

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 (VHYZ) & 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 Kd = 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.

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.

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: STILL MAY USE FRAME SCREWS METHOD WHILE OTHER SIDES USE CLIP)

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 TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 16 GA. 50 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	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/2"	2"

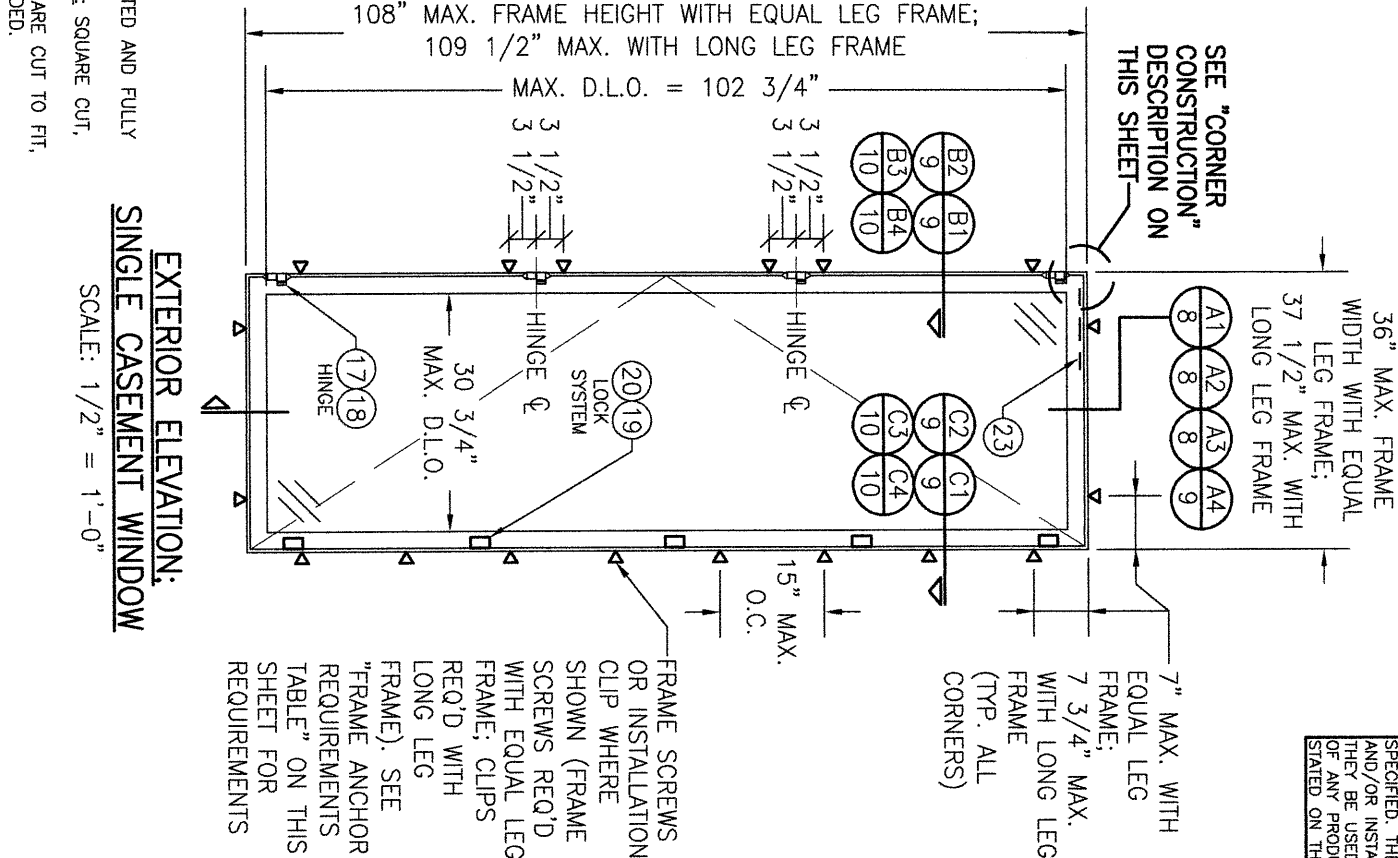
INSTALLATION CLIP SCREWS

(2) MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS SCREW	1 3/8"	3/4"
MIN. 16 GA. 50 KSI METAL STUD	NO. 14 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	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" 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) 2X6 BUCKS MAY BE RIPPED DOWN TO AS LITTLE AS 4" PROVIDING THE REQUIRED SCREW EDGE DISTANCE IS HELD & THE BUCK EXTENDS TO WITHIN 3/16" OF THE EXTERIOR EDGE OF THE WINDOW FRAME.

(1) HINGE REQUIREMENTS

RECTANGULAR FRAME
HINGE CENTERS SHALL BE LOCATED APPROXIMATELY 4" FROM TOP & BOTTOM OF FRAME AND SPACED 33 3/8" MAX. O.C. BETWEEN.
SHAPED FRAME
HINGE CENTERS SHALL BE LOCATED APPROXIMATELY 4" BELOW THE SHAPE SECTION SPRING LINE AND ABOVE THE BOTTOM OF THE FRAME & SPACED 32" MAX. O.C. BETWEEN.
(1) WHEN LONG LEG FRAME IS USED, HINGE CENTER DISTANCE FROM TOP & BOTTOM OF FRAME MAY INCREASE TO APPROXIMATELY 4 3/4"



EXTERIOR ELEVATION:
SINGLE CASEMENT WINDOW

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

CORNER CONSTRUCTION:

FRAME & SASL: MITER CUT, BUTTED AND FULLY WELDED
FIXED ASTRAGAL (IN ONE FRAME): SQUARE CUT, BUTTED AND FULLY WELDED
MID-RAIL ENDS: MID-RAIL ENDS ARE CUT TO FIT, BUTTED TO STILES & FULLY WELDED.

ALLOWABLE DESIGN PRESSURE
(SINGLE WINDOWS)

LOCK TYPE	MAXIMUM FRAME WIDTH (IN.)		ALLOWABLE PRESSURE (PSF)
	EQUAL LEG FRAME	LONG LEG FRAME	
WITH CAM LOCK PART #19	36	37 1/2	+60.0/-65.0
	36	37 1/2	+/-65.0
	32	32	+/-73.1
	28	29 1/2	+/-83.5
WITH MULTI-POINT LOCK PART #20	27 1/2	29	+/-85.0

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.

LOCK REQUIREMENTS
(CAM LOCKS)

(SINGLE & FIXED ASTRIGAL WINDOWS)	
MAXIMUM FRAME HEIGHT	QUANTITY PER PANEL
EQUAL LEG FRAME	
80"	3
52"	2
LONG LEG FRAME	
81 1/2"	3
53 1/2"	2

LOCK REQUIREMENTS
(MULTI-POINT LOCK)

(SINGLE & FIXED ASTRIGAL WINDOWS)	
MAXIMUM FRAME HEIGHT	QUANTITY PER PANEL
EQUAL LEG FRAME	
108"	5
84"	4
66"	3
40"	2
LONG LEG FRAME	
109 1/2"	5
85 1/2"	4
67 1/2"	3
43 1/2"	2

MULTI-POINT LOCK NOTES:
1) SPACING BETWEEN LOCK POINTS MAY NOT EXCEED 24".
2) DISTANCE FROM SHAPE WINDOW SPRING LINE OR WINDOW CORNER TO THE TOP & BOTTOM LOCK POINTS MAY NOT EXCEED 9".
3) SEE SHEET 5 FOR DOUBLE FRENCH WINDOW LOCK REQUIREMENTS.



Digitally signed
by Warren W
Schaefer

Date:

2024.09.05

08:07:26 -04'00'

NO.	REVISION DESCRIPTION	BY	DATE	PLOT: 1-24	DEMAN BY: W.R.M.
A1	UPDATE TO CURRENT STANDARDS	W.R.M.	08/17/11		
B1	UPDATE PER NEW TESTING	W.R.M.	08/17/11		
C1	ADD ALTERNATE GLAZING BEAD	W.R.M.	09/25/13		
D1	UPDATE TO CURRENT STANDARDS	W.W.S.	12/10/14		
E1	ADDED DOUBLE FRENCH WINDOWS	W.W.S.	01/25/23		
F1	INCREASE SHIM SPACE	W.W.S.	09/04/24		
				DATE: 01/9/11	CHECKED BY: W.W.S.

MANUFACTURER
HOPE'S WINDOWS, INC.
84 HOPKINS AVENUE
JAMESTOWN, NY 14702
(716) 665-5124

DRAWING TITLE
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS

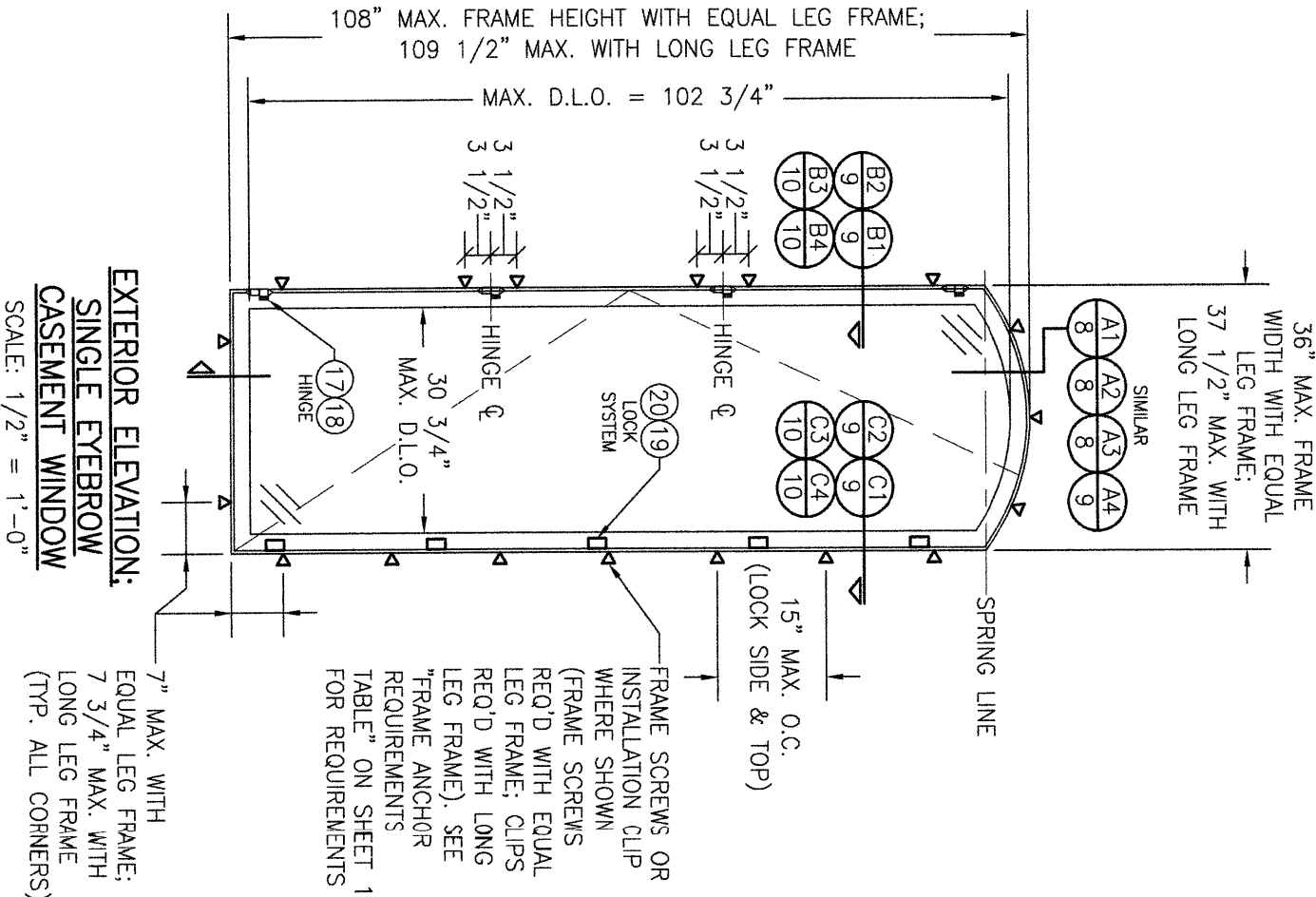
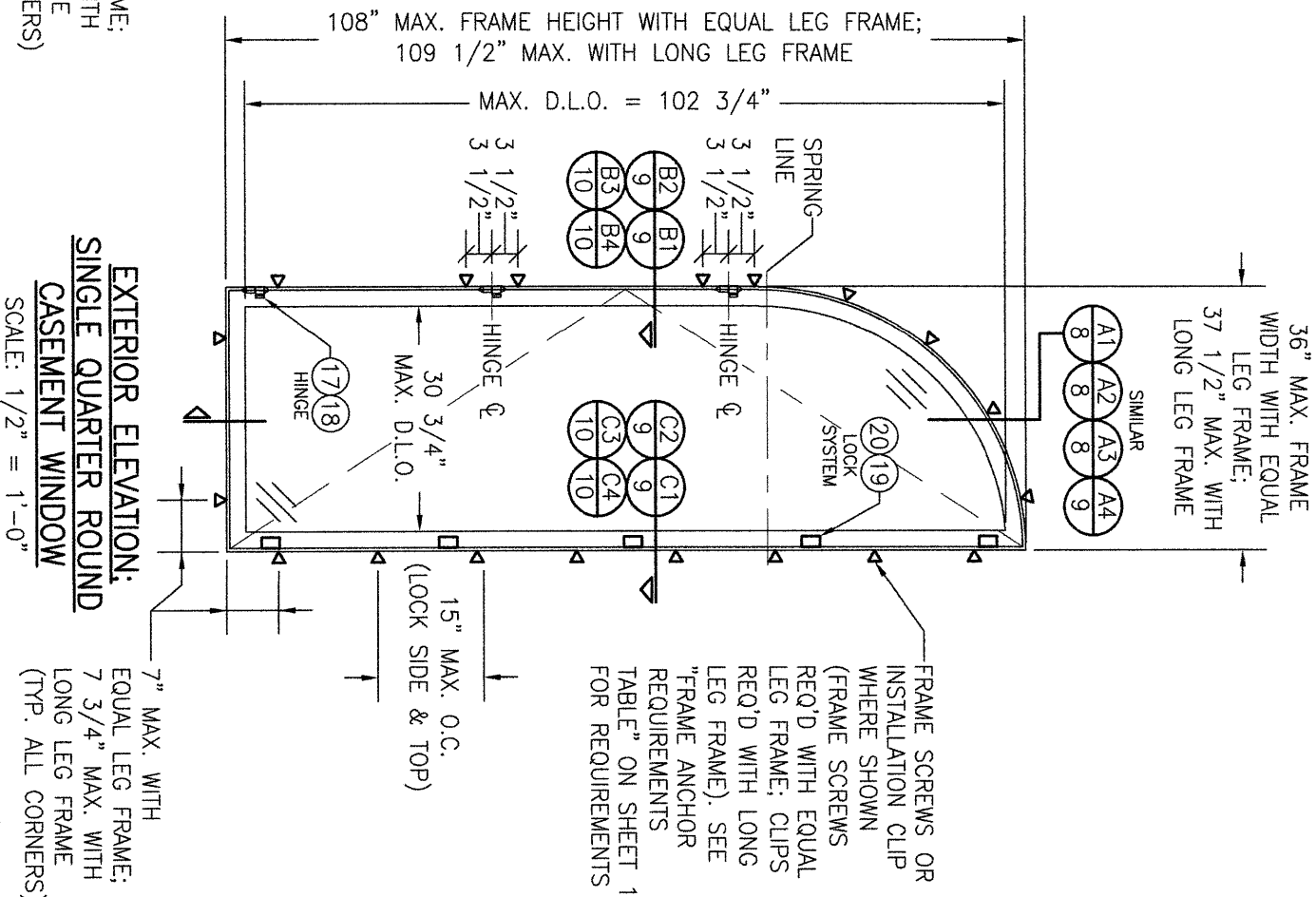
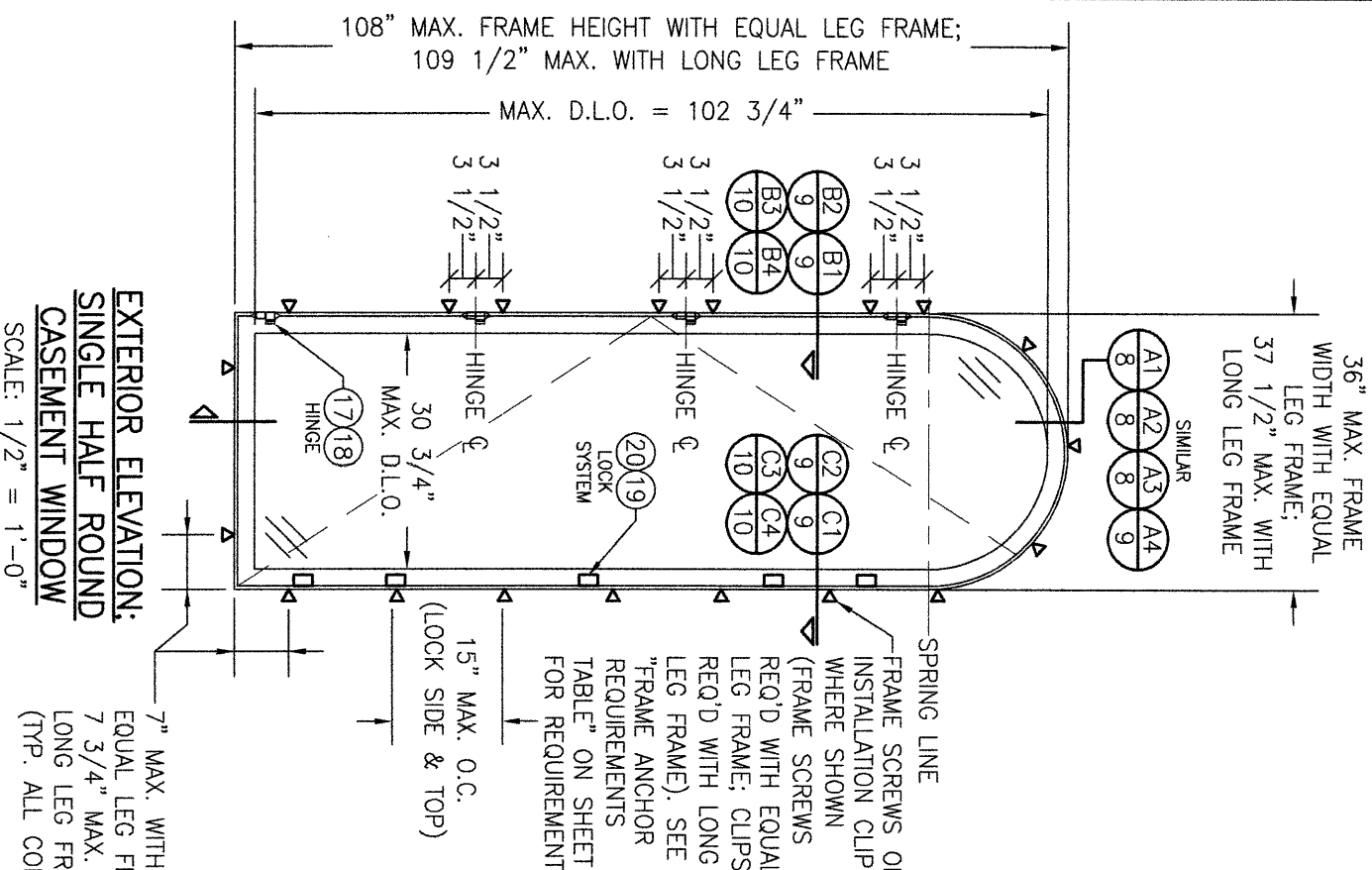
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

CERTIFICATION

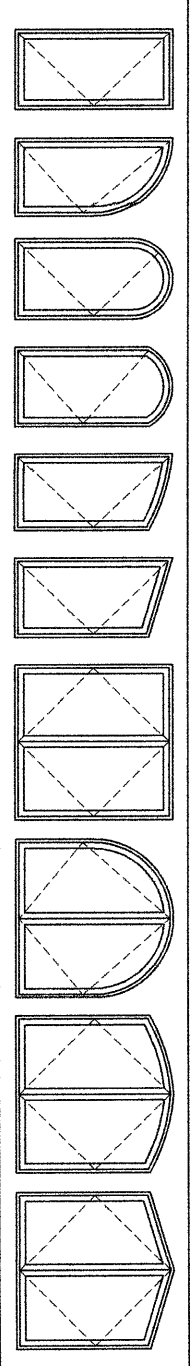
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO.	REV.
1737	F

SHEET NO.
1 OF 13



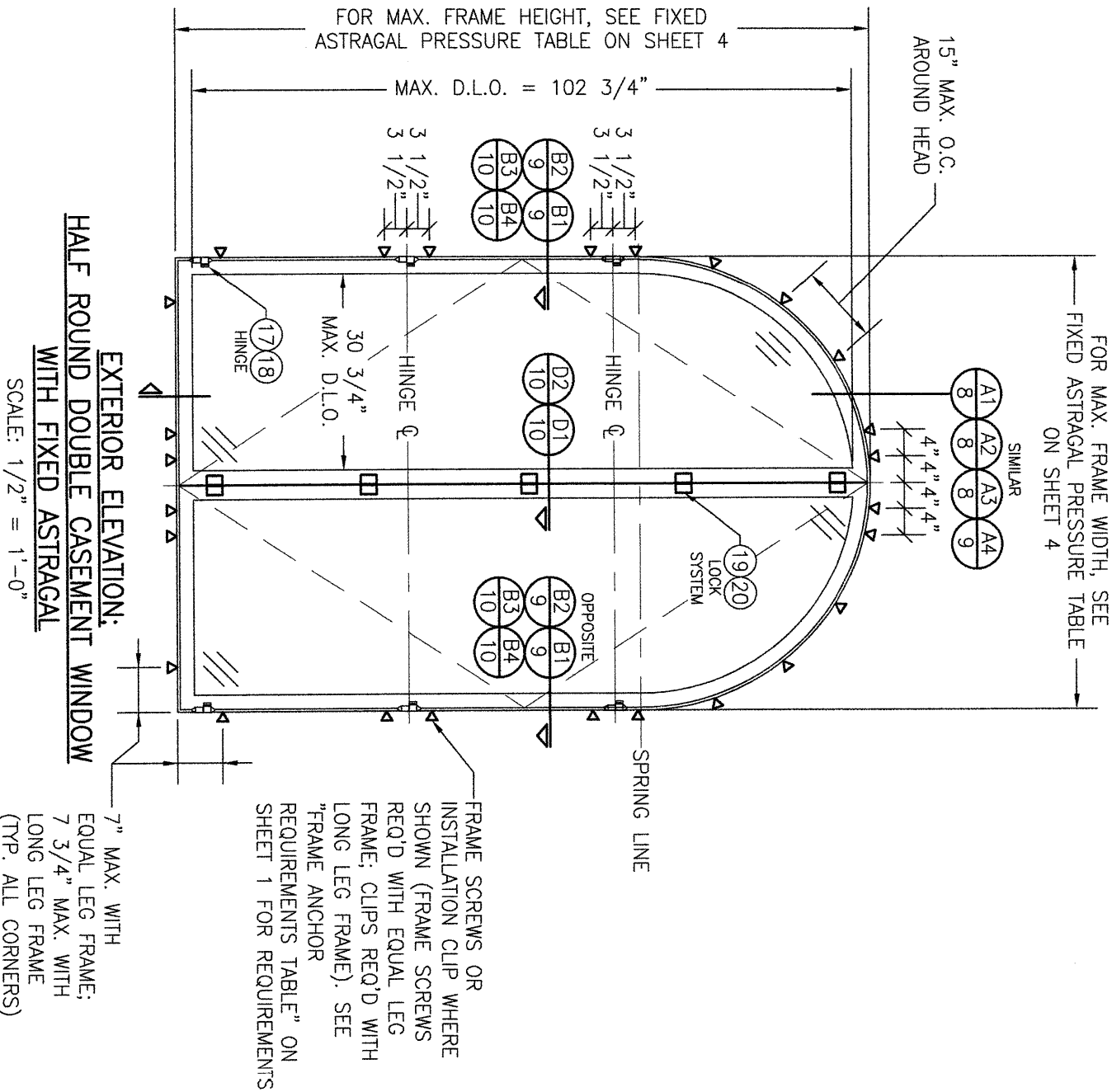
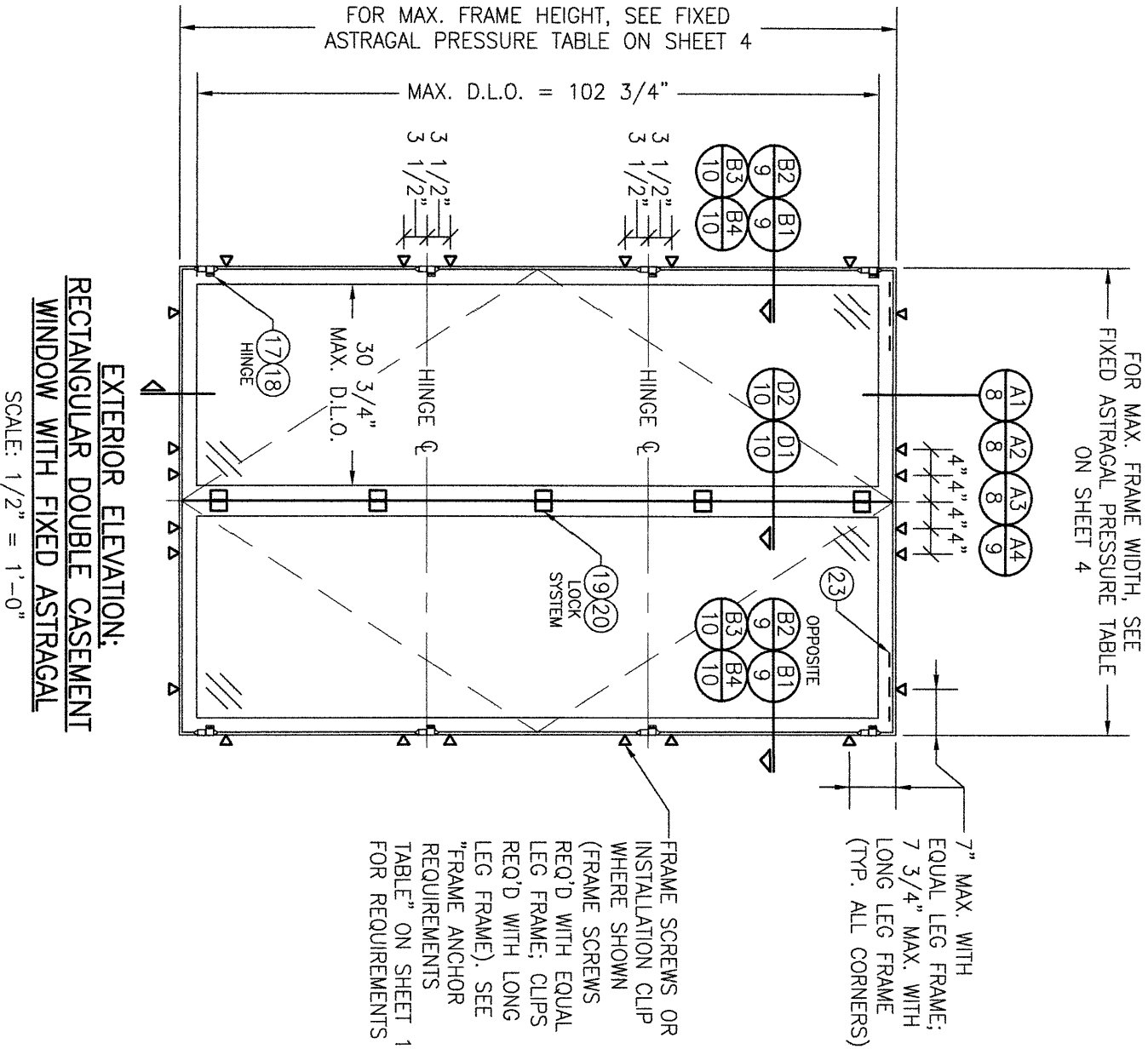
APPROVED SHAPES (SINGLE AND FIXED ASTRIGAL WINDOWS)



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.
3. SHAPES OTHER THAN RECTANGULAR ARE RESTRICTED TO SINGLE AND FIXED ASTRIGAL WINDOWS. DOUBLE FRENCH WINDOWS MAY BE RECTANGULAR ONLY.

NOTE: ANCHORING OF TRIANGULAR TOP WINDOW IS SAME AS SHOWN WITH THIS EYEBROW TYPE WINDOW.

DRAWING NO. 1737 SHEET NO. 2 OF 13		CERTIFICATION WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING TITLE JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS		NO.		REVISION DESCRIPTION		BY	DATE	DRAWN BY: W.R.M.	CHECKED BY: W.M.S.
			CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	MANUFACTURER HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124								



NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
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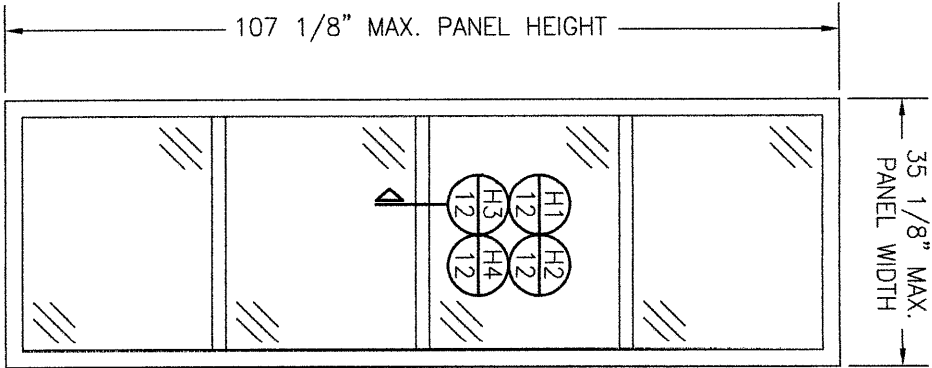
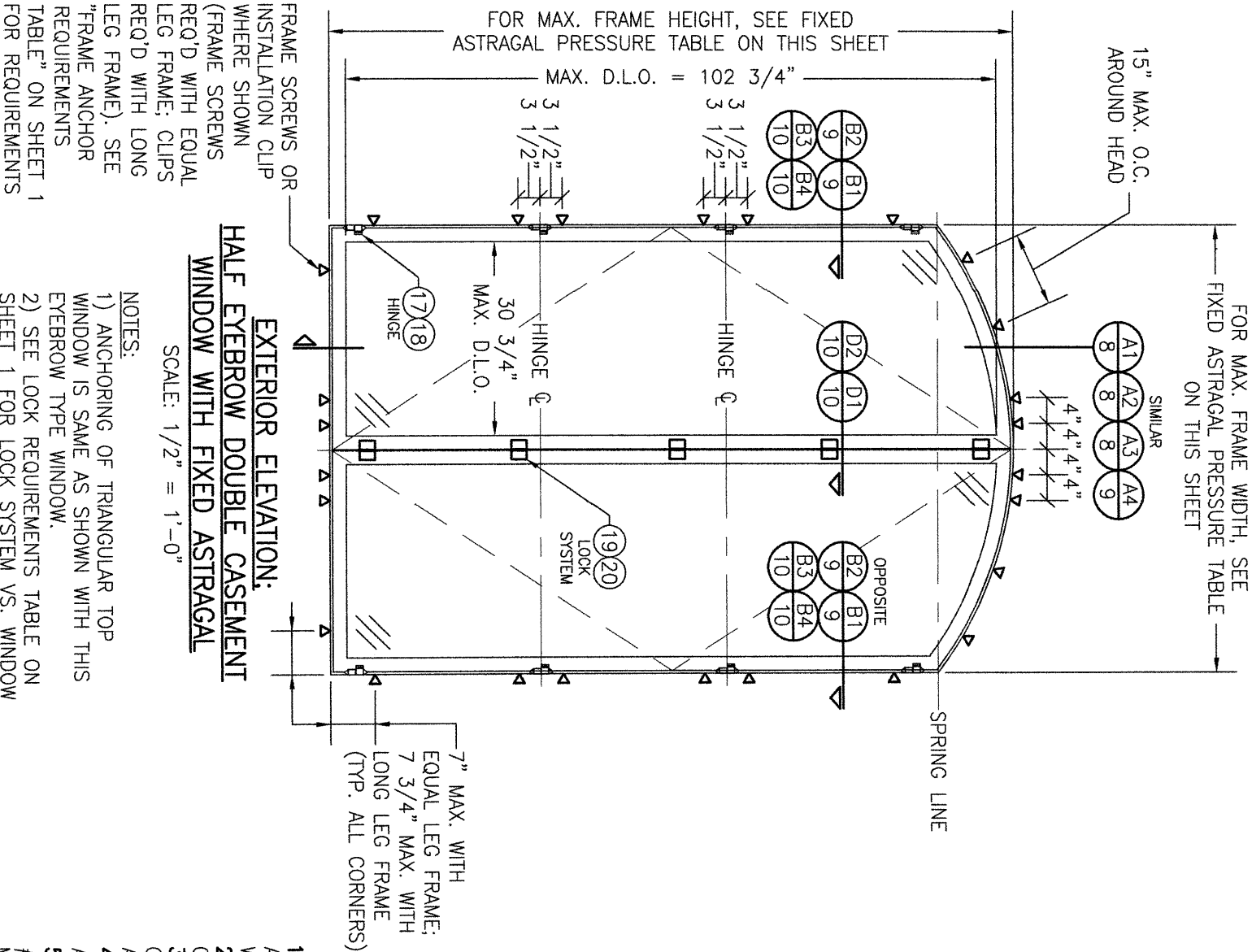
MANUFACTURER
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CERTIFICATION
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. 1737
SHEET NO. 3 OF 13

FIXED ASTRAGAL DESIGN PRESSURE TABLE					
(2) MAXIMUM FRAME HEIGHT (IN.)		MAXIMUM FRAME WIDTH (IN.)		(1) ALLOWABLE PRESSURE	
EQUAL LEG FRAME	LONG LEG FRAME	EQUAL LEG FRAME	LONG LEG FRAME	POSITIVE (PSF)	NEGATIVE (PSF)
108	109 1/2	71 5/16	72 13/16	50.0	50.0
		65 5/16	66 13/16	54.6	54.6
		59 5/16	60 13/16	60.1	60.1
		53 5/16	54 13/16	66.9	66.9
		47 5/16	48 13/16	75.4	75.4
102	103 1/2	41 5/16	42 13/16	85.0	85.0
		71 5/16	72 13/16	52.9	52.9
		65 5/16	66 13/16	57.8	57.8
		59 5/16	60 13/16	63.6	63.6
		53 5/16	54 13/16	70.8	70.8
96	97 1/2	47 5/16	48 13/16	79.8	79.8
		44 5/16	45 13/16	85.0	85.0
		71 5/16	72 13/16	56.2	56.2
		65 5/16	66 13/16	61.4	61.4
		59 5/16	60 13/16	67.6	67.6
90	91 1/2	53 5/16	54 13/16	75.2	75.2
		47 5/16	48 13/16	84.7	84.7
		71 5/16	72 13/16	59.9	59.9
		65 5/16	66 13/16	65.4	65.4
		59 5/16	60 13/16	72.1	72.1
84	85 1/2	53 5/16	54 13/16	80.2	80.2
		50 5/16	51 13/16	84.9	84.9
		71 5/16	72 13/16	64.2	64.2
		65 5/16	66 13/16	70.1	70.1
		59 5/16	60 13/16	77.2	77.2
78	79 1/2	53 5/16	54 13/16	85.0	85.0
		71 5/16	72 13/16	65.0	65.0
		65 5/16	66 13/16	71.0	71.0
		59 5/16	60 13/16	78.2	78.2
		54 5/16	55 13/16	85.0	85.0

NOTES:
(1) WHEN CAM LOCKS (PART #19) ARE USED, POSITIVE PRESSURE MAY NOT EXCEED +60/-65 PSF (SEE PARTS LIST FOR DESCRIPTION OF LOCK TYPES).
(2) ALLOWABLE PRESSURE ON WINDOWS WITH FRAME HEIGHT LESS THAN 78" (79 1/2" FOR LONG LEG FRAME) SHALL BE GOVERNED BY THE PRESSURE SHOWN FOR A 78" FRAME HEIGHT.



SASH VIEW WITH HORIZONTAL MID-RAIL
SCALE: 1/2" = 1'-0"

SASH NOTES:

1. USE OF MID-RAILS MAY APPLY TO ALL SINGLE & DOUBLE OPERABLE WINDOWS, REGARDLESS OF SHAPE.
2. MID-RAILS MAY BE HORIZONTAL ONLY.
3. THERE IS NO LIMIT TO THE NUMBER OF MID-RAILS THAT CAN BE PLACED IN ANY WINDOW SASH.
4. MID-RAILS MAY ALSO BE REFERENCED AS "MUNTINS".
5. SLOPED GLAZING BEADS (PART ITEM #5B) ARE NOT APPLICABLE WITH MID-RAILS.

**EXTERIOR ELEVATION:
HALF EYEBROW DOUBLE CASEMENT
WINDOW WITH FIXED ASTRAGAL**

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

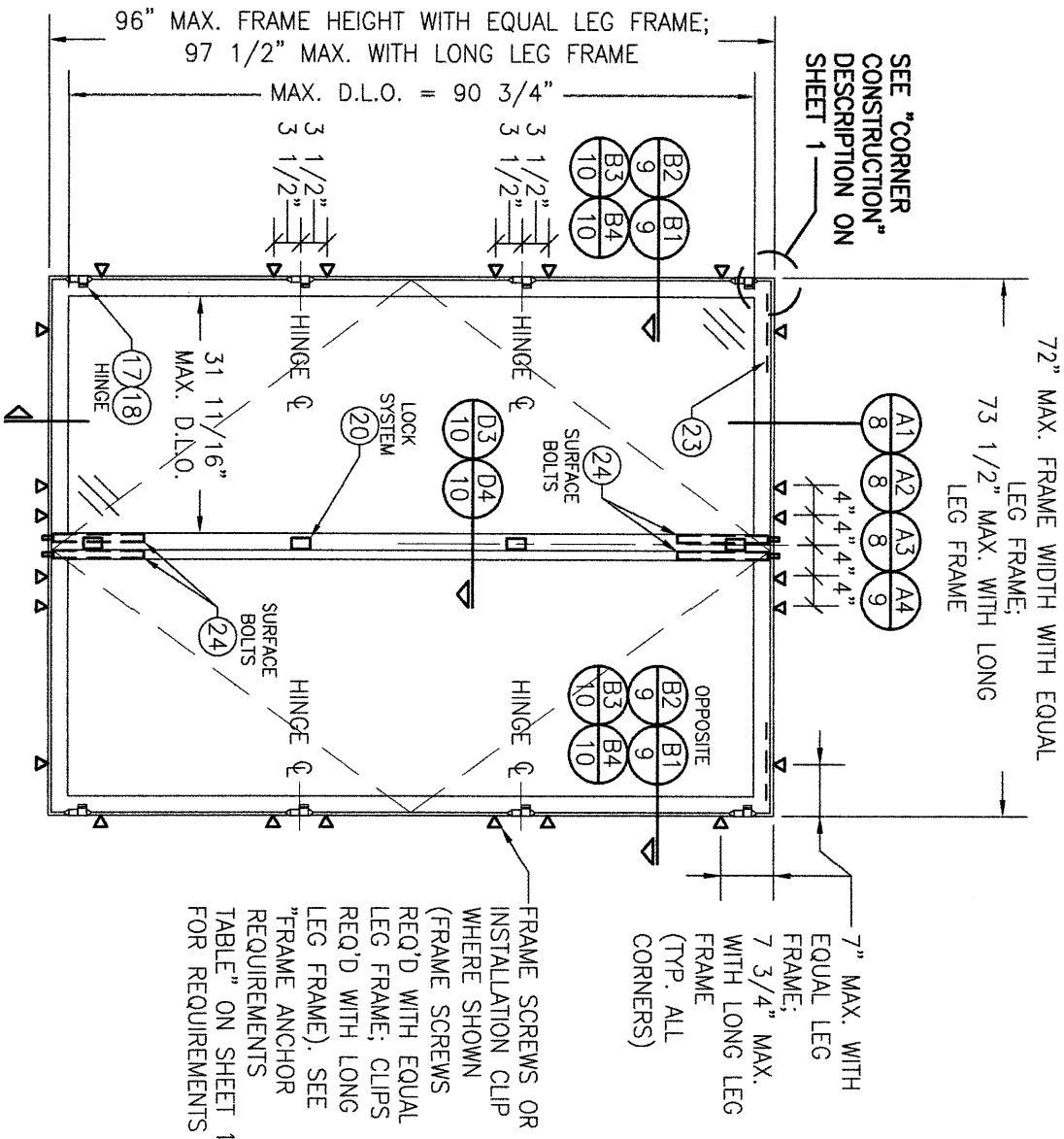
NOTES:
1) ANCHORING OF TRIANGULAR TOP WINDOW IS SAME AS SHOWN WITH THIS EYEBROW TYPE WINDOW.
2) SEE LOCK REQUIREMENTS TABLE ON SHEET 1 FOR LOCK SYSTEM VS. WINDOW HEIGHT REQUIREMENTS.

NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE	
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124

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

DRAWING NO.	REV.
1737	F
SHEET NO.	
4	OF 13



EXTERIOR ELEVATION;
DOUBLE FRENCH CASEMENT WINDOW

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

ALLOWABLE DESIGN PRESSURE (DOUBLE FRENCH WINDOWS ONLY)
+60/-60 PSF

LOCK REQUIREMENTS (MULTI-POINT LOCK) (DOUBLE FRENCH WINDOWS)	
MAXIMUM FRAME HEIGHT	QUANTITY PER PANEL
EQUAL LEG FRAME	
96"	4
68"	3
40"	2
LONG LEG FRAME	
97 1/2"	4
69 1/2"	3
41 1/2"	2

MULTI-POINT LOCK NOTES:
1) SPACING BETWEEN LOCK
POINTS MAY NOT EXCEED 28".

DRAWING TITLE
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS

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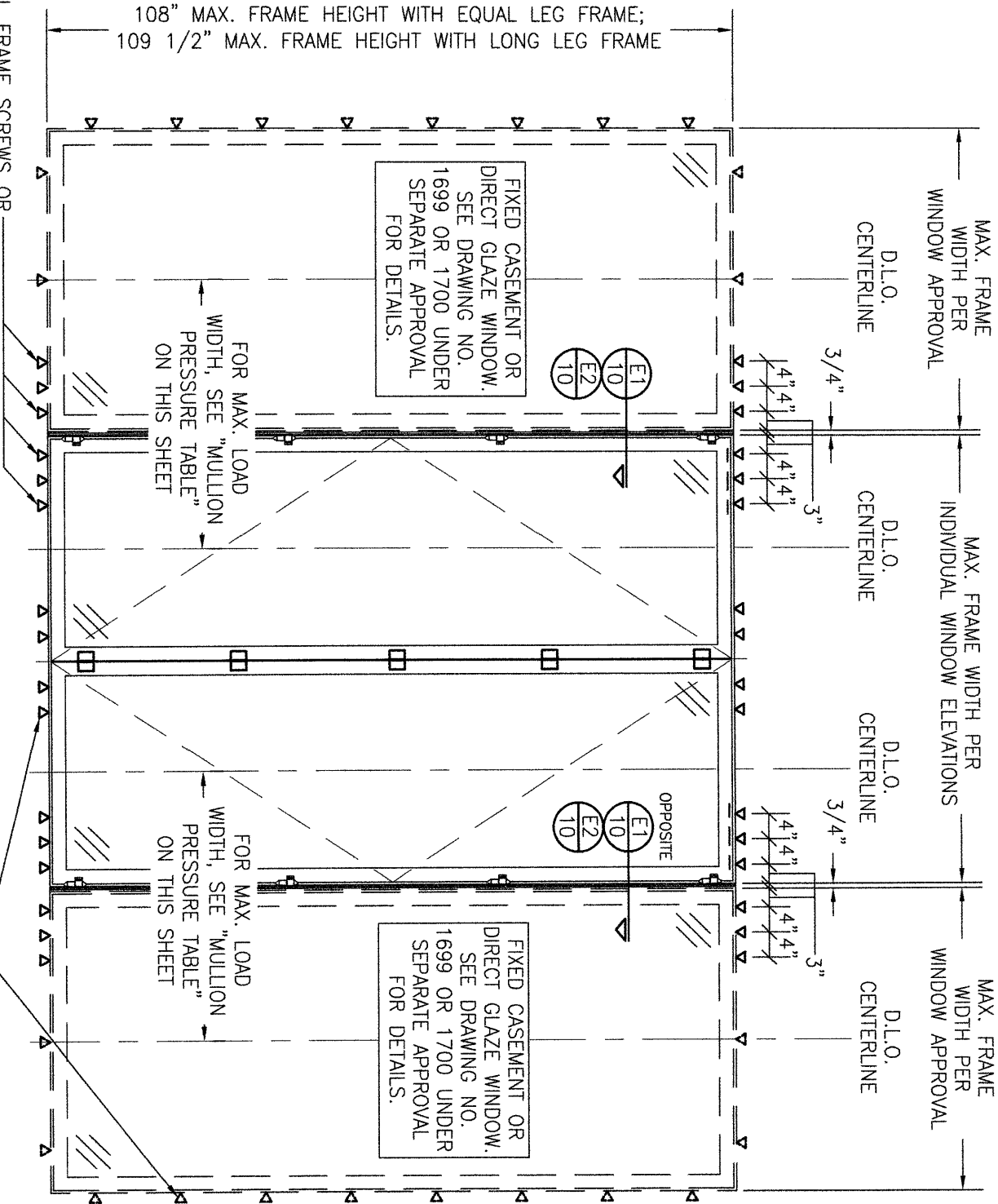
NO.	REVISION	DESCRIPTION	BY	DATE

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
DATE: 01/19/11	

MULLION DESIGN PRESSURE TABLE

MAXIMUM FRAME HEIGHT (IN.)	EQUAL LEG FRAME	LONG LEG FRAME	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/-PSF)	
				4 END ANCHORS	6 END ANCHORS
				4 END ANCHORS	6 END ANCHORS
108	109 1/2		54 3/4	41.8	50.8
			48 3/4	46.9	57.0
			42 3/4	53.5	65.0
			36 3/4	62.2	75.6
			30 3/4	74.2	85.0
			26 3/4	85.0	85.0
			54 3/4	44.2	53.7
			48 3/4	49.6	60.3
			42 3/4	56.6	68.8
			36 3/4	65.8	80.0
102	103 1/2		30 3/4	78.6	85.0
			27 3/4	85.0	85.0
			54 3/4	46.9	57.0
			48 3/4	52.7	64.1
			42 3/4	60.1	73.1
96	97 1/2		36 3/4	69.8	84.9
			30 3/4	83.4	85.0
			29 3/4	85.0	85.0
			54 3/4	50.0	60.8
			48 3/4	56.2	68.3
90	91 1/2		42 3/4	64.1	77.9
			36 3/4	74.4	85.0
			31 3/4	85.0	85.0
			54 3/4	53.6	65.1
			48 3/4	60.2	73.1
84	85 1/2		42 3/4	68.5	83.3
			36 3/4	79.7	85.0
			33 3/4	85.0	85.0
			54 3/4	57.7	70.1
			48 3/4	64.8	78.7
78	79 1/2		42 3/4	73.8	85.0
			36 3/4	85.0	85.0
			54 3/4	62.4	75.9
			48 3/4	70.0	85.0
			42 3/4	79.8	85.0
72	73 1/2		39 3/4	85.0	85.0
			54 3/4	68.0	82.7
			48 3/4	76.3	85.0
			43 3/4	85.0	85.0
			54 3/4	74.7	85.0
60	61 1/2		48 3/4	83.8	85.0
			54 3/4	82.9	85.0
			52 3/4	85.0	85.0
			54 3/4	85.0	85.0
			49 1/2	85.0	85.0

- NOTES:
1. LOAD WIDTH IS THE DISTANCE BETWEEN WINDOW D.L.O. (DAY LIGHT OPENING) CENTERLINES.
 2. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURES SHOWN IN THIS TABLE & THOSE SPECIFIED FOR THE INDIVIDUAL WINDOWS.
 3. SIZE VALUES IN TABLE ARE +/-1/4"



ADDITIONAL FRAME SCREWS OR INSTALLATION CLIPS WHERE SHOWN AT MULLION ENDS. SEE "MULLION DESIGN TABLE" ON THIS SHEET FOR QUANTITY REQUIRED AT EACH MULLION END & "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR ANCHOR REQUIREMENTS.

EXTERIOR ELEVATION:
MULTIPLE CASEMENT/FIXED WINDOWS

SCALE: 1/2" = 1'-0"
OXXO UNIT IS SHOWN. ALL OTHER FIXED/OPERABLE COMBINATIONS ALSO APPLY WITH THE MULLION CONDITIONS SHOWN.

SEE INDIVIDUAL WINDOW ELEVATIONS FOR FRAME ANCHOR REQUIREMENTS & POSITIONS AROUND CASEMENT WINDOWS. FOR FIXED WINDOW ANCHOR REQUIREMENTS, SEE FIXED WINDOW APPROVAL.

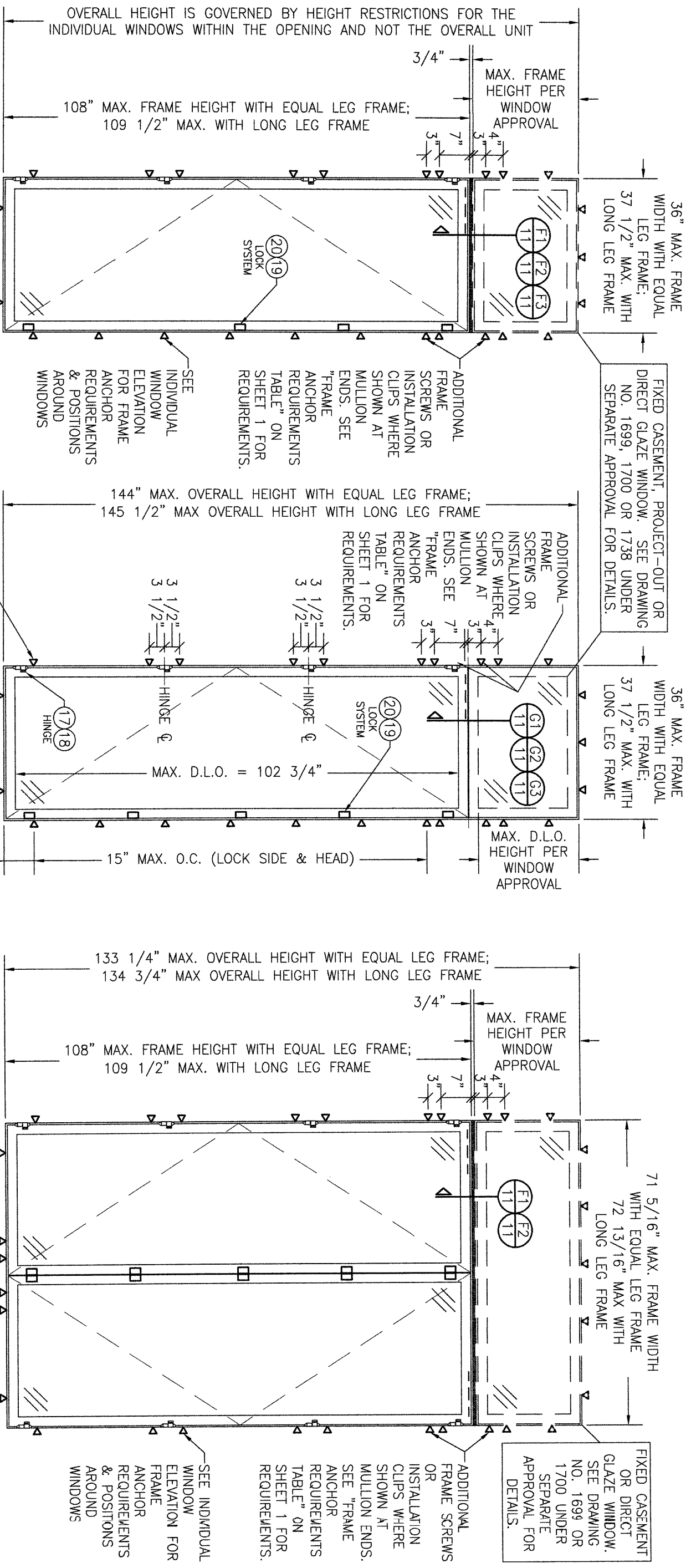
MULTIPLE UNIT NOTES:

1. FOR ALL DETAIL NOT SHOWN, SEE INDIVIDUAL WINDOW ELEVATIONS.
2. 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.
3. ANY COMBINATION OF FIXED/OPERABLE WINDOWS IN ONE OPENING SHALL APPLY.
4. SHAPED WINDOWS ALSO APPLY TO SIDE MULLING (WHEN APPLICABLE) UNDER THE SAME RESTRICTIONS SHOWN.

DRAWN BY:		CHECKED BY:		
W.R.M.		W.M.S.		
PLT:	1 = 24	DATE:	01/18/11	
NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE	
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	HOPE'S WINDOWS, INC.
25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124

CERTIFICATION	
WARREN W. SCHAEFER, P.E.	P.E.
NO. 44135	
DRAWING NO.	REV.
1737	F
SHEET NO.	6 OF 13



**EXTERIOR ELEVATION:
SINGLE CASEMENT WINDOW MULLED
TO TRANSOM**

SCALE: 1/2" = 1'-0"
(SEE SINGLE RECTANGULAR WINDOW ELEVATION ON SHEET 1 FOR CASEMENT WINDOW DETAIL NOT SHOWN)

**EXTERIOR ELEVATION:
SINGLE CASEMENT WINDOW
AND TRANSOM IN ONE FRAME**

SCALE: 1/2" = 1'-0"
(SEE SINGLE RECTANGULAR WINDOW ELEVATION ON SHEET 1 FOR CASEMENT WINDOW DETAIL NOT SHOWN)

**EXTERIOR ELEVATION:
DOUBLE FIXED ASTRAGAL OR FRENCH
CASEMENT WITH TRANSOM**

SCALE: 1/2" = 1'-0"
(SEE DOUBLE RECTANGULAR WINDOW ELEVATIONS ON SHEET 3 OR 5 FOR CASEMENT WINDOW DETAIL NOT SHOWN)

**ALLOWABLE DESIGN PRESSURE
(SINGLE WINDOW WITH TRANSOM)**

ALLOWABLE PRESSURE OF THESE UNITS SHALL BE CONTROLLED BY THE LESSER OF THE ALLOWABLE DESIGN PRESSURE FOR THE CASEMENT WINDOW & THAT FOR THE WINDOW ABOVE. REF. PRESSURE TABLE ON SHEET 1 FOR ALLOWABLE SINGLE CASEMENT WINDOW PRESSURE & FIXED, AWNING OR DIRECT GLAZED WINDOW APPROVALS FOR THEIR ALLOWABLE PRESSURE.

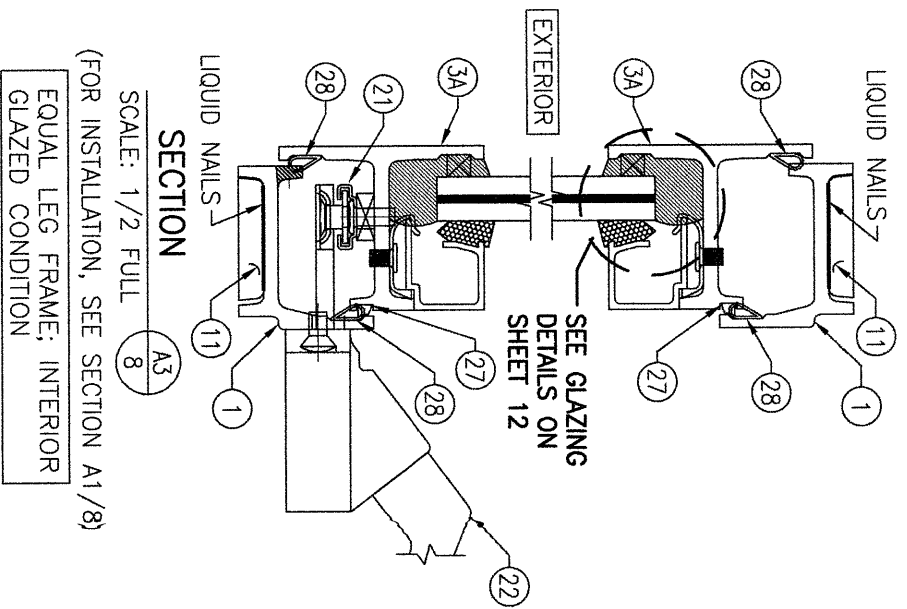
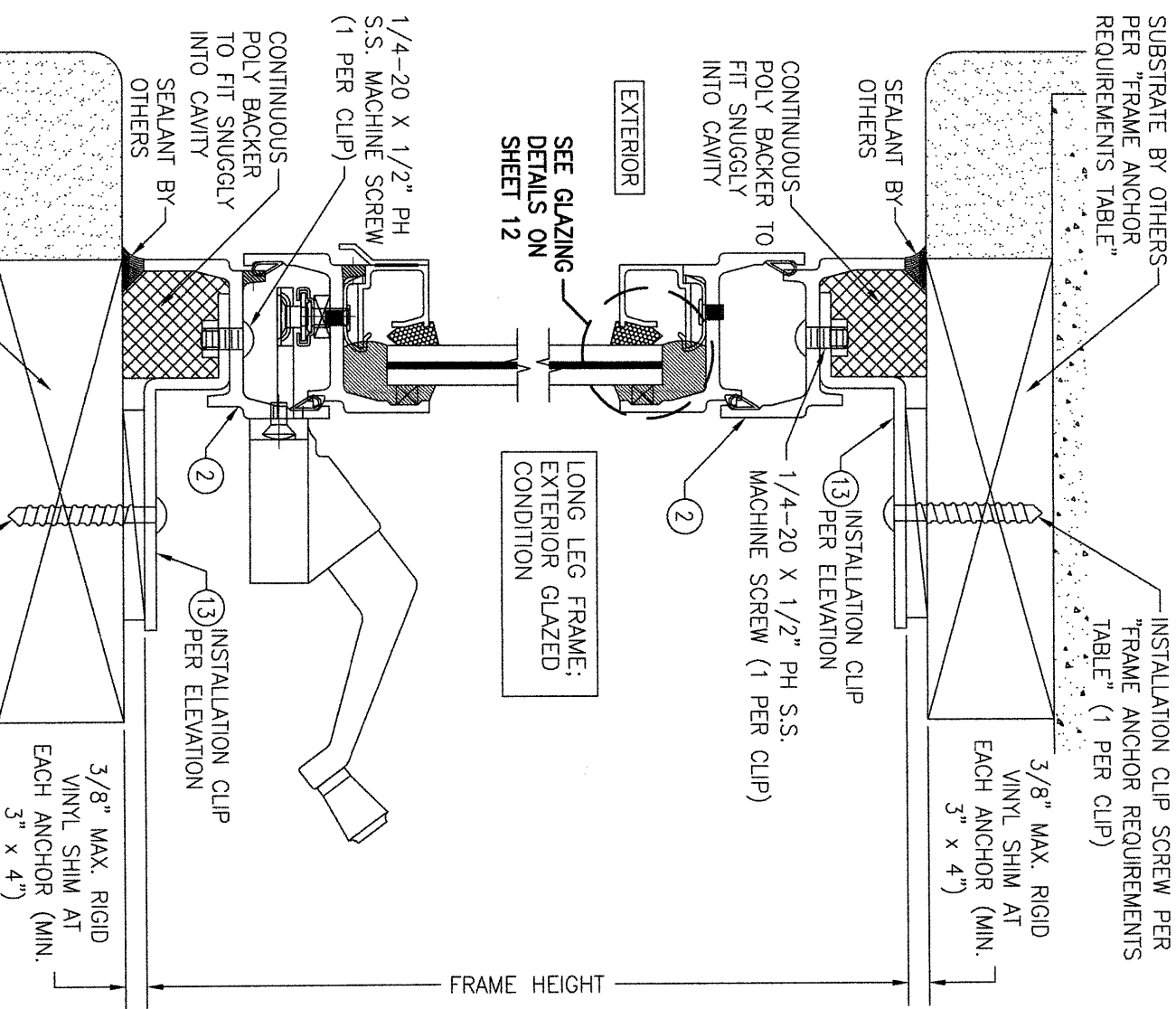
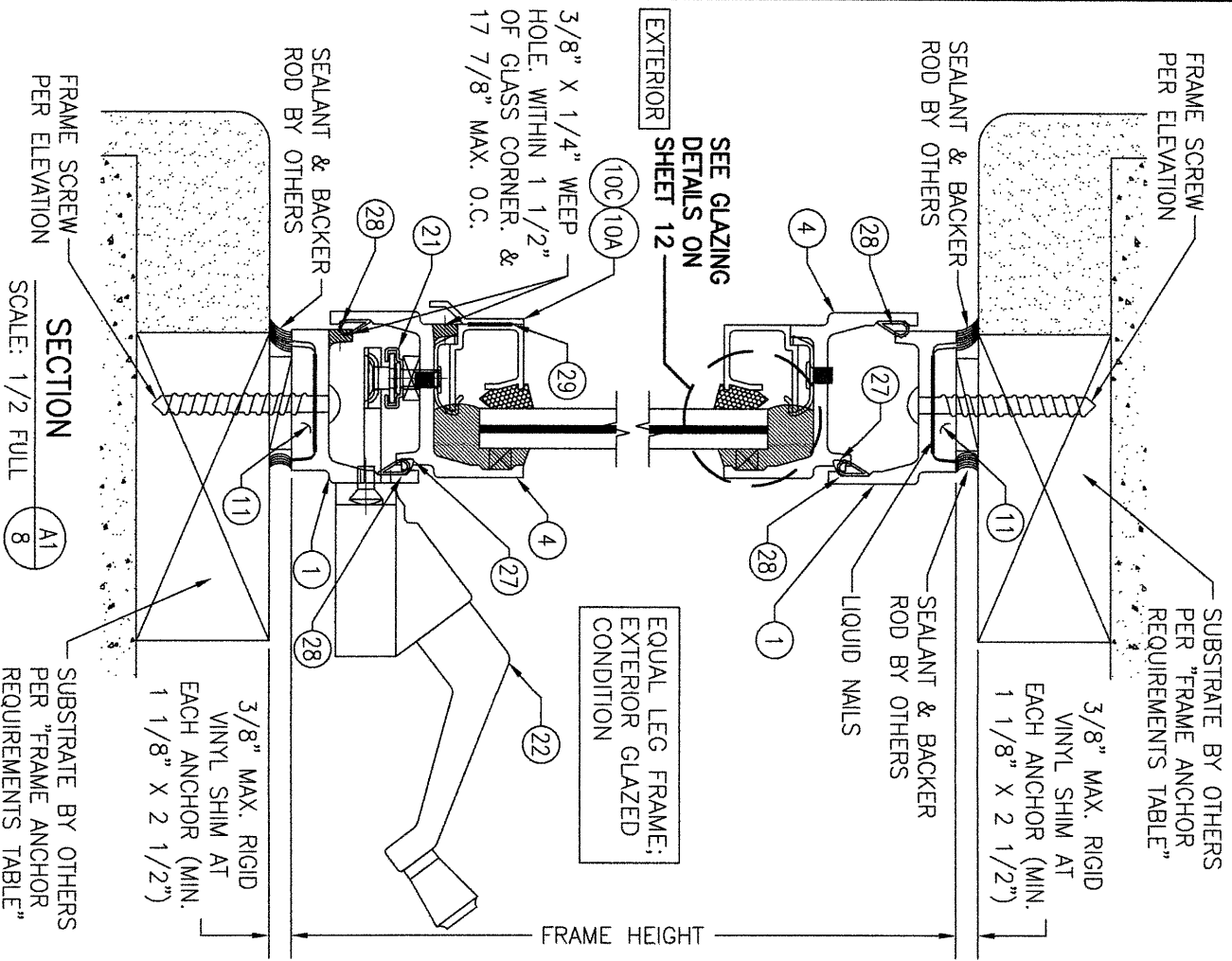
**ALLOWABLE DESIGN PRESSURE
(DOUBLE WINDOW WITH TRANSOM)**

ALLOWABLE PRESSURE OF THIS UNIT SHALL BE CONTROLLED BY THE LESSER OF THE ALLOWABLE DESIGN PRESSURE FOR THE DOUBLE WINDOW & THAT FOR THE FIXED WINDOW. REF. PRESSURE TABLE ON SHEET 4 OR 5 FOR ALLOWABLE DOUBLE WINDOW PRESSURE & FIXED WINDOW APPROVAL FOR ITS ALLOWABLE PRESSURE.

NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE	
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124

CERTIFICATION	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	REV.
1737	F
SHEET NO. 7 OF 13	



NOTE: INSTALLATION SEALANTS AND FINISHES ARE NOT PART OF THIS APPROVAL AND SHALL BE THE RESPONSIBILITY OF OTHERS.

DRAWN BY:		CHECKED BY:		
W.R.M.		W.M.S.		
PLT:	DATE:			
1=2	01/19/11			
NO.	REVISION	DESCRIPTION	BY	DATE

MANUFACTURER
HOPE'S WINDOWS, INC.
 84 HOPKINS AVENUE
 JAMESTOWN, NY 14702
 (716) 665-5124

DRAWING TITLE
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS

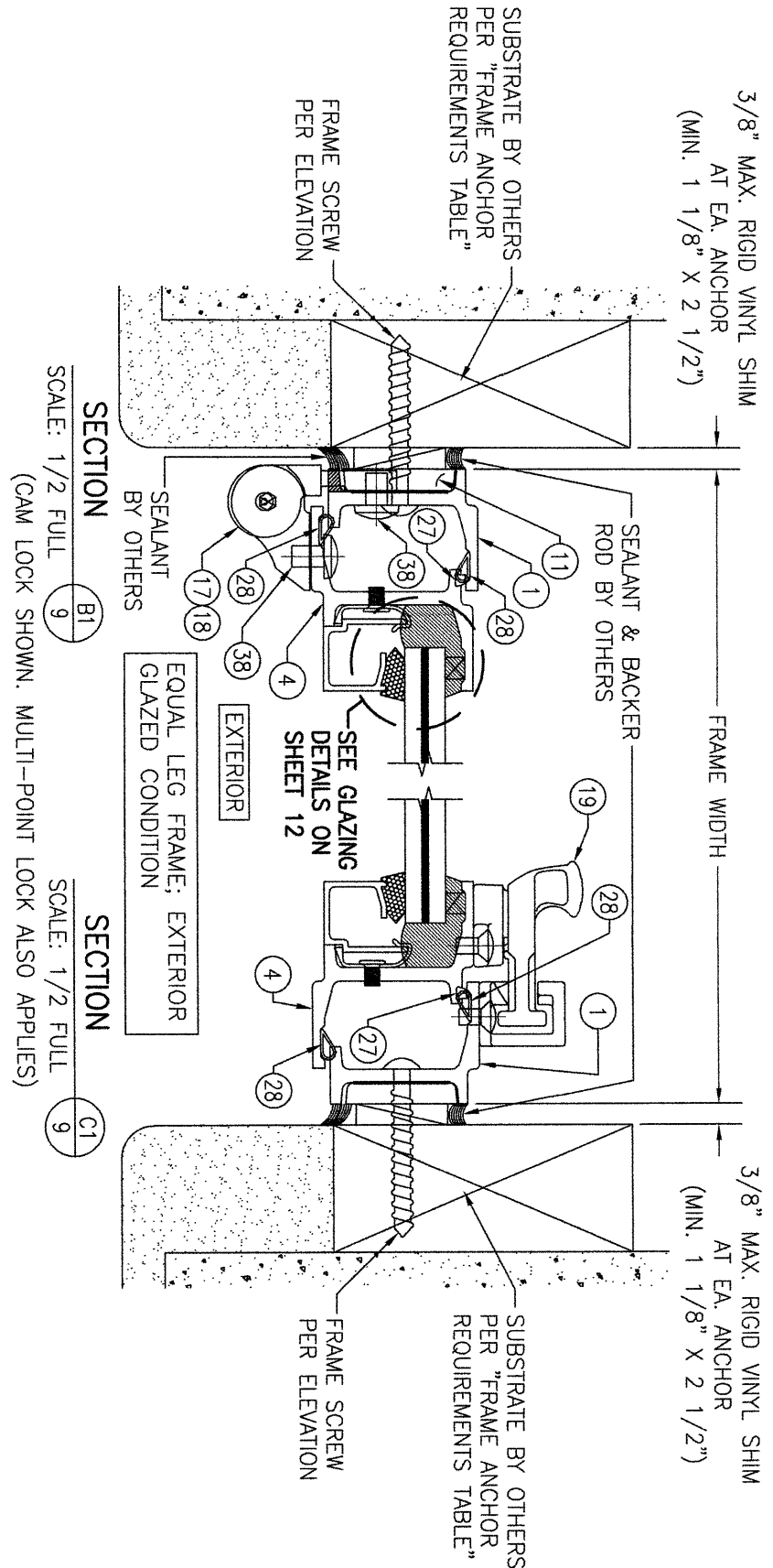
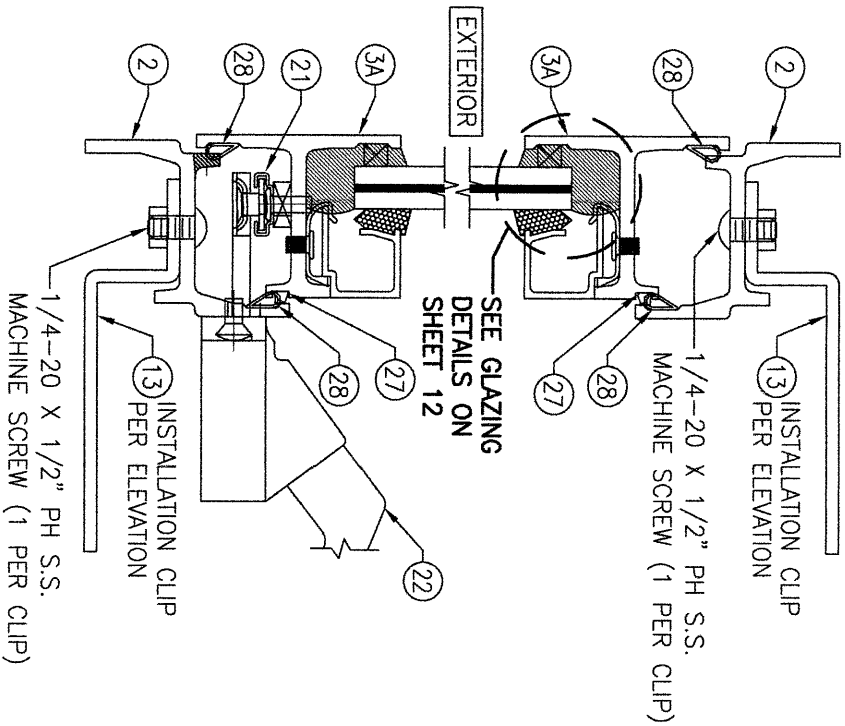
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
 25601 AYSER DRIVE
 PUNTA GORDA, FL 33983
 PHONE: 561-744-3424

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

DRAWING NO.
1737

REV.
F

SHEET NO.
8 OF **13**



SECTION A4

SCALE: 1/2 FULL

(FOR INSTALLATION, SEE SECTION A2/8)

LONG LEG FRAME; INTERIOR
GLAZED CONDITION

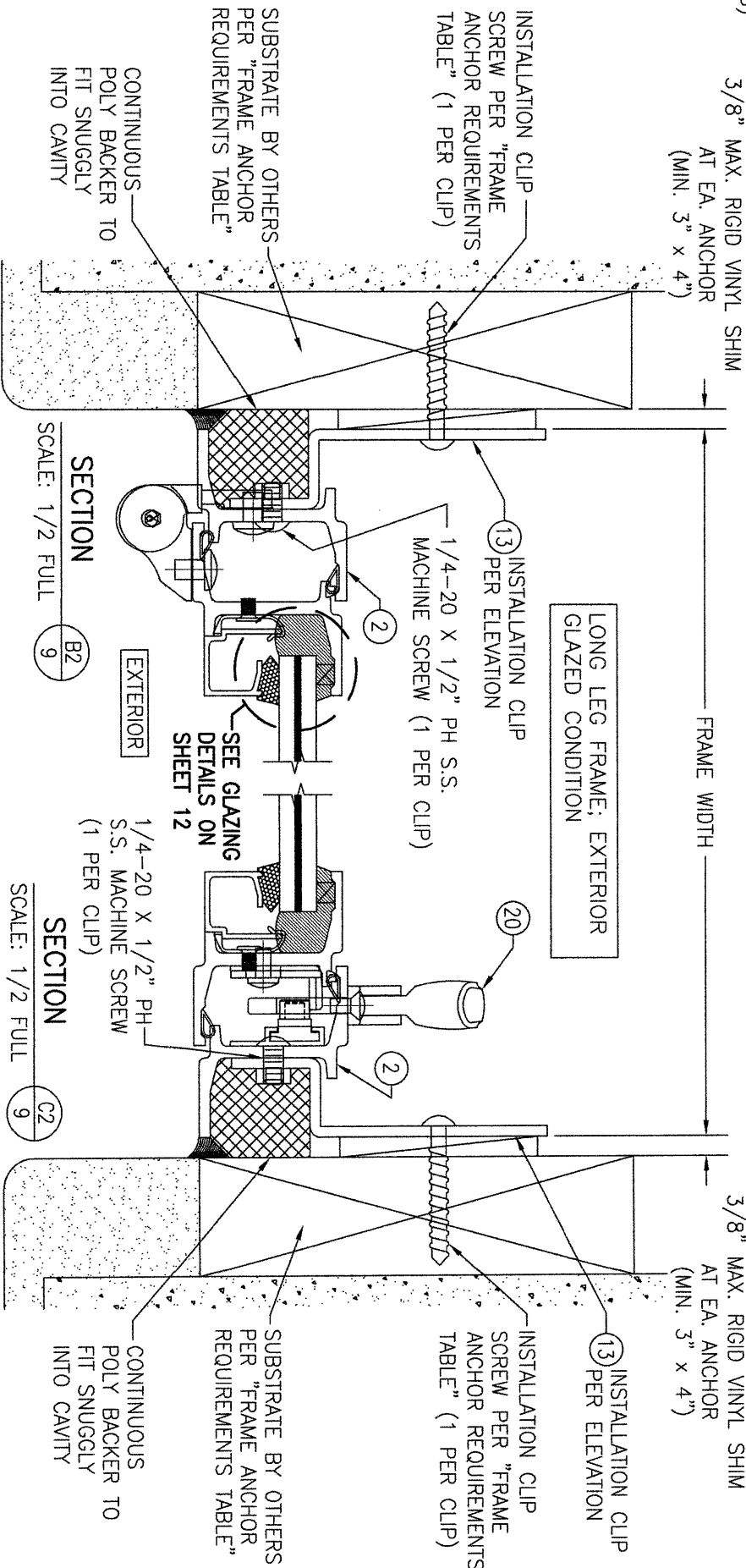
SECTION B1

SCALE: 1/2 FULL

(CAM LOCK SHOWN. MULTI-POINT LOCK ALSO APPLIES)

SECTION C1

SCALE: 1/2 FULL



SECTION B2

SCALE: 1/2 FULL

9

SECTION C2

SCALE: 1/2 FULL

9

(FOR DETAIL, NOT SHOWN, SEE SECTIONS B1/9 & C1/9)
(MULTI-POINT LOCK SHOWN. CAM LOCK ALSO APPLIES)

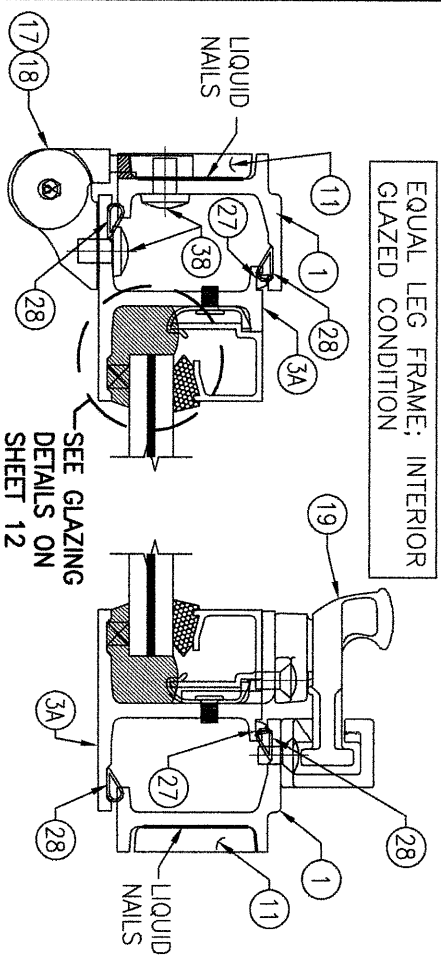
NO.	REVISION	DESCRIPTION	BY	DATE		

DRAWING TITLE	CONSULTANTS	MANUFACTURER
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	HOPE'S WINDOWS, INC.
	25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124

CERTIFICATION

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

DRAWING NO. 1737
REV. F
SHEET NO. 9 OF 13

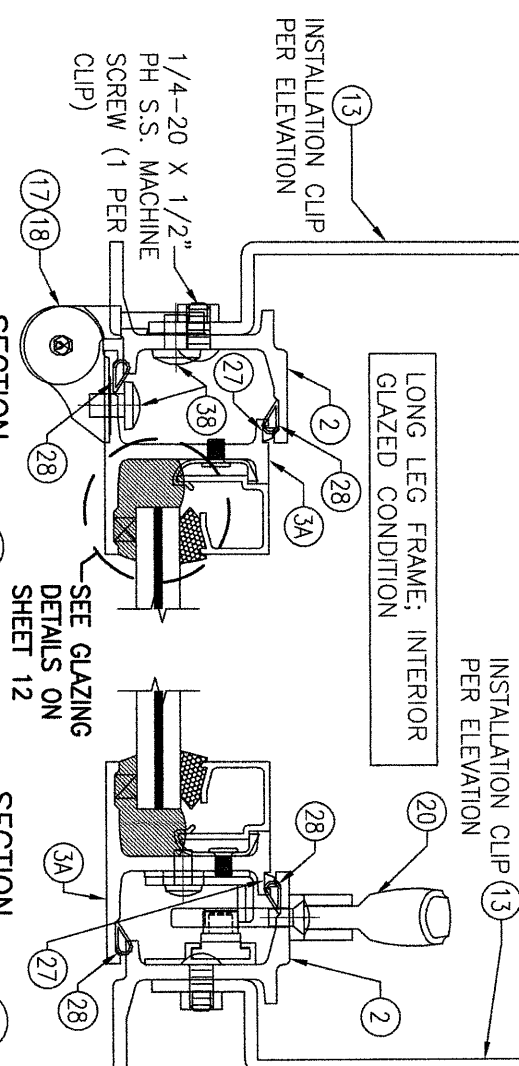


SCALE: 1/2 FULL

(FOR INSTALLATION, SEE SECTIONS B1/9 & C1/9)
(CAM LOCK SHOWN. MULTI-POINT LOCK ALSO APPLIES)



SCALE: 1/2 FULL

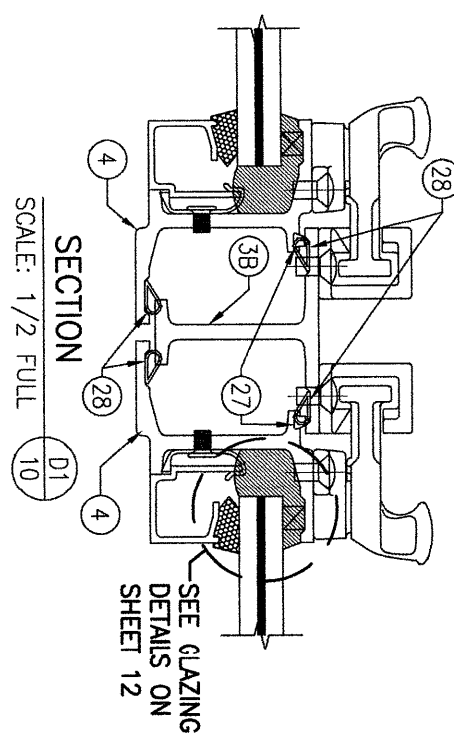


8

(FOR INSTALLATION, SEE SECTIONS B2/9 & C2/9)
(MULTI-POINT LOCK SHOWN. CAM LOCK ALSO APPLIES)

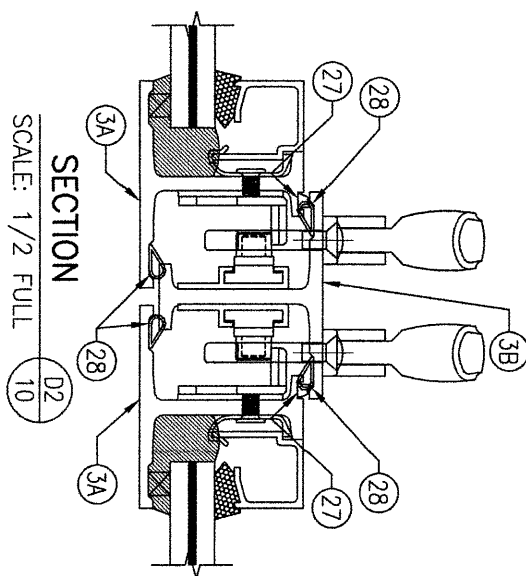


SECTION



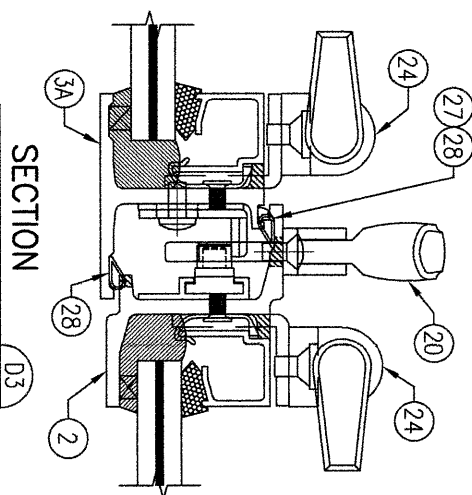
5

(CAM LOCKS SHOWN. MULTI-POINT LOCKS ALSO APPLY)



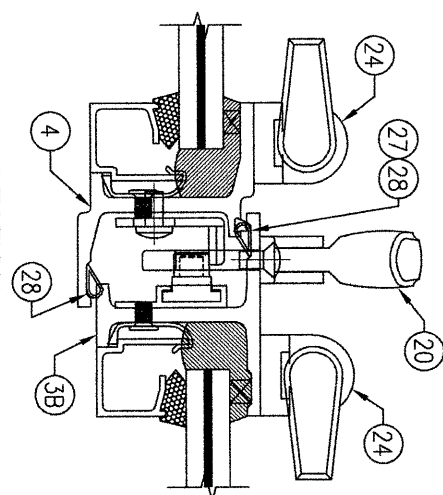
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(MULTI-POINT LOCKS SHOWN. CAM LOCKS ALSO APPLY)



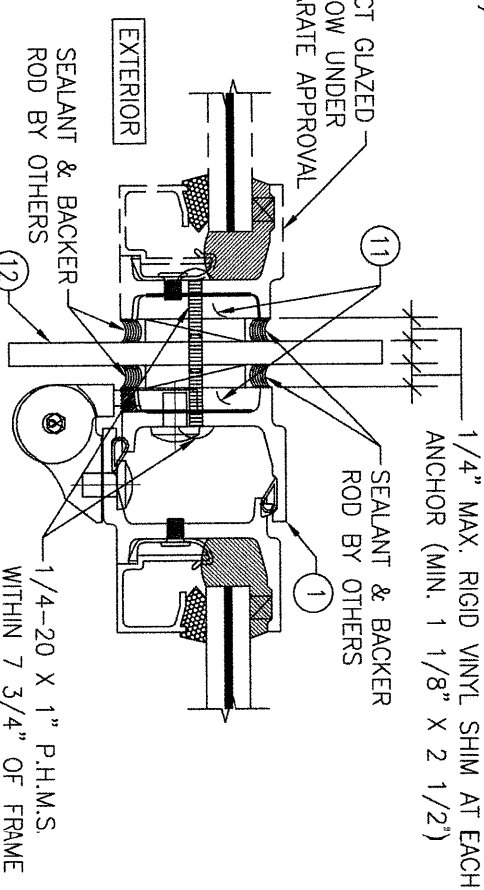
SECTION

INTERIOR GLAZED



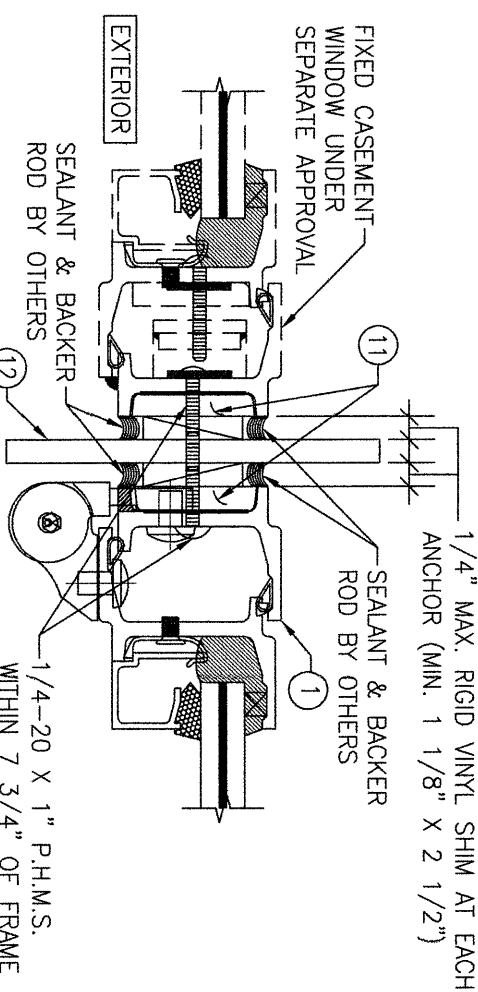
⑦

EXTERIOR GLAZED



12

(EXTERIOR GLAZED CONDITION SHOWN. INTERIOR GLAZED CONDITION ALSO APPLIES)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



KOD Bİ ÖLÇÜLERİ

(EXTERIOR GLAZED CONDITION SHOWN. INTERIOR GLAZED CONDITION ALSO APPLIES)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

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DRAWING TITLE
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS

CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.

25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

MANUFACTURER

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84 HOPKINS AVENUE
JAMESTOWN, NY 14702
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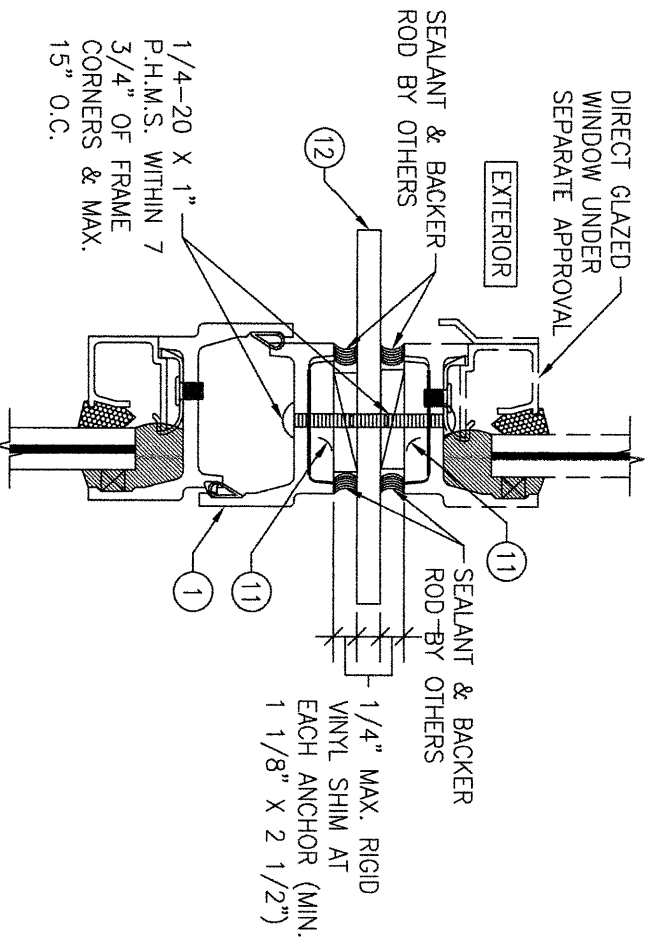
CERTIFICATION

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

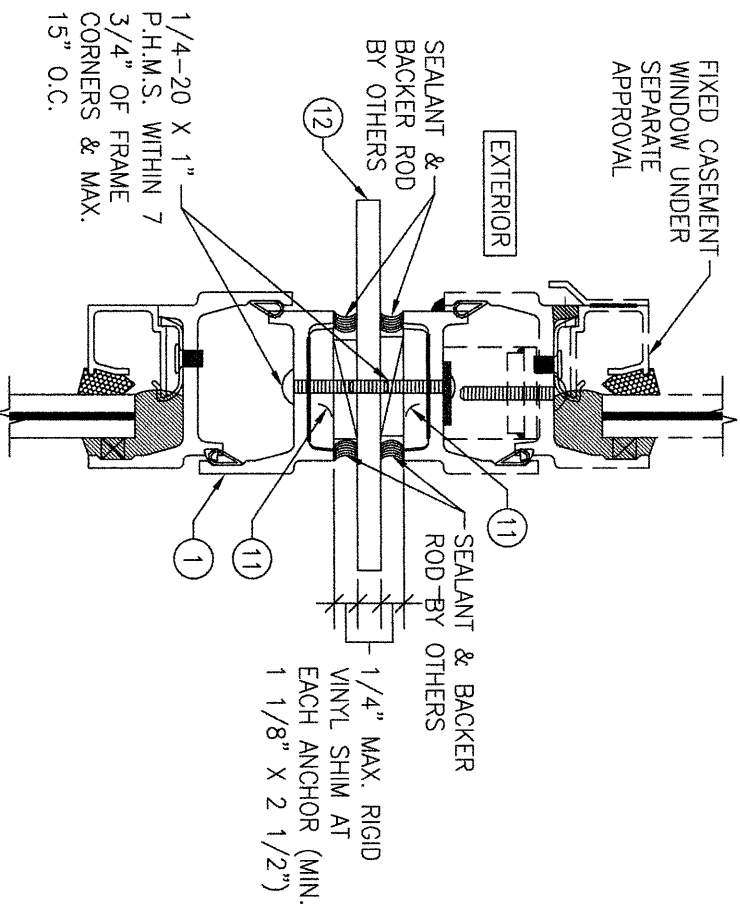
DRAWING NO.

REV
F

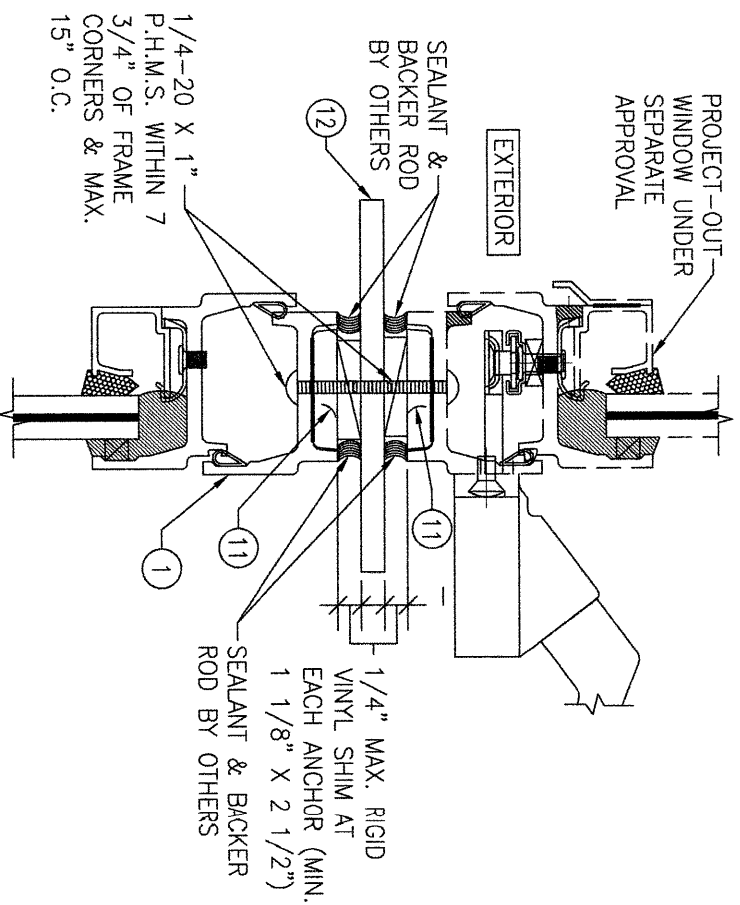
SHEET NO. 10 OF 13



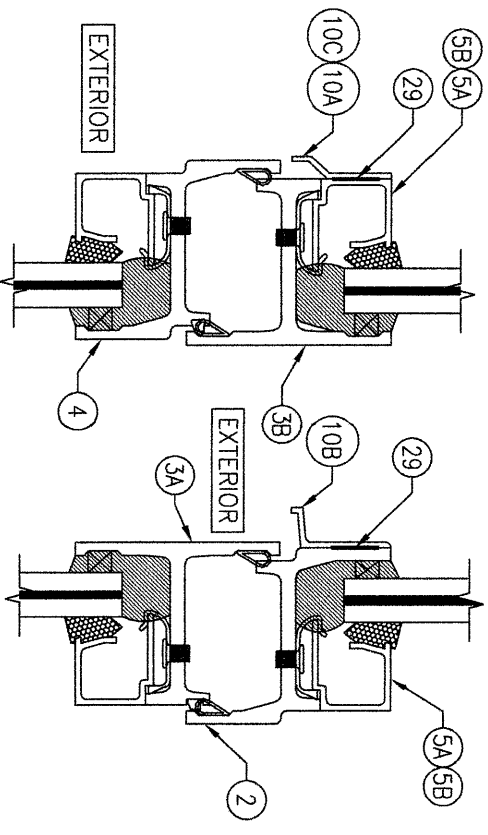
SECTION F1
SCALE: 1/2 FULL 11
(EXTERIOR GLAZED CONDITION SHOWN.
INTERIOR GLAZED CONDITION ALSO APPLIES)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



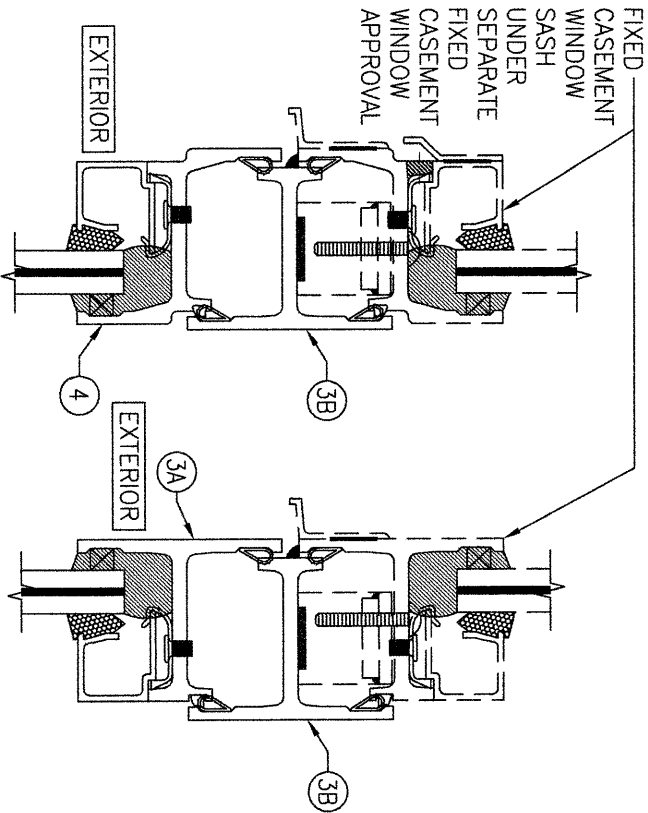
SECTION F2
SCALE: 1/2 FULL 11
(EXTERIOR GLAZED CONDITION SHOWN.
INTERIOR GLAZED CONDITION ALSO APPLIES)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



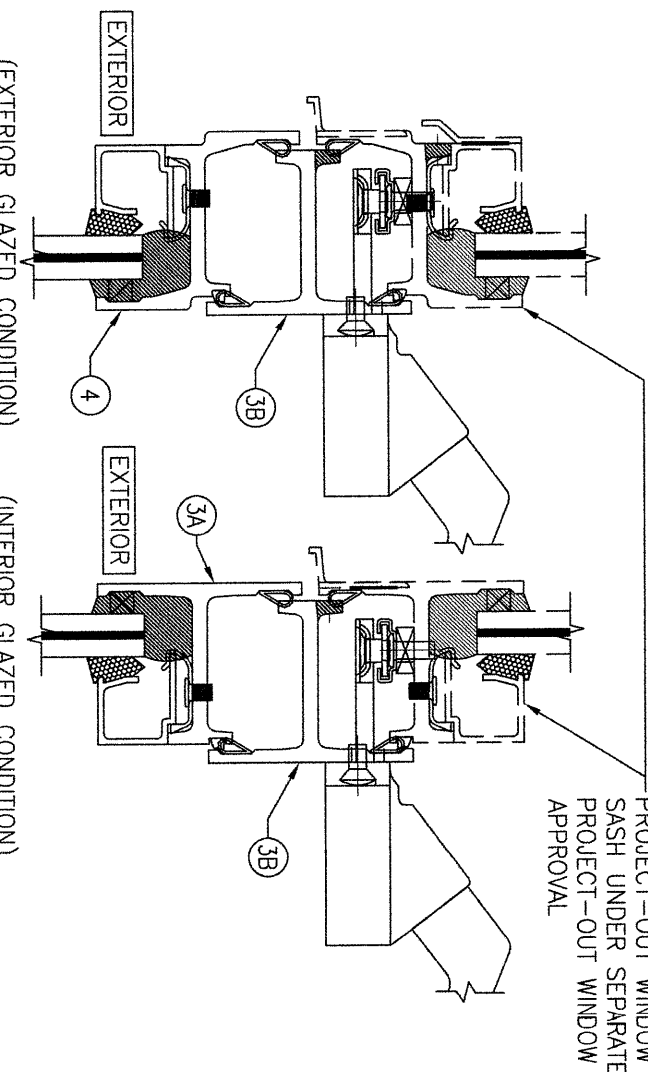
SECTION F3
SCALE: 1/2 FULL 11
(EXTERIOR GLAZED CONDITION SHOWN.
INTERIOR GLAZED CONDITION ALSO APPLIES)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION G1
SCALE: 1/2 FULL 11
(EXTERIOR GLAZED CONDITION) (INTERIOR GLAZED CONDITION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION G2
SCALE: 1/2 FULL 11
(EXTERIOR GLAZED CONDITION) (INTERIOR GLAZED CONDITION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION G3
SCALE: 1/2 FULL 11
(EXTERIOR GLAZED CONDITION) (INTERIOR GLAZED CONDITION)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

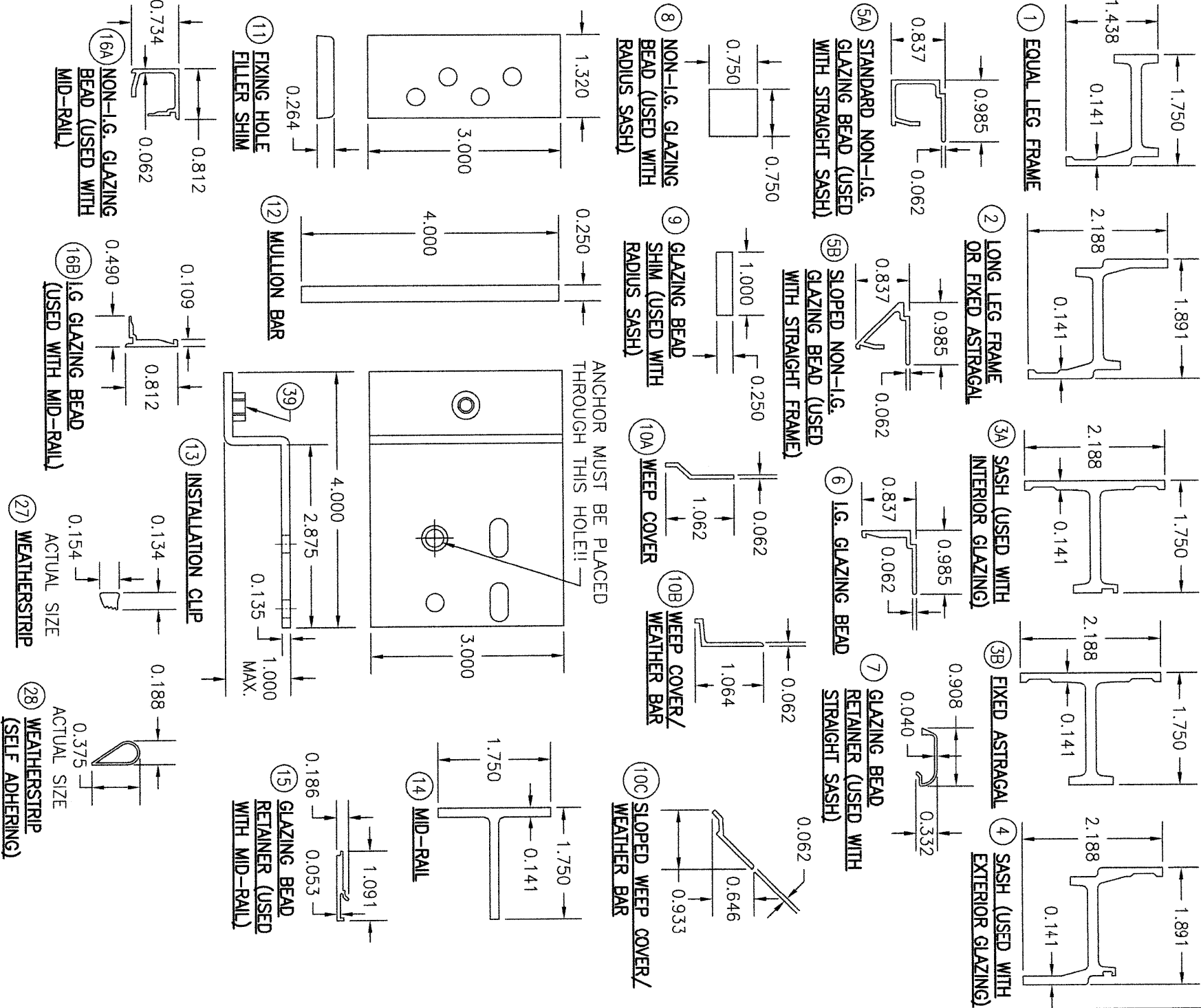
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W.R.M.		W.M.S.		
PLOT: 1-2		DATE: 01/19/11		
NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE	
JAMESTOWN 175 STEEL SERIES IMPACT CASEMENT WINDOWS	
CONSULTANTS	MANUFACTURER
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DRAWING NO.	REV.
1737	F
SHEET NO.	
11 OF 13	

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	FRAME (EQUAL LEG)	A-36 STEEL
2	FRAME (LONG LEG) OR FIXED ASTRAGAL	A-36 STEEL
3A	SASH (USED WITH INTERIOR GLAZING)	A-36 STEEL
3B	FIXED ASTRAGAL	A-36 STEEL
4	SASH (USED WITH EXTERIOR GLAZING)	A-36 STEEL
5A	STANDARD NON-I.G. GLAZING BEAD (USED WITH STRAIGHT SASH)	6063-T5 ALUMINUM
5B	SLOPED NON-I.G. GLAZING BEAD (USED WITH STRAIGHT SASH)	6063-T5 ALUMINUM
6	I.G. GLAZING BEAD	6063-T5 ALUMINUM
7	GLAZING BEAD RETAINER (USED WITH STRAIGHT SASH)	6063-T5 ALUMINUM
8	NON-I.G. GLAZING BEAD (USED WITH RADIUS SASH)	6063-T5 ALUMINUM
9	GLAZING BEAD SHIM (USED WITH RADIUS SASH)	A-36 STEEL
10A	WEEP COVER	6063-T5 ALUMINUM
10B	WEEP COVER/WEATHER BAR	6063-T5 ALUMINUM
10C	SLOPED WEEP COVER/WEATHER BAR	6063-T5 ALUMINUM
11	FIXING HOLE FILLER SHIM	RIGID VINYL
12	MULLION BAR	A-36 STEEL
13	INSTALLATION CLIP	10 GA. GALVANIZED STEEL
14	MID-RAIL	A-36 STEEL
15	GLAZING BEAD RETAINER (USED WITH MID-RAIL)	6063-T5 ALUMINUM
16A	NON-I.G. GLAZING BEAD (USED WITH MID-RAIL)	6063-T5 ALUMINUM
16B	I.G. GLAZING BEAD (USED WITH MID-RAIL)	6063-T5 ALUMINUM
HARDWARE		
17	ADJUSTABLE PIVOT HINGE	HOPE'S PART NO. 1144R-1146
18	STANDARD WELDED ON PIVOT HINGE	HOPE'S PART NO. 237 & 237S
19	SINGLE POINT CAM LOCK WITH KEEPERS	HOPE'S PART NO. 162 & 208-43
20	MULTI-POINT LOCK	HOPE'S PART NO. 101A
21	SINGLE ARM ROTO OPERATOR	HOPE'S PART NO. 141-11
22	OPERATOR HANDLE	AS REQUIRED TO OPERATE WINDOW
23	OPTIONAL FRICTION ADJUSTER	HOPE'S PART NO. 846
24	SURFACE BOLTS	HOPE'S PART NO. 20-50M3
SEALS & SEALANTS		
27	WEATHERSTRIP	TREMCO TR11688E EPDM
28	WEATHERSTRIP (SELF ADHERING)	REESE 638CH SILICONE
29	DOUBLE SIDED TAPE	3M VBH 4941 FOAM/ACRYLIC
30	GLAZING WEDGE (USED WITH NON-I.G. & RADIUS CONDITIONS)	TREMCO 496E EPDM
31	GLAZING WEDGE (USED WITH I.G. CONDITIONS)	TREMCO PS1129E EPDM
32	NON-I.G. GLAZING SHIM	TREMCO TR2178W EPDM
33	I.G. GLAZING SHIM	TREMCO TR1488W EPDM
34	NON-I.G. GLAZING SHIM	TREMCO TR6087W EPDM
35	I.G. GLAZING SHIM	TREMCO TR2178W EPDM
FASTENERS		
37	10-24 X 1/4" S.S. SELF SEALING MACHINE SCREW	2 1/2" FROM D.L.O. EDGE & 12" MAX. O.C.
38	1/4-20 X 3/8" S.S. MACHINE SCREW	2 PER HINGE LEAF (REQ'D ONLY WITH ADJUSTABLE HINGE)
39	1/4-20 SELF CLINCHING NUT INSERT	1 PER CLIP
40	10-24 X 1 1/8" S.S. MACHINE SCREW	2 1/2" FROM D.L.O. EDGE & 12" MAX. O.C.



NO.	REVISION	DESCRIPTION	BY	DATE