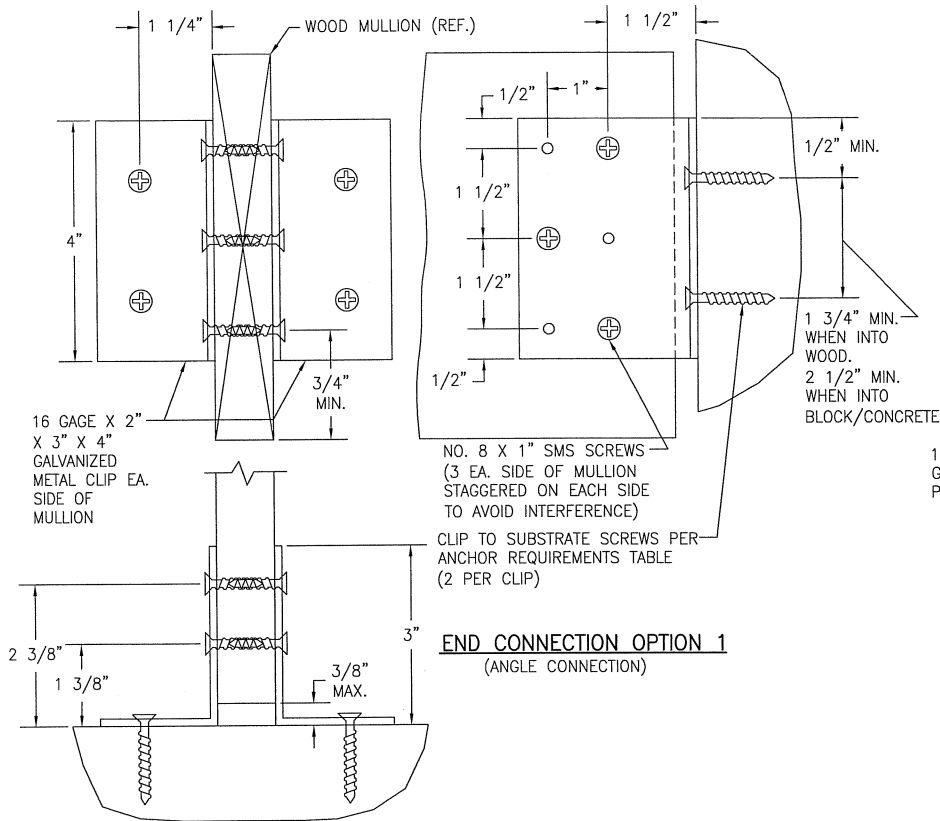
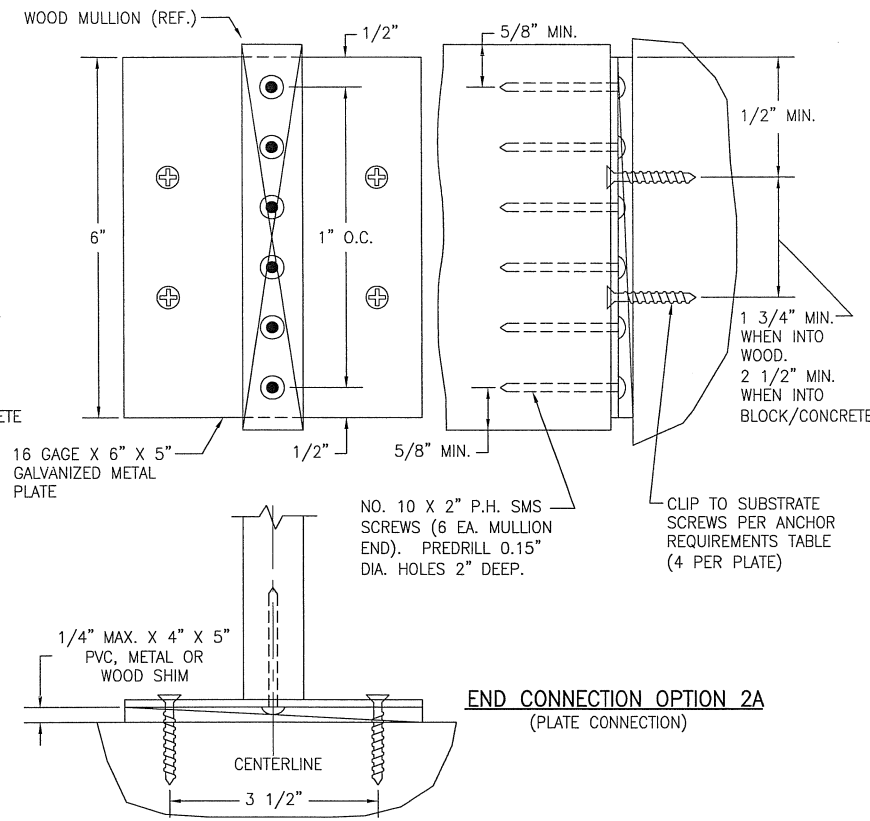
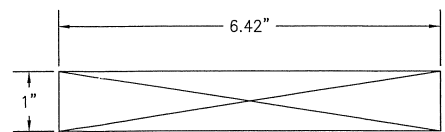




END CONNECTION OPTION 1
(ANGLE CONNECTION)



END CONNECTION OPTION 2A
(PLATE CONNECTION)



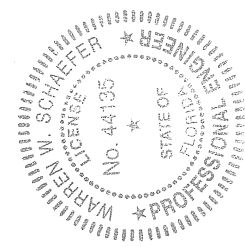
WOOD MULLION
WOOD = SELECT NORTHERN DOUGLAS FIR
G = 0.49 MIN.
F_B = 1350 PSI MINIMUM
E = 1,900,000 PSI MINIMUM

CLIP ANCHOR REQUIREMENTS TABLE

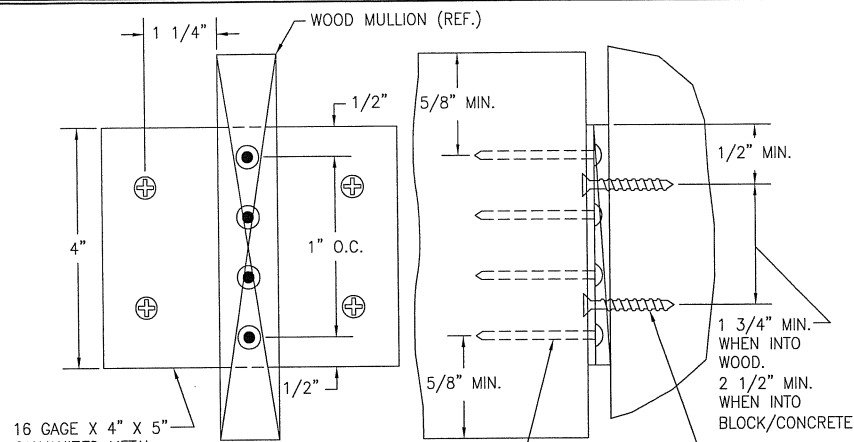
OPENING TYPE (SUBSTRATE)	CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL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

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

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.W.S.		CHECKED BY: W.W.S.	
PLOT: 1-2		DATE: 08/12/05	
NO.	REVISION DESCRIPTION	BY	DATE
A1	UPDATE TO CURRENT STANDARDS W.R.M.	W.W.S.	08/17/11
B1	UPDATE TO CURRENT STANDARDS W.R.M.	W.W.S.	07/07/15
C1	UPDATE TO CURRENT STANDARDS W.R.M.	W.W.S.	07/07/15
DRAWING TITLE: 1" X 6.42" (25.4mm X 163mm) NON-IMPACT WOOD MULLION			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: C.P. LOEWEN ENTERPRISES	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		77 HWY. 52 WEST STEINBACH, MB CANADA R5G 1B2 204-326-6446	
CERTIFICATION: JAN 08 2015	WARREN W. SCHAEFER, P.E. P.E. NO. 44135		
DRAWING NO. 1445	REV. C	SHEET NO. 1 OF 5	



16 GAGE X 4" X 5"
GALVANIZED METAL
PLATE

NO. 10 X 2" P.H. SMS
SCREWS (4 EA. MULLION
END). PREDRILL 0.15"
DIA. HOLES 2" DEEP.

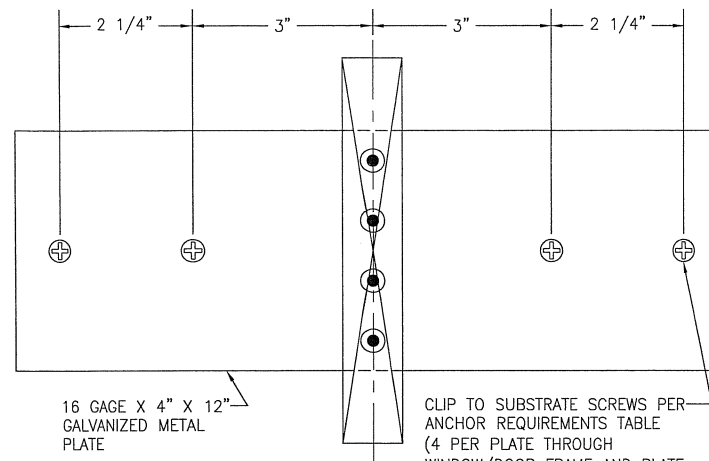
CLIP TO SUBSTRATE
SCREWS PER ANCHOR
REQUIREMENTS TABLE
(4 PER PLATE)

1/4" MAX. X 4" X 5"
PVC, METAL OR
WOOD SHIM

CENTERLINE

END CONNECTION OPTION 3A
(PLATE CONNECTION)

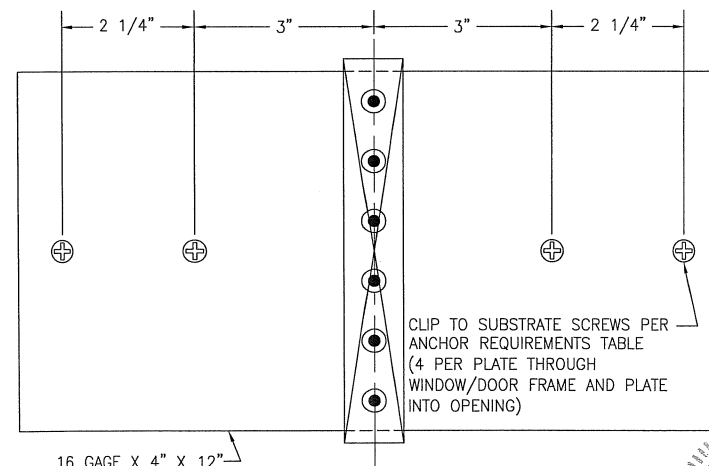
NOTE: CONNECTIONS 2B & 3B ARE TYPICALLY
USED WHEN IT IS DESIRED TO PRE-ASSEMBLE
THE MULLED UNIT PRIOR TO INSTALLATION.



16 GAGE X 4" X 12"
GALVANIZED METAL
PLATE

CLIP TO SUBSTRATE SCREWS PER
ANCHOR REQUIREMENTS TABLE
(4 PER PLATE THROUGH
WINDOW/DOOR FRAME AND PLATE
INTO OPENING)

END CONNECTION OPTION 3B
(SEE CONNECTION 3A FOR ATTACHMENT OF PLATE TO MULLION)

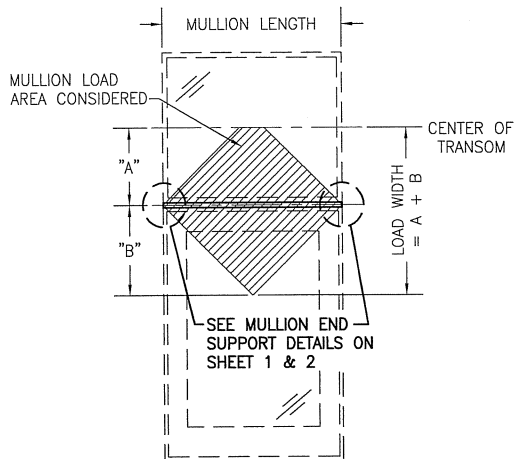


16 GAGE X 4" X 12"
GALVANIZED METAL
PLATE

CLIP TO SUBSTRATE SCREWS PER
ANCHOR REQUIREMENTS TABLE
(4 PER PLATE THROUGH
WINDOW/DOOR FRAME AND PLATE
INTO OPENING)

END CONNECTION OPTION 2B
(SEE CONNECTION 2A FOR ATTACHMENT OF PLATE TO MULLION)

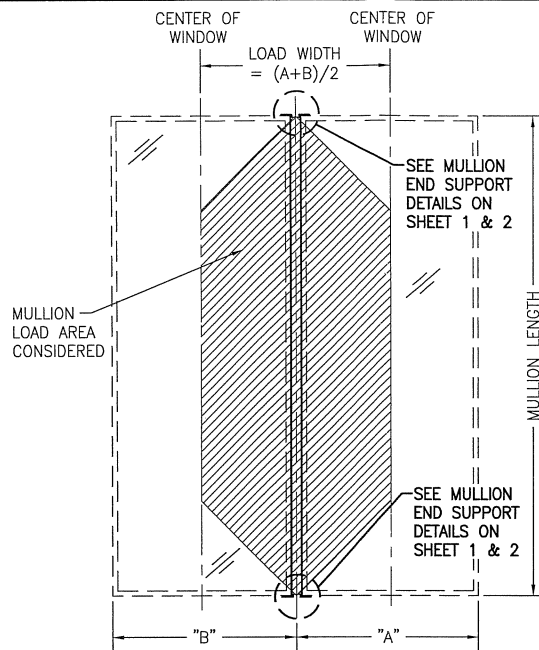
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1-2		DATE: 09/12/05	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: 1" X 6.42" (25.4mm X 163mm) NON-IMPACT WOOD MULLION			
CONSULTANTS		MANUFACTURER	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		C.P. LOEWEN ENTERPRISES	
7480 150TH COURT NORTH		77 HWY. 52 WEST	
PALM BEACH GARDENS, FL 33418		STEINBACH, MB CANADA R5G 1B2	
PHONE: 561-747-3424		204-326-6446	
STATE OF FLORIDA		STATE OF FLORIDA	
ENGINEER		ENGINEER	
NO. 44135		NO. 44135	
JAN 08 2015		JAN 08 2015	
WARREN W. SCHAEFER, P.E.		WARREN W. SCHAEFER, P.E.	
NO. 44135		NO. 44135	
DRAWING NO. 1445		REV. C	
SHEET NO. 2		OF 5	



"A" = LESSER OF (MULLION LENGTH/2) OR (TRANSOM HEIGHT/2)
 "B" = MULLION LENGTH/2

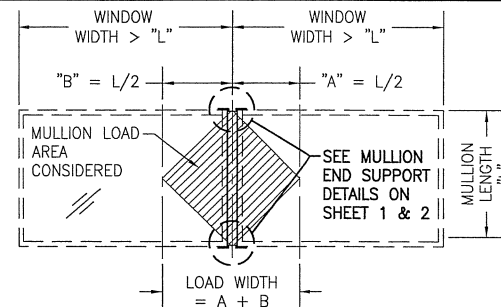
SINGLE WINDOW OR DOOR WITH FIXED TRANSOM
 (SEE LOAD TABLE 1.0)

NOTE: WINDOW/DOOR MAY BE ANY FIXED OR OPERABLE UNIT
 NOTE: MULLION MAY BE HORIZONTAL OR VERTICAL

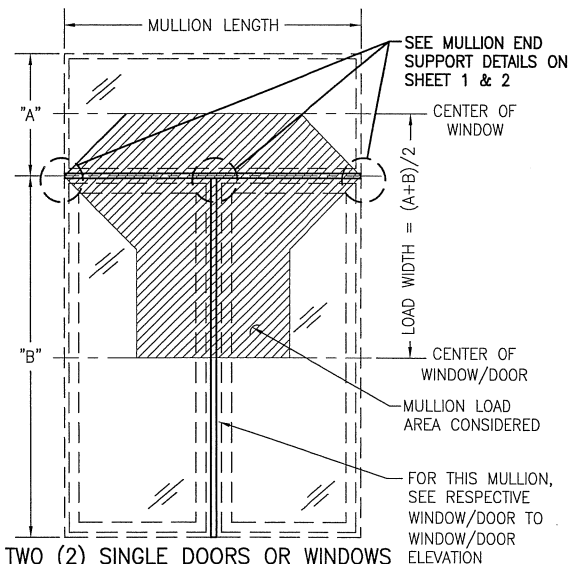


**FIXED WINDOW TO FIXED WINDOW WHEN WINDOW WIDTHS
 ARE LESS THAN OR EQUAL TO THE MULLION LENGTH**
 (SEE LOAD TABLE 1.0)

NOTE: MULLION MAY BE HORIZONTAL OR VERTICAL



**FIXED WINDOW TO FIXED WINDOW
 WHEN WINDOW WIDTHS ARE GREATER
 THAN THE MULLION LENGTH**
 (SEE LOAD TABLE 1.0)



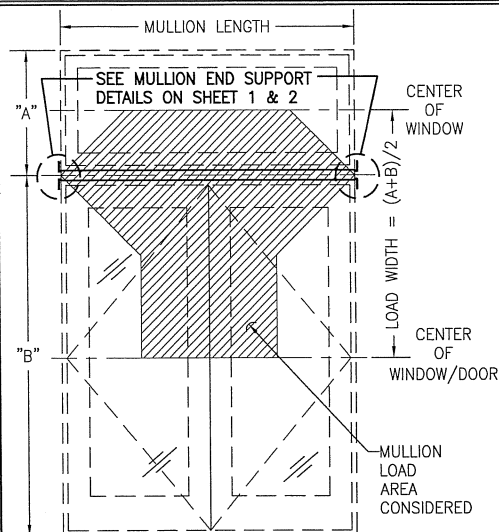
**TWO (2) SINGLE DOORS OR WINDOWS
 WITH A SINGLE FIXED TRANSOM**
 (SEE LOAD TABLE 2.0)

NOTE: DOORS/WINDOWS MAY BE OPERABLE OR FIXED.

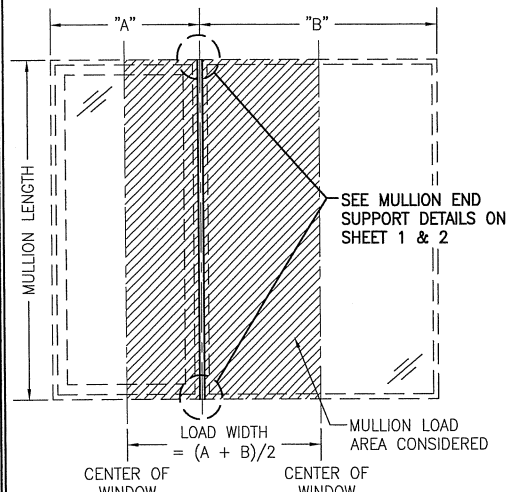
GENERAL NOTES:

1. THIS MULLION IS FOR USE WITH C.P. LOEWEN ENTERPRISES NON-IMPACT ALL WOOD WINDOWS AND DOORS.
2. THIS MULLION AND ITS CONNECTIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND NDS SPECIFICATIONS.
3. ALL ANCHORS SHALL BE INSTALLED AS SPECIFIED ON THIS DRAWING. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. ALL ANCHORS SECURING CLIPS/PLATES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
5. BUCKING, OPENINGS AND BUCKING FASTENERS MUST BE PROPERLY DESIGNED AND INSTALLED TO RESIST WIND LOADS TRANSFERRED FROM THE MULLION TO THE STRUCTURE.
6. CONNECTION OF THE WINDOWS AND DOORS TO THIS MULLION IS NOT PART OF THIS CERTIFICATION & SHALL BE DETERMINED BY OTHERS. CONNECTION SHALL BE AS REQUIRED TO PROPERLY SUPPORT THE WINDOWS/DOORS TO THE MULLION MEMBER.
7. DOORS & WINDOWS SHALL BE UNDER SEPERATE CERTIFICATION & SHALL BE LIMITED BY THOSE CERTIFICATIONS. SEE THE PRODUCTS SPECIFIC CERTIFICATION FOR THEIR USE.
8. ALLOWABLE PRESSURE ON THE MULLED UNIT SHALL BE CONTROLLED BY THE LESSER ALLOWABLE PRESSURE OF THE MULLION, OR THE INDIVIDUAL DOOR/WINDOW UNITS.
9. ANY CONDITIONS NOT COVERED IN THIS CERTIFICATION SHALL BE SUBJECT TO SEPERATE ENGINEERING REVIEW.
10. WHEN VERTICALLY STACKED, THE MANUFACTURER/INSTALLER SHALL INSURE THAT THE DEAD WEIGHT OF THE ABOVE WINDOWS WILL NOT CAUSE UNDO STRESS ON THE BELOW WINDOWS. THESE MULLIONS ARE DESIGNED TO SUPPORT WIND LOAD ONLY & ARE NOT CONSIDERED TO SUPPORT DEAD LOAD OF THE WINDOWS/DOORS.

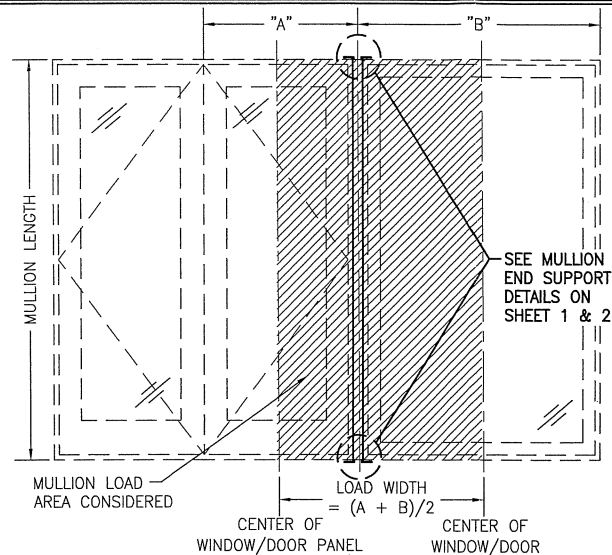
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 08/12/05	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE 1" X 6.42" (25.4mm X 163mm) NON-IMPACT WOOD MULLION			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER C.P. LOEWEN ENTERPRISES 77 HWY. 52 WEST STEINBACH, MB CANADA R5G 1B2 204-326-6446	
CERTIFICATION JAN 08 2015 WARREN M. SCHAEFER, P.E. P.E. NO. 44135		DRAWING NO. 1445 REV. C	
SHEET NO. 3 OF 5			



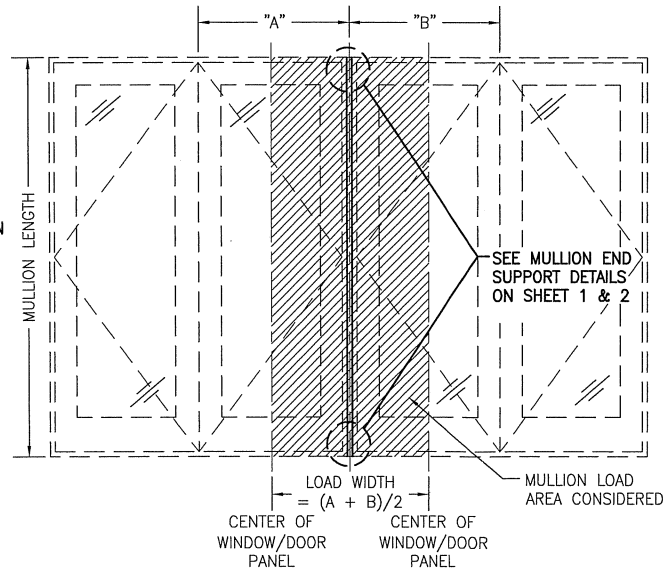
DOUBLE PANEL DOOR OR CASEMENT WINDOW WITH A SINGLE FIXED TRANSOM
(SEE LOAD TABLE 2.0)



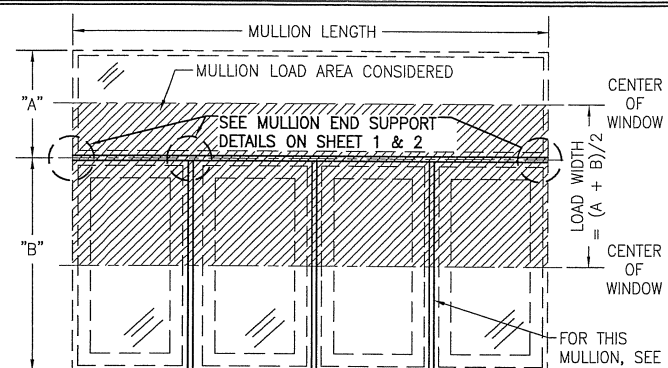
SINGLE OPERABLE DOOR/WINDOW TO A SINGLE OPERABLE OR FIXED DOOR/WINDOW
(SEE LOAD TABLE 3.0)



DOUBLE PANEL DOOR/WINDOW TO A SINGLE DOOR OR FIXED SIDELIGHT
(SEE LOAD TABLE 3.0)

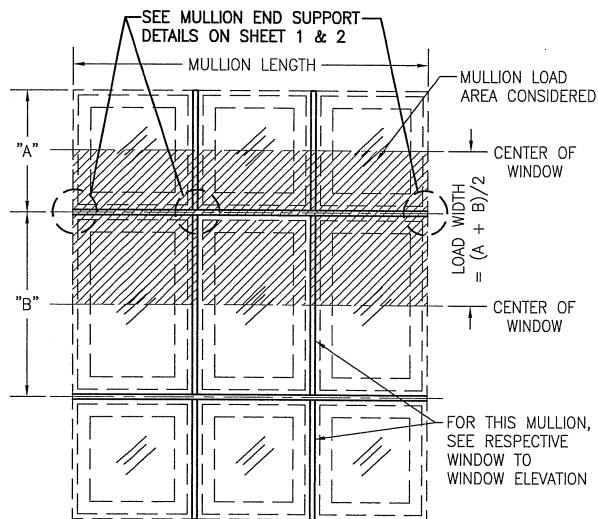


DOUBLE PANEL DOOR/WINDOW TO A DOUBLE PANEL DOOR/WINDOW
(SEE LOAD TABLE 3.0)



MULTIPLE WINDOWS/DOORS WITH TRANSOM
(SEE LOAD TABLE 3.0)

NOTES: 1. TRANSOM MAY BE SINGLE OR MULTIPLE WINDOWS.
2. CONTINUOUS MULLION MAY BE HORIZONTAL OR VERTICAL (HORIZONTAL SHOWN).



MULTIPLE WINDOWS (SEE LOAD TABLE 3.0)
(CONTINUOUS MULLION MAY BE HORIZONTAL OR VERTICAL (HORIZONTAL SHOWN))

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 09/12/05	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: 1" X 6.42" (25.4mm X 163mm) NON-IMPACT WOOD MULLION			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: C.P. LOEWEN ENTERPRISES	
7480 150TH COURT NORTH		77 HWY. 52 WEST	
PALM BEACH GARDENS, FL 33418		STEINBACH, MB CANADA R5G 1B2	
PHONE: 561-744-3424		204-326-6446	
CERTIFICATION: W. W. SCHAEFER, P.E. No. 44135		REV. C	
DRAWING NO. 1445		SHEET NO. 4 OF 5	

LOAD TABLE 1.0			
MAXIMUM MULLION LENGTH (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)	
		CONNECTION OPTION	
		OPTIONS 1, 3A & 3B	OPTIONS 2A & 2B
54	54	85.0	85.0
60	60	85.0	76.8
	54	85.0	77.6
	48	85.0	80.0
	42	85.0	84.4
72	72	55.0	53.3
	66	59.9	53.7
	60	65.9	54.9
	54	73.3	56.9
	48	82.4	60.0
	42	85.0	64.5
	36	85.0	71.1
	30	85.0	80.8
84	24	85.0	85.0
	72	40.4	40.0
	66	44.0	41.1
	60	48.4	42.7
	54	53.8	44.9
	48	60.6	48.0
	42	69.2	52.2
	36	80.7	58.2
	30	85.0	66.8
	24	85.0	80.0
96	18	85.0	85.0
	72	30.9	30.9
	66	33.7	33.2
	60	37.1	34.9
	54	41.2	37.1
	48	46.4	40.0
	42	53.0	43.9
	36	61.8	49.2
	30	74.2	56.9
	24	85.0	68.6
108	18	85.0	85.0
	60	29.3	29.3
	54	32.6	31.6
	48	36.6	34.3
	42	41.9	37.8
	36	48.8	42.7
	30	58.6	49.5
	24	73.3	60.0
120	18	85.0	77.6
	60	23.7	23.7
	54	26.4	26.4
	48	29.7	29.7
	42	33.9	33.2
	36	39.6	37.6
	30	47.5	43.9
	24	59.3	53.3
	18	79.1	69.2

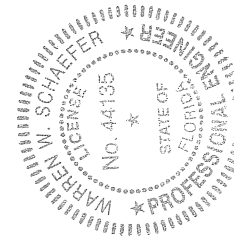
MAXIMUM MULLION LENGTH (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)	
		CONNECTION OPTION	
		OPTIONS 1, 3A & 3B	OPTIONS 2A & 2B
36	72	85.0	76.2
	66	85.0	83.1
	60	85.0	85.0
48	72	85.0	57.1
	66	85.0	62.3
	60	85.0	68.6
	54	85.0	76.2
	48	85.0	85.0
60	72	68.6	45.7
	66	74.8	49.9
	60	82.3	54.9
	54	85.0	61.0
	48	85.0	68.6
	42	85.0	78.4
72	36	85.0	85.0
	72	55.0	38.1
	66	59.9	41.6
	60	65.9	45.7
	54	73.3	50.8
	48	82.4	57.1
	42	85.0	65.3
84	36	85.0	76.2
	72	40.4	32.7
	66	44.0	35.6
	60	48.4	39.2
	54	53.8	43.5
	48	60.6	49.0
	42	69.2	56.0
96	36	80.7	65.3
	72	30.9	28.6
	66	33.7	31.2
	60	37.1	34.3
	54	41.2	38.1
	48	46.4	42.9
	42	53.0	49.0
	36	61.8	57.1

INSTRUCTIONS FOR TABLE USE:

1. DETERMINE REQUIRED WIND PRESSURE FOR THE OPENING.
2. DETERMINE THE MULLION LENGTH & LOAD WIDTH USING THE APPLICABLE ELEVATION ON SHEETS 3 & 4.
3. CHOOSE A CONNECTION TYPE THAT MEETS OR EXCEEDS THE REQUIRED PRESSURE FOR THE APPLICABLE MULLION LENGTH & LOAD WIDTH CONDITIONS.

THESE LOAD TABLES ARE CERTIFIED AS CORRECT IN CONTENT. HOWEVER, CHOOSING OF THE CORRECT MULLION & CONNECTION FROM THESE TABLES FOR ITS SPECIFIC USE IS THE RESPONSIBILITY OF THOSE USING THE TABLES AND SHOULD BE VERIFIED BY THE BUILDING OFFICIAL OR A FLORIDA CERTIFIED ENGINEER.

LOAD TABLE 3.0							
MAXIMUM MULLION LENGTH (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)		MAXIMUM MULLION LENGTH (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)	
		CONNECTION OPTION				CONNECTION OPTION	
		OPTIONS 1, 3A & 3B	OPTIONS 2A & 2B			OPTIONS 1, 3A & 3B	OPTIONS 2A & 2B
36	72	80.0	53.3	84	72	34.3	22.9
	66	85.0	58.2		66	37.4	24.9
	60	85.0	64.0		60	41.1	27.4
	54	85.0	71.1		54	45.7	30.5
	48	85.0	80.0		48	51.4	34.3
	42	85.0	85.0		42	58.8	39.2
48	72	60.0	40.0	96	36	68.6	45.7
	66	65.5	43.6		30	82.3	54.9
	60	72.0	48.0		24	85.0	68.6
	54	80.0	53.3		18	85.0	85.0
	48	85.0	60.0		72	30.0	20.0
	42	85.0	68.6		66	32.7	21.8
60	36	85.0	80.0	108	60	36.0	24.0
	30	85.0	85.0		54	40.0	26.7
	72	48.0	32.0		48	45.0	30.0
	66	52.4	34.9		42	51.4	34.3
	60	57.6	38.4		36	60.0	40.0
	54	64.0	42.7		30	72.0	48.0
	48	72.0	48.0		24	85.0	60.0
	42	82.3	54.9		18	85.0	80.0
	36	85.0	64.0		60	29.3	21.3
	30	85.0	76.8		54	32.6	23.7
	24	85.0	85.0		48	36.6	26.7
	72	72	40.0		26.7	120	42
66		43.6	29.1	36	48.8		35.6
60		48.0	32.0	30	58.6		42.7
54		53.3	35.6	24	73.3		53.3
48		60.0	40.0	18	85.0		71.1
42		68.6	45.7	48	29.7		24.0
36		80.0	53.3	42	33.9		27.4
30		85.0	64.0	36	39.6		32.0
24		85.0	80.0	30	47.5		38.4
18		85.0	85.0	24	59.3		48.0
—		—	—	18	79.1		64.0



DRAWING NO. 1445	SHEET NO. 5 OF 5	REV. C	CERTIFICATION JAN 08 2015	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER C.P. LOEWEN ENTERPRISES 77 HWY. 52 WEST STEINBACH, MB CANADA R5G 1B2 204-326-6446	DRAWING TITLE 1" X 6.42" (25.4mm X 163mm) NON-IMPACT WOOD MULLION				
							NO.	REVISION	DESCRIPTION	BY	DATE
PLOT: 1=1		DRAWN BY W.W.S.		CHECKED BY W.W.S.		DATE: 09/12/05					