

SERIES S200 SINGLE HUNG WOOD WINDOW

DESIGN LOAD RATING FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEET 2.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 5TH EDITION (2014) FLORIDA BUILDING CODE, INCLUDING HIGH VELOCITY HURRICANE ZONE PROVISIONS.

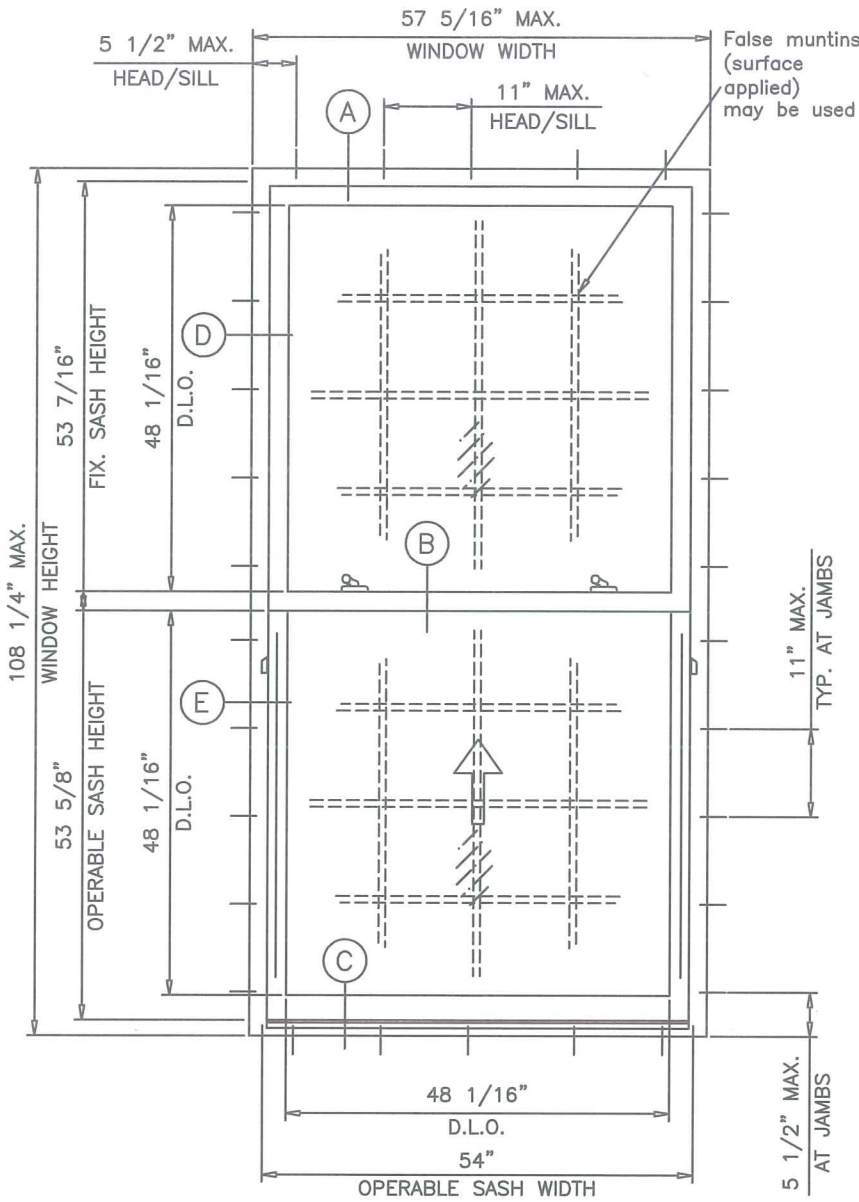
WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

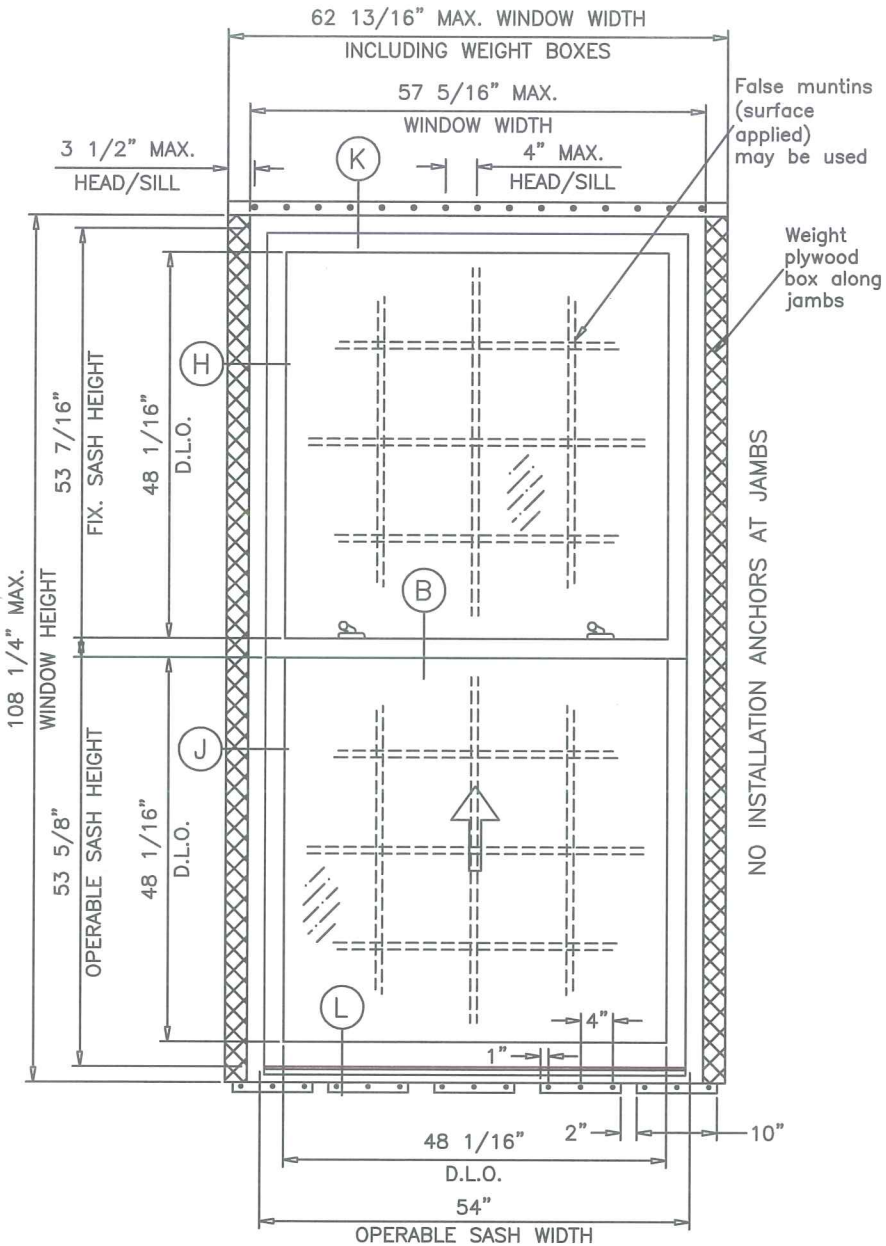
ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

A LOAD DURATION INCREASE IN ALLOWABLE STRESS IS USED IN DESIGN OF WOOD ANCHORS ONLY.

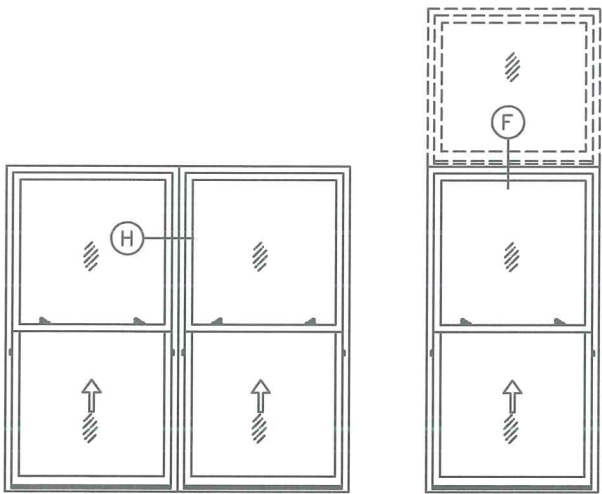
ALL WOOD NOT SEPARATED FROM AND/OR IN DIRECT CONTACT WITH CONCRETE AND MASONRY SHALL BE TREATED IN AN APPROVED PRESERVATIVE OR SHALL BE AN APPROVED DURABLE SPECIES PER FBC CHAPTER 23.



TYPICAL ELEVATION
USING BLOCK & TACKLE BALANCES



TYPICAL ELEVATION
USING PULLEY, CHAIN
& COUNTER WEIGHT SYSTEM
(SINGLE WINDOWS ONLY)

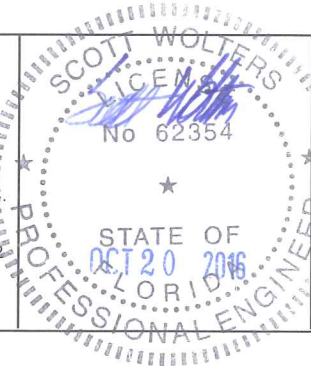


APPROVED CONFIGURATIONS

APPROVAL APPLIES TO INDIVIDUAL UNITS OF SINGLE HUNG WINDOWS OR FIXED OVER SINGLE HUNG WINDOWS.
ALSO SIDE BY SIDE COMBINATIONS OF S.H. TO S.H. IN MODULES OF TWO OR MORE UNITS.
ALSO SIDE BY SIDE COMBINATIONS OF FIX/S.H. TO FIX./S.H. IN MODULES OF TWO OR MORE UNITS USING MIAMI-DADE COUNTY APPROVED MULLION IN BETWEEN.
LOWER DESIGN PRESSURES FROM WINDOW OR MULLION APPROVALS WILL APPLY TO ENTIRE SYSTEM.

THESE WINDOWS ARE RATED FOR LARGE MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.

SCOTT WOLTERS
FL PE# 62354
WOLTERS ENGINEERING, INC.
(COA# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412



SERIES S200 SINGLE HUNG WOOD WDW.(L.M.I.)
MQ windows and doors
4508 rte 117
Ste-Agathe-des-Monts
QC, Canada
TEL (819) 326-0321 FAX (819) 321-1791

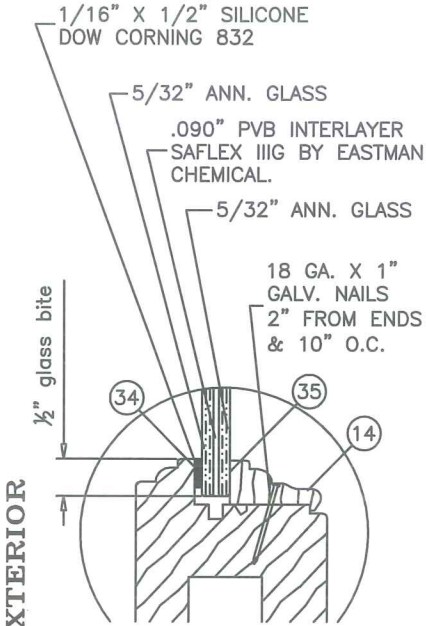
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	1	03/02/09	SM	Counter weight option added
	2	06/24/13	SW	Updated to 2014 FBC

date: 02-14-06
scale: 1/2"=1'-0"
dr. by: S.M.
chk. by:

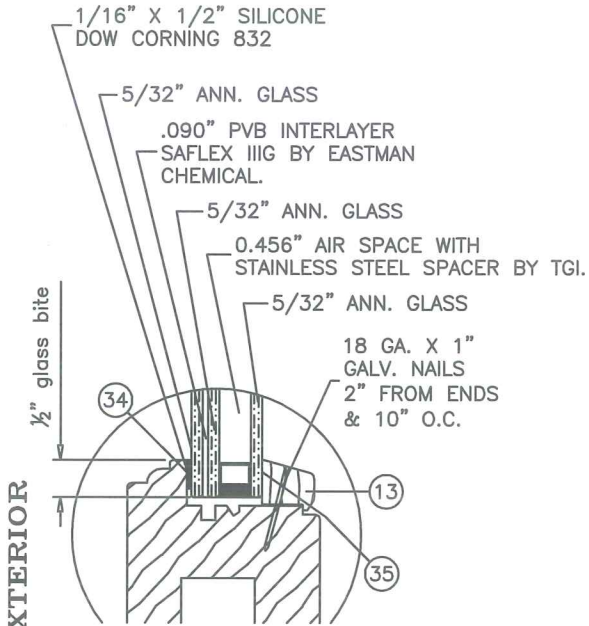
drawing no.
W06-11
sheet 1 of 9

DESIGN LOAD CAPACITY - PSF					
WINDOW DIMS.		GLASS TYPES 'A' & 'B'		GLASS TYPES 'A1' & 'B1'	
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
26-1/2"	34-1/4"	60.0	70.0	60.0	70.0
32"		60.0	70.0	60.0	70.0
37"		60.0	70.0	60.0	70.0
42"		60.0	70.0	60.0	70.0
48"		60.0	70.0	60.0	70.0
53-1/8"		60.0	70.0	60.0	70.0
57-5/16"		60.0	70.0	60.0	70.0
26-1/2"	46-1/4"	60.0	70.0	60.0	70.0
32"		60.0	70.0	60.0	70.0
37"		60.0	70.0	60.0	70.0
42"		60.0	70.0	60.0	70.0
48"		60.0	70.0	60.0	70.0
53-1/8"		60.0	70.0	60.0	70.0
57-5/16"		60.0	70.0	60.0	70.0
26-1/2"	58-1/4"	60.0	70.0	60.0	70.0
32"		60.0	70.0	60.0	70.0
37"		60.0	70.0	60.0	70.0
42"		60.0	70.0	60.0	70.0
48"		60.0	70.0	60.0	70.0
53-1/8"		60.0	70.0	60.0	70.0
57-5/16"		60.0	70.0	60.0	70.0
26-1/2"	70-1/4"	60.0	70.0	60.0	70.0
32"		60.0	70.0	60.0	70.0
37"		60.0	70.0	60.0	70.0
42"		60.0	70.0	60.0	70.0
48"		60.0	70.0	60.0	70.0
53-1/8"		60.0	70.0	60.0	70.0
57-5/16"		60.0	70.0	60.0	70.0
26-1/2"	82-1/4"	60.0	70.0	60.0	70.0
32"		60.0	70.0	60.0	70.0
37"		60.0	70.0	60.0	70.0
42"		60.0	70.0	60.0	70.0
48"		60.0	70.0	60.0	70.0
53-1/8"		60.0	70.0	60.0	70.0
57-5/16"		60.0	70.0	60.0	70.0
26-1/2"	94-1/4"	60.0	70.0	60.0	70.0
32"		60.0	70.0	60.0	70.0
37"		60.0	70.0	60.0	70.0
42"		60.0	70.0	60.0	70.0
48"		60.0	70.0	60.0	70.0
53-1/8"		60.0	70.0	60.0	70.0
57-5/16"		60.0	70.0	60.0	70.0
26-1/2"	108-1/4"	60.0	70.0	60.0	70.0
32"		60.0	70.0	60.0	70.0
37"		60.0	70.0	60.0	70.0
42"		60.0	70.0	60.0	70.0
48"		60.0	70.0	60.0	70.0
53-1/8"		60.0	70.0	60.0	70.0
57-5/16"		60.0	70.0	60.0	70.0

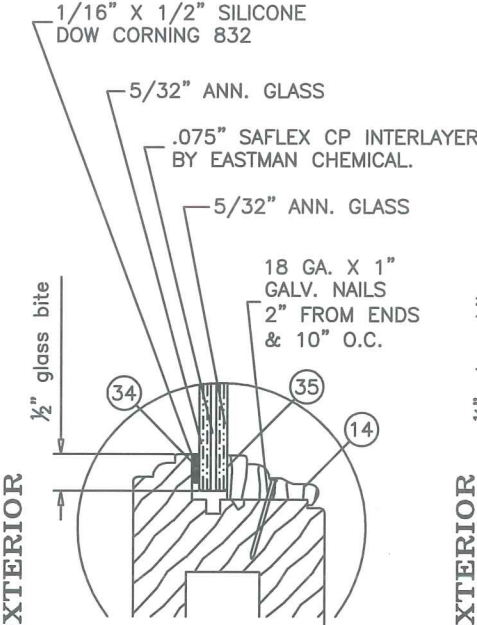
GLASS CAPACITIES ON THIS CHART ARE BASED ON TESTING AND ASTM E1300-04.



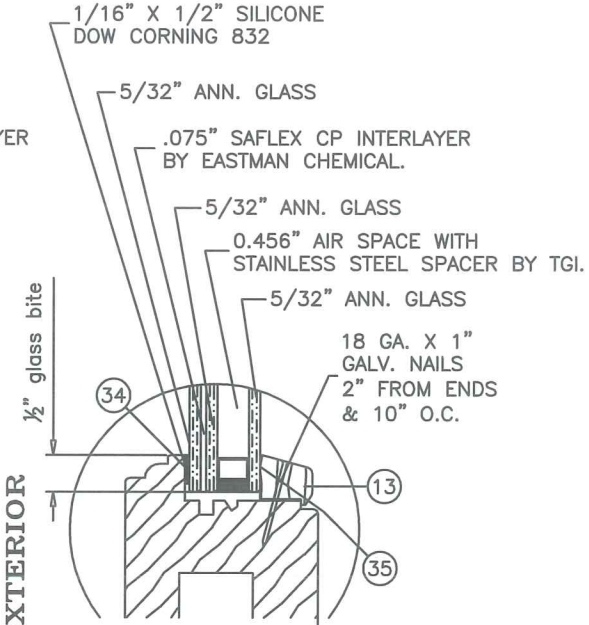
3/8" THICK
GLASS TYPE 'A'



1" THICK GLASS
TYPE 'A1'



3/8" THICK
GLASS TYPE 'B'



1" THICK GLASS
TYPE 'B1'

GLAZING OPTIONS

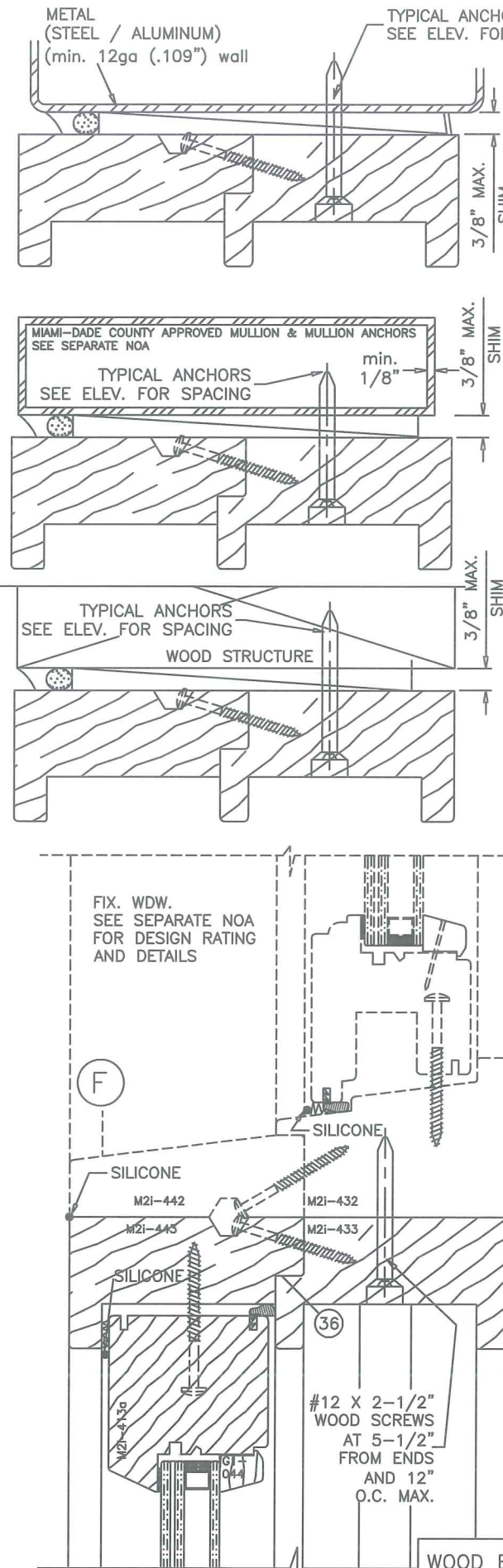
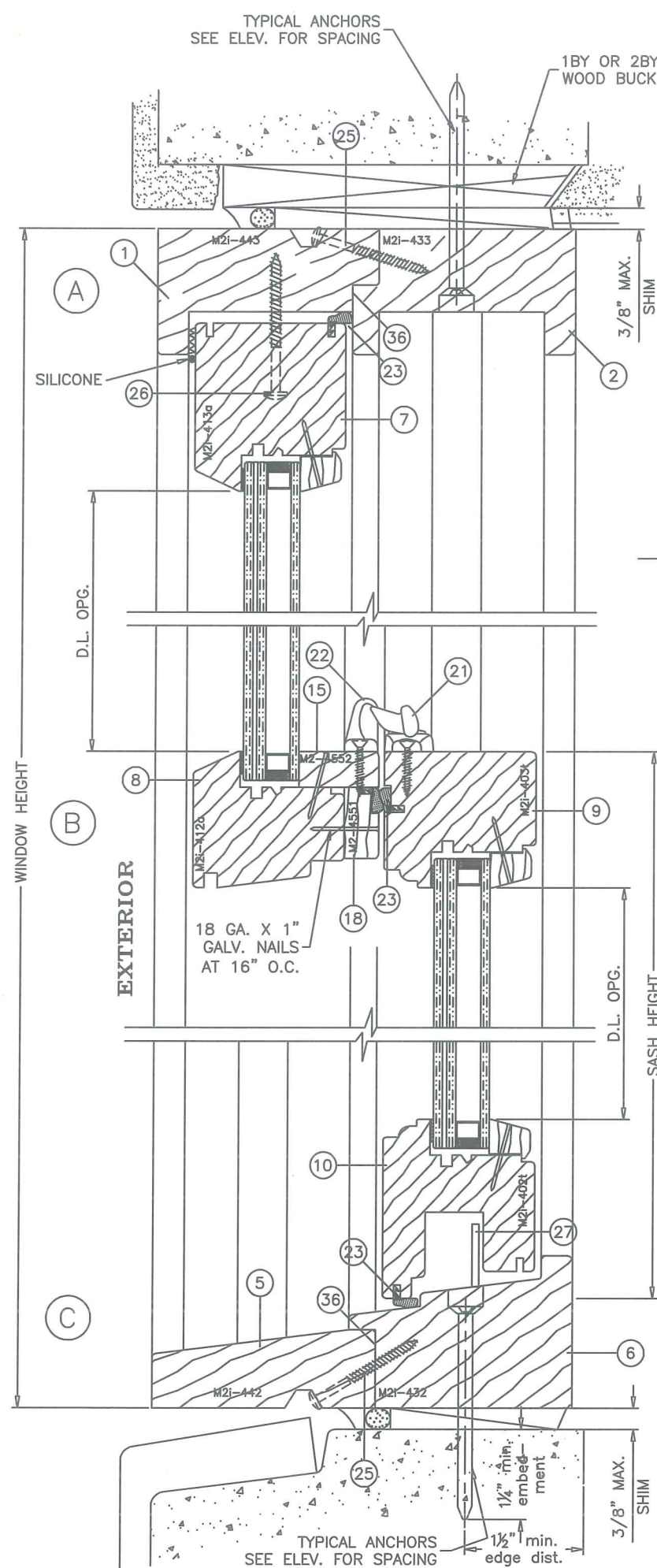
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FL PE# 62354
WOLTERS ENGINEERING, INC.
(COA# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412

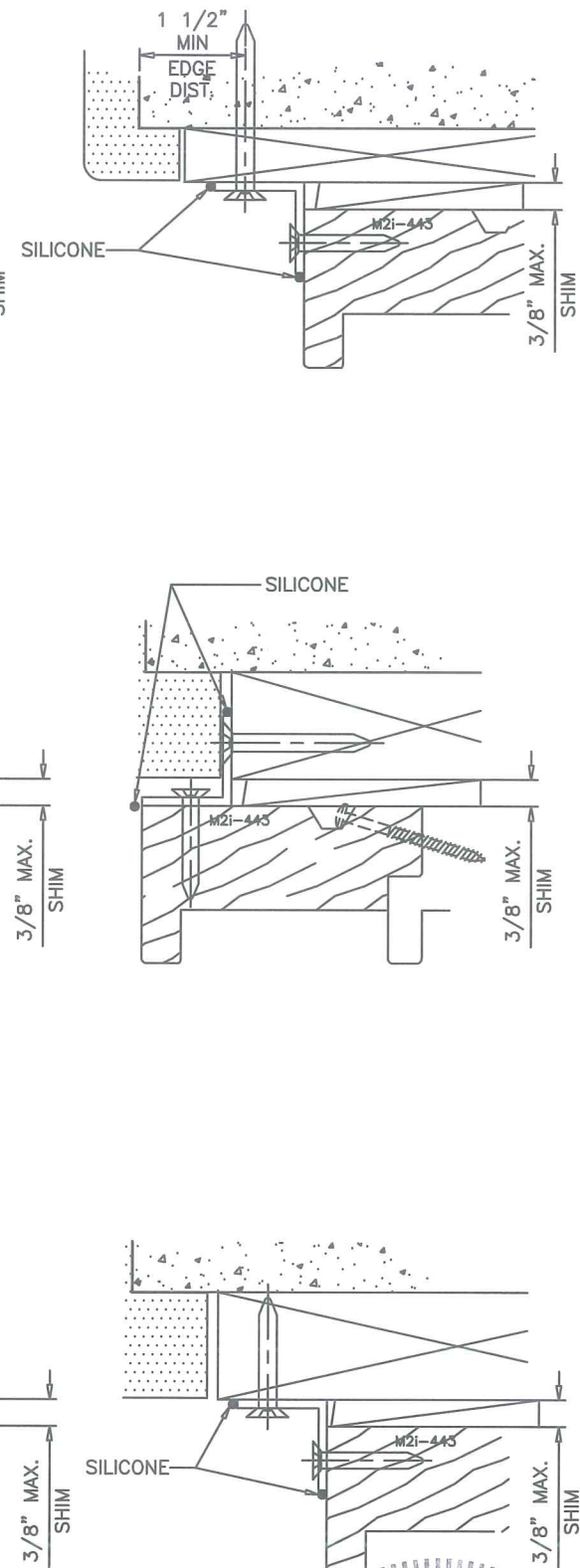
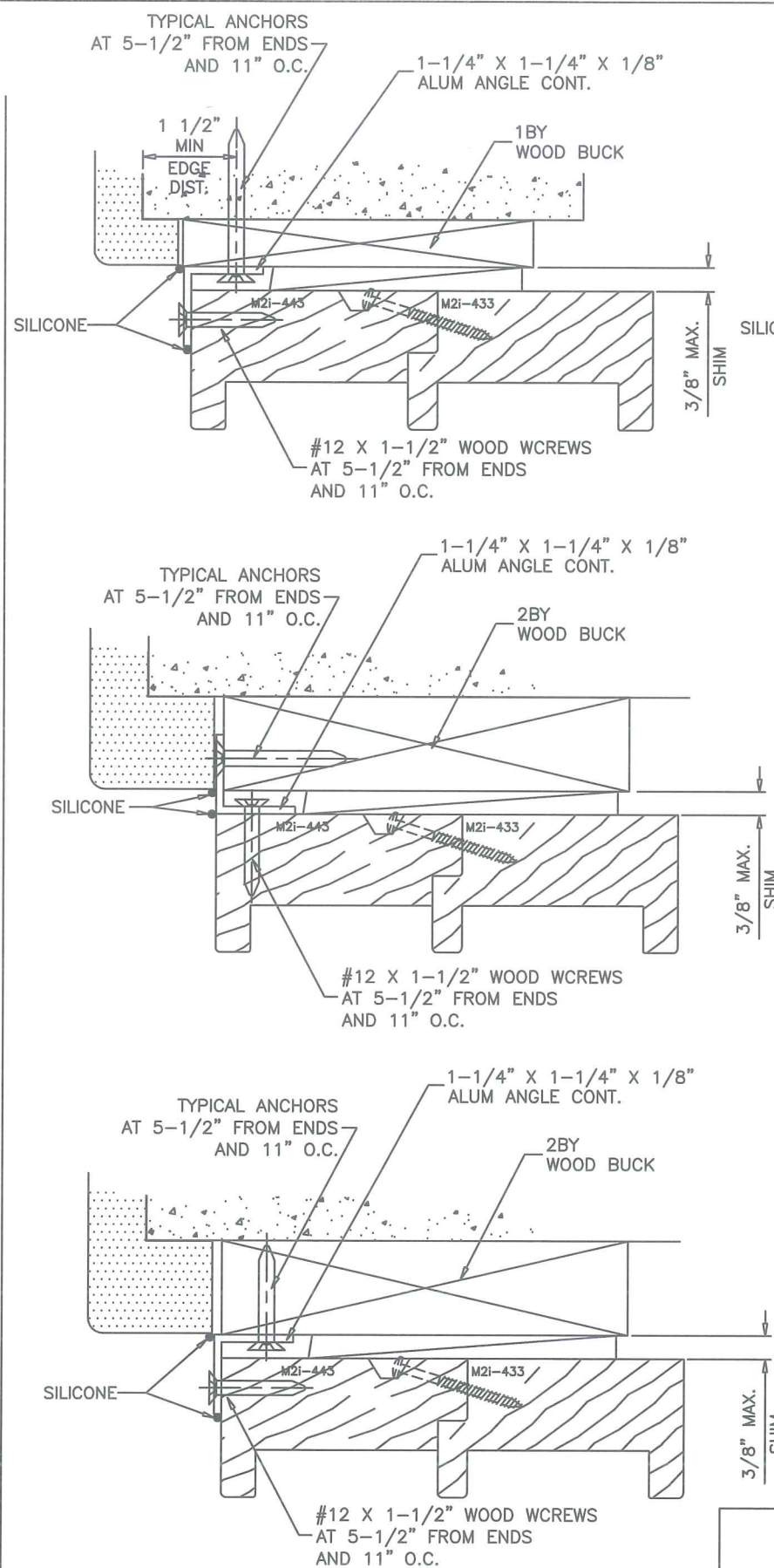
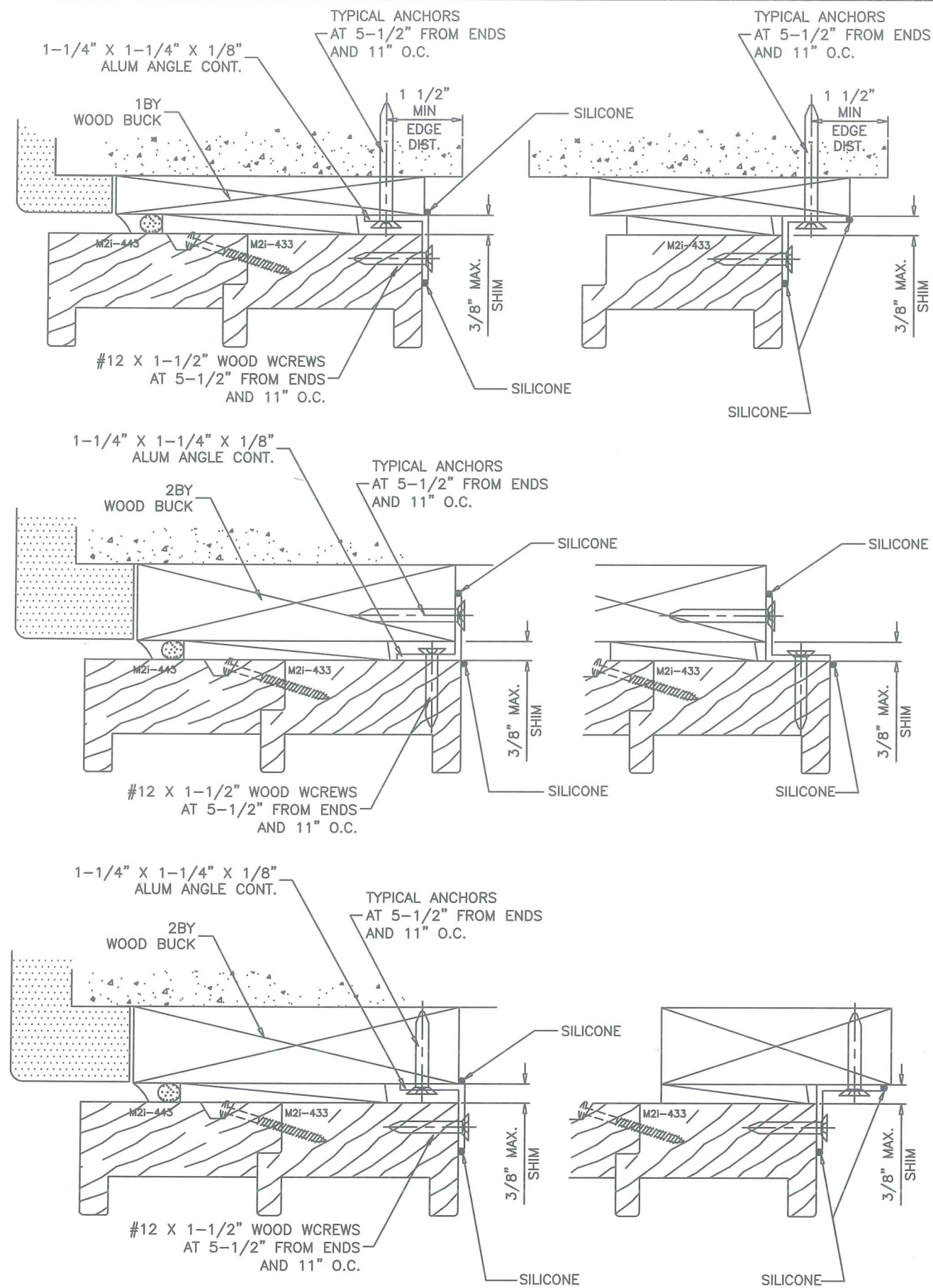
SCOTT WOLTERS
No 62354
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

revisions:		date:	02-14-06	scale:	3/8" = 1"	dr. by:	S.M.	chk. by:	
no.	date	by	description	SM	Counter weight option added				
1	03/02/09	SM							
drawing no. W06-11									
sheet 2 of 9									

SERIES S200 SINGLE HUNG WOOD WDW.(L.M.I.)
MQ windows and doors
4508 rte 117
Ste-Agathe-des-Monts
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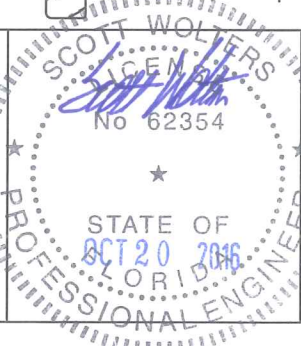
mq.
WINDOWS
OF EUROPE AND
THE AMERICAS





32 ANGLE INSTALLATION DETAILS

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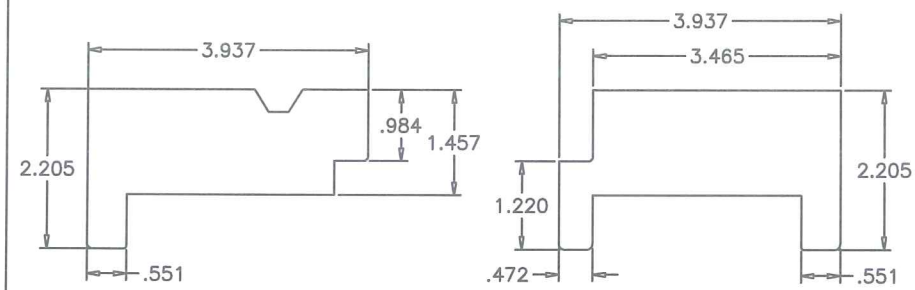
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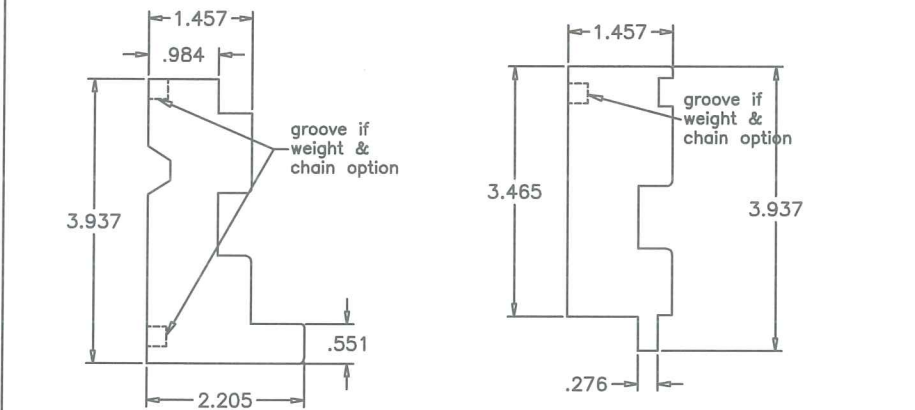
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dr. by: S.M.
chk. by:

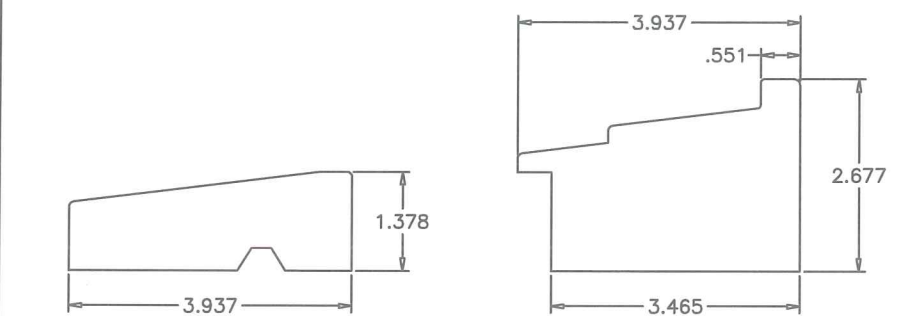
drawing no.
W06-11
sheet 5 of 9



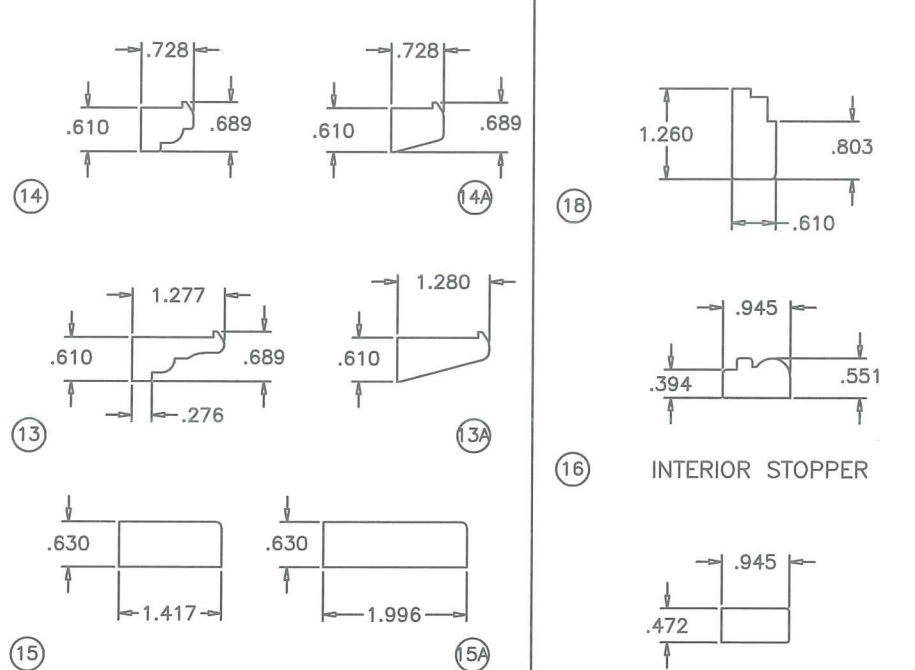
① EXTERIOR FRAME HEAD ② INTERIOR FRAME HEAD



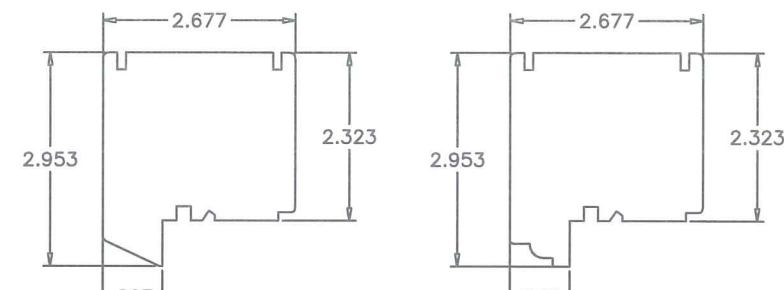
③ EXTERIOR FRAME JAMB ④ INTERIOR FRAME JAMB



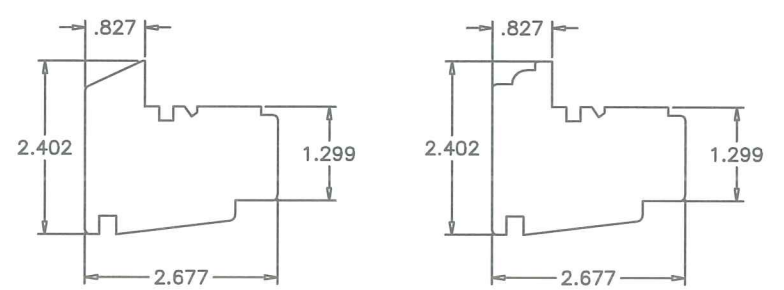
⑤ EXTERIOR FRAME SILL ⑥ INTERIOR FRAME SILL



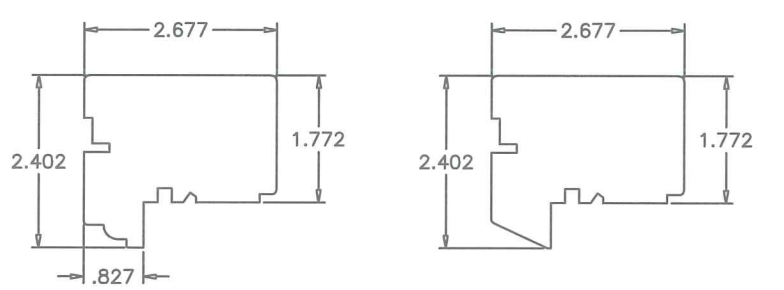
GLAZING BEADS ①⑦ MIDDLE STOPPER



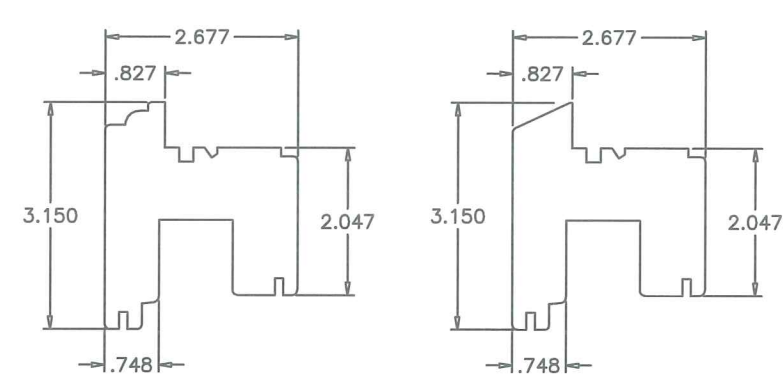
⑦ FIXED UPPER SASH OPTIONAL



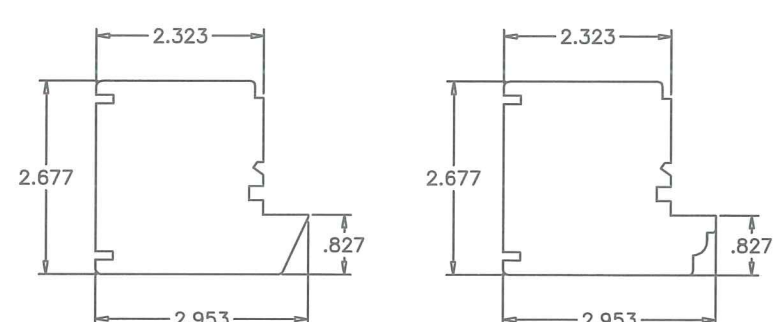
⑧ FIXED MEETING RAIL OPTIONAL



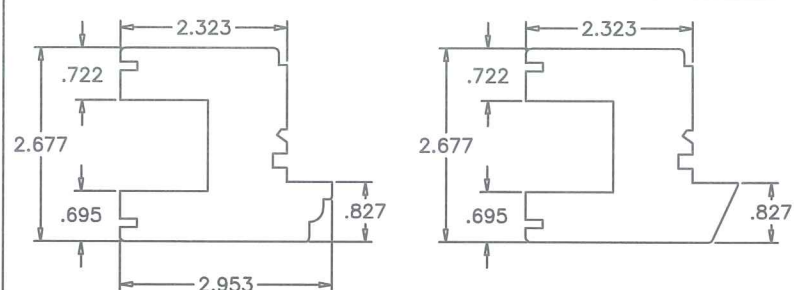
⑨ TOP RAIL OPTIONAL



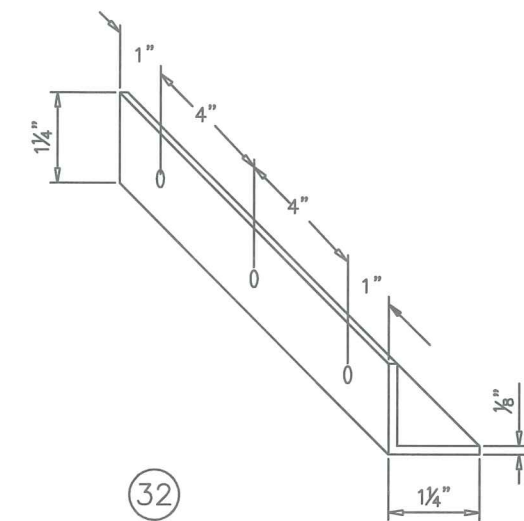
⑩ BOTTOM RAIL OPTIONAL



⑪ JAMB FIXED UPPER STILE OPTIONAL



⑫ JAMB BOTTOM STILE OPTIONAL



③② Aluminum 6005A-T5 installation clip

TYPICAL
WOOD-HONDURAS
MAHOGANY
LUMBER

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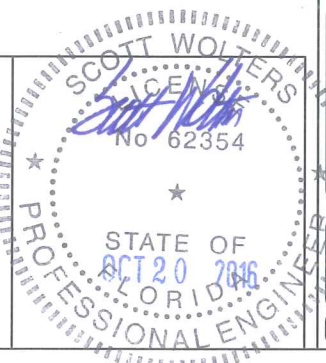


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scale:	3/8" = 1"
dr. by:	S.M.
chk. by:	

drawing no.
W06-11
sheet 6 of 9

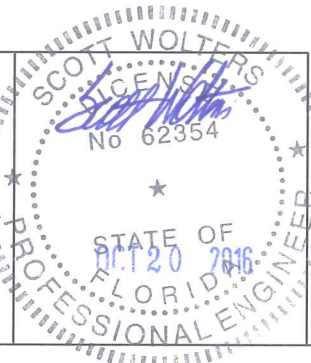
SCOTT WOLTERS
FL PE# 62354
WOLTERS ENGINEERING, INC
(COA# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412



WOOD = Mahogany or with specific gravity of 0.59 or higher

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	M2i-443	1/ WDW.	EXTERIOR FRAME HEAD	WOOD	MQ WDW.
2	M2i-433	1/ WDW.	INTERIOR FRAME HEAD	WOOD	MQ WDW.
3	M2i-440	2/ WDW.	EXTERIOR FRAME JAMB	WOOD	MQ WDW.
4	M2i-430	2/ WDW.	INTERIOR FRAME JAMB	WOOD	MQ WDW.
5	M2i-442	1/ WDW.	EXTERIOR FRAME SILL	WOOD	MQ WDW.
6	M2i-432	1/ WDW.	INTERIOR FRAME SILL	WOOD	MQ WDW.
7	M2i-413A	1/ WDW.	FIXED UPPER SASH	WOOD	MQ WDW.
8	M2i-412A	1/ WDW.	FIXED MEETING RAIL	WOOD	MQ WDW.
9	M2i-403T	1/ WDW.	TOP RAIL	WOOD	MQ WDW.
10	M2i-402T	1/ WDW.	BOTTOM RAIL	WOOD	MQ WDW.
11	M2i-410A	2/ WDW.	JAMB FIXED UPPER STILE	WOOD	MQ WDW.
12	M2i-400T	2/ WDW.	JAMB BOTTOM STILE	WOOD	MQ WDW.
13	G1-075	4/ SASH	GLAZING BEAD (LAMINATED GLASS)	WOOD	MQ WDW.
13A	G1-074	4/ SASH	ALT. GLAZING BEAD (LAM. GLASS)	WOOD	MQ WDW.
14	G1-045	4/ SASH	GLAZING BEAD (LAM. INSUL. GLASS)	WOOD	MQ WDW.
14A	G1-044	4/ SASH	ALT. GLAZING BEAD (LAM. INSUL. GLASS)	WOOD	MQ WDW.
15	M2-4552	1	GLAZING BEAD LAM. INSUL. GLASS	WOOD	MQ WDW. (AT MTG. RAIL)
15A	M2-4553	1	GLAZING BEAD LAM. GLASS	WOOD	MQ WDW. (AT MTG. RAIL)
16	G2-080	2/ WDW.	INTERIOR STOPPER	WOOD	MQ WDW.
17	G2-081	2/ WDW.	MIDDLE STOPPER	WWOD	MQ WDW.
18	M2-4551	1/ WDW.	MEETING RAIL MOULDING	WWOD	-
19	S400	2/ WDW.	BLOCK & TACKLE BALANCE	-	BALANCE SYSTEMS INC.
20	S200-B101	2/ WDW.	BALANCE HOOK BLOCK	Aluminum 6005A-T5	SECURED W/ (2) #7X1" FH WD. SCREWS
21	LKF18	2/ WDW.	CAM LOCK	BRONZE	SECURED W/ (2) #7X1" FH WD. SCREWS
22	-	2/ WDW.	KEEPER	BRONZE	SECURED W/ (2) #7X1" FH WD. SCREWS
23	12057	AS REQD.	W'STRIPPING GASKET	EPDM	AMESBURY
24	251000AFD	AS REQD.	BRUSH W'STRIPPING	POLYPROPYLENE	AMESBURY
25	#10X2"	AS REQD.	FRAME RH ASSY SCREWS	STEEL	AT 24" O.C. MAX. AND 6" FROM CORNERS
26	#12X2-1/2"	AS REQD.	SASH RH ASSY SCREWS	STEEL	AT 5-1/2" FROM ENDS & 12" O.C. MAX.
27	-	1	CONT. FLAT BAR (1/8" X 1-1/4")	Aluminum 6005A-T5	SECURED W/ (2) #7X1/2" FH WD. SCREWS
28	SP250BBRE	2/ WDW.	PULLEY	BRONZE	SECURED W/ (2) #7X1" FH WD. SCREWS
29	#45	2/ WDW.	FLAT CHAIN	BRONZE	SECURED W/ BOLTED HOOK TO THE WEIGHT
30	---	2/ WDW.	COUNTERWEIGHT	STEEL	SECURED W/ BOLTED HOOK TO THE CHAIN
31	-	at jambs	PS 1-07 1/2" exterior C-D grade	SPF PLYWOOD	GLUED (item 36) AND 1 1/2" X 18g NAILS @2" from corners and 10" max o/c.
32	-	inst. option	(5) clip Angles (1/8" x 1 1/4" x 1 1/4" x10" long)	Aluminum 6005A-T5	2" spacing, w/(3) #12 x 1 1/2" wood screw @ 1" from edge and @ 4" o.c.; minimum 1 3/8" embedment
33	-	inst. option	Continuous Angle (1/8" x 1 1/4" x 1 1/4")	Aluminum 6005A-T5	with #12 x 1/1/2" long wood screws @1" from the edge and @ 4" o.c.; minimum 1 3/8" embedment
34	DC832	along glass perimeter	1/16" X 1/2" BEAD	BLACK SILICONE	DOW CORNING 832
35	Spectrem2	along glass perimeter	1/32" X 1/2" bead, between glazing bead and int. face of the glass	CLEAR SILICONE	TREMCO
36	3W-4B	along shown wood surfaces	Type 1 ext. grade Wood glue	white PVA glue	RHENOCOLL GMBH

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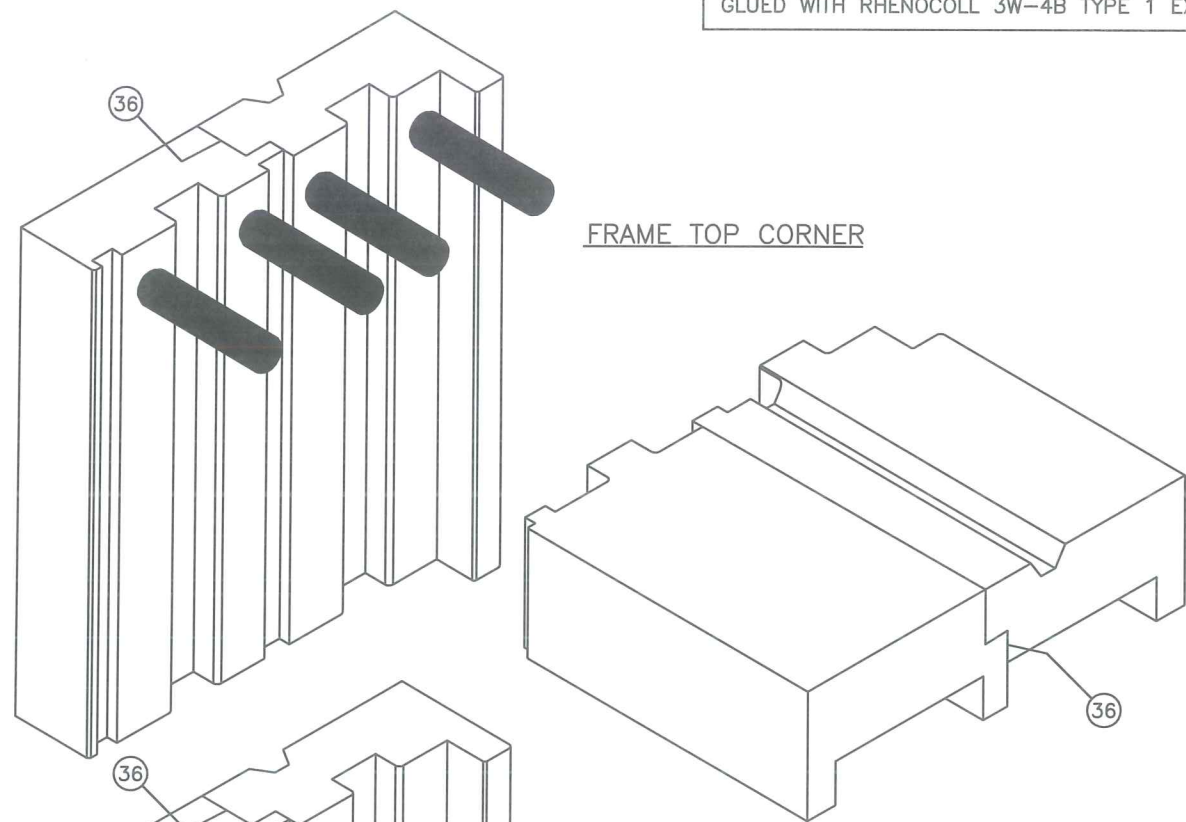
revisions:	
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SM	Counter weight option added
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drawing no.	
W06-11	
sheet 7 of 9	

SERIES S200 SINGLE HUNG WOOD WDW.(L.M.I.)

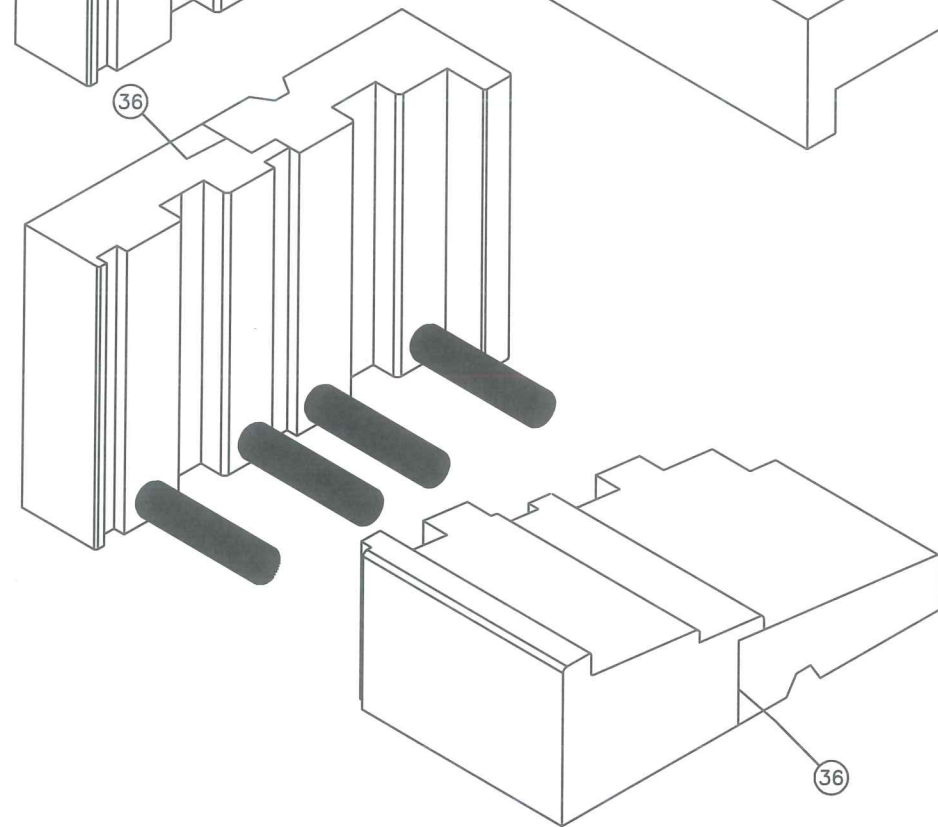
MQ windows and doors
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QC, Canada
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mq.
WINDOWS
OF EUROPE AND
THE AMERICAS

7/16" X 2-3/4" WOOD DOWELS
GLUED WITH RHENOCOLL 3W-4B TYPE 1 EXTERIOR GRADE

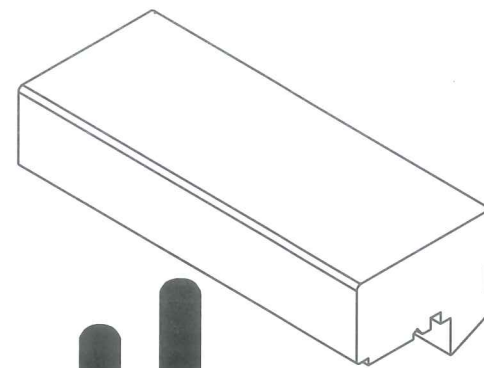
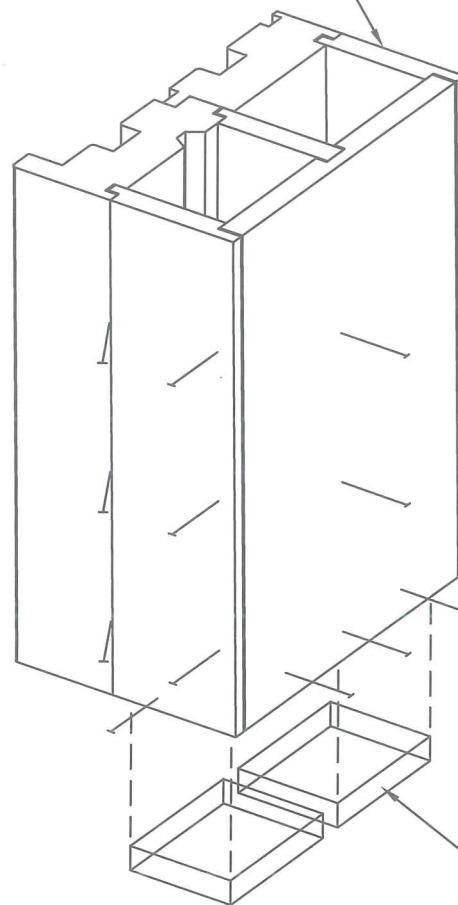


FRAME TOP CORNER

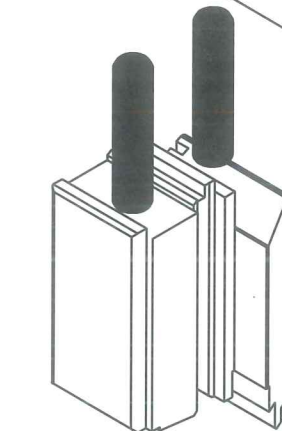


FRAME BOTTOM CORNER

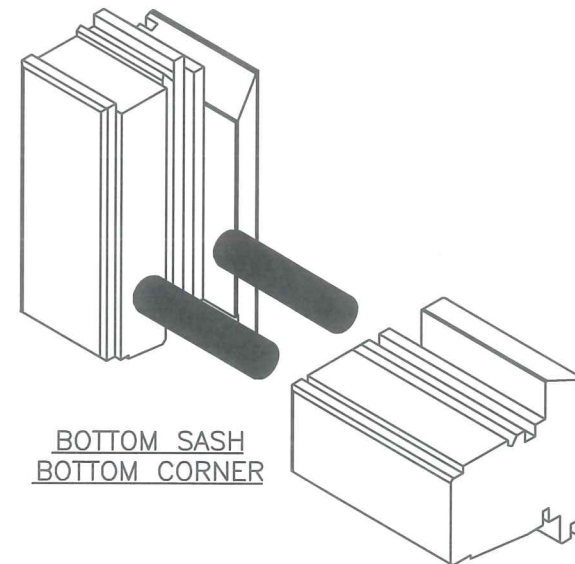
Weight plywood
(#31) enclosure



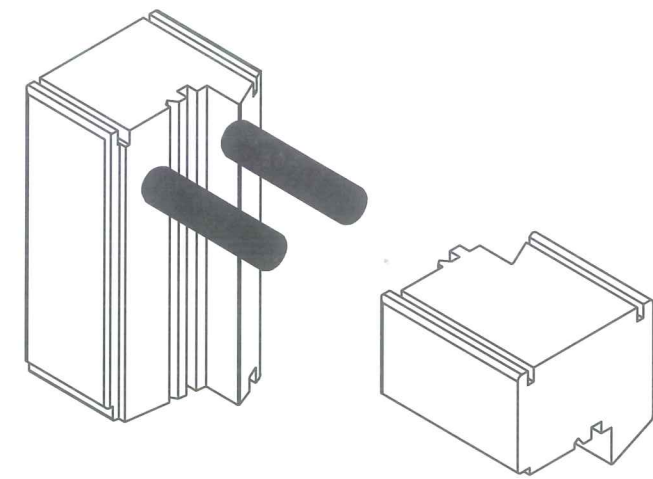
UPPER SASH TOP CORNER



BOTTOM SASH TOP CORNER



BOTTOM SASH
BOTTOM CORNER

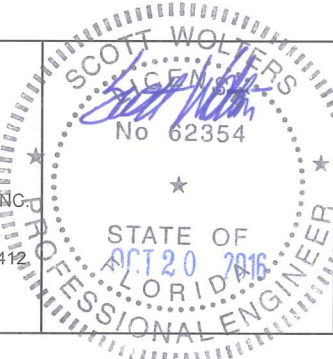


UPPER SASH BOTTOM CORNER

18ga x 1 1/2" long brad nail @
2" from corners and 10"
max. o.c. thereafter. All
interfaces glued with 3W-4B
item #36

#31 plywood ends

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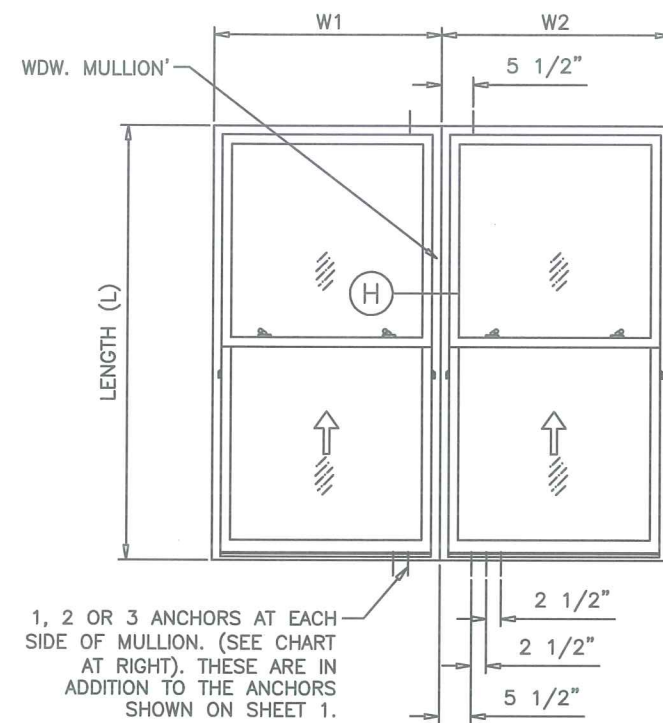
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QC, Canada
TEL (819) 326-0321 FAX (819) 321-1791



revisions:	no	date	by	description
	1	03/02/09	SM	Counter weight option added

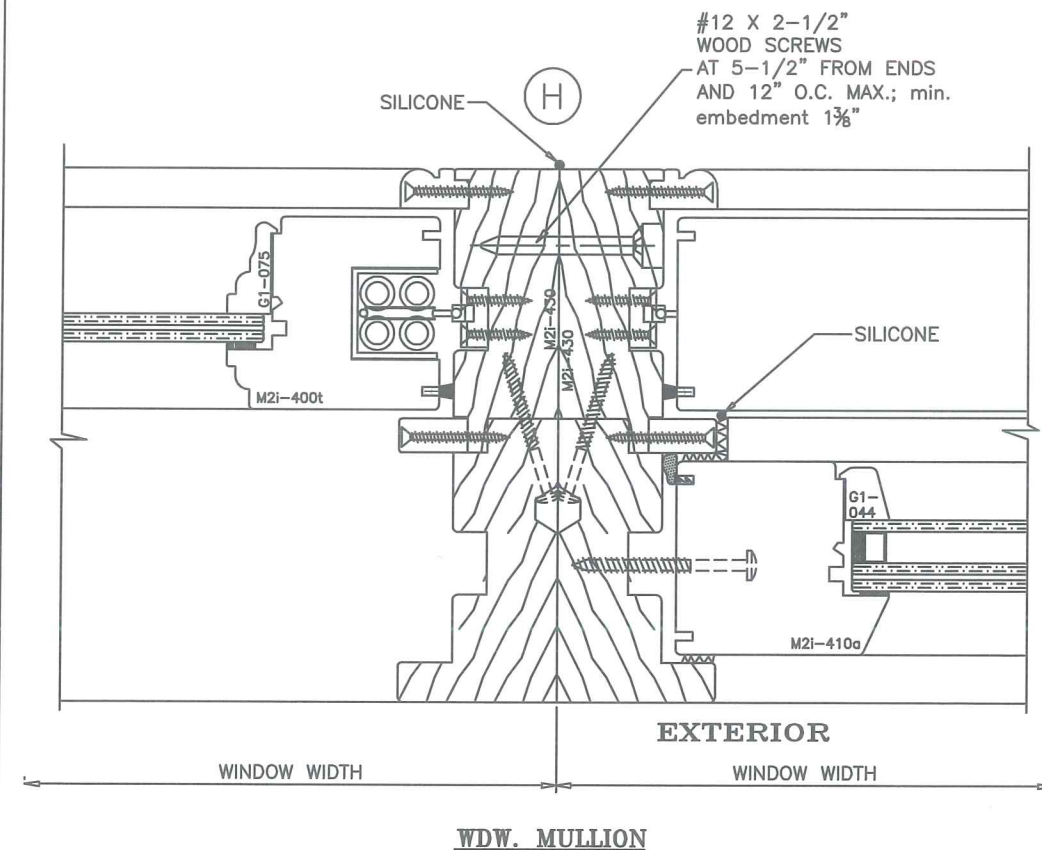
date: 02-14-06	scale: 3/8" = 1"	dr. by: S.M.	chk. by:
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drawing no.
W06-11
sheet 8 of 9



TYPICAL ELEVATIONS
SIDE BY SIDE WINDOWS
 SIDE BY SIDE APPLIES TO TWO OR MORE WINDOWS
 (BLOCK AND TACKLE BALANCES ONLY)

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



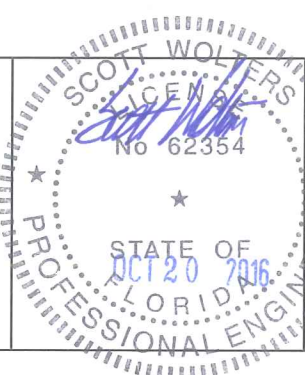
WINDOW DIMS.		MULLION LOAD CAPACITY - PSF								
		1/4" TAPCONS (THRU FRAME)			#14 SMS (THRU FRAME)			#12 SMS (THRU ANGLE)		
		1 ANCHOR AT EACH SIDE OF MULLION	2 ANCHORS AT EACH SIDE OF MULLION	3 ANCHORS AT EACH SIDE OF MULLION	1 ANCHOR AT EACH SIDE OF MULLION	2 ANCHORS AT EACH SIDE OF MULLION	3 ANCHORS AT EACH SIDE OF MULLION	1 ANCHOR AT EACH SIDE OF MULLION	2 ANCHORS AT EACH SIDE OF MULLION	3 ANCHORS AT EACH SIDE OF MULLION
WIDTH (W)	LENGTH (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)
26-1/2"	58-1/4"	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
32"		70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
37"		70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
42"		70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
48"		70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
53-1/8"		70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
57-5/16"		70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
26-1/2"	70-1/4"	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
32"		70.0	70.0	70.0	58.0	70.0	70.0	70.0	70.0	70.0
37"		70.0	70.0	70.0	58.0	70.0	70.0	70.0	70.0	70.0
42"		70.0	70.0	70.0	58.0	70.0	70.0	70.0	70.0	70.0
48"		70.0	70.0	70.0	58.0	70.0	70.0	70.0	70.0	70.0
53-1/8"		70.0	70.0	70.0	58.0	70.0	70.0	70.0	70.0	70.0
57-5/16"		70.0	70.0	70.0	58.0	70.0	70.0	70.0	70.0	70.0
26-1/2"	82-1/4"	70.0	70.0	70.0	59.8	70.0	70.0	70.0	70.0	70.0
32"		61.1	70.0	70.0	49.5	70.0	70.0	67.0	70.0	70.0
37"		61.1	70.0	70.0	49.5	70.0	70.0	67.0	70.0	70.0
42"		61.1	70.0	70.0	49.5	70.0	70.0	67.0	70.0	70.0
48"		61.1	70.0	70.0	49.5	66.0	70.0	67.0	70.0	70.0
53-1/8"		61.1	70.0	70.0	49.5	66.0	70.0	67.0	70.0	70.0
57-5/16"		61.1	70.0	70.0	49.5	64.5	70.0	67.0	70.0	70.0
26-1/2"	94-1/4"	64.3	70.0	70.0	52.2	69.6	70.0	70.0	70.0	70.0
32"		53.3	70.0	70.0	43.2	69.6	70.0	58.4	70.0	70.0
37"		53.3	70.0	70.0	43.2	62.3	70.0	58.4	70.0	70.0
42"		53.3	70.0	70.0	43.2	62.3	70.0	58.4	70.0	70.0
48"		53.3	70.0	70.0	43.2	57.6	70.0	58.4	70.0	70.0
53-1/8"		53.3	70.0	70.0	43.2	57.6	69.4	58.4	70.0	70.0
57-5/16"		53.3	69.4	70.0	43.2	56.3	69.4	58.4	70.0	70.0
26-1/2"	108-1/4"	56.0	70.0	70.0	45.4	60.6	70.0	61.4	70.0	70.0
32"		46.4	70.0	70.0	37.6	62.7	70.0	50.9	70.0	70.0
37"		46.4	66.9	70.0	37.6	54.2	70.0	50.9	70.0	70.0
42"		46.4	66.9	70.0	37.6	54.2	66.9	50.9	70.0	70.0
48"		46.4	61.9	70.0	37.6	50.2	66.9	50.9	67.8	70.0
53-1/8"		46.4	61.9	70.0	37.6	50.2	60.4	50.9	67.8	70.0
57-5/16"		46.4	60.4	70.0	37.6	49.0	60.4	50.9	66.3	70.0

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** SEE CHARTS ON SHEET 2 FOR DESIGN LOAD CAPACITY OF DESIRED WINDOW SIZE.
- STEP 3** USE CHART ON THIS SHEET FOR SIDE BY SIDE CONNECTION CAPACITY OF WINDOW MULLION. THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.
- STEP 4** THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.

SCOTT WOLTERS
 FL PE# 62354
 WOLTERS ENGINEERING, INC.
 (COA# 27194)
 15211 97TH ROAD N
 WEST PALM BEACH, FL 33412



SERIES S200 SINGLE HUNG WOOD WDW.(L.M.I.)

MQ windows and doors
 4508 rte 117
 Ste-Agathe-des-Monts
 QC, Canada
 TEL (819) 326-0321 FAX (819) 321-1791

no	date	by	description
1	03/02/09	SM	Counter weight option added

date	02-14-06
scale	3/8" = 1"
dr. by	S.M.
chk. by	

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 sheet 9 of 9