI. OTHER WOOD SPECIES APPLICABLE FOR USE WITH THIS PRODUCT ARE THOSE WITH A SPECIFIC GRAVITY OF 0.49 AND MODULUS OF ELASTICITY OF 1,600,000 PSI OR GREATER. ALL WOOD IS MINIMUM GRADE 2 MILLED BY C.P. LOEWEN ENTERPRISES TO SELECT.

DRAWING NO. 1637		SHEET NO. 13 OF 13	
DRAWING NO. 1637		REV. D	
DRAWING TITLE ALUMINUM CLAD WOOD CASEMENT WINDOW CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424 MANUFACTURER C.P. LOEWEN ENTERPRISES 77 HWY 52 WEST STEINBACH, MB, CANADA R5G 1B2 204-326-6446			
CERTIFICATION WARREN W. SCHAEFER, P.E. P.E. NO. 44135 DRAWN BY: W.M.M. DATE: 05/13/09 CHECKED BY: W.M.S. DATE: 05/13/09			