

**GENERAL NOTES:**

1. THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ) & IS LARGE MISSILE IMPACT RATED.
5. IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
6. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
7. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  MAY BE APPLIED PER THE ASCE-7 STANDARD.
8. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
9. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. PRODUCT ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
10. CERTIFICATION OF THIS PRODUCT SHALL BE CONSIDERED VOID IF IT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF IT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT.
11. ALL WOOD MEMBERS OF THIS PRODUCT THAT MAY POSSIBLY COME INTO CONTACT WITH MASONRY OR CONCRETE SUBSTRATES, ARE SUBJECT TO MOISTURE &/OR ARE SUBJECT TO THE OUTSIDE ENVIRONMENT SHALL BE OF AN APPROVED DURABLE SPECIES OR BE TREATED IN AN APPROVED METHOD WITH AN APPROVED PRESERVATIVE PER FBC REQUIREMENTS.

**FRAME ANCHOR REQUIREMENTS TABLE**

| OPENING TYPE<br>(SUBSTRATE)                          | FRAME/FIN/BRICK TO OPENING<br>FASTENER TYPE | MINIMUM<br>EMBED | MINIMUM<br>EDGE DIST. |
|------------------------------------------------------|---------------------------------------------|------------------|-----------------------|
| <b>FRAME SCREWS</b>                                  |                                             |                  |                       |
| MIN. 2X4 WOOD FRAME OR BUCK<br>(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.<br>C-90 CMU              | (1) 1/4" CONCRETE SCREW                     | 1 1/4"           | 2"                    |
| 2500 PSI CONCRETE                                    | (1) 1/4" CONCRETE SCREW                     | 1 1/2"           | 2"                    |
| <b>HEAD &amp; SILL STRIKE SCREWS</b>                 |                                             |                  |                       |
| MIN. 2X4 WOOD FRAME OR BUCK<br>(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"                  |
| 2500 PSI CONCRETE                                    | (1) 3/16" CONCRETE SCREW                    | 1 1/2"           | 2"                    |
| <b>HINGE SCREWS</b>                                  |                                             |                  |                       |
| MIN. 2X4 WOOD FRAME OR BUCK<br>(MIN. GR. 3 & G=0.55) | NO. 12 SMS OR WOOD SCREW                    | 1 1/4"           | 3/4"                  |
| MIN. 18 GA. 33 KSI METAL STUD                        | NO. 12 GR. 5 SELF TAP/DRILL SCREW           | FULL             | 1/2"                  |
| MIN. 1/8" THK A36 STEEL                              | NO. 12 GR. 5 SELF TAP/DRILL SCREW           | FULL             | 1/2"                  |
| MIN. 1/8" THK 6063-T5 ALUM.                          | NO. 12 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"                    |
| <b>NAILING FIN &amp; BRICK MOLD FASTENERS</b>        |                                             |                  |                       |
| MIN. 2X4 WOOD FRAME OR BUCK<br>(MIN. GR. 3 & G=0.55) | NO. 8 SMS SCREW                             | 1 3/8"           | 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"                  |

(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.).

**ALLOWABLE SIZE & DESIGN PRESSURE  
(INDIVIDUAL DOORS)**

| MAX.<br>FRAME<br>HEIGHT<br>(IN.)                                                                                                                                            | MAX.<br>FRAME<br>WIDTH<br>(IN.) | MAX.<br>D.L.O.<br>HEIGHT<br>(IN.) | MAX.<br>D.L.O.<br>WIDTH<br>(IN.) | ALLOWABLE<br>PRESSURE<br>(PSF) |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|------|
|                                                                                                                                                                             |                                 |                                   |                                  | POS.                           | NEG. |
| (1) SINGLE OPERABLE DOORS<br>(ALL SHAPES EXCEPT HALF ROUND TOP)                                                                                                             |                                 |                                   |                                  |                                |      |
| 111 7/16                                                                                                                                                                    | 37 7/8                          | 95 13/16                          | 27 3/8                           | 70.0                           | 70.0 |
|                                                                                                                                                                             | 34 7/8                          | 95 13/16                          | 24 3/8                           | 70.0                           | 75.0 |
| 99 7/16                                                                                                                                                                     | 43 7/8                          | 83 13/16                          | 33 3/8                           | 70.0                           | 70.0 |
|                                                                                                                                                                             | 40 7/8                          | 83 13/16                          | 30 3/8                           | 70.0                           | 75.0 |
| (1) DOUBLE OPERABLE DOORS<br>(ALL SHAPES EXCEPT HALF ROUND TOP)                                                                                                             |                                 |                                   |                                  |                                |      |
| 111 7/16                                                                                                                                                                    | 75 1/16                         | 95 13/16                          | 27 3/8                           | 70.0                           | 70.0 |
|                                                                                                                                                                             | 69 1/16                         | 95 13/16                          | 24 3/8                           | 70.0                           | 75.0 |
| 99 7/16                                                                                                                                                                     | 87 1/16                         | 83 13/16                          | 33 3/8                           | 70.0                           | 70.0 |
|                                                                                                                                                                             | 81 1/16                         | 83 13/16                          | 30 3/8                           | 70.0                           | 75.0 |
| SINGLE FIXED PANEL DOORS<br>(ALL SHAPES)                                                                                                                                    |                                 |                                   |                                  |                                |      |
| 111 7/16                                                                                                                                                                    | 43 7/8                          | 95 13/16                          | 33 3/8                           | 70.0                           | 70.0 |
|                                                                                                                                                                             | 40 7/8                          | 95 13/16                          | 30 3/8                           | 70.0                           | 75.0 |
| SINGLE OPERABLE DOORS<br>(HALF ROUND TOP)                                                                                                                                   |                                 |                                   |                                  |                                |      |
| 111 7/16                                                                                                                                                                    | 37 7/8                          | 95 13/16                          | 27 3/8                           | 50.0                           | 50.0 |
|                                                                                                                                                                             | 34 7/8                          | 95 13/16                          | 24 3/8                           | 54.3                           | 54.3 |
|                                                                                                                                                                             | 31 7/8                          | 95 13/16                          | 21 3/8                           | 59.4                           | 59.4 |
|                                                                                                                                                                             | 28 7/8                          | 95 13/16                          | 18 3/8                           | 65.6                           | 65.6 |
|                                                                                                                                                                             | 26 7/8                          | 95 13/16                          | 16 3/8                           | 70.0                           | 70.0 |
| DOUBLE OPERABLE DOORS<br>(HALF ROUND TOP)                                                                                                                                   |                                 |                                   |                                  |                                |      |
| 111 7/16                                                                                                                                                                    | 75 1/16                         | 95 13/16                          | 27 3/8                           | 50.0                           | 50.0 |
|                                                                                                                                                                             | 69 1/16                         | 95 13/16                          | 24 3/8                           | 54.3                           | 54.3 |
|                                                                                                                                                                             | 63 1/16                         | 95 13/16                          | 21 3/8                           | 59.5                           | 59.5 |
|                                                                                                                                                                             | 57 1/16                         | 95 13/16                          | 18 3/8                           | 65.8                           | 65.8 |
|                                                                                                                                                                             | 53 1/16                         | 95 13/16                          | 16 3/8                           | 70.0                           | 70.0 |
| (1) WHEN DISTANCE FROM TOP OF DOOR FRAME TO<br>THE FRAME RADIUS SPRING LINE EXCEEDS 12", DOOR<br>SIZE & PRESSURE RATING SHALL BE AS RESTRICTED<br>FOR HALF ROUND TOP DOORS. |                                 |                                   |                                  |                                |      |

(1) WHEN DISTANCE FROM TOP OF DOOR FRAME TO THE FRAME RADIUS SPRING LINE EXCEEDS 12", DOOR SIZE & PRESSURE RATING SHALL BE AS RESTRICTED FOR HALF ROUND TOP DOORS.

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

**ALLOWABLE SIZE & DESIGN PRESSURE  
(TRANSOM MULLED UNIT)**

| MAX.<br>FRAME<br>WIDTH<br>(IN.) | ALLOWABLE<br>PRESSURE<br>(PSF) |      |
|---------------------------------|--------------------------------|------|
|                                 | POS.                           | NEG. |
| <b>DOUBLE DOOR</b>              |                                |      |
| 87 1/16                         | 70.0                           | 70.0 |
| 81 1/16                         | 70.0                           | 75.0 |
| <b>SINGLE DOOR</b>              |                                |      |
| 43 7/8                          | 70.0                           | 70.0 |
| 40 7/8                          | 70.0                           | 75.0 |

**NOTES:**

1. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURES SHOWN IN THIS TABLE & THOSE SPECIFIED FOR THE INDIVIDUAL UNITS WITHIN THE MULLED UNIT.

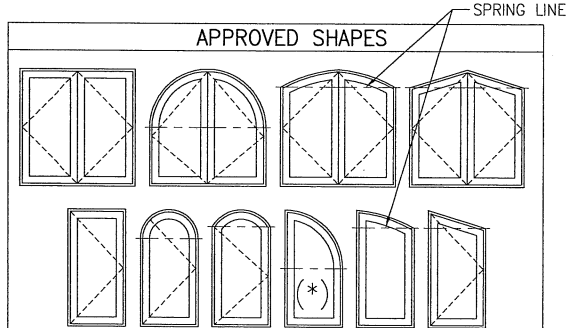
**ALLOWABLE DESIGN PRESSURE  
(SIDE BY SIDE MULLED UNITS)**

WORSE CASE ALLOWABLE DESIGN PRESSURE RATING OF THE INDIVIDUAL UNITS WITHIN THE MULLED UNIT SHALL CONTROL AS ALLOWABLE DESIGN PRESSURE ON THE MULLED UNIT, SEE INDIVIDUAL UNIT SIZE/PRESSURE TABLE ON THIS SHEET.

**HINGE REQUIREMENTS**

| MAX. FRAME<br>HEIGHT (IN.) | QUANTITY<br>PER PANEL |
|----------------------------|-----------------------|
| OVER 83                    | 5                     |
| 83                         | 4                     |

NOTE: FOR HINGE REQUIREMENTS, THE "FRAME HEIGHT" IS CONSIDERED TO BE FULL FRAME HEIGHT FOR RECTANGULAR UNITS OR DISTANCE FROM THE BASE OF FRAME TO FRAME SPRINGLINE FOR SHAPED UNITS

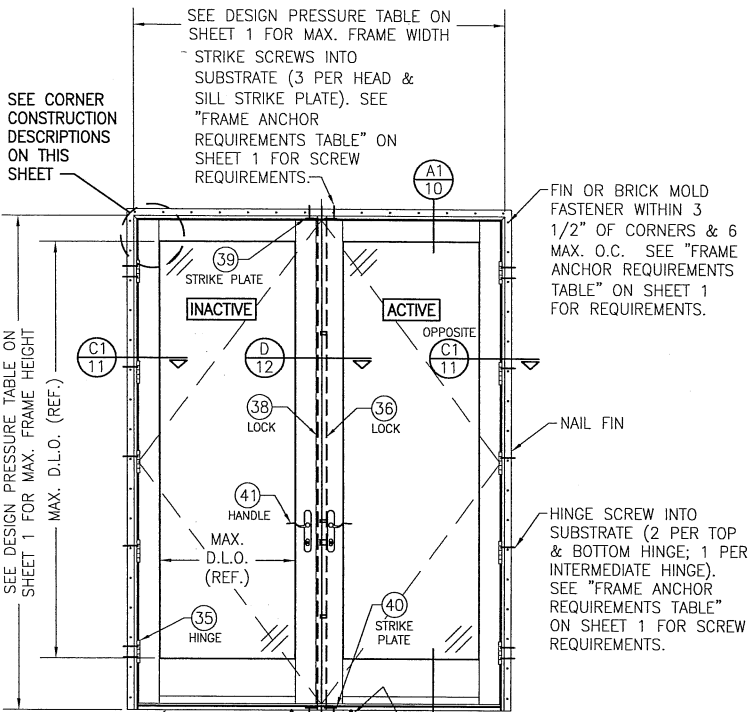
**APPROVED SHAPES****NOTES:**

1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED IN THIS DRAWING.
2. ALL SHAPED UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE RECTANGULAR UNITS & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE RECTANGULAR UNIT.
3. THE SHAPES LABELED (\*) ARE ONLY APPLICABLE TO FIXED PANEL DOORS (NOT APPLICABLE TO OPERABLE DOORS).
4. SPRING LINE LOCATION = END OF STRAIGHT JAMB

|                                 |                       |
|---------------------------------|-----------------------|
| DRAWN BY:<br>W.R.M.             | CHECKED BY:<br>W.W.S. |
| PLOT:<br>1-24                   | DATE:<br>01/19/11     |
| DATE<br>08/17/11                | BY<br>W.R.M.          |
| REVISION DESCRIPTION            | BY                    |
| A1 UPDATE TO CURRENT STANDARDS  | W.R.M.                |
| B1 CHANGE FRAME CLAD            | W.W.S.                |
| D1 CHANGED MATERIAL FOR PART #8 | W.W.S.                |
| E1 ADDED THICKER STILES/RAILS   | W.W.S.                |
| NO                              |                       |

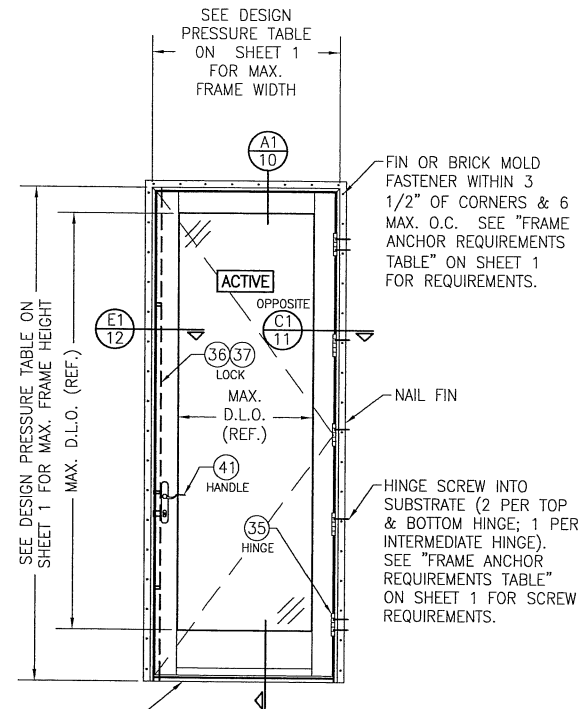
|                                                                                                                                                  |                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR                                                                                                     | MANUFACTURER<br>C.P. LOEWEN ENTERPRISES<br>77 HWY 52 WEST<br>STEINBACH, MB, CANADA R5G 1B2<br>204-326-6446 |
| CONSULTANTS<br>W. W. SCHAEFER ENGINEERING<br>& CONSULTING, P.A.<br>7480 150TH COURT NORTH<br>PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424 |                                                                                                            |

|                      |           |
|----------------------|-----------|
| DRAWING NO.<br>1640A | REV.<br>F |
| SHEET NO.<br>1       | OF 18     |



SET SILL IN A BED OF SEALANT PER SECTION A1/10

**EXTERIOR ELEVATION:  
DOUBLE RECTANGULAR DOOR**  
SCALE: 1/2" = 1'-0"  
(NAIL FIN MOUNT CONDITION)



SET SILL IN A BED OF SEALANT PER SECTION A1/10

**EXTERIOR ELEVATION:  
SINGLE RECTANGULAR DOOR**  
SCALE: 1/2" = 1'-0"  
(NAIL FIN MOUNT CONDITION)

#### CORNER CONSTRUCTION:

**RECTANGULAR UNIT FRAME:** MEMBERS ARE COPED, BUTTED AND JOINED WITH (2)TWO 16GA. X 7/16" X 2" STAPLES & (2)TWO NO. 8 X 2 1/2" WOOD SCREWS THROUGH THE VERTICAL FRAME MEMBERS INTO THE HORIZONTAL MEMBER & (1)ONE NO. 8 X 2 1/2" WOOD SCREW THROUGH THE HORIZONTAL MEMBER INTO THE VERTICAL MEMBERS. CORNERS ARE SEALED WITH POLYURETHANE SEALANT.

**SHAPED FRAME (CAMBER TOP):** HEAD TO JAMB MEMBERS ARE COPED, BUTTED AND JOINED WITH (3)THREE NO. 8 X 2 1/2" WOOD SCREWS THROUGH THE VERTICAL MEMBER INTO THE HORIZONTAL MEMBERS & (3)THREE NO. 8 X 2 1/2" WOOD SCREWS THROUGH THE VERTICAL MEMBERS INTO THE HORIZONTAL MEMBERS. SILL TO JAMB MEMBERS ARE COPED, BUTTED, AND JOINED WITH (3)THREE NO. 8 X 2 1/2" WOOD SCREWS THROUGH THE VERTICAL MEMBERS INTO THE HORIZONTAL MEMBERS & (1)ONE NO. 8 X 2 1/2" WOOD SCREW THROUGH THE HORIZONTAL MEMBERS INTO THE SILL MEMBER. CORNERS ARE SEALED WITH POLYURETHANE SEALANT AND A FOAM PAD AT THE SILL.

**SHAPED FRAME (ROUND TOP):** HEAD TO JAMB MEMBERS ARE COPED, BUTTED, POCKET HOLE DRILLED AND JOINED WITH (3)THREE NO. 8 X 2" WOOD SCREWS. ADDITIONALLY A 0.039" X 2 3/4" X 10" GALVANIZED PLATE WAS SECURED TO EACH FRAME MEMBER WITH (6)SIX 3/8" X 1/2" STAPLES. SILL TO JAMB MEMBERS ARE COPED, BUTTED, AND JOINED WITH (3)THREE NO. 8 X 2 1/2" WOOD SCREWS THROUGH THE VERTICAL MEMBERS INTO THE HORIZONTAL MEMBERS & (1)ONE NO. 8 X 2 1/2" WOOD SCREW THROUGH THE HORIZONTAL MEMBERS INTO THE SILL MEMBER. CORNERS ARE SEALED WITH POLYURETHANE SEALANT AND A FOAM PAD AT THE SILL.

**RECTANGULAR TOP RAIL TO STILE:** MEMBERS ARE SQUARE CUT, BUTTED AND JOINED WITH (2)TWO #5/8" X 6" DOWELS. CORNERS ARE SEALED WITH POLYURETHANE SEALANT.

**SHAPED TOP RAIL TO STILE:** MEMBERS ARE SQUARE CUT, BUTTED AND JOINED WITH (2)TWO #5/8" X 6" DOWELS. CORNERS ARE SEALED WITH POLYURETHANE SEALANT.

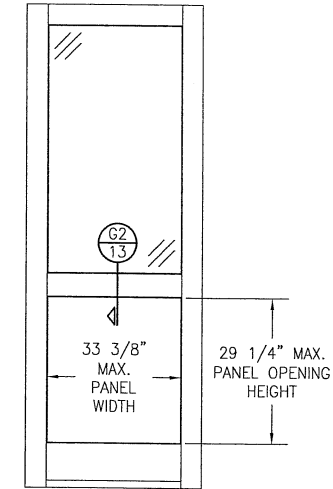
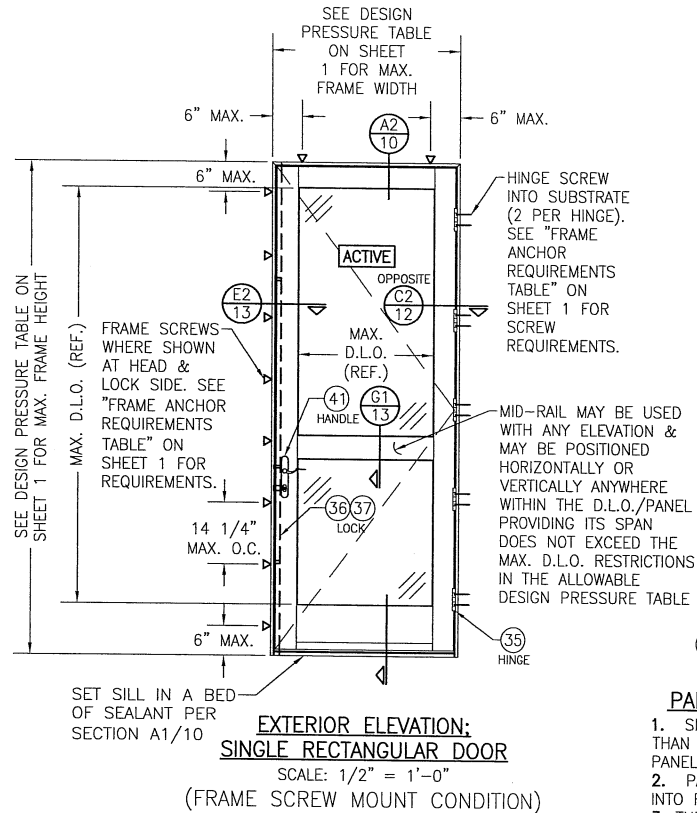
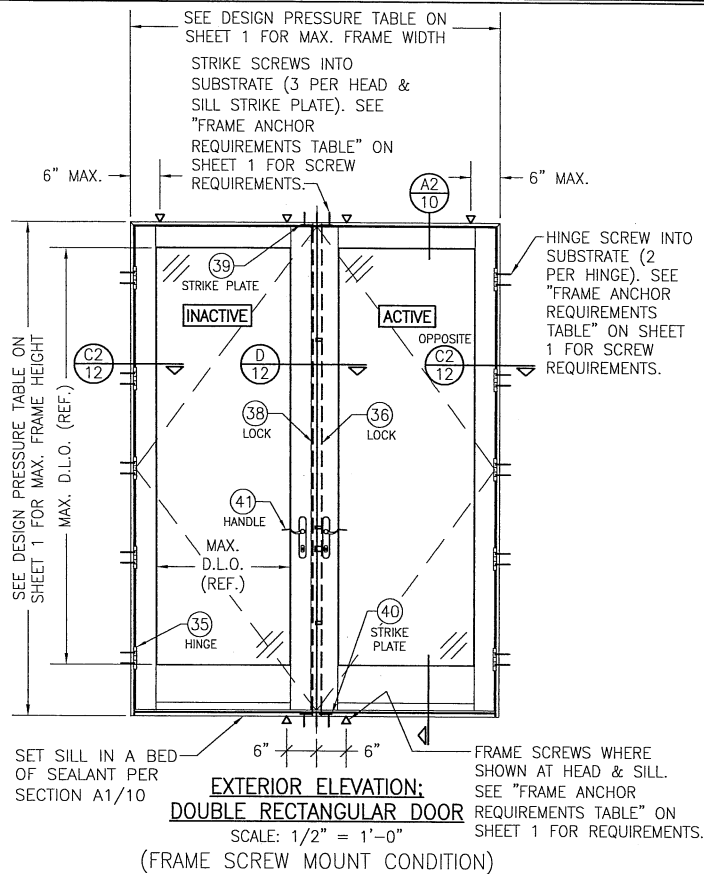
**BOTTOM RAIL TO STILE:** MEMBERS ARE SQUARE CUT, BUTTED AND JOINED WITH (4)FOUR #5/8" X 6" DOWELS. CORNERS ARE SEALED WITH POLYURETHANE SEALANT.

**RECTANGULAR TOP FRAME CLAD:** MEMBERS ARE MITERED TOGETHER & JOINED VIA A CORNER KEY (ITEM #31) & WITH (1)ONE NO. 6 X 1 1/2" SMS SCREW PER CORNER. CORNERS ARE SEALED WITH POLYURETHANE SEALANT.

**SHAPED TOP FRAME CLAD:** MEMBERS ARE MITERED TOGETHER & JOINED VIA A CORNER KEY (ITEM #31) & WITH (1)ONE NO. 6 X 1 1/2" SMS SCREW PER CORNER. CORNERS ARE SEALED WITH POLYURETHANE SEALANT.

**PANEL CLAD:** MEMBERS ARE COPED & BUTTED TOGETHER & SECURED TO THE SASH. CORNERS ARE SEALED WITH POLYURETHANE SEALANT.

|                                                                                                        |    |                                               |     |
|--------------------------------------------------------------------------------------------------------|----|-----------------------------------------------|-----|
| DRAWN BY: W.R.M.                                                                                       |    | CHECKED BY: W.W.S.                            |     |
| PLOT: 1-24                                                                                             |    | DATE: 01/19/11                                |     |
| DATE                                                                                                   | BY | REVISION DESCRIPTION                          | NO. |
|                                                                                                        |    |                                               |     |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR                                            |    |                                               |     |
| CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)                                   |    | MANUFACTURER: C.P. LOEWEN ENTERPRISES         |     |
| 7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418                                                   |    | 77 HWY 52 WEST, STEINBACH, MB, CANADA R5G 1B2 |     |
| PHONE: 561-744-3424                                                                                    |    | 204-326-6446                                  |     |
| LICENSE NO. 44135<br>STATE OF FLORIDA<br>PROFESSIONAL ENGINEER<br>WARREN W. SCHAEFER<br>P.E. NO. 14135 |    |                                               |     |
| DRAWING NO. 1640A                                                                                      |    | REV. E                                        |     |
| SHEET NO. 2                                                                                            |    | OF 18                                         |     |



**EXTERIOR ELEVATION:  
PARTIAL WOOD PANEL**

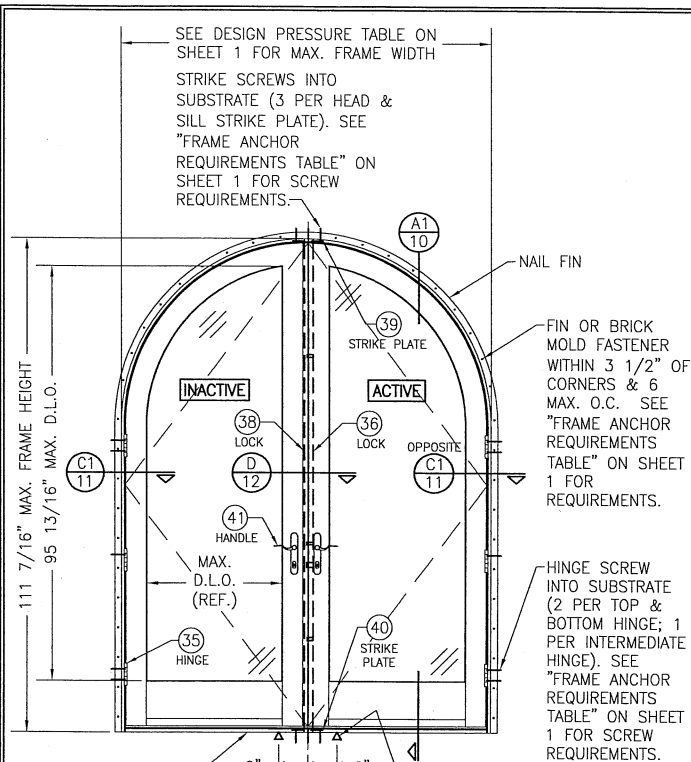
SCALE: 1/2" = 1'-0"

(SEE SINGLE DOOR ELEVATIONS FOR DOOR DETAIL AND INSTALLATION NOT SHOWN)

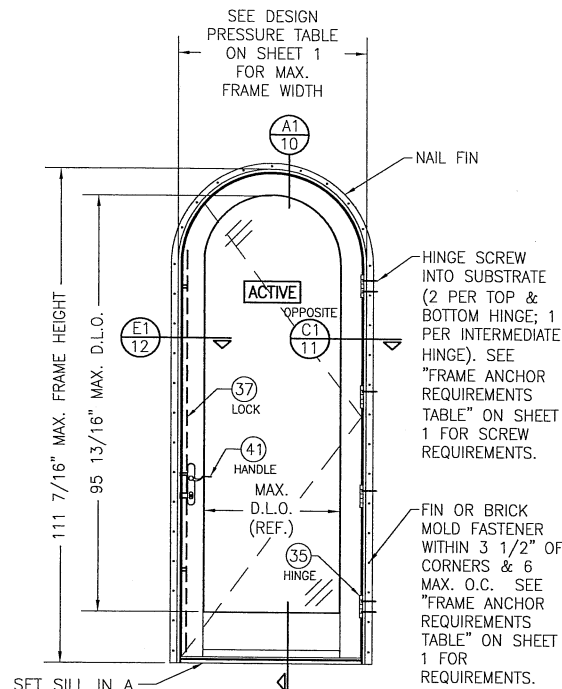
**PANEL NOTES:**

1. SINGLE PANEL CONDITION SHOWN, MORE THAN ONE PANEL MAY EXIST IN A SINGLE DOOR PANEL WHEN MULTIPLE MID-RAILS ARE USED.
2. PANEL ONLY IS SHOWN. FOR INSTALLATION INTO FRAME, SEE OTHER ELEVATIONS.
3. THESE PANEL CONDITIONS APPLY WITH BOTH OPERABLE & FIXED PANEL DOORS
4. RECTANGULAR CONDITION SHOWN, SHAPED CONDITIONS ALSO APPLY.

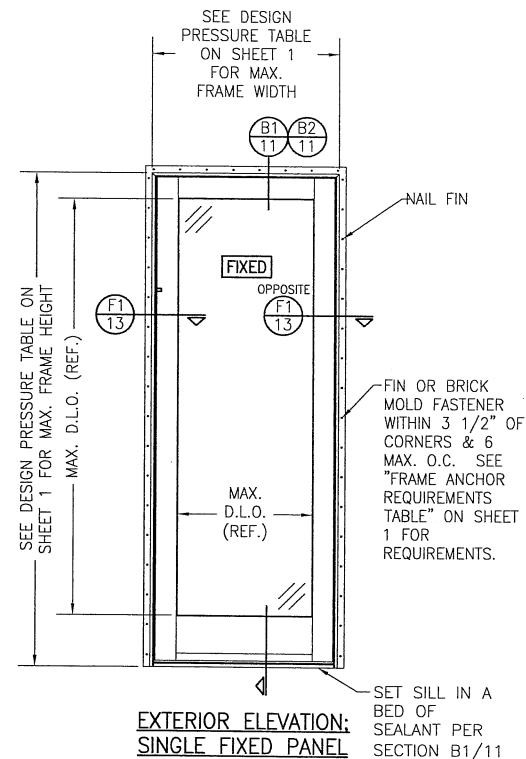
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|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| DRAWN BY:<br>W.S.M.                                                                                                                                        | CHECKED BY:<br>W.S.M. |
| PLT:<br>1-24                                                                                                                                               | DATE:<br>01/19/11     |
| DATE                                                                                                                                                       |                       |
| BY                                                                                                                                                         |                       |
| REVISION DESCRIPTION                                                                                                                                       |                       |
| NO.                                                                                                                                                        |                       |
| DRAWING TITLE<br>ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR                                                                                              |                       |
| MANUFACTURER<br>C.P. LOEWEN ENTERPRISES<br>77 HWY 52 WEST<br>STEINBACH, MB, CANADA R5G 1B2<br>204-326-6446                                                 |                       |
| CONSULTANTS<br>W. W. SCHAEFER ENGINEERING<br>& CONSULTING, P.A. (CA 6809)<br>7480 150TH COURT NORTH<br>PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424 |                       |
| <div style="text-align: center;">  </div>                             |                       |
| DRAWING NO.<br>1640A                                                                                                                                       | REV.<br>F             |
| SHEET NO.<br>3                                                                                                                                             | OF 18                 |



**EXTERIOR ELEVATION:**  
**DOUBLE HALF ROUND DOOR**  
SCALE: 1/2" = 1'-0"  
(NAIL FIN MOUNT CONDITION)



**EXTERIOR ELEVATION:**  
**SINGLE HALF ROUND DOOR**  
SCALE: 1/2" = 1'-0"  
(NAIL FIN MOUNT CONDITION)

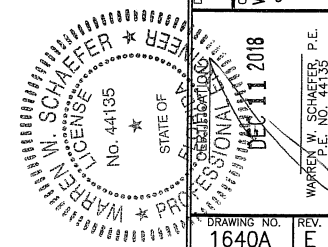


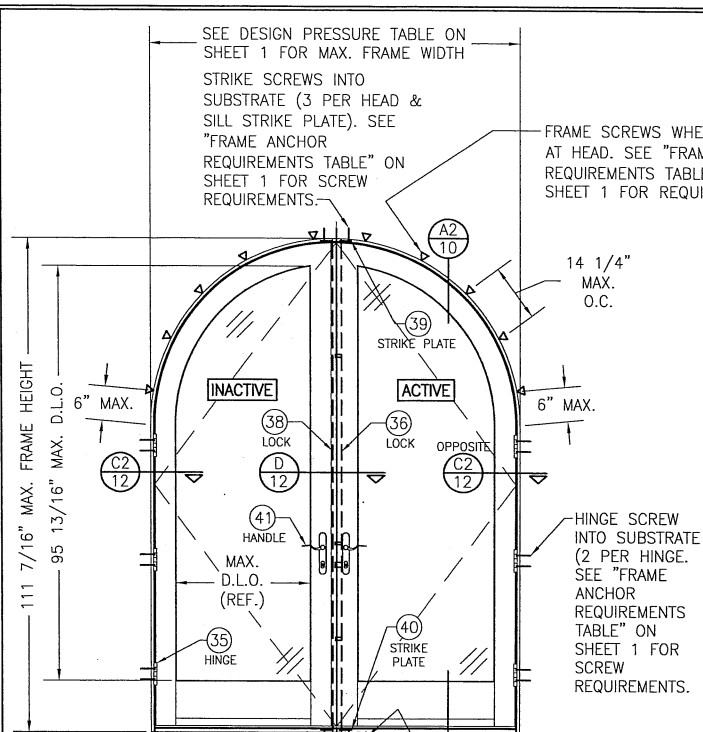
**EXTERIOR ELEVATION:**  
**SINGLE FIXED PANEL**

SCALE: 1/2" = 1'-0"  
(NAIL FIN MOUNT CONDITION)  
(RECTANGULAR FIXED DOOR SHOWN. SHAPED DOORS ALSO APPLY.  
SEE "APPROVED SHAPES" TABLE ON SHEET 1)

RECTANGULAR FIXED PANEL SHOWN. ANCHORING OF SHAPED FIXED PANEL IS THE SAME WITH REQUIRED ANCHOR SPACING ALONG THE FRAME CIRCUMFERENCE BEING THE SAME AS SPECIFIED FOR A STRAIGHT FRAME.

|                                              |                       |
|----------------------------------------------|-----------------------|
| DRAWN BY:<br>W.S.M.                          | CHECKED BY:<br>W.S.S. |
| PLOT:<br>1-24                                | DATE:<br>01/19/11     |
| DATE                                         |                       |
| BY                                           |                       |
| REVISION DESCRIPTION                         |                       |
| NO.                                          |                       |
| ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR |                       |
| MANUFACTURER                                 |                       |
| C.P. LOEWEN ENTERPRISES                      |                       |
| 7480 150TH COURT NORTH                       |                       |
| PALM BEACH GARDENS, FL 33418                 |                       |
| STEINBACH, MB, CANADA R5G 1B2                |                       |
| 204-326-6446                                 |                       |
| CONSULTANTS                                  |                       |
| W. W. SCHAEFER ENGINEERING                   |                       |
| & CONSULTING, P.A. (CA 6809)                 |                       |
| 7480 150TH COURT NORTH                       |                       |
| PALM BEACH GARDENS, FL 33418                 |                       |
| PHONE: 561-744-3424                          |                       |
| DRAWING TITLE                                |                       |
| ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR |                       |
| CONSULTANTS                                  |                       |
| W. W. SCHAEFER ENGINEERING                   |                       |
| & CONSULTING, P.A. (CA 6809)                 |                       |
| 7480 150TH COURT NORTH                       |                       |
| PALM BEACH GARDENS, FL 33418                 |                       |
| PHONE: 561-744-3424                          |                       |
| DRAWING NO.                                  |                       |
| 1640A                                        |                       |
| REV.                                         |                       |
| E                                            |                       |
| SHEET NO.                                    |                       |
| 4 OF 18                                      |                       |

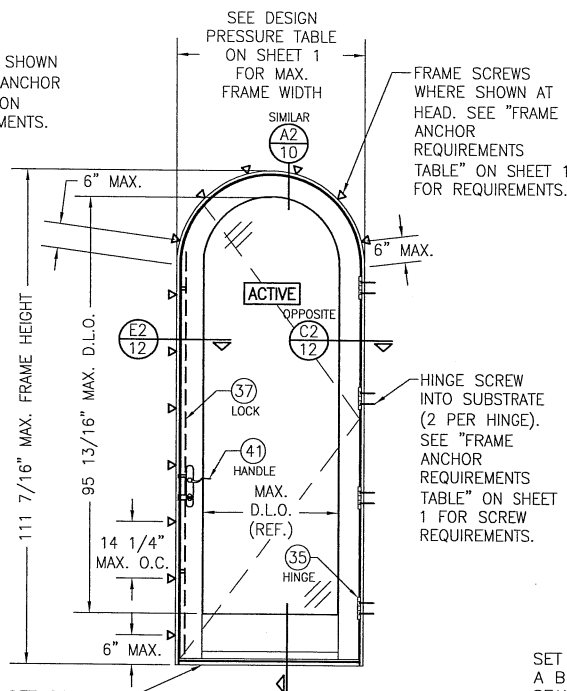




SET SILL IN A BED OF SEALANT PER SECTION A1/10

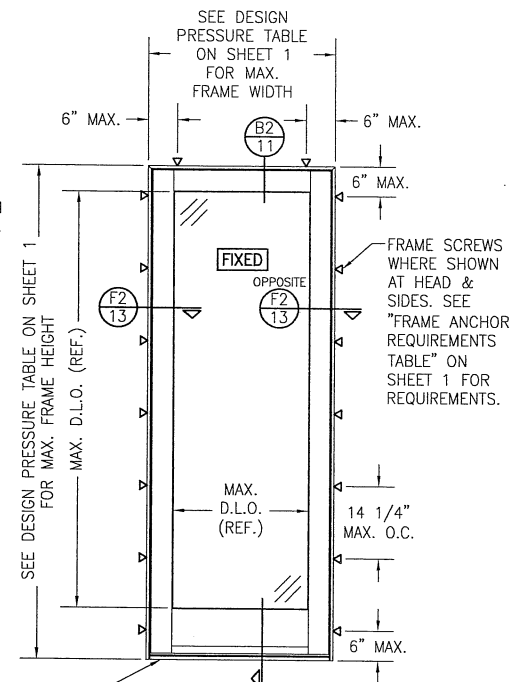
**EXTERIOR ELEVATION:  
DOUBLE HALF ROUND DOOR**  
SCALE: 1/2" = 1'-0"  
(FRAME SCREW MOUNT CONDITION)

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



SET SILL IN A BED OF SEALANT PER SECTION A1/10

**EXTERIOR ELEVATION:  
SINGLE HALF ROUND DOOR**  
SCALE: 1/2" = 1'-0"  
(FRAME SCREW MOUNT CONDITION)



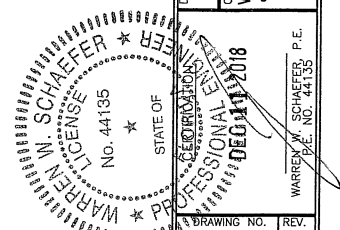
SET SILL IN A BED OF SEALANT PER SECTION B1/11

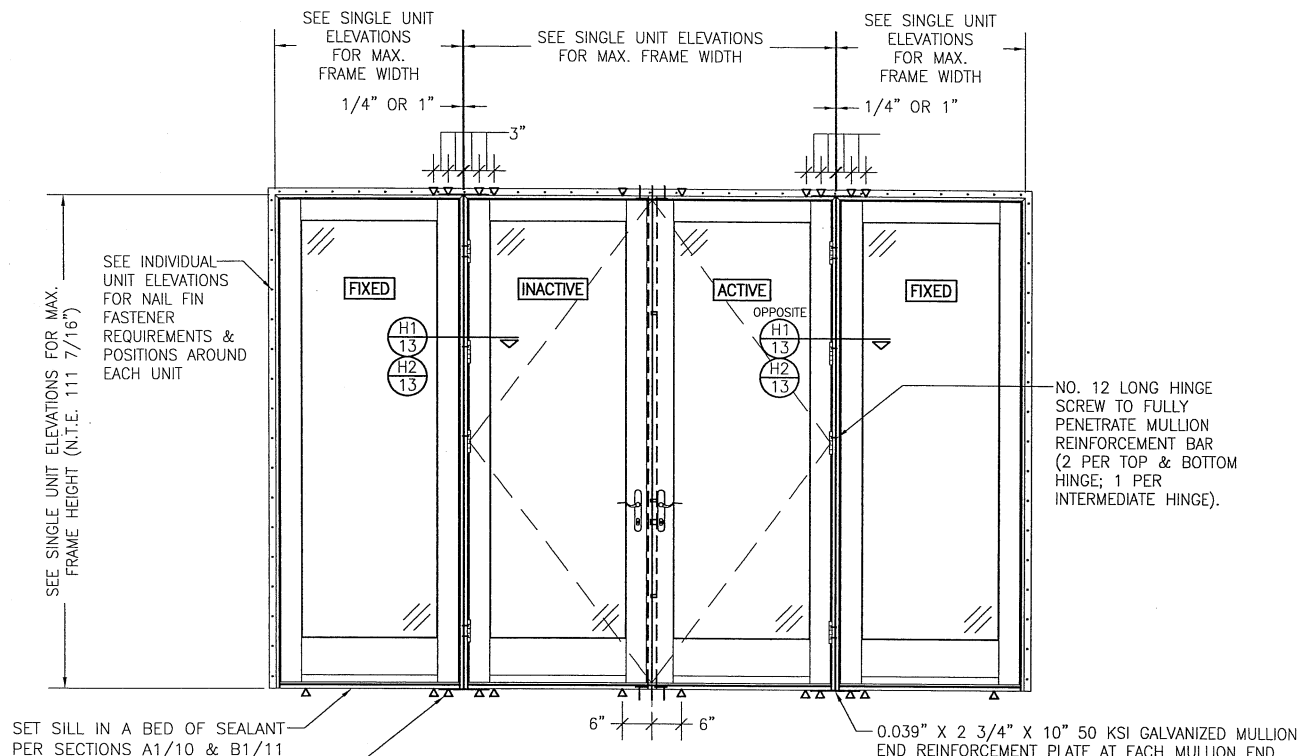
**EXTERIOR ELEVATION:  
SINGLE FIXED PANEL**  
SCALE: 1/2" = 1'-0"  
(FRAME SCREW MOUNT CONDITION)  
(RECTANGULAR FIXED DOOR SHOWN, SHAPED DOORS ALSO APPLY. SEE "APPROVED SHAPES" TABLE ON SHEET 1)

RECTANGULAR FIXED PANEL SHOWN. ANCHORING OF SHAPED FIXED PANEL IS THE SAME WITH REQUIRED ANCHOR SPACING ALONG THE HEAD FRAME CIRCUMFERENCE BEING THE SAME AS SPECIFIED FOR A STRAIGHT JAMB.

FOR OTHER APPROVED SHAPES, SEE TABLE ON SHEET 1

|                                                                                                                                                                                                                                                                                                                                                      |                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| DRAWN BY:<br>W.S.M.                                                                                                                                                                                                                                                                                                                                  | CHECKED BY:<br>W.S.M. |
| PLOT:<br>1-24                                                                                                                                                                                                                                                                                                                                        | DATE:<br>01/19/11     |
| DATE                                                                                                                                                                                                                                                                                                                                                 |                       |
| BY                                                                                                                                                                                                                                                                                                                                                   |                       |
| REVISION DESCRIPTION                                                                                                                                                                                                                                                                                                                                 |                       |
| NO.                                                                                                                                                                                                                                                                                                                                                  |                       |
| <p>ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR</p> <p>MANUFACTURER<br/>C.P. LOEWEN ENTERPRISES<br/>77 HWY 52 WEST<br/>STEINBACH, MB, CANADA R5G 1B2<br/>204-326-6446</p> <p>CONSULTANTS<br/>W. W. SCHAEFER ENGINEERING<br/>&amp; CONSULTING, P.A. (CA 6809)<br/>7480 150TH COURT NORTH<br/>PALM BEACH GARDENS, FL 33418<br/>PHONE: 561-744-3424</p> |                       |
| DRAWING TITLE                                                                                                                                                                                                                                                                                                                                        |                       |
| DATE                                                                                                                                                                                                                                                                                                                                                 |                       |
| NO.                                                                                                                                                                                                                                                                                                                                                  |                       |
| REV.                                                                                                                                                                                                                                                                                                                                                 |                       |
| 5                                                                                                                                                                                                                                                                                                                                                    | 18                    |





SET SILL IN A BED OF SEALANT  
PER SECTIONS A1/10 & B1/11

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

**EXTERIOR ELEVATION:  
DOUBLE DOORS WITH FIXED PANELS**

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

(NAIL FIN MOUNT CONDITION)

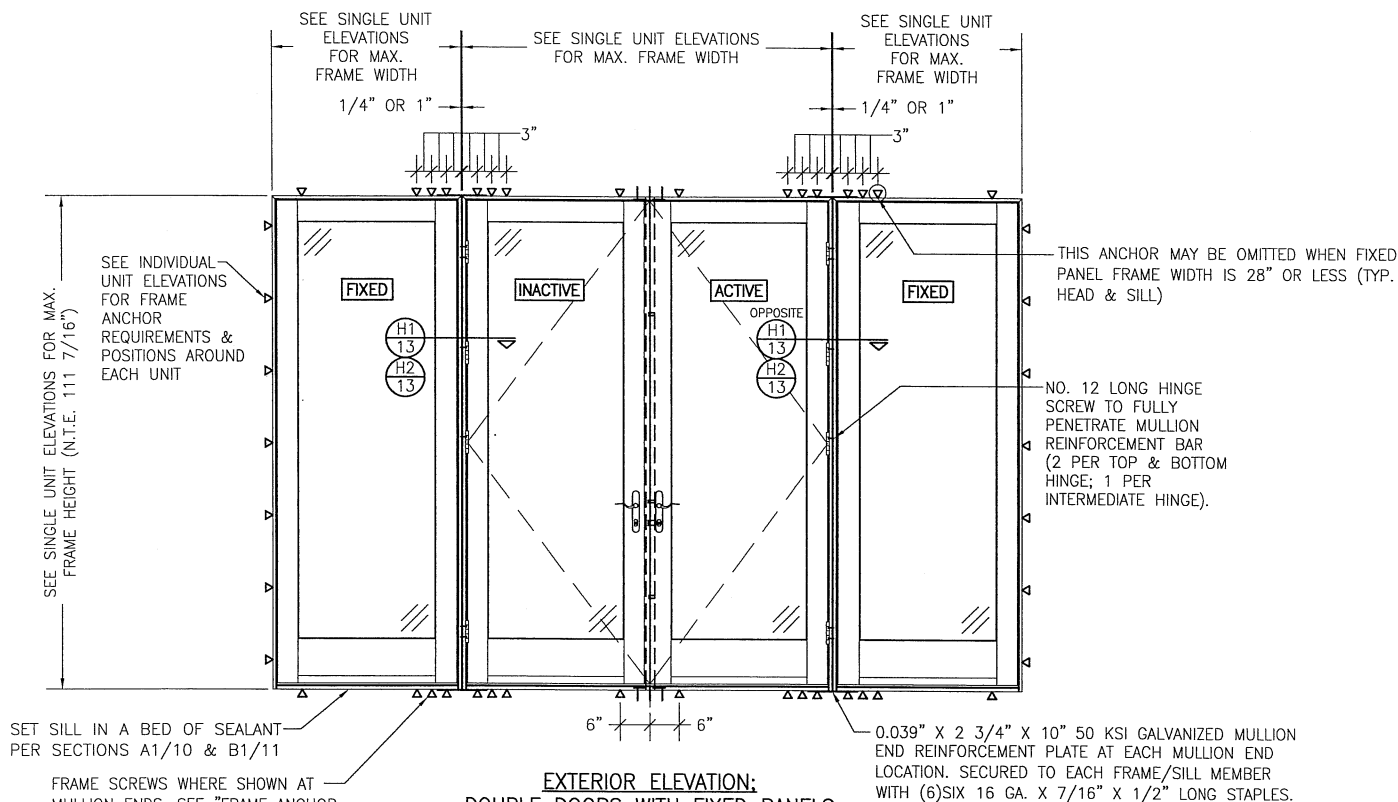
**MULTIPLE UNIT NOTES:**

1. FOR ALL DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATIONS.
2. THERE IS NO LIMIT ON THE NUMBER OF DOORS THAT MAY BE COMBINED IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE DOORS & THEIR MULLIONS.
3. OXO UNIT IS SHOWN. ALL OTHER FIXED/OPERABLE COMBINATIONS ALSO APPLY WITH THE MULLION CONDITIONS SHOWN.
4. INDIVIDUAL DOOR/FIXED PANEL SIZES SHALL BE RESTRICTED AS SPECIFIED IN THE SINGLE UNIT ELEVATIONS.

NO. 12 LONG HINGE  
SCREW TO FULLY  
PENETRATE MULLION  
REINFORCEMENT BAR  
(2 PER TOP & BOTTOM  
HINGE; 1 PER  
INTERMEDIATE HINGE).

0.039" X 2 3/4" X 10" 50 KSI GALVANIZED MULLION  
END REINFORCEMENT PLATE AT EACH MULLION END  
LOCATION. SECURED TO EACH FRAME/SILL MEMBER  
WITH (6)SIX 16 GA. X 7/16" X 1/2" LONG STAPLES.

|                                                                               |                      |                                                                                                             |    |
|-------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------|----|
| DRAWN BY:<br>W.R.M.                                                           |                      | CHECKED BY:<br>W.W.S.                                                                                       |    |
| PLOT:<br>1-24                                                                 |                      | DATE:<br>01/19/11                                                                                           |    |
| NO.                                                                           | REVISION DESCRIPTION | DATE                                                                                                        | BY |
|                                                                               |                      |                                                                                                             |    |
|                                                                               |                      |                                                                                                             |    |
|                                                                               |                      |                                                                                                             |    |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR                   |                      |                                                                                                             |    |
| CONSULTANTS:<br>W. W. SCHAEFER ENGINEERING<br>& CONSULTING, P.A. (CA 6809)    |                      | MANUFACTURER:<br>C.P. LOEWEN ENTERPRISES<br>77 HWY 52 WEST<br>STEINBACH, MB, CANADA R5G 1B2<br>204-326-6446 |    |
| 7480 150TH COURT NORTH<br>PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424 |                      |                                                                                                             |    |
| <div style="text-align: center;"> </div>                                      |                      |                                                                                                             |    |
| DRAWING NO.<br>1640A                                                          |                      | REV.<br>F                                                                                                   |    |
| SHEET NO.<br>6                                                                |                      | OF 18                                                                                                       |    |

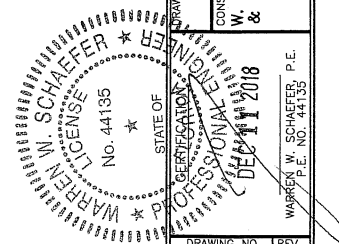


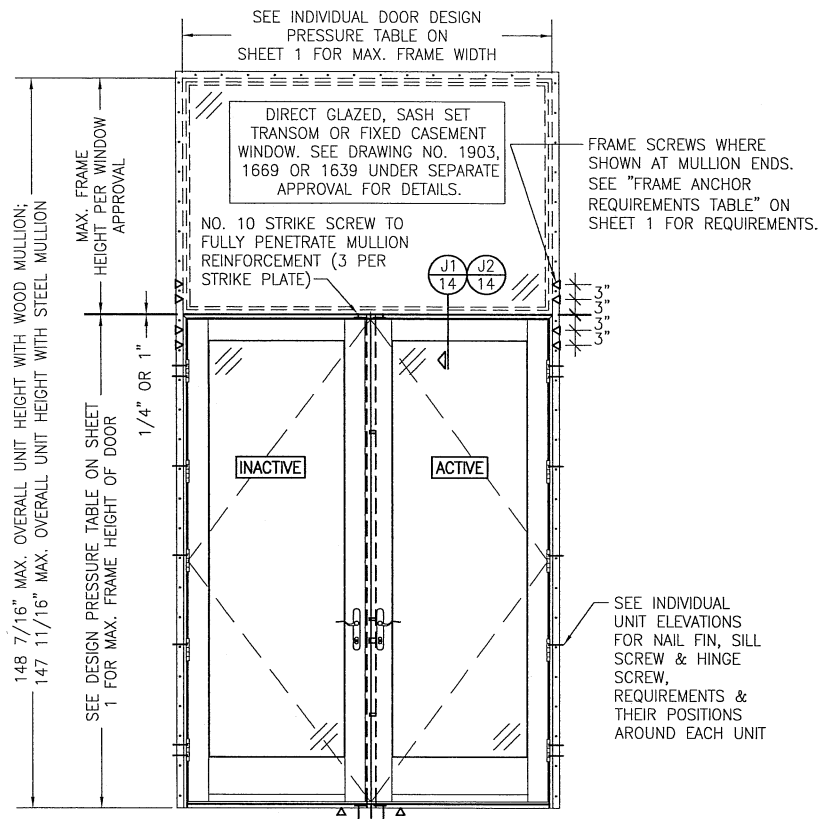
**EXTERIOR ELEVATION:  
DOUBLE DOORS WITH FIXED PANELS**  
SCALE: 1/2" = 1'-0"  
(FRAME SCREW MOUNT CONDITION)

**MULTIPLE UNIT NOTES:**

1. FOR ALL DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATIONS.
2. THERE IS NO LIMIT ON THE NUMBER OF DOORS THAT MAY BE COMBINED IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE DOORS & THEIR MULLIONS.
3. OXO UNIT IS SHOWN. ALL OTHER FIXED/OPERABLE COMBINATIONS ALSO APPLY WITH THE MULLION CONDITIONS SHOWN.
4. INDIVIDUAL DOOR/FIXED PANEL SIZES SHALL BE RESTRICTED AS SPECIFIED IN THE SINGLE UNIT ELEVATIONS.

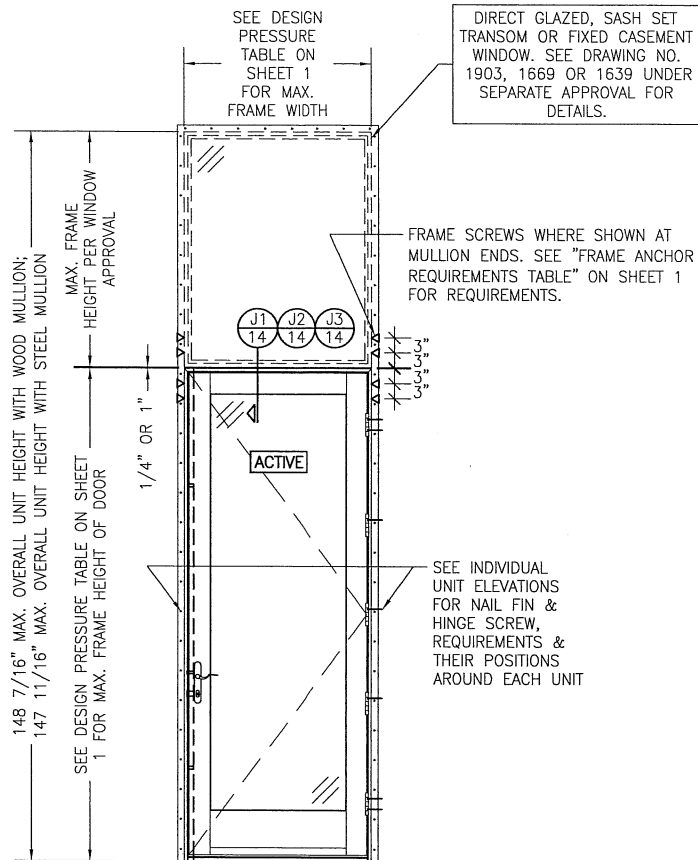
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| DRAWN BY:<br>W.R.M.                                                                                                                                                                                                                                         |    | CHECKED BY:<br>W.W.S. |             |
| PLOT:<br>1=24                                                                                                                                                                                                                                               |    | DATE:<br>01/19/11     |             |
| DATE                                                                                                                                                                                                                                                        | BY | REVISION              | DESCRIPTION |
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|                                                                                                                                                                                                                                                             |    |                       |             |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR<br>MANUFACTURER: C.P. LOEWEN ENTERPRISES<br>CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)<br>7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424 |    |                       |             |
| DRAWING NO. 1640A<br>SHEET NO. 7 OF 18                                                                                                                                                                                                                      |    |                       |             |





EXTERIOR ELEVATION:  
DOUBLE DOORS WITH TRANSOM

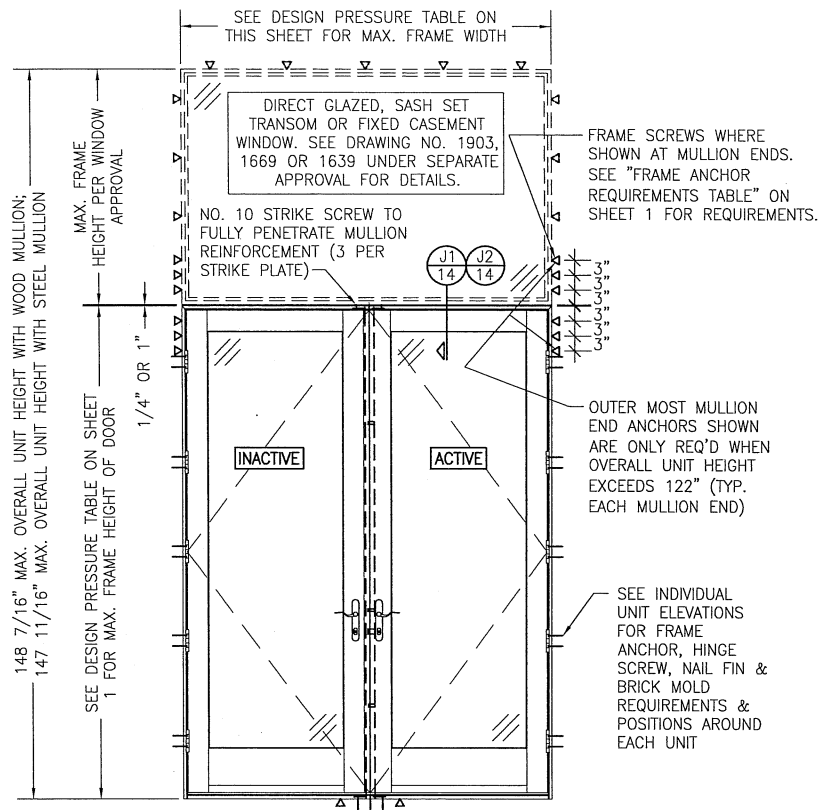
SCALE: 1/2" = 1'-0"  
(NAIL FIN MOUNT CONDITION)  
(FOR DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATIONS)



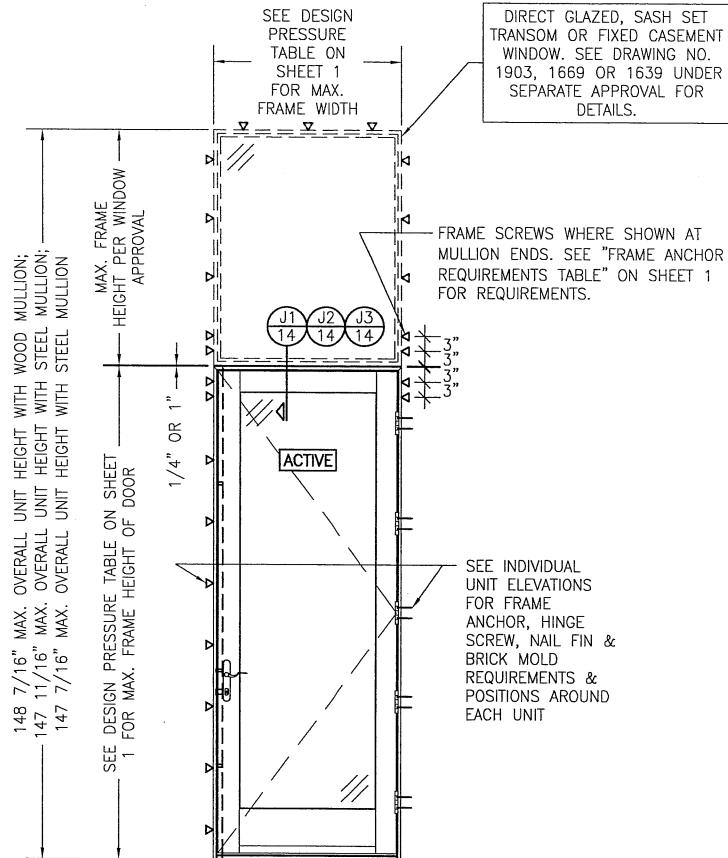
EXTERIOR ELEVATION:  
SINGLE OPERABLE OR FIXED PANEL DOOR  
WITH TRANSOM

SCALE: 1/2" = 1'-0"  
(NAIL FIN MOUNT CONDITION)  
(FOR DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATIONS)

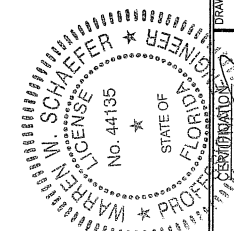
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| DRAWN BY:<br>W.R.M.                                                                                                                                                                                                                                                    |                      | CHECKED BY:<br>W.W.S.                                                                                           |      |
| PLOT:<br>1-24                                                                                                                                                                                                                                                          |                      | DATE:<br>01/19/11                                                                                               |      |
| NO.                                                                                                                                                                                                                                                                    | REVISION DESCRIPTION | BY                                                                                                              | DATE |
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| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR                                                                                                                                                                                                            |                      |                                                                                                                 |      |
| CONSULTANTS<br>W. W. SCHAEFER ENGINEERING<br>& CONSULTING, P.A. (CA 6809)<br>7480 150TH COURT NORTH<br>PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424                                                                                                             |                      | MANUFACTURER<br>C.P. LOEWEN ENTERPRISES<br>C.P. 77 HWY 52 WEST<br>STEINBACH, MB, CANADA R5G 1B2<br>204-326-6446 |      |
| <div style="display: flex; justify-content: space-between;"> <div> <p>WARREN N. SCHAEFER</p> <p>PROFESSIONAL ENGINEER</p> <p>NO. 44135</p> <p>STATE OF FLORIDA</p> <p>DEC 04 2018</p> </div> <div> <p>WARREN N. SCHAEFER, P.E.</p> <p>P.E. NO. 44135</p> </div> </div> |                      |                                                                                                                 |      |
| DRAWING NO.<br>1640A                                                                                                                                                                                                                                                   |                      | REV.<br>F                                                                                                       |      |
| SHEET NO.<br>8                                                                                                                                                                                                                                                         |                      | OF 18                                                                                                           |      |



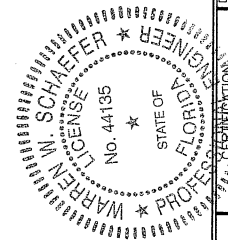
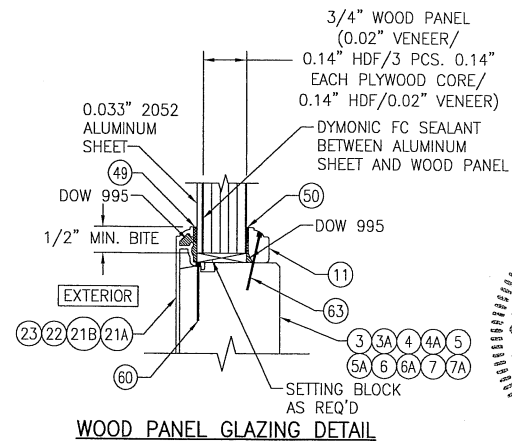
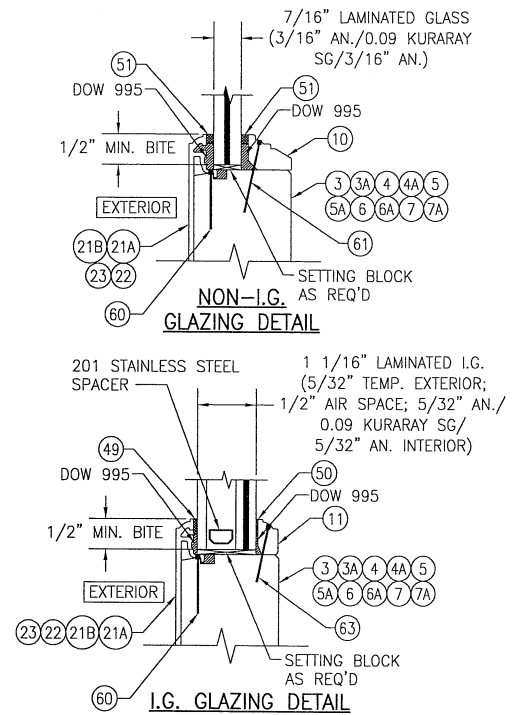
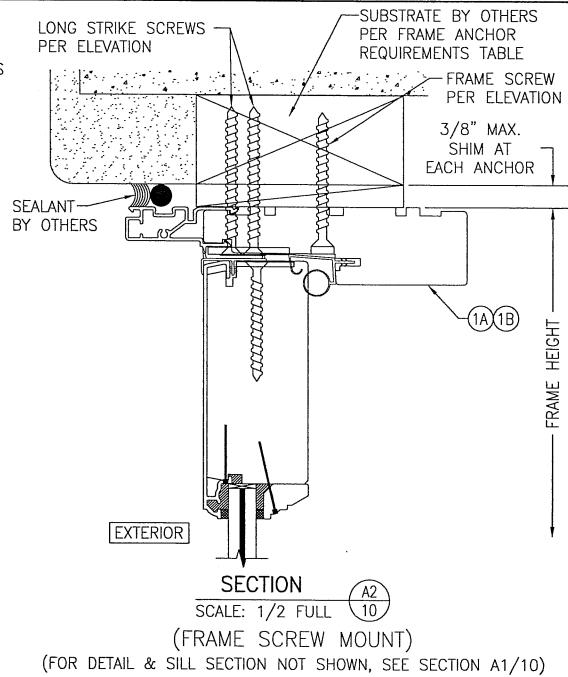
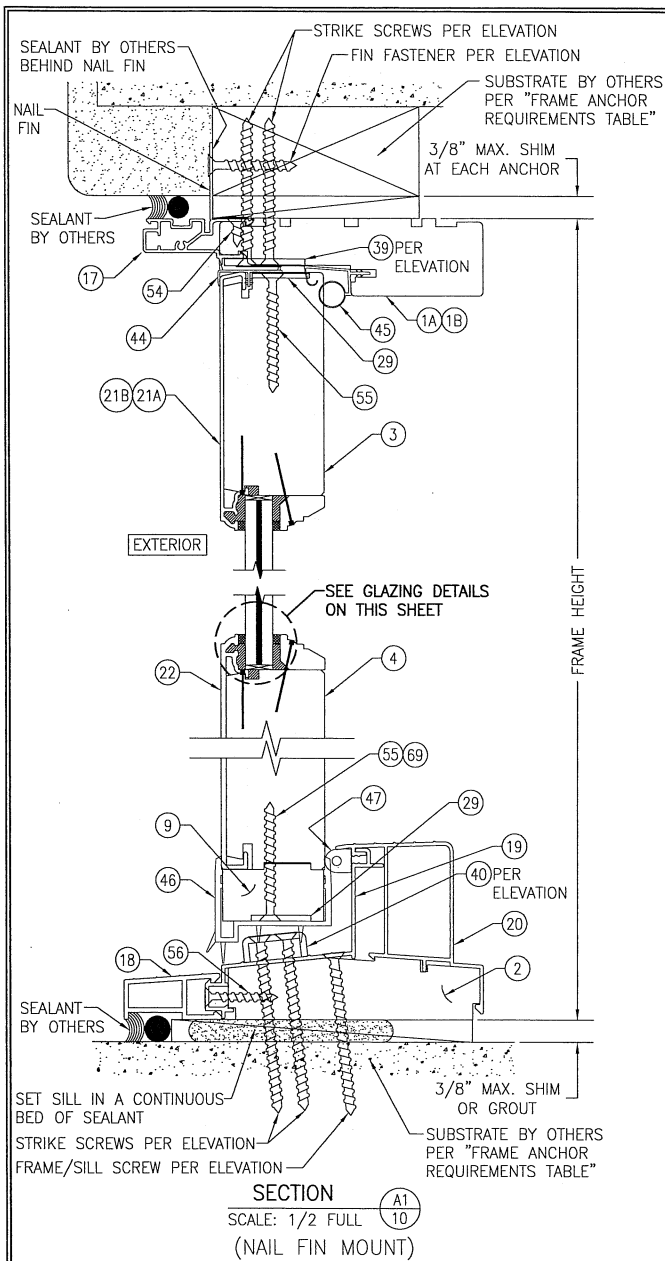
**EXTERIOR ELEVATION:**  
**DOUBLE DOORS WITH TRANSOM**  
 SCALE: 1/2" = 1'-0"  
 (FRAME SCREW MOUNT CONDITION)  
 (FOR DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATIONS)



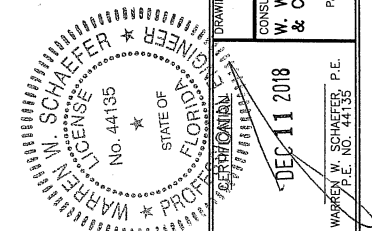
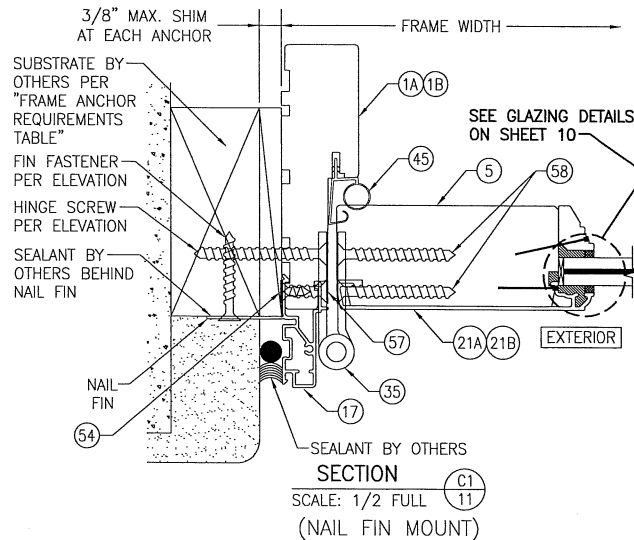
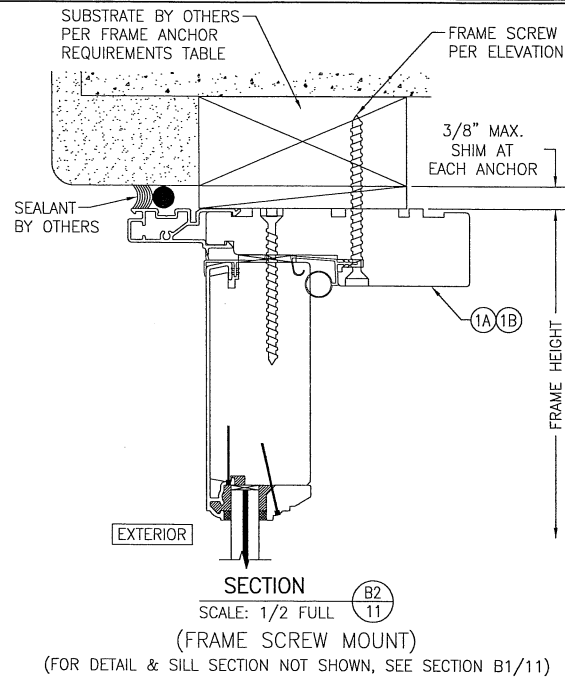
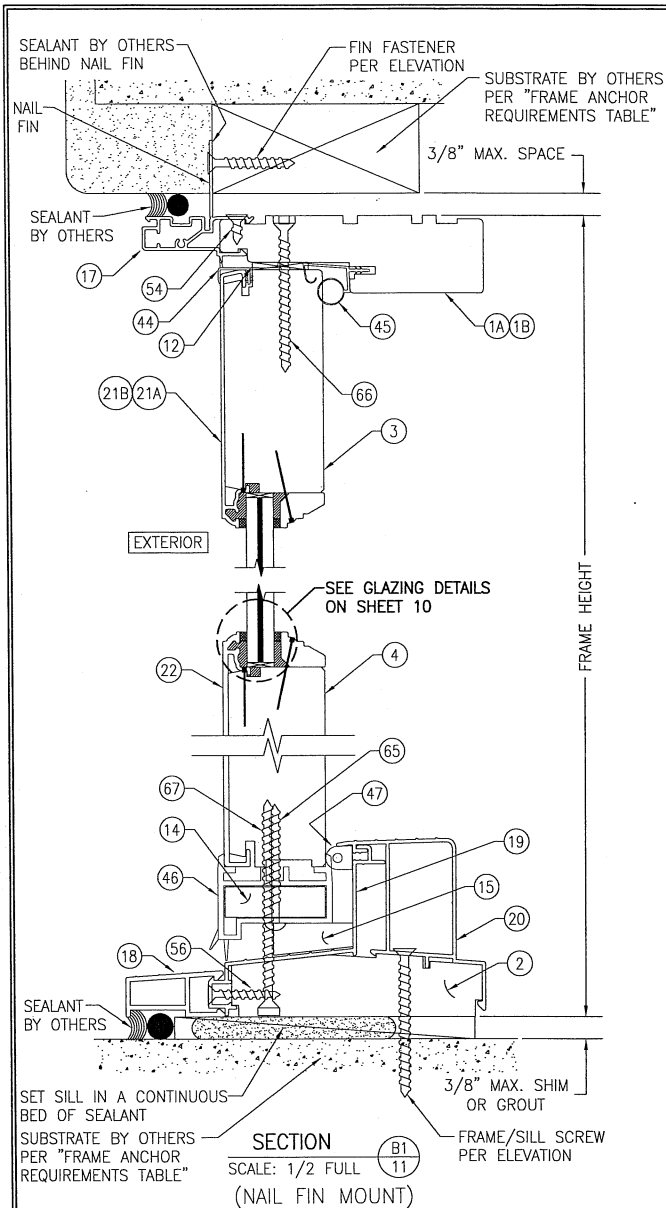
**EXTERIOR ELEVATION:**  
**SINGLE OPERABLE OR FIXED PANEL DOOR**  
**WITH TRANSOM**  
 SCALE: 1/2" = 1'-0"  
 (FRAME SCREW MOUNT CONDITION)  
 (FOR DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATIONS)



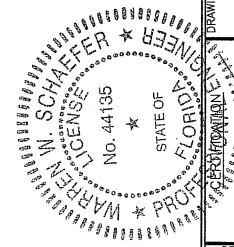
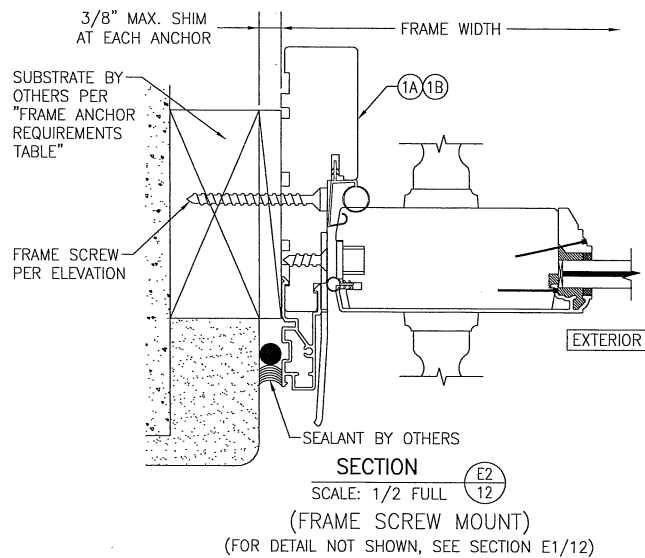
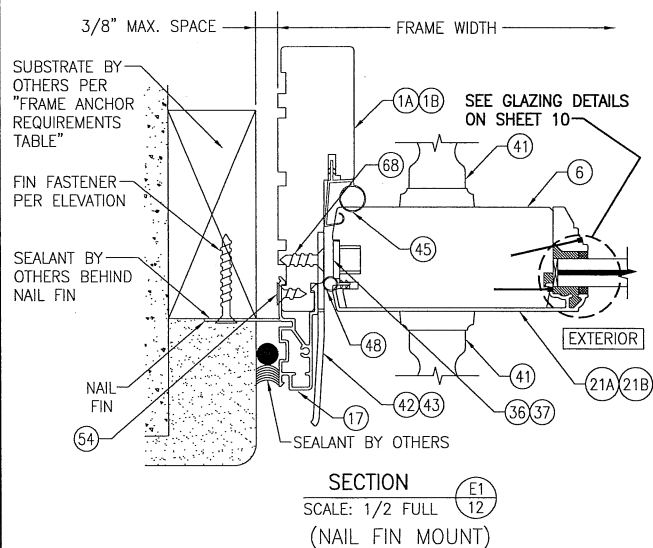
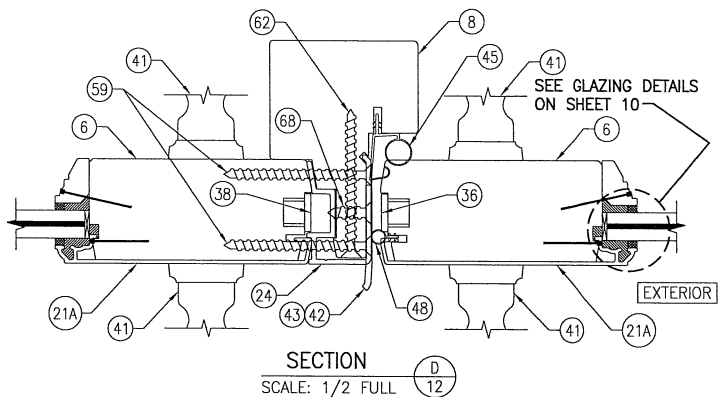
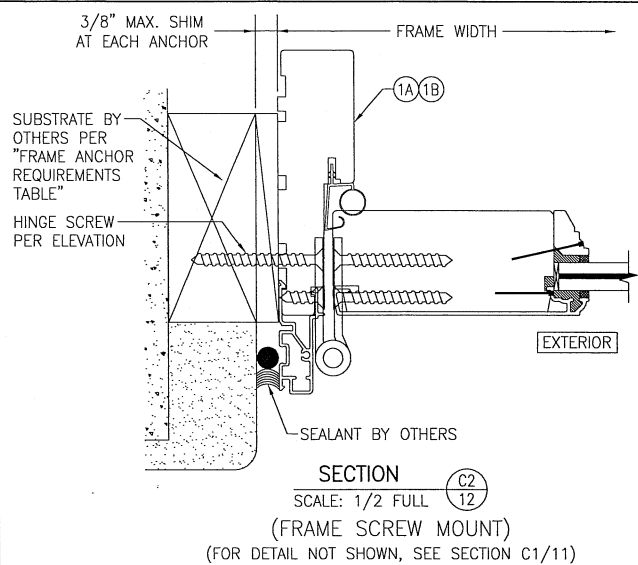
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| DRAWN BY:<br>W.R.M.                                                  | CHECKED BY:<br>W.W.S. |
| PLT:<br>1-24                                                         | DATE:<br>01/19/11     |
| DATE                                                                 |                       |
| BY                                                                   |                       |
| REVISION DESCRIPTION                                                 |                       |
| NO.                                                                  |                       |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR          |                       |
| MANUFACTURER: C.P. LOEWEN ENTERPRISES                                |                       |
| CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) |                       |
| 7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418                 |                       |
| PHONE: 561-744-3424                                                  |                       |
| STEINBACH, MB, CANADA R5G 1B2                                        |                       |
| 204-326-6446                                                         |                       |
| DRAWING NO.                                                          | REV.                  |
| 1640A                                                                | F                     |
| SHEET NO.                                                            |                       |
| 9                                                                    | OF 18                 |



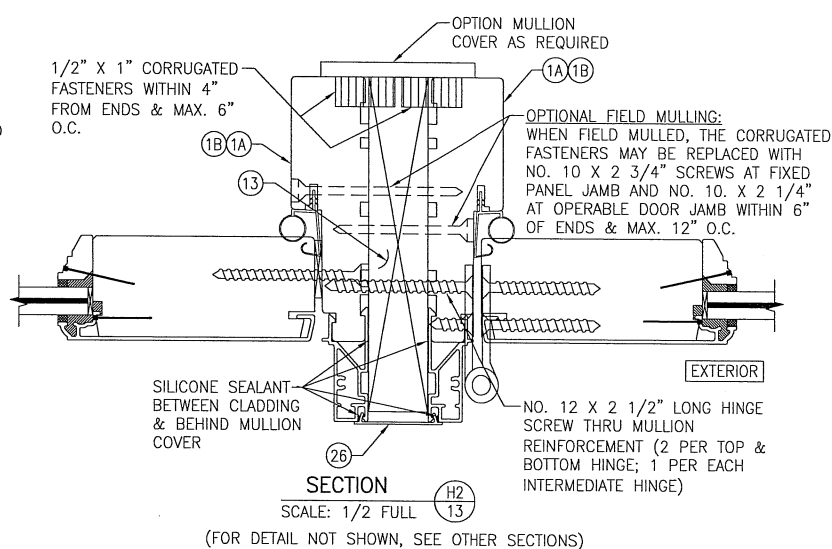
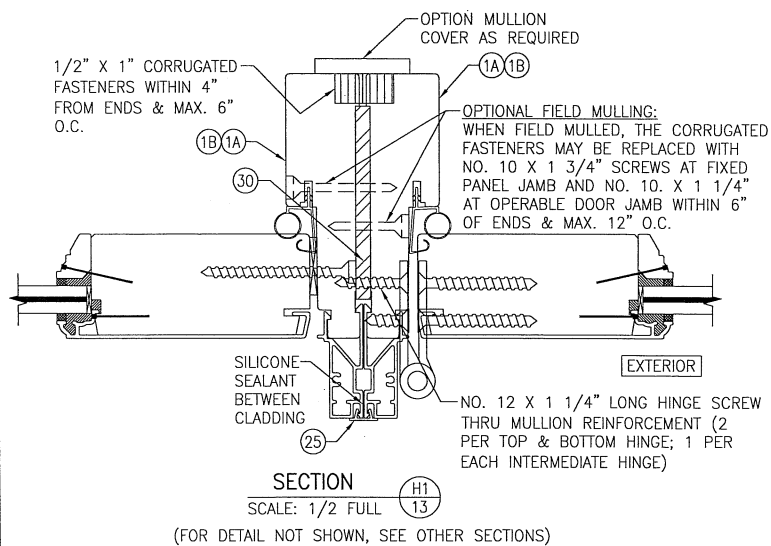
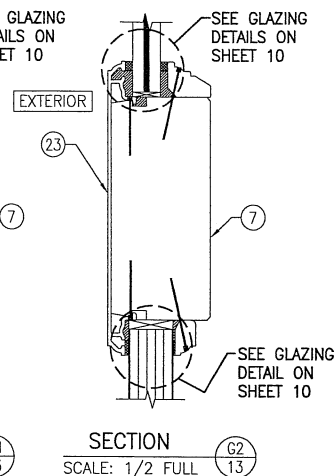
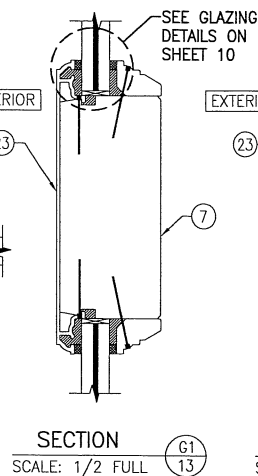
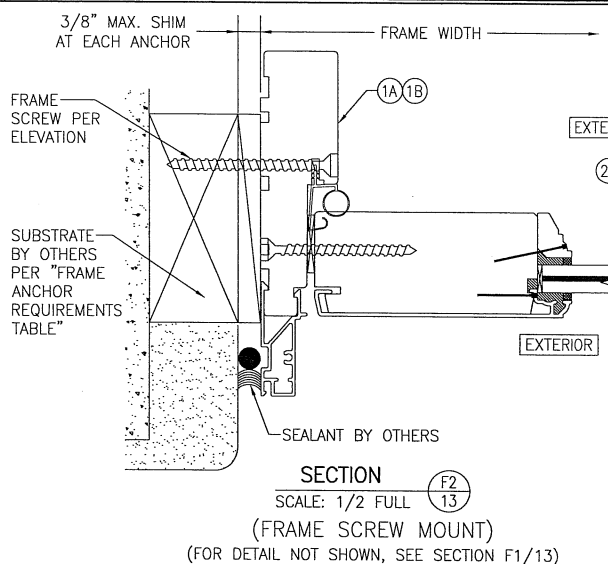
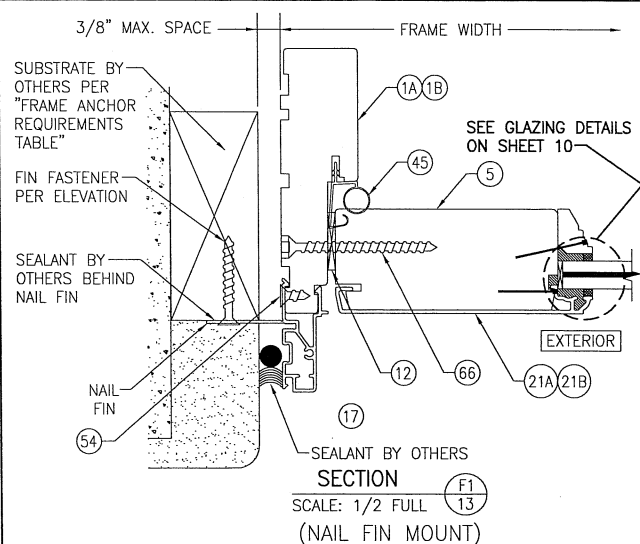
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| DRAWN BY:<br>W.R.M.                                         | CHECKED BY:<br>W.W.S. |
| PLOT:<br>1=2                                                | DATE:<br>01/19/11     |
| DATE                                                        |                       |
| BY                                                          |                       |
| REVISION DESCRIPTION                                        |                       |
| NO.                                                         |                       |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR |                       |
| MANUFACTURER: C.P. LOEWEN ENTERPRISES                       |                       |
| CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.  |                       |
| 7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418        |                       |
| PHONE: 561-744-3424                                         |                       |
| DEC 11 2018                                                 |                       |
| WARREN W. SCHAEFER, P.E.                                    |                       |
| P.E. NO. 44135                                              |                       |
| DRAWING NO.                                                 | REV.                  |
| 1640A                                                       | F                     |
| SHEET NO.                                                   |                       |
| 10                                                          | OF 18                 |



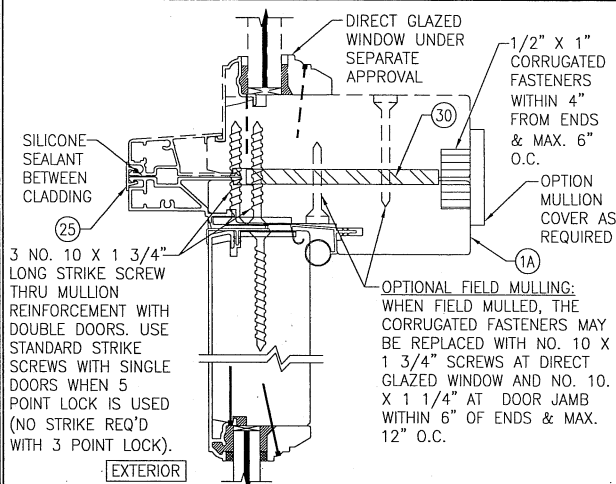
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| DRAWN BY:<br>W.S.M.                                                  | CHECKED BY:<br>W.S.S. |
| PLOT:<br>1-2                                                         | DATE:<br>01/19/11     |
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| REVISION DESCRIPTION                                                 |                       |
| NO.                                                                  |                       |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR          |                       |
| MANUFACTURER: C.P. LOEWEN ENTERPRISES                                |                       |
| CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) |                       |
| 7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418                 |                       |
| PHONE: 561-744-3424                                                  |                       |
| DEC 11 2018                                                          |                       |
| WARREN M. SCHAEFER, P.E.                                             |                       |
| P.E. NO. 44135                                                       |                       |
| DRAWING NO.                                                          | REV.                  |
| 1640A                                                                | F                     |
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| DRAWN BY:<br>W.R.M.                                                  | CHECKED BY:<br>W.W.S. |
| PLOT:<br>1=2                                                         | DATE:<br>01/19/11     |
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| REVISION DESCRIPTION                                                 |                       |
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| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR          |                       |
| MANUFACTURER: C.P. LOEWEN ENTERPRISES                                |                       |
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| 7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418                 |                       |
| PHONE: 561-744-3424                                                  |                       |
| DEC 11 2018                                                          |                       |
| WARREN W. SCHAEFER, P.E.                                             |                       |
| P.E. NO. 44135                                                       |                       |
| DRAWING NO.                                                          | REV.                  |
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| DRAWN BY: W.S.M.                                                                                                                                                                                                                                                                        |    | CHECKED BY: W.S.M. |             |
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|                                                                                                                                                                                                                                                                                         |    |                    |             |
| <p>DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR</p> <p>MANUFACTURER: C.P. LOEWEN ENTERPRISES</p> <p>CONSULTANTS: W. W. SCHAEFFER ENGINEERING &amp; CONSULTING, P.A. (CA 6809)</p> <p>7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418</p> <p>PHONE: 561-744-3424</p> |    |                    |             |
| <p>DEC 11 2018</p> <p>STATE OF FLORIDA</p> <p>WARREN W. SCHAEFFER, P.E.</p> <p>NO. 44135</p> <p>P.E. NO. 44135</p>                                                                                                                                                                      |    |                    |             |
| DRAWING NO. 1640A                                                                                                                                                                                                                                                                       |    | REV. F             |             |
| SHEET NO. 13                                                                                                                                                                                                                                                                            |    | OF 18              |             |



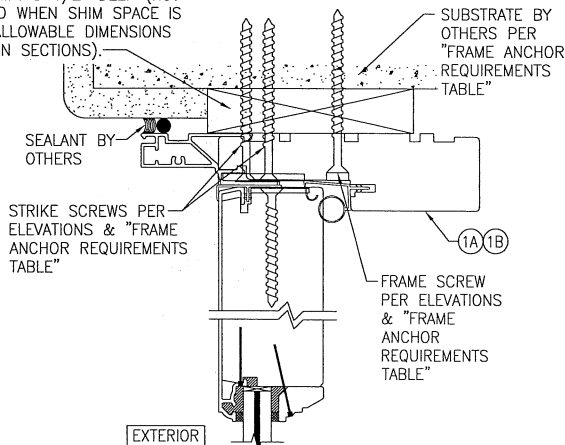
SECTION

SCALE: 1/2 FULL

J1  
14

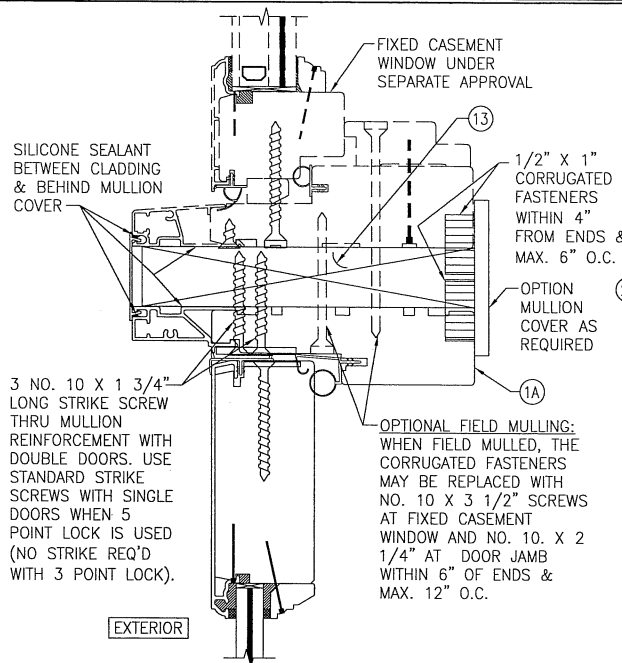
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)  
(DIRECT GLAZED TRANSOM WINDOW SHOWN. SASH SET TRANSOM & FIXED CASEMENT TRANSOM WINDOWS ALSO APPLY.)

CONTINUOUS WOOD MEMBER LESS IN THICKNESS THAN A 2X<sub>4</sub> 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 WITH ALL ANCHORS RUNNING THROUGH THE SPACER INTO THE SUBSTRATE)  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

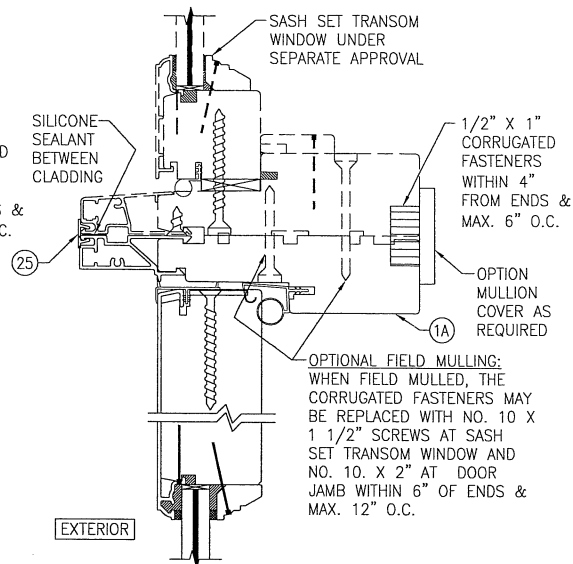


SECTION

SCALE: 1/2 FULL

J2  
14

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)  
(FIXED CASEMENT TRANSOM WINDOW SHOWN. DIRECT SET & SASH SET TRANSOM WINDOWS ALSO APPLY.)



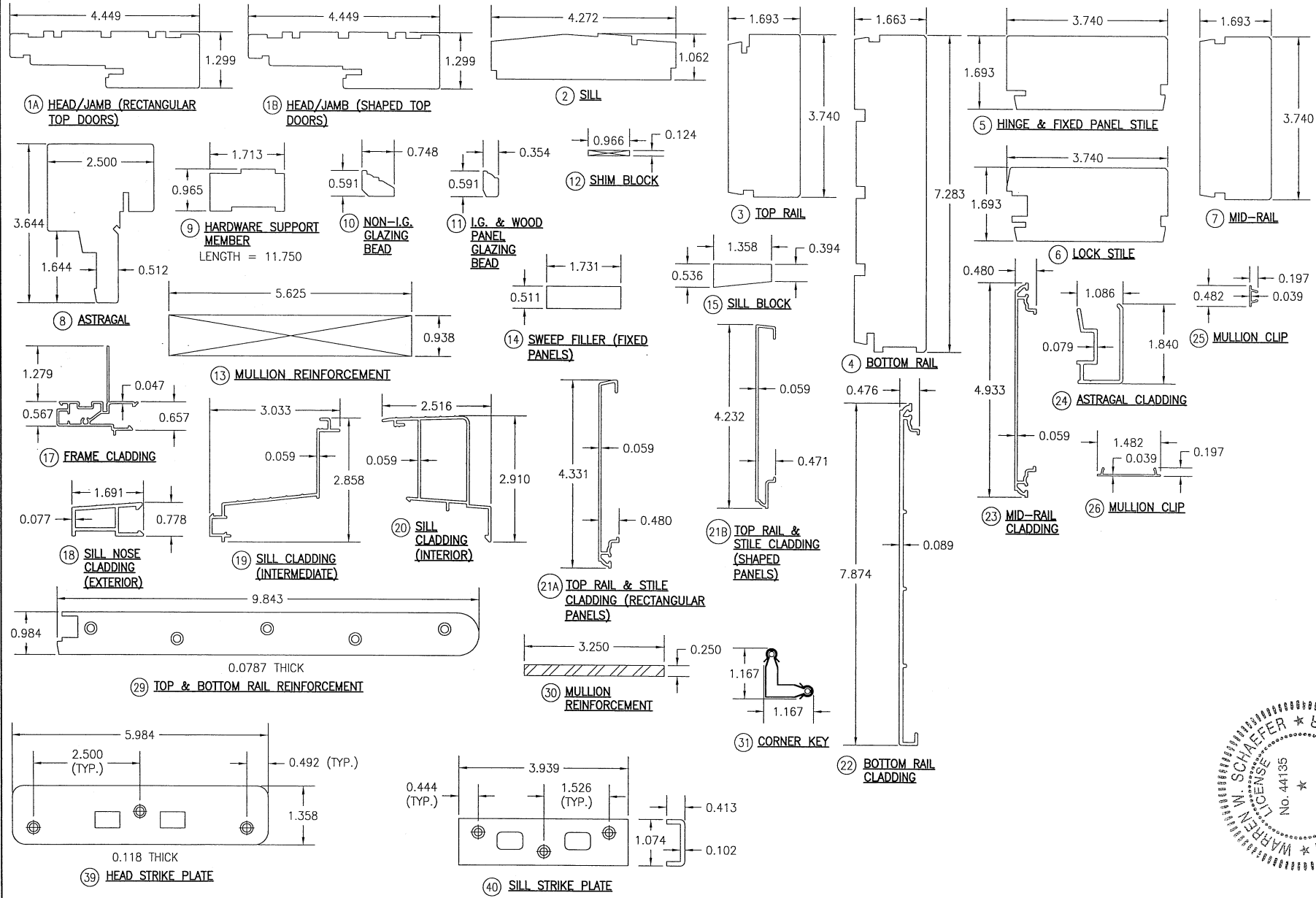
SECTION

SCALE: 1/2 FULL

J3  
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(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)  
(SASH SET TRANSOM WINDOW SHOWN. DIRECT SET & FIXED CASEMENT TRANSOM WINDOWS ALSO APPLY.)

|                                                             |    |                               |     |
|-------------------------------------------------------------|----|-------------------------------|-----|
| DRAWN BY: W.R.M.                                            |    | CHECKED BY: W.W.S.            |     |
| PLOT: 1-2                                                   |    | DATE: 01/19/11                |     |
| DATE                                                        | BY | REVISION DESCRIPTION          | NO. |
|                                                             |    |                               |     |
|                                                             |    |                               |     |
|                                                             |    |                               |     |
| DRAWING TITLE: ALUMINUM GLAD WOOD STORMFORCE OUT-SWING DOOR |    |                               |     |
| 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: 561-744-3424                                         |    | 204-326-6446                  |     |
| DEC 11 2018                                                 |    |                               |     |
| WARREN W. SCHAEFER, P.E.                                    |    |                               |     |
| P.E. NO. 44135                                              |    |                               |     |
| DRAWING NO. 1640A                                           |    | REV. E                        |     |
| SHEET NO. 14                                                |    | OF 18                         |     |



|                  |          |                    |      |
|------------------|----------|--------------------|------|
| DRAWN BY: W.S.M. |          | CHECKED BY: W.M.S. |      |
| PLOT: 1-2        |          | DATE: 01/19/11     |      |
| NO.              | REVISION | DESCRIPTION        | DATE |
| 1                |          |                    |      |
| 2                |          |                    |      |
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|                                                             |                               |
|-------------------------------------------------------------|-------------------------------|
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR |                               |
| CONSULTANTS                                                 | MANUFACTURER                  |
| W. W. SCHAEFER ENGINEERING                                  | C.P. LOEWEN ENTERPRISES       |
| & CONSULTING, P.A. (CA 6809)                                | 77 HWY 52 WEST                |
| 7480 150TH COURT NORTH                                      | STEINBACH, MB, CANADA R5G 1B2 |
| PALM BEACH GARDENS, FL 33418                                | 204-326-6446                  |
| PHONE: 561-744-3424                                         |                               |

|                       |                    |
|-----------------------|--------------------|
| CERTIFICATION         | WARREN M. SCHAEFER |
| FLORIDA               | No. 44135          |
| PROFESSIONAL ENGINEER |                    |
| DATE: 01/19/11        |                    |

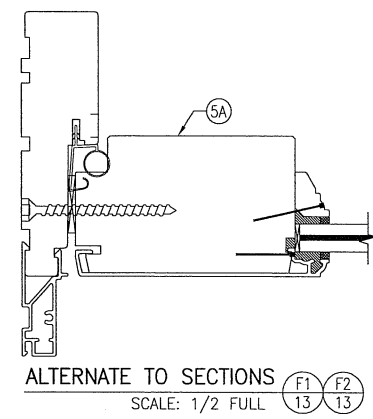
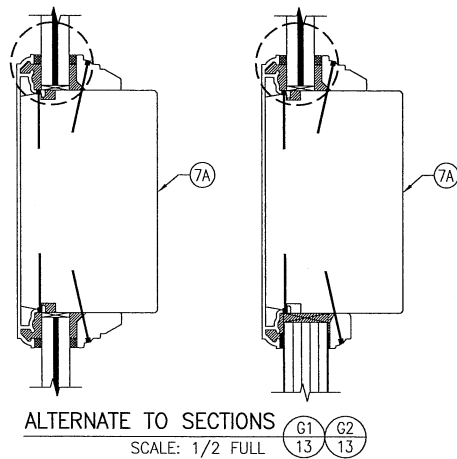
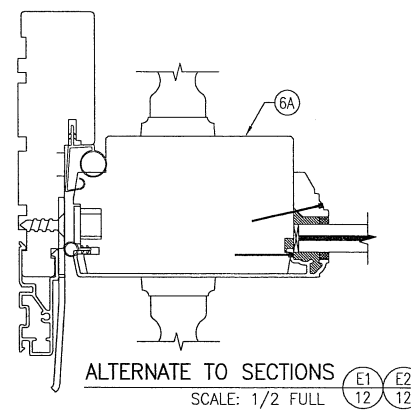
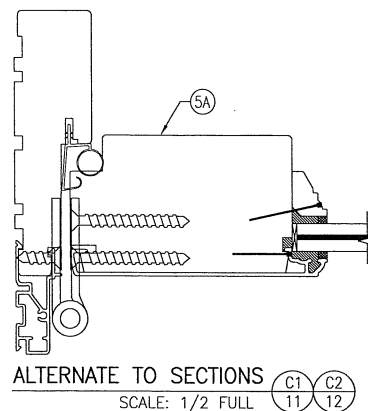
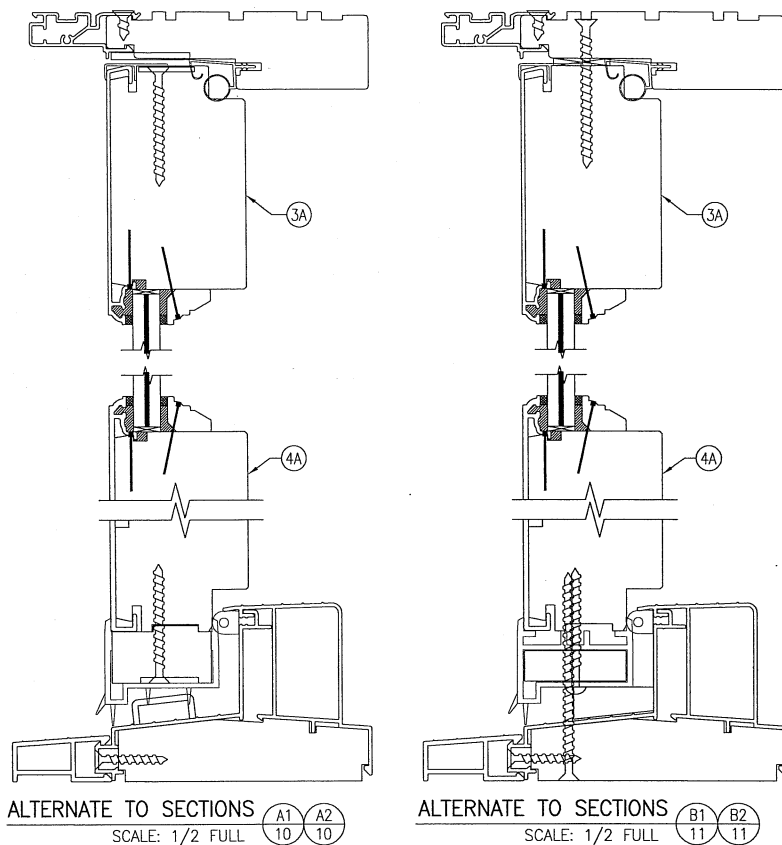
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|-------------|-------|
| DRAWING NO. | REV.  |
| 1640A       | E     |
| SHEET NO.   |       |
| 15          | OF 18 |

| ITEM #           | ITEM DESCRIPTION                               | MANUFACTURER/NOTES                                               |
|------------------|------------------------------------------------|------------------------------------------------------------------|
| PARTS            |                                                |                                                                  |
| 1A               | HEAD/JAMB (RECTANGULAR TOP DOORS)              | DOUGLAS FIR                                                      |
| 1B               | HEAD/JAMB (SHAPED TOP DOORS)                   | GLUED UP DOUGLAS FIR                                             |
| 2                | SILL                                           | DOUGLAS FIR                                                      |
| 3                | TOP RAIL                                       | DOUGLAS FIR                                                      |
| 4                | BOTTOM RAIL                                    | DOUGLAS FIR                                                      |
| 5                | HINGE & FIXED PANEL STILE                      | DOUGLAS FIR                                                      |
| 6                | LOCK STILE                                     | DOUGLAS FIR                                                      |
| 7                | MID-RAIL                                       | DOUGLAS FIR                                                      |
| 8                | ASTRAGAL                                       | DOUGLAS FIR                                                      |
| 9                | HARDWARE SUPPORT MEMBER                        | SOLID PVC                                                        |
| 10               | NON-I.G. GLAZING BEAD                          | DOUGLAS FIR                                                      |
| 11               | I.G. & WOOD PANEL GLAZING BEAD                 | DOUGLAS FIR                                                      |
| 12               | SHIM BLOCK                                     | DOUGLAS FIR                                                      |
| 13               | MULLION REINFORCEMENT                          | DOUGLAS FIR                                                      |
| 14               | SWEEP FILLER (FIXED PANELS)                    | DOUGLAS FIR                                                      |
| 15               | SILL BLOCK                                     | DOUGLAS FIR                                                      |
| 17               | FRAME CLADDING                                 | 6060-T5 ALUMINUM                                                 |
| 18               | SILL NOSE CLADDING (EXTERIOR)                  | 6060-T5 ALUMINUM                                                 |
| 19               | SILL CLADDING (INTERMEDIATE)                   | 6060-T5 ALUMINUM                                                 |
| 20               | SILL CLADDING (INTERIOR)                       | 6060-T5 ALUMINUM                                                 |
| 21A              | TOP RAIL & STILE CLADDING (RECTANGULAR PANELS) | 6060-T5 ALUMINUM                                                 |
| 21B              | TOP RAIL & STILE CLADDING (SHAPED PANELS)      | 6060-T5 ALUMINUM                                                 |
| 22               | BOTTOM RAIL CLADDING                           | 6060-T5 ALUMINUM                                                 |
| 23               | MID-RAIL CLADDING                              | 6060-T5 ALUMINUM                                                 |
| 24               | ASTRAGAL CLADDING                              | 6060-T5 ALUMINUM                                                 |
| 25               | MULLION CLIP                                   | 6060-T5 ALUMINUM                                                 |
| 26               | MULLION CLIP                                   | 6060-T5 ALUMINUM                                                 |
| 29               | TOP & BOTTOM RAIL REINFORCEMENT                | S.S. (TOP & BOTTOM OF ACTIVE PANEL;<br>BOTTOM OF INACTIVE PANEL) |
| 30               | MULLION REINFORCEMENT                          | A-36 STEEL                                                       |
| 31               | CORNER KEY                                     | CAST ALUMINUM BODY WITH STEEL RINGS                              |
| HARDWARE         |                                                |                                                                  |
| 35               | S.S. BUTT HINGE                                | PRECISION BUILT BUTTS: NP-1053                                   |
| 36               | 5-POINT MULTI-POINT LOCK                       | FUHR 856 SERIES                                                  |
| 37               | 3-POINT MULTI-POINT LOCK                       | FUHR 856 SERIES                                                  |
| 38               | 2-POINT MULTI-POINT LOCK                       | FUHR 856 SERIES                                                  |
| 39               | HEAD STRIKE PLATE                              | FUHR 856 SERIES                                                  |
| 40               | SILL STRIKE PLATE                              | FUHR 856 SERIES                                                  |
| 41               | HANDLE                                         | AS REQ'D TO OPERATE LOCK                                         |
| 42               | DEADBOLT/LATCH STRIKE                          | FUHR 856 SERIES                                                  |
| 43               | MULTI-POINT STRIKE                             | FUHR 856 SERIES                                                  |
| SEALS & SEALANTS |                                                |                                                                  |
| 44               | TOP RAIL CAP                                   | INTEK 30894BPS                                                   |
| 45               | BULB WEATHERSTRIP                              | INTEK: #50178A                                                   |
| 46               | SILL SWEEP                                     | RIGID PVC; INTEK 30839APS                                        |
| 47               | FOAM WEATHERSTRIP                              | CLOSED CELL FOAM EPDM CLEANSEAL #105                             |
| 48               | BULB WEATHERSTRIP                              | SSI: #CAP-425 OR ULTRAFAB: #E104186N                             |
| 49               | 1/16" X 1/4" I.G. GLAZING TAPE                 | CLOSED CELL FOAM; VENTURE VG1116B                                |
| 50               | 1/32" X 3/8" I.G. GLAZING TAPE                 | CLOSED CELL FOAM; VENTURE VG332B                                 |
| 51               | 1/8" X 3/16" NON-I.G. GLAZING TAPE             | CLOSED CELL FOAM; VENTURE VG308B-L314                            |

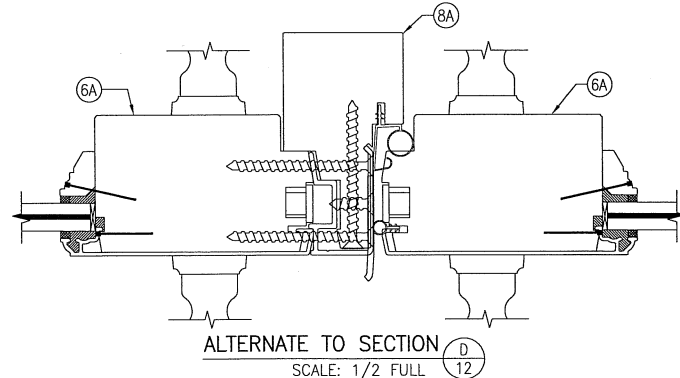
| ITEM #    | ITEM DESCRIPTION                  | MANUFACTURER/NOTES                                                                                         |
|-----------|-----------------------------------|------------------------------------------------------------------------------------------------------------|
| FASTENERS |                                   |                                                                                                            |
| 54        | NO. 8 X 1/2" SELF TAPPING SCREW   | WITHIN 1" FROM CORNERS & 6" O.C.                                                                           |
| 55        | NO. 8 X 2" SMS OR WOOD SCREW      | 5 PER RAIL REINFORCEMENT                                                                                   |
| 56        | NO. 6 X 1 1/4" SMS                | 3 PER CLADDING                                                                                             |
| 57        | NO. 12 X 3/4" SMS OR WOOD SCREW   | 2 OR 3 PER HINGE INTO JAMB<br>TOTAL OF SCREWS REQUIREMENTS IS<br>DEPENDANT ON QUANTITY USED INTO SUBSTRATE |
| 58        | NO. 12 X 2" SMS OR WOOD SCREW     | 4 PER HINGE INTO STILE                                                                                     |
| 59        | NO. 8 X 2 1/2" SMS SCREW (2 ROWS) | WITHIN 1 1/4" FROM ENDS & 14" O.C.                                                                         |
| 60        | 18 GA. X 1" BRAD NAIL             | WITHIN 1" FROM CORNERS & 6" O.C.                                                                           |
| 61        | 16 GA. X 1 1/4" FINISH NAIL       | WITHIN 1" FROM CORNERS & 6" O.C.                                                                           |
| 62        | NO. 8 X 2 1/2" SMS OR WOOD SCREW  | (3)THREE GROUPED 1 1/2", 3 1/2" &<br>5 1/2" FROM ENDS & (2)TWO EQUALLY<br>SPACED BETWEEN                   |
| 63        | 18 GA. X 1" BRAD NAIL             | WITHIN 1" FROM CORNERS & 6" O.C.                                                                           |
| 65        | NO. 8 X 2" PH SMS                 | WITHIN 2 3/8" FROM CORNERS & 8" O.C.                                                                       |
| 66        | NO. 8 X 2 1/2" SMS OR WOOD SCREW  | WITHIN 5" FROM CORNERS & 8" O.C.                                                                           |
| 67        | NO. 8 X 3 1/2" SMS OR WOOD SCREW  | WITHIN 5" FROM CORNERS & 8" O.C.                                                                           |
| 68        | NO. 7 X 3/4" SCREW                | 3 PER DEADBOLT/LATCH STRIKE;<br>2 PER MULTI-POINT STRIKE                                                   |
| 69        | NO. 8 X 2" SMS OR WOOD SCREW      | WITHIN 2 3/8" FROM HINGE CORNER<br>& (3) EQUALLY SPACED                                                    |

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.

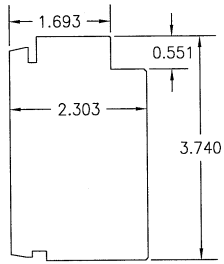
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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------|-------------|
| DRAWN BY: W.R.M.                                                                                                                                                         |    | CHECKED BY: W.W.S. |             |
| PLOT: 1-2                                                                                                                                                                |    | DATE: 01/19/11     |             |
| DATE                                                                                                                                                                     | BY | REVISION           | DESCRIPTION |
|                                                                                                                                                                          |    | NO.                |             |
| <b>ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR</b><br>MANUFACTURER<br><b>C.P. LOEWEN ENTERPRISES</b><br>77 HWY 52 WEST<br>STEINBACH, MB, CANADA R5G 1B2<br>204-326-6446 |    |                    |             |
| CONSULTANTS<br><b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A. (CA 6809)</b><br>7480 150TH COURT NORTH<br>PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424       |    |                    |             |
| DRAWING TITLE<br><b>ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR</b>                                                                                                     |    |                    |             |
| STATE OF<br>FLORIDA<br>PROFESSIONAL ENGINEER<br>W. W. SCHAEFER<br>No. 44135<br>DEC 11 2018                                                                               |    |                    |             |
| DRAWING NO. 1640A                                                                                                                                                        |    | REV. F             |             |
| SHEET NO. 16                                                                                                                                                             |    | OF 18              |             |



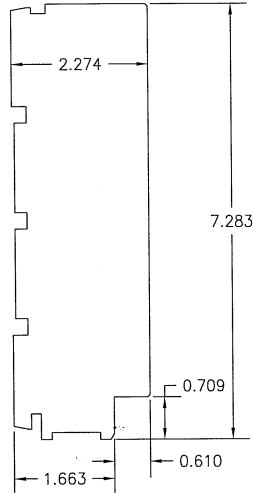
ALTERNATE SECTIONS NOTE:  
ALL SECTIONS ON THIS SHEET ARE ALTERNATES TO THOSE SPECIFIED WITH THE ONLY DIFFERENCE BEING THE THICKER STILES AND RAILS. ALL OTHER PARTS & FASTENERS IN THESE ALTERNATE SECTIONS ARE THE SAME AS THOSE IN THE MAIN SECTIONS. SEE SHEET 18 FOR DETAIL OF ALTERNATE PARTS.



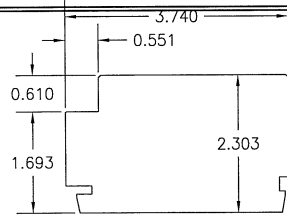
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| DRAWN BY:<br>W.R.M.                                                                     | CHECKED BY:<br>W.W.S. |
| PLOT:<br>1-2                                                                            | DATE:<br>01/19/11     |
| DATE                                                                                    | BY                    |
| REVISION DESCRIPTION                                                                    |                       |
| NO.                                                                                     |                       |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR                             |                       |
| MANUFACTURER: C.P. LOEWEN ENTERPRISES                                                   |                       |
| CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)                    |                       |
| 1480 15TH COURT NORTH, SUITE 100<br>PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424 |                       |
| DEC 11 2018                                                                             |                       |
| WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135                                              |                       |
| DRAWING NO.<br>1640A                                                                    | REV.<br>F             |
| SHEET NO.<br>17 OF 18                                                                   |                       |



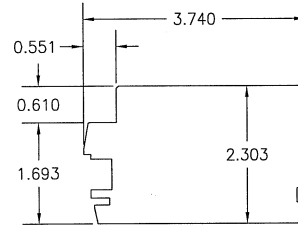
3A TOP RAIL



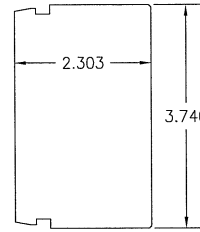
4A BOTTOM RAIL



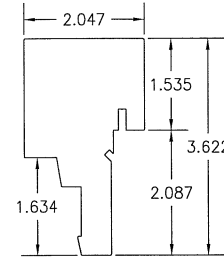
5A HINGE & FIXED PANEL STILE



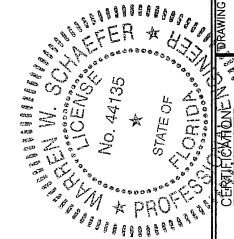
6A LOCK STILE



7A MID-RAIL



8A ASTRAGAL



|                                                                                                                                                                                                                                                                                                                                  |          |                                               |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------|------|
| DRAWN BY:<br>W.E.M.                                                                                                                                                                                                                                                                                                              |          | CHECKED BY:<br>W.W.S.                         |      |
| PLOT:<br>1-2                                                                                                                                                                                                                                                                                                                     |          | DATE:<br>01/19/11                             |      |
| NO.                                                                                                                                                                                                                                                                                                                              | REVISION | DESCRIPTION                                   | DATE |
| DRAWING TITLE: ALUMINUM CLAD WOOD STORMFORCE OUT-SWING DOOR<br>CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)<br>7480 150TH COURT NORTH<br>PALM BEACH GARDENS, FL 33418<br>PHONE: 561-744-3424<br>MANUFACTURER: C.P. LOEWEN ENTERPRISES<br>77 HWY 52 WEST<br>STEINBACH, MB, CANADA R5G 1B2<br>204-326-6446 |          |                                               |      |
| DEC 11 2018<br>WARREN W. SCHAEFER, P.E.<br>P.E. NO. 44135                                                                                                                                                                                                                                                                        |          | DRAWING NO.<br>1640A<br>SHEET NO.<br>18 OF 18 |      |