

SUBMITTAL REVIEW COVER SHEET

SPECIFICATION SECTION NUMBER AND TITLE: Spec Sections: 084100 – Aluminum Storefront
Spec Sections: 084413 – Curtainwall

PROJECT NAME: Laurel School Refurbishment

DATE: 12/19/2016

ARCHITECT: Mahlum I Scairono Martinez Architects

CONTRACTOR: TUNA CONSTRUCTION LLC

Supplier/Preparer: Star Glass Inc.

Options:

Contractor's Review Stamp

Consultant's Review Stamp

Tuna Construction L.L.C.

Tuna Construction L.L.C. submission of these Submittals is subject to the provisions of the contract Drawings, Specifications and Addenda. This Action is for general concurrence only. Tuna Construction L.L.C. is not responsible for Errors, Omissions, Lack of Design, or Lack of Proper Detail in the contract documents

Time is of the essence. Delays in timely review of these Submissions will delay completion of the job.

Reviewed
 Reviewed Corrections Noted

Reviewed By: Kelli Perkins _____

Delivered On: 12/19/2016 _____

See notes &
comments on
cover sheet
JHC

COMMENTS:

All work shall be placed in strict conformance with the requirements of the Contract Documents, particularly the specific specification Sections Spec Sections: 084100 – Aluminum Storefront

Spec Sections: 084413 – Curtainwall

Contractor to field verify all dimensions.



STAR GLASS INC.

1000 WESTBANK EXPY.
GRETNA, LA 70053
P(504) 368-8826
F(504) 367-5802

Laurel School Refurbishment STOREFRONT SHOP DRAWINGS

FIELD MEASUREMENTS

YES NO DATE: _____
DATE: _____

Laurel School Refurbishment
820 Jackson Ave New Orleans, LA
70130 RSD Project No.
2011-0891-0001

DATE DRAWN:
11-21-2016

REVISION DATE:



PROJECT NUMBER:
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GENERAL NOTES

1. THESE DRAWINGS REPRESENT THE INTERPRETATION BY STAR GLASS INC. OF ARCHITECTURAL INFORMATION PROVIDED AND APPLICATION OF PRODUCTS SHOWN TO SATISFY DESIGN REQUIREMENTS. IT IS IMPORTANT THAT THIS INTERPRETATION BE REVIEWED DIMENSIONAL AND FUNCTIONALLY WITH RESPECT TO ACTUAL ARCHITECT INTENT BY THE GENERAL CONTRACTOR AND ARCHITECT.
2. ALL DIMENSIONS SHOULD BE FIELD VERIFIED AND/OR APPROVED BY THE ARCHITECT PRIOR TO THE ORDERING AND/OR FABRICATION OF GLASS AND FRAMING PRODUCTS.
3. STAR GLASS INC. WILL ASSUME NO RESPONSIBILITY FOR ERRORS RESULTING FROM THE USE OF THESE DRAWINGS FOR SIZES AND ORDERING MATERIALS OR LABOR BY OTHER TRADES.
4. MATERIALS FOR THIS PROJECT WILL NOT BE RELEASED, NOR WILL FABRICATION PRINTS BE PREPARED UNTIL STARGLASSINC. RECEIVES RETURNED "APPROVED" AND/OR "APPROVED AS NOTED" SHOP DRAWINGS.
5. REQUEST FOR REVISIONS AFTER STAR GLASS INC. HAS BEEN RELEASED FOR FABRICATION WILL RESULT IN CHARGES FOR ALL ENGINEERING, FABRICATION, TRANSPORTATION, AND HANDLING. SCHEDULE DELAYS MAY RESULT DUE TO ANY CHANGES OF THIS NATURE. CHANGES MUST BE APPROVED IN WRITING PRIOR TO ANY REVISIONS BEING UNDERTAKEN.
6. GENERAL CONTRACTOR IS TO CLOSELY SUPERVISE OTHER TRADES TO INSURE THAT ALL INSTALLED GLASS AND/OR FINISH ALUMINUM PRODUCTS ARE PROTECTED DURING WELDING OPERATIONS, FIRE PROOFING OR ANY OTHER PROCESS THAT MAY BE HARMFUL TO THE APPEARANCE AND/OR PERFORMANCE OF PROJECT MATERIALS. THIS INCLUDES PROVIDING OR INSURING THAT PROTECTION FROM STAINING BY WET CARDBOARD, PAPER, AND FROM THE ACTION OF HARSH ALKALIS, SAND IN CONCRETE, STUCCO, MORTAR OR PLASTER WILL BE PROVIDED TO ENSURE THE PREVENTION OF MARRING AND/OR DISCOLORATION.
7. THE BUILDING STRUCTURE AND COMPONENTS THERE OF MUST BE CAPABLE OF SAFELY CARRYING THE LOADS IMPOSED UPON IT BY THE PROJECT MATERIALS, INCLUDING DEAD LOADS, WINDLOADS SHOWN HEREIN ON THE DRAWINGS AND/OR CALCULATIONS, THERMAL LOADS, SEISMIC LOADS, LIVE LOADS, ETC.
8. CONTRACTOR TO REMOVE EXISTING WINDOWS FROM OPENING. ALL ROUGH OPENINGS PROVIDED MUST BE PLUMB, LEVEL, SQUARE, AND WITHIN SPECIFIED BUILDING TOLERANCES.
9. THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF STAR GLASS, INC. AND ARE NOT TO BE USED OR DUPLICATED WITHOUT THE WRITTEN AUTHORIZATION FROM STAR GLASS, INC.
10. STAR GLASS INC., IS NOT RESPONSIBLE FOR CLEANING AND PROTECTION, REPAIR AND/OR REPLACEMENT OF MATERIALS, DAMAGED BY OTHERS.
11. CONTRACTOR TO HIRE A LICENSED ELECTRICIAN TO WIRE EL PANIC DEVICE. PANIC DEVICE WARRANTY WILL BE VOIDED IF AN UNLICENSED PERSON(S) WIRES EL PANIC DEVICES.

FRAME SCHEDULE

STOREFRONT:
KAWNEER IR500 (2 1/2" X 5")

CURTAINWALL:
KAWNEER 1600 (2 1/2" X 7 1/2")

DOORS:
KAWNEER 350 IR

VENT WINDOW:
KAWNEER 7225 CASEMENT WINDOW

Provide info on hardware at casement windows
JHC 02/06/2017

HARDWARE SCHEDULE

1@Set 1-1
Door 1001B
Each opening to have:
1 ea Continuous hinge 112HD EPT
1 ea Continuous hinge 112HD
1 ea Exit device EL9827 NL-OP
1 ea Exit device 9827 EO
1 ea Rim cylinder 20-057
2 ea Closers 4111-Cush
2 ea Closer brackets 4110-18
2 ea Pulls 8190-0
1 ea Powertransfer EPT 10
1 ea Powersupply PS914 x 900 2RS
All other hardware by door supplier.

3@Set 1-2
Doors 1204A, 1103D, 1103C Each leaf to have
1 ea Continuous hinge 112HD
1 ea exit device 98L
1 ea Rim cylinder 20-057
1 ea Closer 4111-Cush
1 ea Closer bracket 4110-18
All other hardware by door supplier

3@Set 1-4
Doors 1002B, 1401B, 1402B
Each opening to have
2 ea Continuous hinges 112HD
2 ea Exit devices 9827L
2 ea Rim cylinders 20-057
2 ea Closers 4111-Cush
2 ea Closer brackets 4110-18
All other hardware by door supplier

PROJECT INFORMATION

CONTRACTOR: TUNA CONSTRUCTION, LLC.
2420 DAWSON ST
KENNER, LA 70062
P: (504) 305-2249

ARCHITECT: MAHLUM SCAIRONO MARTINEZ ARCHITECTS
3642 MAGAZINE ST
NEW ORLEANS, LA 70115
P: (504) 896-2000

FINISH SCHEDULE

CLEAR ANODIZED

SEALANT SCHEDULE

S1 DOW CORNING 795
COLOR: SILVER
LOCATION: PERIMETER SEALANT

GLASS SCHEDULE

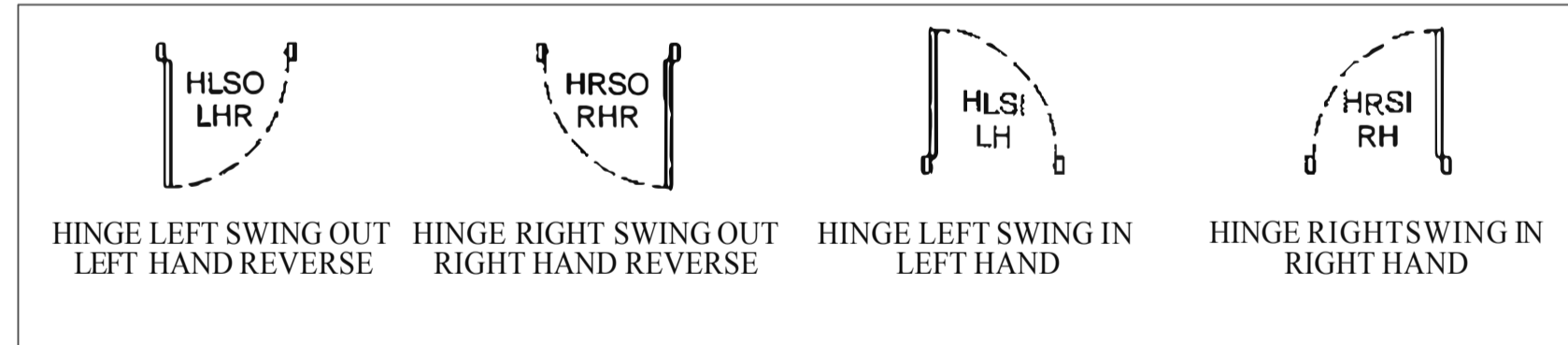
G1 - 1/4" CL TP 090 PVB 1/4" CL TP

G2 - 1/4" CL TP 030 ARTIC SNOW 090 PVB 1/4" CL TP

G3- MAPES R PANEL

Provide samples
JHC 02/06/2017

DOOR SWING DIRECTION



CORRECTIVE PROCEDURES

THE FOLLOWING PROCEDURES MUST BE ADHERED TO IF ANY CORRECTIVE WORK IS REQUIRED ON THIS PROJECT

BEFORE ANY CORRECTIVE WORK IS BEGUN, THE PROJECT MANAGER AT STAR GLASS INC. MUST BE CONTACTED. THE DETAILS OF THE PROBLEM ALONG WITH RECOMMENDATIONS OF THE CORRECTIVE REQUIREMENTS SHOULD BE ADDRESSED AT THAT TIME. ONCE THE PROJECT MANAGER HAS THIS INFORMATION, COURSES OF ACTION WILL BE EVALUATED WITH OTHER INTERNAL PERSONNEL; AUTHORIZATION WILL BE PROVIDED IF REWORK IS TO BE PERFORMED, THEN AND ONLY THEN WILL SUCH WORK BE UNDERTAKEN.

PROJECT DOCUMENTATION

DESCRIPTION	DATE
<input type="checkbox"/> YES <input type="checkbox"/> NO ARCHITECTURAL DWGS	AA-AA-AAAA
<input type="checkbox"/> YES <input type="checkbox"/> NO STRUCTURAL DWGS	
<input type="checkbox"/> YES <input type="checkbox"/> NO SPECIFICATIONS	
<input type="checkbox"/> YES <input type="checkbox"/> NO ADDENDUM - ASI- CP	

DRAWING INDEX

SHEET	DESCRIPTION
000	PROJECT INFORMATION
100-108	ELEVATIONS & FLOOR
200-201	SECTIONS DETAILS
300-307	FRAME FABRICATION

Not submitted
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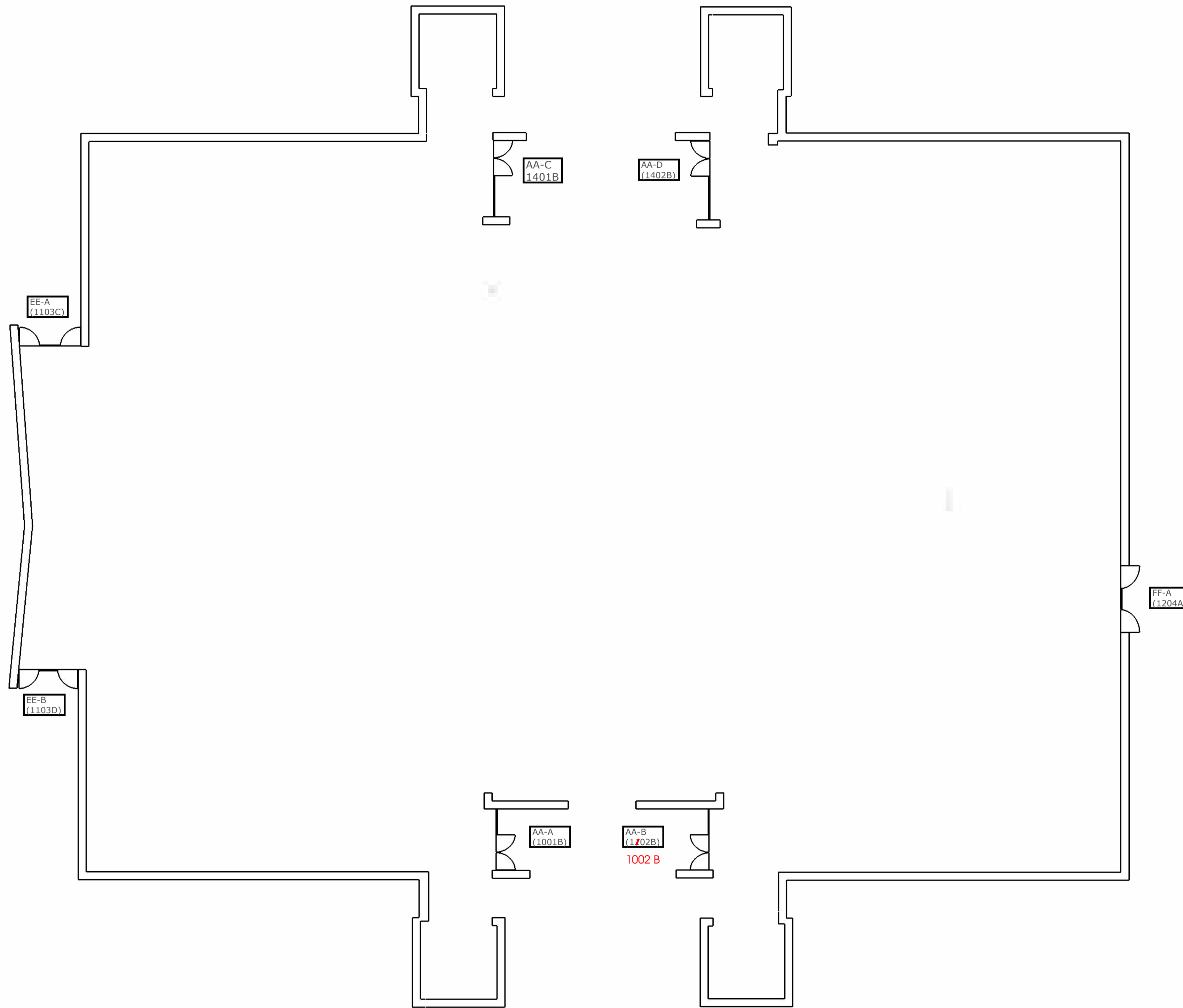
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100

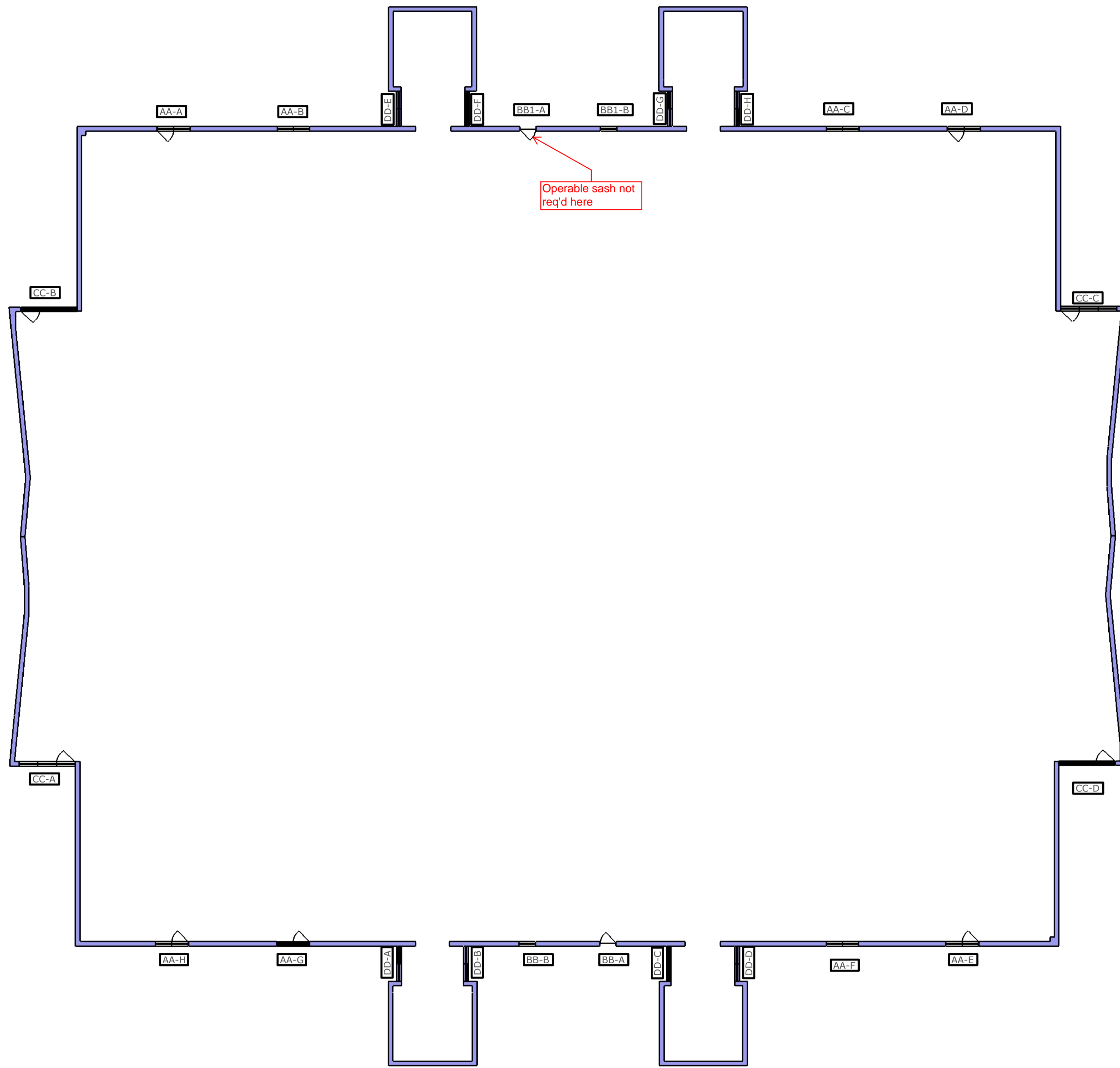
ANNUNCIATION ST



JACKSON AVE

1ST FLOOR PLAN

ANNUNCIATION ST



JACKSON AVE

2ND FLOOR PLAN



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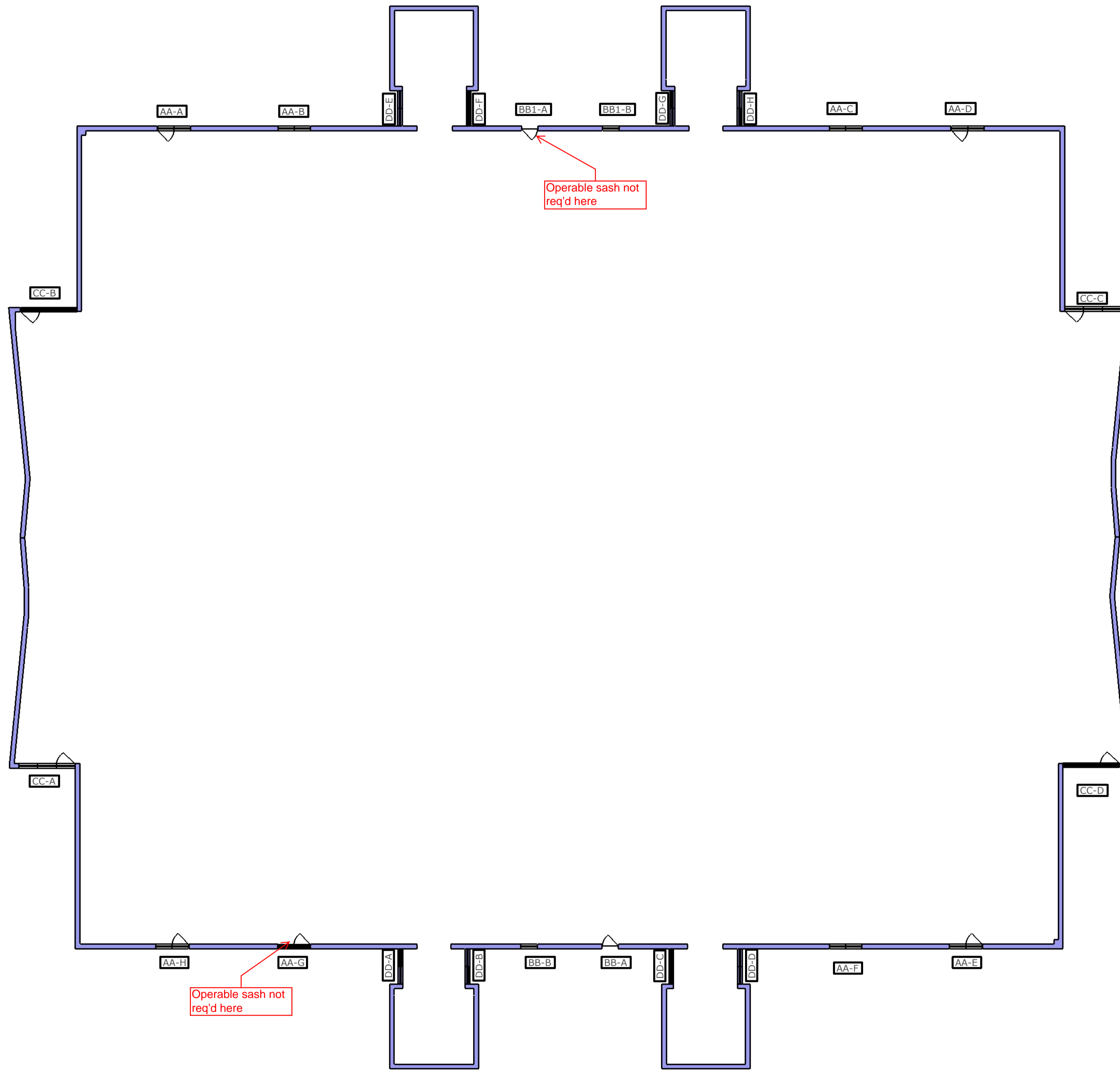
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ANNUNCIATION ST



JACKSON AVE

3RD FLOOR PLAN



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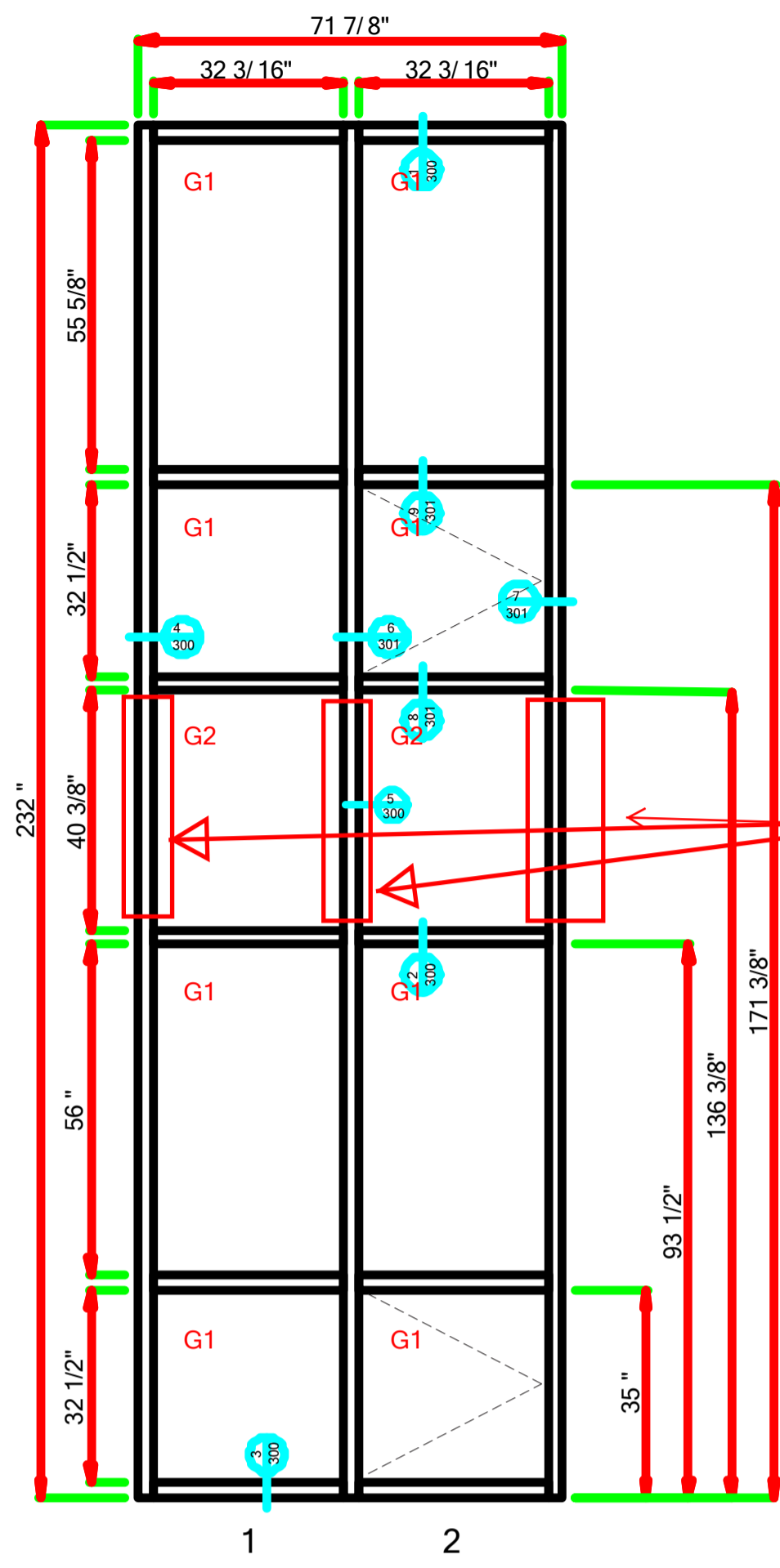


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DRAWN BY:
P.S.

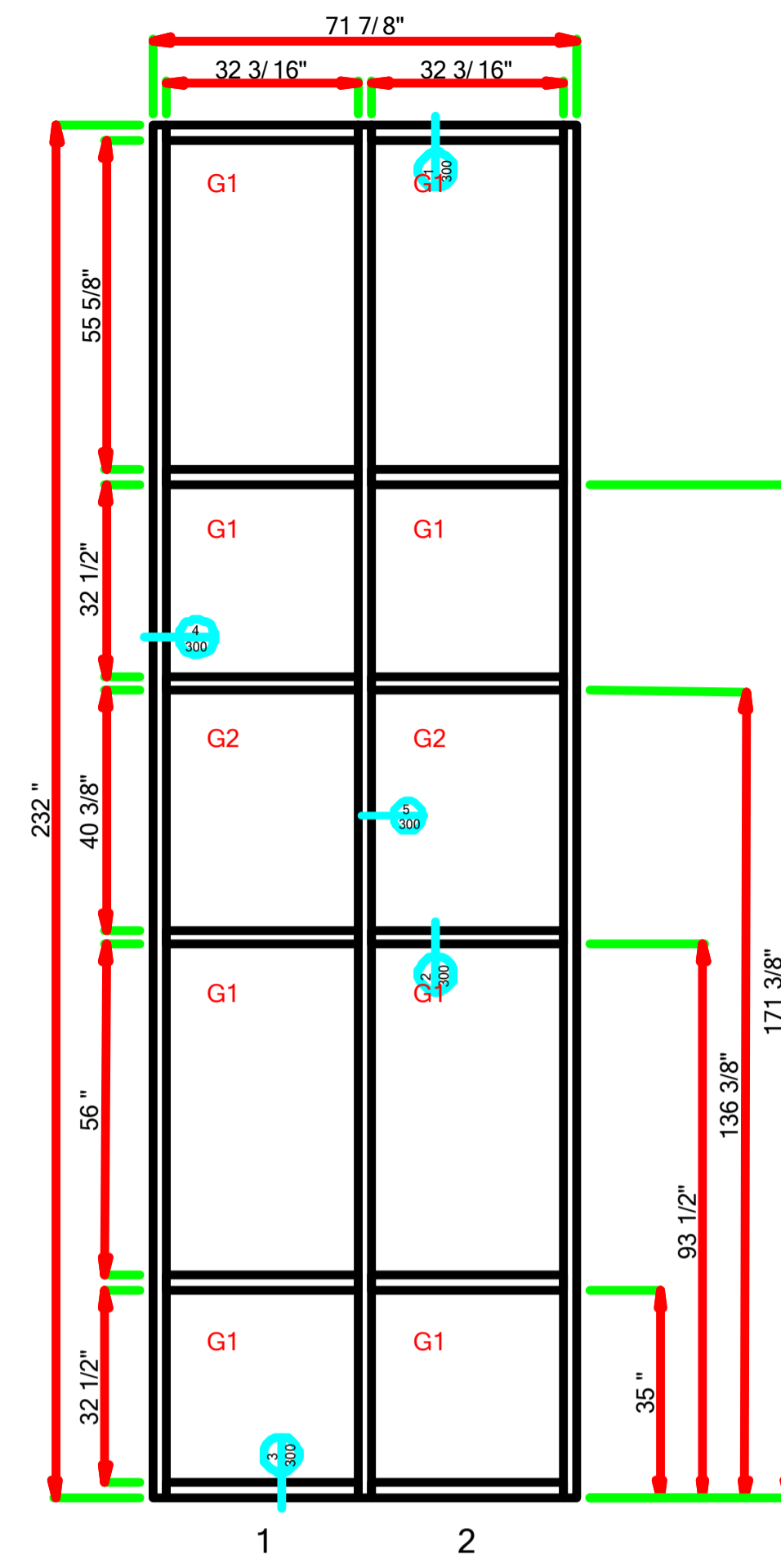
SHEET

104

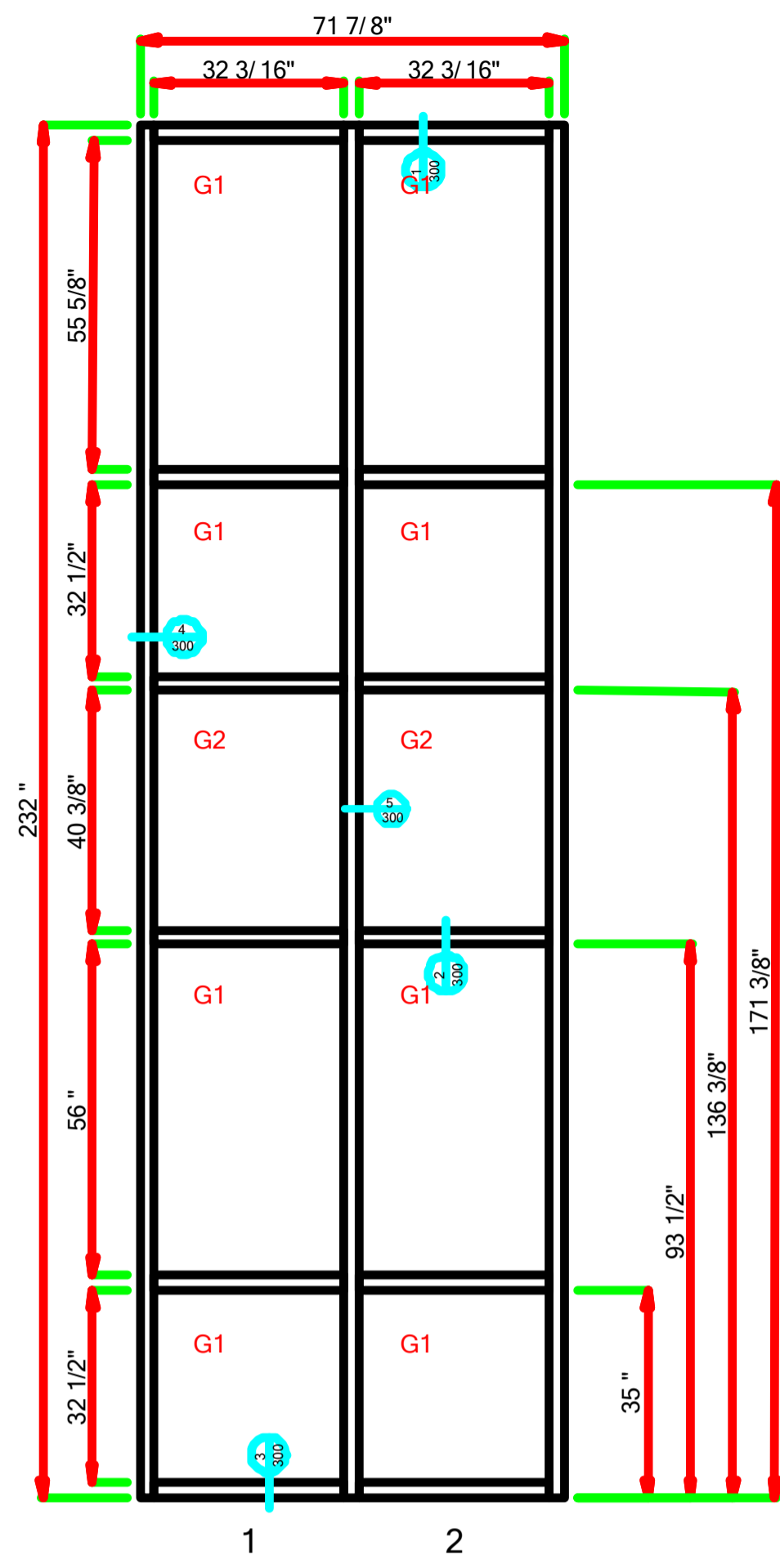


Resubmit mullion
@ structure, typ all
AA, BB, CC & DD
JHC 02/06/2017

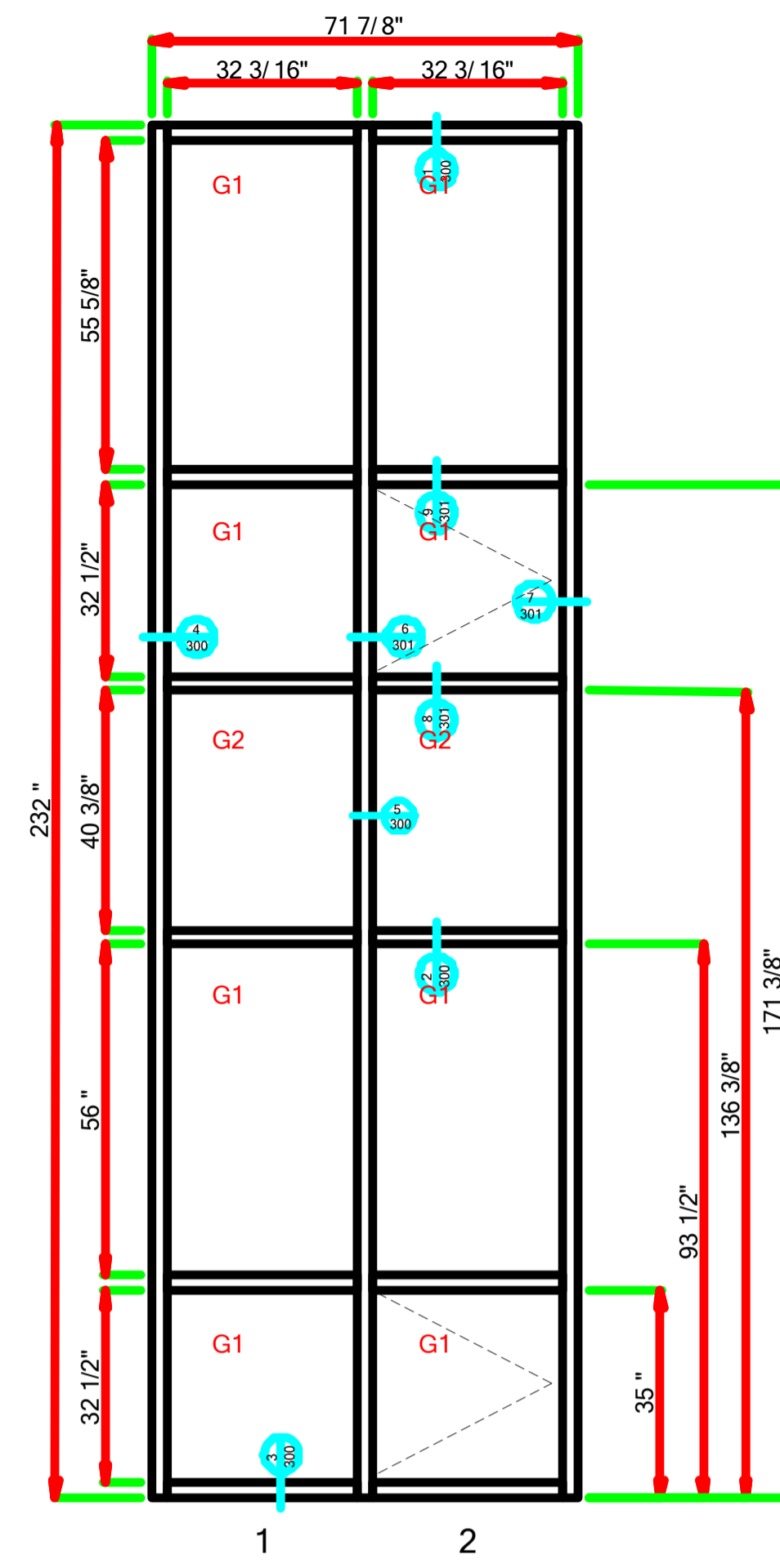
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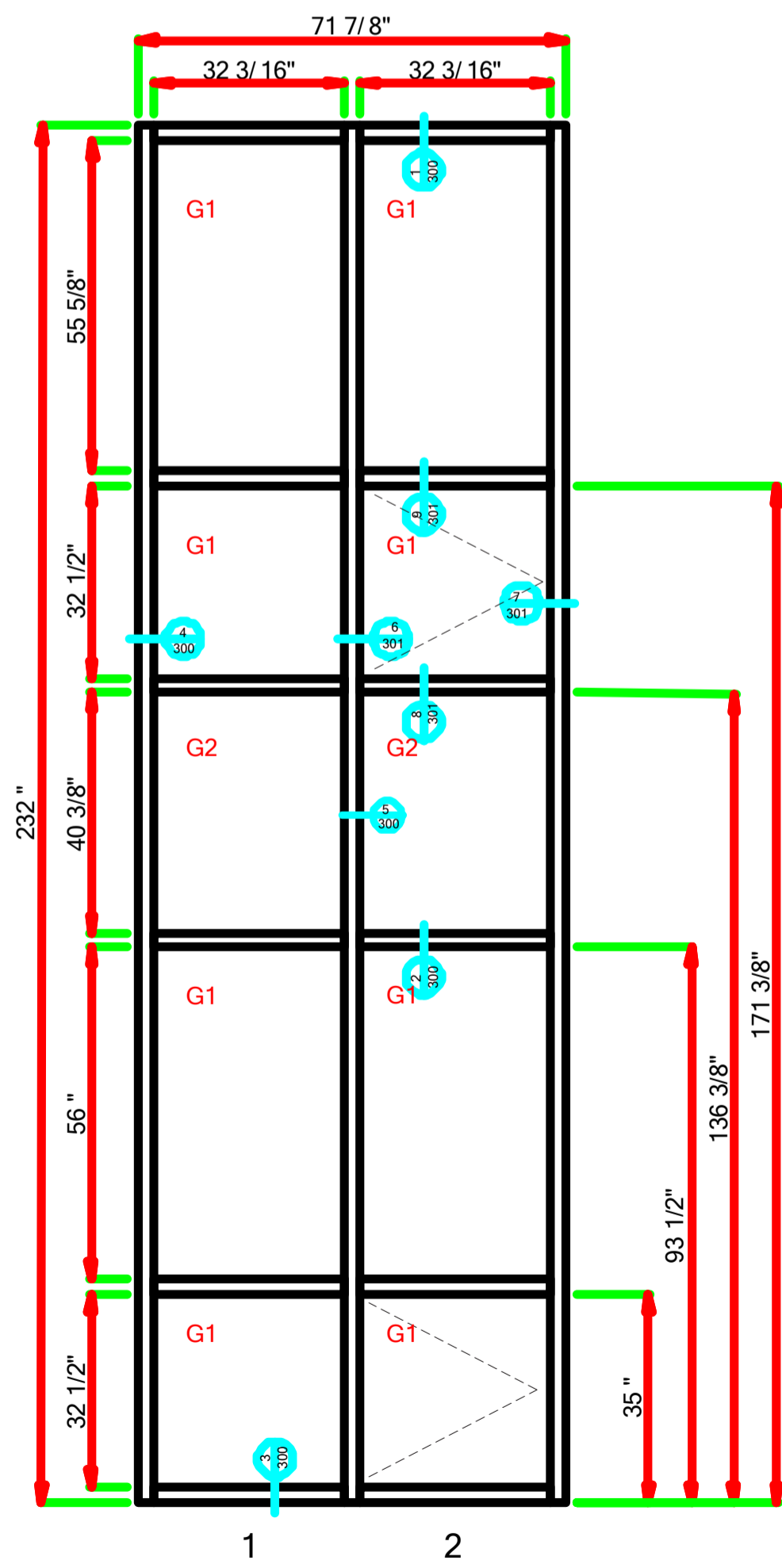
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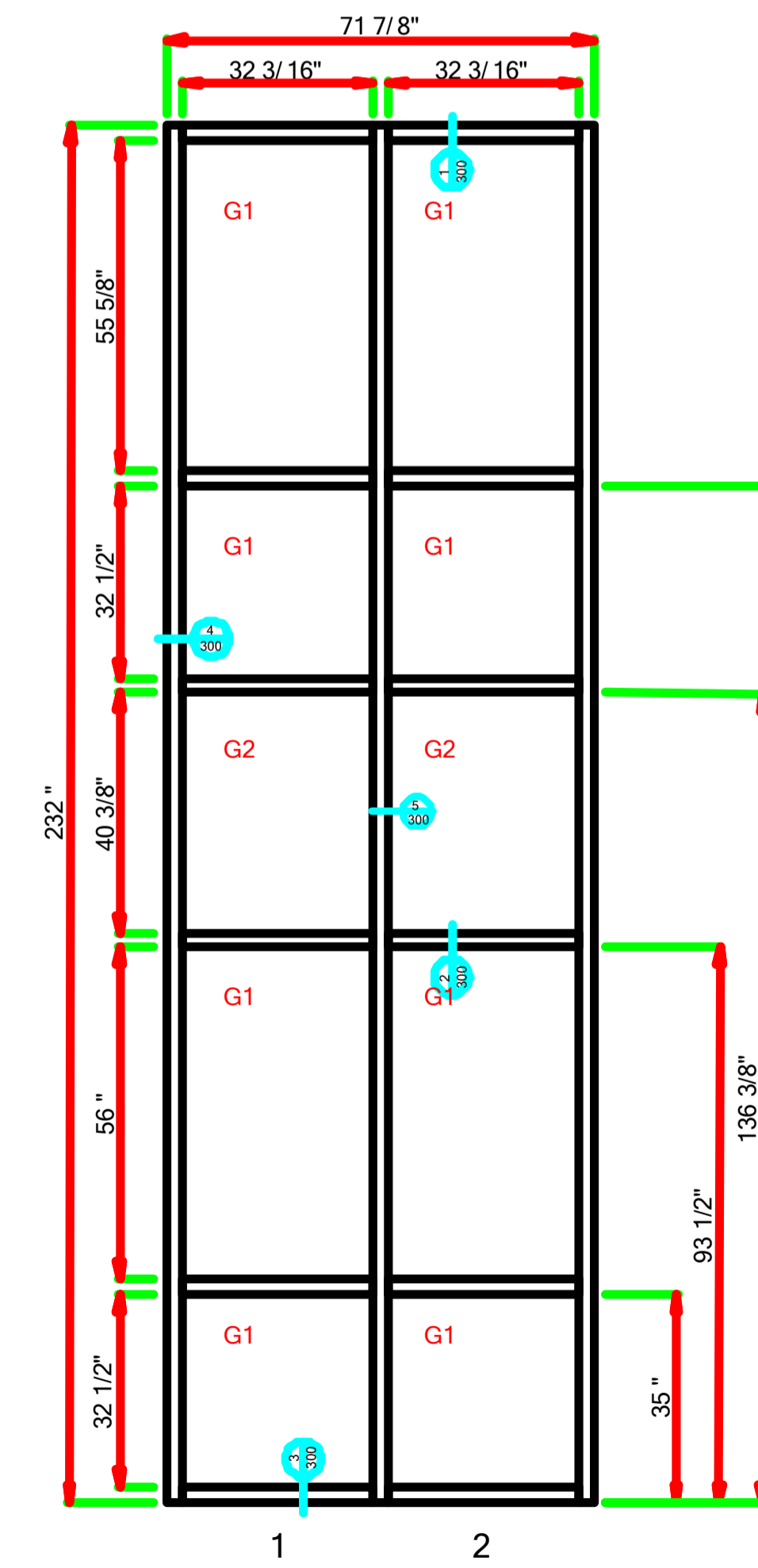
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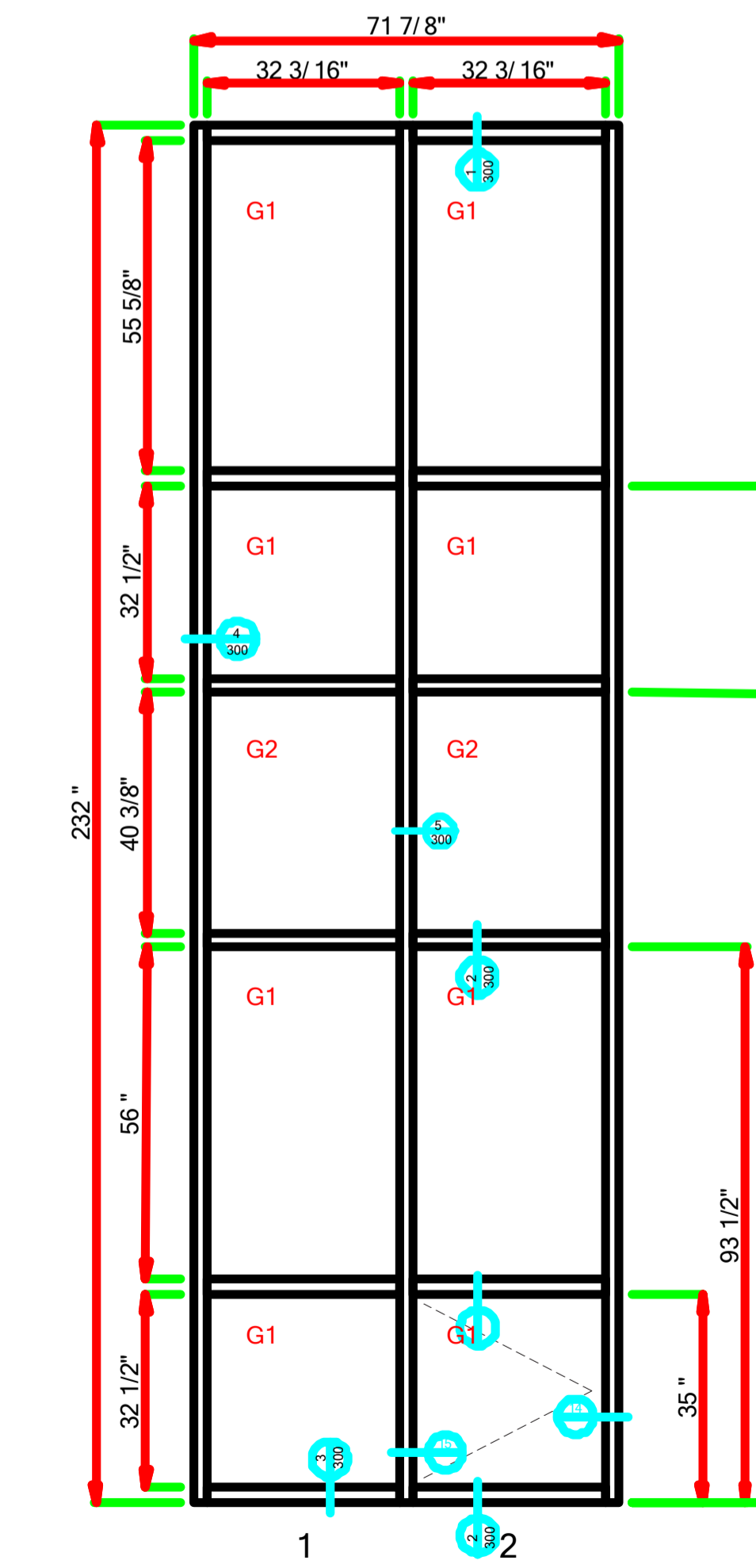
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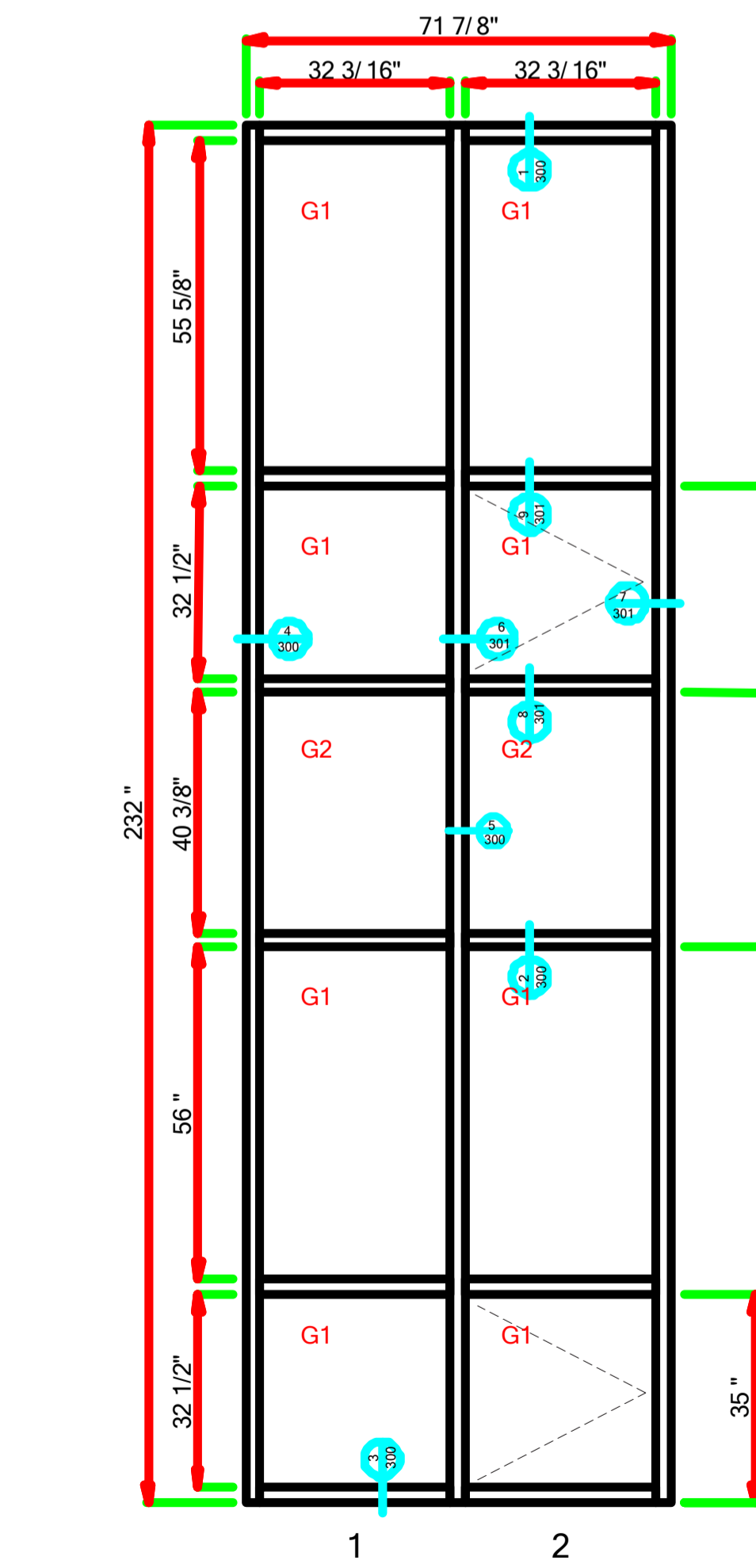
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LAUREL - 006 - MARK AA-F.dwg (1 Thus)



LAUREL - 007 - MARK AA-G.dwg (1 Thus)



LAUREL - 008 - MARK AA-H.dwg (1 Thus)

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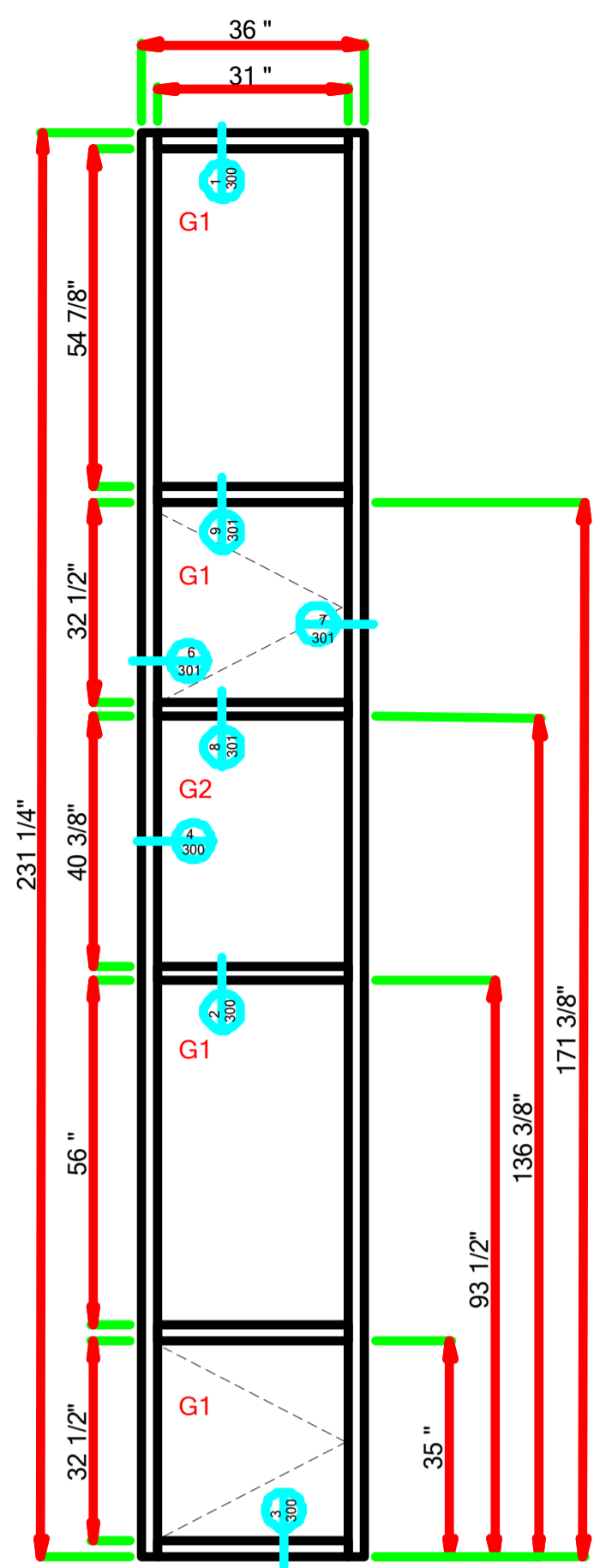


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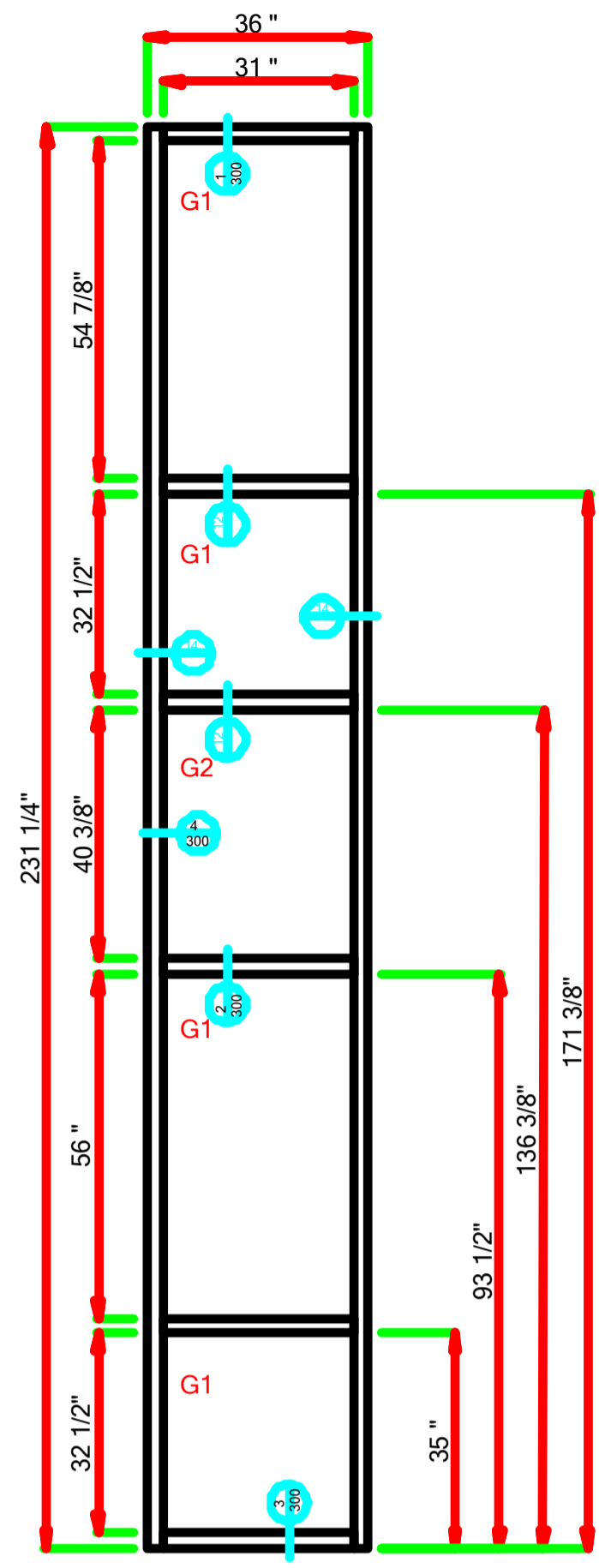
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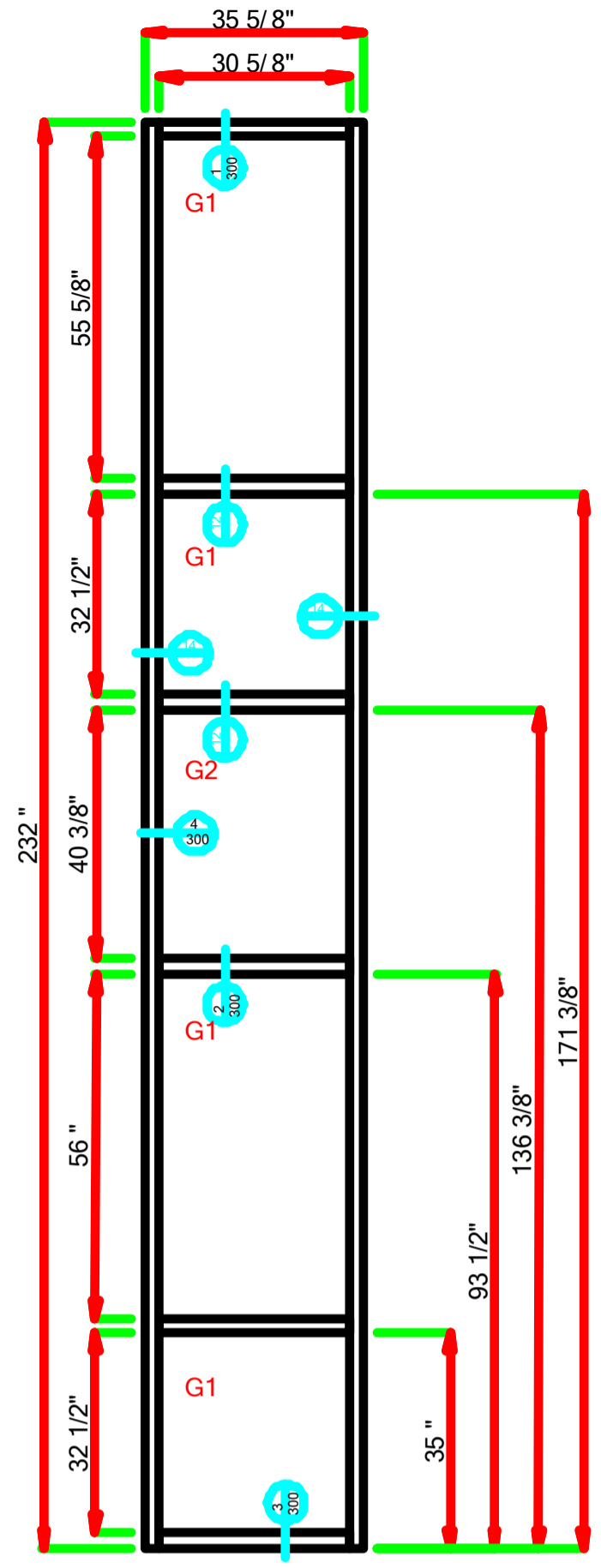
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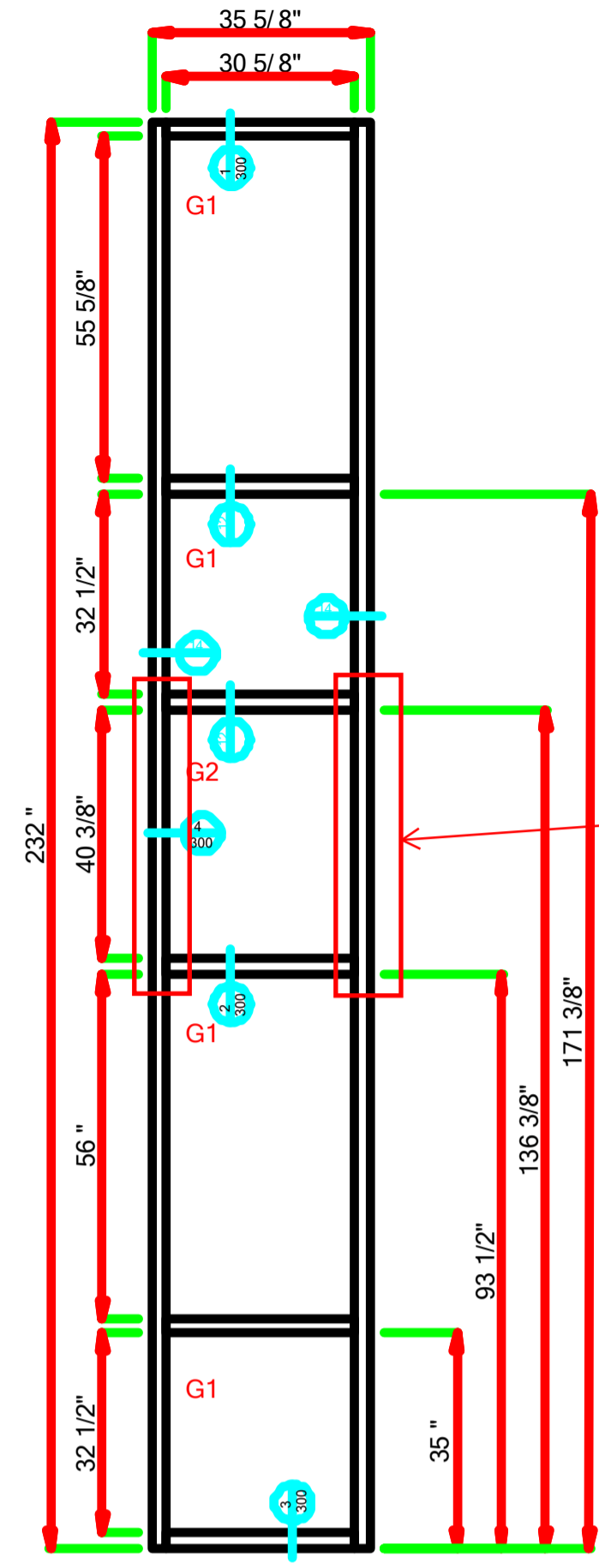
LAUREL - 009 - MARK BB-A.dwg (1 Thus)



LAUREL - 010 - MARK BB-B.dwg (1 Thus)

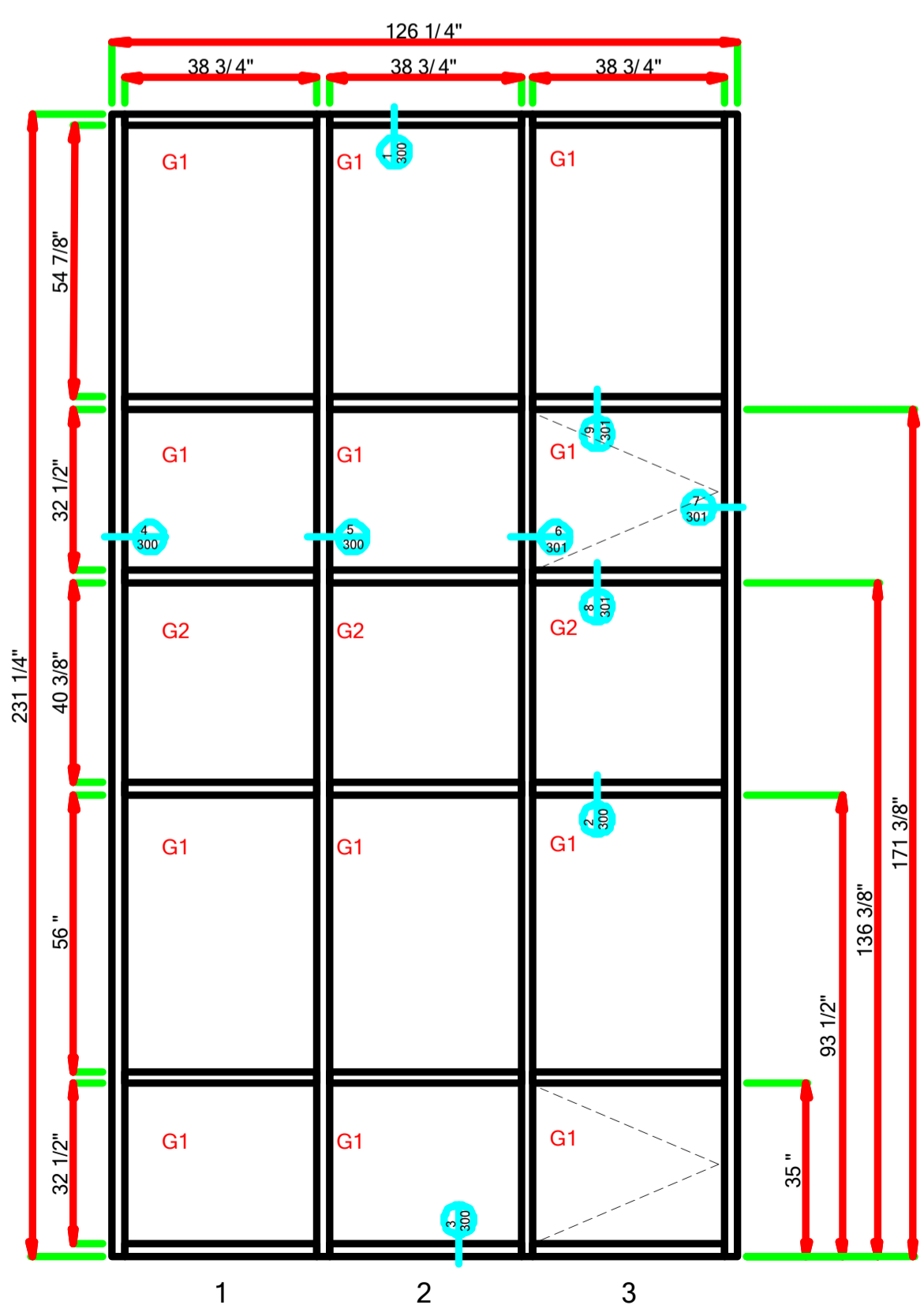


LAUREL - 011 - MARK BB1-A.dwg (1 Thus)

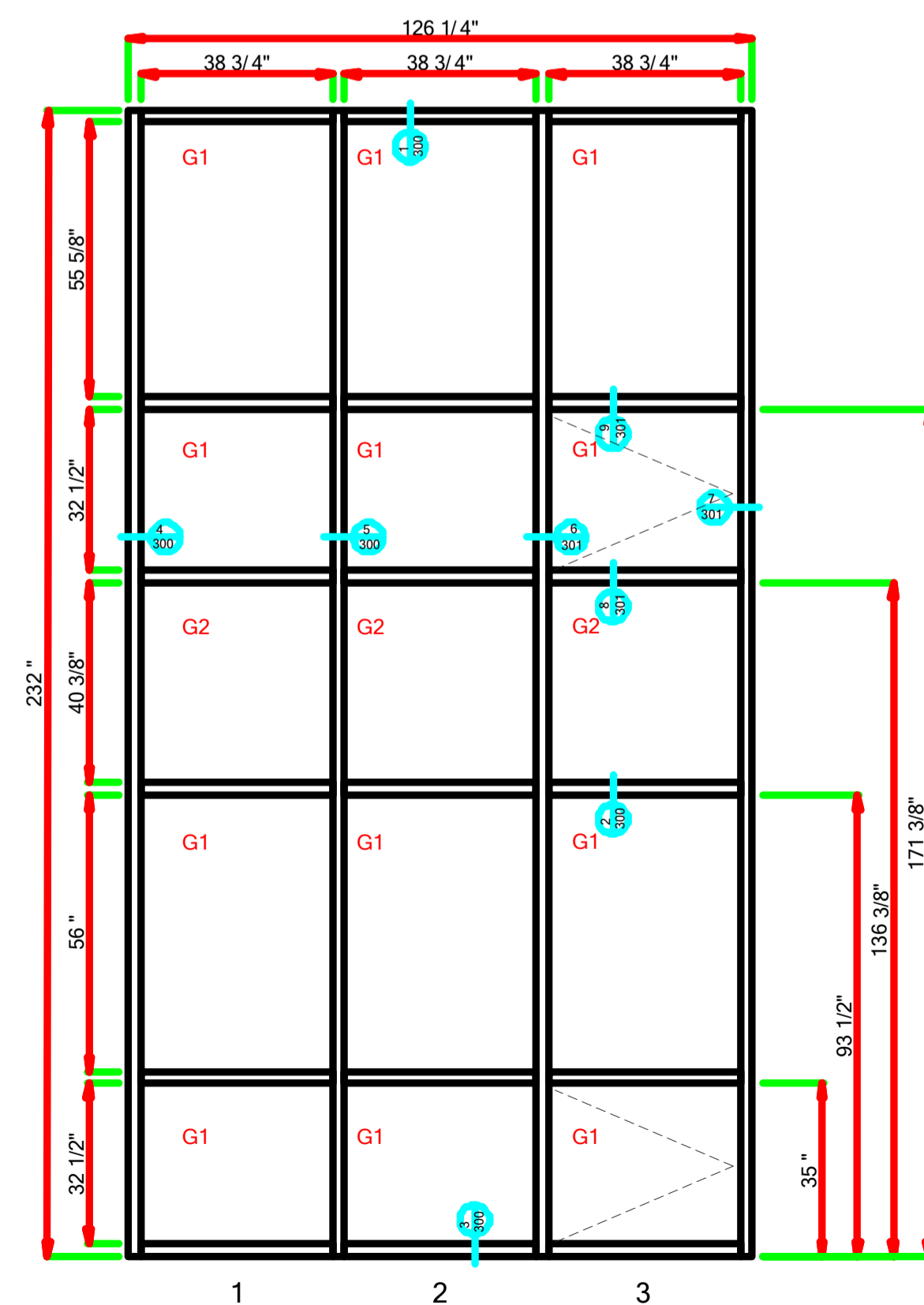


Resubmit mullion @
structure, typ all AA, BB, CC
& DD
JHC 02/06/2017

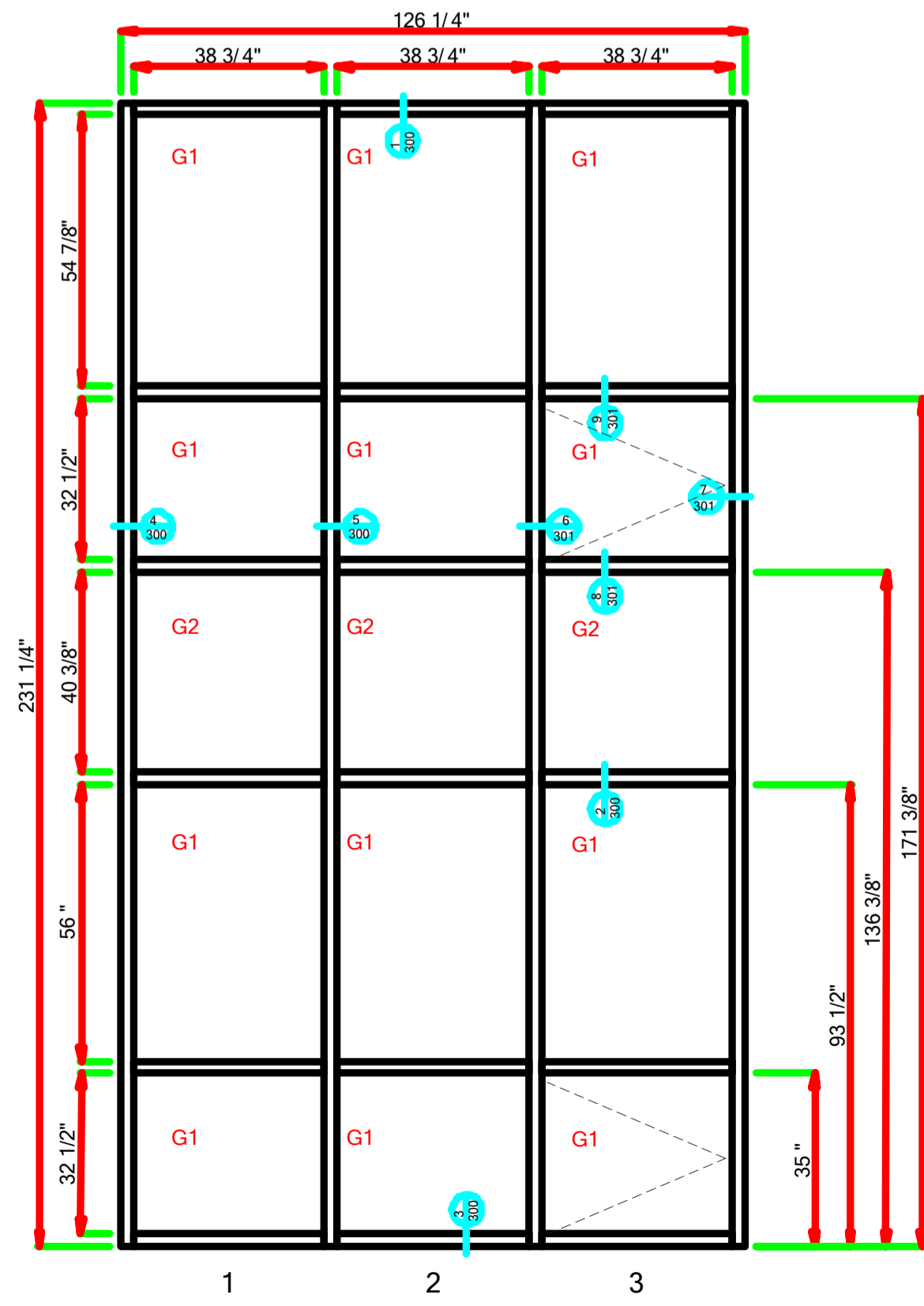
LAUREL - 012 - MARK BB1-B.dwg (1 Thus)



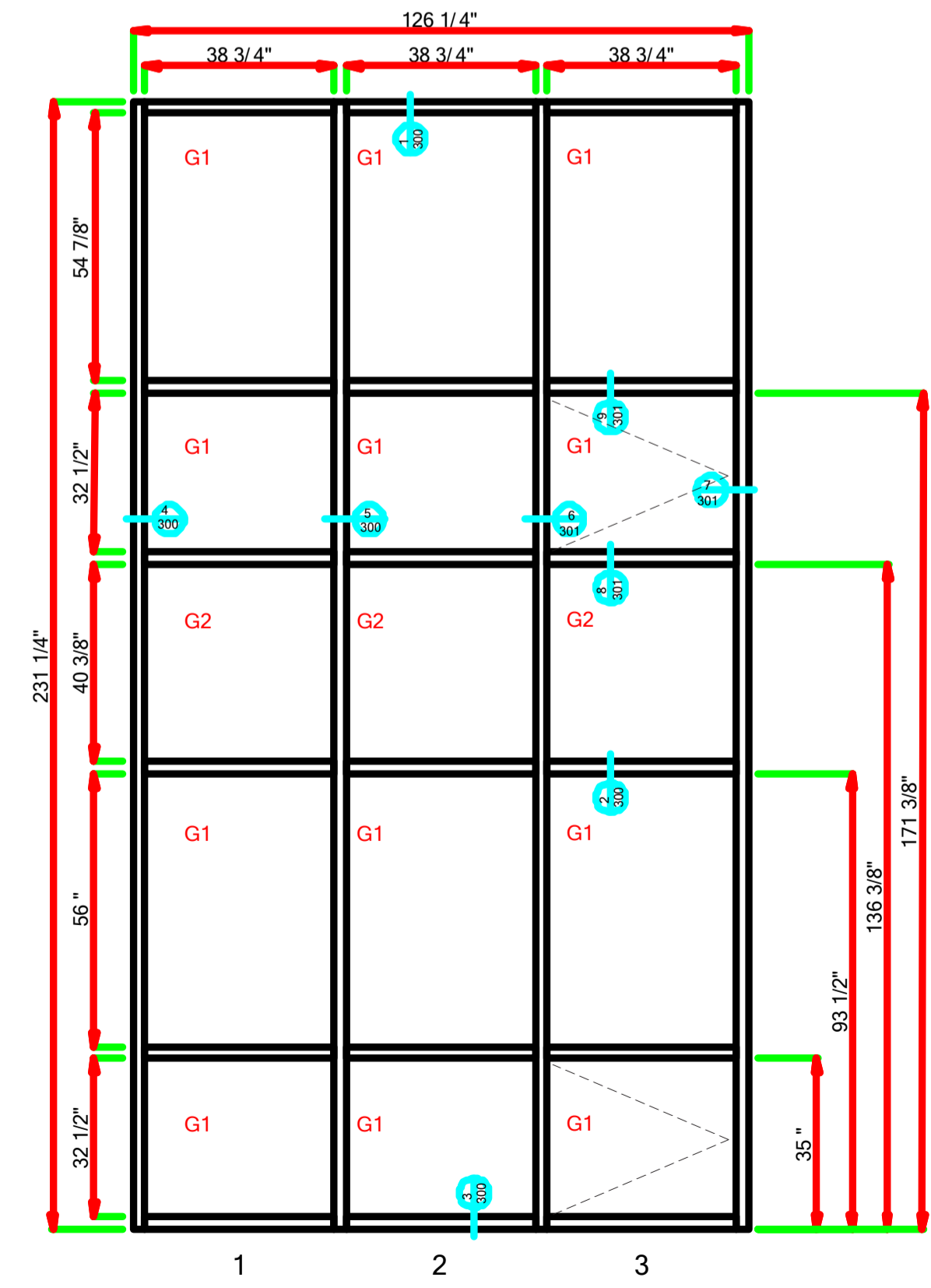
LAUREL - 013 - MARK CC-A.dwg (1 Thus)



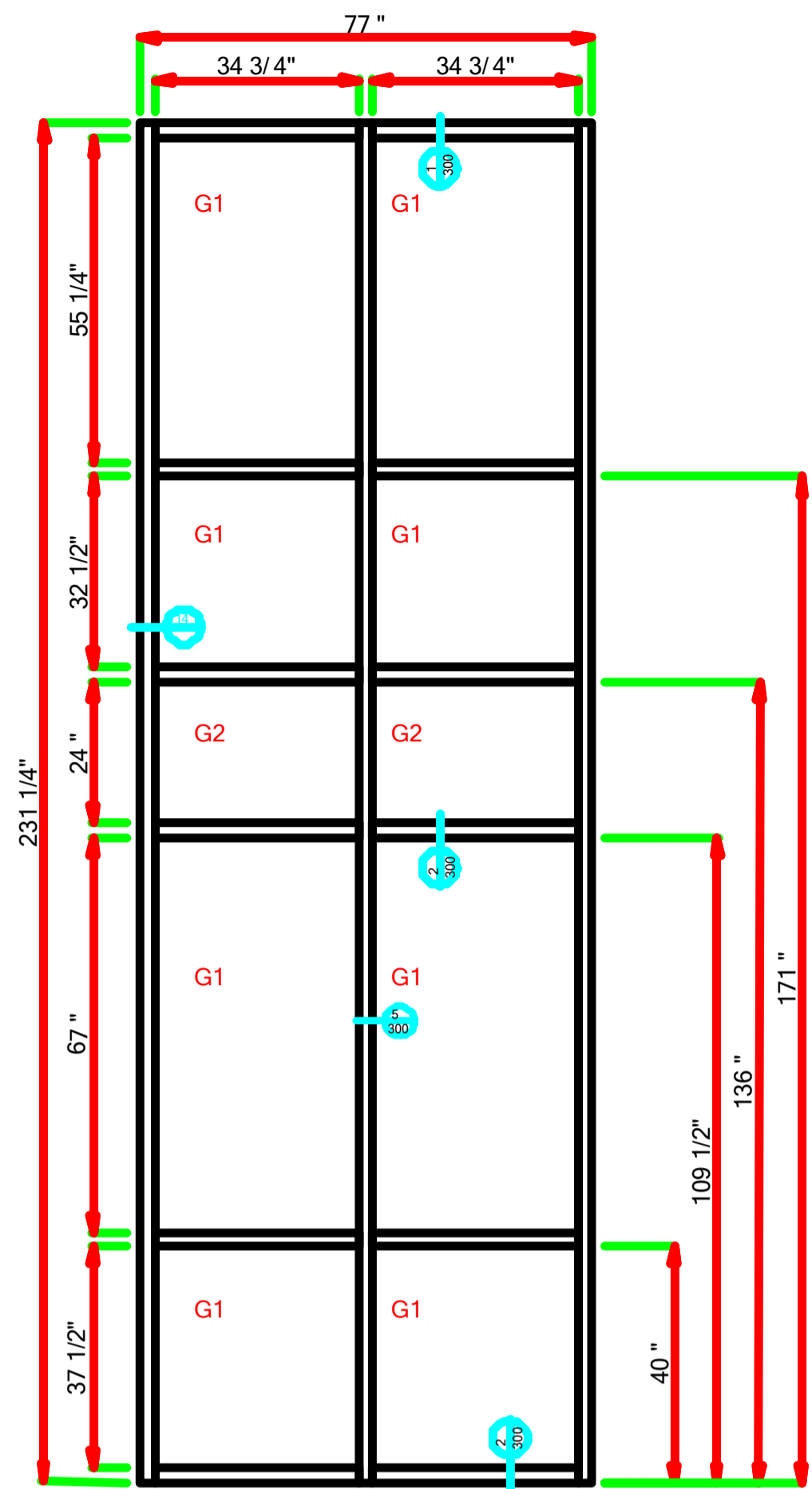
LAUREL - 014 - MARK CC-B.dwg (1 Thus)



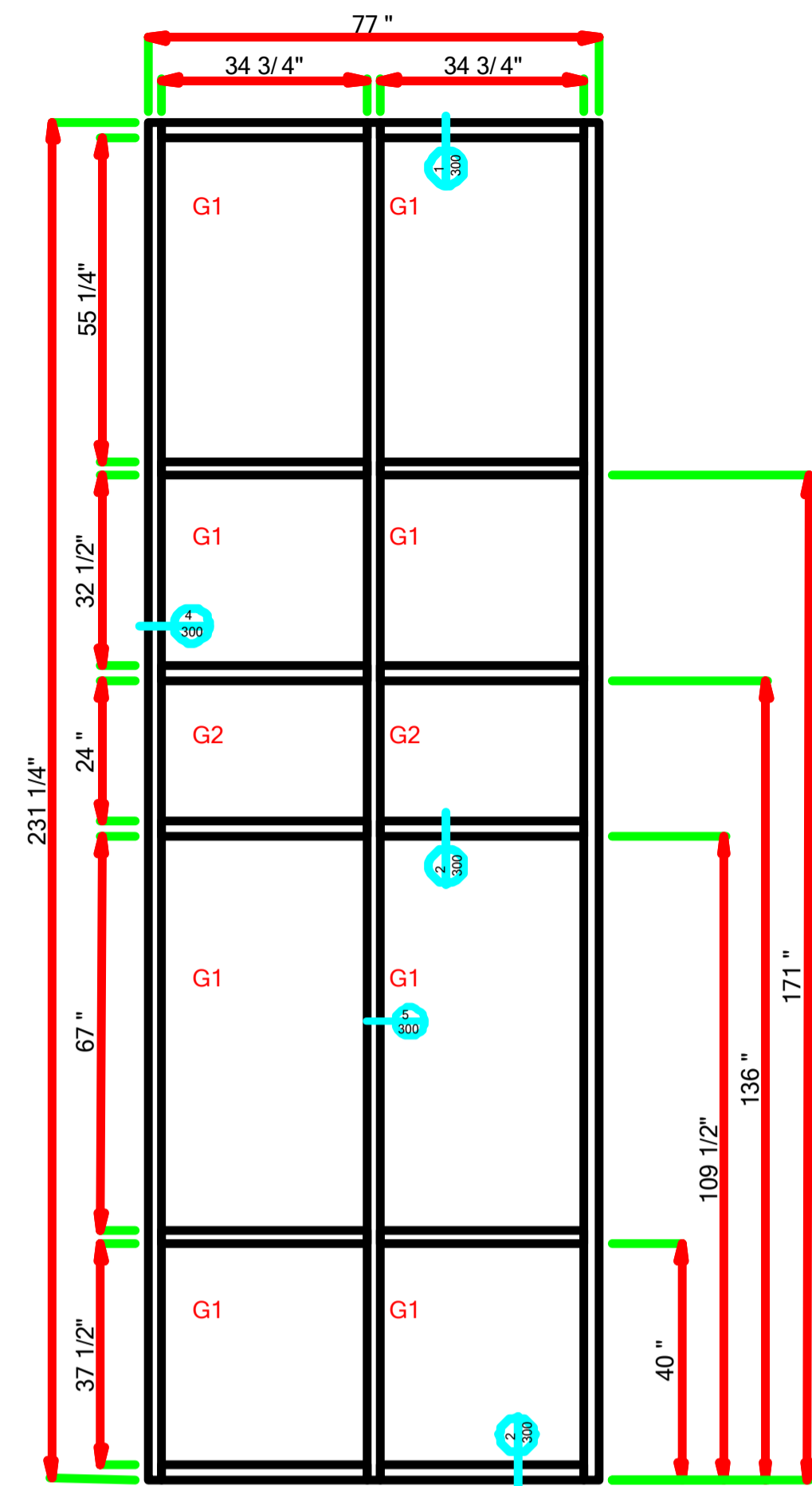
LAUREL - 015 - MARK CC-C.dwg (1 Thus)



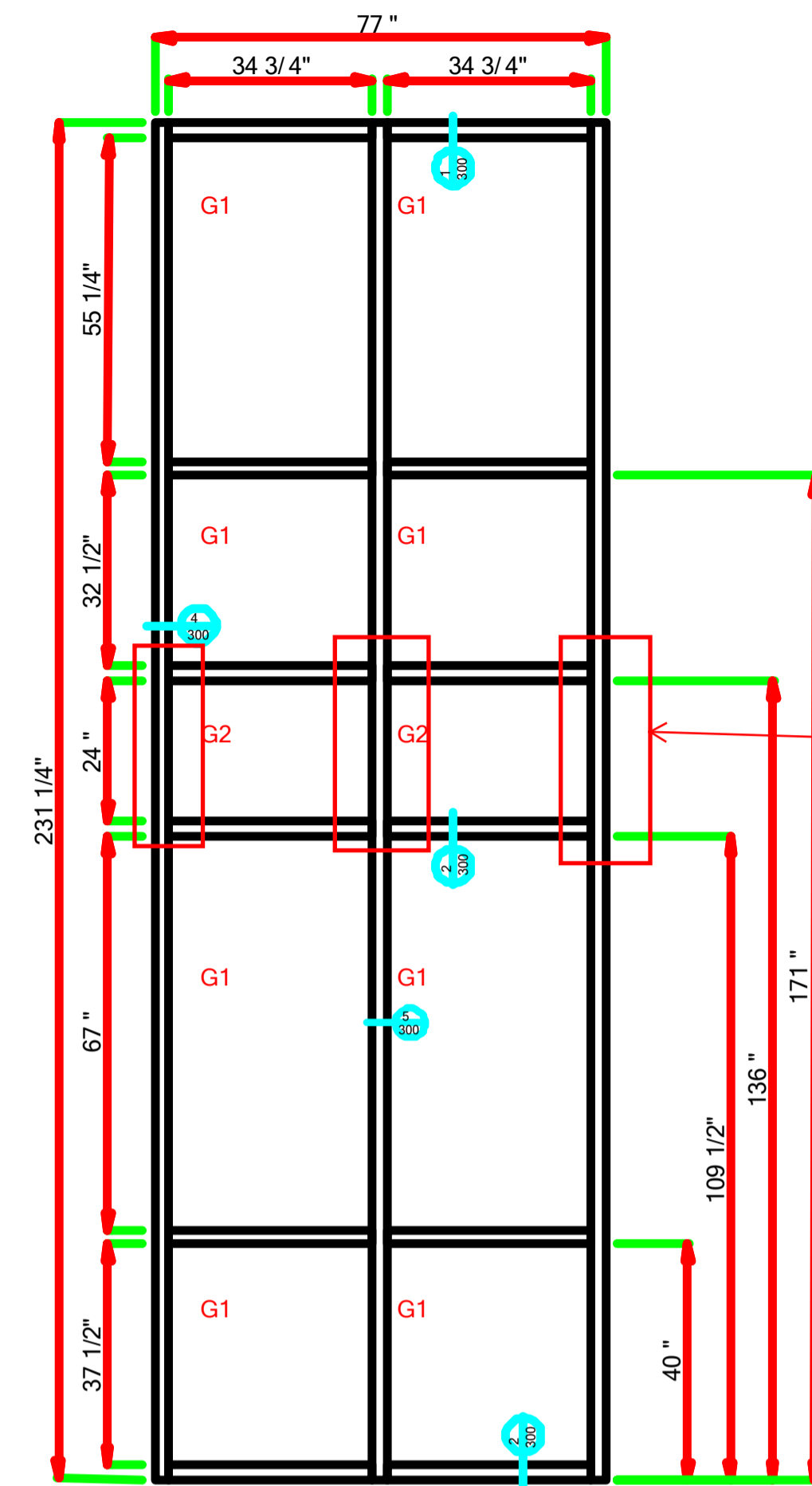
LAUREL - 016 - MARK CC-D.dwg (1 Thus)



LAUREL - 017 - MARK DD-A.dwg (1 Thus)

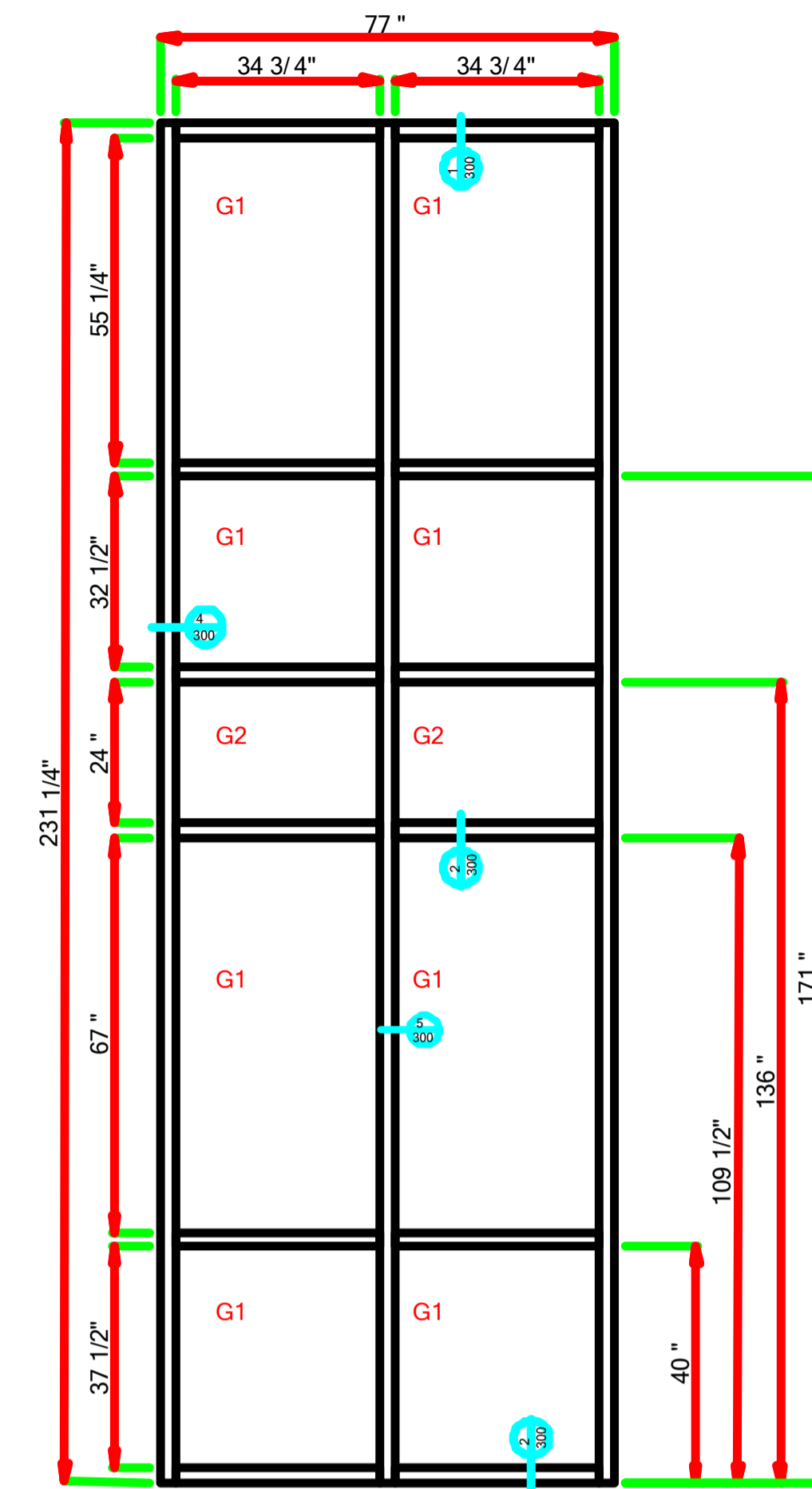


LAUREL - 018 - MARK DD-B.dwg (1 Thus)



LAUREL - 019 - MARK DD-C.dwg (1 Thus)

Resubmit mullion @ structure, typ all AA, BB, CC & DD JHC 02/06/2017



LAUREL - 020 - MARK DD-D.dwg (1 Thus)



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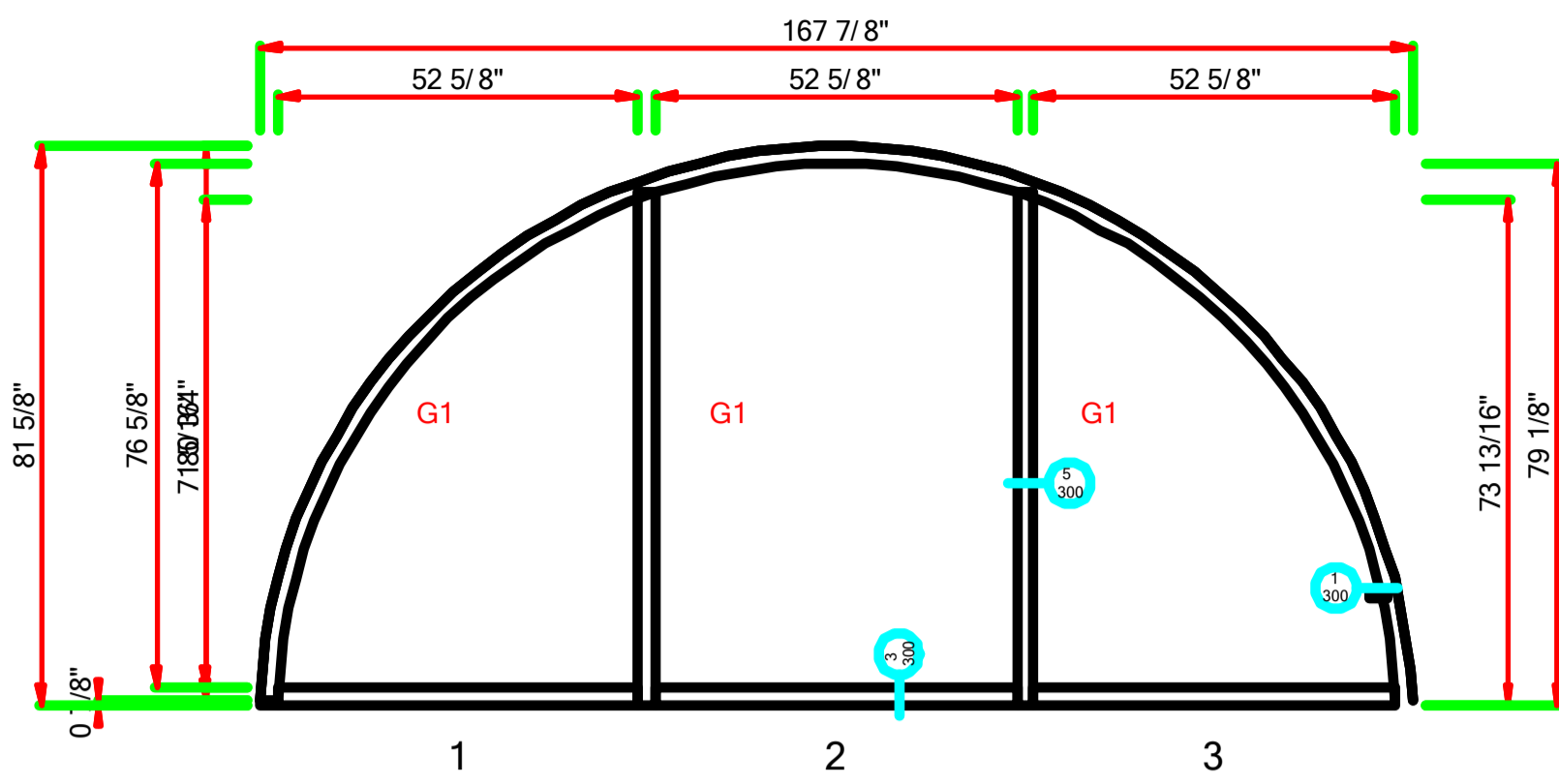


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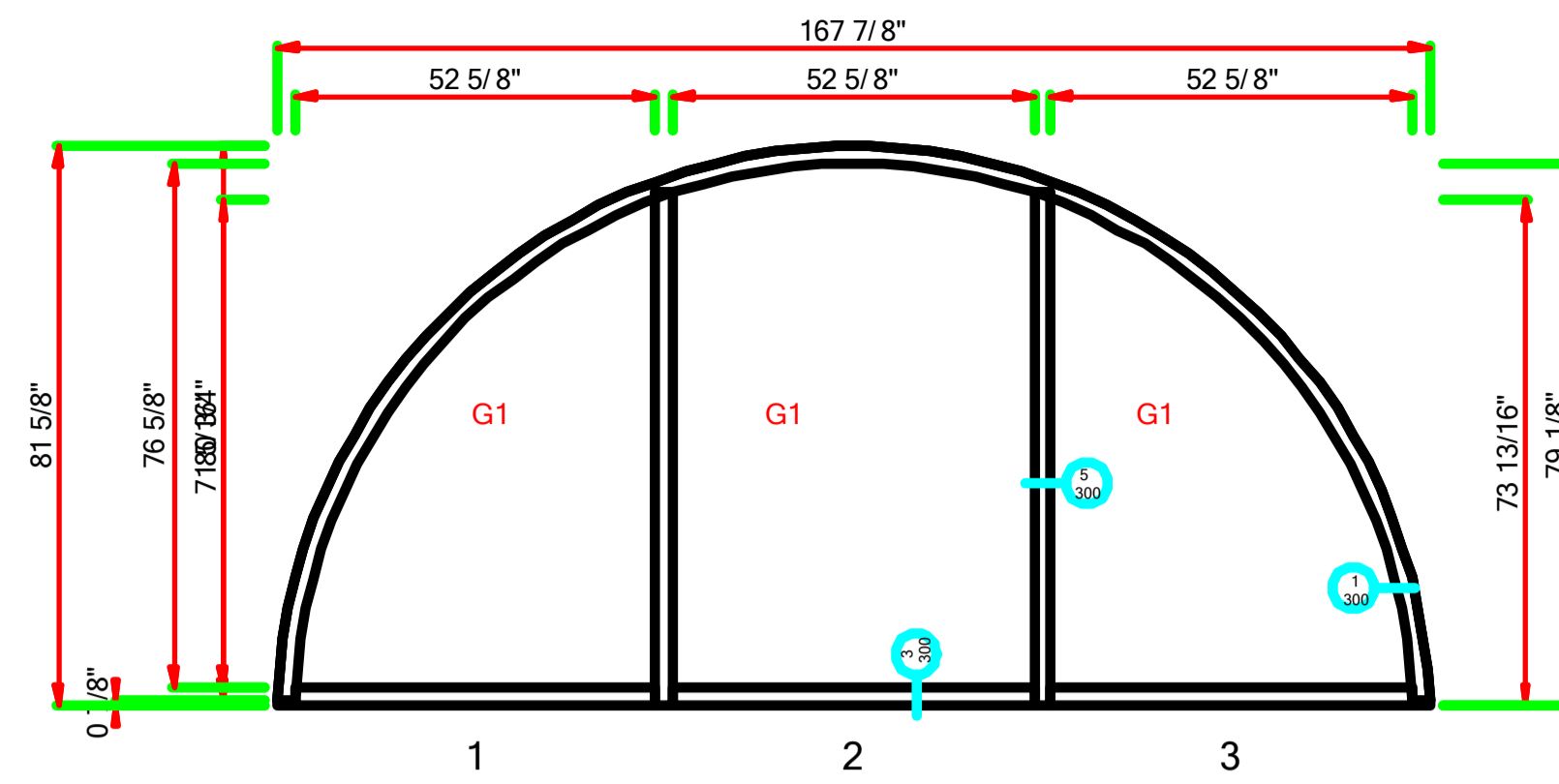
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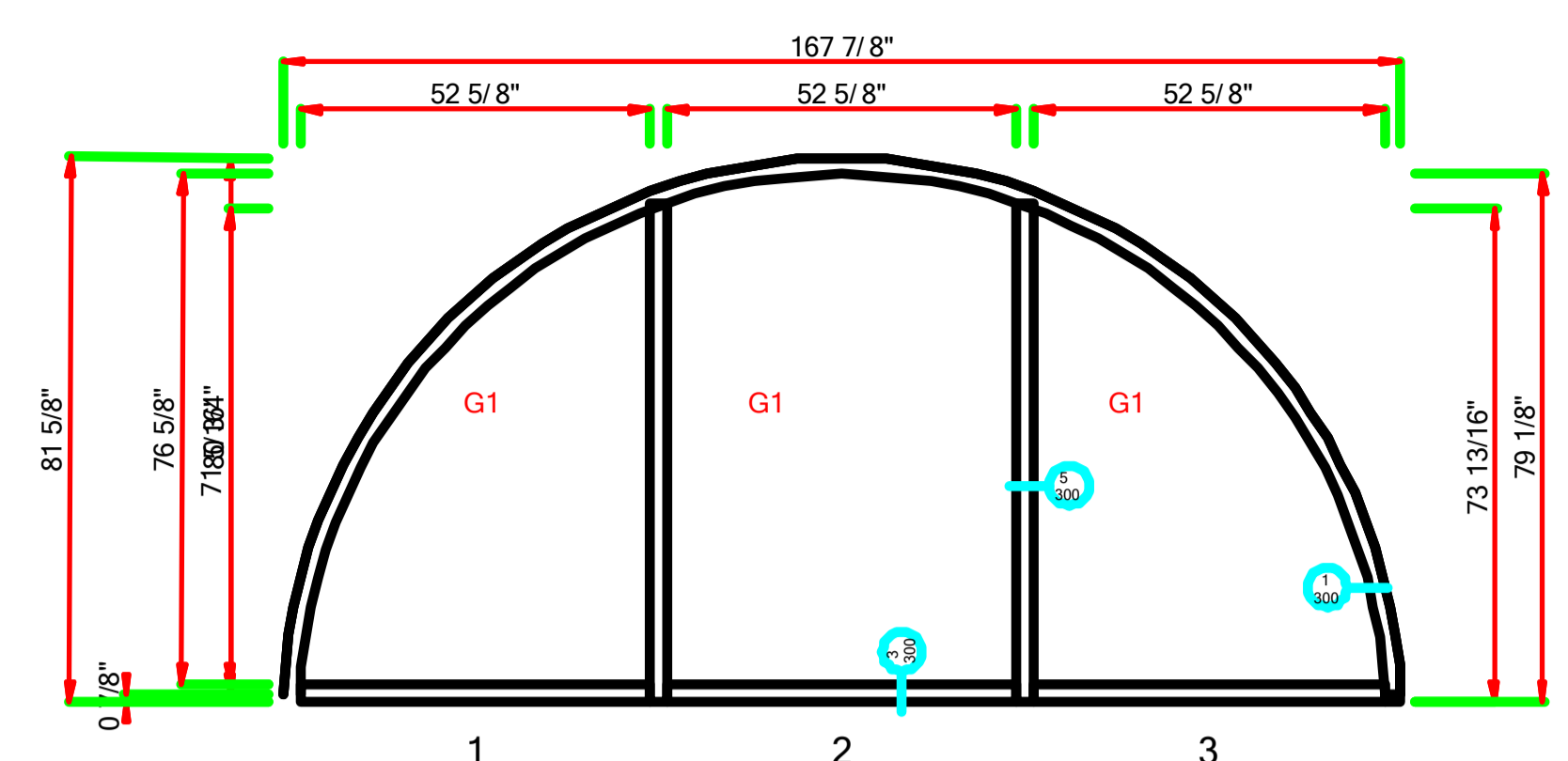
107



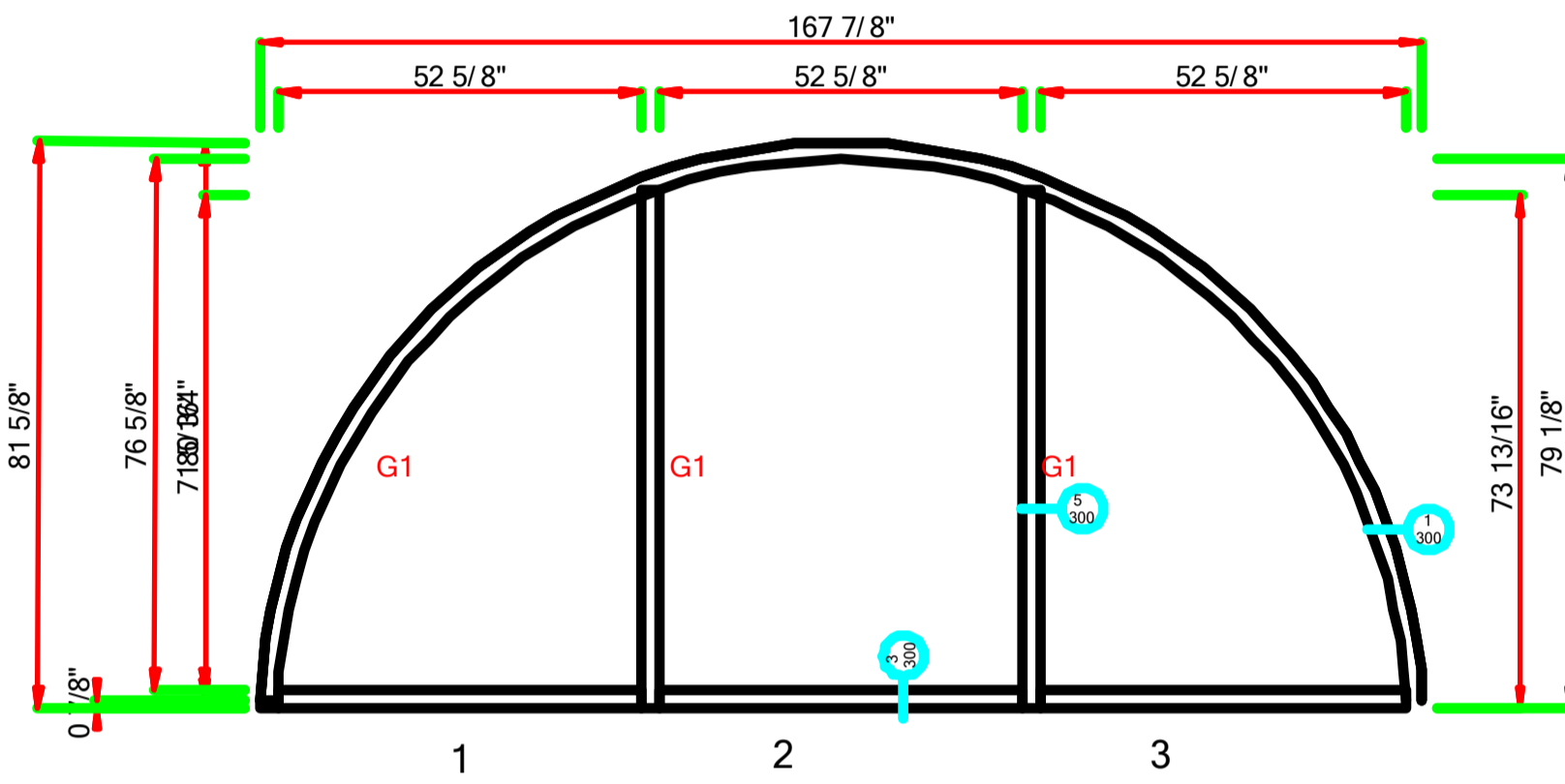
LAUREL - 021 - MARK EE-A.dwg (1 Thus)



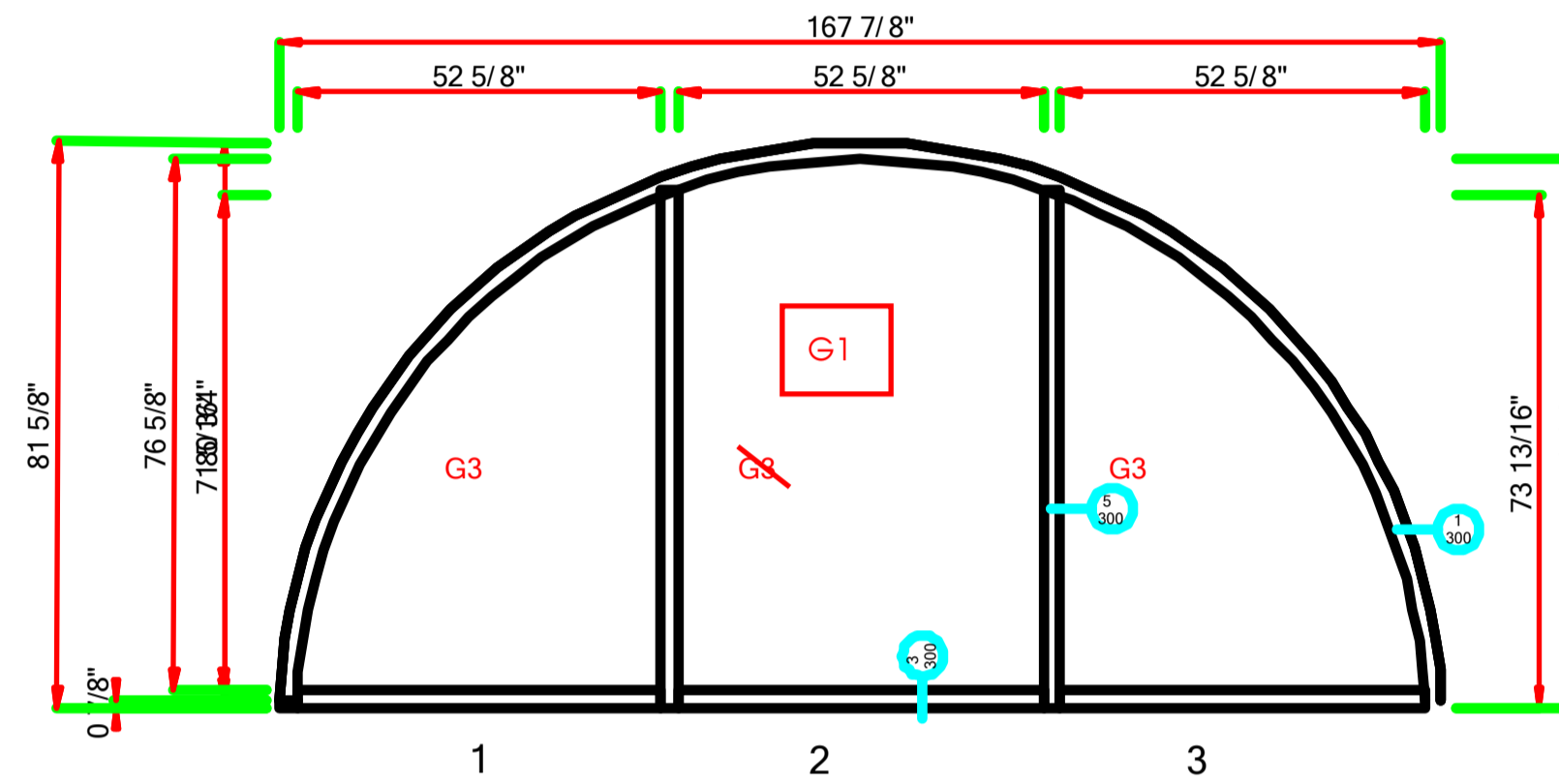
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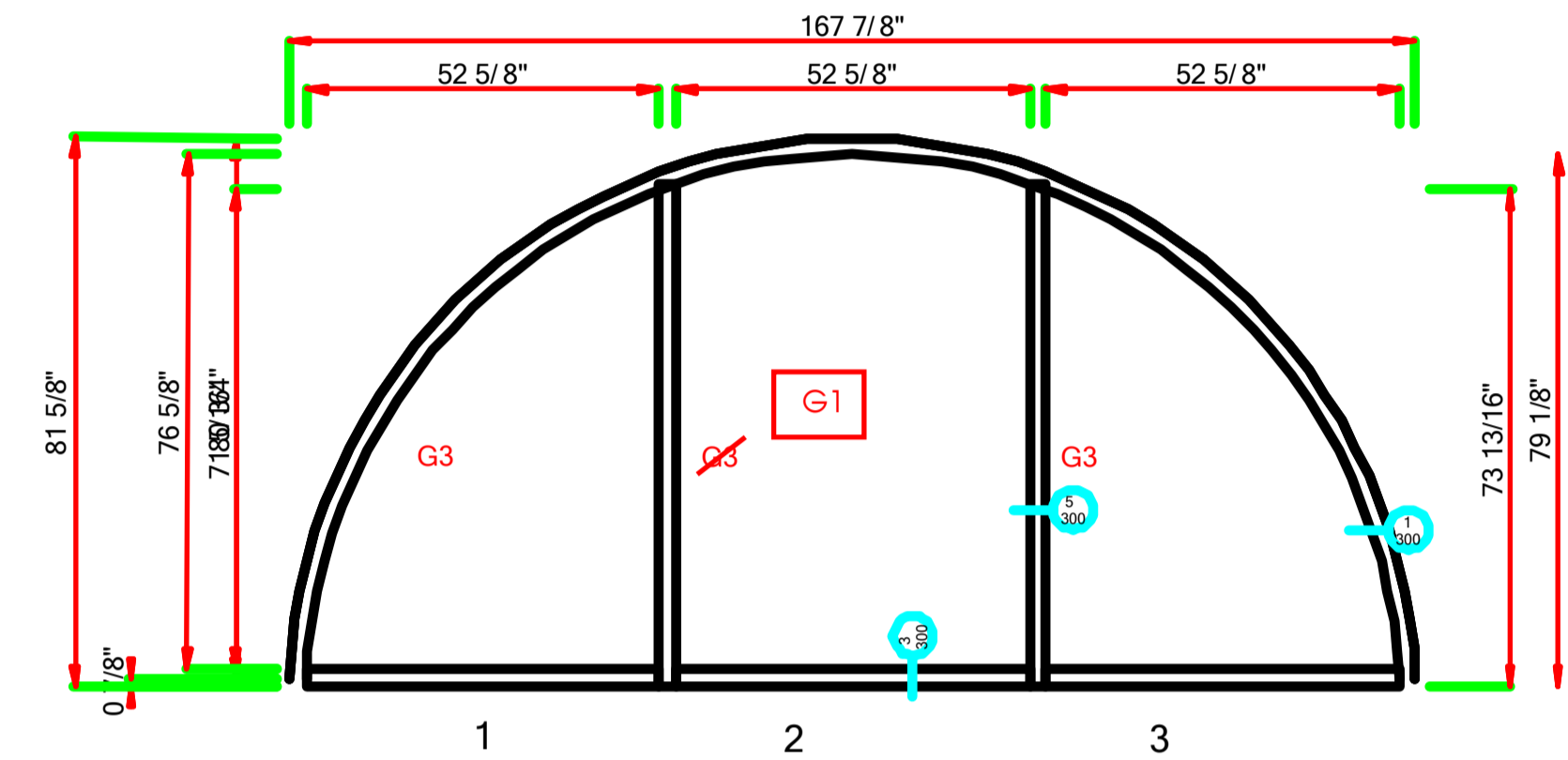
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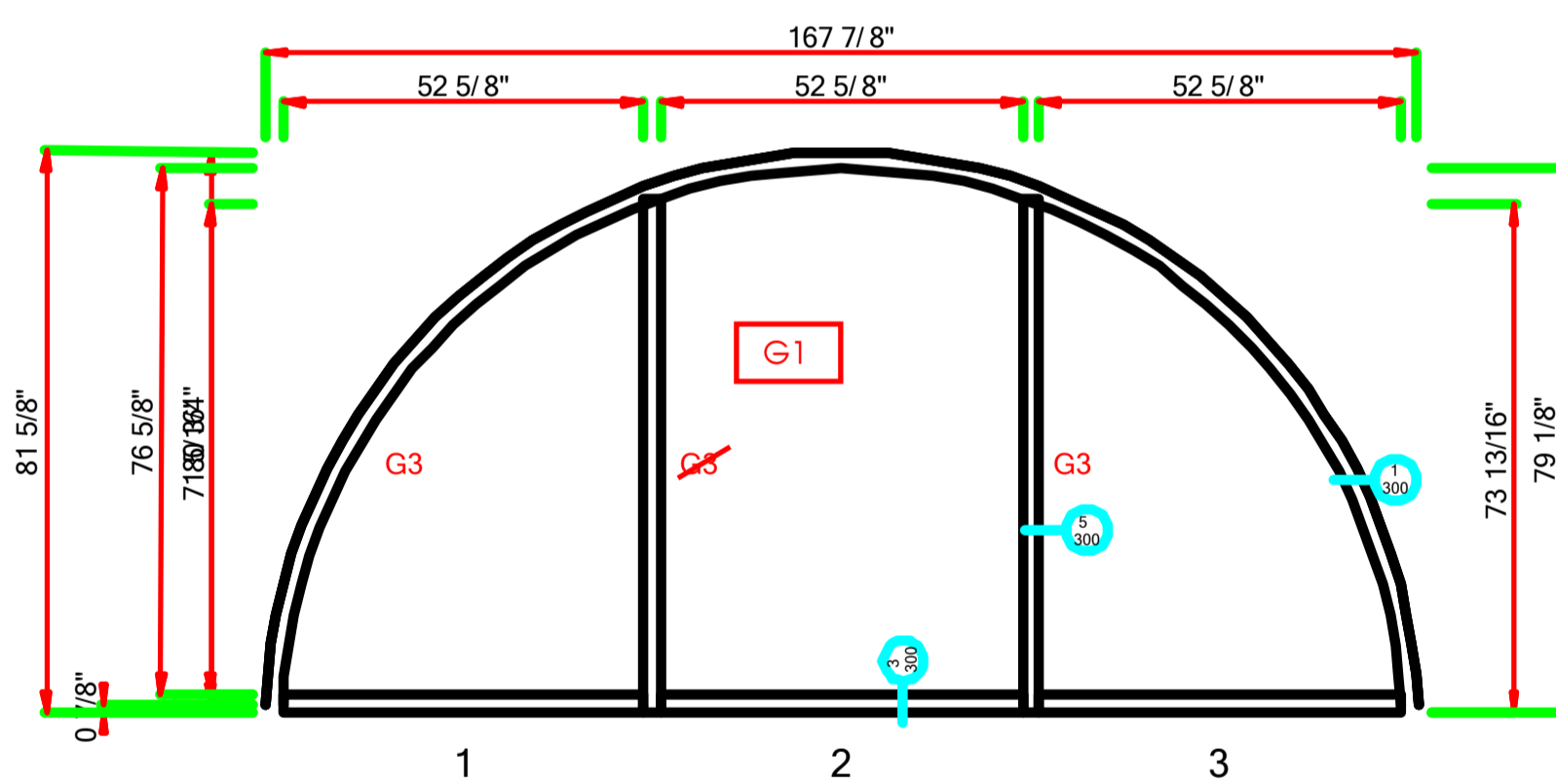
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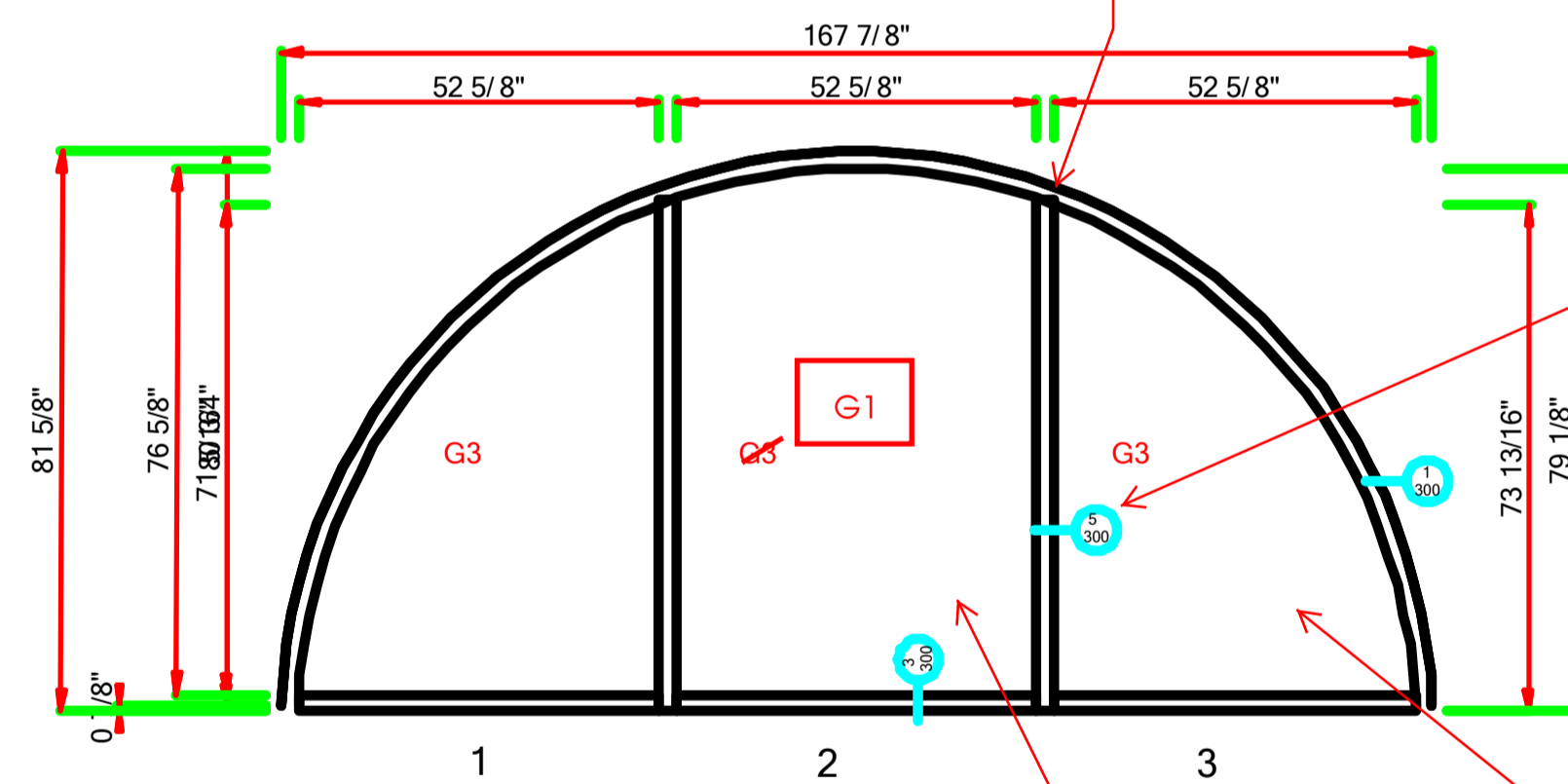
LAUREL - 025 - MARK FF-A.dwg (1 Thus)



LAUREL - 026 - MARK FF-B.dwg (1 Thus)



LAUREL - 027 - MARK FF-C.dwg (1 Thus)



LAUREL - 028 - MARK FF-D.dwg (1 Thus)

Clarify if there is a change to frame at change from Mapes to glass, typ. JHC 02/06/2017

Resubmit detail @ inside vertical w/ Mapes on one side / glass on the other, typ. JHC 02/06/2017

Center panel glass, typ. JHC 02/06/2017

Coord. Mapes panel w/ duct & flashing, typ. JHC 02/06/2017

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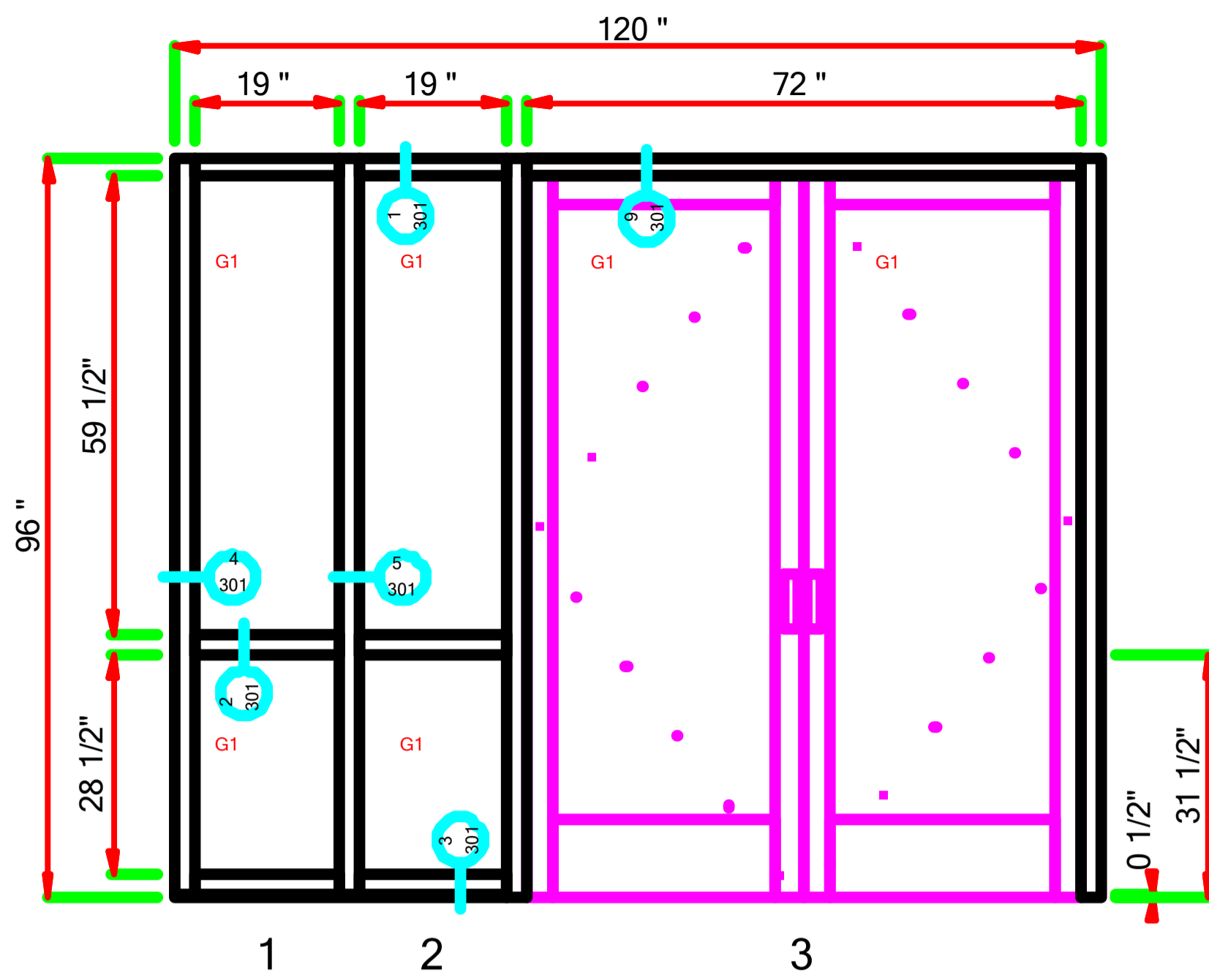


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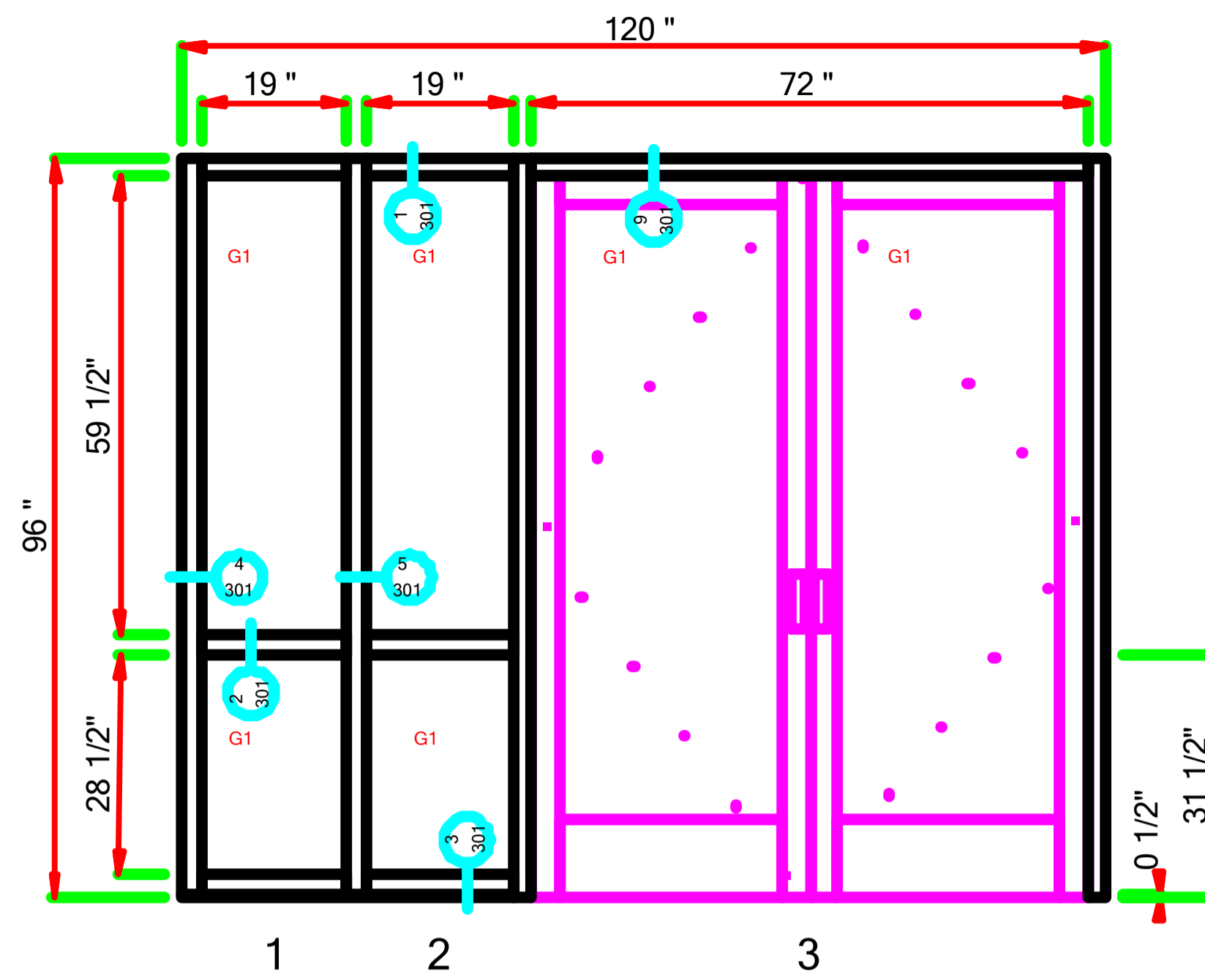
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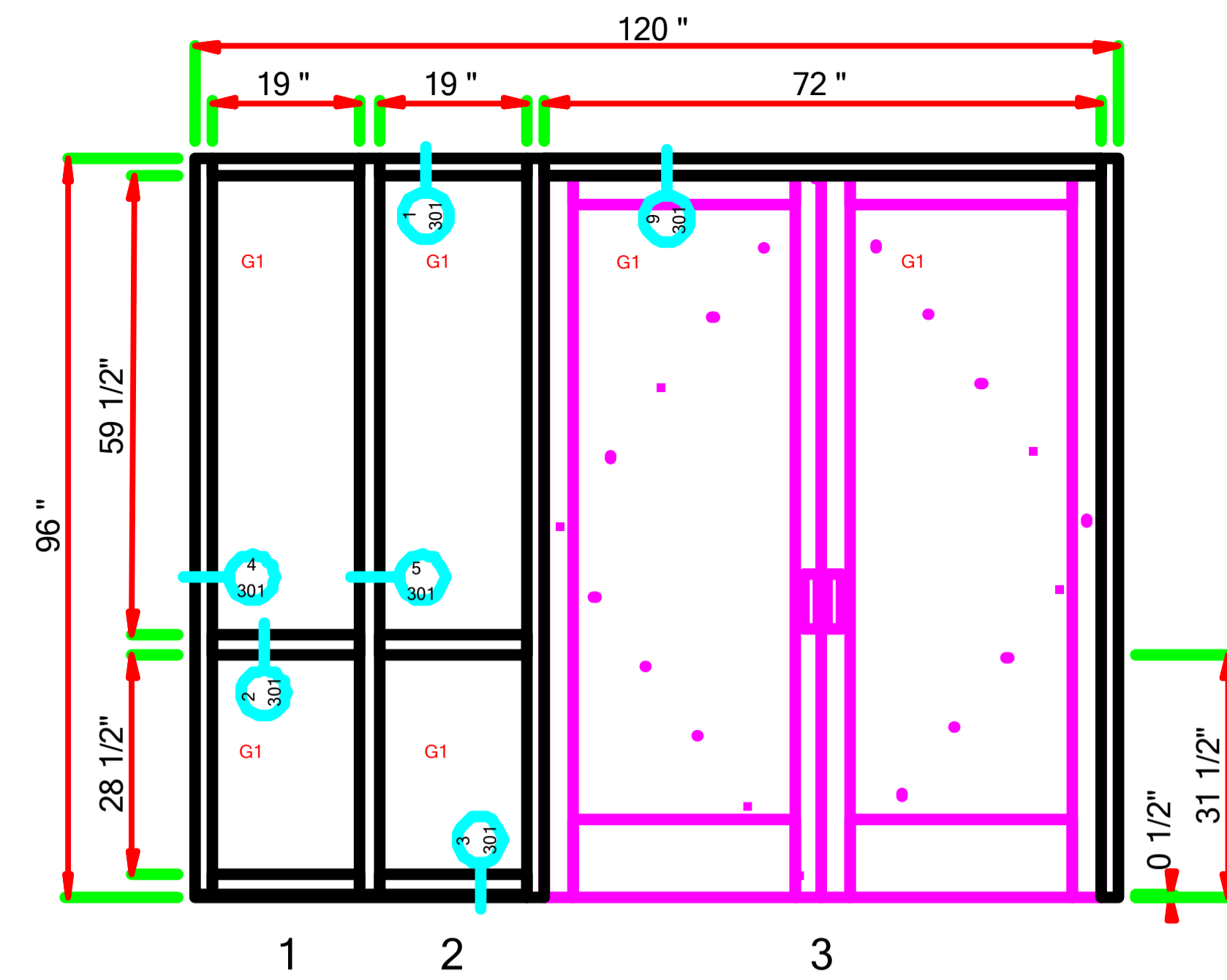
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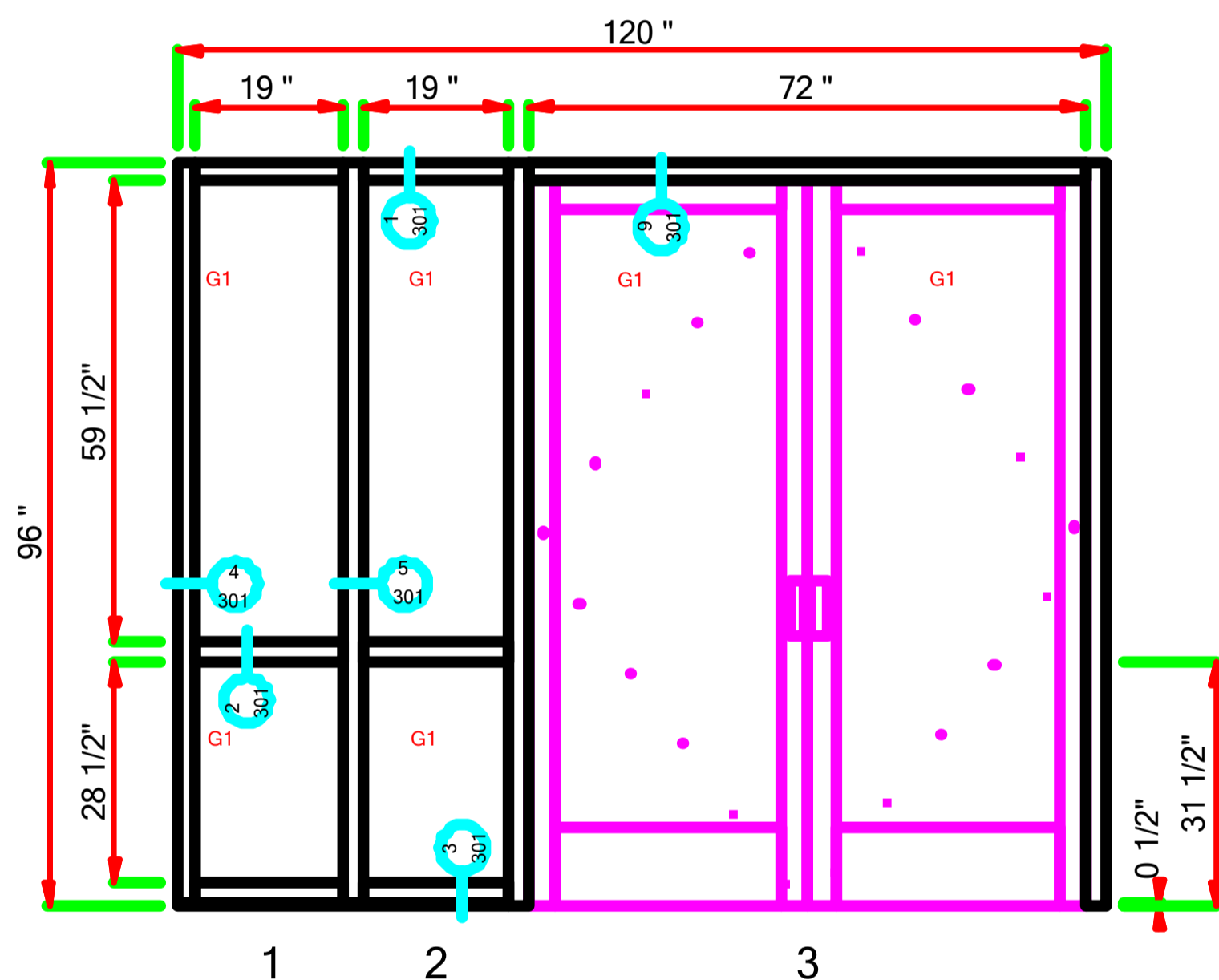
LAUREL - 029 - MARK AA-A DOOR 1001B HDW .dwg (1 Thus)
Frame: (C2-Clear) E44000 : Storefront : ForceFront Storm : 2-1/2 x 5 : Screw Spline



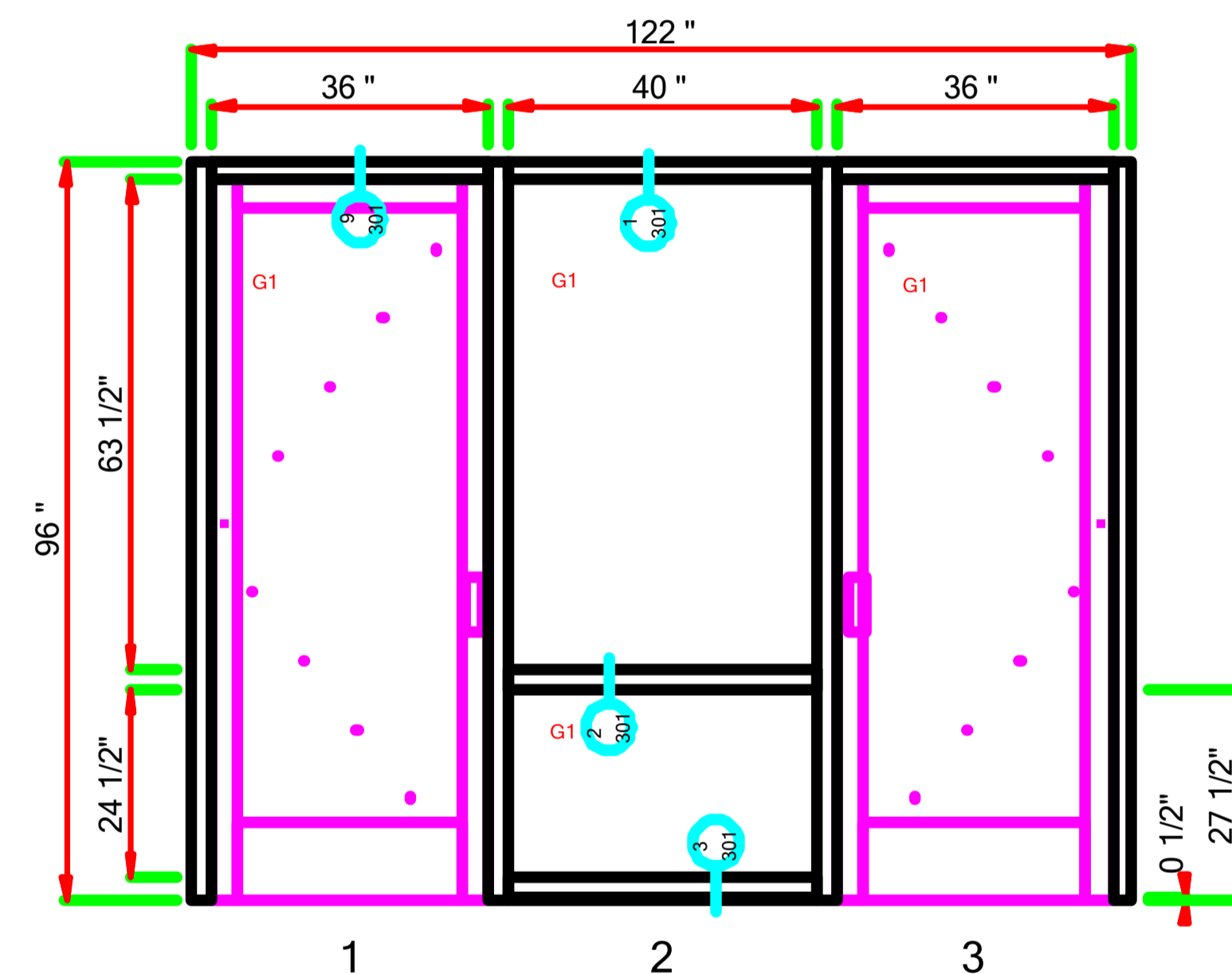
LAUREL - 030 - MARK AA-B DOOR 1002B HWD .dwg (1 Thus)
Frame: (C2-Clear) E44000 : Storefront : ForceFront Storm : 2-1/2 x 5 : Screw Spline



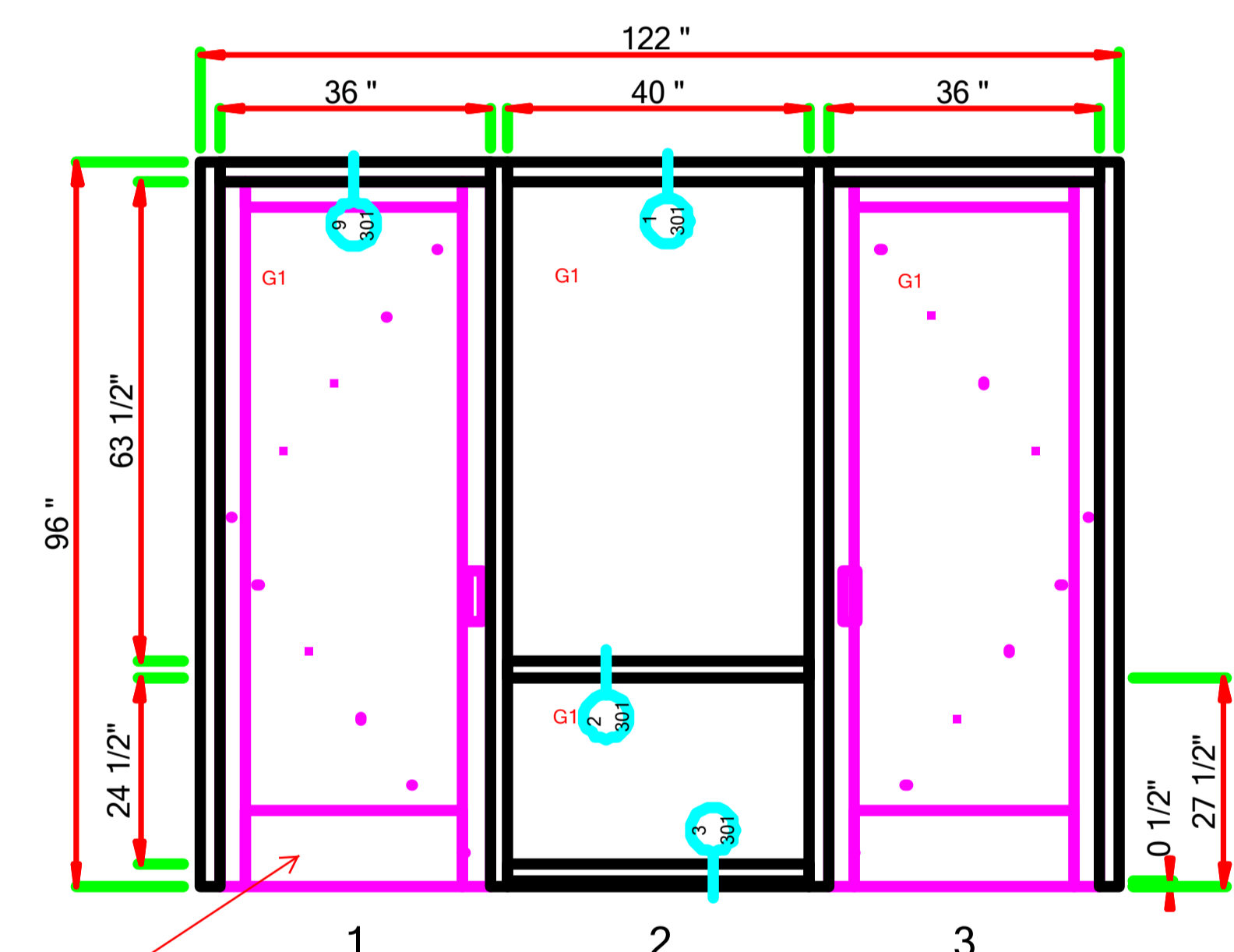
LAUREL - 031 - MARK AA-C DOOR 1401B HWD .dwg (1 Thus)
Frame: (C2-Clear) E44000 : Storefront : ForceFront Storm : 2-1/2 x 5 : Screw Spline



LAUREL - 032 - MARK AA-D DOOR 1402B HWD .dwg (1 Thus)
Frame: (C2-Clear) E44000 : Storefront : ForceFront Storm : 2-1/2 x 5 : Screw Spline

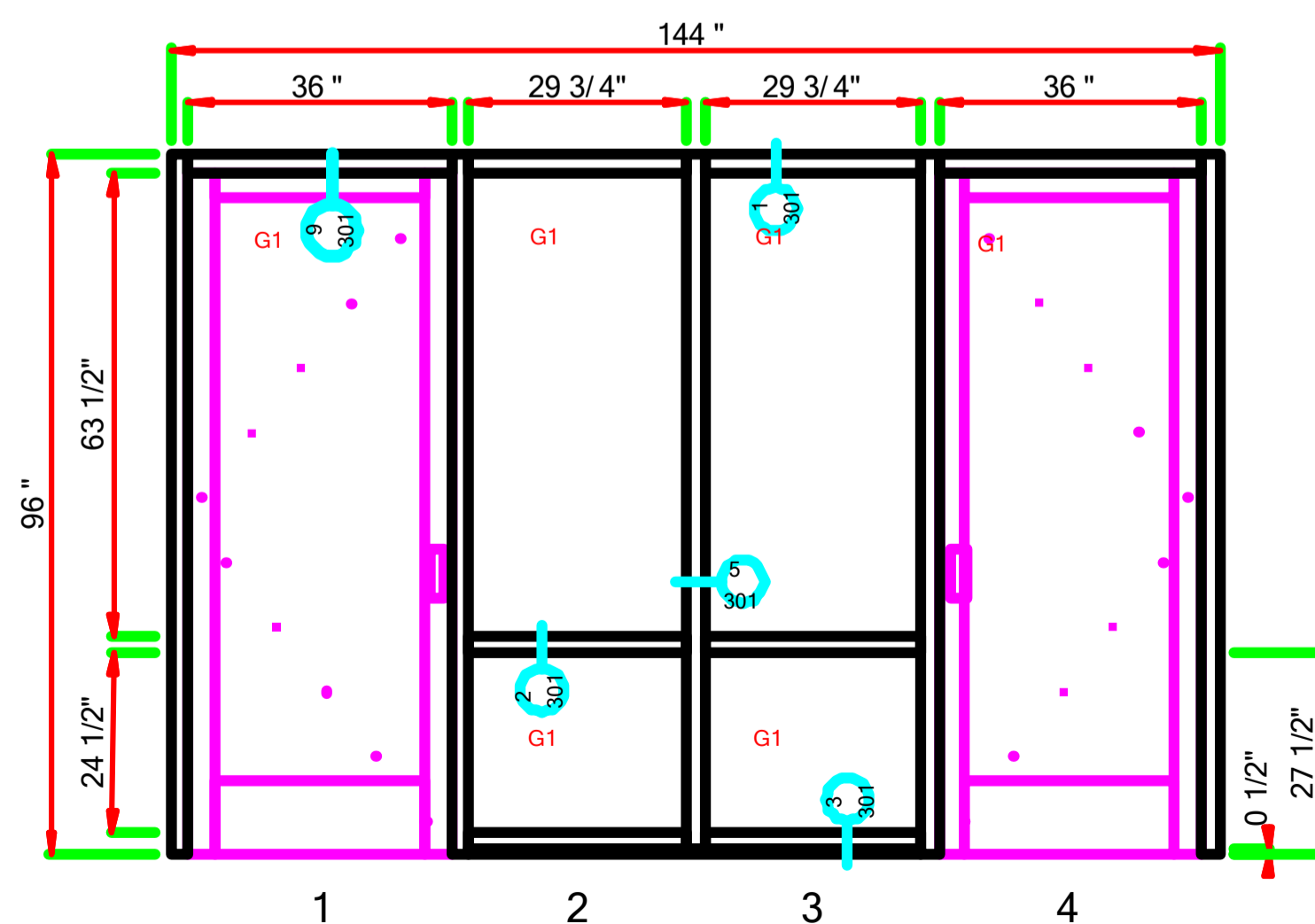


LAUREL - 033 - MARK EE-A DOOR 1103C HDW .dwg (1 Thus)
Frame: (C2-Clear) E44000 : Storefront : ForceFront Storm : 2-1/2 x 5 : Screw Spline

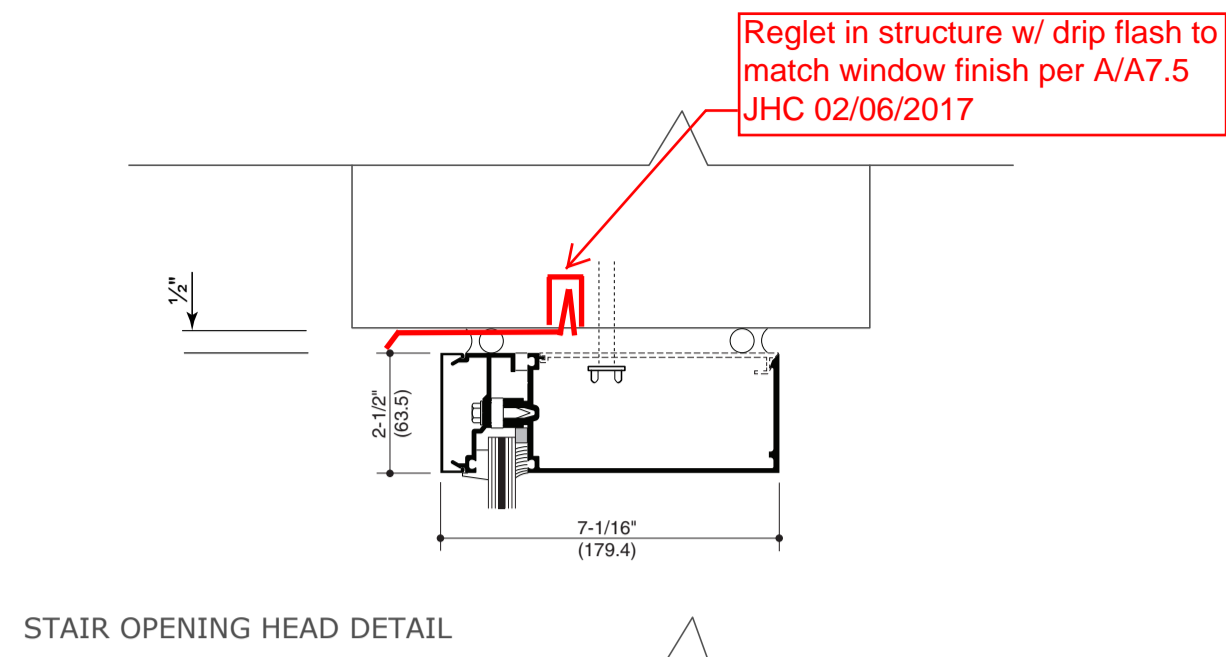


LAUREL - 034 - MARK EE-B DOOR 1103D HWD .dwg (1 Thus)
Frame: (C2-Clear) E44000 : Storefront : ForceFront Storm : 2-1/2 x 5 : Screw Spline

Provide jamb & sill details @
doors, typ.
JHC 02/06/2017

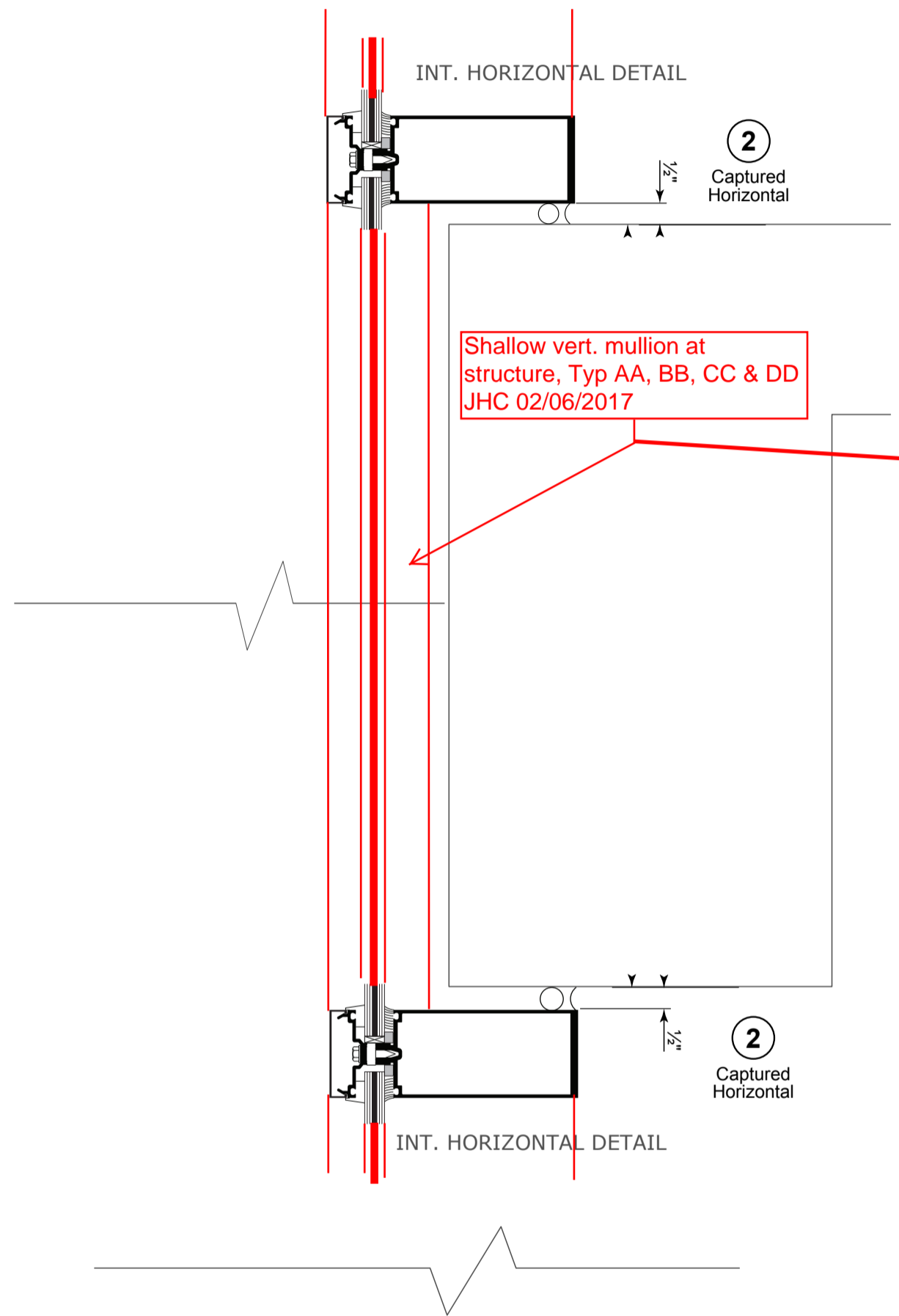


LAUREL - 035 - MARK FF-A DOOR 1204A HWD .dwg (1 Thus)
Frame: (C2-Clear) E44000 : Storefront : ForceFront Storm : 2-1/2 x 5 : Screw Spline



Reglet in structure w/ drip flash to match window finish per A/A7.5 JHC 02/06/2017

***NOTE**
NO APPROVED MANUFACTURE OFFERS 5 1/2" CURTAINWALL SYSTEM. C.W. HORIZONTALS WILL NEED TO SIT ON TOP OF THE FLOOR @ STAIRS. REFERENCE DETAILS.

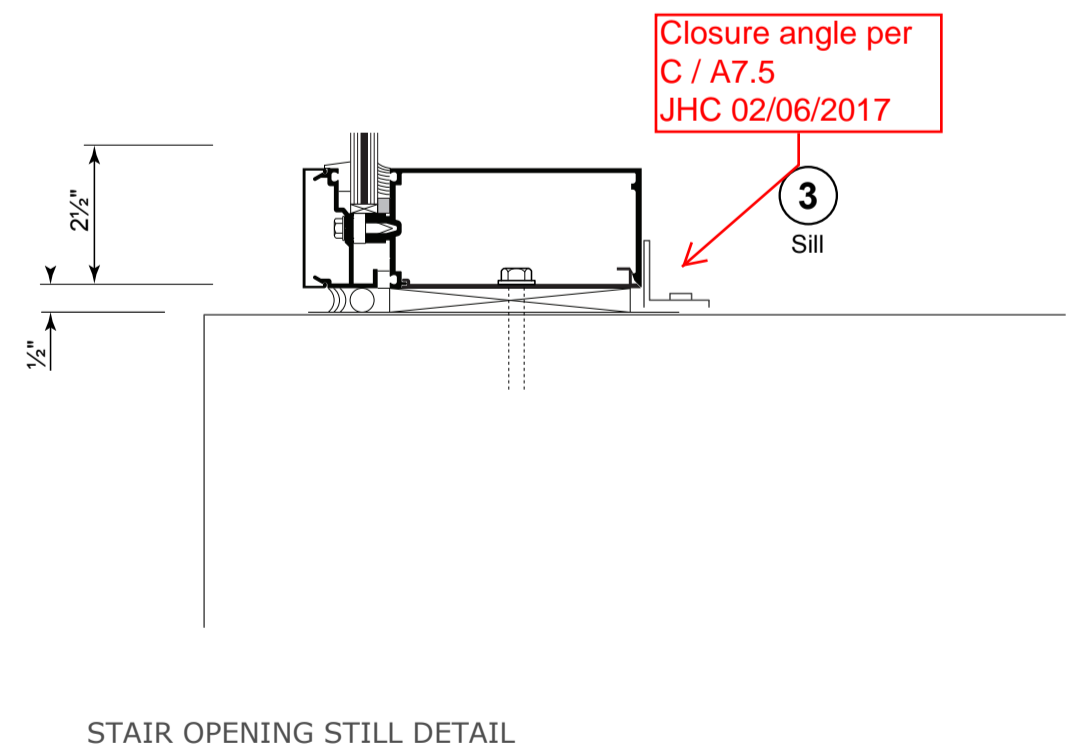


Shallow vert. mullion at structure, Typ AA, BB, CC & DD JHC 02/06/2017

Full depth mullion OK @ occupied 2nd & 3rd stories JHC 02/06/2017

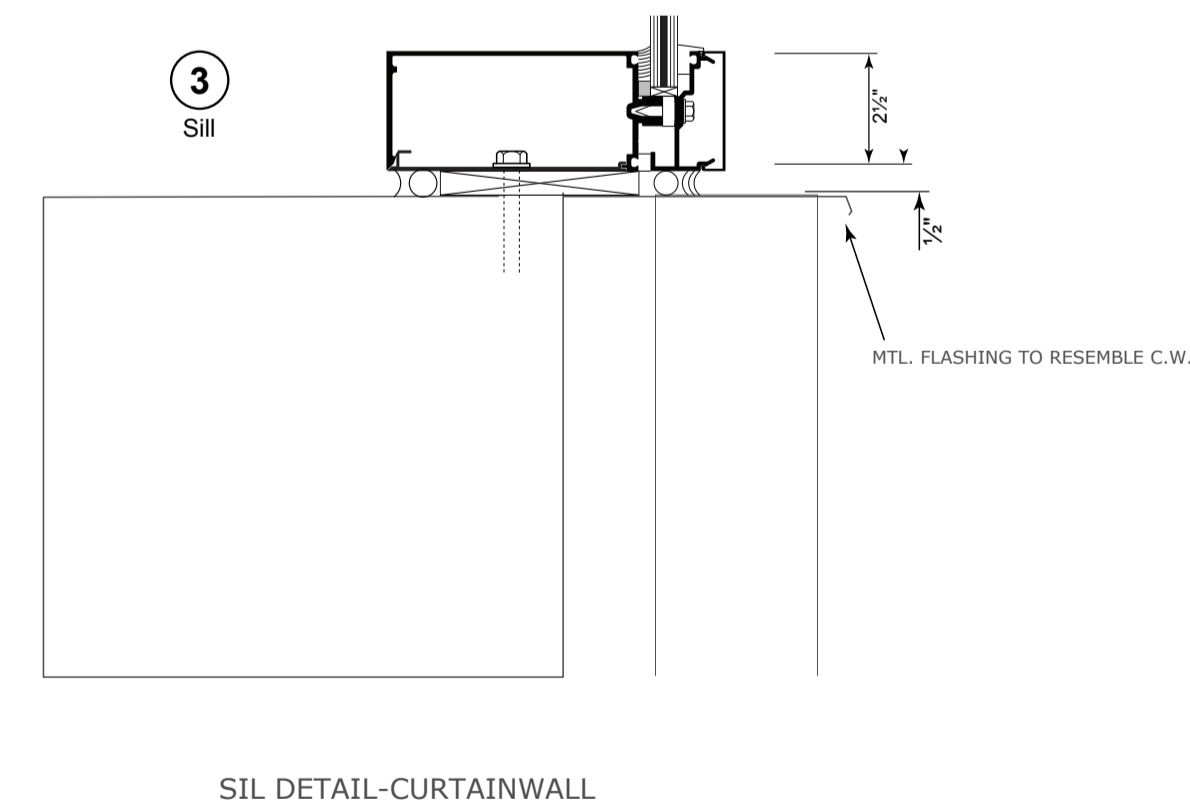
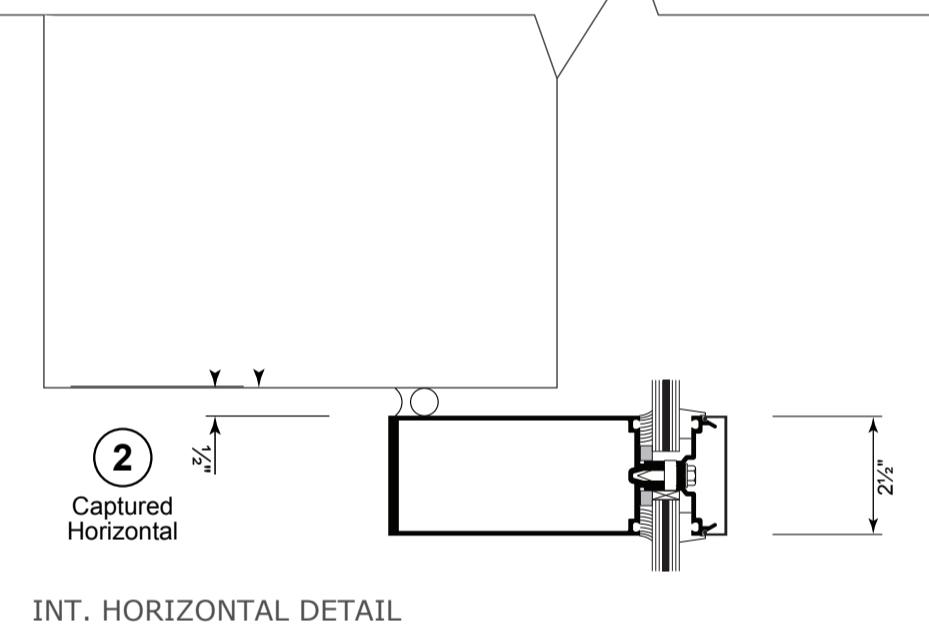
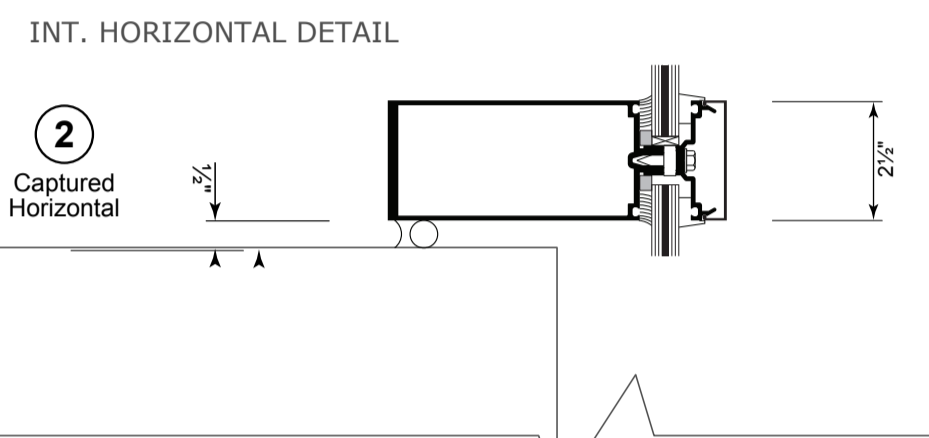
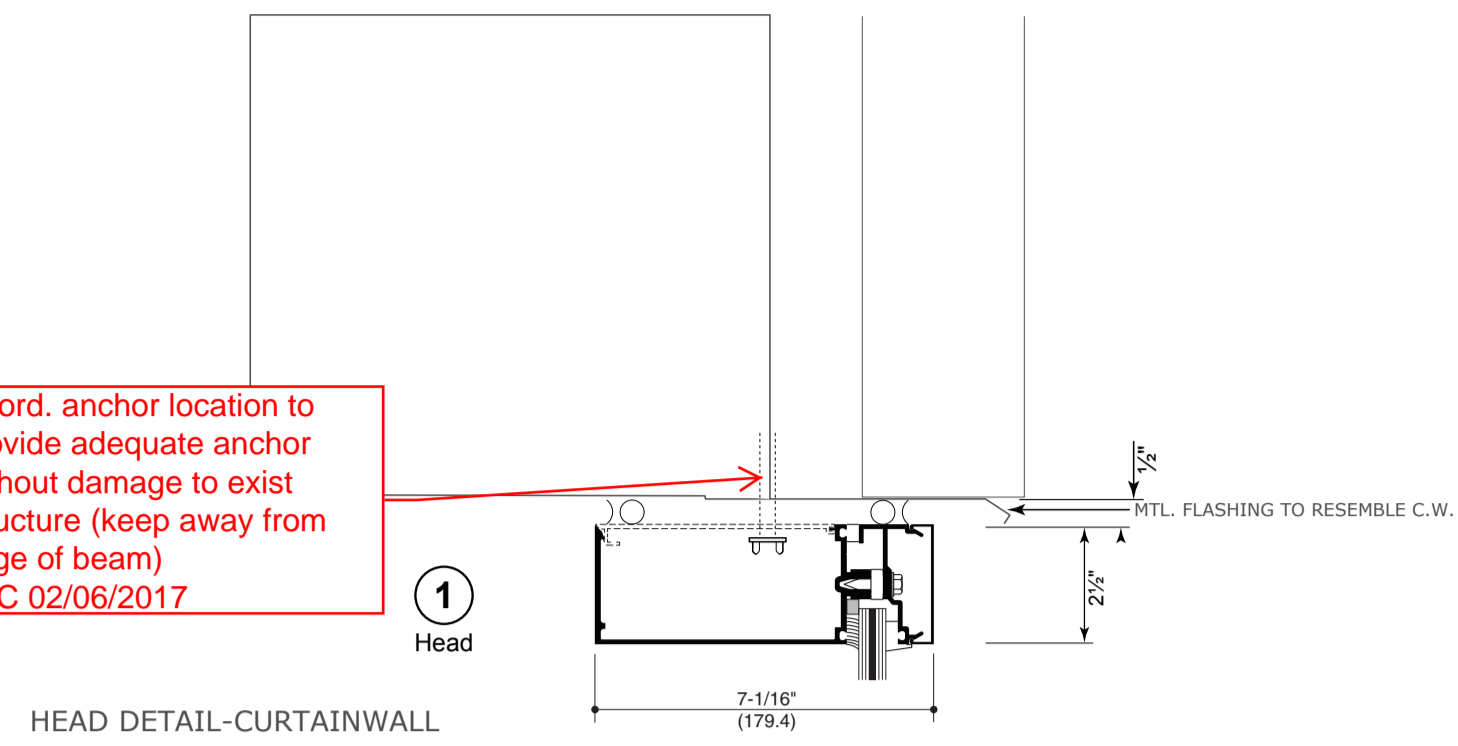
Provide info on shallow mullion @ 3rd floor beam / slab JHC 02/06/2017

Line of 3rd floor beam / slab JHC 02/06/2017

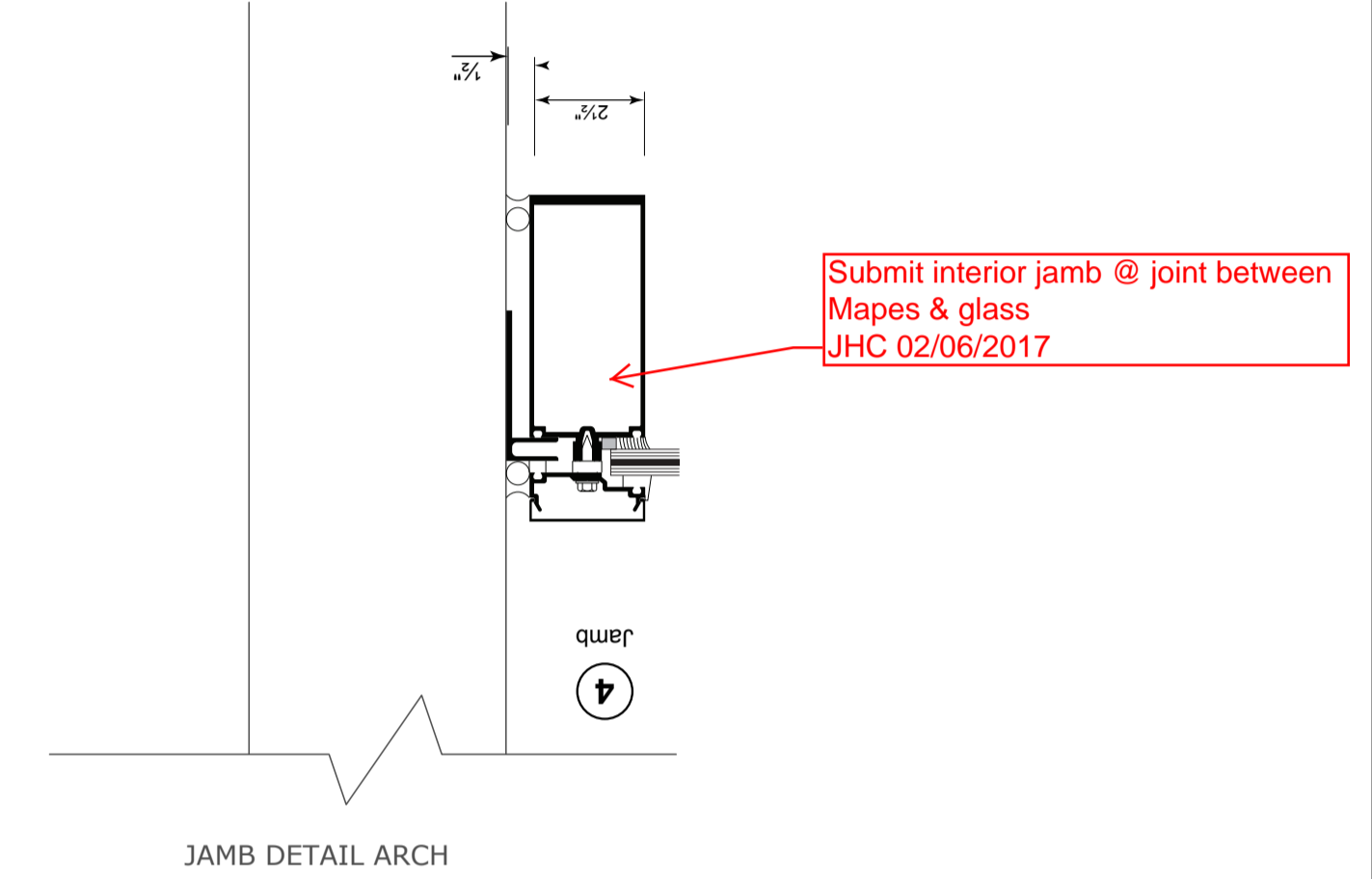
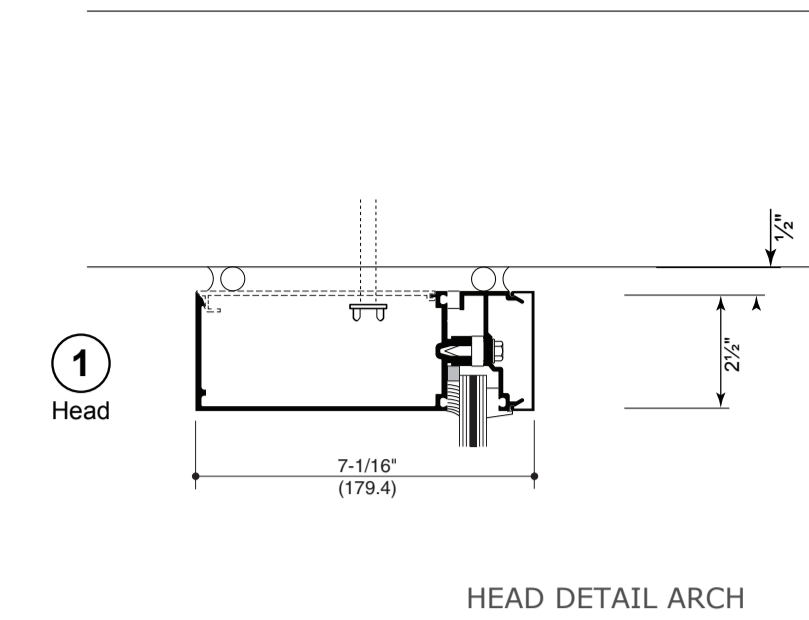


Closure angle per C / A7.5 JHC 02/06/2017

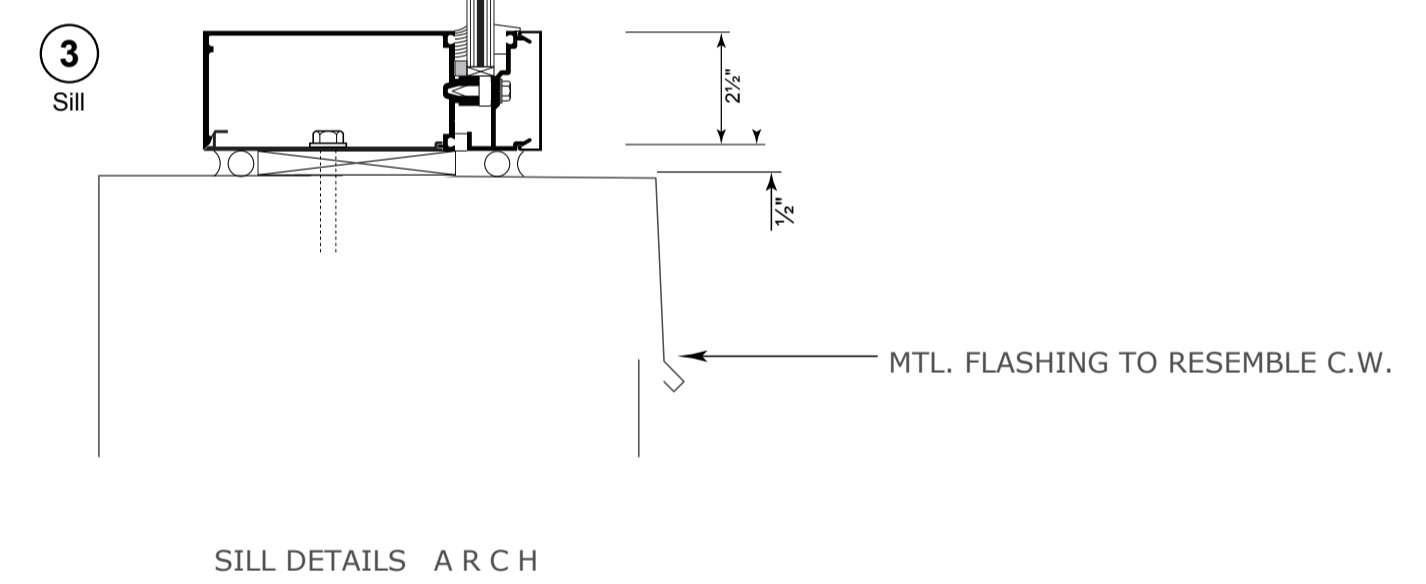
Coord. anchor location to provide adequate anchor without damage to exist structure (keep away from edge of beam) JHC 02/06/2017

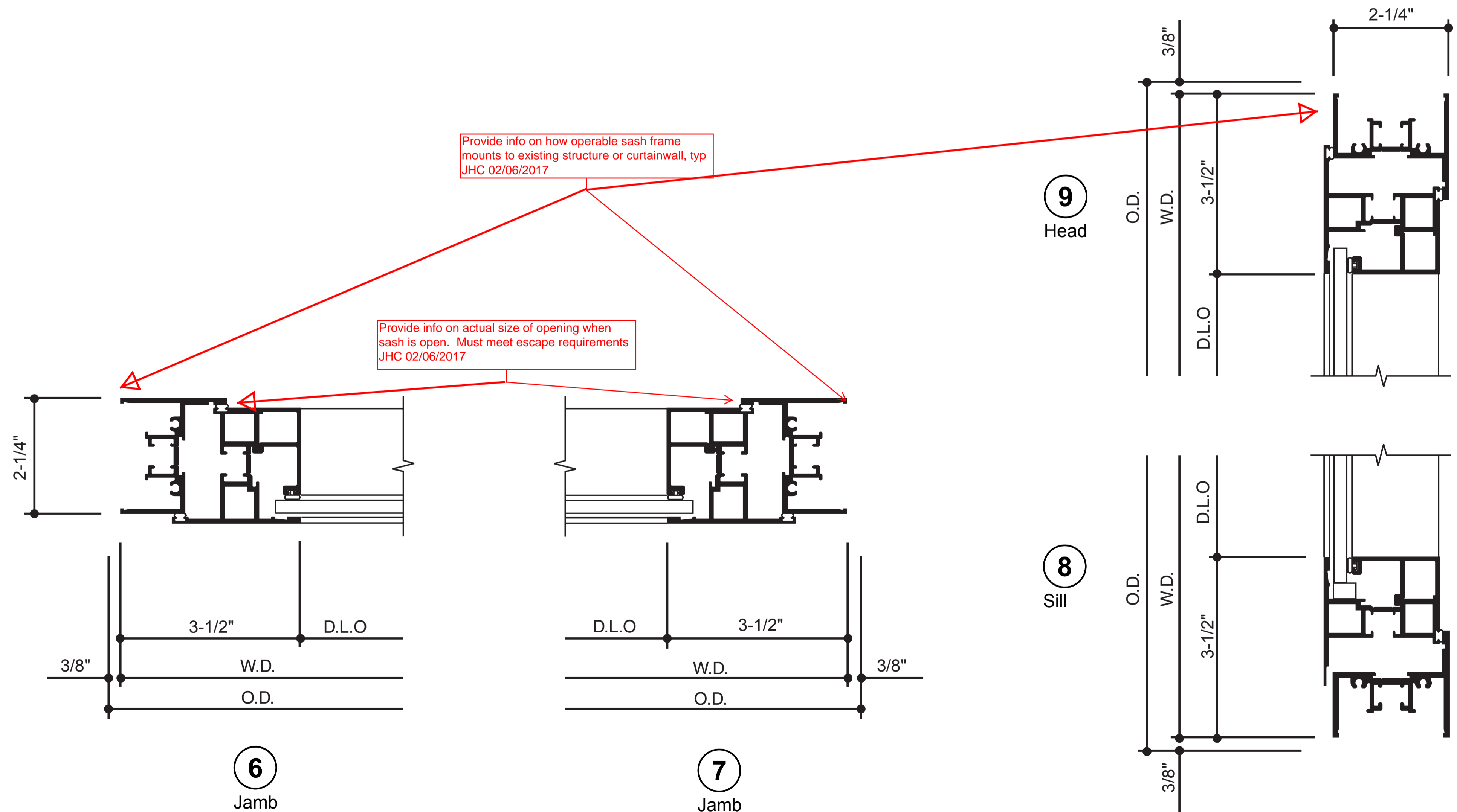
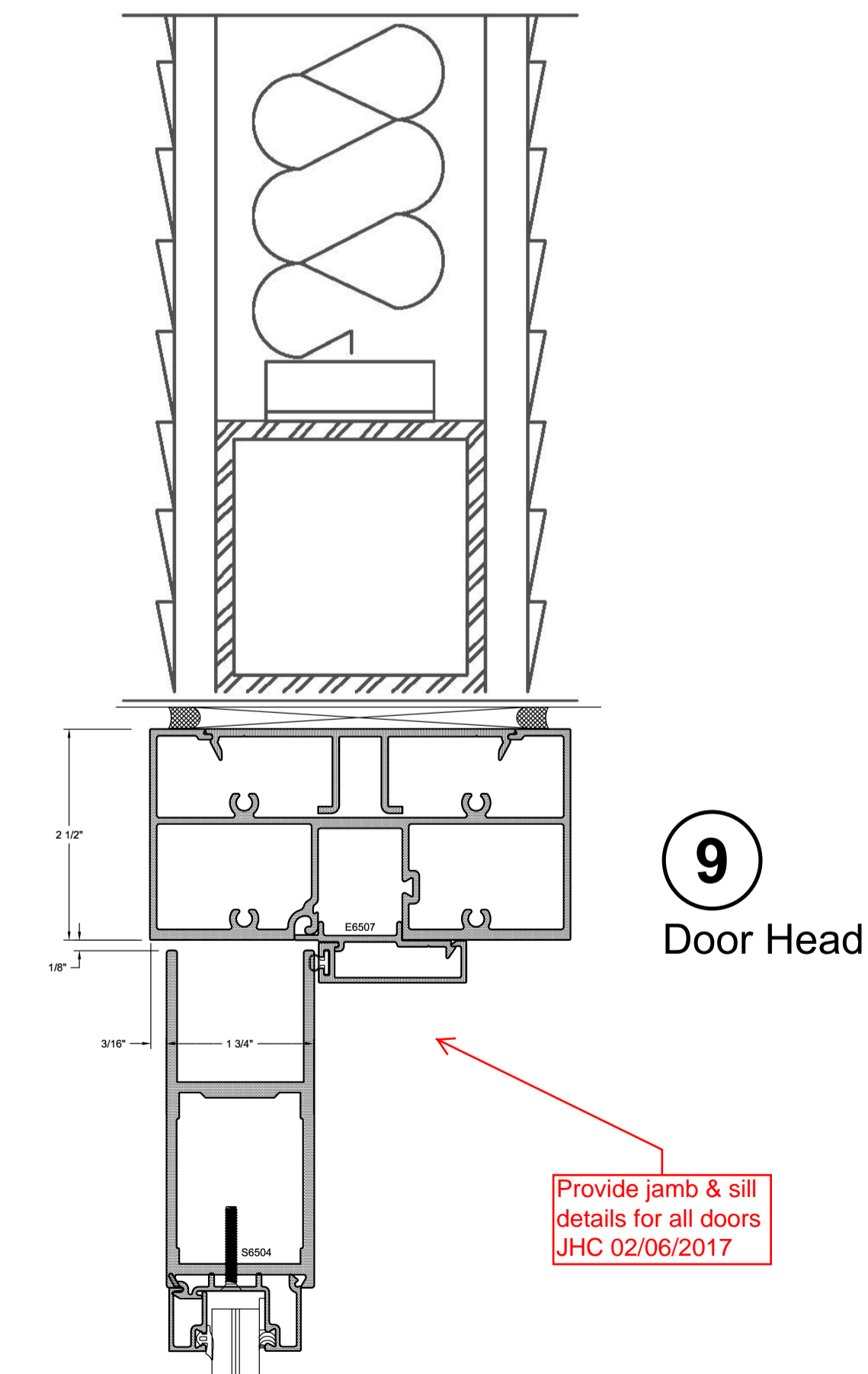
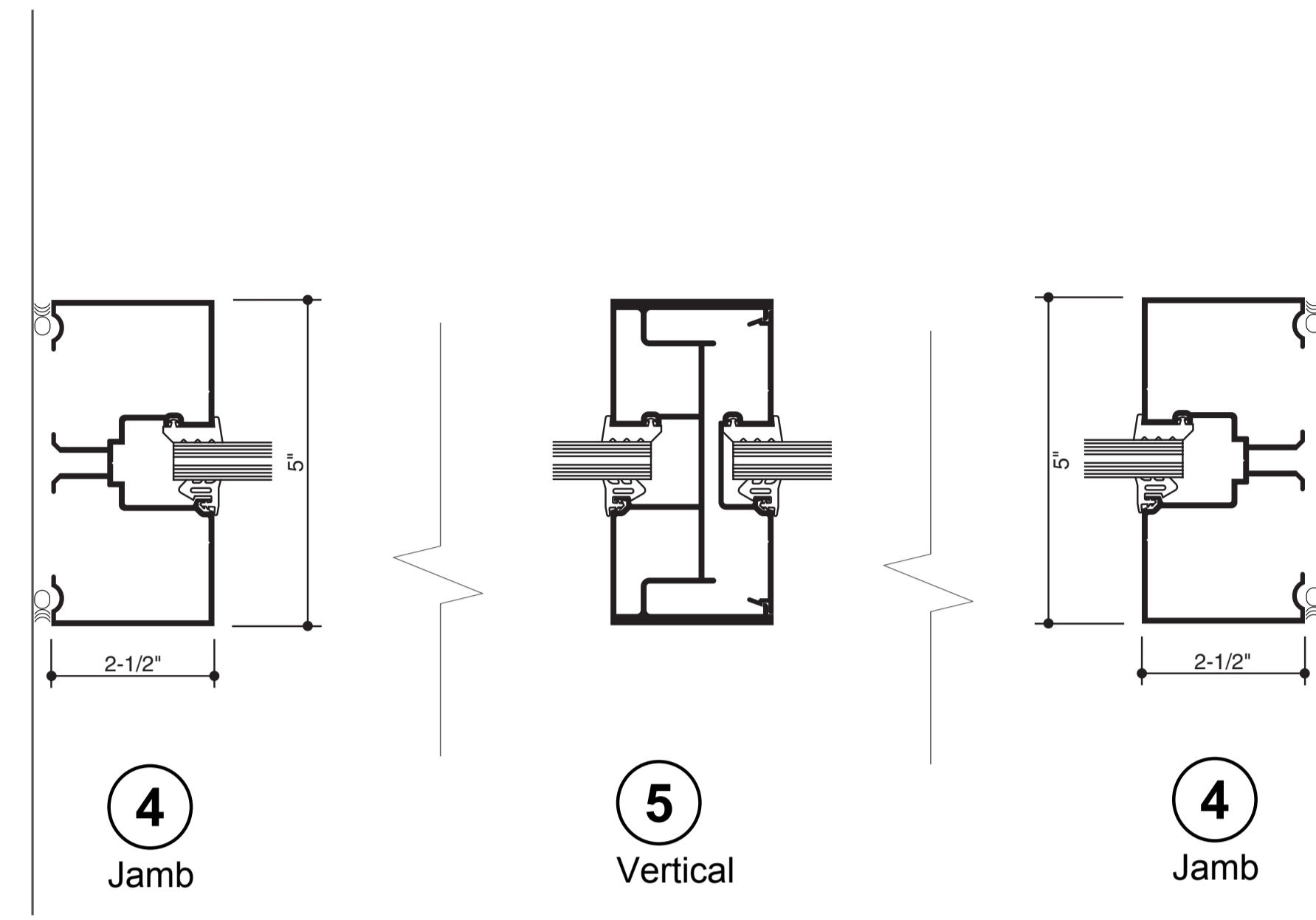
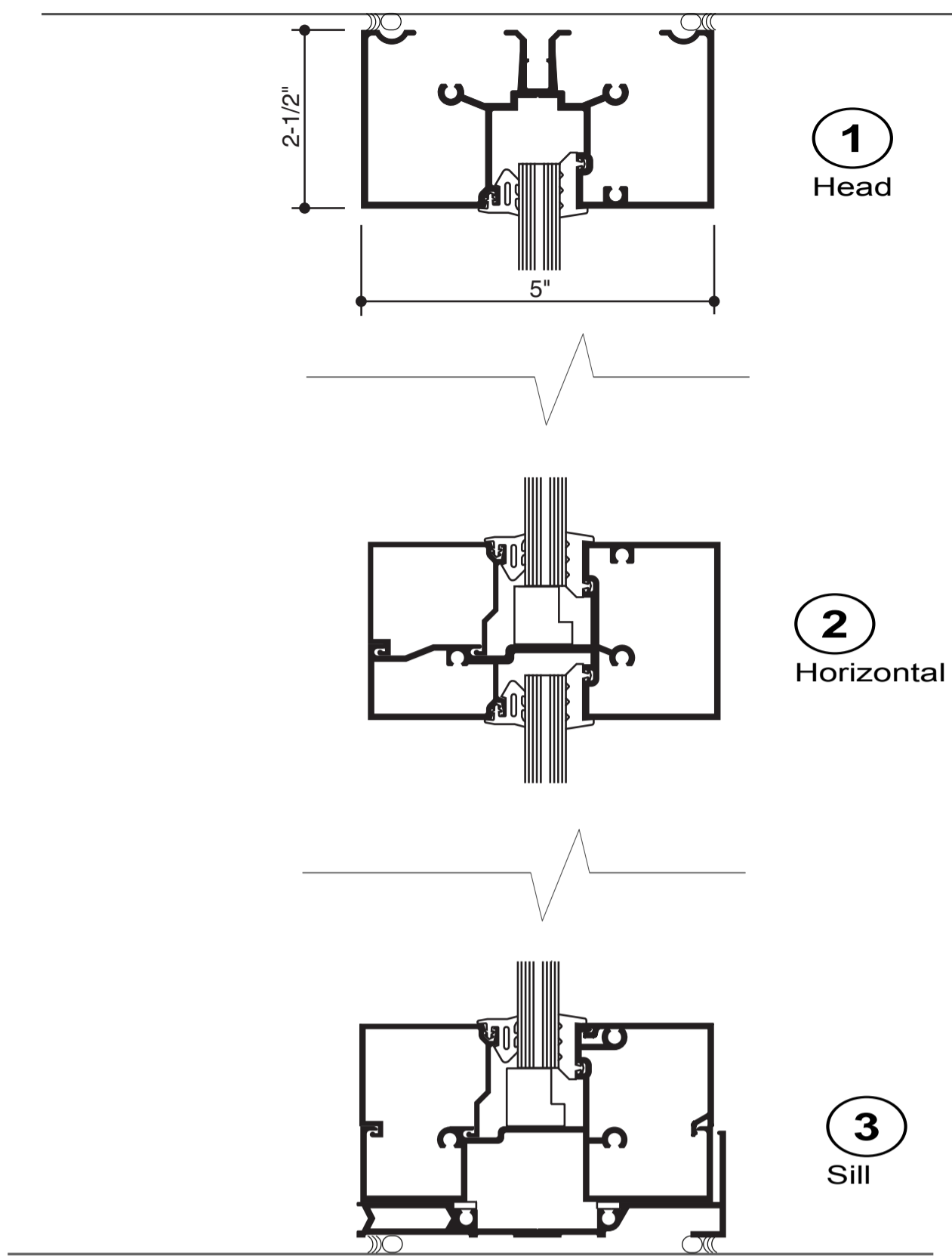


Provide jamb details JHC 02/06/2017



Submit interior jamb @ joint between Mapes & glass JHC 02/06/2017





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CURTAIN WALL TEST REPORTS FOLLOW



STAR GLASS INC.

1000 WESTBANK EXPY.
GRETNA, LA 70053
P(504) 368-8826
F(504) 367-5802

Laurel School Refurbishment
820 Jackson Ave New Orleans, LA
70130 RSD Project No.
2011-0891-0001

DATE DRAWN:
11-21-2016

REVISION DATE:



PROJECT NUMBER:
**

DRAWN BY:
P.S.

SHEET

000

GENERAL NOTES:

1. THESE CURTAIN WALL SYSTEMS HAVE 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. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH ASTM E330, E283, E331, E1886 & E1996 FOR SMALL MISSILE IMPACT CURTAIN WALL SYSTEMS.
5. THESE CURTAIN WALL SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC).
6. THIS CURTAIN WALL SYSTEM MAY NOT BE INSTALLED AT ELEVATIONS BELOW 30 FT. ABOVE GRADE WITHOUT AN APPROVED SHUTTER.
7. ALL ANCHORS SECURING CURTAIN WALL FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. 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 INTERNATIONAL BUILDING CODE, A DIRECTIONALITY FACTOR OF $KD = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR $CD = 1.6$ WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE SEPARATED OR COATED AS REQUIRED TO AVOID CORROSION OF EITHER MATERIAL.
11. THERE SHALL BE NO LIMIT TO THE NUMBER OF HORIZONTAL & VERTICAL PANELS USED FOR ANY JOB PROVIDING ALL RESTRICTIONS ARE MET PER THE ELEVATIONS.
12. TO THE BEST OF OUR KNOWLEDGE, THE CURTAIN WALL SYSTEMS SHOWN HEREIN ARE QUALITY ASSURED BY AN APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH APPLICABLE STANDARDS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. CURTAIN WALL ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
13. CERTIFICATION OF THESE CURTAIN WALL SYSTEMS SHALL BE CONSIDERED VOID IF THEY ARE INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF THEY ARE INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH CURTAIN WALL INSTALLATIONS.

CORNER CONSTRUCTION:

ONE-PIECE VERTICAL AND HORIZONTAL FRAMING AND INTERMEDIATES: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #9). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 12 X 7/16" PHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 12 X 1 1/2" FHTF SCREWS. CORNERS ARE SEALED WITH DOW 795 SILICONE SEALANT.

TWO-PIECE VERTICAL AND HORIZONTAL FRAMING AND INTERMEDIATES: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #9). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 12 X 7/16" PHTF SCREWS & THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 FH & 2 PH NO. 12 X 1 1/2" FHTF SCREWS. CORNERS ARE SEALED WITH DOW 795 SILICONE SEALANT.

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=48	DATE: 03/16/13
DATE	
BY	
REVISION DESCRIPTION	
NO.	

ANCHOR LEGEND	
ANCHOR SYMBOL	ANCHOR DESCRIPTION
⊕	STANDARD WIND LOAD ANCHOR
⊞	STANDARD T-ANCHOR
⬠	DOOR JAMB U-ANCHOR
▲	F-ANCHOR (FRAME MEMBER ENDS)
SEE SHEETS 4-6 FOR DETAILS OF ANCHORS	

GLASS D.L.O. SIZE VS. PRESSURE

GLASS OPTIONS	MAXIMUM D.L.O. WIDTH	MAXIMUM D.L.O. HEIGHT	ALLOWABLE DESIGN PRESSURE
1, 2, 3 & 4	58 1/2"	82 1/8"	+/-90 PSF
	51 3/8"	93 1/2"	+/-90 PSF
	50 5/8"	94 3/4"	+/-90 PSF
	73 3/4"	54 5/8"	+/-90 PSF
1 & 2	58 1/2"	93 1/2"	+/-65 PSF
	57 3/4"	94 3/4"	+/-65 PSF
5 & 6	58 1/2"	93 1/2"	+/-90 PSF
	57 3/4"	94 3/4"	+/-90 PSF
	73 3/4"	54 5/8"	+/-90 PSF

SEE GLAZING DETAILS FOR GLASS OPTIONS
HEIGHT & WIDTH MAY NOT BE INTERCHANGED!

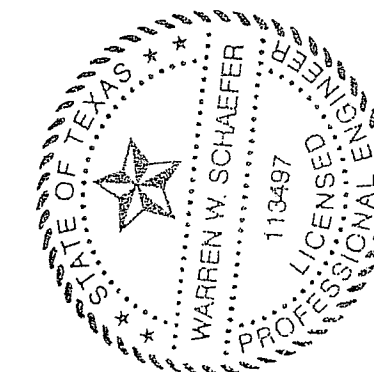
EVALUATION OF THIS PRODUCT IS BASED ON APPLICABLE STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE BUILDING CODE VERSION CONSIDERED WITH THIS EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THIS PRODUCT, PRIOR TO STATING CODE COMPLIANCE, THE MANUFACTURER SHALL CONFIRM WITH THE EVALUATION ENGINEER OF RECORD THAT EVERYTHING SPECIFIED HERE-IN IS CURRENT WITH ALL CURRENT TESTING, CODES AND APPLICABLE STANDARDS.

**ANCHOR REQUIREMENTS TABLE
(SINGLE SPAN REINFORCED & NON-REINFORCED CURTAIN WALL)**

OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
F-PERIMETER ANCHOR SCREWS			
MIN. 16 GA. 50 KSI METAL STUD	1/4-14 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 2 & G=0.55)	1/4" DIA. GR. 5 COARSE THREAD SCREW	1 1/4"	3/4"
MIN. 1/8" THK A36 STEEL	1/4-14 OR 20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 3000 PSI CONCRETE	(1) 3/8" CONCRETE SCREW ANCHOR	2 1/2"	2 1/2"
T, F & U-ANCHOR SCREWS/BOLTS (VERTICAL MEMBER ENDS)			
MIN. 1/4" THK A36 STEEL	3/8"-16 430 SS HCMS OR GR. 5 CS THREAD FORMING SCREW	FULL	3/4"
	3/8" GR. 5 CS OR 410 SS BOLT WITH LOCK WASHER & NUT	FULL	3/4"
	1/4-14 OR 20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
	1/4" GR. 5 CS OR 410 SS BOLT WITH LOCK WASHER & NUT	FULL	1/2"
	5/16-24 GR. 5 SELF TAP/DRILL SCREW	FULL	5/8"
	5/16" GR. 5 CS OR 410 SS BOLT WITH LOCK WASHER & NUT	FULL	5/8"
(2) MIN. 3000 PSI CONCRETE	(1) 1/2" CONCRETE SCREW ANCHOR	3 1/4"	SEE DETAILS

- (1) 1/2" CONCRETE SCREWS SHALL BE SIMPSON STRONG-TIE TITAN HD SCREW ANCHOR (GALVANIZED STEEL).
(2) MINIMUM CONCRETE SLAB THICKNESS FOR PLACEMENT OF "T", "F" & "U" ANCHORS IS 6 3/4".

Provide info for submitted curtain wall (71/4" not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17



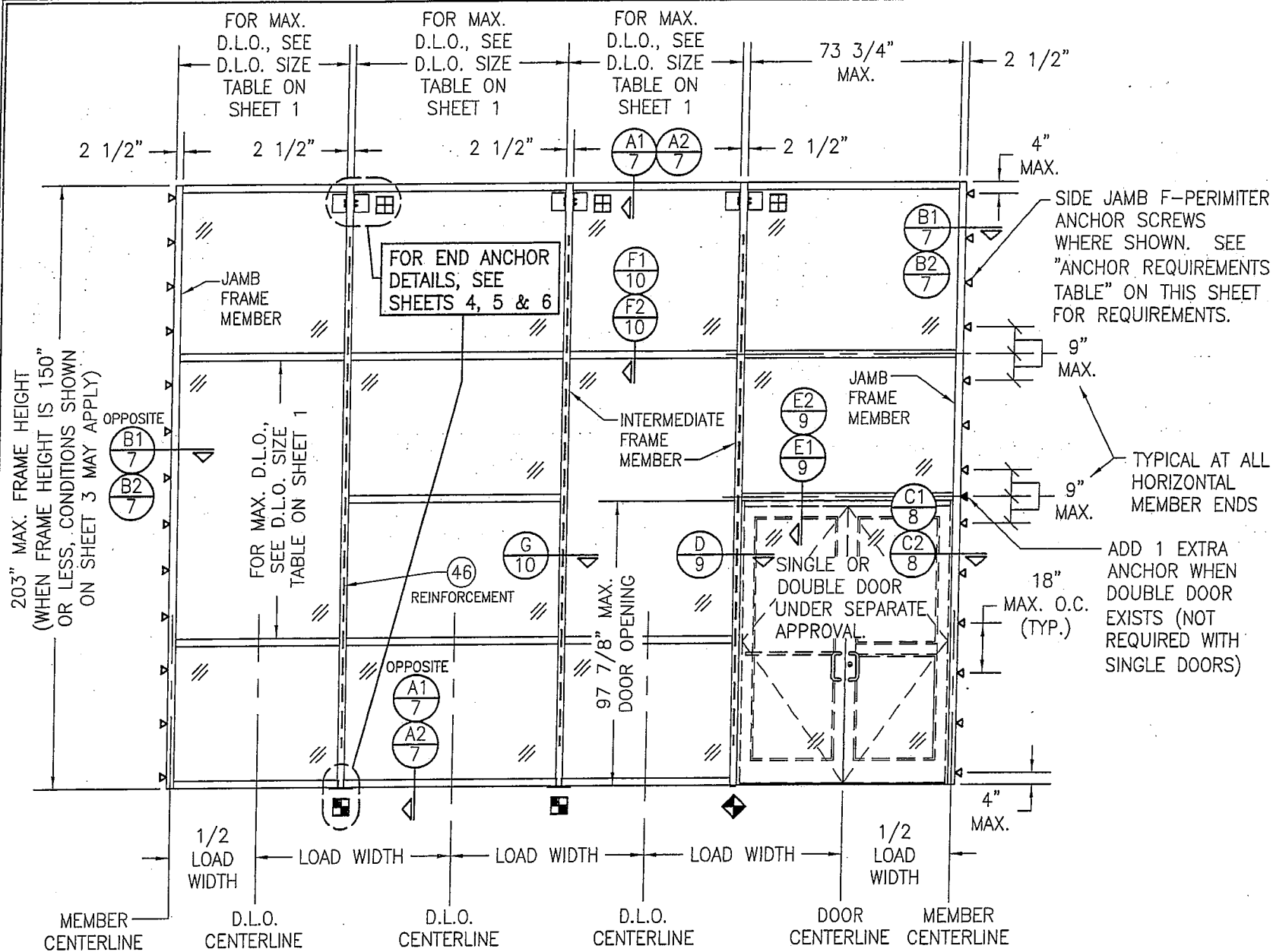
DRAWING TITLE: 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

JOB INFORMATION: KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
770-449-5555

CERTIFICATION: MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO. 1795T
REV. SHEET NO. 1 OF 12



EXTERIOR ELEVATION:
 SINGLE-SPAN REINFORCED CURTAIN WALL
 SCALE: 1/4" = 1'-0"

NOTES APPLICABLE TO SINGLE-SPAN REINFORCED CURTAIN WALLS

1. REINFORCEMENT SHALL RUN CONTINUOUS IN INTERMEDIATE VERTICAL MEMBERS & EXTEND TO WITHIN 17 1/2" OF THE ENDS.
2. THERE IS NO LIMIT TO THE NUMBER OF SECTIONS HORIZONTALLY PROVIDING THE OPENING IS DESIGNED TO SUPPORT THE LOADS TRANSFERRED FROM THE WALL SYSTEM.
3. THE SINGLE-SPAN ELEVATION SHOWN SHOWS ONE DOOR SECTION. MULTIPLE DOOR SECTIONS MAY OCCUR SIDE-BY-SIDE IN ONE WALL SYSTEM PROVIDING ALL REQUIREMENTS WITHIN THIS DRAWING ARE MET & PROPER LOAD WIDTH (DISTANCE BETWEEN DOOR CENTERS) IS CONSIDERED WHEN DETERMINING ALLOWABLE DESIGN PRESSURE.
4. ALTHOUGH A DOOR SECTION IS SHOWN AT A SIDE JAMB, THAT SECTION MAY EXIST WITH OR WITHOUT A DOOR & THE DOOR MAY EXIST IN ANY BAY.
5. THE ELEVATION HERE-IN SHOWS T-ANCHORS AT THE BASE OF THE WALL ONLY. THESE ANCHORS MAY ALSO BE USED AT THE TOP OF A WALL IN LIEU OF THE WIND LOAD ANCHORS SHOWN PROVIDING THEY ARE INSTALLED THE SAME AS SHOWN AT THE BASE.
6. DOOR OPENINGS WIDER THAN THAT SHOWN ARE NOT PART OF THE SCOPE OF THIS APPROVAL. IF WIDER DOOR OPENINGS ARE REQUIRED, THEY SHALL BE EVALUATED & CERTIFIED UNDER SEPERATE JOB APPROVAL.

**ALLOWABLE DESIGN PRESSURE
 (SINGLE SPAN REINFORCED
 CURTAIN WALL)**

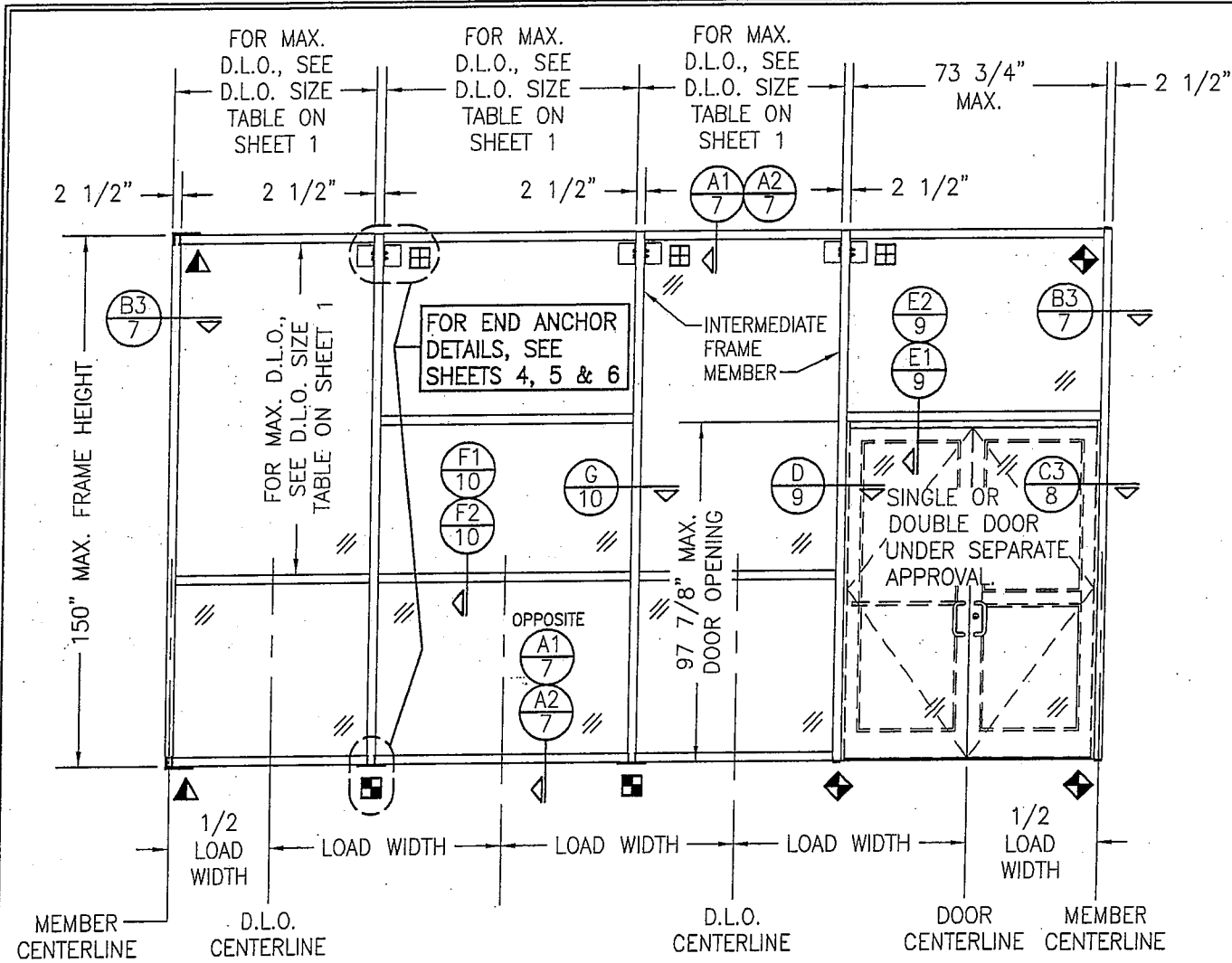
MAXIMUM MULLION SPAN (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (POS & NEG PSF)
203	76 1/4	81.0
	72	85.8
	68 5/8	90.0
	62	99.6
192	76 1/4	85.6
	72	90.7
	68 5/8	95.2
	62	105.3
180 & LESS	76 1/4	90.0
	72	95.3
	68 5/8	100.0
	62	110.0

NOTES:
 1. SEE ELEVATION FOR DIMENSIONING OF LOAD WIDTH.
 2. PRESSURES SHOWN ARE SPECIFIC TO EACH INDIVIDUAL MULLION SUPPORT AREA. ALLOWABLE PRESSURE MAY VARY FROM BAY TO BAY AS DICTATED BY EACH INDIVIDUAL MULLION CONDITION.
 3. LESSER OF PRESSURES STATED IN THIS TABLE & THE ALLOWABLE GLASS PRESSURE, AS SHOWN ON SHEET 1, SHALL CONTROL AS ALLOWABLE FOR THE WALL ASSEMBLY.
 4. AT SPAN OF 180" & LESS, LOAD WIDTH CONTROLS THE ALLOWABLE PRESSURE. THEREFORE, IT SHALL NOT BE ASSUMED THAT INTERPRETATION OF PRESSURE VALUES CAN BE DONE WITH SPANS UNDER 180". INTERPRETATION OF PRESSURE VALUES BETWEEN THOSE SHOWN MAY APPLY.

Provide info for submitted curtain wall (71/4" not 10 13/16")
 & stamped by Louisiana engineer
 JHC 02/06/17



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1-48		DATE: 03/16/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
DRAWING NO. 1795T		REV.	
SHEET NO. 2 OF 12			



**EXTERIOR ELEVATION:
SINGLE-SPAN NON-REINFORCED CURTAIN WALL**

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

NOTES APPLICABLE TO SINGLE-SPAN NON-REINFORCED CURTAIN WALLS

1. THE ELEVATION SHOWN ILLUSTRATES SIDE JAMB FRAME MEMBERS WITH FULL SPANS END SUPPORTED BY "F" OR "U" ANCHORS. IT IS OPTIONAL TO OMIT THE "F" & "U" ANCHORS AND INSTALL THE SIDE JAMB F-PERIMETER ANCHOR SCREWS AS SHOWN IN THE REINFORCED WALL ELEVATION ON SHEET 2.
2. THERE IS NO LIMIT TO THE NUMBER OF SECTIONS HORIZONTALLY PROVIDING THE OPENING IS DESIGNED TO SUPPORT THE LOADS TRANSFERRED FROM THE WALL SYSTEM.
3. THE SINGLE-SPAN ELEVATION SHOWN SHOWS ONE DOOR SECTION. MULTIPLE DOOR SECTIONS MAY OCCUR SIDE-BY-SIDE IN ONE WALL SYSTEM PROVIDING ALL REQUIREMENTS WITHIN THIS DRAWING ARE MET & PROPER LOAD WIDTH (DISTANCE BETWEEN DOOR CENTERS) IS CONSIDERED WHEN DETERMINING ALLOWABLE DESIGN PRESSURE.
4. ALTHOUGH A DOOR SECTION IS SHOWN AT A SIDE JAMB, THAT SECTION MAY EXIST WITH OR WITHOUT A DOOR & THE DOOR MAY EXIST IN ANY BAY.
5. THE ELEVATION HERE-IN SHOWS T-ANCHORS AT THE BASE OF THE WALL ONLY. THESE ANCHORS MAY ALSO BE USED AT THE TOP OF A WALL IN LIEU OF THE WIND LOAD ANCHORS SHOWN PROVIDING THEY ARE INSTALLED THE SAME AS SHOWN AT THE BASE.
6. DOOR OPENINGS WIDER THAN THAT SHOWN ARE NOT PART OF THE SCOPE OF THIS APPROVAL. IF WIDER DOOR OPENINGS ARE REQUIRED, THEY SHALL BE EVALUATED & CERTIFIED UNDER SEPERATE JOB APPROVAL.
7. WHEN THERE IS NO CONTINUOUS JAMB SUPPORT, THE MINIMUM & MAXIMUM ALLOWABLE SPACE BETWEEN JAMB FRAME MEMBERS & THE OPENING SUBSTRATE OR FINISHES SHALL BE SPECIFIED BY THE ENGINEER OR ARCHITECT OF RECORD FOR EACH JOB BUT SHALL NOT BE LESS THAN 1/2" NOR GREATER THAN 1 3/8". WHEN CONSIDERING TYPE, DEPTH & JOINT SPAN OF SEALANT, THE ENGINEER/ARCHITECT SHALL TAKE INTO CONSIDERATION THE DEFLECTION OF THE JAMB MEMBER THAT WOULD OCCUR WHILE SUPPORTING THE JOB REQUIRED DESIGN WIND PRESSURE. ALSO TO BE CONSIDERED SHALL BE THE MATERIALS & SURFACES TO WHICH THE SEALANT WILL BE APPLIED.

**ALLOWABLE DESIGN PRESSURE
(SINGLE SPAN
NON-REINFORCED
CURTAIN WALL)**

MAXIMUM MULLION SPAN (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (POS & NEG PSF)
150	76 1/4	81.0
	72	85.8
	68 5/8	90.0
	62	99.6
144	76 1/4	84.4
	72	89.4
	68 5/8	93.8
	62	103.8
132 & LESS	76 1/4	90.0
	72	95.3
	68 5/8	100.0
	62	110.0

NOTES:

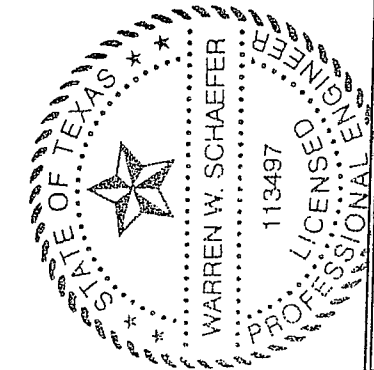
1. SEE ELEVATION FOR DIMENSIONING OF LOAD WIDTH.
2. PRESSURES SHOWN ARE SPECIFIC TO EACH INDIVIDUAL MULLION SUPPORT AREA. ALLOWABLE PRESSURE MAY VARY FROM BAY TO BAY AS DICTATED BY EACH INDIVIDUAL MULLION CONDITION.
3. LESSER OF PRESSURES STATED IN THIS TABLE & THE ALLOWABLE GLASS PRESSURE, AS SHOWN ON SHEET 1, SHALL CONTROL AS ALLOWABLE FOR THE WALL ASSEMBLY.
4. AT SPAN OF 132" & LESS, LOAD WIDTH CONTROLS THE ALLOWABLE PRESSURE. THEREFORE, IT SHALL NOT BE ASSUMED THAT INTERPRETATION OF PRESSURE VALUES CAN BE DONE WITH SPANS UNDER 132". INTERPRETATION OF PRESSURE VALUES BETWEEN THOSE SHOWN MAY APPLY.

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=48	DATE: 03/16/13
DATE	
BY	
REVISION DESCRIPTION	
NO.	

JOB INFORMATION:
KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
770-449-5555

DRAWING TITLE
10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424



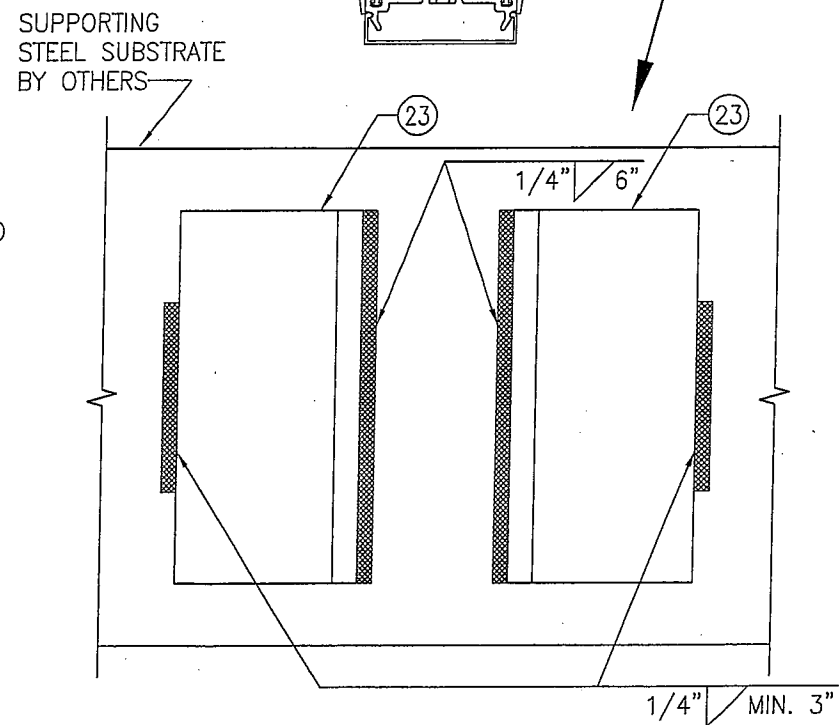
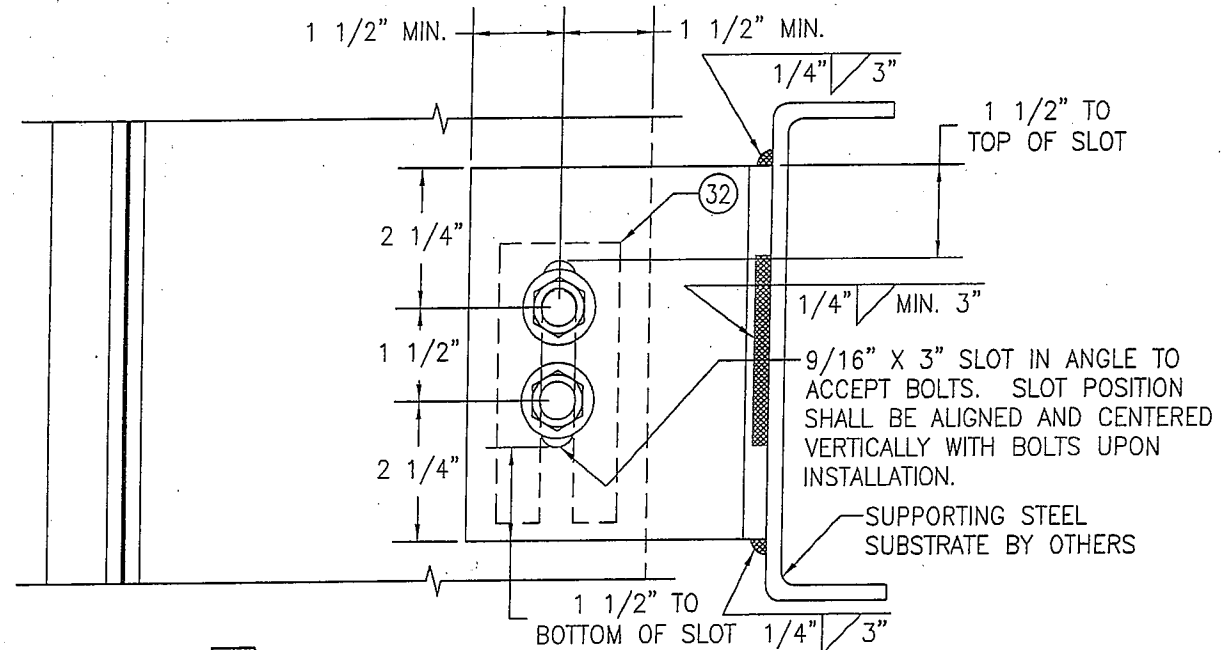
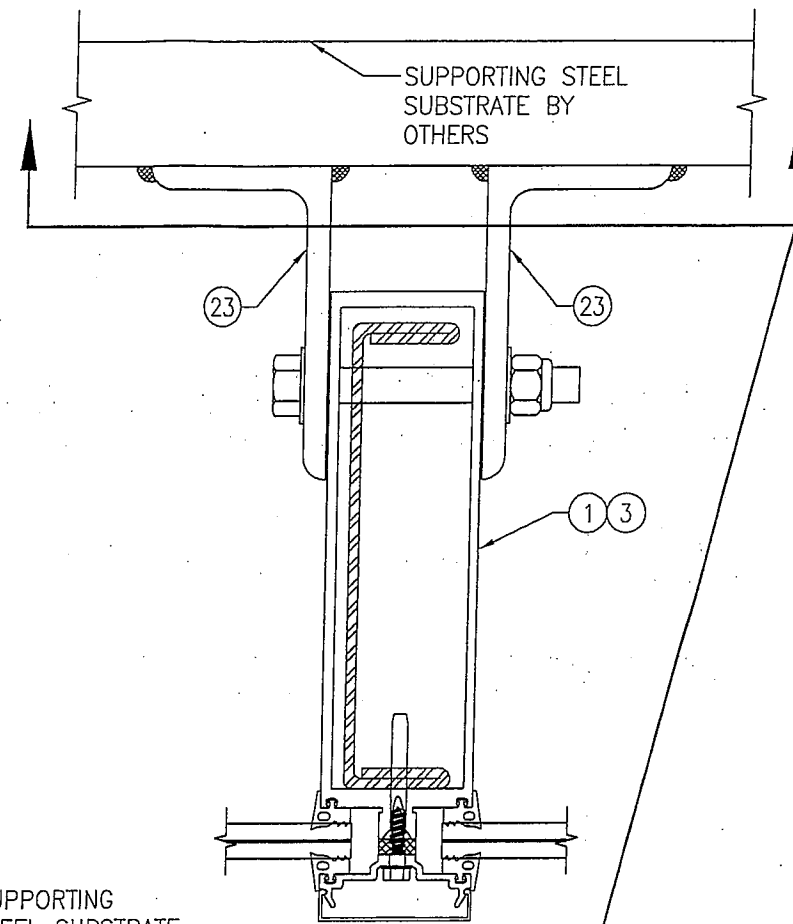
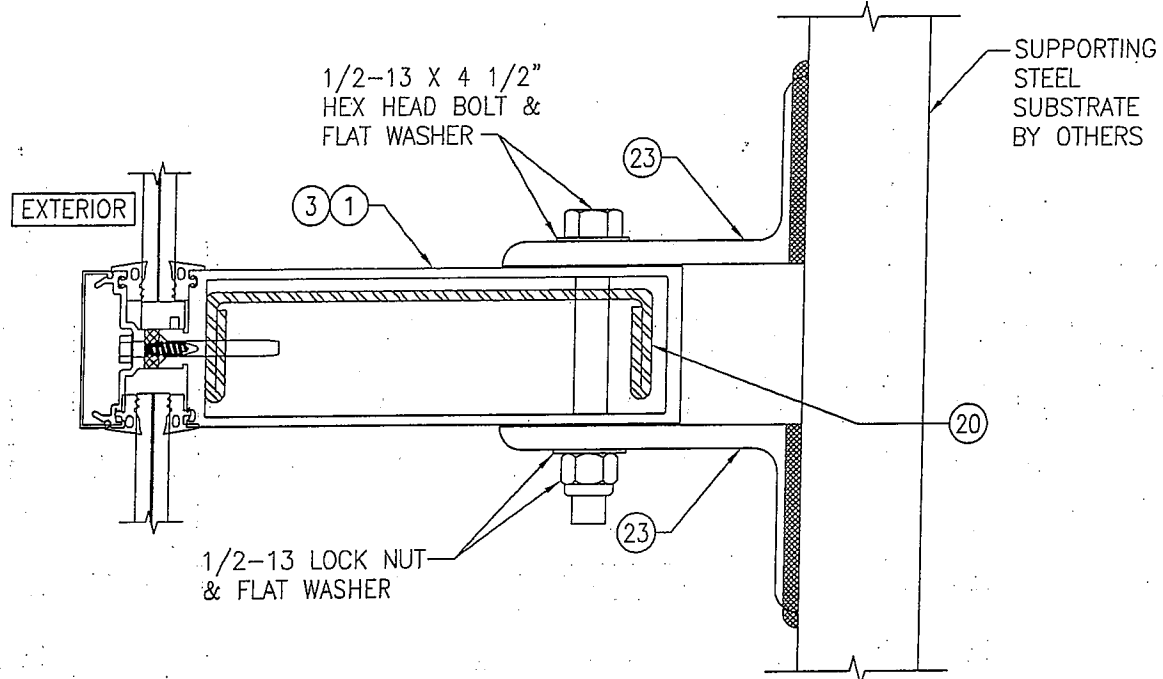
CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497


DRAWING NO.
1795T

REV.

SHEET NO.
3 OF 12

Provide info for submitted curtain wall (71/4" not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17




STANDARD WIND LOAD ANCHOR
 SCALE: 1/3 FULL

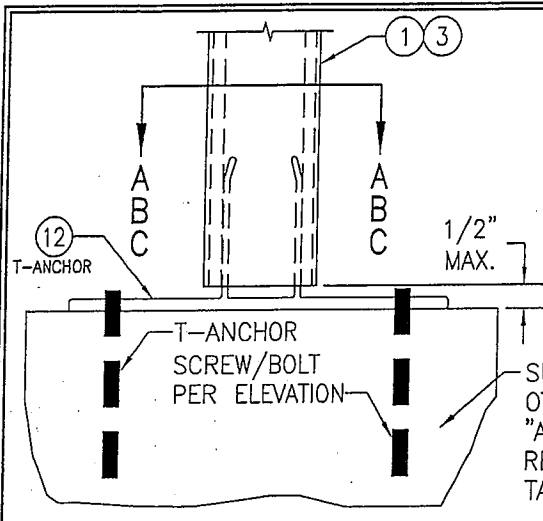
ALTERNATE WELD DETAIL FOR WIND LOAD ANCHORS
 SCALE: 1/3 FULL

NOTE: ALL 1/2" BOLTS
 CONNECTING ANGLES TO
 MULLIONS SHALL BE GRADE
 5 STEEL OR 300 SERIES
 STAINLESS STEEL.

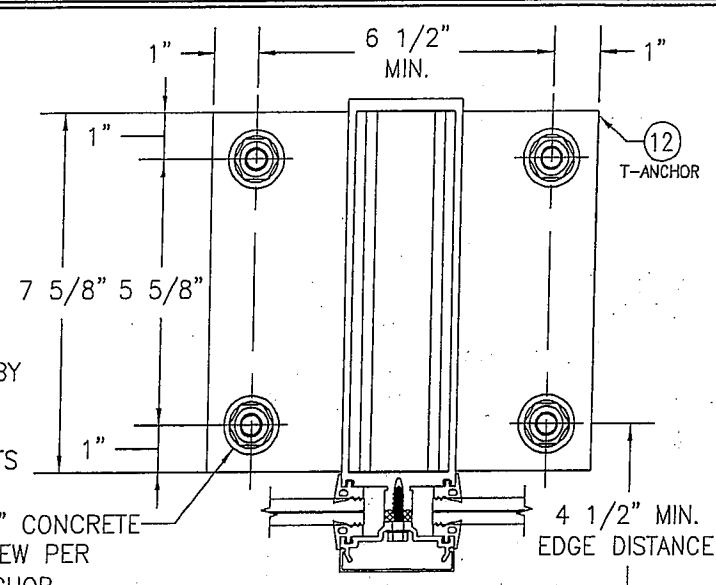
Provide info for submitted curtain wall (71/4" with
 anchoring details as submitted, not 10 13/16") & stamped
 by Louisiana engineer
 JHC 02/06/17



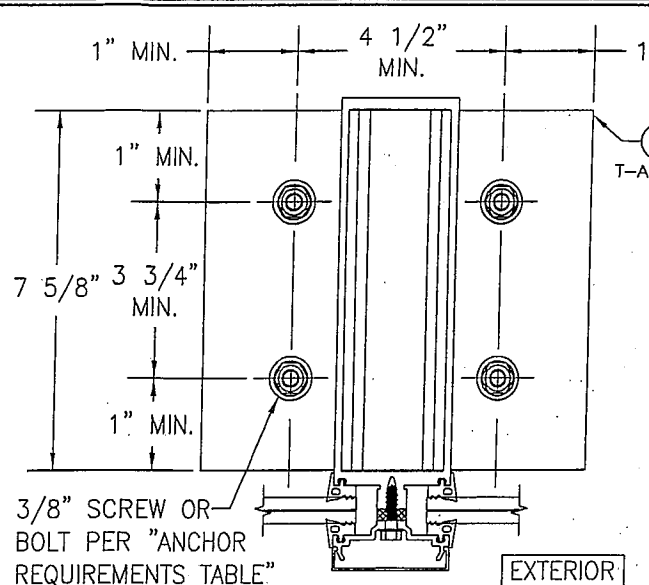
DRAWING TITLE		DRAWN BY:		CHECKED BY:	
10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)		W.W.S.		W.W.S.	
CONSULTANTS		PLOT:		DATE:	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		1-3		03/19/13	
JOB INFORMATION:		NO.		DATE	
KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555					
CERTIFICATION		BY		REVISION DESCRIPTION	
MAR 20 2013					
WARREN W. SCHAEFER, P.E. P.E. NO. 113497					
DRAWING NO.		REV.			
1795T					
SHEET NO.					
4 OF 12					



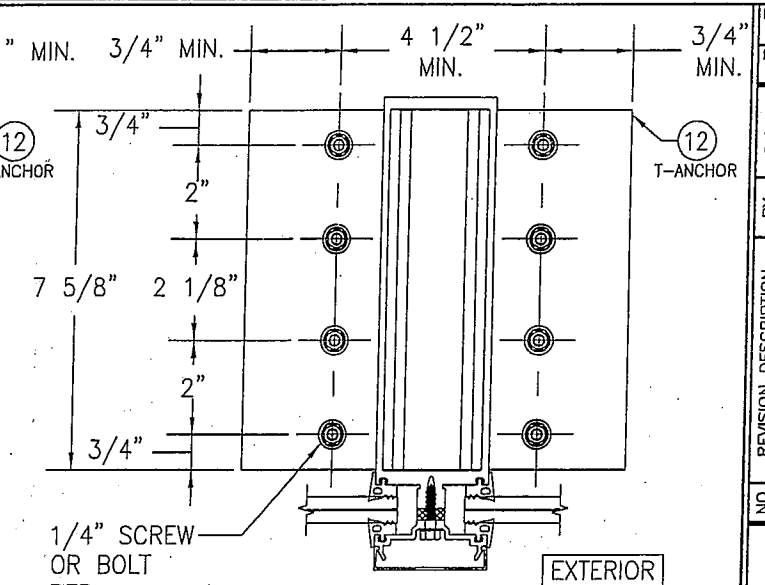
STANDARD T-ANCHOR
SCALE: 1/4 FULL



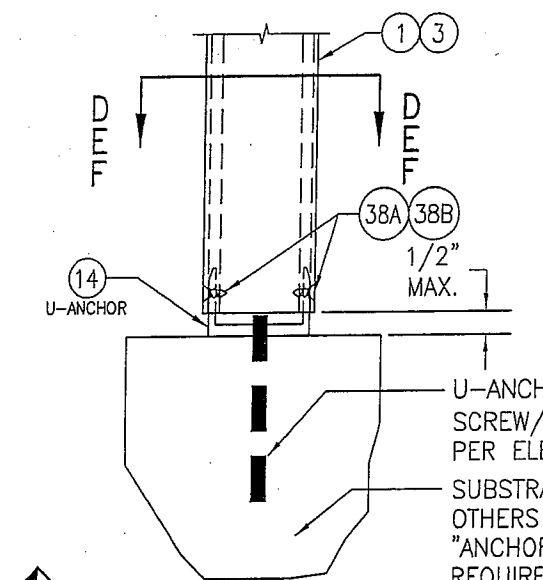
SECTION "A-A" (INTO CONCRETE)
SCALE: 1/4 FULL



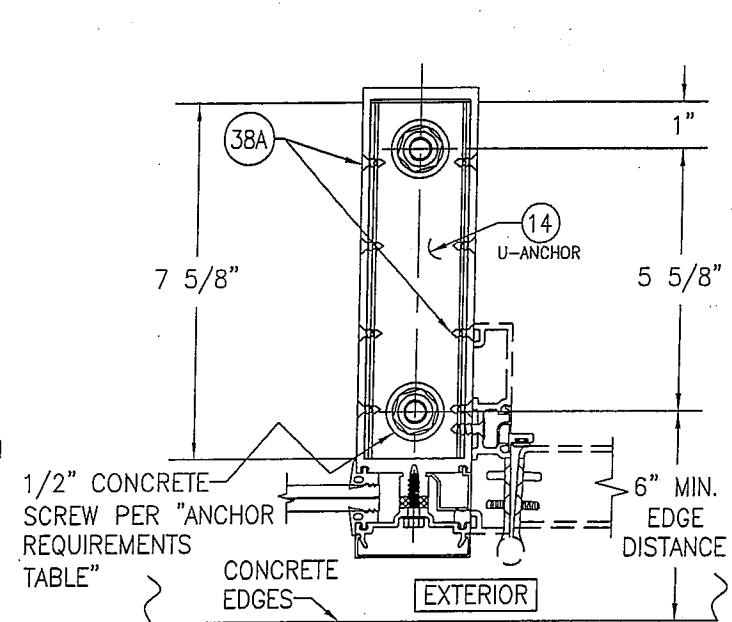
SECTION "B-B" (INTO STEEL)
SCALE: 1/4 FULL



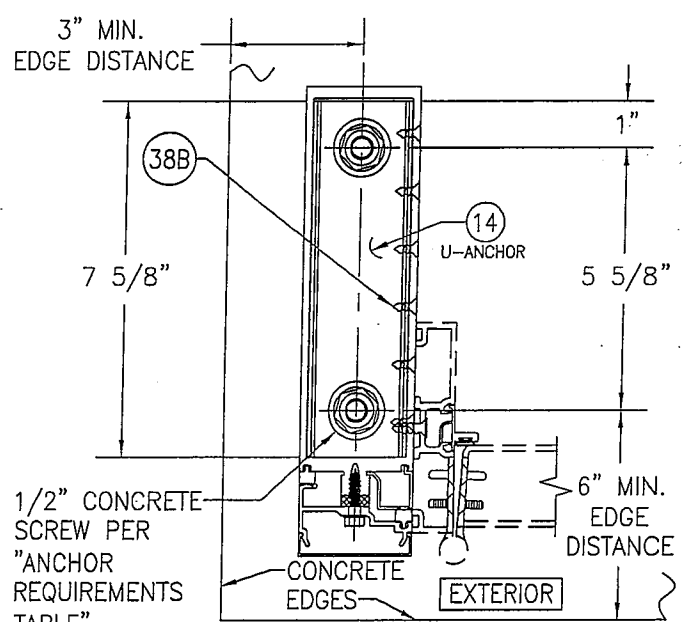
SECTION "C-C" (ALTERNATE INTO STEEL)
SCALE: 1/4 FULL



DOOR JAMB U-ANCHOR
SCALE: 1/4 FULL

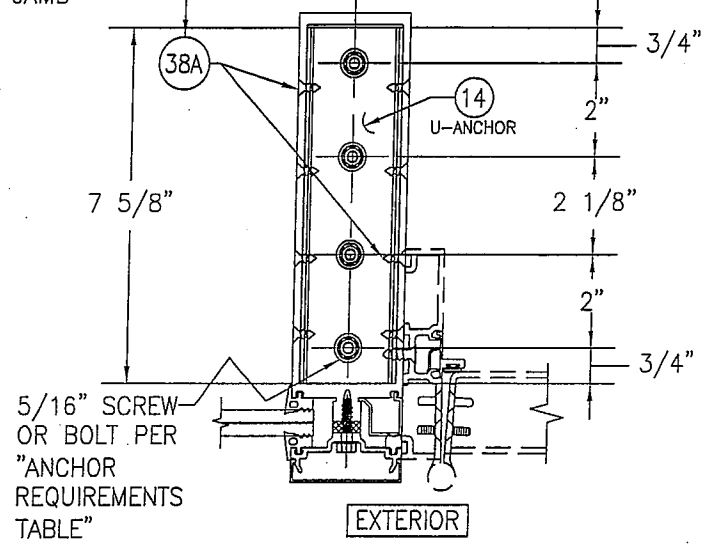


SECTION "D-D" (INTO CONCRETE AT INTERMEDIATE MEMBER)
SCALE: 1/4 FULL



SECTION "E-E" (INTO CONCRETE AT PERIMETER SIDE JAMB MEMBER)
SCALE: 1/4 FULL

SEE SECTION "E-E" FOR USE OF 38B WHEN AT A PERIMETER SIDE JAMB



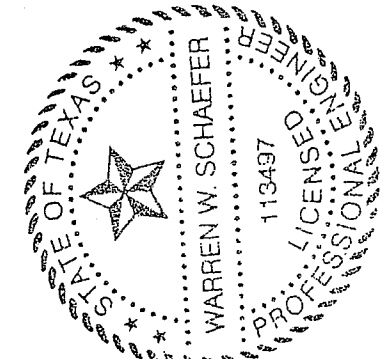
SECTION "F-F" (INTO STEEL)
SCALE: 1/4 FULL

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 03/19/13
NO.	REVISION DESCRIPTION

JOB INFORMATION:
KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
770-449-5555

DRAWING TITLE:
10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)

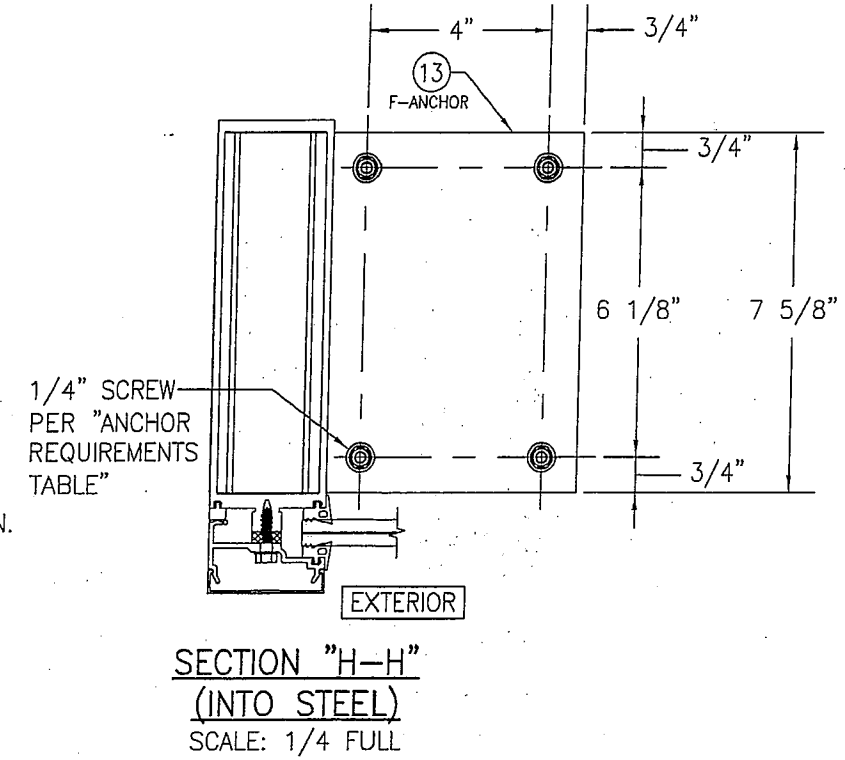
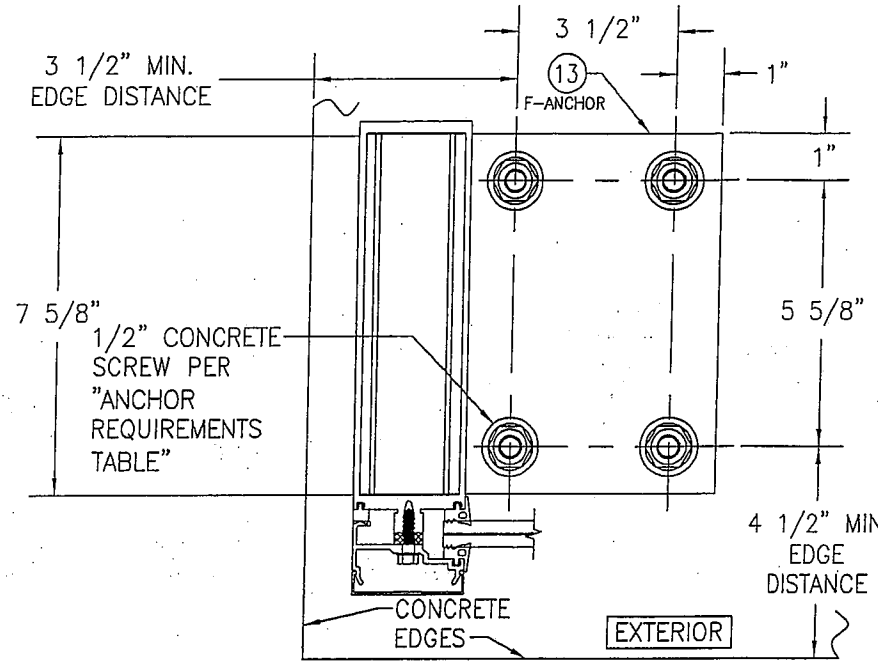
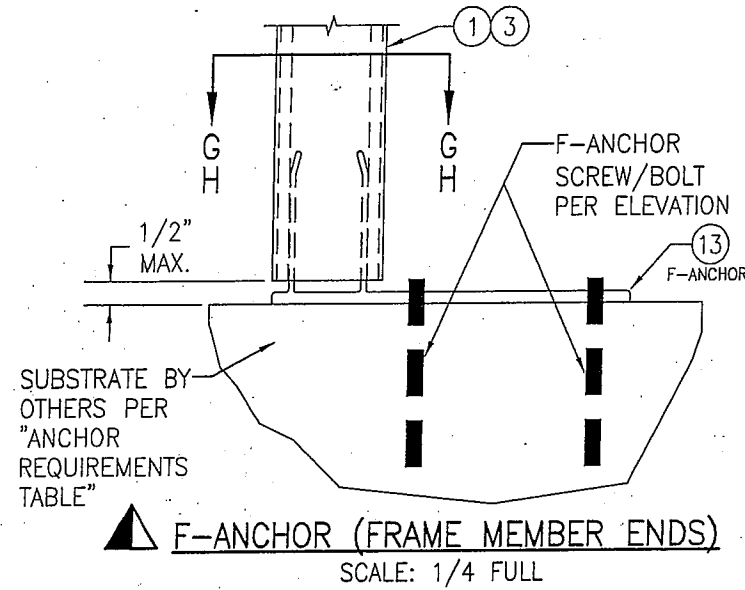
CONSULTANTS:
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424



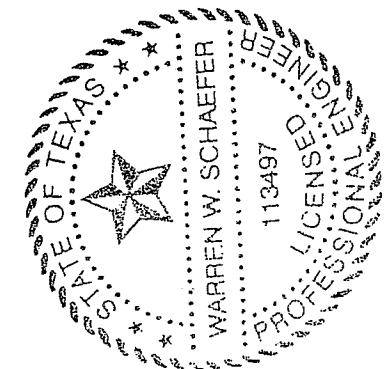
CERTIFICATION:
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO.: 1795T
REV.:
SHEET NO.: 5 OF 12

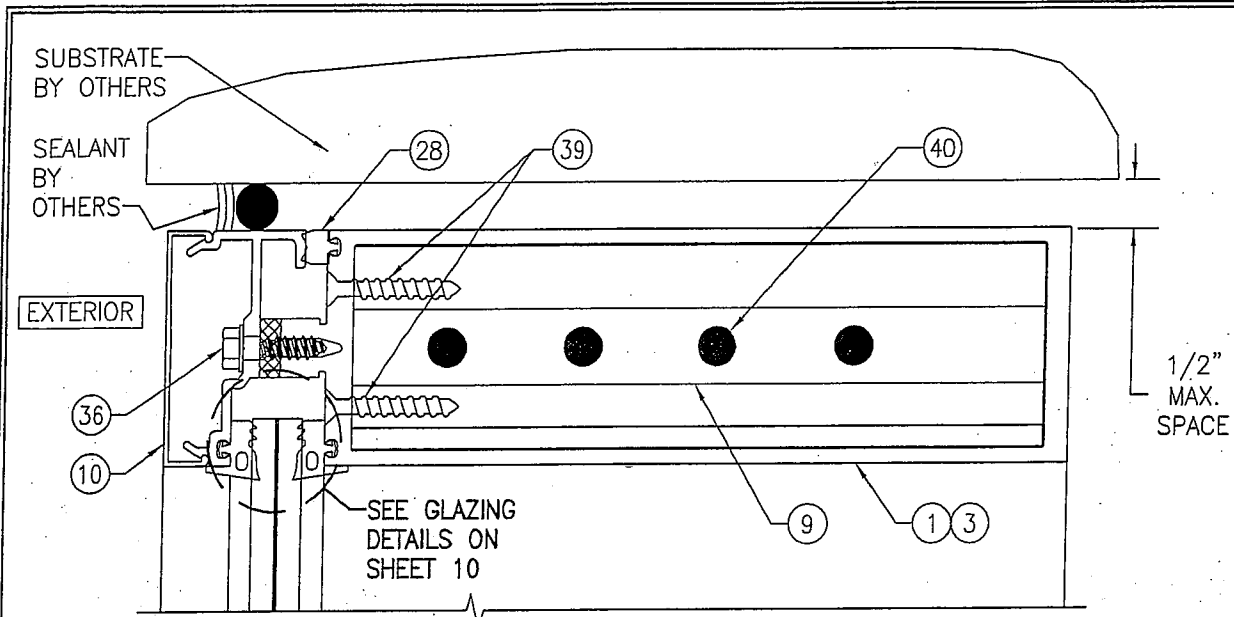
Provide info for submitted curtain wall (71/4" with anchoring details as submitted, not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17



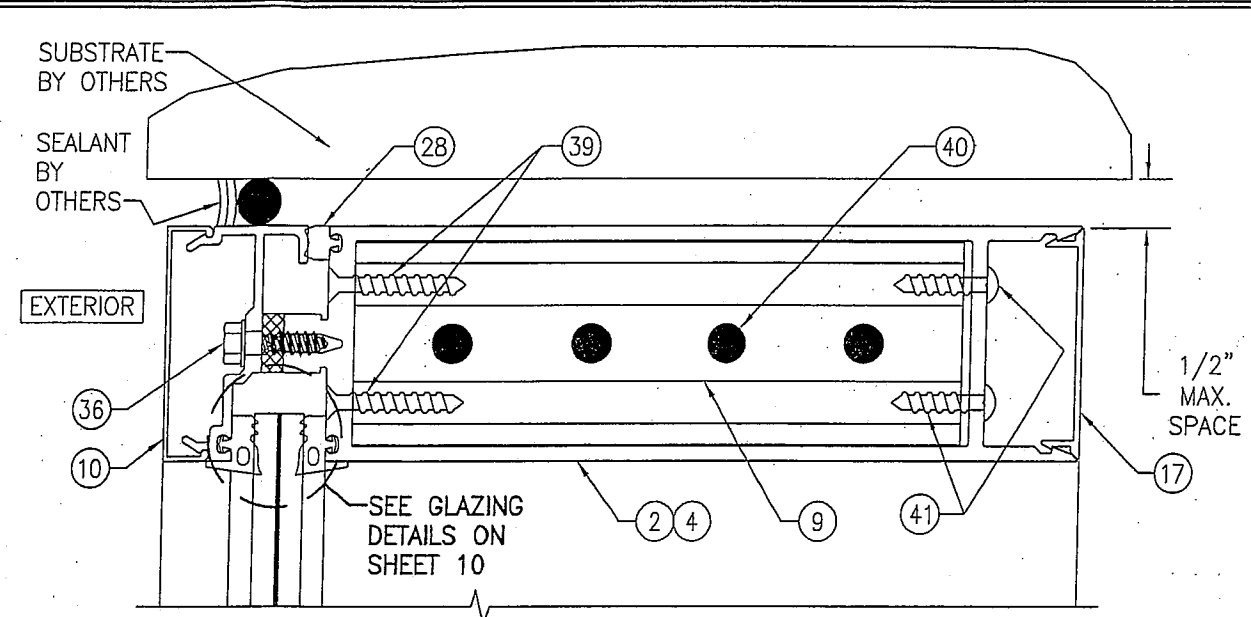
Provide info for submitted curtain wall (71/4" with anchoring details as submitted, not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17



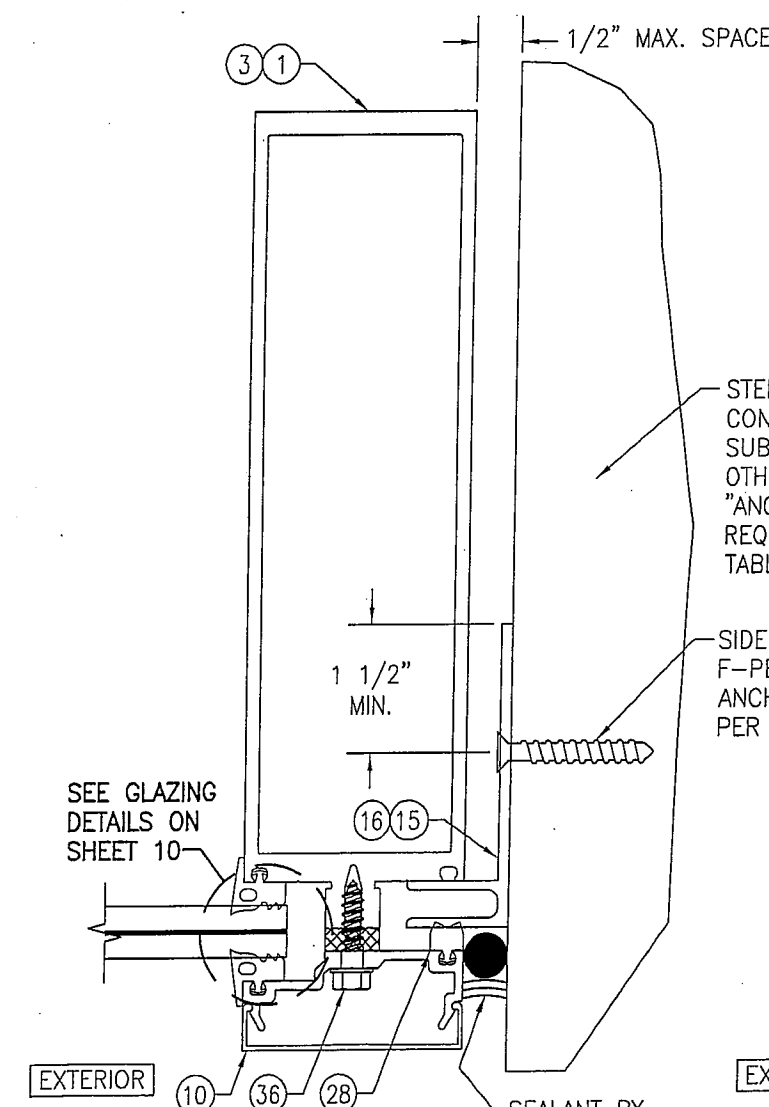
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 20 2013		WARREN W. SCHAEFER, P.E. P.E. NO. 113497	
DRAWING NO. 1795T	REV.		
SHEET NO. 6 OF 12			



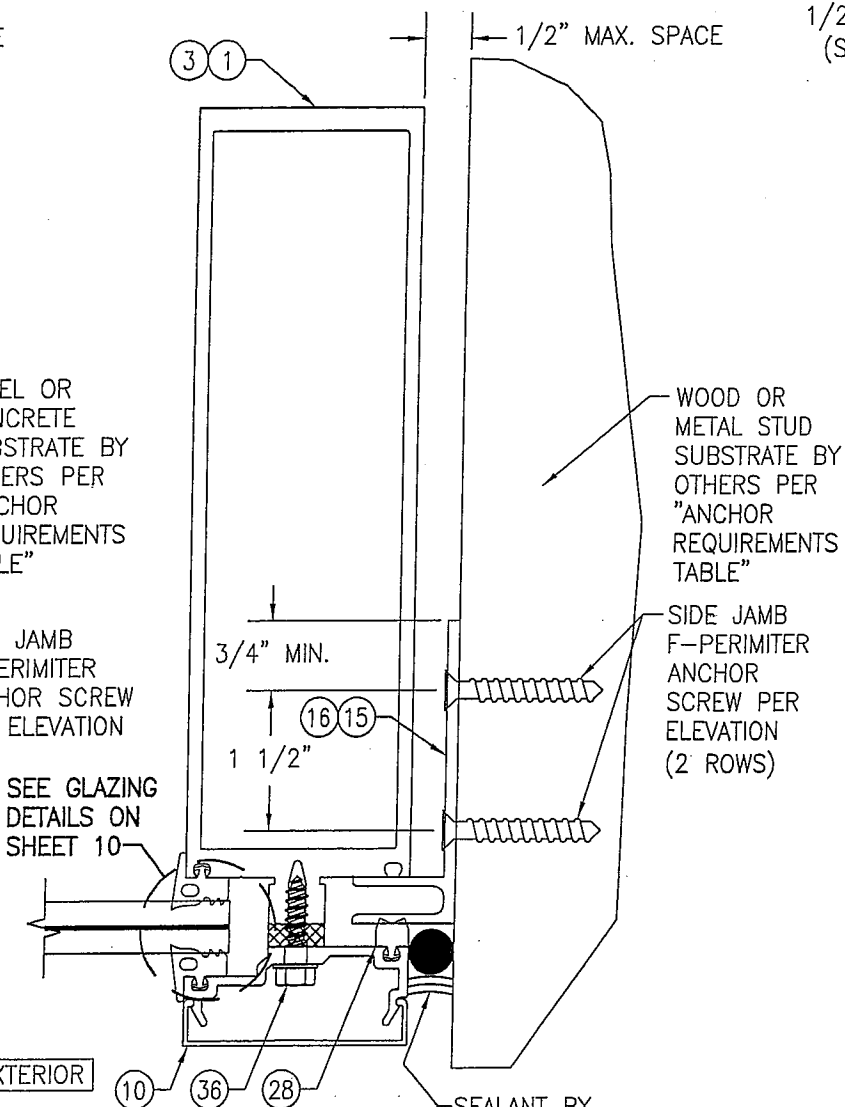
SECTION A1
SCALE: 1/2 FULL



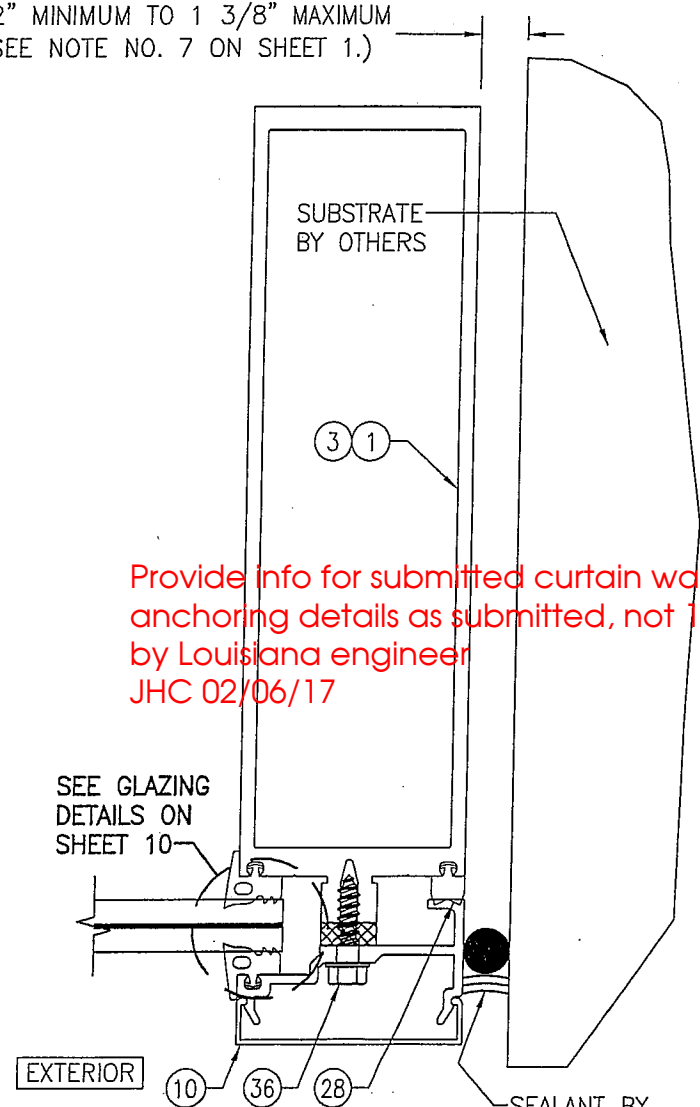
SECTION A2
SCALE: 1/2 FULL



SECTION B1
SCALE: 1/2 FULL
(SIDE JAMB F-ANCHOR TO STEEL AND CONCRETE)

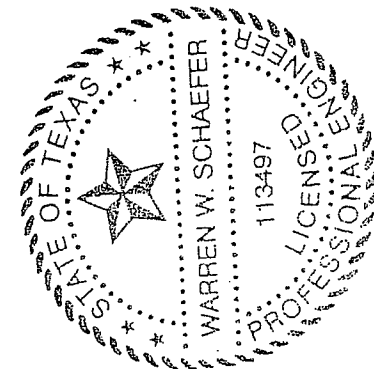


SECTION B2
SCALE: 1/2 FULL
(SIDE JAMB F-ANCHOR TO WOOD OR METAL STUD)

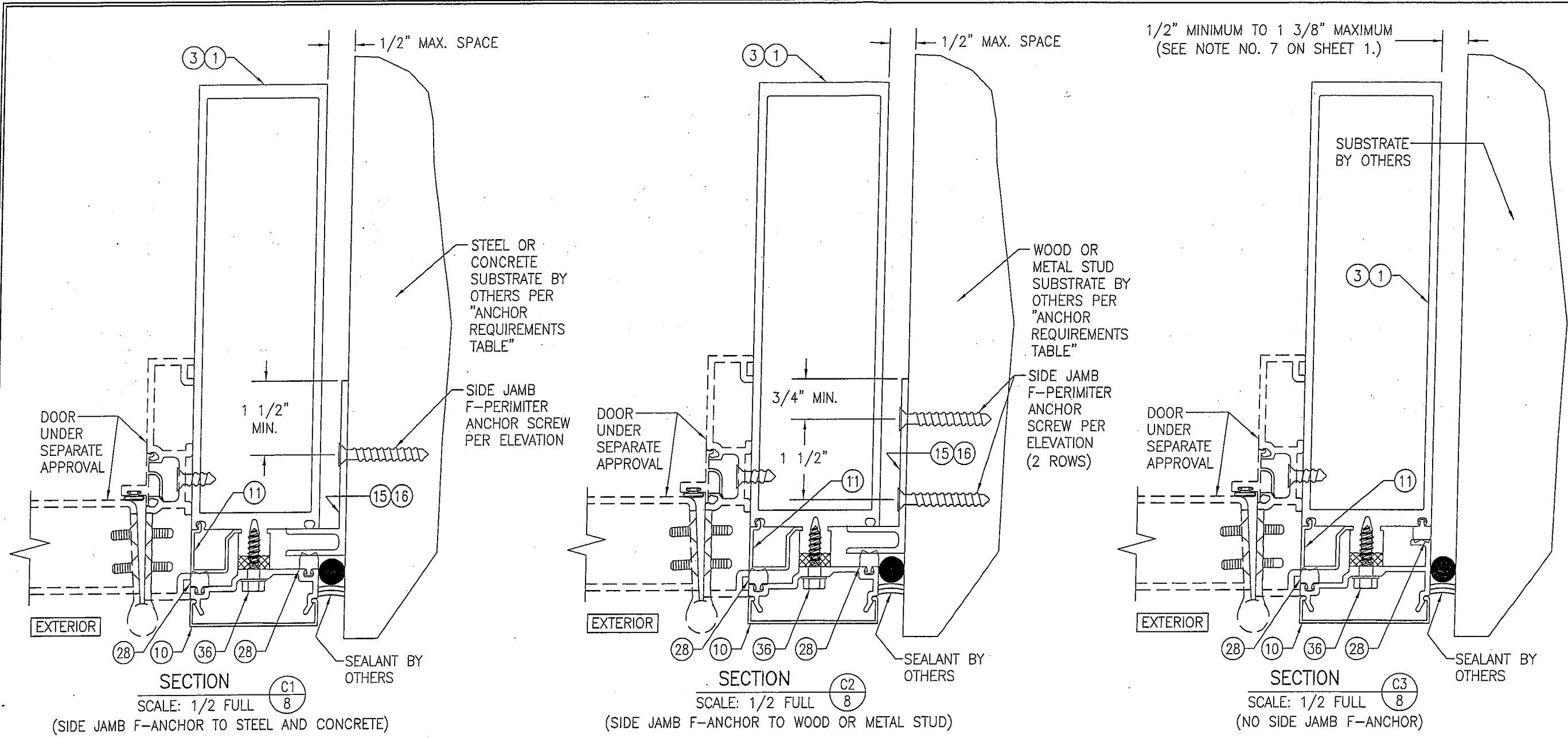


SECTION B3
SCALE: 1/2 FULL
(NO SIDE JAMB F-ANCHOR)

Provide info for submitted curtain wall (71/4" with anchoring details as submitted, not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1-2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1795T		REV.	
SHEET NO. 7 OF 12			



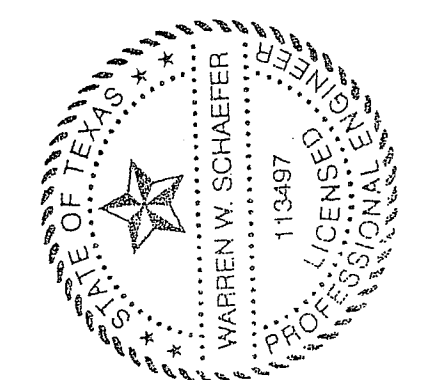
1/2" MINIMUM TO 1 3/8" MAXIMUM
(SEE NOTE NO. 7 ON SHEET 1.)

SECTION C1
SCALE: 1/2 FULL
(SIDE JAMB F-ANCHOR TO STEEL AND CONCRETE)

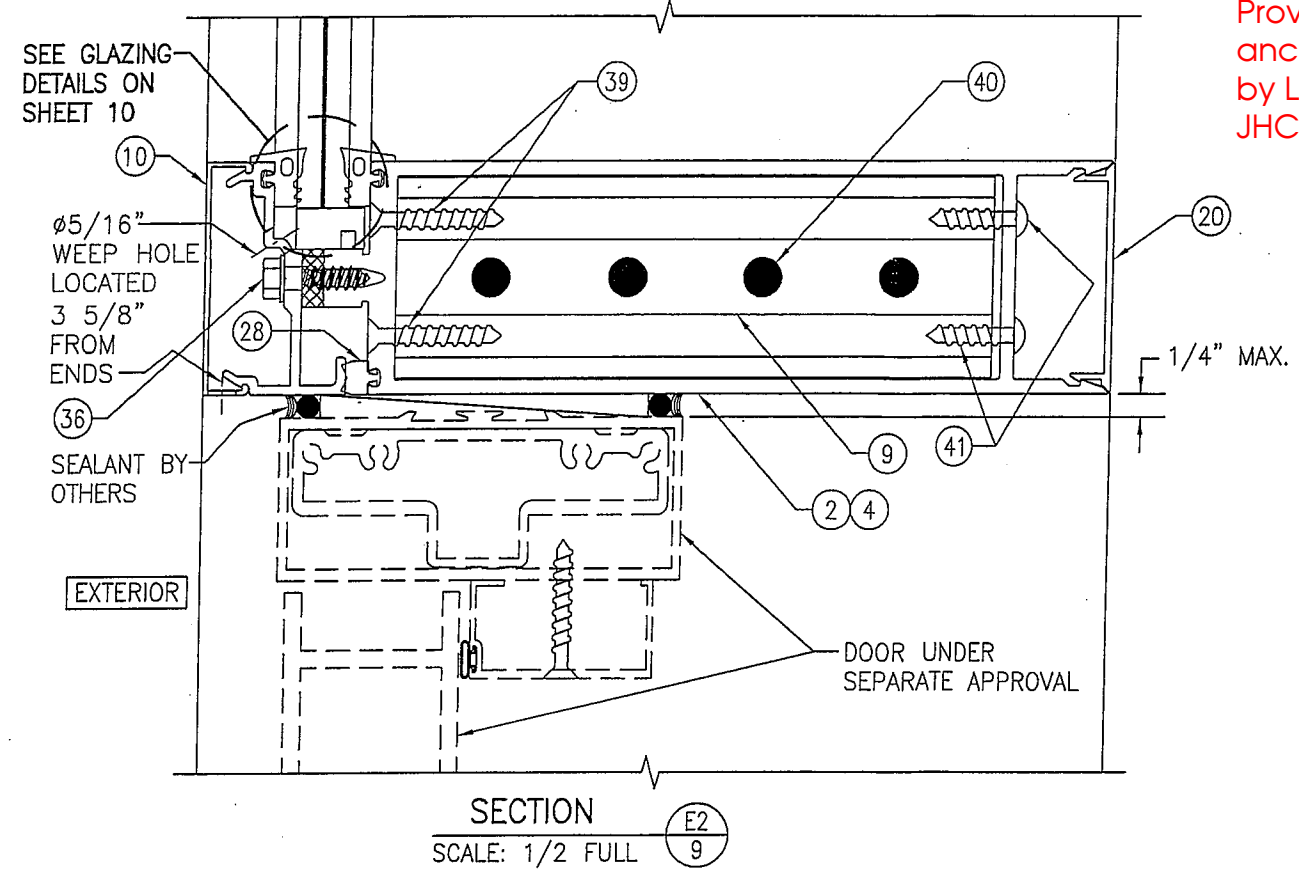
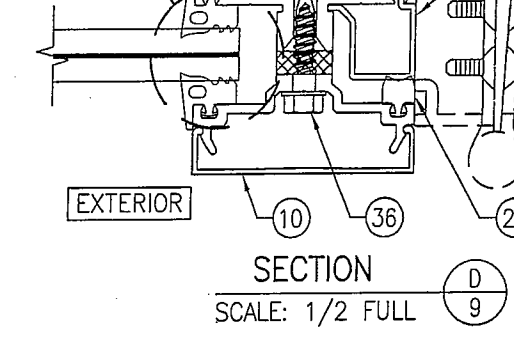
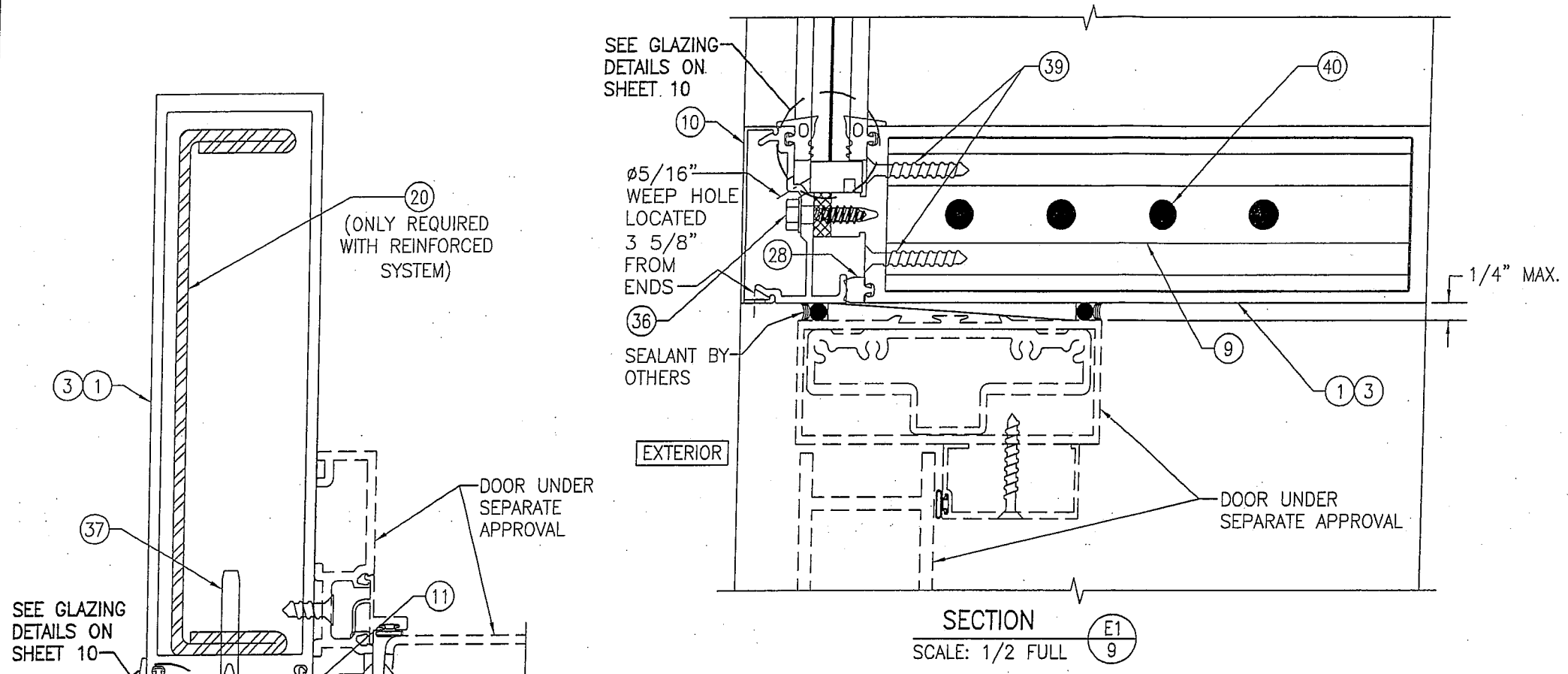
SECTION C2
SCALE: 1/2 FULL
(SIDE JAMB F-ANCHOR TO WOOD OR METAL STUD)

SECTION C3
SCALE: 1/2 FULL
(NO SIDE JAMB F-ANCHOR)

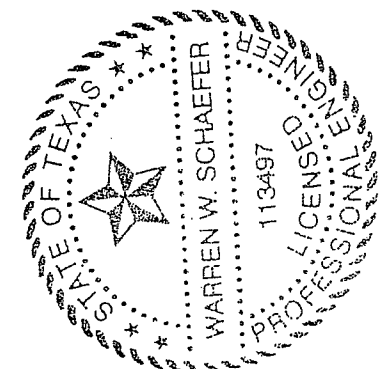
Provide info for submitted curtain wall (71/4" with anchoring details as submitted, not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17



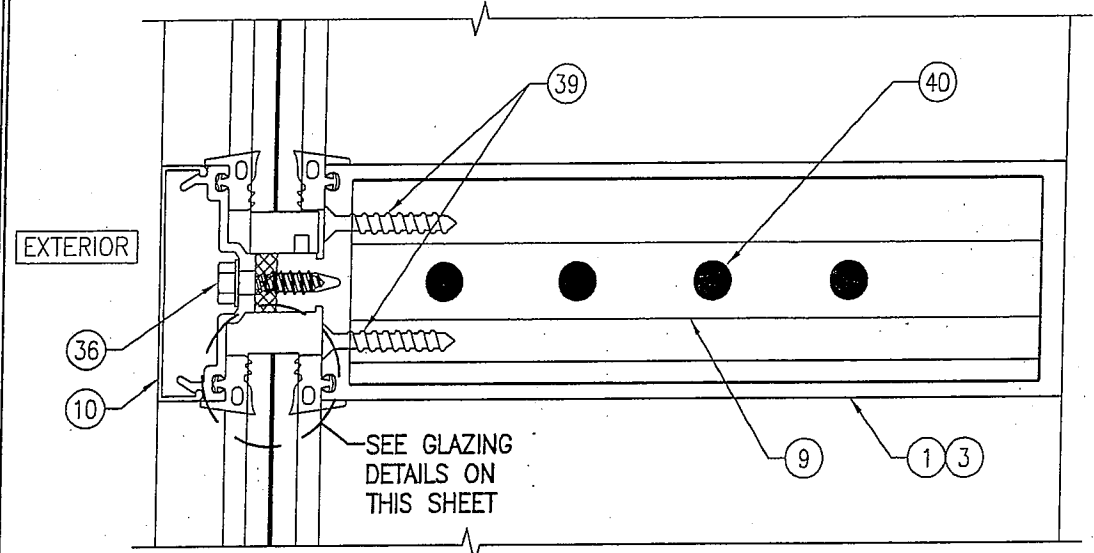
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497		DRAWING NO. 1795T	
SHEET NO. 8 OF 12		REV.	



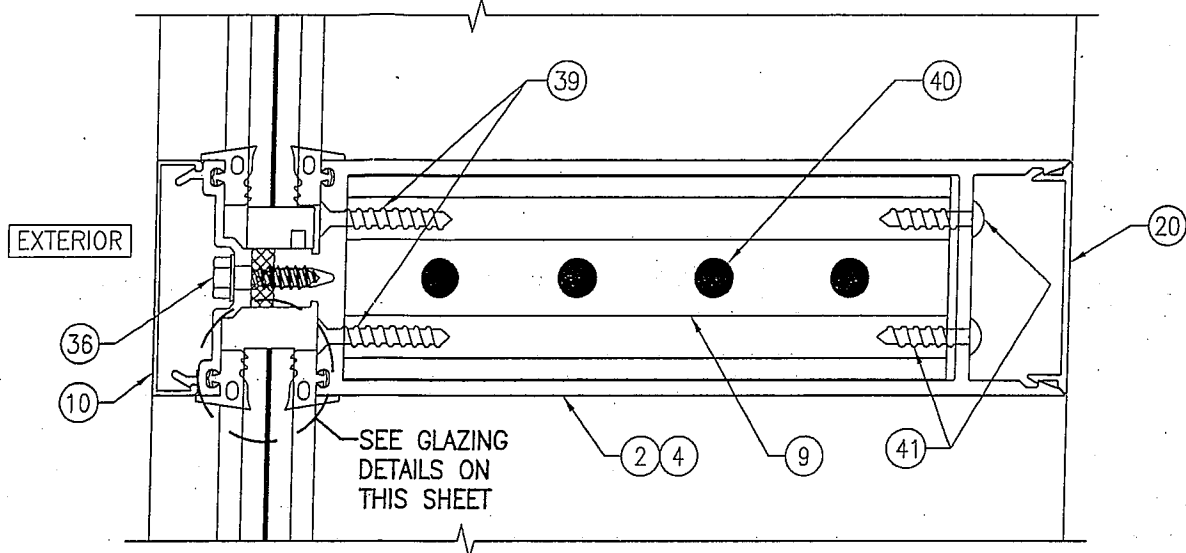
Provide info for submitted curtain wall (71/4" with anchoring details as submitted, not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17



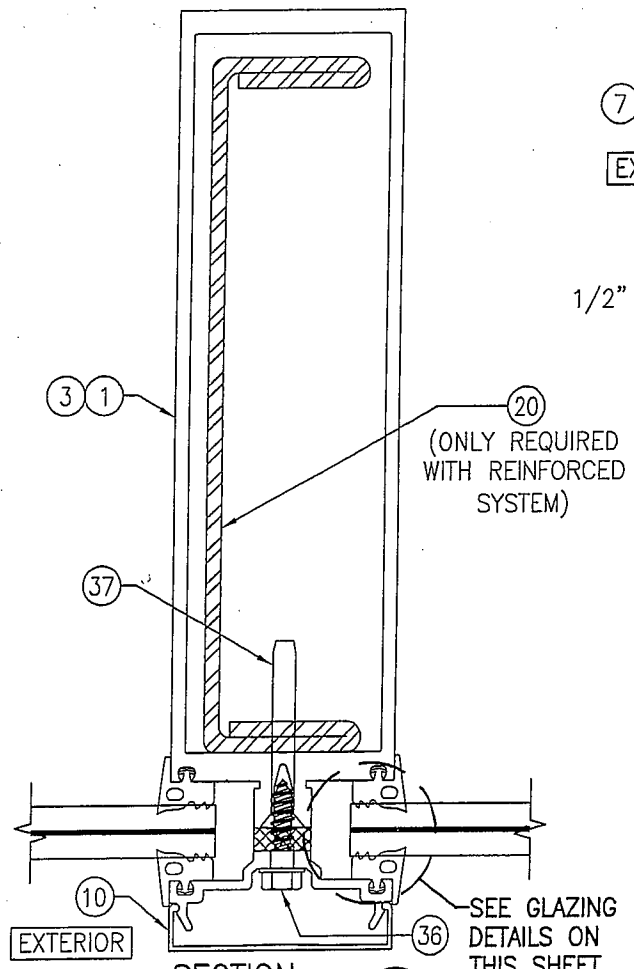
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1795T		REV.	
SHEET NO. 9 OF 12			



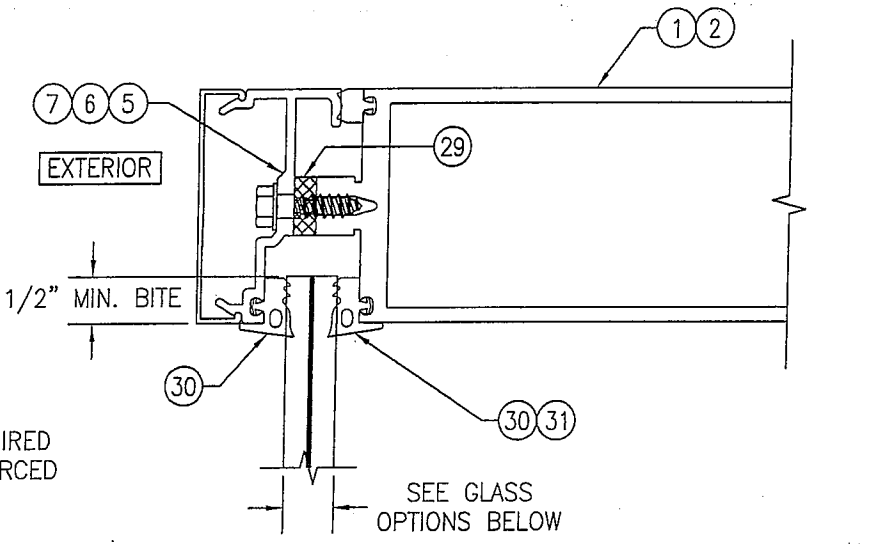
SECTION F1
SCALE: 1/2 FULL



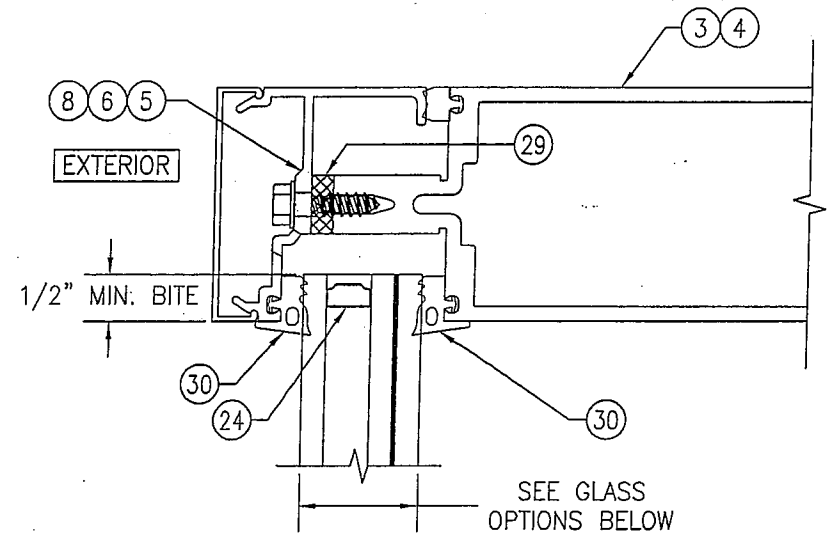
SECTION F2
SCALE: 1/2 FULL



SECTION G
SCALE: 1/2 FULL



TYPICAL MONOLITHIC GLAZING DETAIL

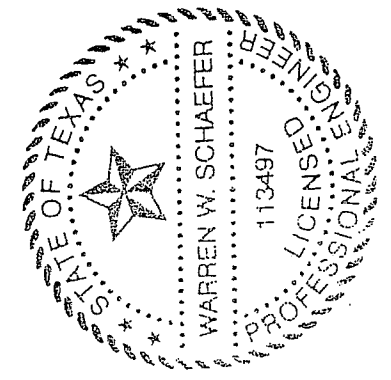


TYPICAL I.G. GLAZING DETAIL

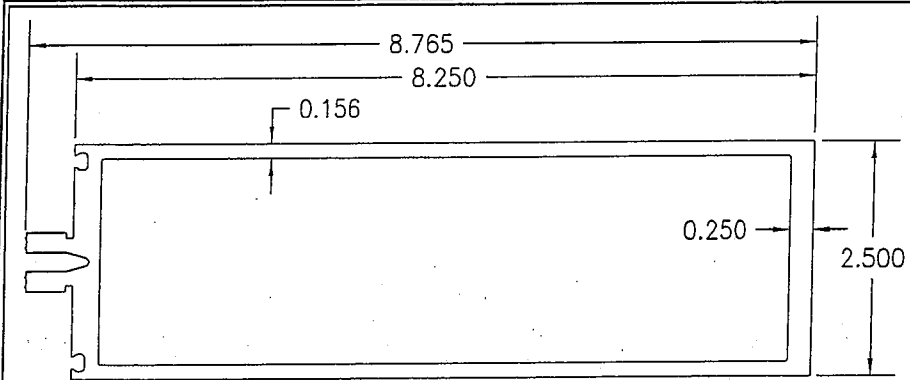
- GLASS OPTIONS:**
 OPTION 1: 1/2" THICK LAMINATED GLASS (1/4" HT. ST./0.060" DUPONT BUTACITE PVB/1/4" HT. ST.)
 OPTION 2: 1/2" THICK LAMINATED GLASS (1/4" HT. ST./0.060" SOLUTIA SAFLEX/1/4" HT. ST.)
 OPTION 3: 9/16" THICK LAMINATED GLASS (1/4" HT. ST./0.090" DUPONT BUTACITE PVB/1/4" HT. ST.)
 OPTION 4: 9/16" THICK LAMINATED GLASS (1/4" HT. ST./0.090" SOLUTIA SAFLEX/1/4" HT. ST.)

- GLASS OPTIONS:**
 OPTION 5: 1 5/16" THICK I.G LAMINATED GLASS (1/4" TEMPERED EXTERIOR; 1/2" AIR SPACE; 1/4" HT. ST./0.060" SOLUTIA SAFLEX/1/4" HT. ST. INTERIOR)
 OPTION 6: 1 5/16" THICK I.G LAMINATED GLASS (1/4" TEMPERED EXTERIOR; 1/2" AIR SPACE; 1/4" HT. ST./0.060" DUPONT BUTACITE PVB/1/4" HT. ST. INTERIOR)

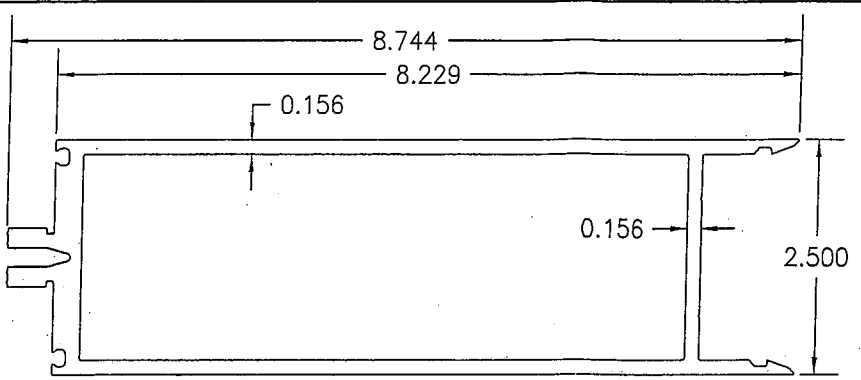
Provide info for submitted curtain wall (71/4" with anchoring details & glass as submitted, not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17



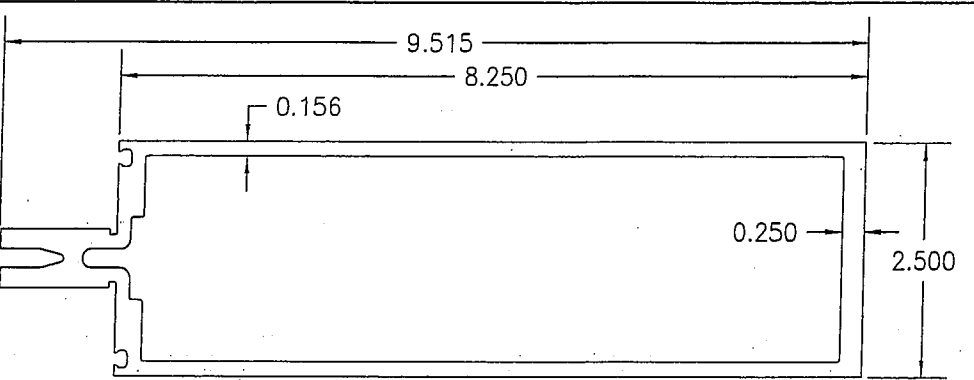
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
DRAWING NO. 1795T		REV.	
SHEET NO. 10 OF 12			



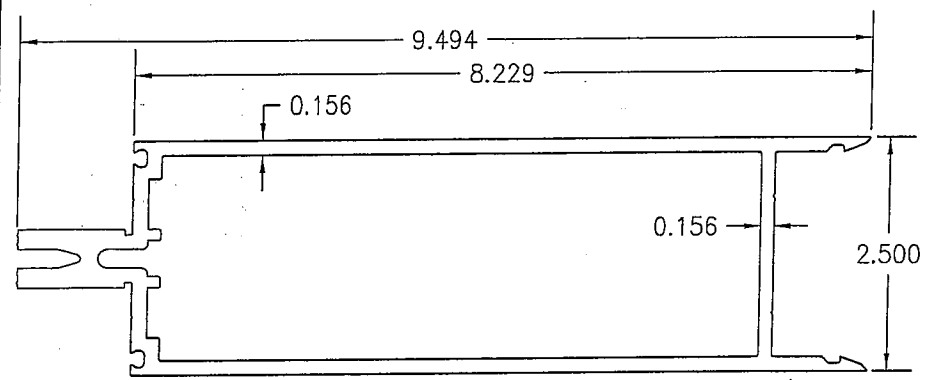
① VERTICAL AND HORIZONTAL FRAMING USED WITH MONOLITHIC GLASS



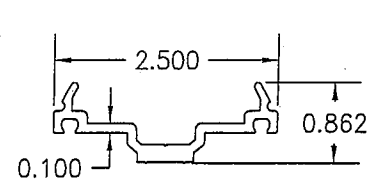
② ALTERNATE HORIZONTAL FRAMING USED WITH MONOLITHIC GLASS



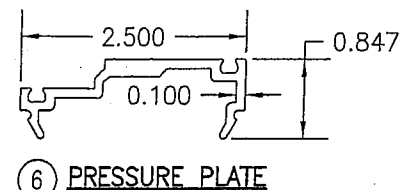
③ VERTICAL AND HORIZONTAL FRAMING USED WITH I.G. GLASS



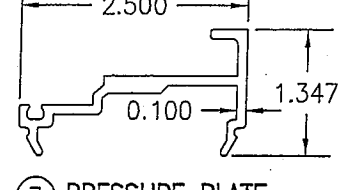
④ ALTERNATE HORIZONTAL FRAMING USED WITH I.G. GLASS



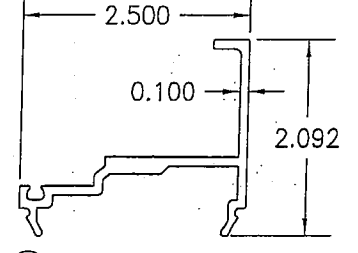
⑤ PRESSURE PLATE



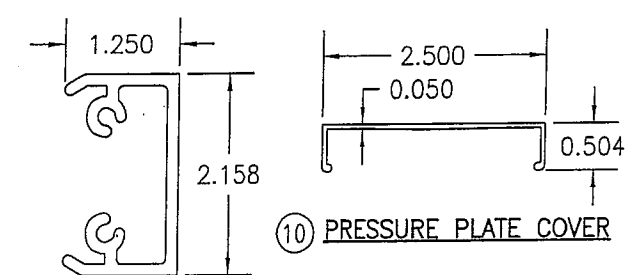
⑥ PRESSURE PLATE



⑦ PRESSURE PLATE



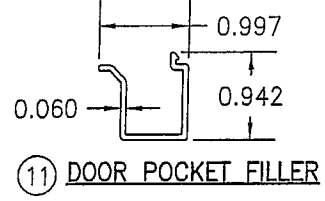
⑧ PRESSURE PLATE



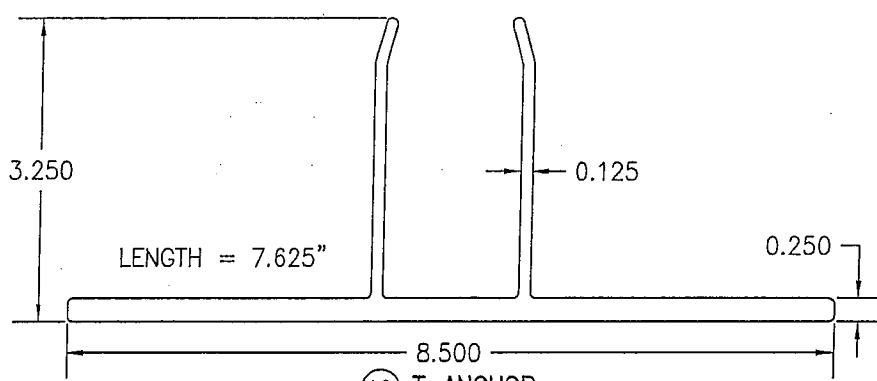
⑩ PRESSURE PLATE COVER

LENGTH = 6.625" WITH PARTS 2 & 4
LENGTH = 7.625" WITH PARTS 1 & 3

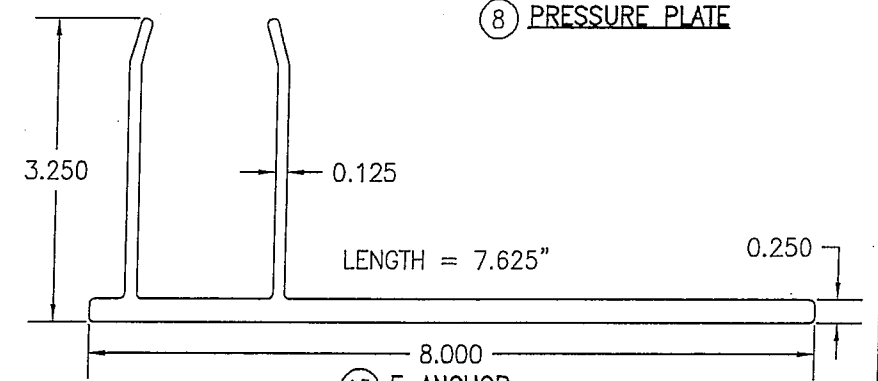
⑨ SHEAR BLOCK



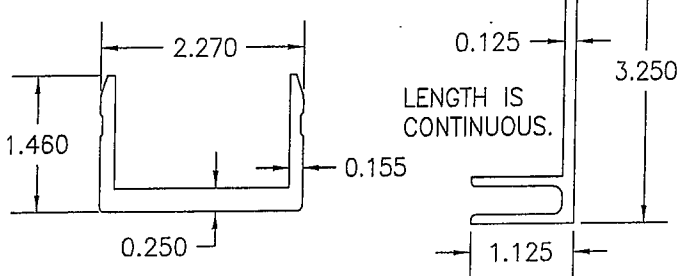
⑪ DOOR POCKET FILLER



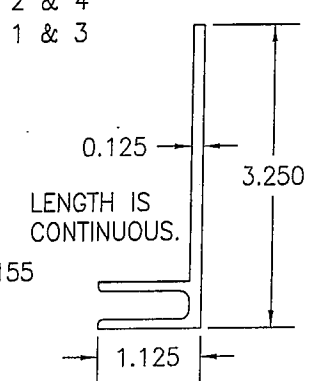
⑫ T-ANCHOR



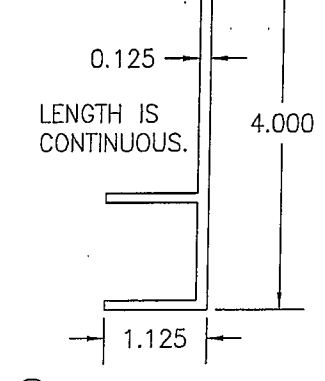
⑬ F-ANCHOR



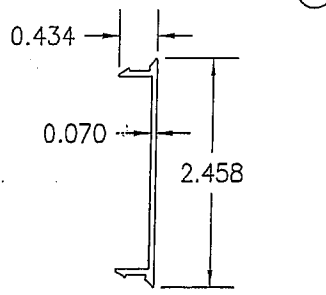
⑭ U-ANCHOR



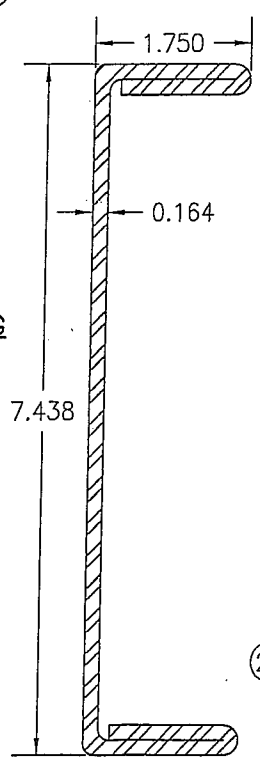
⑮ F-PERIMETER ANCHOR USED WITH MONOLITHIC GLASS SYSTEMS



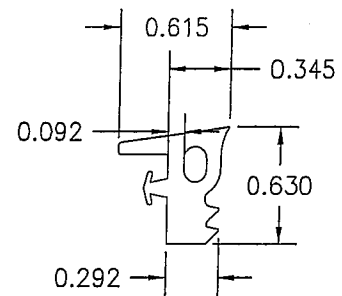
⑯ F-PERIMETER ANCHOR USED WITH I.G. GLASS SYSTEMS



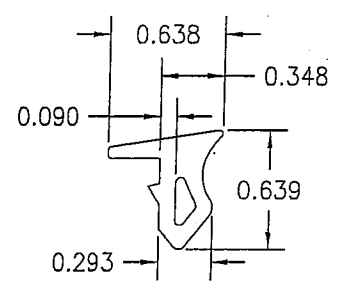
⑰ HORIZONTAL FRAMING FILLER



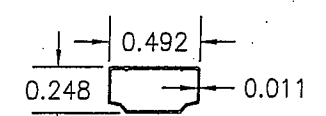
⑳ MULLION REINFORCEMENT



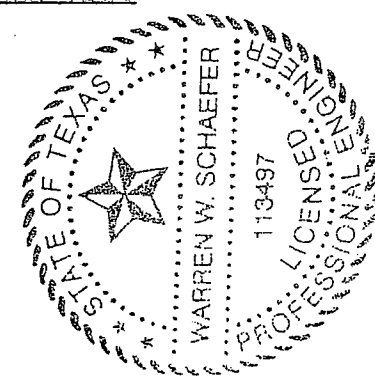
⑳ INTERIOR & EXTERIOR GLAZING FIXED GASKET USED WITH I.G. & 9/16" MONOLITHIC GLASS



㉑ INTERIOR GLAZING FIXED GASKET USED WITH 1/2" MONOLITHIC GLASS



㉒ 1/2" I.G. GLASS SPACER

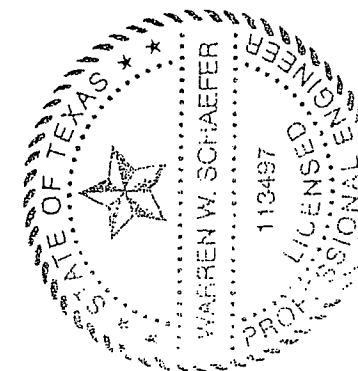


Provide info for submitted curtain wall (71/4" with anchoring details as submitted, not 10 13/16") & stamped by Louisiana engineer JHC 02/06/17

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION: MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1795T		REV.	
SHEET NO. 11		OF 12	

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	VERTICAL AND HORIZONTAL FRAMING USED WITH MONOLITHIC GLASS	6063-T6 ALUMINUM
2	ALTERNATE HORIZONTAL FRAMING USED WITH MONOLITHIC GLASS	6063-T6 ALUMINUM
3	VERTICAL AND HORIZONTAL FRAMING USED WITH I.G. GLASS	6063-T6 ALUMINUM
4	ALTERNATE HORIZONTAL FRAMING USED WITH I.G. GLASS	6063-T6 ALUMINUM
5	PRESSURE PLATE	6063-T6 ALUMINUM
6	PRESSURE PLATE	6063-T6 ALUMINUM
7	PRESSURE PLATE	6063-T6 ALUMINUM
8	PRESSURE PLATE	6063-T6 ALUMINUM
9	SHEAR BLOCK	6063-T6 ALUMINUM
10	STANDARD PRESSURE PLATE COVER	6063-T6 ALUMINUM
11	DOOR POCKET FILLER	6063-T6 ALUMINUM
12	T-ANCHOR	6063-T6 ALUMINUM
13	F-ANCHOR	6063-T6 ALUMINUM
14	U-ANCHOR	6063-T6 ALUMINUM
15	F-PERIMETER ANCHOR USED WITH MONOLITHIC GLASS SYSTEMS	6063-T6 ALUMINUM
16	F-PERIMETER ANCHOR USED WITH I.G. GLASS SYSTEMS	6063-T6 ALUMINUM
17	HORIZONTAL FRAMING FILLER	6063-T6 ALUMINUM
20	MULLION REINFORCEMENT	ASTM A-653/A-04A GRADE 50
23	5" X 3" X 3/8" X 6" LONG ANGLE	50 KSI STEEL
24	1/2" I.G. GLASS SPACER	3005 OR 3105 ALUMINUM
SEALS & SEALANTS		
28	FIXED GASKET	TREMCO TR4726P EPDM DUROMETER 70 +/-5
29	THERMAL SEPERATOR	TREMCO TR-4015P EPDM DUROMETER 60 +/-5
30	INTERIOR & EXTERIOR GLAZING FIXED GASKET USED WITH I.G. & 9/16" MONOLITHIC GLASS	TREMCO TR-4014P EPDM DUROMETER 60 +/-5
31	INTERIOR GLAZING FIXED GASKET USED WITH 1/2" MONOLITHIC GLASS	TREMCO TX-4305P EPDM DUROMETER 70 +/-5
32	STEEL TO ALUMINUM SEPERATOR	THERMO-TOK TN-9004
FASTENERS		
36	1/4" X 1" HWTF TYPE "AB" SCREW 300 SERIES S.S.	WITHIN 3" FROM ENDS & 9" MAX. O.C. (300 SERIES S.S.)
37	1/4-20 X 2" FNTCS 300 SERIES S.S.	WITHIN 9" FROM ENDS & 9" MAX. O.C. (GR. 5 STEEL)
38A	NO. 8 X 1/2" FHTFS 300 SERIES S.S.	8 PER U-ANCHOR AT INTERMEDIATE MEMBERS (4 PER SIDE OF MEMBER)
38B	NO. 8 X 1/2" FHTFS 300 SERIES S.S.	6 PER U-ANCHOR AT SIDE JAMB MEMBERS (AT 1 SIDE OF MEMBER)
39	NO. 12 X 1 1/2" FHTF TYPE "B" SCREW 300 SERIES S.S.	2 PER SHEAR BLOCK (300 SERIES S.S.)
40	NO. 12 X 7/16" PHTF TYPE "AB" SCREW 300 SERIES S.S.	4 PER SHEAR BLOCK (430 SERIES S.S.)
41	NO. 12 X 1" PHTF TYPE "AB" SCREW 300 SERIES S.S.	2 PER SHEAR BLOCK (300 SERIES S.S.)

Provide info for submitted curtain wall (71/4" with anchoring details as submitted, not 10 13/16") & stamped by Louisiana engineer
JHC 02/06/17



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE 10 13/16" DEEP 1600 SYSTEM 1 CURTAIN WALL (S.M.I.)			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CERTIFICATION MAR 20 2013		WARREN W. SCHAEFER, P.E. P.E. NO. 113497	
DRAWING NO. 1795T		REV.	
SHEET NO. 12		OF 12	

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STOREFRONT & DOOR TEST REPORTS FOLLOW



STAR GLASS INC.

1000 WESTBANK EXPY.
GRETNA, LA 70053
P(504) 368-8826
F(504) 367-5802

Laurel School Refurbishment
820 Jackson Ave New Orleans, LA
70130 RSD Project No.
2011-0891-0001

DATE DRAWN:
11-21-2016

REVISION DATE:



PROJECT NUMBER:
**

DRAWN BY:
P.S.

SHEET

000

GENERAL NOTES:

1. THESE STORE FRONT SYSTEMS HAVE 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. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH ASTM E330, E283, E331, E1886 & E1996 FOR LARGE MISSILE IMPACT STORE FRONT SYSTEMS.
5. THESE STORE FRONT SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS STORE FRONT SYSTEM.
7. ALL ANCHORS SECURING STORE FRONT FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. 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 INTERNATIONAL BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_D = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_D = 1.6$ WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE SEPARATED OR COATED AS REQUIRED TO AVOID CORROSION OF EITHER MATERIAL.
11. TO THE BEST OF OUR KNOWLEDGE, THE STORE FRONT SYSTEMS SHOWN HEREIN ARE QUALITY ASSURED BY AN APPROVED CERTIFICATION/DA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH APPLICABLE STANDARDS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. STORE FRONT ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
12. CERTIFICATION OF THESE STORE FRONT SYSTEMS SHALL BE CONSIDERED VOID IF THEY ARE INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF THEY ARE INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH STORE FRONT INSTALLATIONS.

CORNER & FRAME END CONSTRUCTION:

FRAME HEAD CORNER (APPLICABLE TO ITEM #1A & 1B): HEAD IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH THREE(3) NO. 12 X 1" PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE HEAD MEMBER SCREW SPLINES & SEALED WITH SILICONE.

FRAME HEAD CORNER (APPLICABLE TO ITEM #1C): HEAD IS MITER OR SQUARE CUT, BUTTED TO SIDE, FASTENED WITH TWO(2) NO. 12 X 1 1/2" PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE HEAD MEMBER SCREW SPLINES & SEALED WITH SILICONE.

FRAME SILL CORNER: SILL IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH THREE(3) NO. 12 X 1" PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE SILL MEMBER SCREW SPLINES & SEALED WITH SILICONE.

FRAME DOOR JAMB SILL CORNER: SILL IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH 1 JAMB PIVOT ASSEMBLY. EACH PIVOT ASSEMBLY WAS FASTENED TO TO THE SIDE WITH THREE(3) NO. 12-24 X 5/8" FHMS. THE THRESHOLD IS THEN FASTENED TO PIVOT ASSEMBLY WITH TWO(2) NO. 12-24 X 3/8" FHMS & SEALED WITH SILICONE.

HORIZONTAL FRAME MULLION END (APPLICABLE TO ITEMS #6A & #7): HORIZONTAL IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH THREE(3) NO. 12 X 1" SS PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE MULLION MEMBER SCREW SPLINES & SEALED WITH SILICONE.

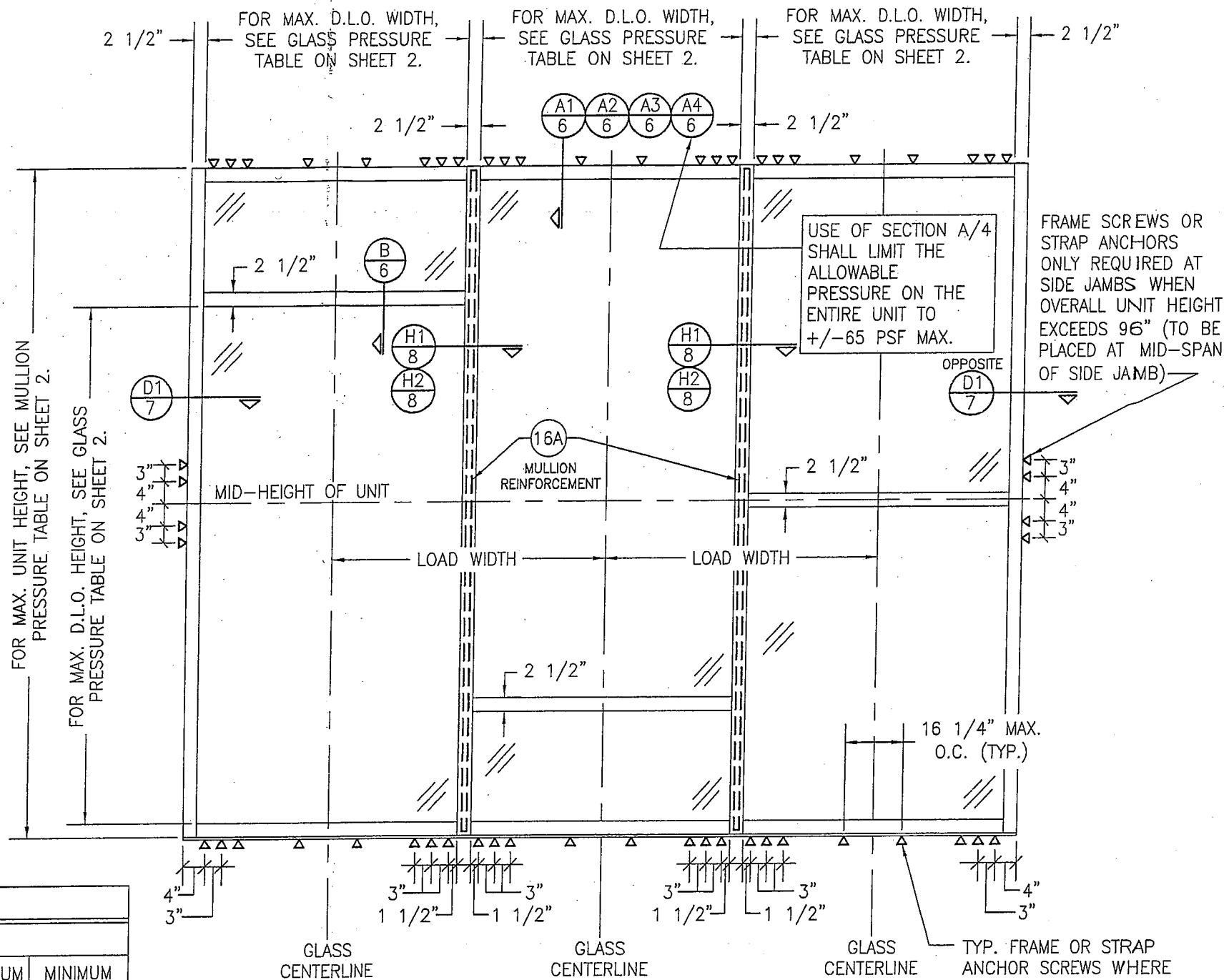
HORIZONTAL FRAME MULLION END (APPLICABLE TO ITEM #6B): HORIZONTAL IS SQUARE CUT, BUTTED TO SIDE, JOINED VIA A SHEAR BLOCK (PART #21). THE SHEAR BLOCK IS FASTENED TO THE VERTICAL FRAME MEMBER WITH FOUR(4) NO. 12 X 1 7/8" FHIF TYPE B SCREWS. THE HORIZONTAL MEMBER IS FASTENED TO THE SHEAR BLOCK WITH THREE(3) NO. 12 X 1" FHIF TYPE AB SCREWS. EACH CORNER IS SEALED WITH DOW 795 SILICONE SEALANT.

FRAME ANCHOR REQUIREMENTS TABLE

FRAME & STRAP ANCHOR SCREWS

OPENING TYPE	OPENING TYPE (SUBSTRATE)	FRAME TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
A	MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	(4) NO. 14 SMS OR WOOD SCREW	1 1/4"	3/4"
B	MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
C	MIN. 3000 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/2"	2 1/2"
D	MIN. 16 GA. 33 KSI METAL STUD	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
E	MIN. C-90 CMU	(1) 1/4" CONCRETE SCREW	1 1/4"	2 1/2"
(3) F	MIN. 3000 PSI CONCRETE	(2) 3/8" WEDGE/SLEEVE ANCHOR	2 1/2"	3"

- (1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).
- (2) WEDGE/SLEEVE ANCHORS SHALL BE RAMSET/RED HEAD DYNABOLT, HILTI KWIK-BOLT 3, OR POWERS RAWL POWER BOLT (STEEL OR S.S.).
- (3) ANCHOR TYPE "F" IS ONLY APPLICABLE FOR USE WITH THE SILL ANCHOR BLOCK AT THE VERTICAL DOOR MULLION BOTTOM END.
- (4) WHILE 1/4" MAX. SHIM GAP IS SPECIFIED IN THE SECTIONS, A 3/8" SHIM GAP MAY BE USED WITH ALL SUBSTRATES PROVIDING THE SCREWS ARE AS SPECIFIED IN THIS TABLE EXCEPT THAT THE SCREWS TO WOOD SUBSTRATE MUST BE 1/4"-14 GRADE 5 SCREWS.



**EXTERIOR ELEVATION
MULTIPLE FIXED PANEL STORE FRONT ASSEMBLY
(WHEN ANCHORED TO WOOD, METAL STUD, CONCRETE OR CMU)**

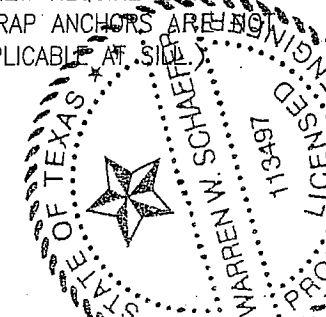
SCALE: 1/2"=1'-0"

HORIZONTAL STACKING & OVERALL UNIT WIDTH IS UNLIMITED PROVIDING DIMENSIONS SPECIFIED ARE NOT EXCEEDED. NUMBER OF VERTICAL PANELS IS UNLIMITED BUT MUST FIT INSIDE MAXIMUM UNIT HEIGHT SHOWN.

NOTE: CMU IS APPLICABLE ONLY AT SIDES.

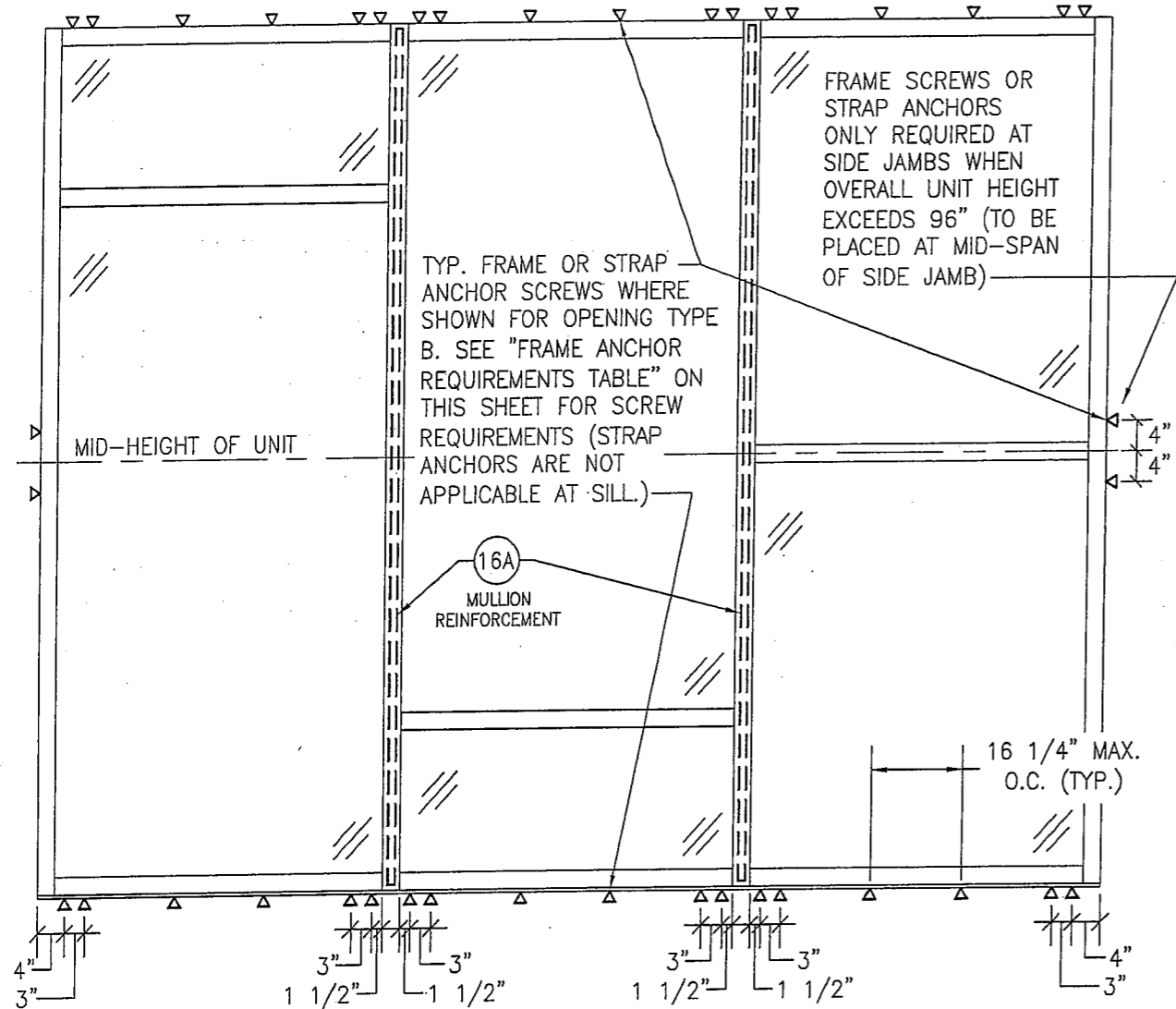
Provide stamped by Louisiana engineer
JHC 02/06/2017

TYP. FRAME OR STRAP ANCHOR SCREWS WHERE SHOWN FOR OPENING TYPE A, C, D OR E. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON THIS SHEET FOR SCREW REQUIREMENTS. (STRAP ANCHORS ARE NOT APPLICABLE AT SIDES)



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

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 03/19/13
DATE	BY
REVISION DESCRIPTION	NO.
JOB INFORMATION: IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT	
KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-5424	
DRAWING TITLE	DATE
IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT	MAR 20 2013
CERTIFICATION	P.E.
WARREN W. SCHAEFER	WARREN W. SCHAEFER, P.E. P.E. NO. 113497
DRAWING NO.	REV.
1633T	
SHEET NO.	
1 OF 10	



**EXTERIOR ELEVATION
MULTIPLE FIXED PANEL STORE FRONT ASSEMBLY
(WHEN ANCHORED TO STEEL)**
SCALE: 1/2"=1'-0"

* FOR ALL FRAMING & D.L.O. DIMENSIONS AND OTHER INFORMATION NOT SHOWN, SEE ELEVATION ON SHEET 1.
* IF SILL IS CONCRETE, SEE ELEVATION ON SHEET 1 FOR SILL ANCHORAGE REQUIREMENTS.

MULLION ALLOWABLE DESIGN PRESSURE			
MAXIMUM UNIT HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	
		NON REINFORCED	REINFORCED
120	60	N/A	54.7
	54	N/A	60.8
	50 1/2	N/A	65.0
	48	N/A	68.4
	42	N/A	78.2
108	36	N/A	90.0
	60	N/A	63.2
	54	N/A	70.2
	50 1/2	N/A	75.1
	48	N/A	79.0
102	42	N/A	90.0
	60	N/A	75.0
	54	N/A	83.4
96	50 1/2	N/A	89.1
	48	N/A	90.0
96	60	90.0	90.0

NOTES:
1. SEE ELEVATIONS FOR DIMENSIONING OF LOAD WIDTH.
2. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE GLASS.
3. "N/A" DESIGNATES A SIZE NOT APPLICABLE TO THAT REINFORCEMENT CONDITION.
4. SEE SECTION H2/8 FOR DETAIL OF NON-REINFORCED MULLION & SECTION H1/8 FOR REINFORCED MULLION.

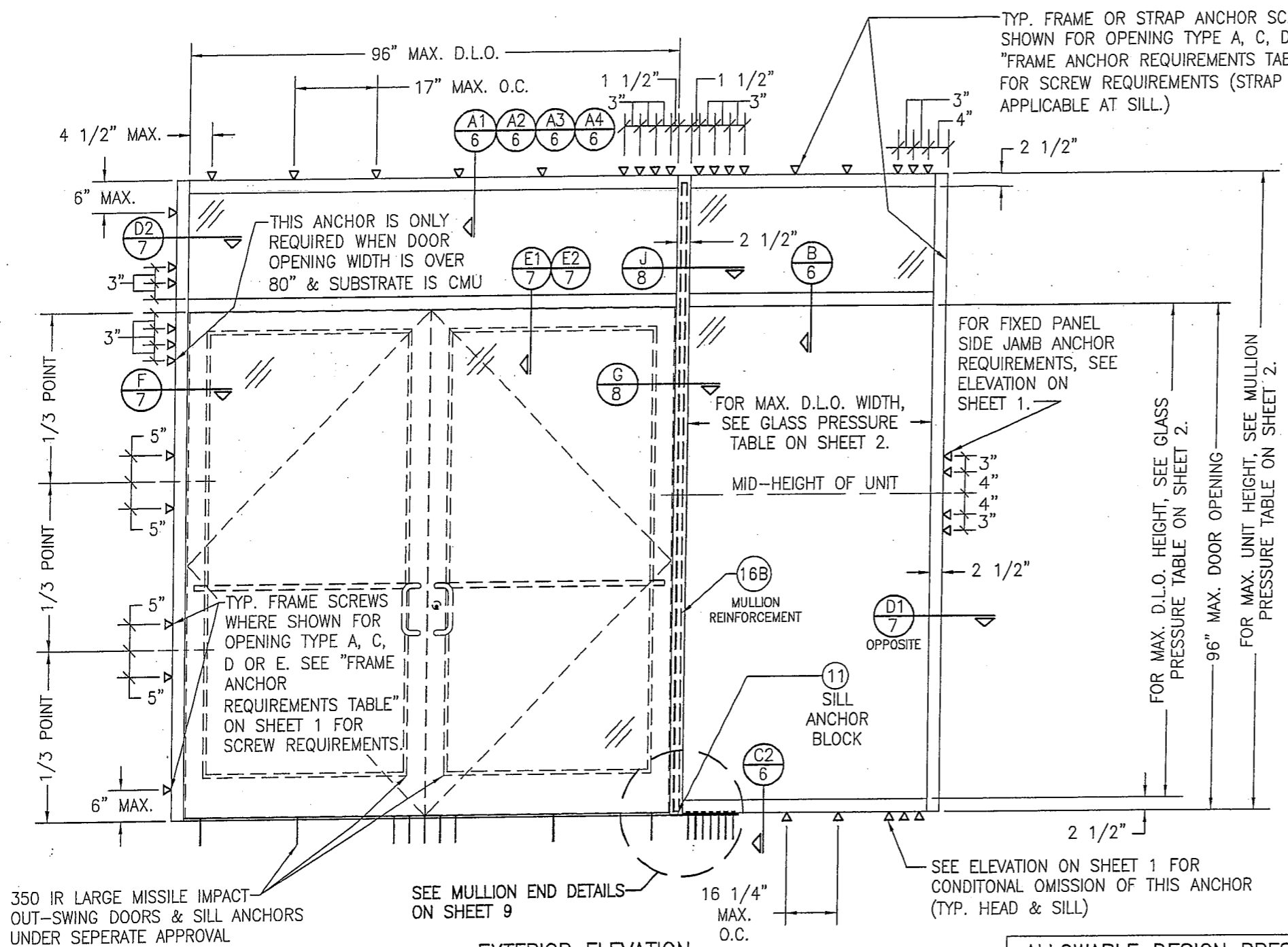
GLASS ALLOWABLE PRESSURE TABLE			
MAXIMUM D.L.O. HEIGHT (IN.)	MAXIMUM D.L.O. WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	
		GLASS OPTION 1, 2 & 5	GLASS OPTION 3 & 4
91	57 1/2	N/A	90
92 3/4	48	65	90
97	54	N/A	90
97	45 3/4	65	90
103	50 3/4	N/A	90
103	43 1/4	65	90
109	48	N/A	90
109	40 3/4	65	90
115	45 1/2	N/A	90
115	38 3/4	65	90

NOTES:
1. SEE ELEVATIONS FOR DIMENSIONING OF D.L.O. HEIGHT & WIDTH.
2. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE VERTICAL MULLIONS.
3. "N/A" DESIGNATES A SIZE NOT APPLICABLE TO THAT REINFORCEMENT CONDITION.

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 03/19/13
NO.	REVISION DESCRIPTION
BY	DATE
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555	
DRAWING TITLE: IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT	CONSULTANTS: W. W. SCHAEFER, ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424
CERTIFICATION MAR 20 2013	WARREN W. SCHAEFER, P.E. P.E. NO. 113497
DRAWING NO. 1633T	REV.
SHEET NO. 2	OF 10



TYP. FRAME OR STRAP ANCHOR SCREWS WHERE SHOWN FOR OPENING TYPE A, C, D OR E. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR SCREW REQUIREMENTS (STRAP ANCHORS ARE NOT APPLICABLE AT SILL.)



350 IR LARGE MISSILE IMPACT OUT-SWING DOORS & SILL ANCHORS UNDER SEPERATE APPROVAL

SEE MULLION END DETAILS ON SHEET 9

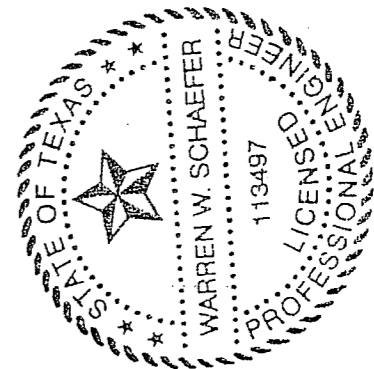
SEE ELEVATION ON SHEET 1 FOR CONDITONAL OMISSION OF THIS ANCHOR (TYP. HEAD & SILL)

EXTERIOR ELEVATION
STORE FRONT ASSEMBLY WITH DOORS & TRANSOM
(WHEN ANCHORED TO WOOD, METAL STUD, COINCRETE OR CMU)
 SCALE: 1/2"=1'-0"

- * SINGLE SIDELIGHT SHOWN, MULTIPLE SIDELIGHT CONDITION ALSO APPLIES WITH SIDELIGHT AT ONE OR BOTH SIDES.
- * DOUBLE DOOR CONDITION SHOWN, SINGLE DOOR CONDITION ALSO APPLIES.
- * HORIZONTAL STACKING & OVERALL UNIT WIDTH IS UNLIMITED. NUMBER OF VERTICAL PANELS IS UNLIMITED BUT MUST FIT INSIDE MAXIMUM FRAME HEIGHT SHOWN.

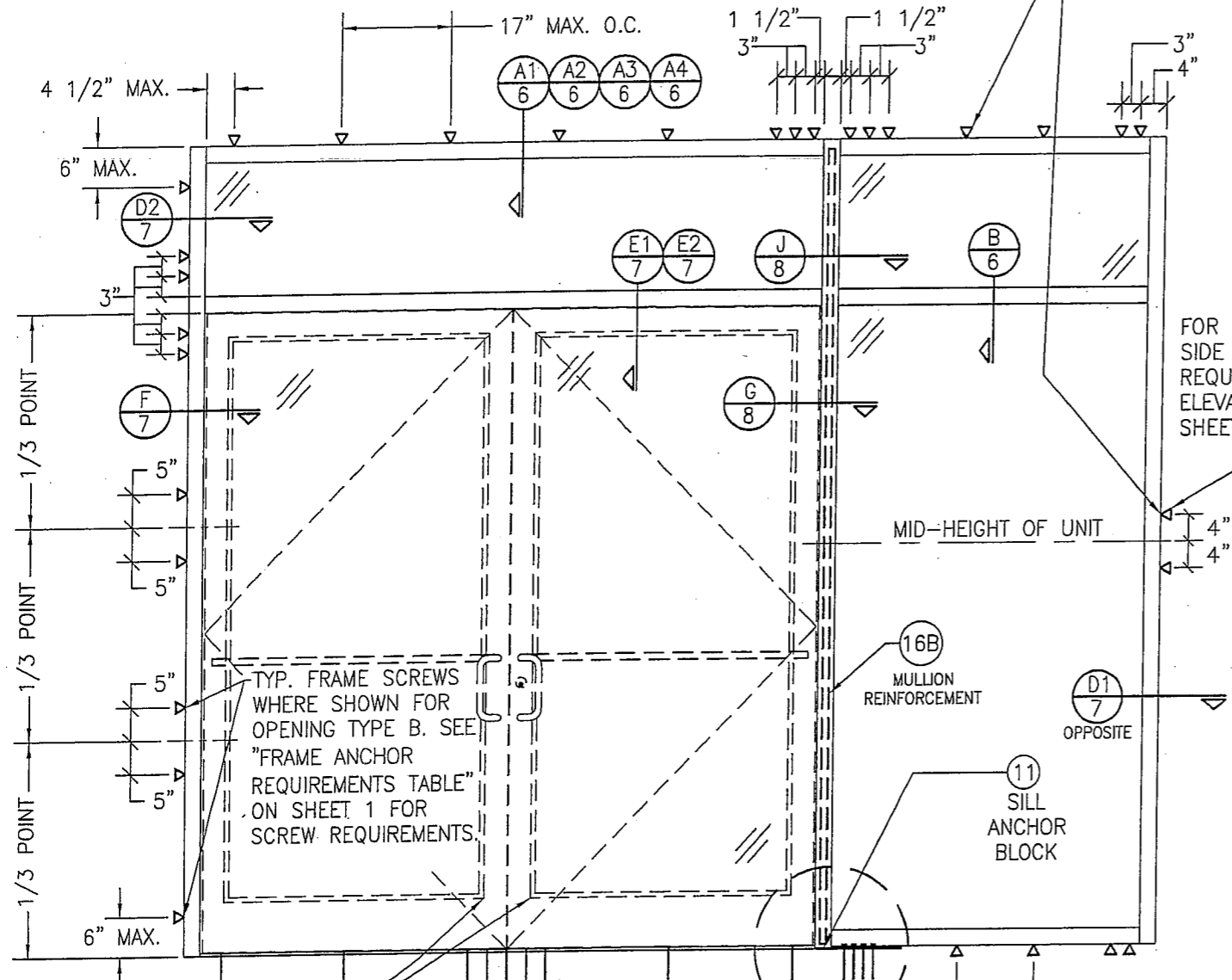
ALLOWABLE DESIGN PRESSURE
(DOOR UNITS)
 +/-65 PSF

ONLY THE DOOR/TRANSOM AREA & THE PANEL SECTIONS DIRECTLY NEXT TO THE DOOR AREA ARE RESTRICTED TO +/-65 PSF. FOR ALLOWABLE PRESSURE ON GLASS PANEL AREAS OF THE STOREFRONT ASSEMBLY AWAY FROM THE DOORS, SEE GLASS AND MULLION PRESSURE TABLES ON SHEET 2.



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CERTIFICATION MAR 20 2013		WARREN W. SCHAEFER, P.E. P.E. NO. 113497	
DRAWING NO. 1633T		REV.	
SHEET NO. 3		OF 10	

TYP. FRAME OR STRAP ANCHOR SCREWS WHERE SHOWN FOR OPENING TYPE B. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR SCREW REQUIREMENTS (STRAP ANCHORS ARE NOT APPLICABLE AT SILL.)



FOR FIXED PANEL SIDE JAMB ANCHOR REQUIREMENTS, SEE ELEVATION ON SHEET 1.

TYP. FRAME SCREWS WHERE SHOWN FOR OPENING TYPE B. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR SCREW REQUIREMENTS.

(16B) MULLION REINFORCEMENT

(D1) OPPOSITE

(11) SILL ANCHOR BLOCK

350 IR LARGE MISSILE IMPACT OUT-SWING DOORS & SILL ANCHORS UNDER SEPERATE APPROVAL

SEE MULLION END DETAILS ON SHEET 9
16 1/4" MAX. O.C.

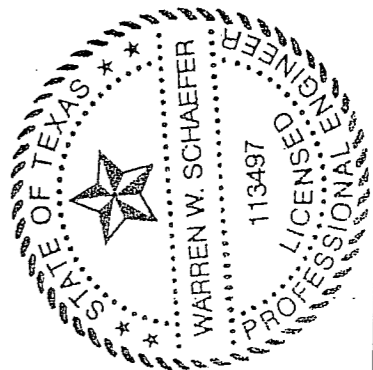
**EXTERIOR ELEVATION
STORE FRONT ASSEMBLY WITH DOORS & TRANSOM
(WHEN ANCHORED TO STEEL)**

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

- * SINGLE SIDELIGHT SHOWN, MULTIPLE SIDELIGHT CONDITION ALSO APPLIES WITH SIDELIGHT AT ONE OR BOTH SIDES.
- * DOUBLE DOOR CONDITION SHOWN, SINGLE DOOR CONDITION ALSO APPLIES.
- * HORIZONTAL STACKING & OVERALL UNIT WIDTH IS UNLIMITED. NUMBER OF VERTICAL PANELS IS UNLIMITED BUT MUST FIT INSIDE MAXIMUM FRAME HEIGHT SHOWN.
- * FOR ALL FRAMING & D.L.O. DIMENSIONS, SEE ELEVATION ON SHEET 3.

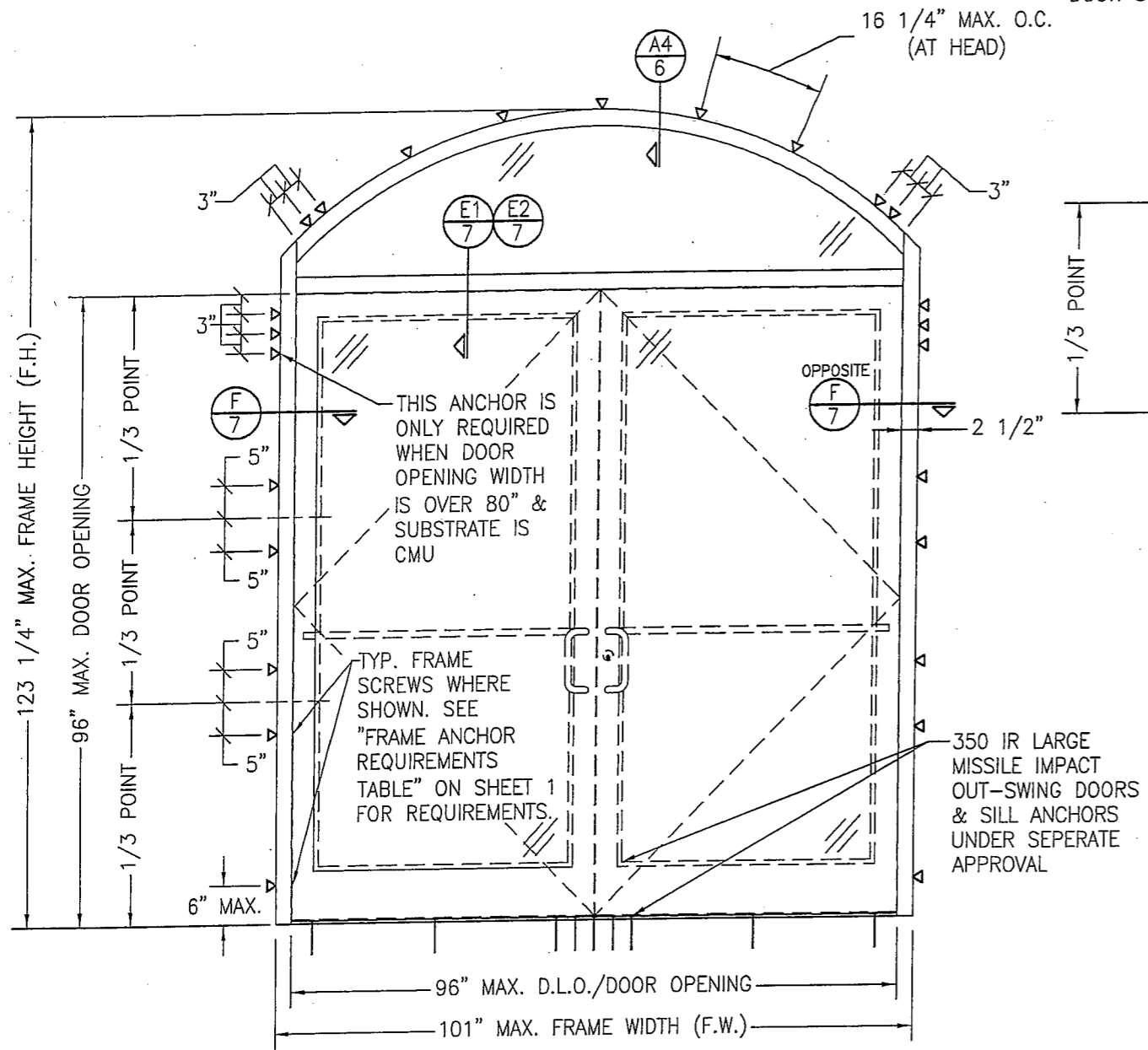
**ALLOWABLE DESIGN PRESSURE
(DOOR UNITS)**
+/-65 PSF

ONLY THE DOOR/TRANSOM AREA & THE PANEL SECTIONS DIRECTLY NEXT TO THE DOOR AREA ARE RESTRICTED TO +/-65 PSF. FOR ALLOWABLE PRESSURE ON GLASS PANEL AREAS OF THE STOREFRONT ASSEMBLY AWAY FROM THE DOORS, SEE GLASS AND MULLION PRESSURE TABLES ON SHEET 2.



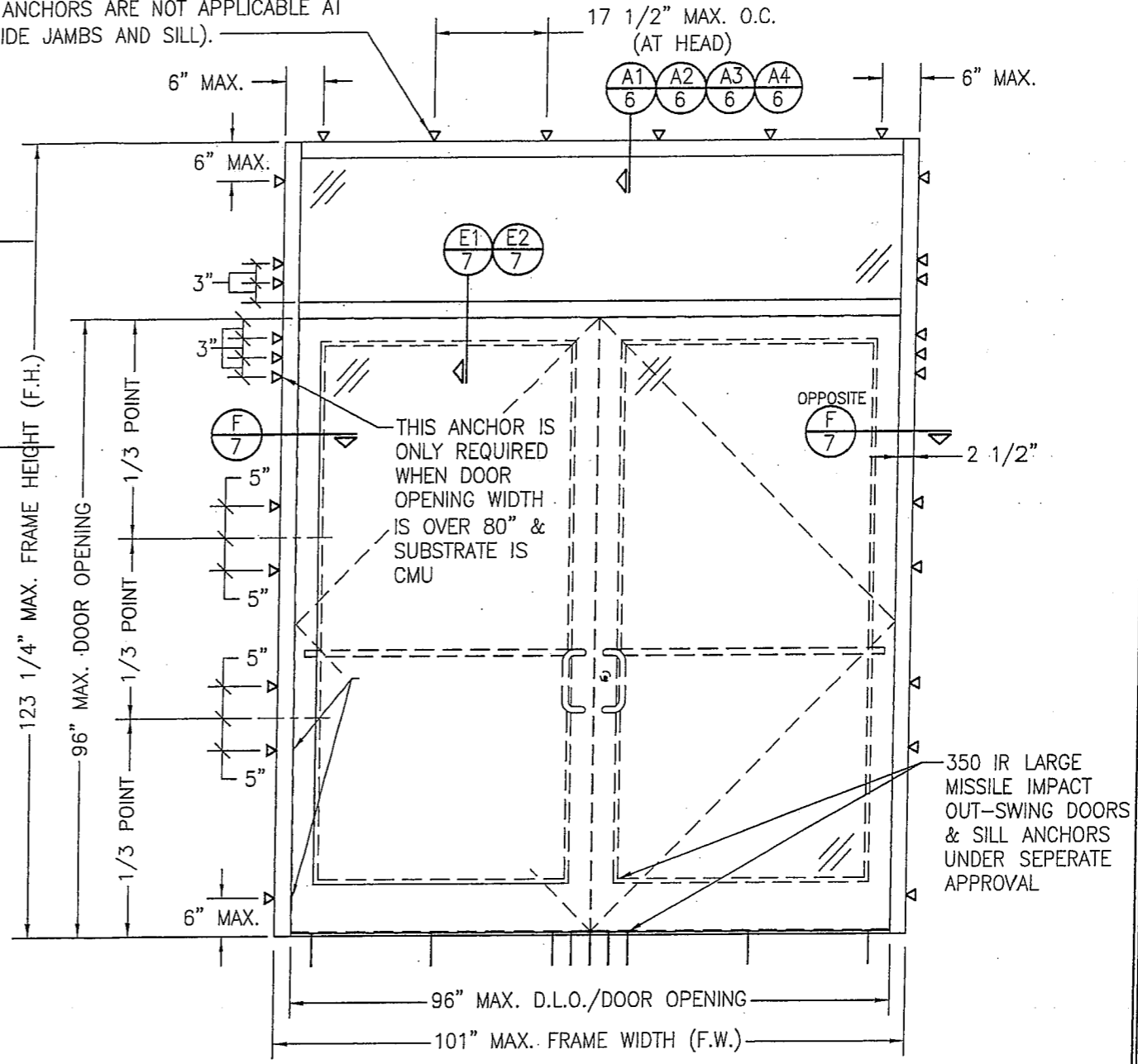
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT			
CONSULTANTS JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 20 2013		WARREN W. SCHAEFER, P.E. P.E. NO. 113497	
DRAWING NO. 1633T		REV.	
SHEET NO. 4 OF 10			

TYP. FRAME OR STRAP ANCHOR SCREWS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS (STRAP ANCHORS ARE NOT APPLICABLE AT DOOR SIDE JAMBS AND SILL).



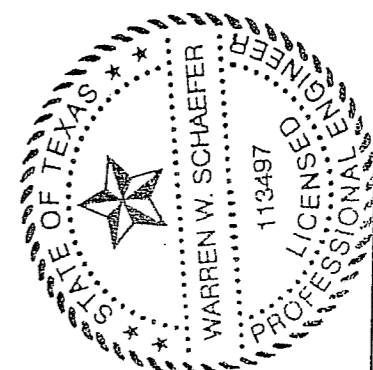
EXTERIOR ELEVATION
STORE FRONT FRAMING WITH DOORS & EYEBROW TRANSOM
 (APPLICABLE WITH ALL SUBSTRATES)
 (DOUBLE DOOR CONDITION SHOWN, SINGLE DOOR CONDITION ALSO APPLIES)
 SCALE: 1/2"=1'-0"

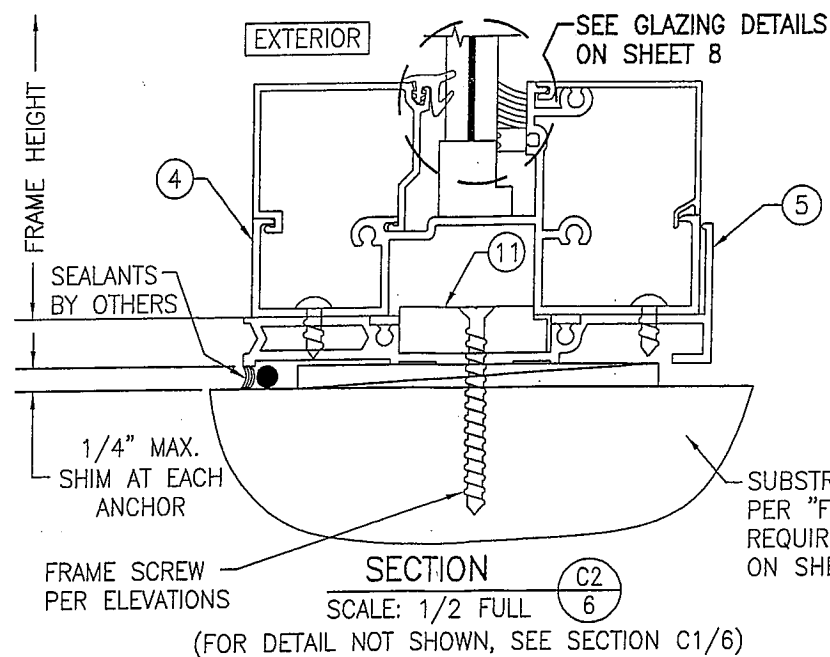
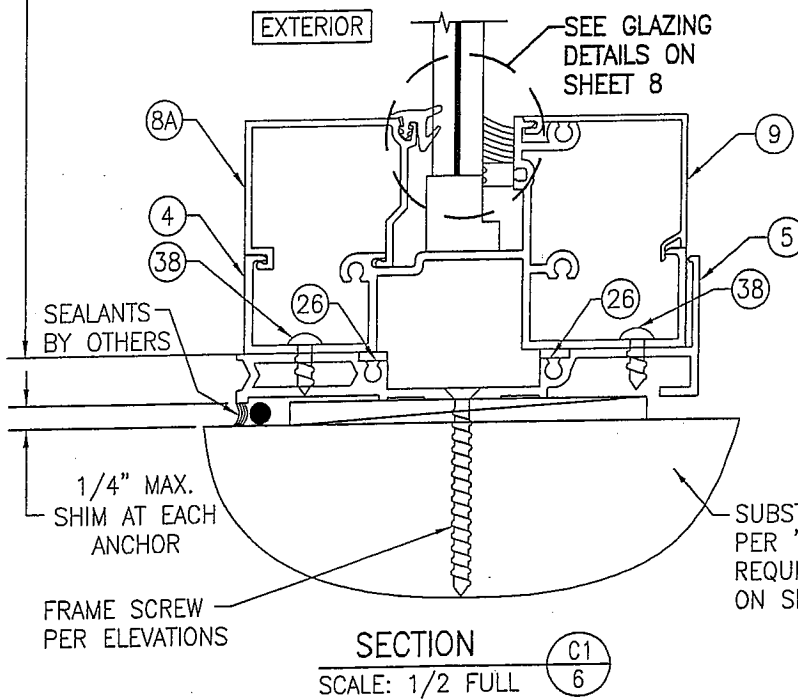
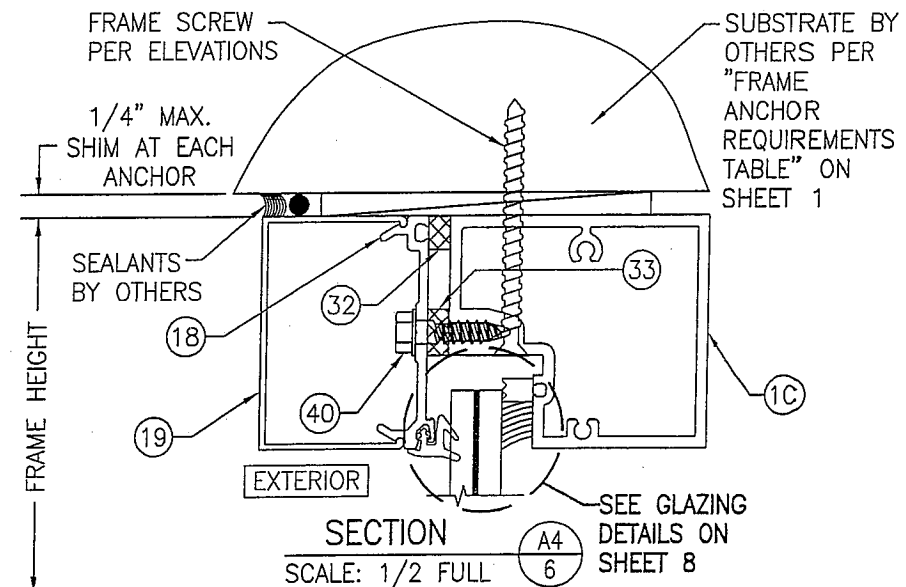
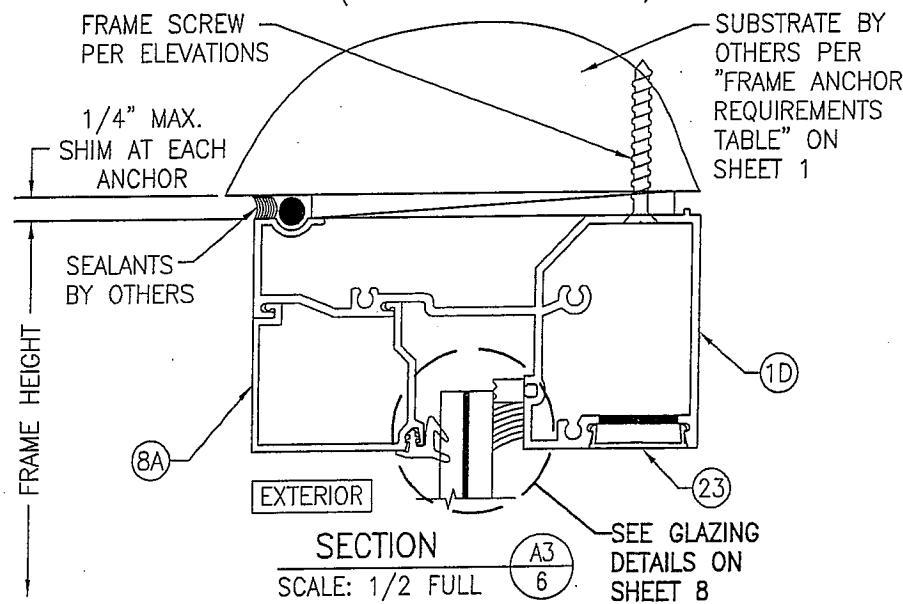
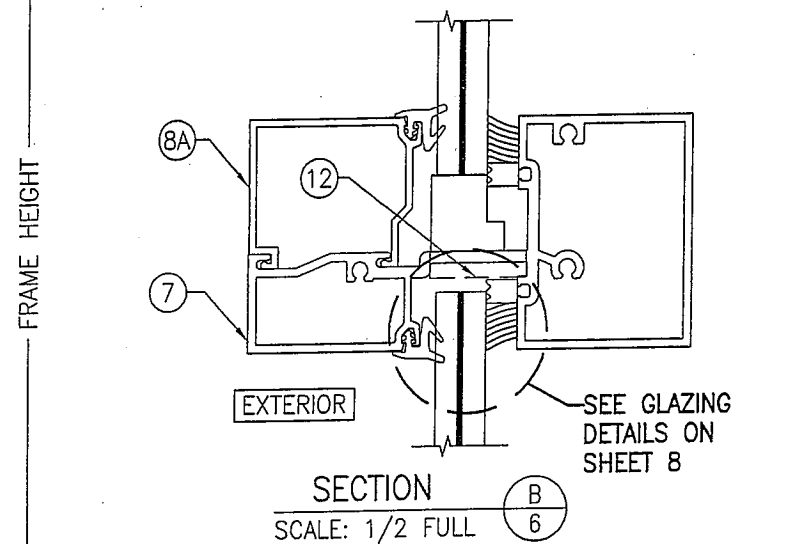
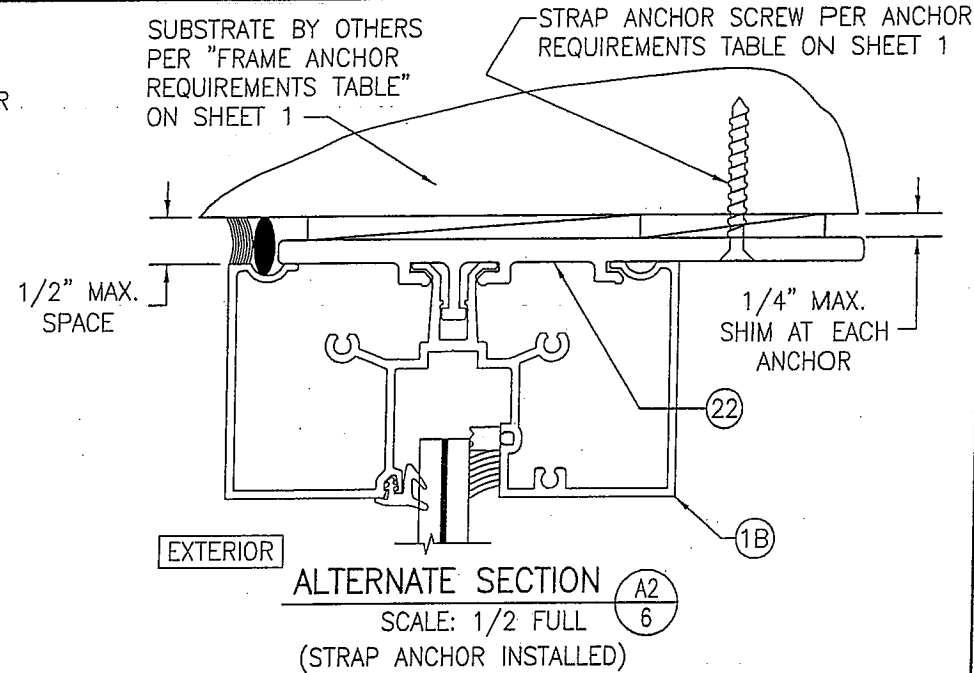
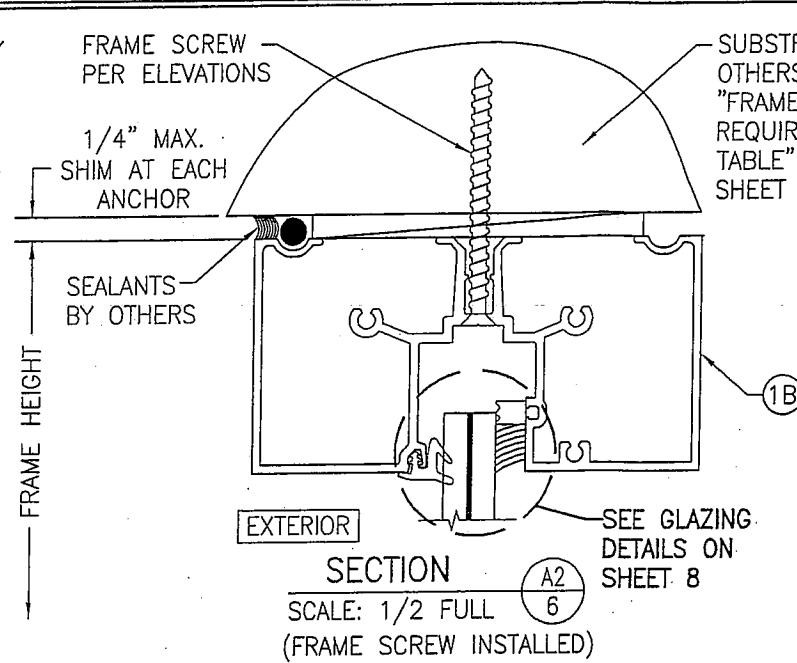
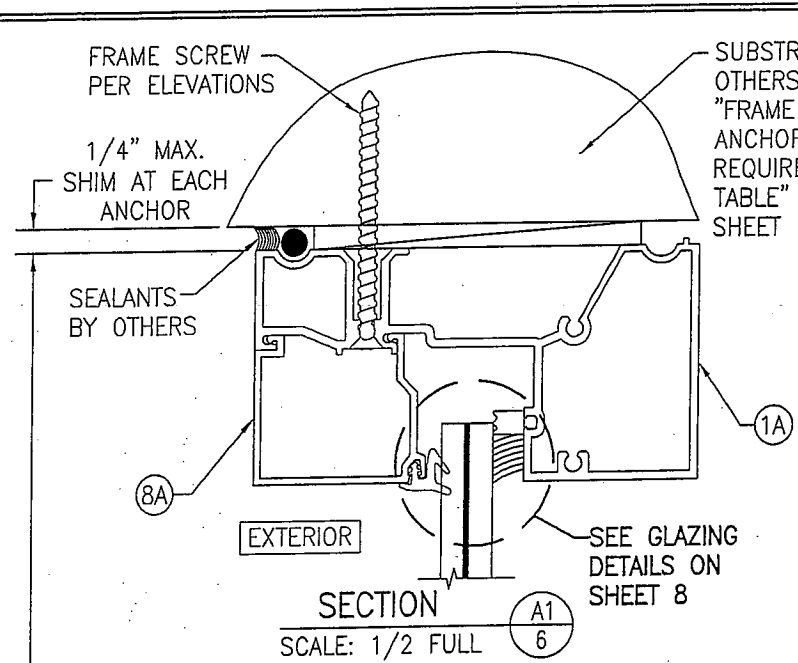
ALLOWABLE DESIGN PRESSURE
 (DOOR WITH TRANSOM UNITS)
 +/-65 PSF



EXTERIOR ELEVATION
STORE FRONT FRAMING WITH DOORS & RECTANGULAR TRANSOM
 (APPLICABLE WITH ALL SUBSTRATES)
 (DOUBLE DOOR CONDITION SHOWN, SINGLE DOOR CONDITION ALSO APPLIES)
 SCALE: 1/2"=1'-0"

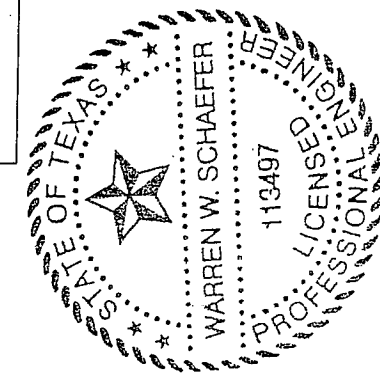
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1633T		REV.	
SHEET NO. 5 OF 10			



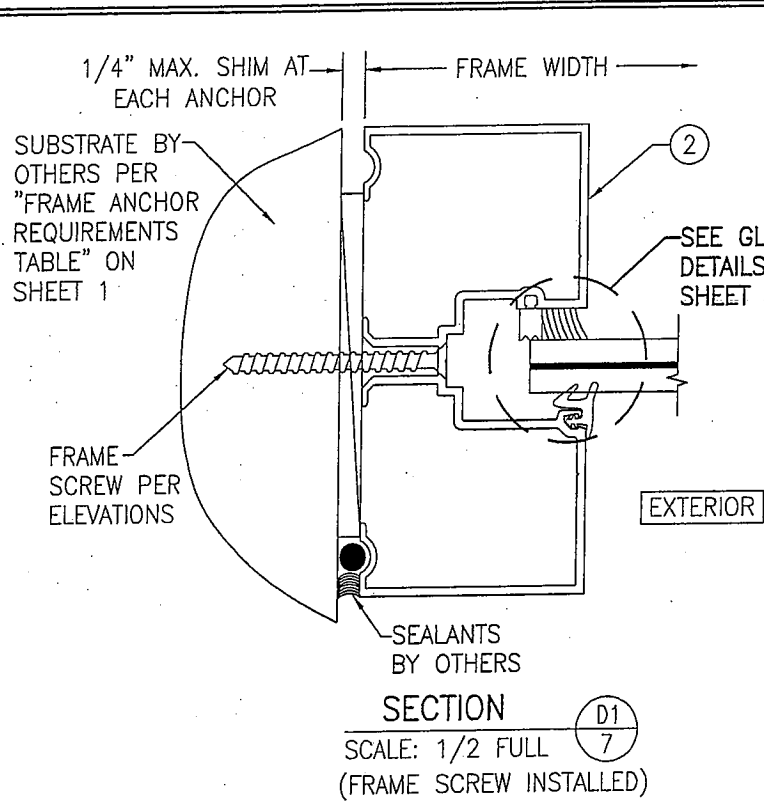


WHEN THIS HEAD SECTION IS USED, THE ALLOWABLE DESIGN PRESSURE ON THE ENTIRE UNIT SHALL BE LIMITED TO MAXIMUM +/-65 PSF.

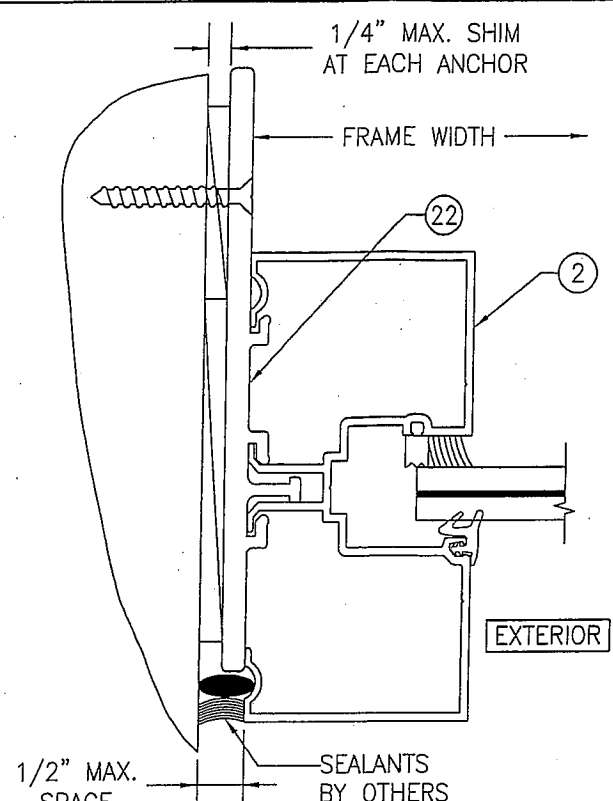
SEE FOOTNOTE #4 BELOW ANCHOR REQUIREMENTS TABLE ON SHEET 1 FOR THE OPTION OF HAVING A 3/8" PERIMETER SHIM GAP IN LIEU OF THE 1/4" SPECIFIED IN THESE SECTIONS.



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-5424			
CERTIFICATION: MAR 20 2013		WARREN W. SCHAEFER, P.E. P.E. NO. 113497	
DRAWING NO. 1633T		REV.	
SHEET NO. 6		OF 10	

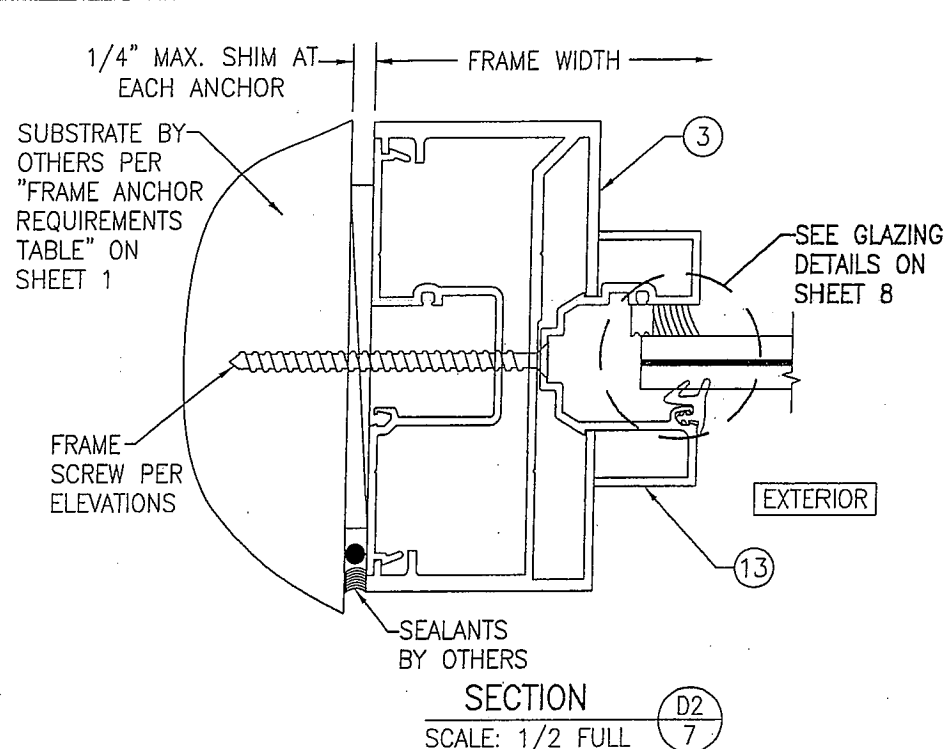


SECTION D1
SCALE: 1/2 FULL
(FRAME SCREW INSTALLED)

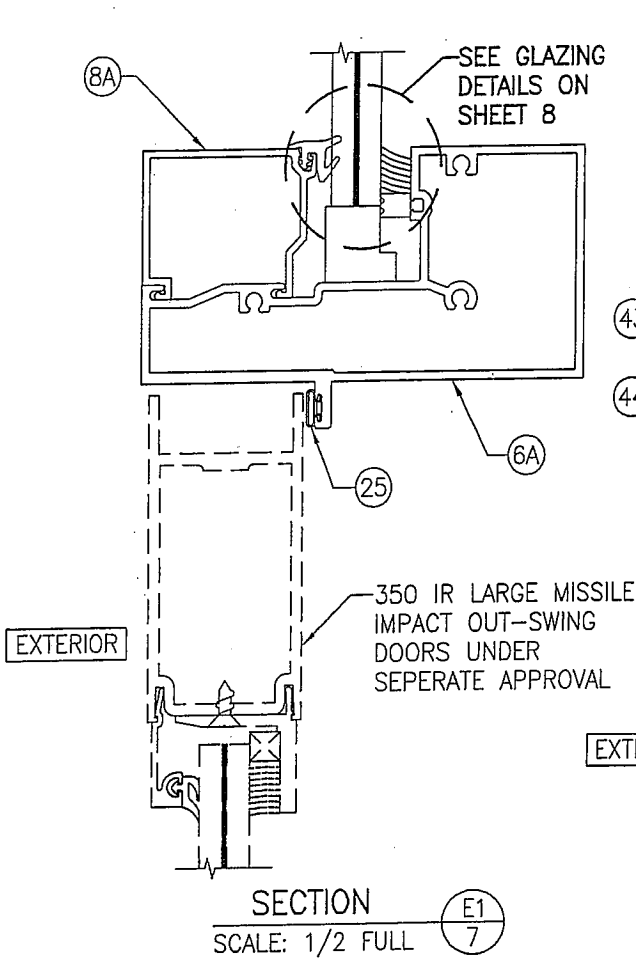


ALTERNATE SECTION D1
SCALE: 1/2 FULL
(STRAP ANCHOR INSTALLED)

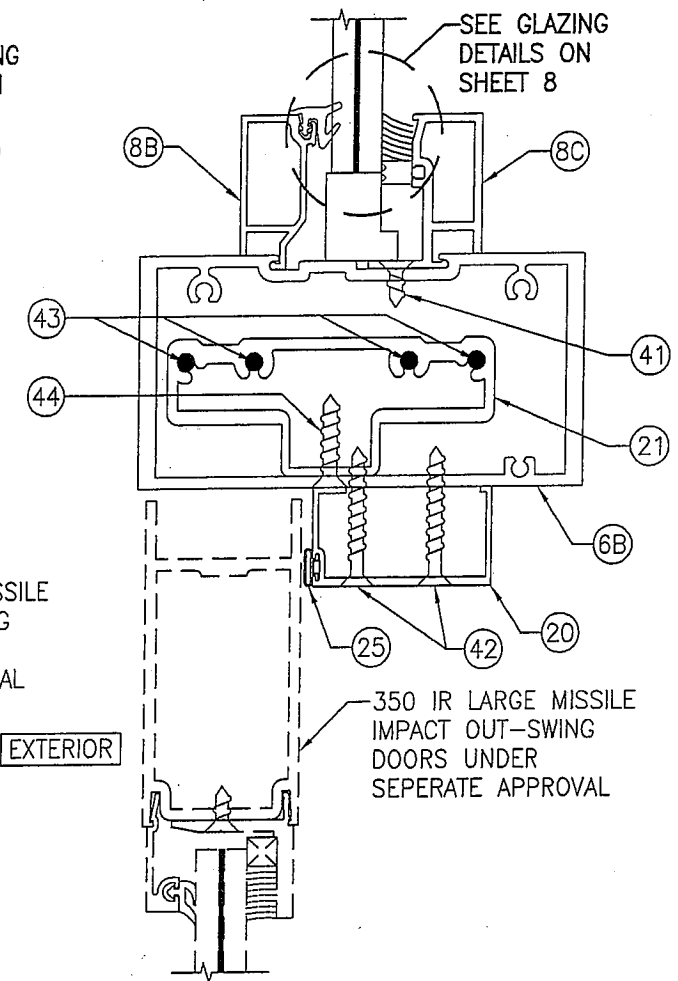
SEE FOOTNOTE #4 BELOW ANCHOR REQUIREMENTS TABLE ON SHEET 1 FOR THE OPTION OF HAVING A 3/8" PERIMETER SHIM GAP IN LIEU OF THE 1/4" SPECIFIED IN THESE SECTIONS.



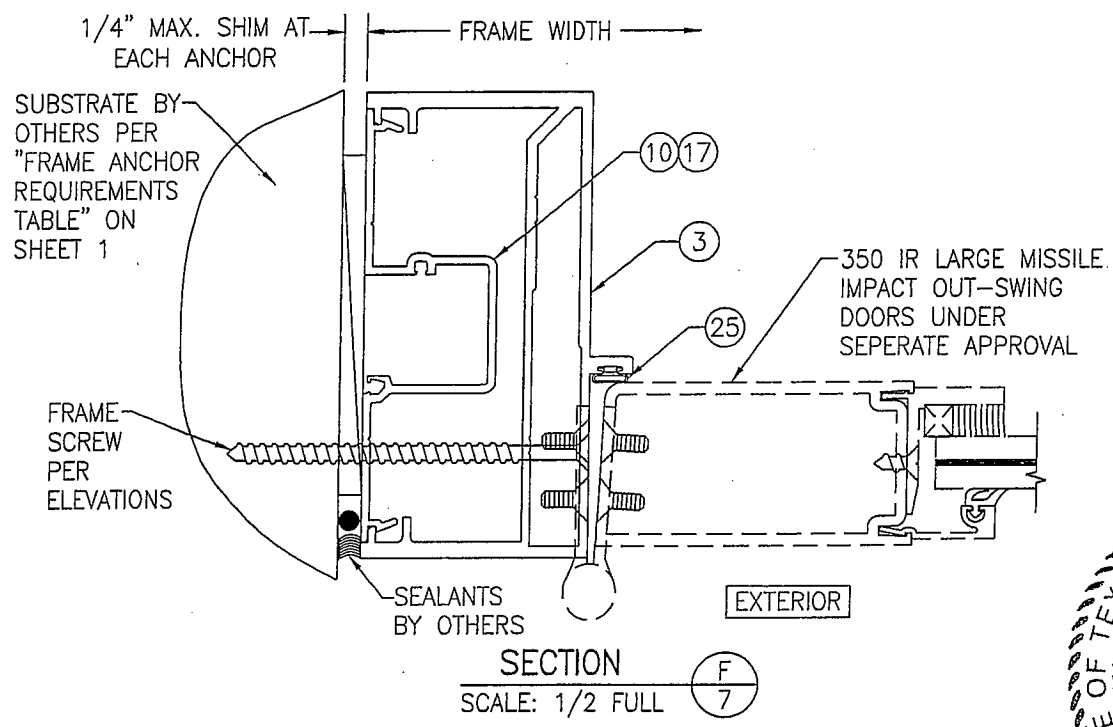
SECTION D2
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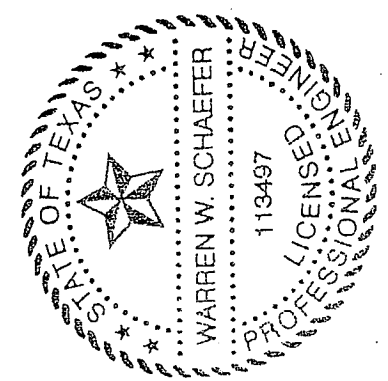
SECTION E1
SCALE: 1/2 FULL



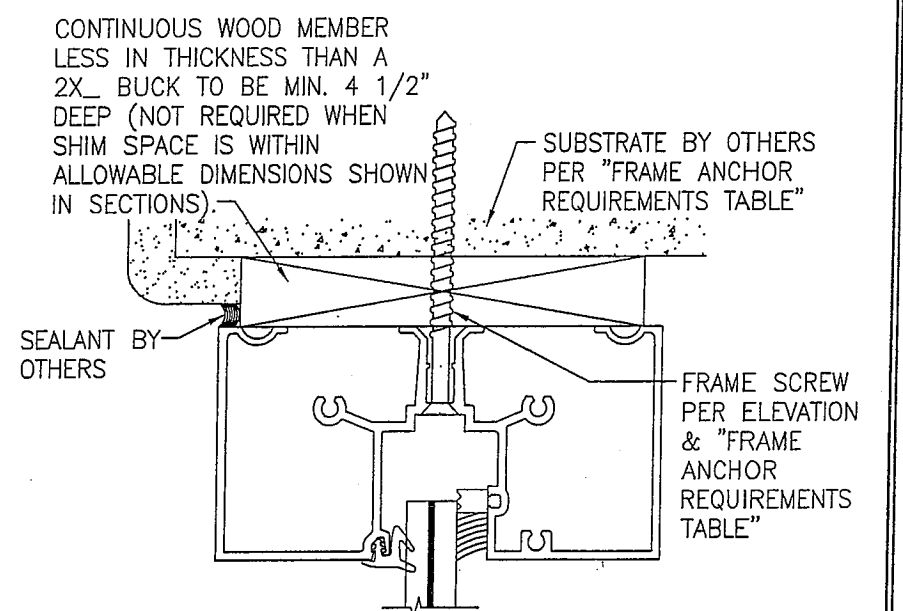
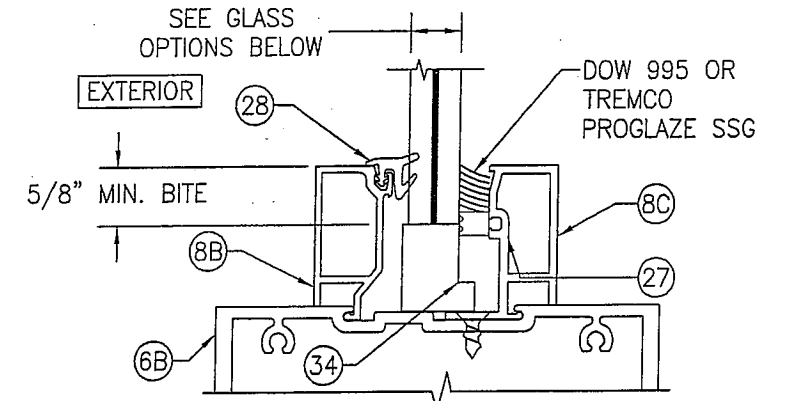
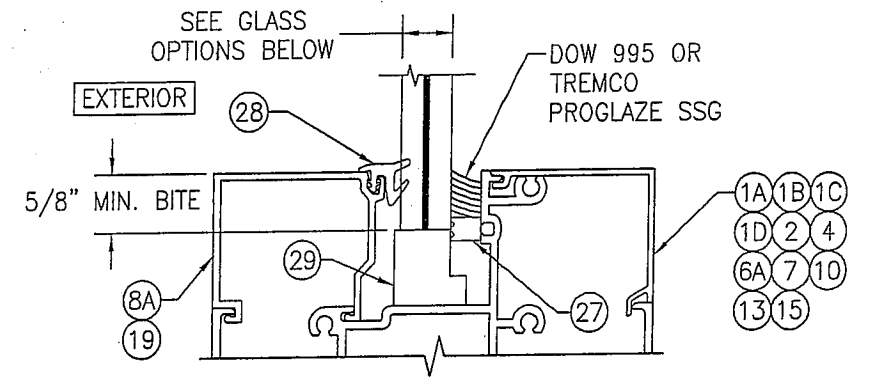
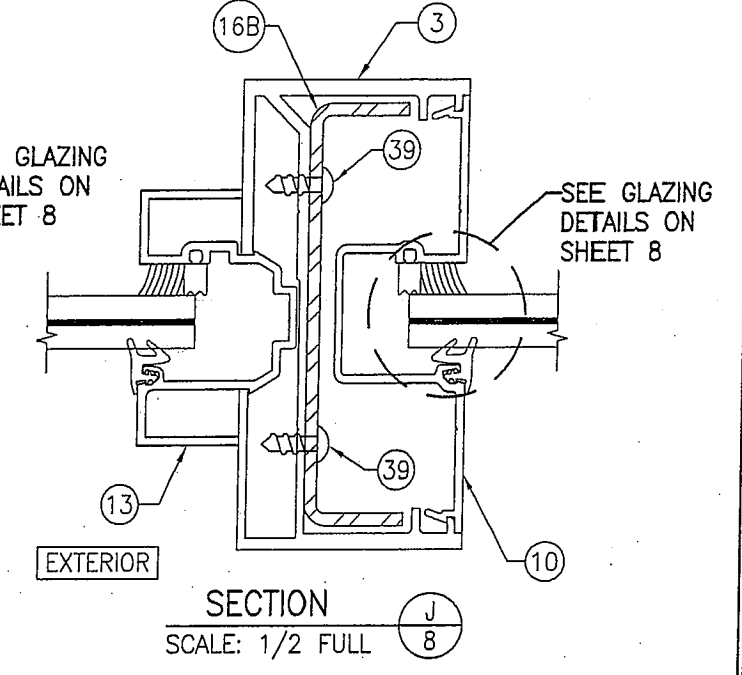
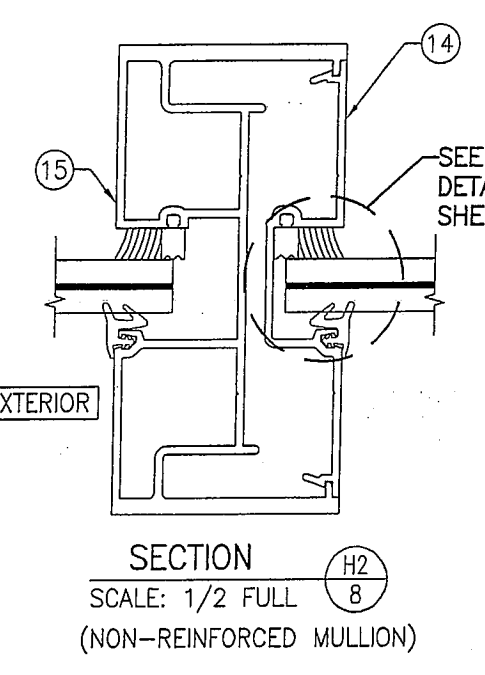
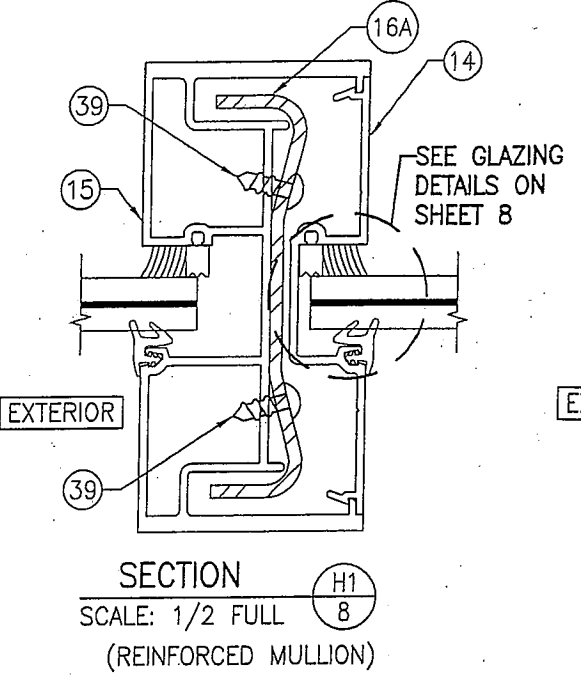
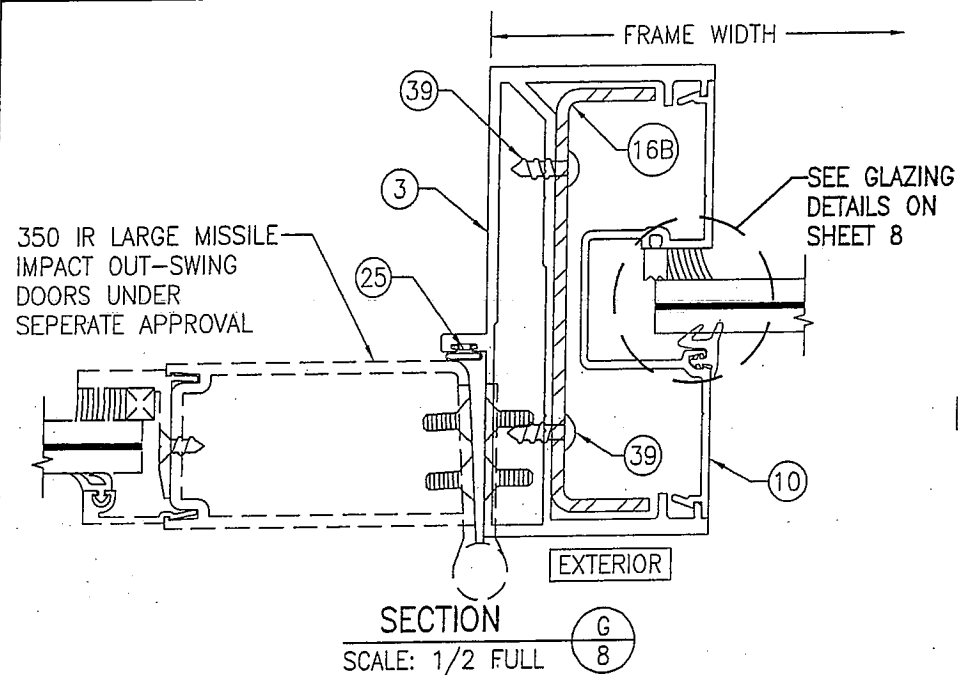
SECTION E2
SCALE: 1/2 FULL



SECTION F
SCALE: 1/2 FULL



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT			
CONSULTANTS: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION		MAR 20 2013	
DRAWING NO. 1633T		REV.	
SHEET NO. 7 OF 10		WARREN W. SCHAEFER, P.E. P.E. NO. 113497	

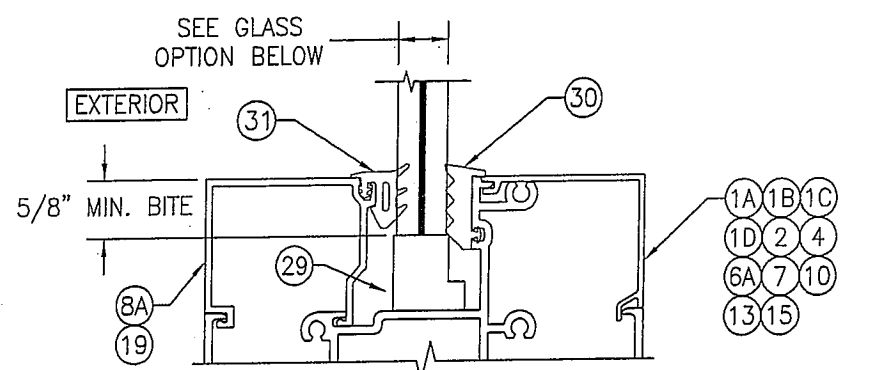


TYP. GLAZING DETAIL
(WET GLAZED; SINGLE GLAZING BEAD CONDITION)

TYP. GLAZING DETAIL
(WET GLAZED; DOUBLE GLAZING BEAD CONDITION)

OPTIONAL DIRECT MOUNT DETAIL
TO SUBSTRATE WITH SPACER

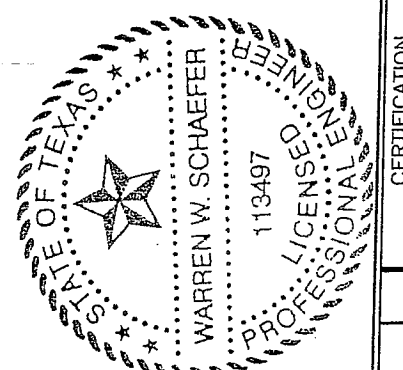
- GLASS OPTIONS (WET GLAZED):
- OPTION 1: 9/16" THICK LAMINATED GLASS BY SOLUTIA (1/4" HT. ST./0.09 SOLUTIA SAFLEX/1/4" HT. ST.)
 - OPTION 2: 9/16" THICK LAMINATED GLASS BY DUPONT (1/4" HT. ST./0.09 DUPONT BUTICITE PVB/1/4" HT. ST.)
 - OPTION 3: 9/16" THICK LAMINATED GLASS BY DUPONT (1/4" HT. ST./0.09 DUPONT SG/1/4" HT. ST.)
 - OPTION 4: 9/16" THICK LAMINATED GLASS BY SOLUTIA (1/4" HT. ST./0.10 SOLUTIA SAFLEX HP/1/4" HT. ST.)



TYP. GLAZING DETAIL
(DRY GLAZED; SINGLE GLAZING BEAD CONDITION)

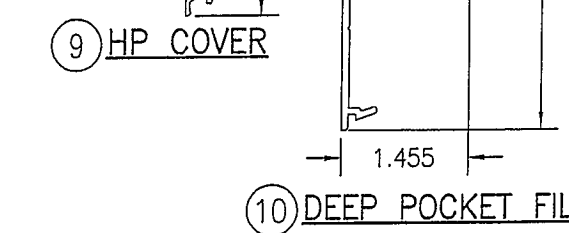
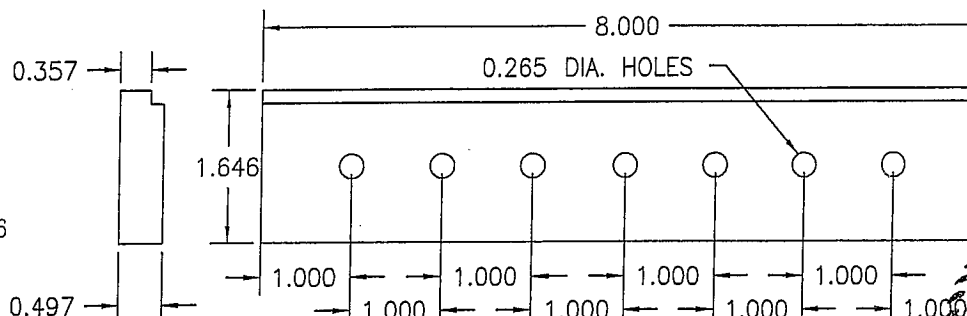
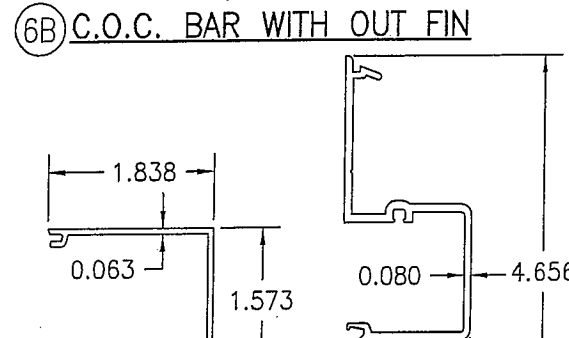
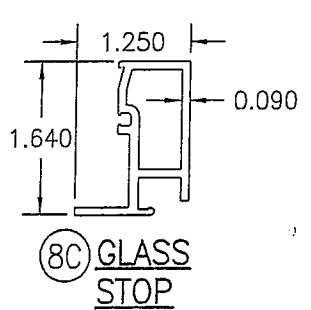
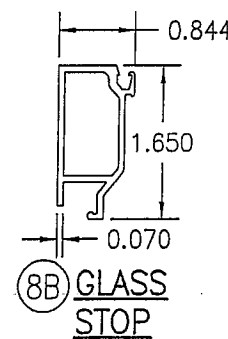
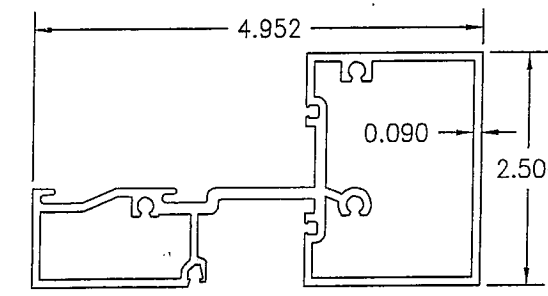
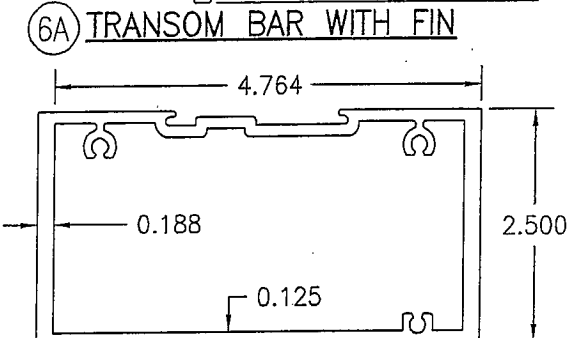
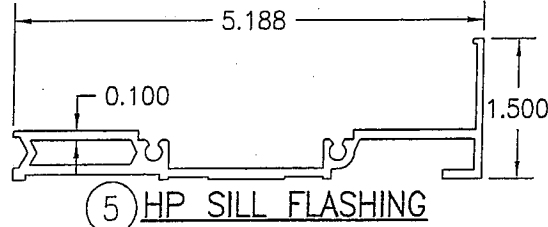
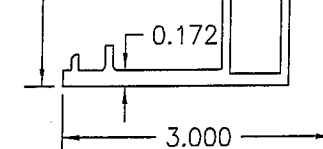
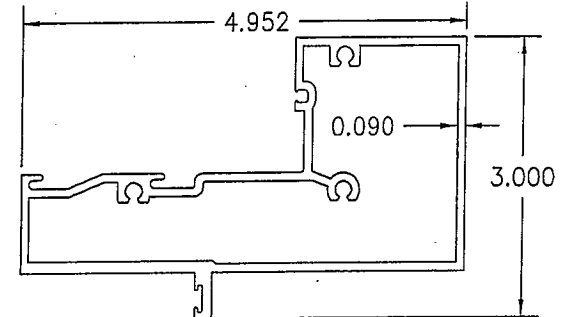
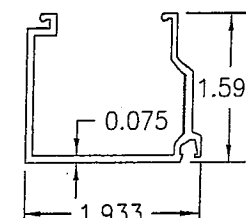
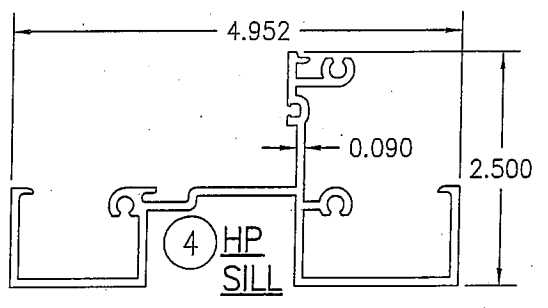
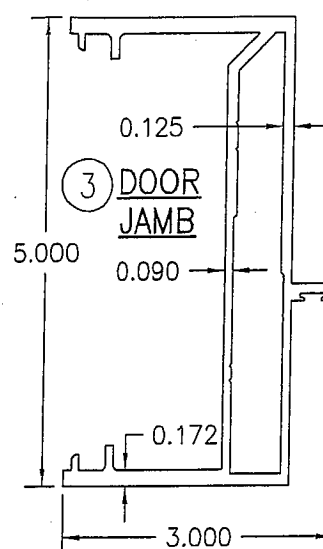
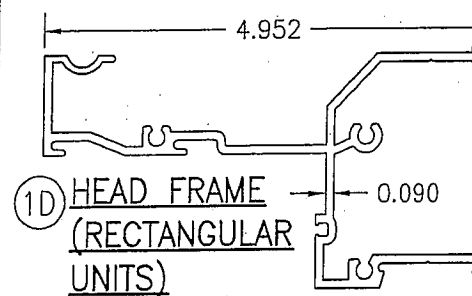
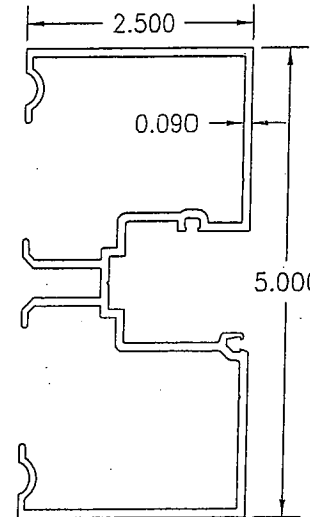
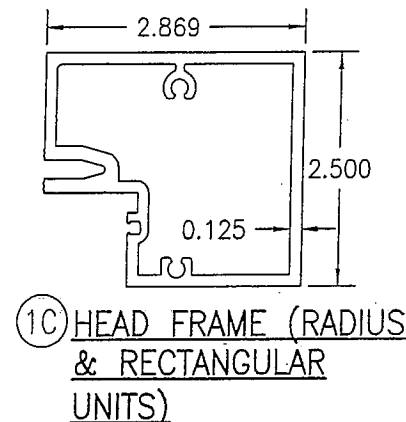
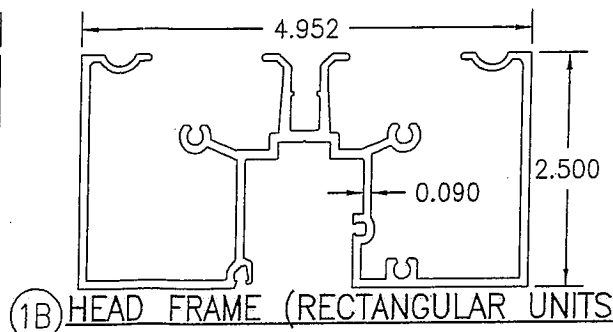
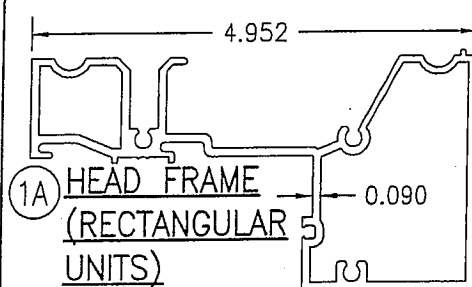
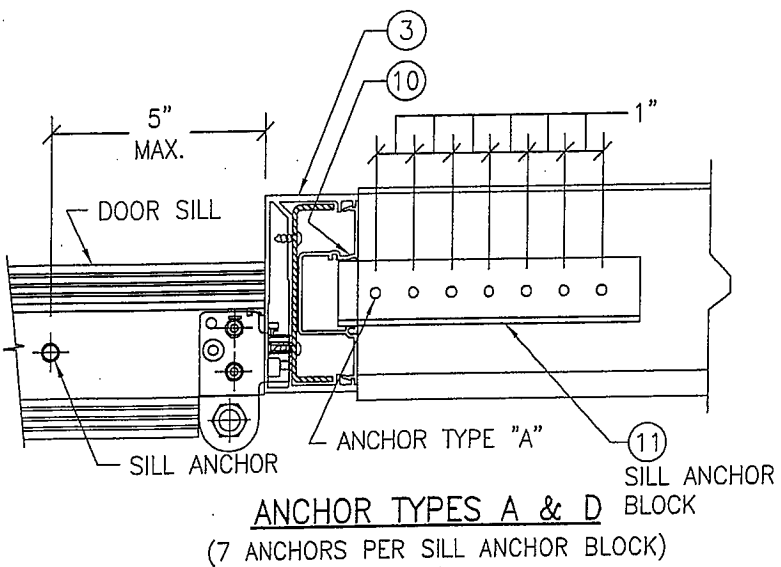
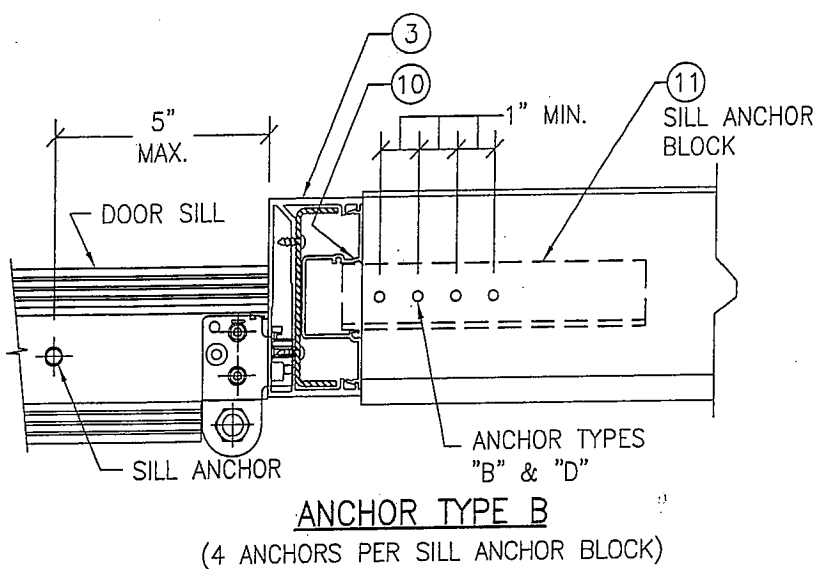
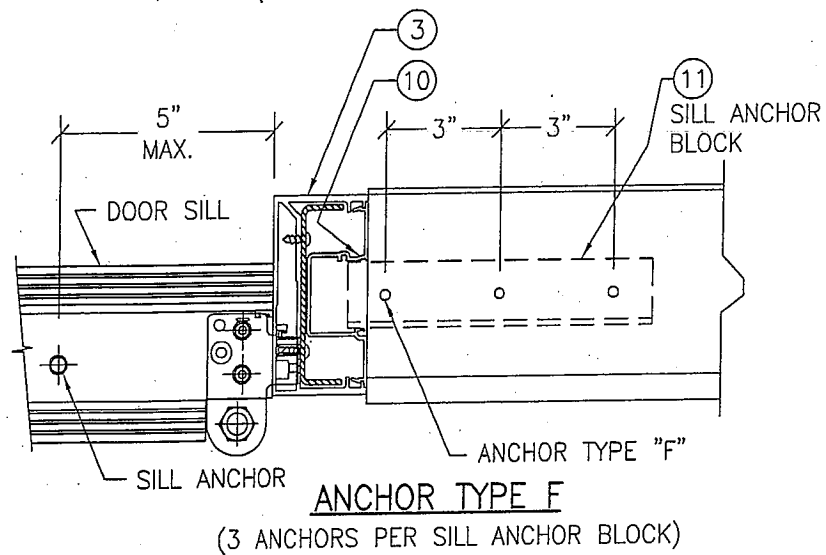
- GLASS OPTION (DRY GLAZED):
- OPTION 5: 9/16" THICK LAMINATED GLASS BY DUPONT (1/4" HT. ST./0.09 DUPONT SG/1/4" HT. ST.)

* HEAD SECTION SHOWN WITH HEAD FRAME PART #1B; SILL & SIDES WITH OTHER APPLICABLE FRAME PARTS MAY BE INSTALLED THE SAME (NOT APPLICABLE WITH STRAP ANCHOR INSTALLATIONS).
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

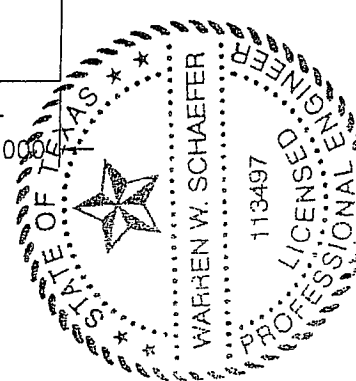


DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT			
JOB INFORMATION:			
KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555		W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 130TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	MAR 20 2013	DRAWING NO.	REV.
		1633T	
		SHEET NO.	
		8	OF 10

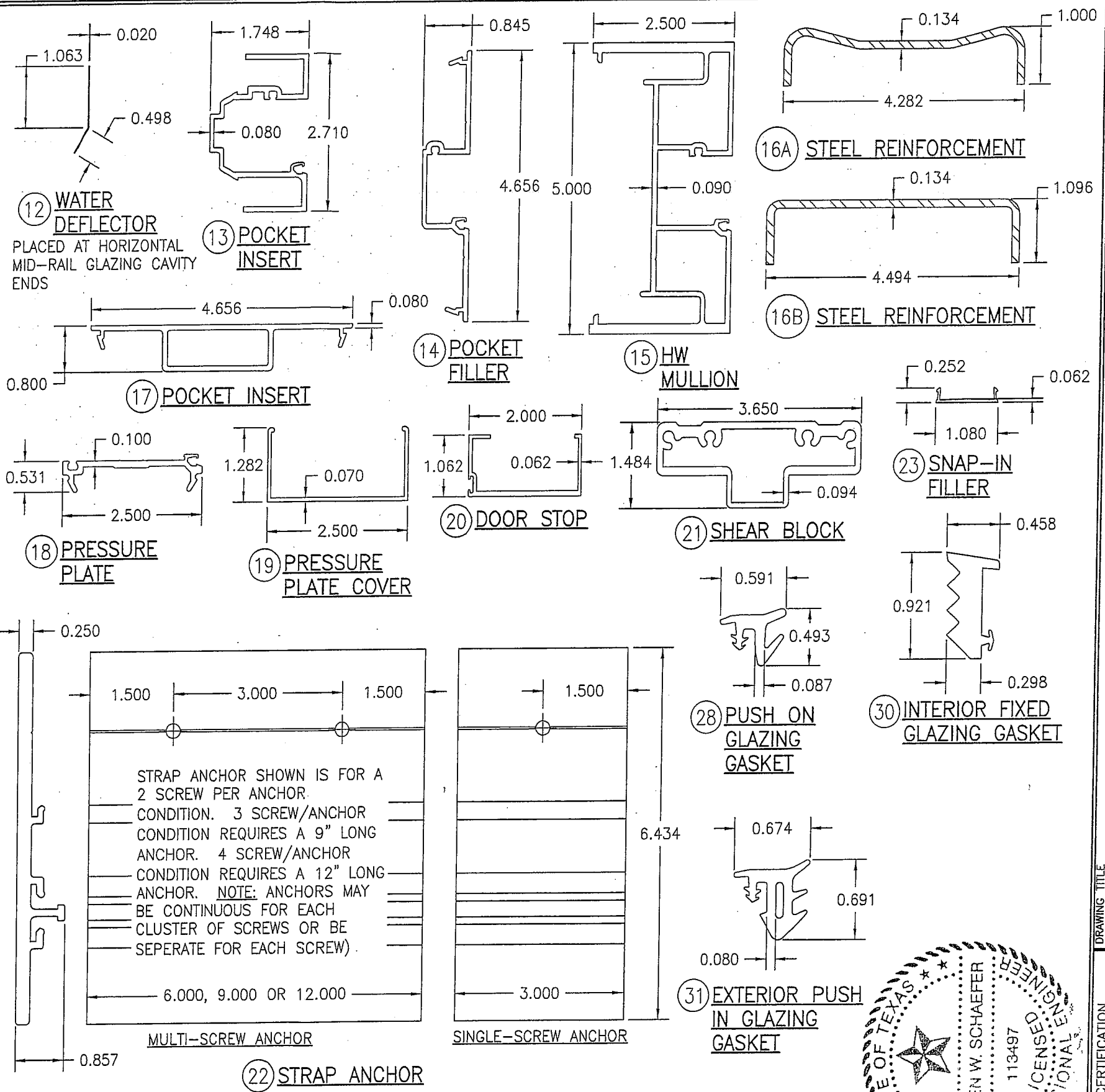
MULLION END CONNECTION DETAILS AT VERTICAL MULLIONS ALONG SIDE DOORS
(TYPICAL AT SILL ONLY)



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/18/13
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT	
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
DRAWING NO. 1633T	
REV.	
SHEET NO. 9 OF 10	



ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1A	HEAD FRAME (RECTANGULAR UNITS)	6063-T6 ALUMINUM
1B	HEAD FRAME (RECTANGULAR UNITS)	6063-T6 ALUMINUM
1C	HEAD FRAME (RADIUS & RECTANGULAR UNITS)	6063-T6 ALUMINUM
1D	HEAD FRAME (RECTANGULAR UNITS)	6063-T6 ALUMINUM
2	JAMB	6063-T6 ALUMINUM
3	DOOR JAMB	6063-T6 ALUMINUM
4	HP SILL	6063-T6 ALUMINUM
5	HP SILL FLASHING	6063-T6 ALUMINUM
6A	TRANSOM BAR WITH FIN	6063-T6 ALUMINUM
6B	C.O.C. TRANSOM BAR	6063-T6 ALUMINUM
7	HORIZONTAL	6063-T6 ALUMINUM
8A	GLASS STOP	6063-T6 ALUMINUM
8B	GLASS STOP	6063-T6 ALUMINUM
8C	GLASS STOP	6063-T6 ALUMINUM
9	HP COVER	6063-T6 ALUMINUM
10	DEEP POCKET FILLER	6063-T6 ALUMINUM
11	ANCHOR BLOCK AT DOOR JAMB	6063-T6 ALUMINUM
12	WATER DEFLECTOR	6063-T6 ALUMINUM
13	POCKET INSERT	6063-T6 ALUMINUM
14	POCKET FILLER	6063-T6 ALUMINUM
15	HW MULLION	6063-T6 ALUMINUM
16A	STEEL REINF.	A36 STEEL
16B	STEEL REINF.	A36 STEEL
17	POCKET INSERT	6063-T6 ALUMINUM
18	PRESSURE PLATE	6063-T6 ALUMINUM
19	PRESSURE PLATE COVER	6063-T6 ALUMINUM
20	DOOR STOP	6063-T6 ALUMINUM
21	SHEAR BLOCK	6063-T6 ALUMINUM (PART #450-140)
22	STRAP ANCHOR	6063-T6 ALUMINUM
23	SNAP-IN FILLER	6063-T6 ALUMINUM
SEALS AND SEALANTS		
25	DOOR BULB WEATHERING	ALCRYN
26	SILL TO FLASHING GASKET	CCN SPONGE
27	SLIDE IN SPACER	SANTOPRENE (PART #127-012)
28	STANDARD PUSH ON GLAZING GASKET	EPDM (DUROMETER = 70) (PART #027-074)
29	SETTING BLOCK	EPDM
30	INTERIOR FIXED GLAZING GASKET	EPDM (DUROMETER = SPONGE) (PART #127-146)
31	EXTERIOR PUSH IN GLAZING GASKET	EPDM (DUROMETER = 70) (PART #127-147)
32	GASKET	EPDM (DUROMETER = 70)
33	THERMAL SEPARATOR	EPDM (DUROMETER = 70)
34	SETTING BLOCK	EPDM
FASTENERS		
38	NO. 12 X 7/16" S.S. PHTF SCREW	1.5" & 4.5" FROM ENDS & 16 1/4" MAX. O.C.
39	NO. 12 X 5/8" S.S. PHTF SCREW	4" FROM ENDS (2 ROWS)
40	1/4" X 1" S.S. HWHTF SCREW	3" FROM ENDS & MAX. 9" O.C.
41	NO. 10 X 1/2" S.S. FHTF SCREW	3" FROM ENDS & MAX. 18" O.C.
42	NO. 10 X 1 5/8" S.S. FHTF SCREW	1" FROM ENDS; 4 GROUPED AT MID-SPAN; 16" MAX. BETWEEN
43	NO. 12 X 1 7/8" FHTF SCREW	4 PER SHEAR BLOCK
44	NO. 12 X 1" FHTF SCREW	3 PER SHEAR BLOCK



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/19/13
DATE	
BY	
REVISION DESCRIPTION	
NO.	

DRAWING TITLE
IR500 ALUMINUM STORE FRONT SYSTEM - LARGE MISSILE IMPACT

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

JOB INFORMATION:
KAWNEER COMPANY, INC.
555 GUTHRIE COURT
NORCROSS, GA 30092
770-449-5555

CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO.
1633T

REV.
SHEET NO.
10 OF 10

ALLOWABLE SIZE/PRESSURE TABLE									
DOOR TYPE	MAX. DOOR OPENING WIDTH (IN.)	MAX. DOOR OPENING HEIGHT (IN.)	MAX. D.L.O. WIDTH (IN.)	MAX. D.L.O. HEIGHT (IN.)	LOCK OPTION (3)	GLASS OPTION (1)	MISSILE LEVEL (2)	ALLOWABLE PRESSURE (+/- PSF)	
								DOORS IN 450, 451 OR 1600 FRAMES	DOORS IN IR500/501 FRAMES
DOUBLE	96	96	38 13/16	83 13/16	1 OR 2	1, 2 OR 5	D	110	90
	96	96	38 13/16	83 13/16	1	5	E	110	90
	72	108	30 13/16	95 3/16	1 OR 2	1 OR 2	D	110	90
	96	96	38 13/16	83 13/16	1 THRU 3	1, 2, 3 & 5	D	70	70
	72	96	30 13/16	83 13/16	1 THRU 3	4	D	60	60
SINGLE	48	96	38 13/16	83 13/16	1 OR 2	1, 2 OR 5	D	110	90
	48	96	38 13/16	83 13/16	1	5	E	110	90
	36	108	30 13/16	95 3/16	1 OR 2	1 OR 2	D	110	90
	48	96	38 13/16	83 13/16	1 THRU 3	1, 2, 3 & 5	D	70	70
	36	96	30 13/16	83 13/16	1 THRU 3	4	D	60	60

LOCK OPTIONS:

- **OPTION 1** = ADAMS RITE 1850 3 POINT LOCK AT ACTIVE PANEL (ITEM #57) & ADAMS RITE FLUSHBOLTS AT HEAD AND SILL (ITEM #58) OF INACTIVE PANEL.
- **OPTION 2** = KAWNEER 1686 DEADBOLT & PANIC DEVICE (ITEM #59) AT ACTIVE PANEL & KAWNEER 1686 PANIC DEVICE (ITEM #60) AT INACTIVE PANEL.
- **OPTION 3** = SCHLAGE DEADBOLT WITH & EITHER FALCON HH 1690 OR VON DUPRIN HH9947 CVR PANIC DEVICE (ITEM #61) AT ACTIVE PANEL & EITHER FALCON HH 1690 OR VON DUPRIN HH9947 CVR PANIC DEVICE (ITEM #62) AT INACTIVE PANEL.

PRESSURE TABLE FOOTNOTES:

- (1) FOR GLASS OPTIONS SEE GLAZING DETAILS ON SHEET 11.
- (2) WHEN MISSILE LEVEL E IS REQUIRED ONLY LOCK OPTION 1 & GLASS OPTION 5 ARE APPLICABLE.

NOTE: THESE DOORS ARE NOT APPROVED FOR USE WHERE WATER INFILTRATION RESISTANCE IS REQUIRED BY THE DOOR. UNLESS UNITS ARE INSTALLED IN NON-HABITABLE AREAS WHERE THE UNIT & THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION, UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG WHERE-BY THE OVERHANG(OH) RATIO IS EQUAL TO OR MORE THAN.

GENERAL NOTES:

1. THESE DOOR SYSTEMS HAVE 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. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH ASTM E330, E283, E1886, E1996 & AMMA 1304 FOR LARGE MISSILE IMPACT DOORS.
5. THESE DOOR SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE DOORS.
7. ALL ANCHORS SECURING DOOR FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. 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 INTERNATIONAL BUILDING CODE, A DIRECTIONALITY FACTOR OF $KD = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR $CD = 1.6$ WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE SEPARATED OR COATED AS REQUIRED TO AVOID CORROSION OF EITHER MATERIAL.
11. TO THE BEST OF OUR KNOWLEDGE, THE DOOR SYSTEMS SHOWN HEREIN ARE QUALITY ASSURED BY AN APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH APPLICABLE STANDARDS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. DOOR ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
12. CERTIFICATION OF THESE DOOR SYSTEMS SHALL BE CONSIDERED VOID IF THEY ARE INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF THEY ARE INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH DOOR INSTALLATIONS.

FRAME ANCHOR REQUIREMENTS TABLE				
OPENING TYPE (SUBSTRATE)	FRAME & MULLION PLATE TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.	
FRAME SCREWS				
(2) MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 2 & G=0.55)	NO. 14 OR 1/4" GR. 5 COARSE THREAD SCREW OR 1/4" CONCRETE SCREW	1 1/4"	3/4"	
MIN. 16 GA. 33 KSI METAL STUD	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"	
MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"	
MIN. 0.100" THK 6063-T5 ALUM.	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"	
(3) MIN. C-90 CONCRETE FILLED BLOCK	(1) 1/4" CONCRETE SCREW	1 1/2"	2 1/2"	
MIN. 3000 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 3/4"	2 1/2"	
(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S. OR S.S.).				
(2) 2X6 BUCKS SHALL BE OF A MINIMUM DEPTH REQUIRED TO MEET ANCHOR EDGE DISTANCE REQUIREMENTS BUT NO LESS THAN 4 1/4".				
(3) CONCRETE FILLED BLOCK SUBSTRATE IS NOT APPLICABLE AT HEAD & SILL.				

CORNER CONSTRUCTION:

TRIFAB 450 OR 451 FRAME HEAD: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #17). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 10 X 1 19/32" PHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 10 X 9/16" FHTF SCREWS. CORNERS ARE SEALED WITH SILICONE SEALANT.

IR500/501 FRAME HEAD: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #18). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 12 X 1 7/8" FHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE MULLION WITH 3 NO. 12 X 1" PHTF SCREWS. CORNERS ARE SEALED WITH SILICONE SEALANT.

FRAME HEAD WITHIN 1600 SYSTEM 1 CURTAIN WALL: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #19). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 10 X 1 19/32" PHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 10 X 9/16" FHTF SCREWS. CORNERS ARE SEALED WITH SILICONE SEALANT.

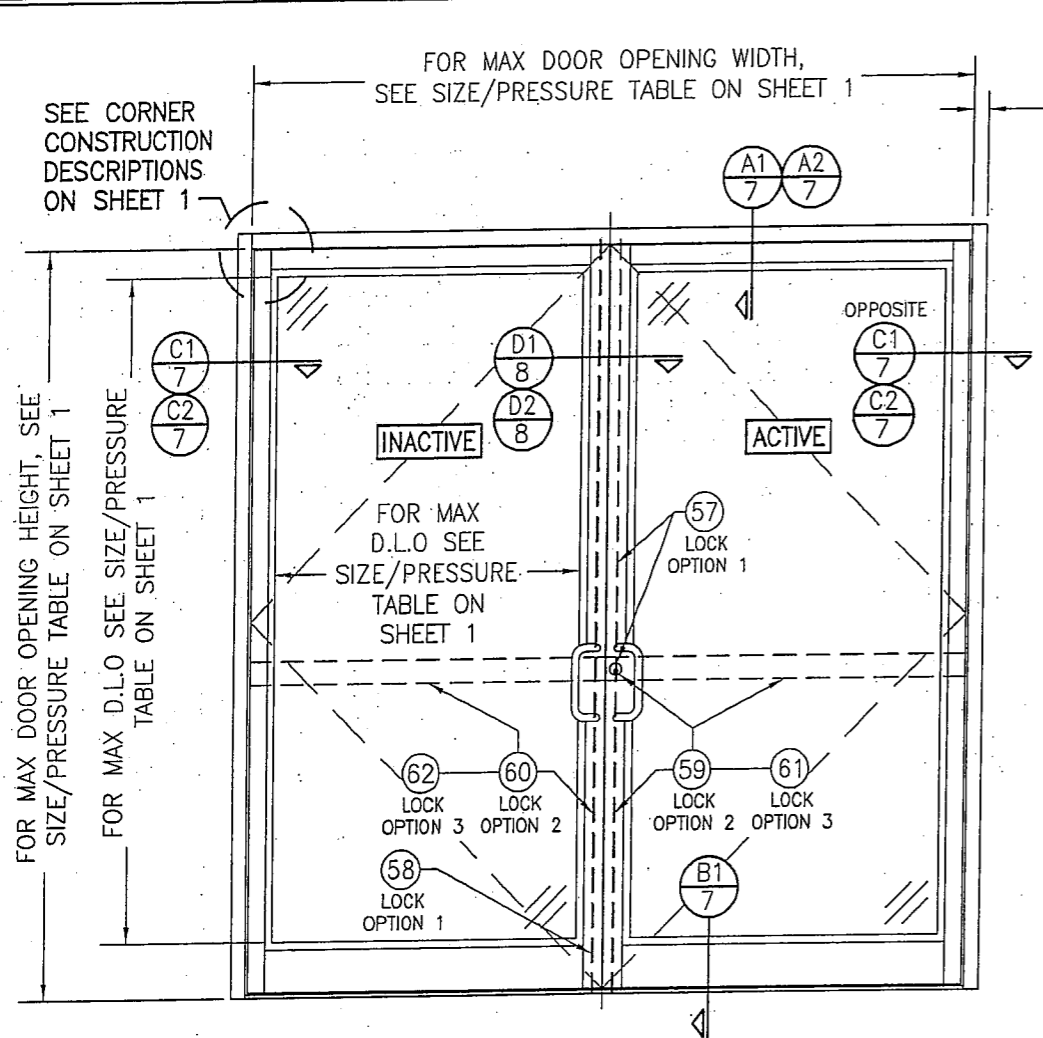
SILL: VERTICAL MEMBERS RUN THROUGH WHILE THE THRESHOLD IS SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBER VIA A PIVOT ASSEMBLY OR CLIP (ITEM #30). THE CLIP IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 3 NO. 12-24 X 3/8" FHMS. THE THRESHOLD MEMBER IS ATTACHED TO THE CLIP BLOCK WITH 2 NO. 12-24 X 3/8" FHMS. CORNERS ARE SEALED WITH SILICONE SEALANT.

DOOR PANEL: VERTICAL STILES RUN THROUGH AND ARE SECURED TO THE RAILS AT THE TOP & BOTTOM WITH 1/4" THICK EXTRUDED CHANNELS. EACH CHANNEL IS FASTENED TO THE STILE & RAIL WITH 1/4-20 X 3/4" PHMS & 3/16" THICK STEEL NUT PLATES. THE INTERSECTION OF EACH CORNER JOINT WAS WELDED WITH A 1/2" DIA. PLUG WELD AND A 1 1/8" LONG FILLET WELD AT BOTH WEBS OF THE RAIL.



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 03/19/13	
DATE	BY	REVISION DESCRIPTION	NO.
JOB INFORMATION:			
DRAWING TITLE: IR350/500-HW WIND ZONE 4 L.M.I. OUT-SWING DOORS		KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	MAR 20 2013	WARREN W. SCHAEFER, P.E. P.E. NO. 113497	
DRAWING NO. 1821T		REV.	
SHEET NO. 1 OF 12			

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.



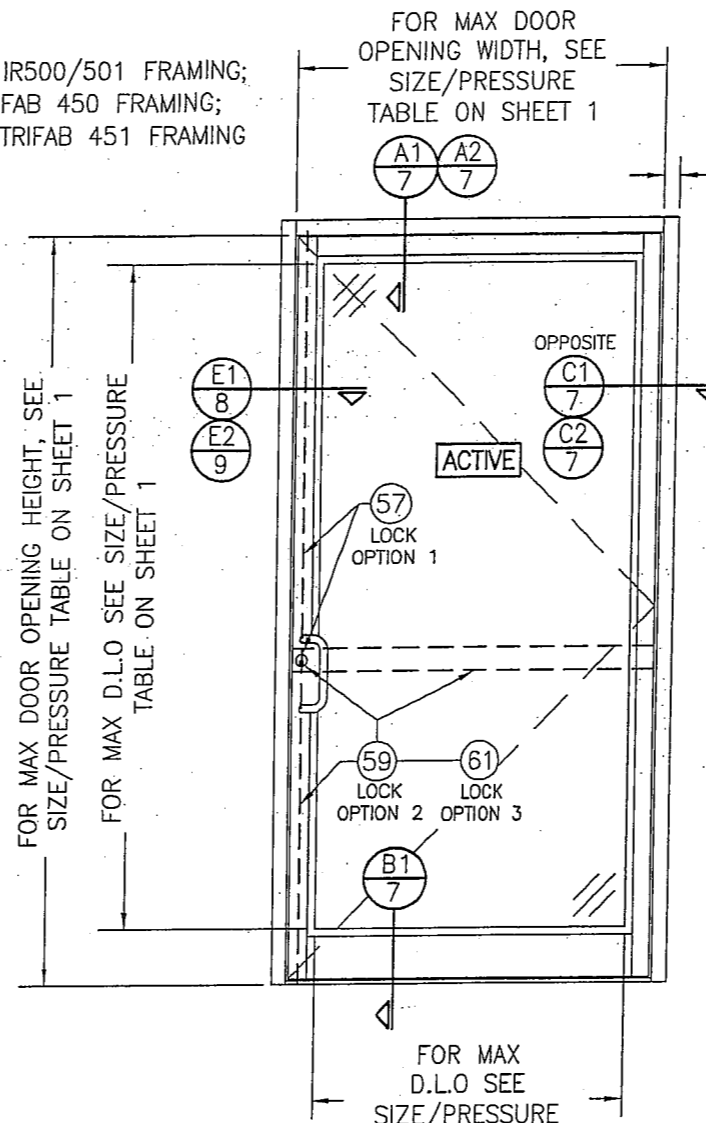
**EXTERIOR ELEVATION:
DOUBLE DOOR WITH TRIFAB 450, 451 OR IR500/501
FRAMING**

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

(FOR INSTALLATION REQUIREMENTS NOT SHOWN, SEE INSTALLATION ELEVATIONS ON SHEETS 4, 5 & 6)

(FOR HINGE REQUIREMENTS, SEE HINGE LOCATION DIAGRAMS ON SHEET 3)

2 1/2" WITH IR500/501 FRAMING;
2" WITH TRIFAB 450 FRAMING;
1 3/4" WITH TRIFAB 451 FRAMING



**EXTERIOR ELEVATION:
SINGLE DOOR WITH TRIFAB 450, 451 OR
IR500/501 FRAMING**

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

(FOR INSTALLATION REQUIREMENTS NOT SHOWN, SEE INSTALLATION ELEVATIONS ON SHEETS 4, 5 & 6)

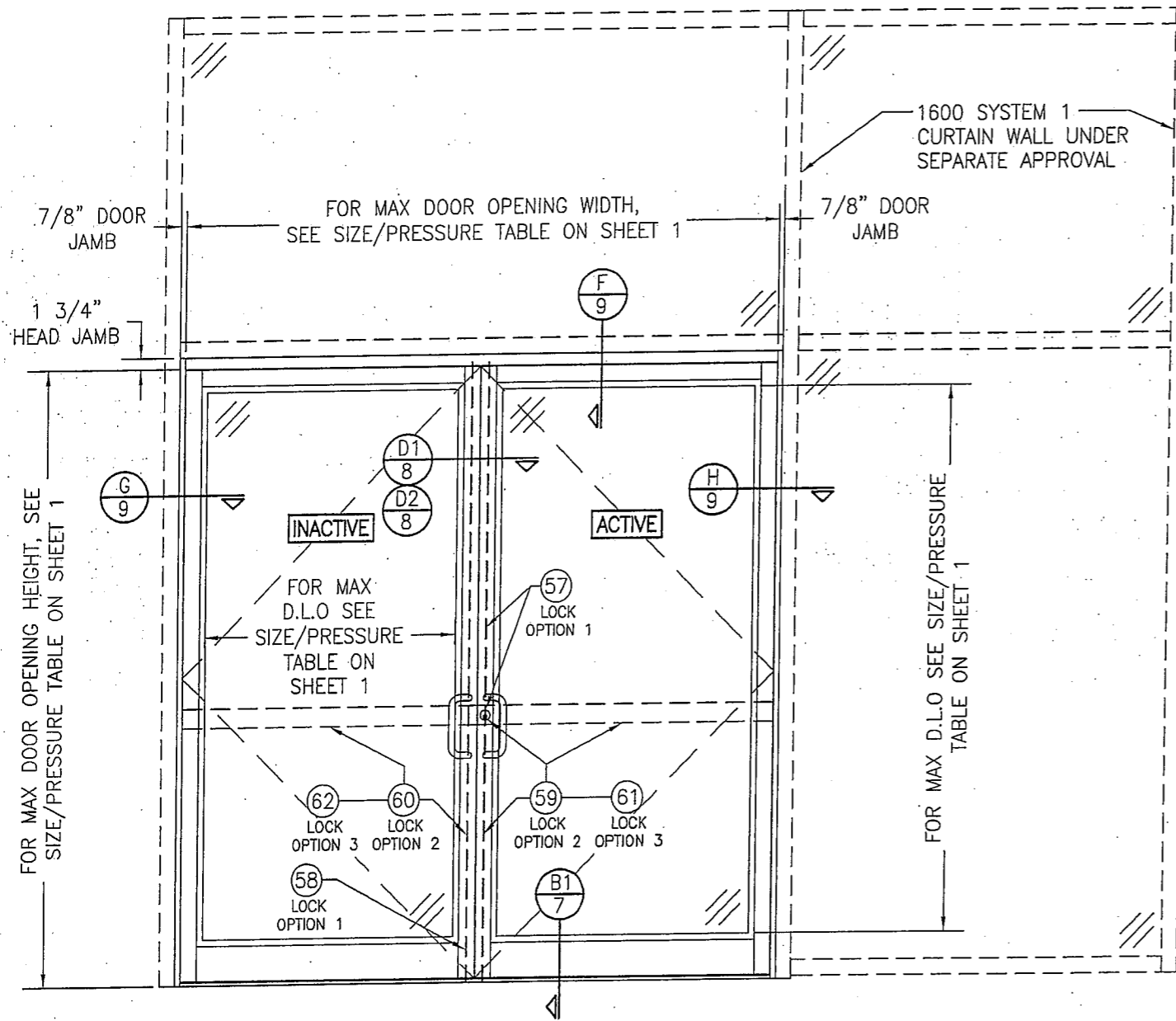
(FOR HINGE REQUIREMENTS, SEE HINGE LOCATION DIAGRAMS ON SHEET 3)

2 1/2" WITH IR500/501 FRAMING;
2" WITH TRIFAB 450 FRAMING;
1 3/4" WITH TRIFAB 451 FRAMING

ALLOWABLE DESIGN PRESSURE
SEE SIZE/PRESSURE TABLE ON SHEET 1

THE 450, 451 & 500/501 SUPPORT FRAMING MAY BE CONFIGURED FOR AND INSTALLED INTO A PUNCHED OPENING AS SHOWN OR BE PART OF A STORE FRONT FRAMING SYSTEM. IF PART OF A STORE FRONT FRAMING SYSTEM, THE LESSER OF THE ALLOWABLE PRESSURE SPECIFIED IN THE STORE FRONT APPROVAL AND THAT STATED HERE-IN SHALL CONTROL FOR THE OVERALL SYSTEM.

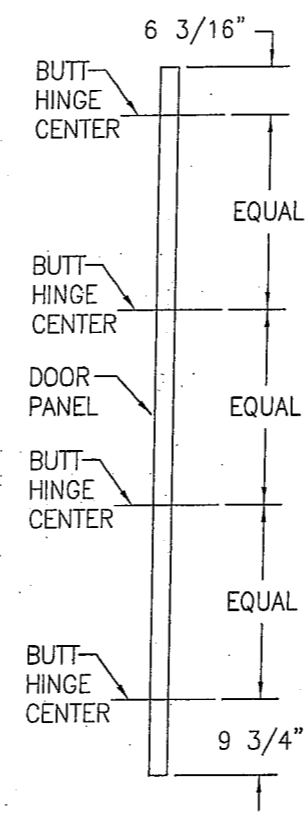
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION	WARREN W. SCHAEFER, P.E. P.E. NO. 113497		
DRAWING NO. 1821T		REV.	
SHEET NO. 2		OF 12	



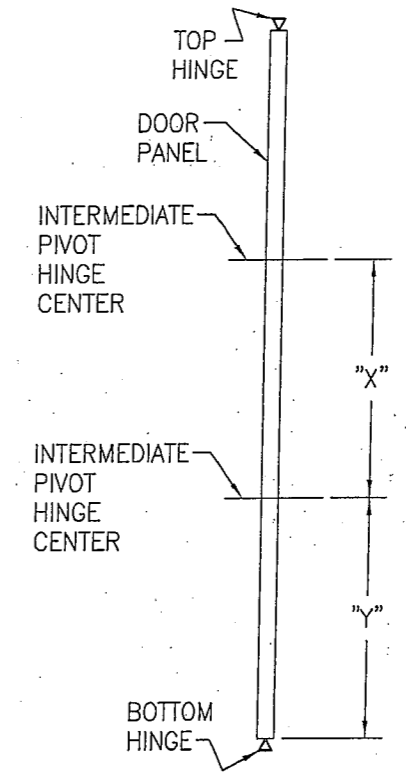
EXTERIOR ELEVATION:
DOUBLE DOOR WITHIN 1600 SYSTEM 1 CURTAIN WALL
 SCALE: 1/2" = 1'-0"
 (FOR HINGE REQUIREMENTS, SEE HINGE LOCATION DIAGRAMS ON THIS SHEET.)

ALLOWABLE DESIGN PRESSURE
 SEE SIZE/PRESSURE TABLE ON SHEET 1

- NOTES:**
- FOR DOOR INSTALLATION CONDITIONS NOT SHOWN, SEE INSTALLATION ELEVATIONS ON SHEET 4, 5 & 6.
 - DOUBLE DOOR SHOWN, SINGLE DOOR CONDITION ALSO APPLIES.
 - FOR CURTAIN WALL FRAMING REQUIREMENTS, SEE RESPECTIVE CURTAIN WALL APPROVAL.
 - ALTHOUGH DOOR SECTION IS SHOWN AT A SIDE JAMB, THE DOOR MAY BE LOCATED IN ANY BAY OF THE CURTAIN WALL.
 - THE LESSER ALLOWABLE PRESSURE FOR THE DOOR AND THAT FOR THE 1600 WALL SYSTEM SHALL CONTROL AS THE ALLOWABLE PRESSURE ON THE ASSEMBLY.



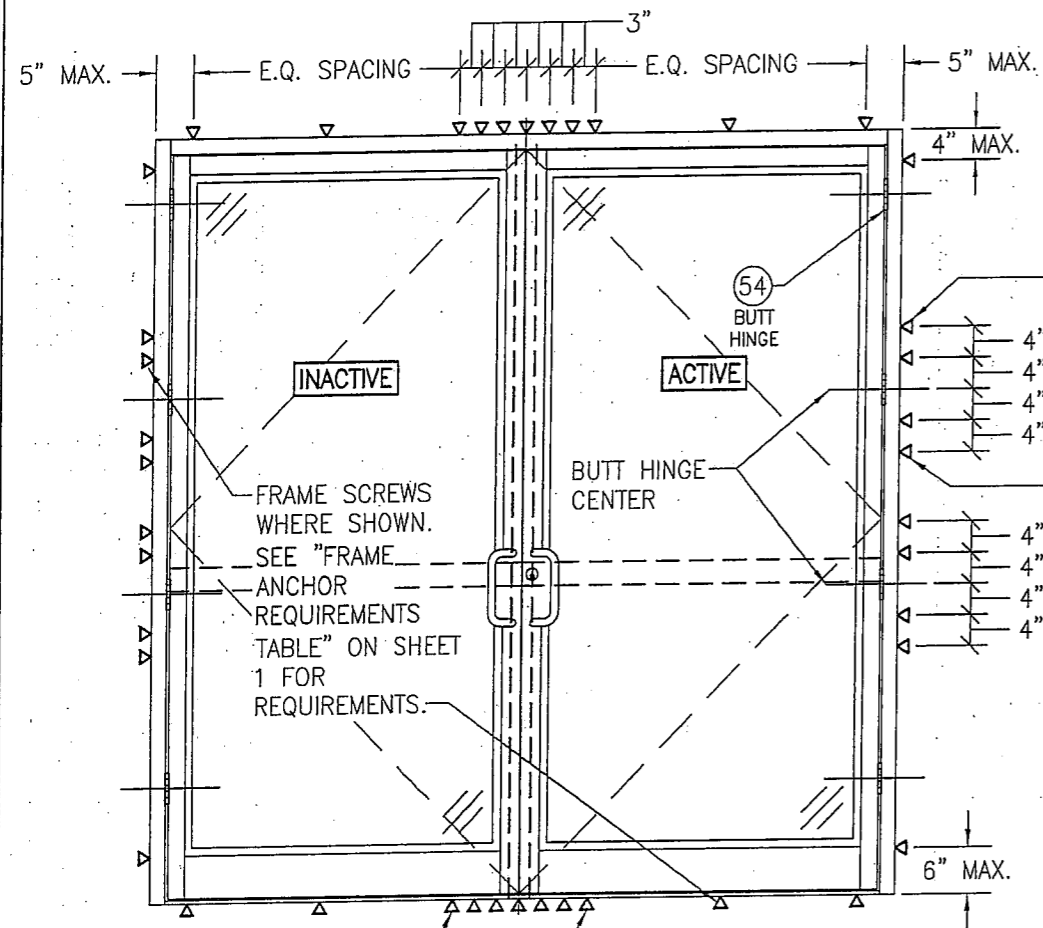
BUTT HINGE LOCATION DIAGRAM
 SCALE: 1/2" = 1'-0"



PIVOT HINGE LOCATION DIAGRAM
 SCALE: 1/2" = 1'-0"

"X" = DOOR OPENING HEIGHT / (NUMBER OF INTERMEDIATE HINGES + 1)
 "Y" = "X" - 13/16"

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 03/19/13	
NO.	DATE	BY	REVISION DESCRIPTION
JOB INFORMATION:			
DRAWING TITLE: IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS		KAWNEER COMPANY, INC.	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		555 GUTHRIE COURT	
7480 150TH COURT NORTH		NORCROSS, GA 30092	
PALM BEACH GARDENS, FL 33418		770-449-5555	
PHONE: 561-744-3424			
CERTIFICATION: MAR 20 2013			
WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1821T		REV.	
SHEET NO. 3 OF 12			



NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, THESE OUTER MOST SCREWS AT EACH HINGE LOCATION ARE NOT REQUIRED

NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, SCREW SPACING MAY BE INCREASED TO 17\"/>

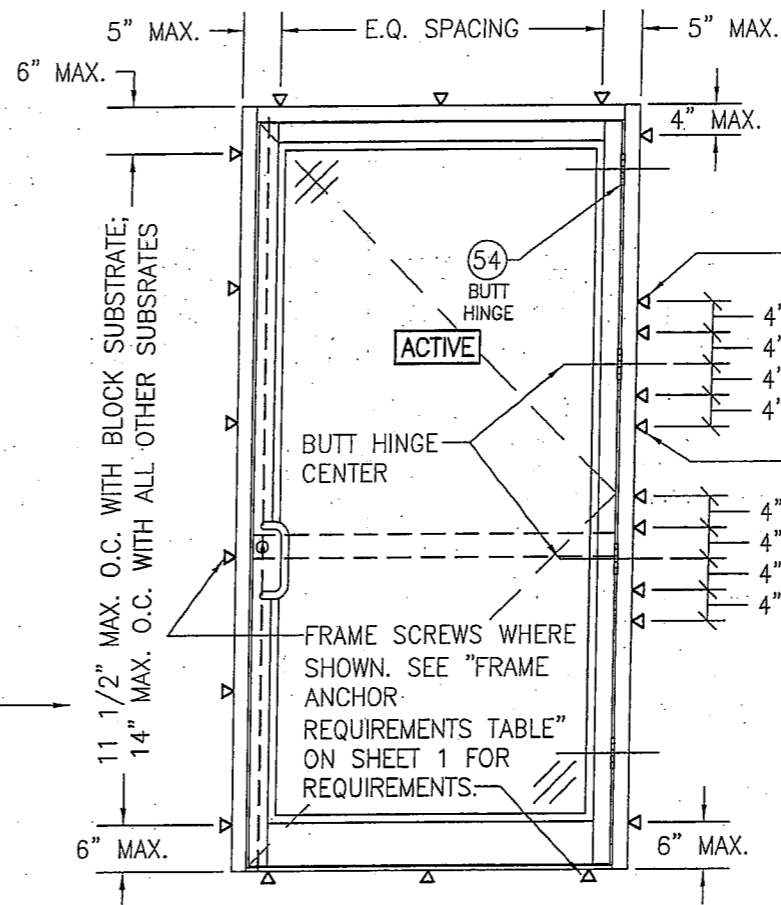
THESE 2 FRAME ANCHORS ARE ONLY REQUIRED WHEN DESIGN PRESSURE EXCEEDS +/-70 PSF (TYP. HEAD AND SILL)

**EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR DOUBLE DOORS
WITH BUTT HINGES**

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

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

THE CONDITIONS SHOWN IN THESE ELEVATIONS CONSIDER THE PERIMETER FRAMING TO BE INSTALLED TO A PUNCHED WALL OPENING OR CURTAIN WALL SYSTEM OPENING. WHEN DOOR PANELS ARE INSTALLED INTO A 450, 451 OR 500/501 STOREFRONT SYSTEM (NOT A PUNCHED OPENING), THE INSTALLATION REQUIREMENTS OF THE STORE FRONT APPROVAL SHALL CONTROL WITH THE DOOR PANELS BEING HINGED AND LOCKED TO THE FRAMING AS SHOWN HERE-IN.



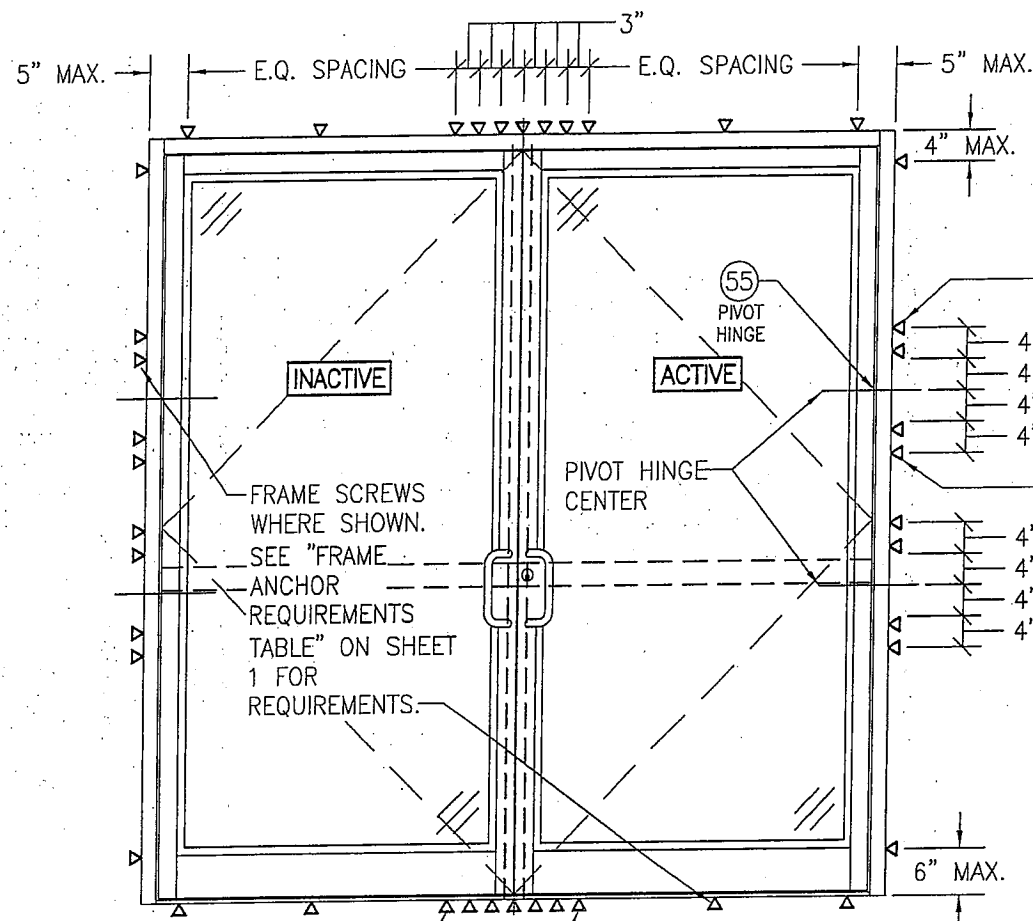
NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, THESE OUTER MOST SCREWS AT EACH HINGE LOCATION ARE NOT REQUIRED

**EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR SINGLE
DOORS WITH BUTT HINGES**

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

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 03/19/13	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113487			
DRAWING NO. 1821T		REV.	
SHEET NO. 4 OF 12			

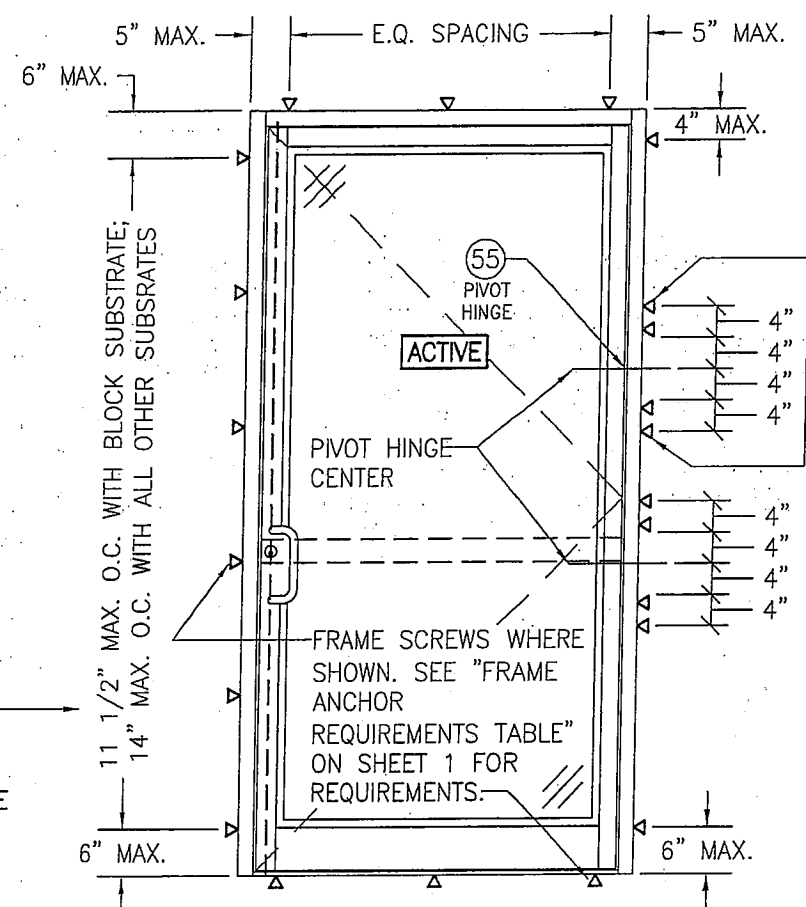


THESE 2 FRAME ANCHORS ARE ONLY REQUIRED WHEN DESIGN PRESSURE EXCEEDS +/-70 PSF (TYP. HEAD AND SILL)

**EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR DOUBLE DOORS
WITH PIVOT HINGES**
SCALE: 1/2" = 1'-0"
(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, THESE OUTER MOST SCREWS AT EACH HINGE LOCATION ARE NOT REQUIRED

NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, SCREW SPACING MAY BE INCREASED TO 17" O.C. WITH ALL SUBSTRATES

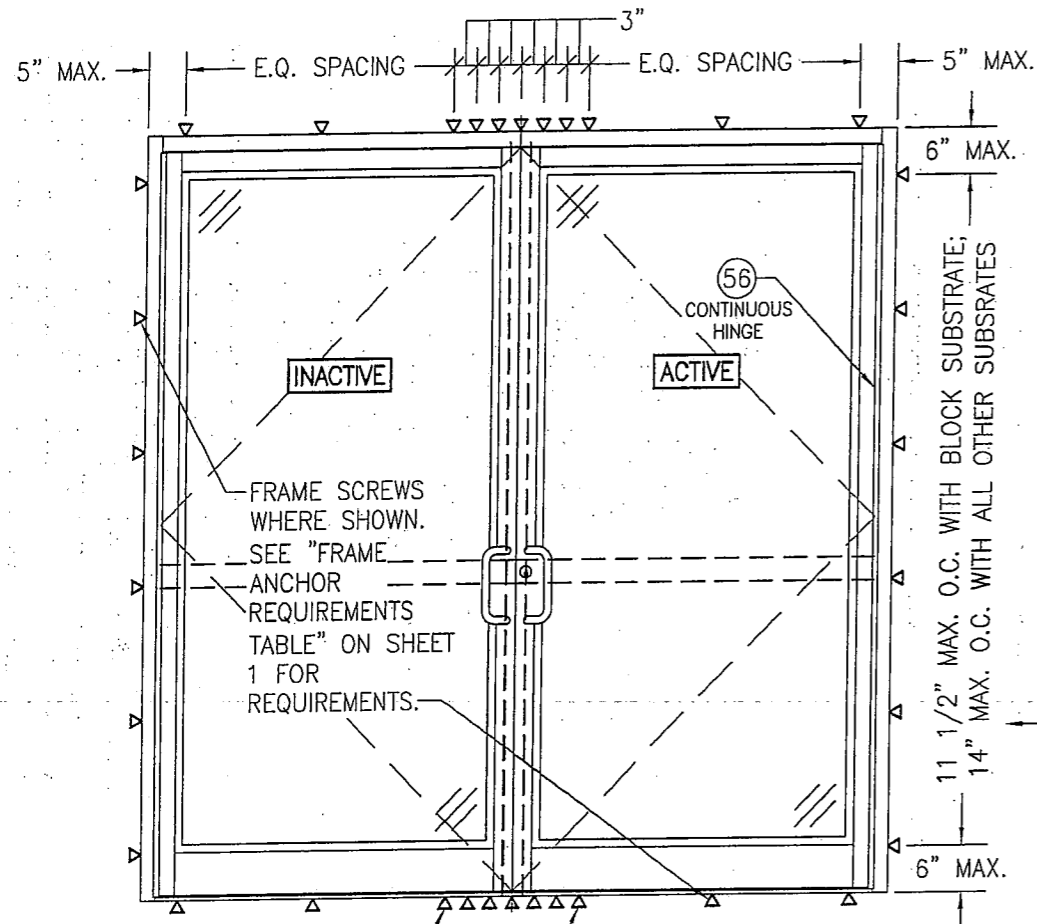


**EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR SINGLE
DOORS WITH PIVOT HINGES**
SCALE: 1/2" = 1'-0"
(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, THESE OUTER MOST SCREWS AT EACH HINGE LOCATION ARE NOT REQUIRED

THE CONDITIONS SHOWN IN THESE ELEVATIONS CONSIDER THE PERIMETER FRAMING TO BE INSTALLED TO A PUNCHED WALL OPENING OR CURTAIN WALL SYSTEM OPENING. WHEN DOOR PANELS ARE INSTALLED INTO A 450, 451 OR 500/501 STOREFRONT SYSTEM (NOT A PUNCHED OPENING), THE INSTALLATION REQUIREMENTS OF THE STORE FRONT APPROVAL SHALL CONTROL WITH THE DOOR PANELS BEING HINGED AND LOCKED TO THE FRAMING AS SHOWN HERE-IN.

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PLOT: 1-24		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1821T		REV.	
SHEET NO. 5		OF 12	



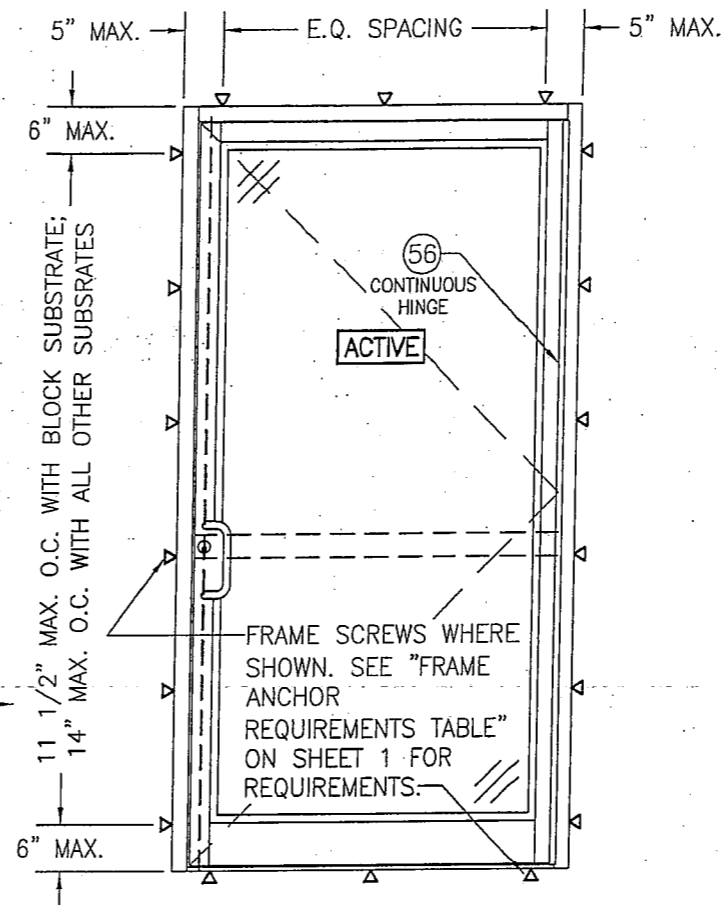
THESE 2 FRAME ANCHORS ARE ONLY REQUIRED WHEN DESIGN PRESSURE EXCEEDS +/-70 PSF (TYP. HEAD AND SILL)

**EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR DOUBLE DOORS
WITH CONTINUOUS HINGES**

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

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, SCREW SPACING MAY BE INCREASED TO 17" O.C. WITH ALL SUBSTRATES



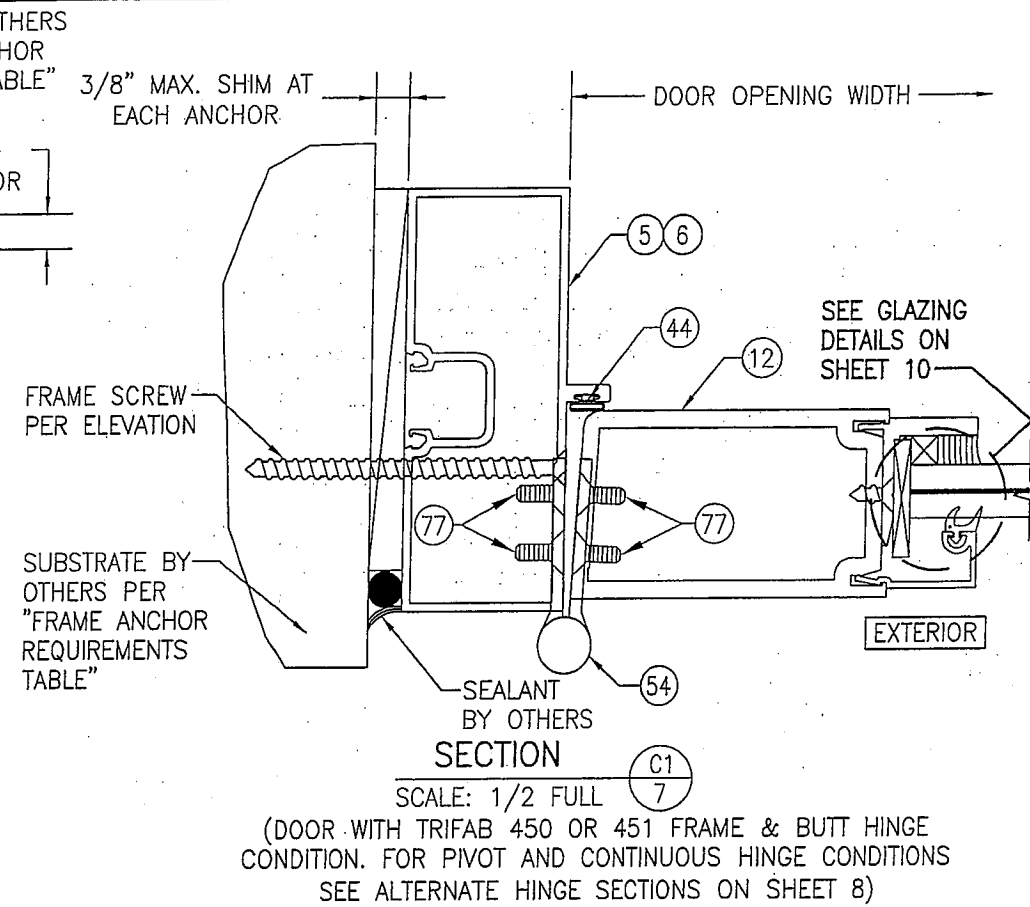
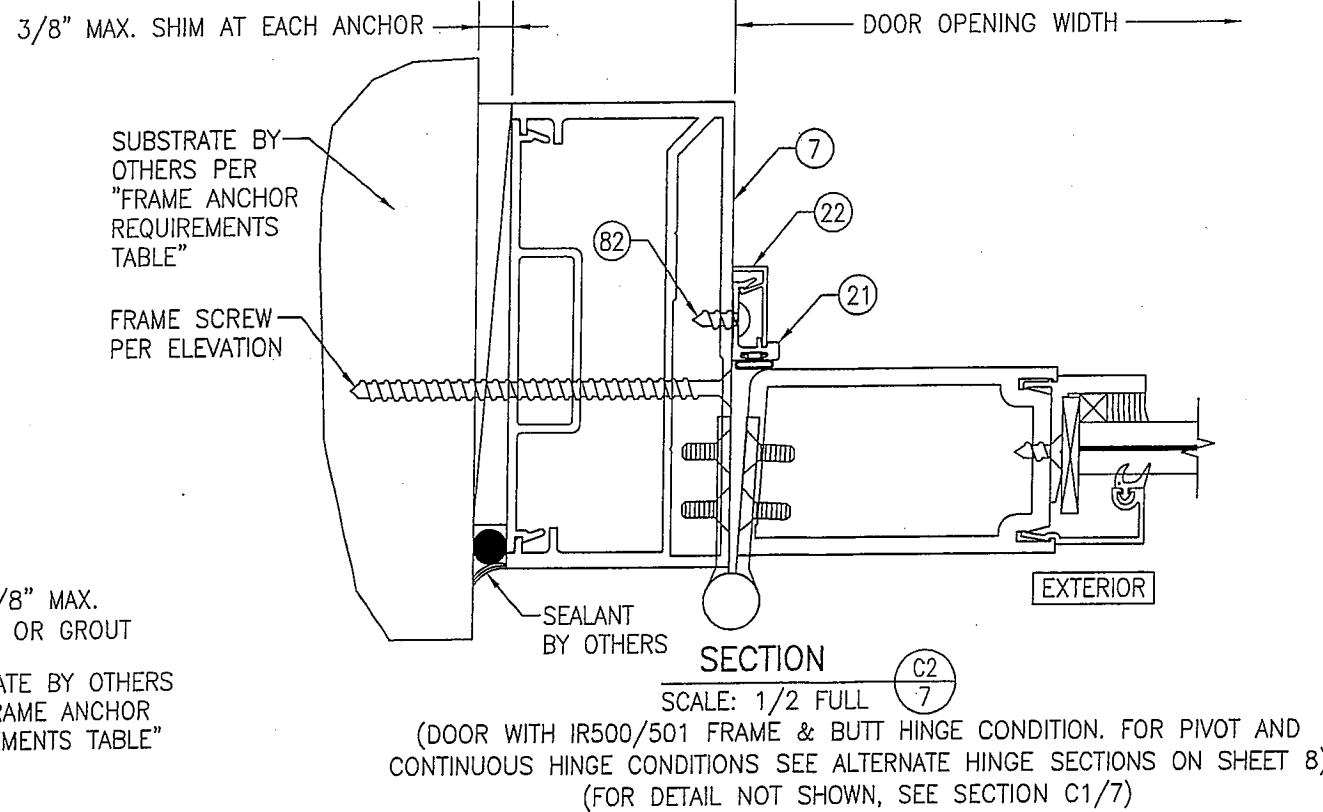
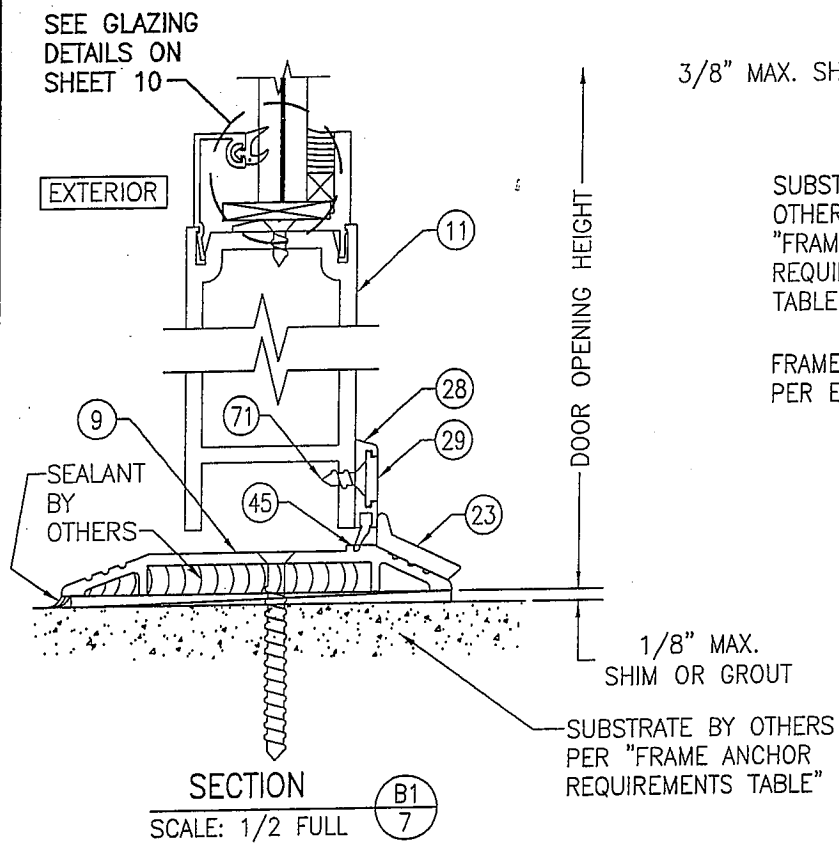
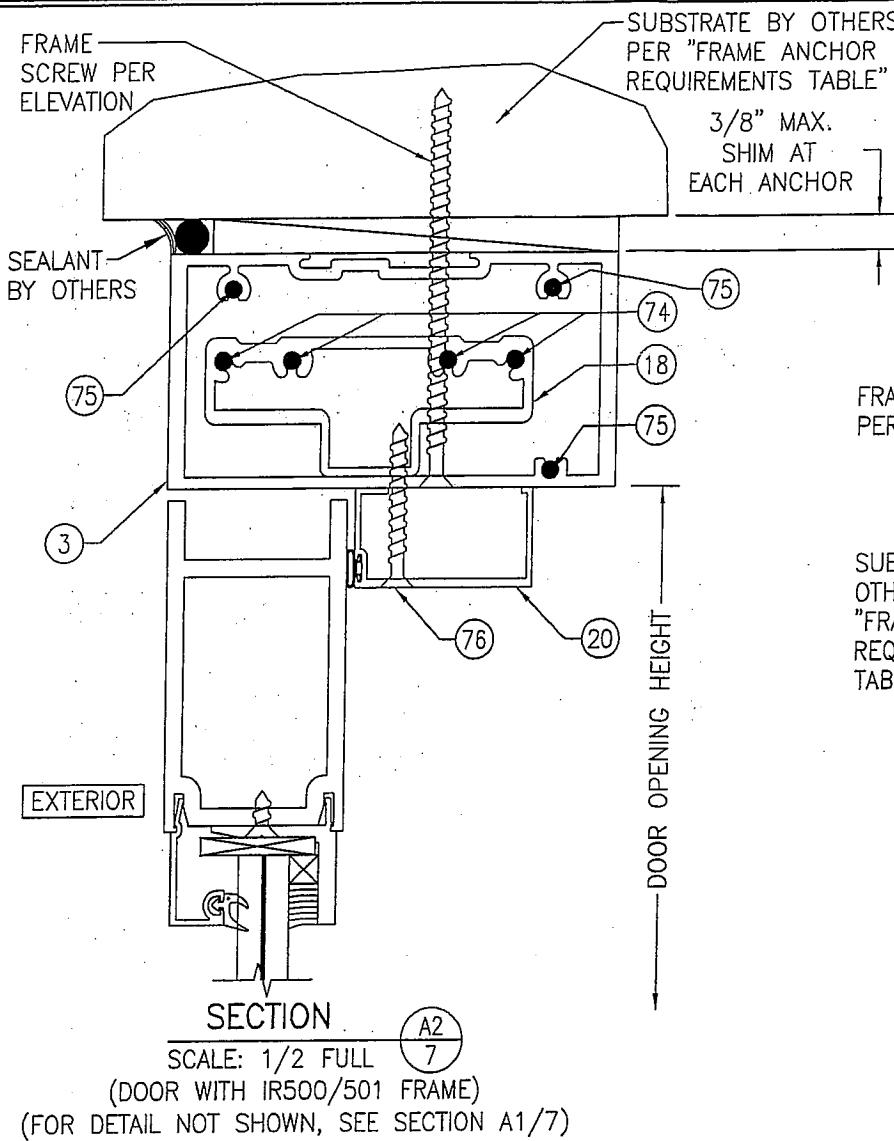
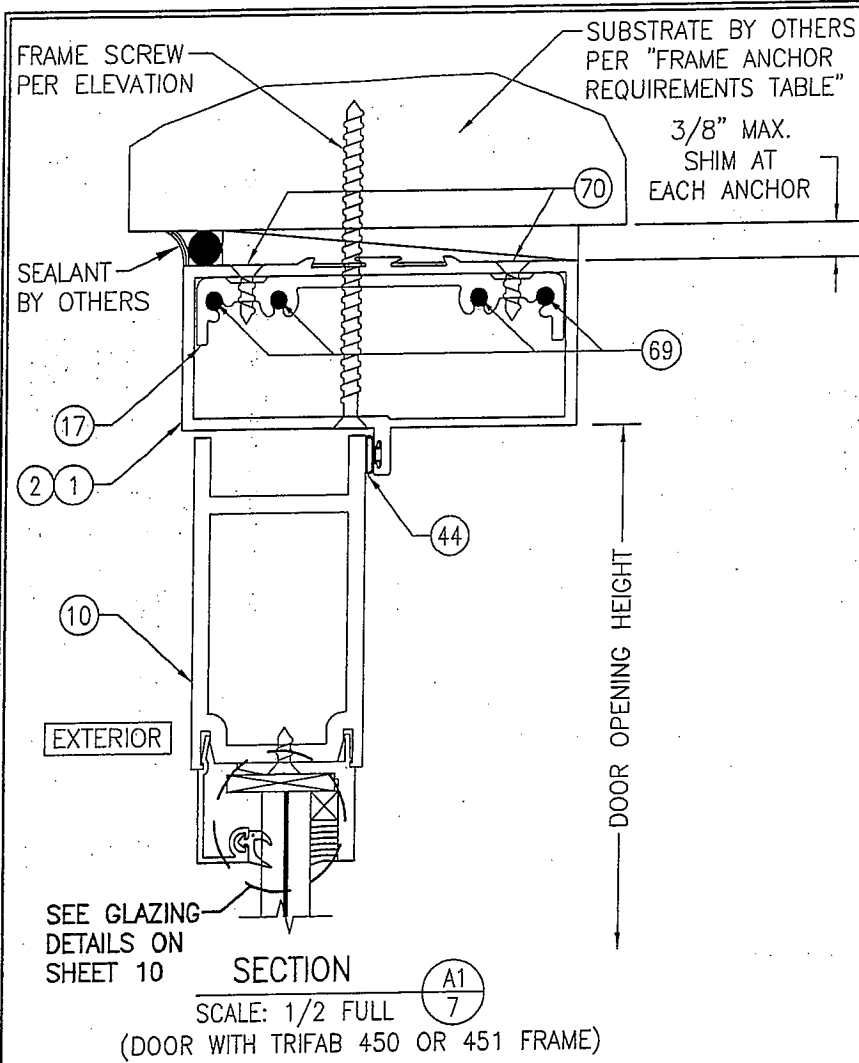
**EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR SINGLE
DOORS WITH CONTINUOUS HINGE**

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

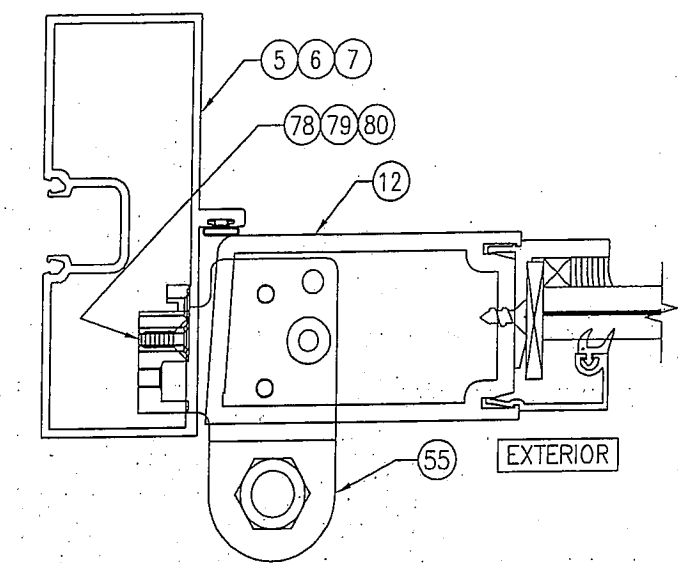
(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

THE CONDITIONS SHOWN IN THESE ELEVATIONS CONSIDER THE PERIMETER FRAMING TO BE INSTALLED TO A PUNCHED WALL OPENING OR CURTAIN WALL SYSTEM OPENING. WHEN DOOR PANELS ARE INSTALLED INTO A 450, 451 OR 500/501 STOREFRONT SYSTEM (NOT A PUNCHED OPENING), THE INSTALLATION REQUIREMENTS OF THE STORE FRONT APPROVAL SHALL CONTROL WITH THE DOOR PANELS BEING HINGED AND LOCKED TO THE FRAMING AS SHOWN HERE-IN.

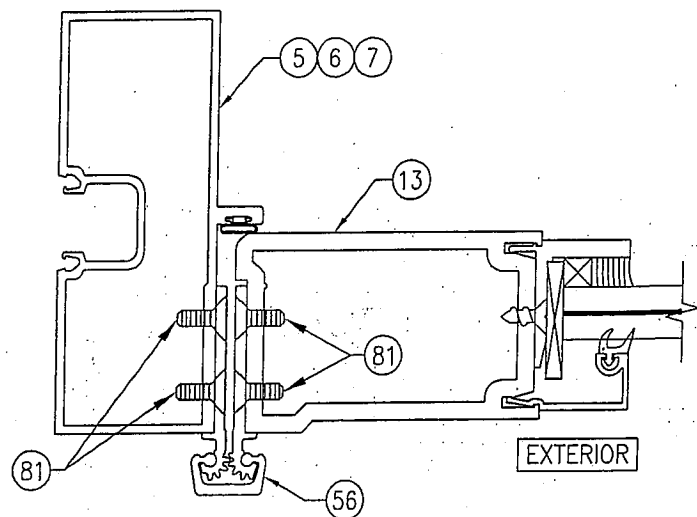
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113487			
DRAWING NO. 1821T		REV.	
SHEET NO. 6		OF 12	



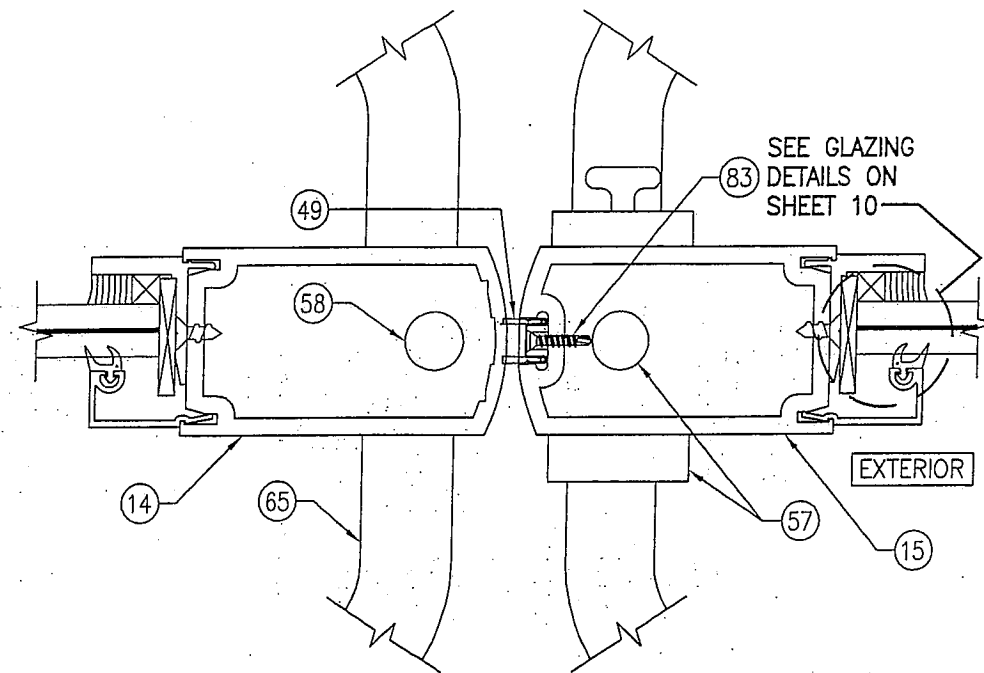
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PLOT: 1=2	DATE: 03/19/13
NO.	REVISION DESCRIPTION
BY	DATE
JOB INFORMATION:	
DRAWING TITLE IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS	
CONSULTANTS KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	MAR 20 2013
WARREN W. SCHAEFER, P.E. P.E. NO. 113497	
DRAWING NO. 1821T	REV.
SHEET NO. 7 OF 12	



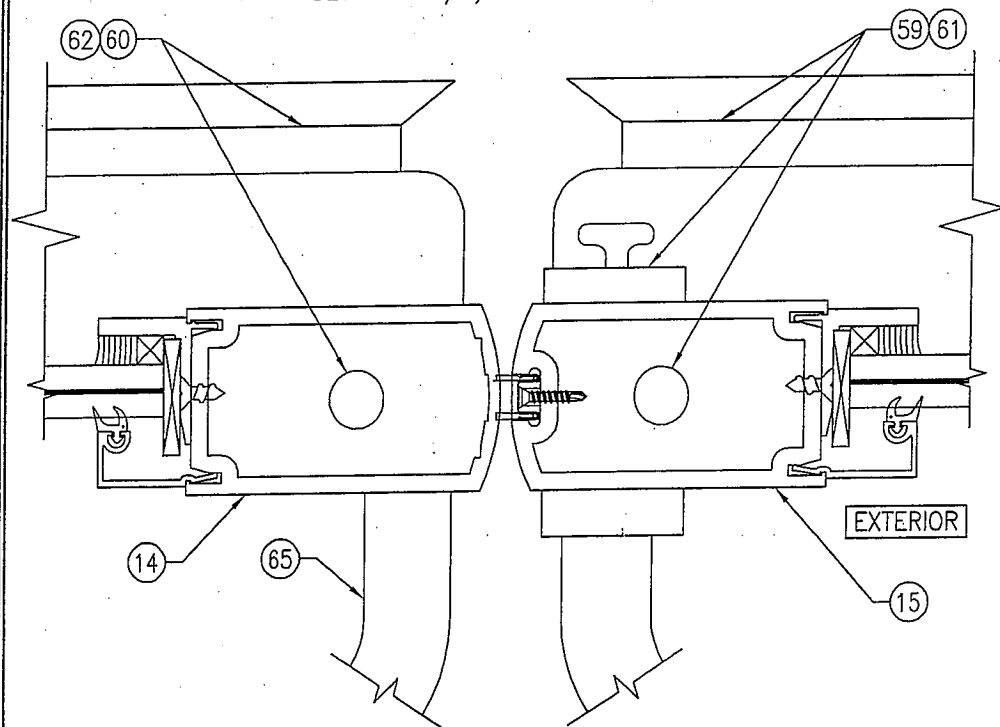
ALTERNATE HINGE SECTION
(PIVOT HINGE CONDITION)
(FOR DETAIL AND INSTALLATION NOT SHOWN, SEE SECTION C1/7)



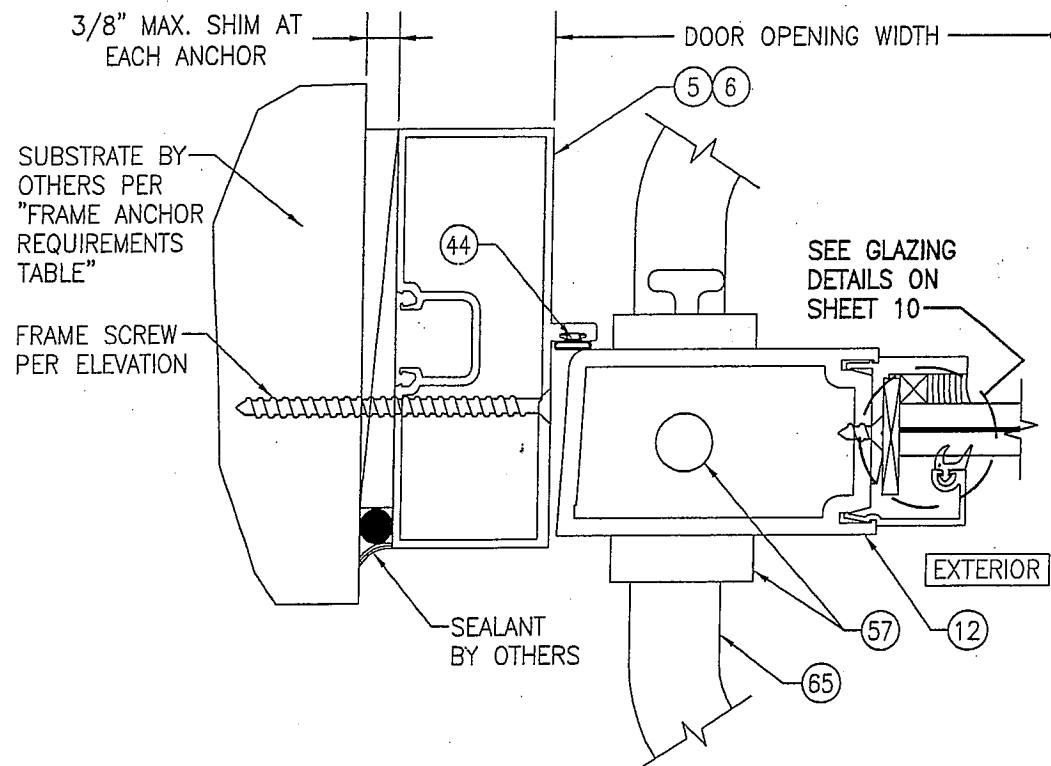
ALTERNATE HINGE SECTION
(CONTINUOUS HINGE CONDITION)
(FOR DETAIL AND INSTALLATION NOT SHOWN, SEE SECTION C1/7)



SECTION
SCALE: 1/2 FULL (D1/8)
(DOOR WITH LOCK OPTION 1)



SECTION
SCALE: 1/2 FULL (D2/8)
(DOOR WITH LOCK OPTIONS 2 & 3)
(FOR DETAIL NOT SHOWN, SEE SECTION D1/8)



SECTION
SCALE: 1/2 FULL (E1/8)
(DOOR WITH TRIFAB 450 OR 451 FRAME & LOCK OPTION 1. FOR LOCK OPTIONS 2 & 3 SEE ALTERNATE LOCK SECTION ON SHEET 9)

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/19/13
NO.	REVISION DESCRIPTION
DATE	BY

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:
KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
770-449-5555

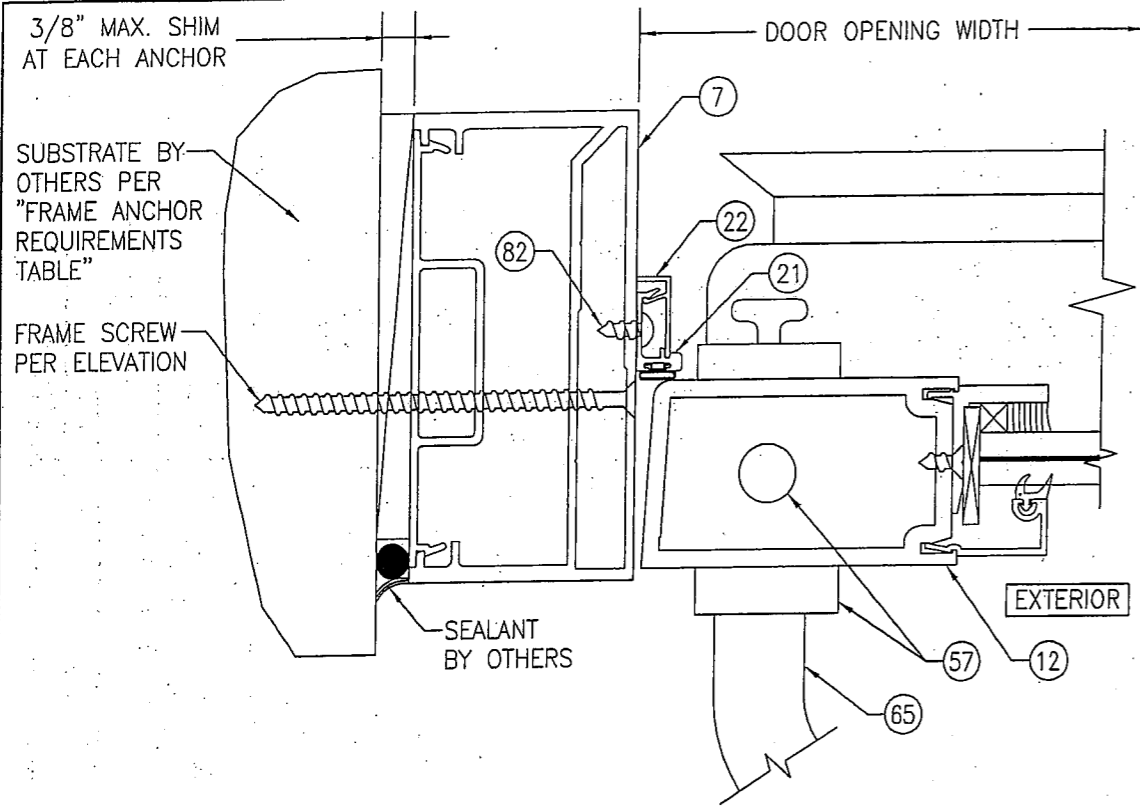
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO.
1821T

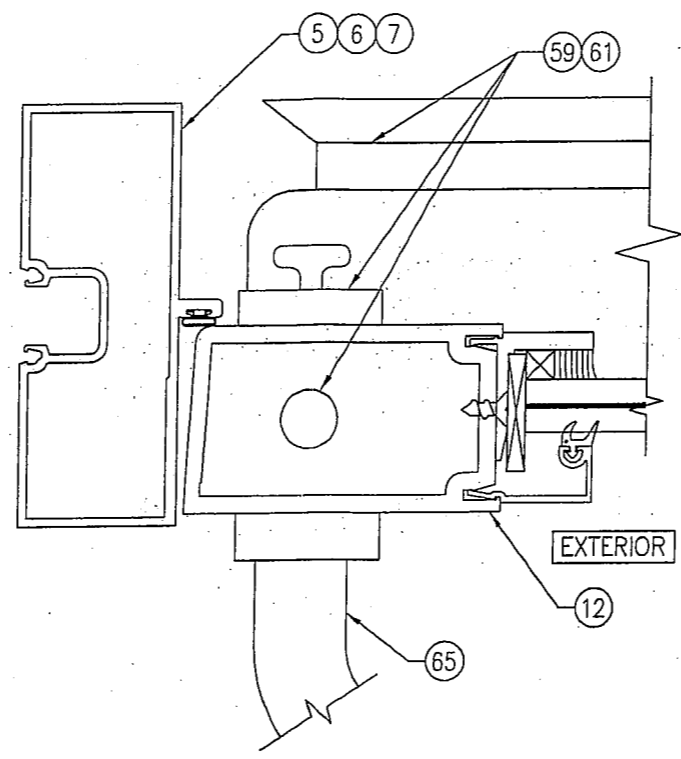
REV.

SHEET NO.
8 OF 12



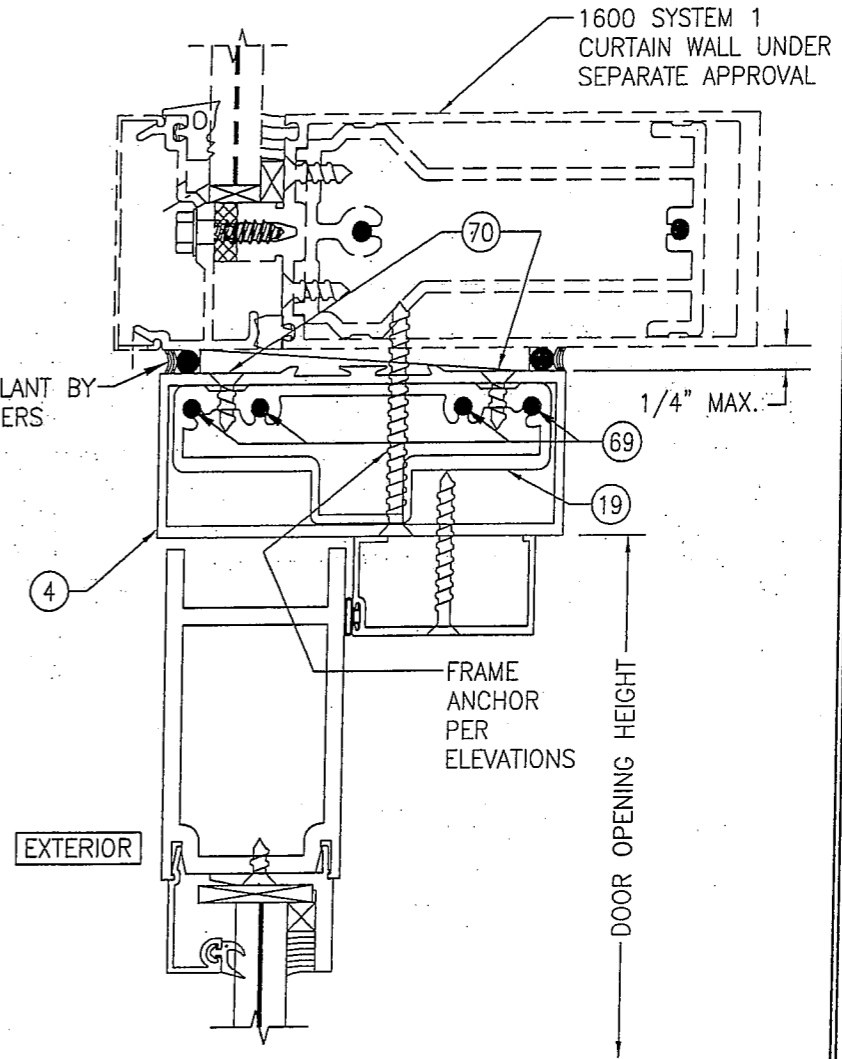
SECTION E2
SCALE: 1/2 FULL 9

(DOOR WITH IR500/501 FRAME & LOCK OPTION 1. FOR LOCK OPTIONS 2 & 3 SEE ALTERNATE LOCK SECTION ON THIS SHEET)
(FOR DETAIL NOT SHOWN, SEE SECTION E1/8)



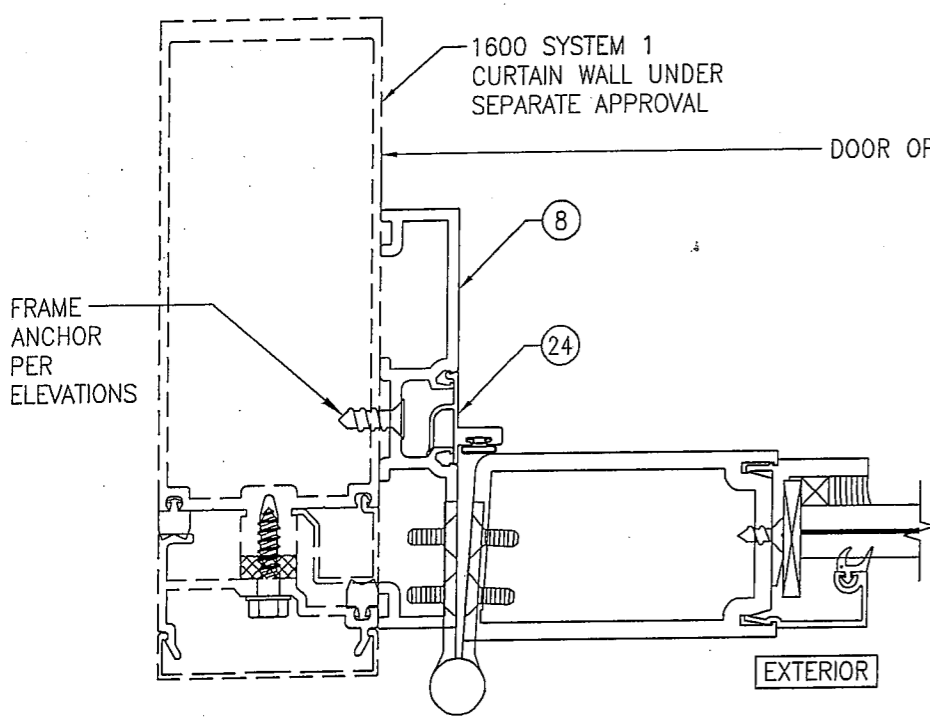
ALTERNATE LOCK SECTION
(LOCK OPTIONS 2 & 3)

(FOR DETAIL AND INSTALLATION NOT SHOWN, SEE SECTION E1/8)



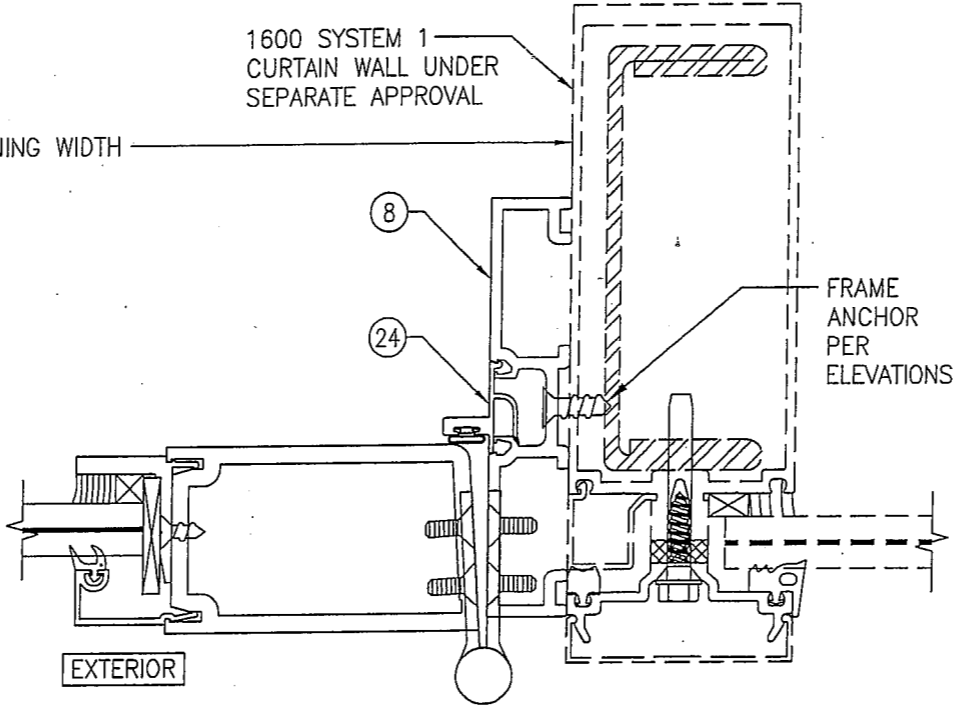
SECTION F
SCALE: 1/2 FULL 9

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION G
SCALE: 1/2 FULL 9

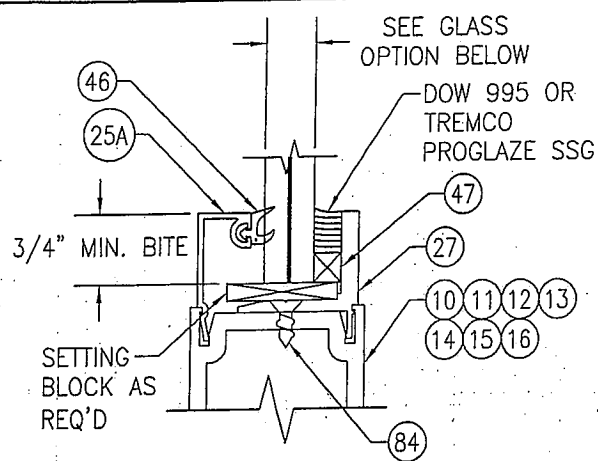
(BUTT HINGE CONDITION SHOWN. PIVOT AND CONTINUOUS HINGE CONDITIONS ALSO APPLY)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION H
SCALE: 1/2 FULL 9

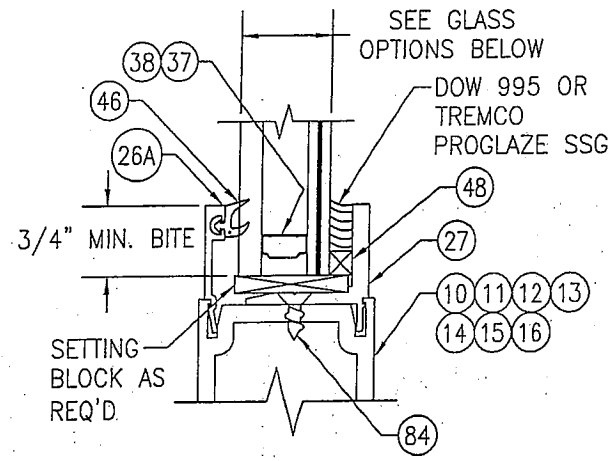
(BUTT HINGE CONDITION SHOWN. PIVOT AND CONTINUOUS HINGE CONDITIONS ALSO APPLY)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION: MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1821T		REV.	
SHEET NO. 9		OF 12	



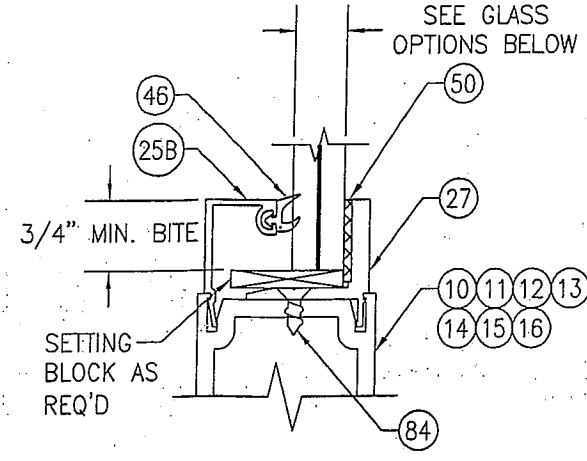
TYPICAL MONOLITHIC GLAZING DETAIL

GLASS OPTION: (WET GLAZED)
OPTION 1: 9/16" THICK LAMINATED GLASS (1/4" HT. ST./0.090" DUPONT SG/1/4" HT. ST.)



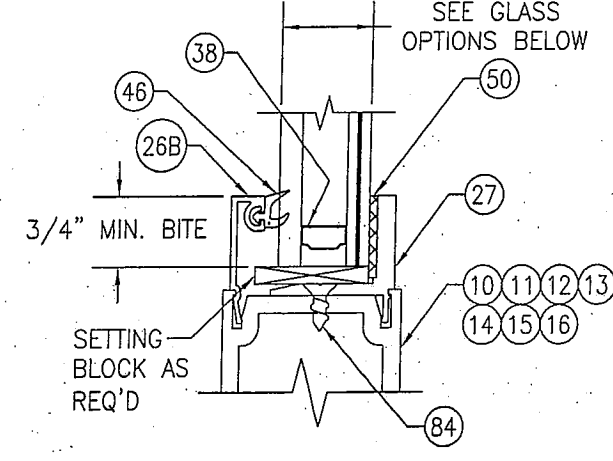
TYPICAL I.G. GLAZING DETAIL

GLASS OPTIONS: (WET GLAZED)
OPTION 2: 1" THICK I.G. LAMINATED GLASS (1/4" TEMP EXTERIOR; 1/2" AIR SPACE; 1/8" HT. ST./0.090" DUPONT SG/1/8" HT. ST. INTERIOR)
OPTION 5: 1" THICK I.G. LAMINATED GLASS (1/4" TEMP EXTERIOR; 1/4" AIR SPACE; 3/16" HT. ST./0.180" DUPONT SG/3/16" HT. ST. INTERIOR)



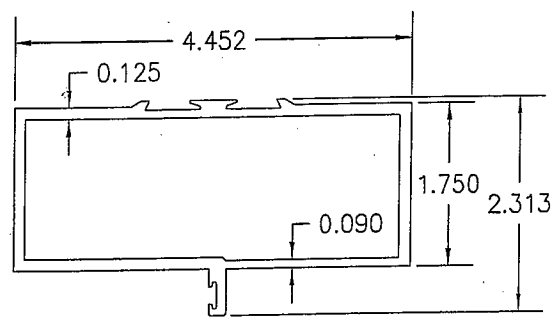
TYPICAL MONOLITHIC GLAZING DETAIL (TAPE GLAZED)

GLASS OPTIONS: (TAPE GLAZED)
OPTION 3: 9/16" THICK LAMINATED GLASS (1/4" HT. ST./0.090" DUPONT BUTACITE PVB/1/4" HT. ST.)

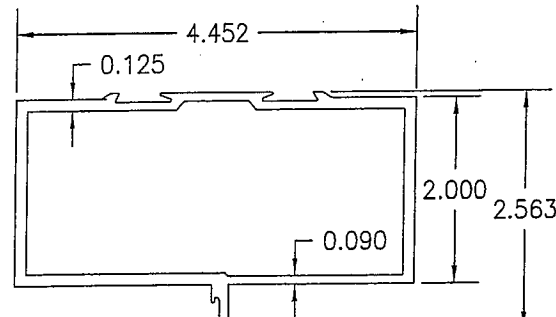


TYPICAL I.G. GLAZING DETAIL (TAPE GLAZED)

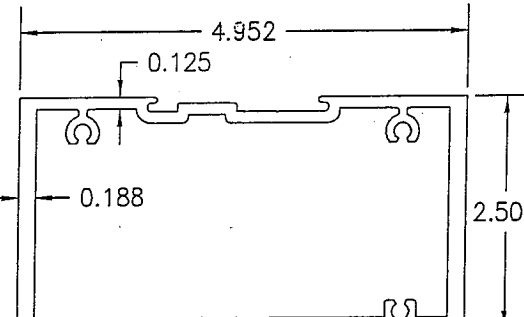
GLASS OPTIONS: (TAPE GLAZED)
OPTION 4: 1" THICK I.G. LAMINATED GLASS (1/4" TEMP EXTERIOR; 1/2" AIR SPACE; 1/8" HT. ST./0.090" DUPONT BUTACITE PVB/1/8" HT. ST. INTERIOR)



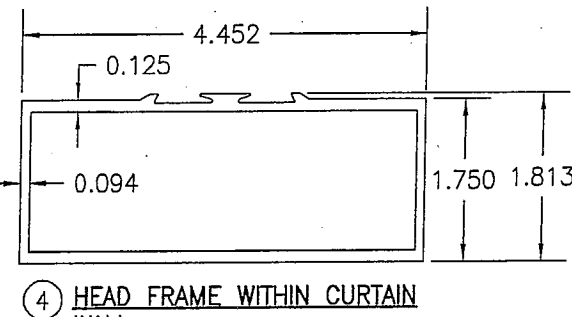
① TRIFAB 450 HEAD FRAMING



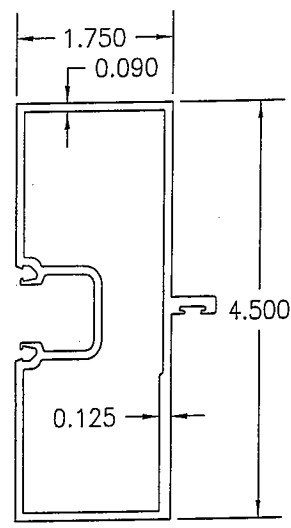
TRIFAB 451 HEAD FRAMING ②



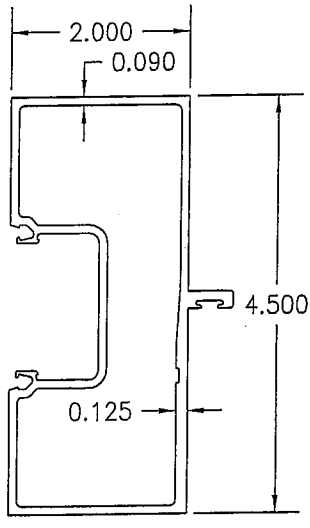
③ IR500/501 HEAD FRAMING



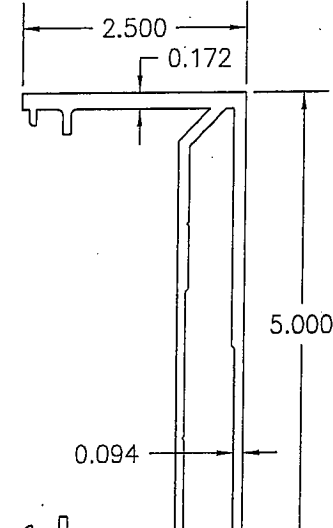
④ HEAD FRAME WITHIN CURTAIN WALL



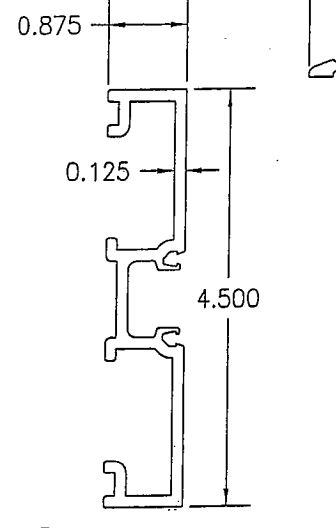
⑤ TRIFAB 450 JAMB FRAMING



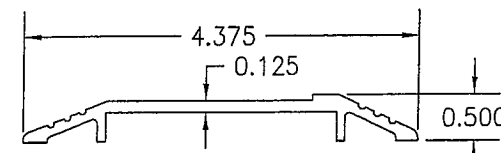
⑥ TRIFAB 451 JAMB FRAMING



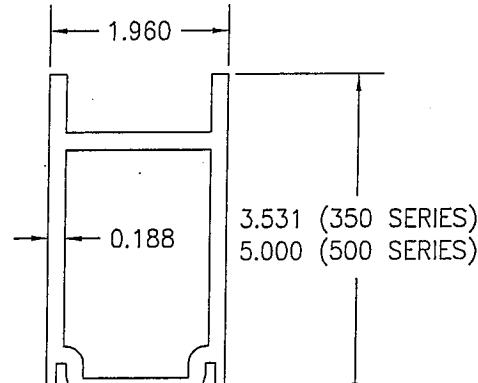
⑦ IR500/501 JAMB FRAMING



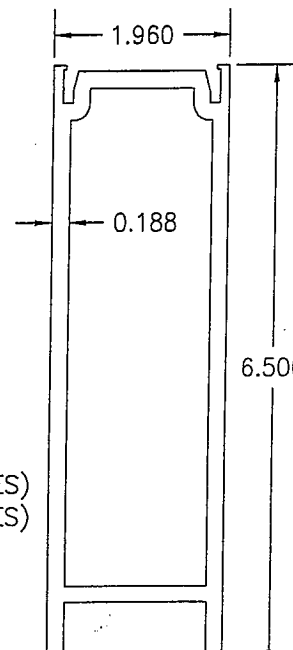
⑧ DOOR ADAPTOR WITHIN CURTAIN WALL SYSTEM



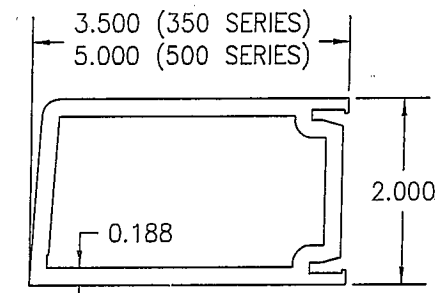
⑨ THRESHOLD



⑩ TOP RAIL

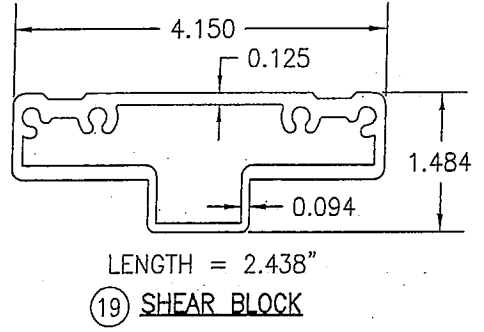
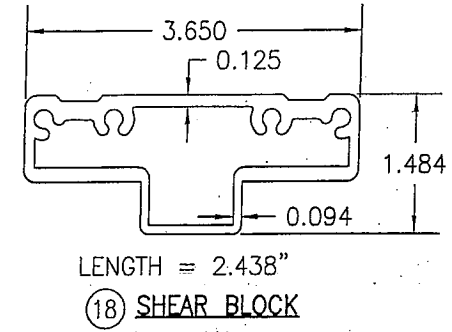
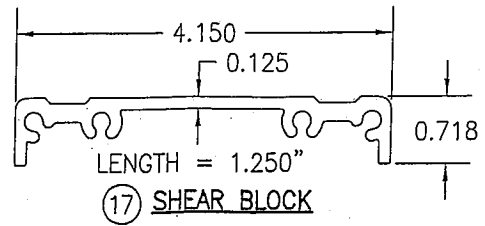
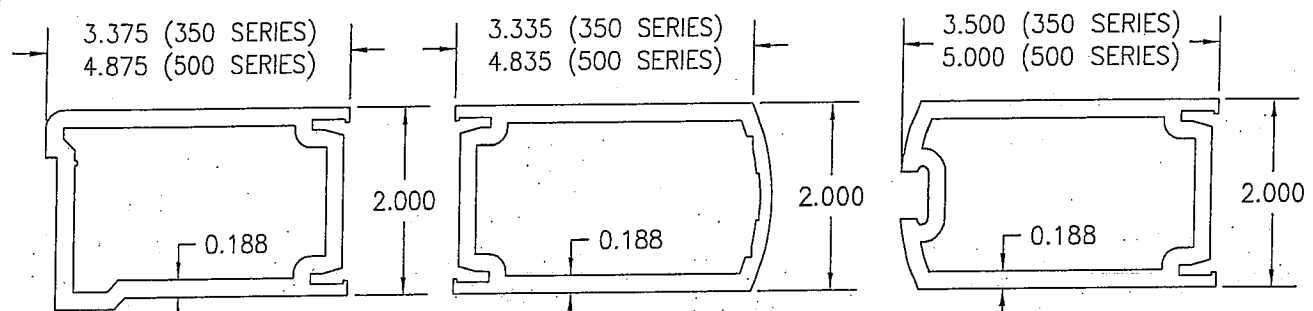


⑪ BOTTOM RAIL



⑫ JAMB STILE USED WITH BUTT OR PIVOT HINGES

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION: MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1821T		REV.	
SHEET NO. 10 OF 12			



(13) JAMB STILE USED WITH CONTINUOUS HINGES

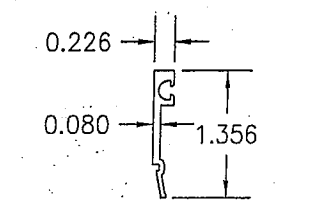
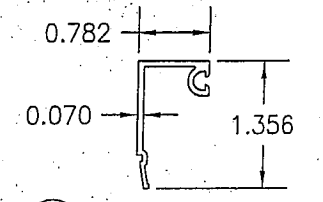
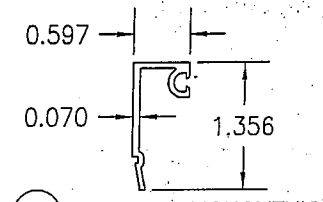
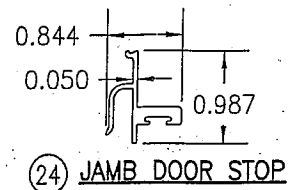
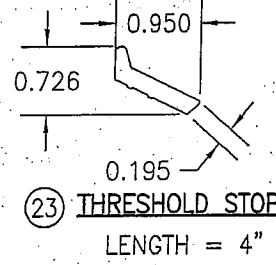
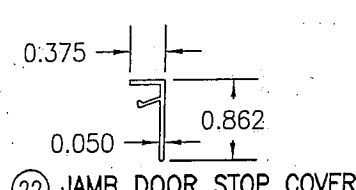
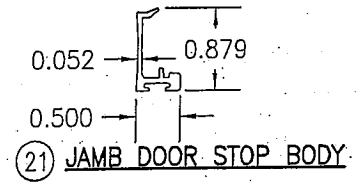
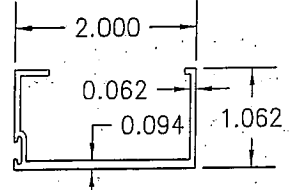
(14) INACTIVE MEETING STILE

(15) ACTIVE MEETING STILE

(17) SHEAR BLOCK

(18) SHEAR BLOCK

(19) SHEAR BLOCK



(20) TOP DOOR STOP

(21) JAMB DOOR STOP BODY

(22) JAMB DOOR STOP COVER

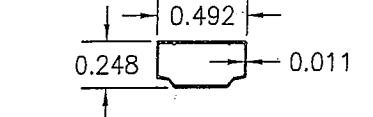
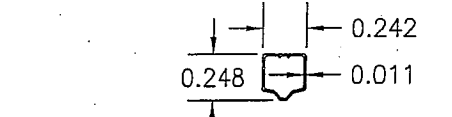
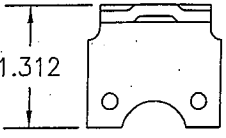
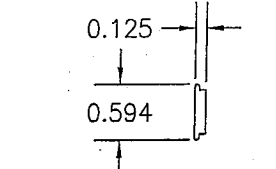
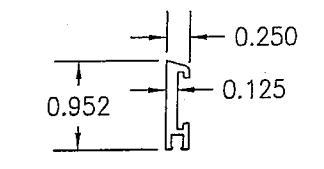
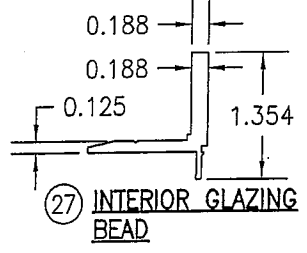
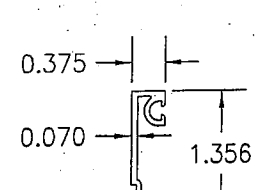
(23) THRESHOLD STOP

(24) JAMB DOOR STOP

(25A) EXTERIOR MONOLITHIC GLAZING BEAD (WET GLAZED)

(25B) EXTERIOR MONOLITHIC GLAZING BEAD (TAPE GLAZED)

(26A) EXTERIOR I.G. GLAZING BEAD (WET GLAZED)



(26B) EXTERIOR I.G. GLAZING BEAD (TAPE GLAZED)

(27) INTERIOR GLAZING BEAD

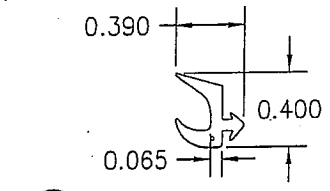
(28) DOOR BOTTOM WEATHER SWEEP BODY

(29) DOOR BOTTOM WEATHER SWEEP SCREW COVER

(30) THRESHOLD CLIP

(37) 1/4" I.G. GLASS SPACER

(38) 1/2" I.G. GLASS SPACER



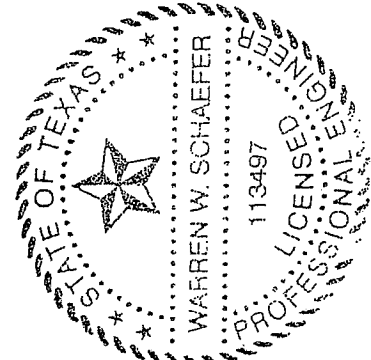
(46) EXTERIOR GLAZING GASKET

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/19/13	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			
JOB INFORMATION: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION MAR 20 2013 WARREN W. SCHAEFER, P.E. P.E. NO. 113497			
DRAWING NO. 1821T		REV.	
SHEET NO. 11 OF 12			

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	TRIFAB 450 HEAD FRAMING	6063-T6 ALUMINUM
2	TRIFAB 451 HEAD FRAMING	6063-T6 ALUMINUM
3	IR500/501 HEAD FRAMING	6063-T6 ALUMINUM
4	HEAD FRAME WITHIN CURTAIN WALL SYSTEM	6063-T6 ALUMINUM
5	TRIFAB 450 JAMB FRAMING	6063-T6 ALUMINUM
6	TRIFAB 451 JAMB FRAMING	6063-T6 ALUMINUM
7	IR500/501 JAMB FRAMING	6063-T6 ALUMINUM
8	DOOR ADAPTOR WITHIN CURTAIN WALL SYSTEM	6063-T6 ALUMINUM
9	THRESHOLD	6063-T6 ALUMINUM
10	TOP RAIL	6063-T6 ALUMINUM
11	BOTTOM RAIL	6063-T6 ALUMINUM
12	JAMB STILE USED WITH BUTT OR PIVOT HINGES	6063-T6 ALUMINUM
13	JAMB STILE USED WITH CONTINUOUS HINGES	6063-T6 ALUMINUM
14	INACTIVE MEETING STILE	6063-T6 ALUMINUM
15	ACTIVE MEETING STILE	6063-T6 ALUMINUM
17	SHEAR BLOCK	6063-T6 ALUMINUM
18	SHEAR BLOCK	6063-T6 ALUMINUM
19	SHEAR BLOCK	6063-T6 ALUMINUM
20	TOP DOOR STOP	6063-T6 ALUMINUM
21	JAMB DOOR STOP BODY	6063-T6 ALUMINUM
22	JAMB DOOR STOP COVER	6063-T6 ALUMINUM
23	THRESHOLD STOP	6063-T6 ALUMINUM (PLACED @ MID-SPAN OF SILL)
24	JAMB DOOR STOP	6063-T6 ALUMINUM
25A	EXTERIOR MONOLITHIC GLAZING BEAD (WET GLAZED)	6063-T6 ALUMINUM
25B	EXTERIOR MONOLITHIC GLAZING BEAD (TAPE GLAZED)	6063-T6 ALUMINUM
26A	EXTERIOR I.G. GLAZING BEAD (WET GLAZED)	6063-T6 ALUMINUM
26B	EXTERIOR I.G. GLAZING BEAD (TAPE GLAZED)	6063-T6 ALUMINUM
27	INTERIOR GLAZING BEAD	6063-T6 ALUMINUM
28	DOOR BOTTOM WEATHER SWEEP BODY	6063-T6 ALUMINUM
29	DOOR BOTTOM WEATHER SWEEP SCREW COVER	6063-T6 ALUMINUM
30	THRESHOLD CLIP	1010-1020 H.R. STEEL
37	1/4" I.G. GLASS SPACER	3005 OR 3105 ALUMINUM
38	1/2" I.G. GLASS SPACER	3005 OR 3105 ALUMINUM
SEALS & SEALANTS		
44	DOOR BULB WEATHERING	ALCRYN DUROMETER 70 +/-5 & RIGID PVC
45	DOOR SWEEP	NEOPRENE
46	EXTERIOR GLAZING GASKET	TREMCO TR-13536E EPDM DUROMETER 70 +/-5
47	5/16" X 5/16" GLAZING TAPE	POLYURETHANE FAOM DUROMETER 30 +/-5
48	1/4" X 1/4" GLAZING TAPE	POLYURETHANE FAOM DUROMETER 30 +/-5
49	ADJUSTABLE ASTRAGAL WEATHERING	5052-H32 ALUMINUM/NYLON/POLYURETHANE/EPDM
50	0.090" X 0.875" GLAZING TAPE	3M CONFORMABLE ACRYLIC FOAM
HARDWARE		
54	BUTT HINGE	HAGER 037-264
55	TOP OFFSET PIVOT HINGE	KAWNEER NO. 050-322
	INTERMEDIATE PIVOT HINGE	KAWNEER NO. 037-233/037-234
	BOTTOM OFFSET PIVOT HINGE	KAWNEER NO. 050-326/050-327
56	CONTINUOUS HINGE	HAGER/ROTON 050-820

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
HARDWARE CONTINUED		
57	ACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 1)	ADAMS-RITE 1850 3-POINT LOCK SYSTEM WITH KAWNEER'S CYLINDER, THUMBTURN & PUSH PACKAGE
58	INACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 1)	ADAMS-RITE FLUSH BLOTS 50-079 TOP FLUSH BOLT 50-075 BOTTOM FLUSH BOLT
59	ACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 2)	KAWNEER 1686 PANIC DEVICE SYSTEM WITH KAWNEER'S DEADBOLT (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS)
60	INACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 2)	KAWNEER 1686 PANIC DEVICE (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS)
61	ACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 3)	FALCON HH 1690 OR VON DUPRIN HH9947 CONSEALED VERTICAL ROD PANIC DEVICE SYSTEM WITH SCHLAGE'S DEADBOLT (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS)
62	INACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 3)	FALCON HH 1690 OR VON DUPRIN HH9947 CONSEALED VERTICAL ROD PANIC DEVICE SYSTEM (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS)
65	PUSH-PULL HANDLE	AS REQ'D
FASTENERS		
69	NO. 10 X 1 19/32" PHTF SCREW	4 PER SHEAR BLOCK
70	NO. 10 X 9/16" FHTF SCREW	2 PER SHEAR BLOCK
71	NO. 6 X 3/8" FHTF SCREW	WITHIN 2" FROM ENDS & 10" MAX. O.C.
74	NO. 12 X 1 7/8" FHTF SCREW	4 PER SHEAR BLOCK
75	NO. 12 X 1" PHTF SCREW	3 PER HORIZONTAL
76	NO. 8 X 3/8" PHTF SCREW	WITHIN 1" FROM ENDS & 16" MAX. O.C.
77	NO. 12-24 X 9/16" SCREW	8 PER HINGE
78	5/16"-18 X 5/8" SCREW	2 PER TOP PIVOT HINGE
79	NO. 12-24 X 9/16" SCREW	2 PER INTERMEDIATE PIVOT HINGE
80	1/4-20 X 3/8" SCREW	3 PER BOTTOM PIVOT HINGE
81	NO. 12-24 X 13/32" SCREW	2 9/16" FROM ENDS & 5 1/8" MAX. O.C.
82	NO. 8 X 3/8" FHTF SCREW	WITHIN 1" FROM ENDS & 9" MAX. O.C.
83	NO. 6-18 FHTF SCREW	10 PER LEAF
84	NO. 10 X 1/2" FHTF SCREW	WITHIN 3" FROM ENDS & 11 1/8" MAX. O.C.

Provide info for submitted system and stamp of Louisiana engineer JHC 02/06/2017



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.	PLOT: 1=2	DATE: 03/19/13		
DATE	BY	REVISION DESCRIPTION	NO.		
JOB INFORMATION:					
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS			KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555		
CONSULTANTS			W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)		
DRAWING TITLE			7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		
CERTIFICATION					
MAR 20 2013					
WARREN W. SCHAEFER, P.E. P.E. NO. 113497					
DRAWING NO. 1821T		REV.			
SHEET NO. 12		OF 12			

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GLASS PERFORMANCE DATA FOLLOWS



STAR GLASS INC.

1000 WESTBANK EXPY.
GRETNA, LA 70053
P(504) 368-8826
F(504) 367-5802

Laurel School Refurbishment
820 Jackson Ave New Orleans, LA
70130 RSD Project No.
2011-0891-0001

DATE DRAWN:
11-21-2016

REVISION DATE:



PROJECT NUMBER:
**

DRAWN BY:
P.S.

SHEET

000

Aura at College Park
Toronto, ON
Architect: Graziani + Corazza



spandrel glass



Oldcastle BuildingEnvelope

Engineering your creativity™

Offered monolithically, in insulating glass units or as laminated glass, spandrel glass is typically specified for a building's non-vision areas to mask construction materials. New, and even retrofit buildings, can be constructed entirely of glass by using a combination of vision and spandrel glass. Typical color samples are shown below. Black is also available, as well as an array of standard and custom colors.



Due to the limitations of the printing process, colors above may vary. Consult factory for actual color samples.

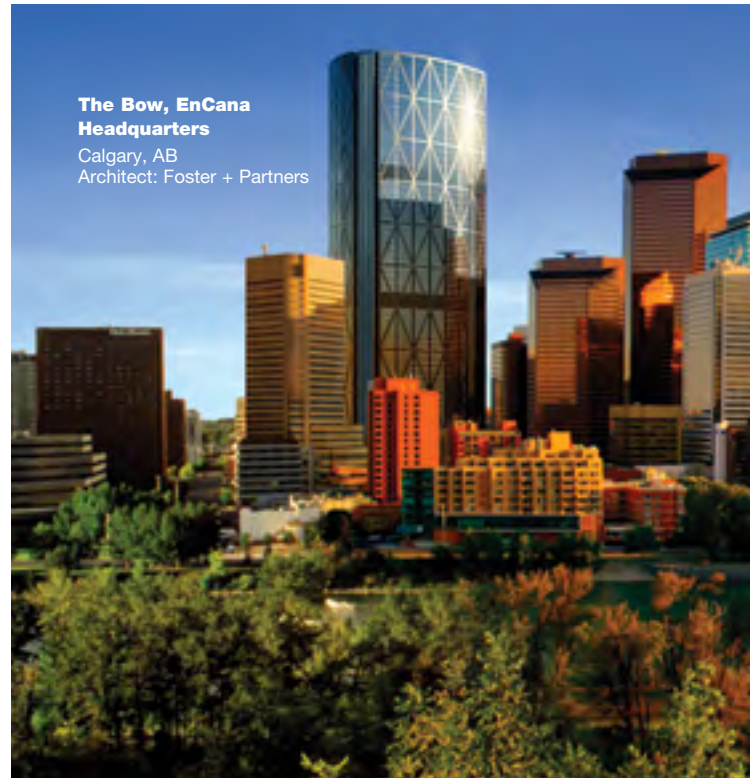
Provide samples for selection
JHC 02/06/2017

Spandrel Applications

Spandrel glass applications range from functional to decorative:*

- Masking structural components while maintaining a consistent glass look
- Custom Color Applications
- Non-vision Areas
- Curtain Walls
- Storefronts
- Wall Cladding

* Spandrel glass is not intended for use in vision applications.



The Bow, EnCana Headquarters
Calgary, AB
Architect: Foster + Partners

Note to Specifiers:

The specifications below are suggested as desirable inclusions in glass and glazing specifications (section 08 81 00), but are not intended to be complete. An appropriate and qualified Architect or Engineer must verify suitability of a particular product for use in a particular application as well as review final specifications. Oldcastle BuildingEnvelope® assumes no responsibility or liability for the information included or not included in these specifications.

PRODUCTS

Approved Glass Fabricator Oldcastle BuildingEnvelope®
Glass Description FLOAT GLASS

1. USA - Annealed float glass shall comply with ASTM C1036, Type I, Class 1 (clear), Class 2 (tinted), Quality-Q3. Canada - Annealed float glass shall comply with CAN/CGSB-12.3-M, Quality-Glazing.

2. USA- Heat-strengthened float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind HS. Canada - Heat-strengthened float glass shall comply with CAN/CGSB-12.9-M, Type 2-Heat-Strengthened Glass, Class A-Float Glass.

3. USA - Tempered float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind FT. Canada - Tempered float glass shall comply with CAN/CGSB-12.1-M, Type 2-Tempered Glass, Class B-Float Glass.

4. USA - Laminated glass to comply with ASTM C1172. Canada - Laminated glass to comply with CAN/CGSB-12.1-M, Type 1-Laminated Glass, Class B-Float Glass.

5. Glass shall be annealed, heat-strengthened or tempered as required by codes, or as required to meet thermal stress and wind loads.

Monolithic Laminated Glass (Vertical) GENERAL

1. Laminated glass products to be fabricated in autoclave with heat, plus pressure, free of foreign substances and air pockets.

2. Interlayer material: Extruded sheet interlayer.

LAMINATED VISION LITE PERFORMANCE CHARACTERISTICS

1. Laminated Lite

19/32" Laminate - 1/4" Clear - 0.030" Vanceva® Arctic Snow (2165) PVB - 0.060" Clear PVB - 1/4" Clear

2. Performance Characteristics

Thermal		Optical	
Winter U-factor/U-value:	0.93	Visible Light Transmittance:	62%
Summer U-factor/U-value:	0.85	Visible Light Reflectance (outside):	7%
Solar Heat Gain Coefficient:	0.60	Visible Light Reflectance (inside):	7%
Shading Coefficient:	0.69	Total Solar Transmittance:	44%
Relative Heat Gain (Btu/hr-ft²):	150	Total Solar Reflectance (outside):	5%
Light to Solar Gain:	1.03	Ultraviolet Transmittance:	<1%

Contact Oldcastle BuildingEnvelope® at 866-Oldcastle (653-2278) for samples or additional information concerning performance, strength, deflection, thermal stress or application guidelines. GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 6.3 program (version 6.3.74.0) with Environmental Conditions set at NFRC 100-2010. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 44.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 44.0; 2. LBNL Optics 6 (version 6.0 Maintenance Pack 1); 3. Vendor supplied spectral data files; 4. Vendor supplied data. 5. Based on vendor testing, clear acid-etched glass performance data is estimated using regular clear glass of equivalent thickness. Thermal values are in Imperial units.

Provide samples for selection
JHC 02/06/2017

Note to Specifiers:

The specifications below are suggested as desirable inclusions in glass and glazing specifications (section 08 81 00), but are not intended to be complete. An appropriate and qualified Architect or Engineer must verify suitability of a particular product for use in a particular application as well as review final specifications. Oldcastle BuildingEnvelope® assumes no responsibility or liability for the information included or not included in these specifications.

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3. USA - Tempered float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind FT. Canada - Tempered float glass shall comply with CAN/CGSB-12.1-M, Type 2-Tempered Glass, Class B-Float Glass.

4. USA - Laminated glass to comply with ASTM C1172. Canada - Laminated glass to comply with CAN/CGSB-12.1-M, Type 1-Laminated Glass, Class B-Float Glass.

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Monolithic Laminated Glass (Vertical) GENERAL

1. Laminated glass products to be fabricated in autoclave with heat, plus pressure, free of foreign substances and air pockets.

2. Interlayer material: Extruded sheet interlayer.

LAMINATED VISION LITE PERFORMANCE CHARACTERISTICS

1. Laminated Lite

19/32" Laminate - 1/4" Clear - 0.090" Clear PVB - 1/4" Clear

2. Performance Characteristics

Thermal		Optical	
Winter U-factor/U-value:	0.92	Visible Light Transmittance:	86%
Summer U-factor/U-value:	0.84	Visible Light Reflectance (outside):	8%
Solar Heat Gain Coefficient:	0.73	Visible Light Reflectance (inside):	8%
Shading Coefficient:	0.84	Total Solar Transmittance:	64%
Relative Heat Gain (Btu/hr-ft ²):	181	Total Solar Reflectance (outside):	6%
Light to Solar Gain:	1.18	Ultraviolet Transmittance:	<1%

Contact Oldcastle BuildingEnvelope® at 866-Oldcastle (653-2278) for samples or additional information concerning performance, strength, deflection, thermal stress or application guidelines. GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 6.3 program (version 6.3.74.0) with Environmental Conditions set at NFRC 100-2010. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 44.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 44.0; 2. LBNL Optics 6 (version 6.0 Maintenance Pack 1); 3. Vendor supplied spectral data files; 4. Vendor supplied data. 5. Based on vendor testing, clear acid-etched glass performance data is estimated using regular clear glass of equivalent thickness. Thermal values are in Imperial units.

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GLASS PERFORMANCE DATA FOLLOWS



STAR GLASS INC.

1000 WESTBANK EXPY.
GRETNA, LA 70053
P(504) 368-8826
F(504) 367-5802

Laurel School Refurbishment
820 Jackson Ave New Orleans, LA
70130 RSD Project No.
2011-0891-0001

DATE DRAWN:
11-21-2016

REVISION DATE:



PROJECT NUMBER:
**

DRAWN BY:
P.S.

SHEET

000

MAPES-R™



THE "GREEN" SOLUTION FOR GLAZING APPLICATIONS

With insulation values up to R=27.9, Mapes-R panels offer a wide variety of solutions to improve the thermal efficiency of window, spandrel, curtain wall and glazing applications. Mapes-R panels can be manufactured to match any architectural finish including Kynar, anodized, porcelain, and baked enamel. In addition to thermal improvement, Mapes-R panels can meet local building codes for sound, fire and impact resistance.

APPLICATIONS

- Passive Solar Control
- Window Replacement
- Metal Spandrel Panel
- Insulated Spandrel Glass
- Curtain Wall
- Transoms
- Door Sidelights

FEATURES

- High Thermal Values—
R up to 27.9
- Increased Energy
Efficiency
- More Design Options
(vs. Glass)
 - Impact Resistant
 - Fire Resistant
 - Graffiti Proof
- 25 Year Lamination
Warranty
- Lower Heating/
Cooling Costs
- Custom Colors



MAPES-R™

TECHNICAL DATA

LEED CONTRIBUTIONS

Energy & Atmosphere

1-10 points-Two {2} points mandatory

EA Credit 1.1 Optimize Energy Performance

Achieving increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.

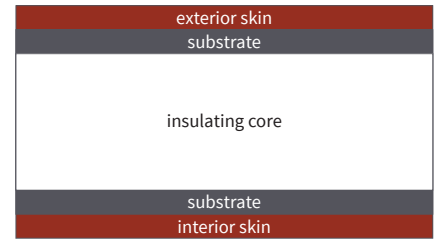
Indoor Environmental Quality

One {1} Point

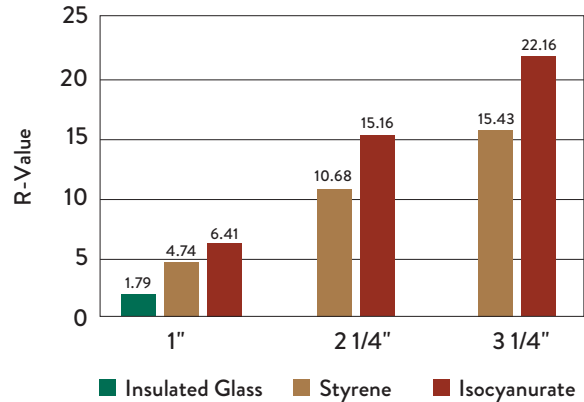
EQ Credit Thermal Comfort, Design

Provide for a comfortable thermal environment that supports the productivity and well-being of the building occupants

TYPICAL CROSS SECTION



MAPES PANELS VS. INSULATED GLASS



SELECTION GUIDE

SKINS	THICKNESS	TEXTURE		STANDARD COLORS	CUSTOM COLORS	AVAILABLE WIDTHS		FINISH WARRANTY
		EMBOSSED	SMOOTH			48"	60"	
Porcelain on Steel	0.014		•	8	•	•	•	20
Standard .032 Kynar	0.032	•	•	18		•	•	20
Custom Kynar	0.036 - 0.125	•	•		•	•	•	10
Spandrel Glass	0.25		•	8	•	•	•	5
Colorlume E	0.012	•		6		•	•	5
Colorlume S	0.022		•	2		•	•	5
.025 Clear Anodized (Coil)	0.025		•	1		•	•	N/A
.025 Bronze Anodized (Coil)	0.025		•	1		•	•	N/A
Class 1 Anodized	0.036 - 0.125	•	•		•	•	•	

SUBSTRATES	THICKNESS	TEXTURE	STANDARD COLORS	CUSTOM COLORS	AVAILABLE WIDTHS		FINISH WARRANTY	LAMINATION WARRANTY
					48"	60"		
1/8" Hardboard	0.125		MOST ECONOMICAL		•	•	•	25
3/16" Hardboard	0.187		MOST ECONOMICAL		•	•	•	25
1/2" Gypsum	0.5		FIRE RESISTANT		•	•	•	25
Cement Board	4mm		WATER/IMPACT RESISTANT		•	•	•	25
Corelite (H.D.P.E.)	4mm		WATER RESISTANT		•	•	•	10
Solid Plastic (SPS)	0.125 & 0.187		WATER/IMPACT RESISTANT		•	•	•	5

CORES

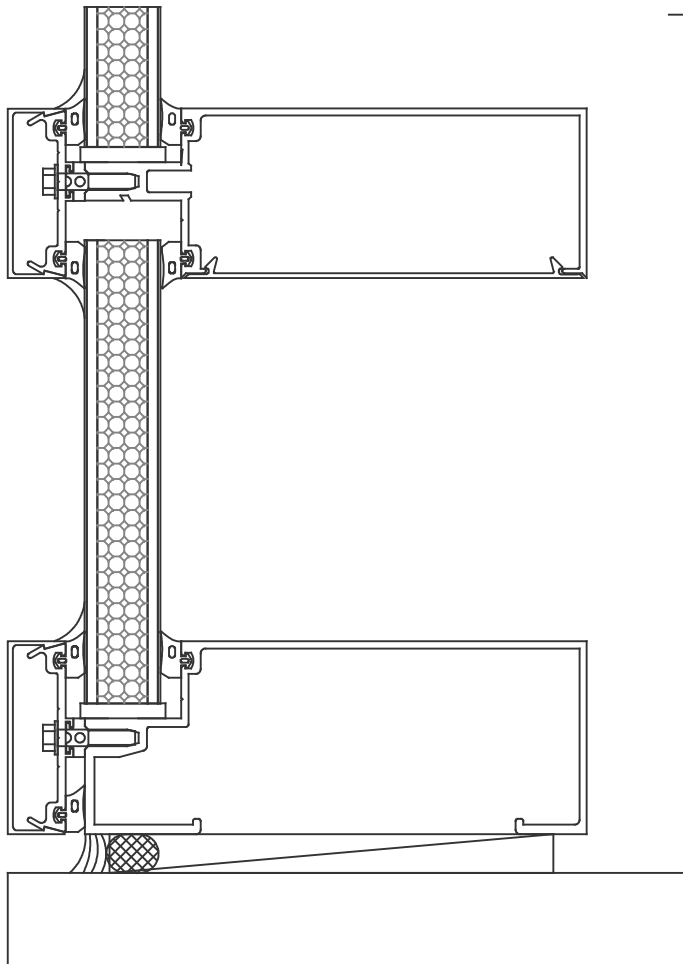
2# Density Polystyrene	most cost effective per R-Value (4.74 - 20.31 R-Value)
Isocyanurate	most insulation per inch (6.41 - 27.79 R-Value)
Micore	Class A Fire Rated (3.05 - 15.50 R-Value)



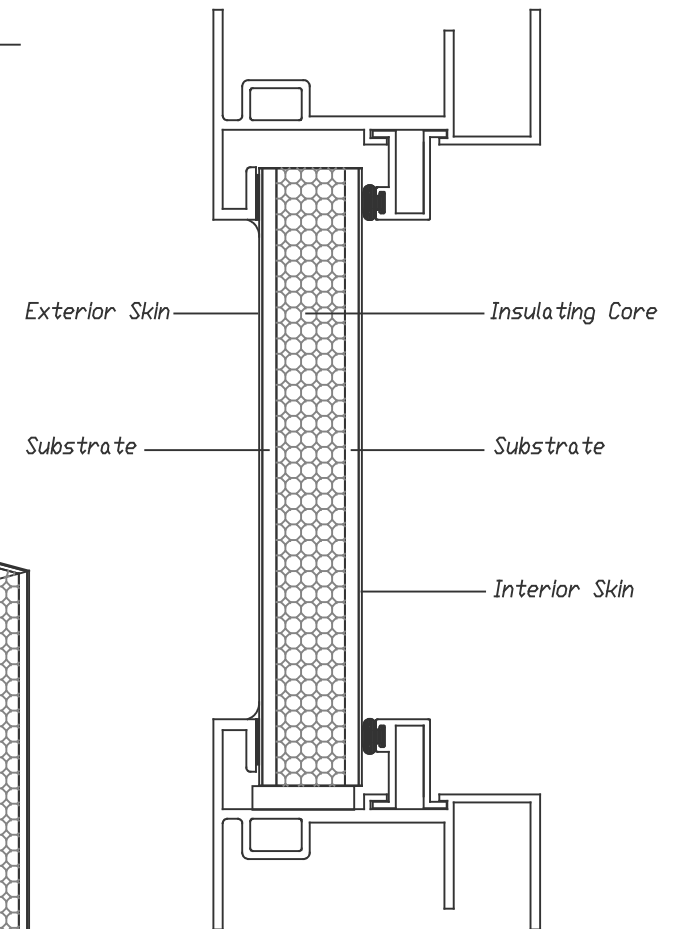
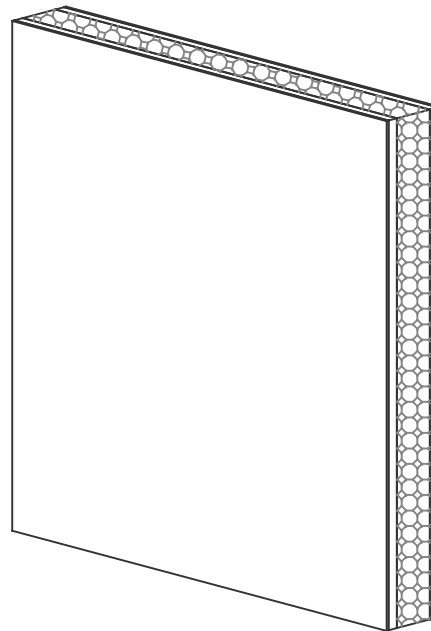
mapes
ARCHITECTURAL PANELS

Mapes Panels, LLC
2929 Cornhusker Hwy / Lincoln, NE 68504
800-228-2391 / 800-737-6756 fax
panels@mapes.com / www.mapespanels.com

Mapes-R Infill Panel



CURTAIN WALL



Exterior Skin

Insulating Core

Substrate

Substrate

Interior Skin

WINDOW FRAME

Details shown are typical, the framing systems are for presentation only.

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SAMPLE WARRANTY FOLLOWS



STAR GLASS INC.

1000 WESTBANK EXPY.
GRETNA, LA 70053
P(504) 368-8826
F(504) 367-5802

Laurel School Refurbishment
820 Jackson Ave New Orleans, LA
70130 RSD Project No. 2011-0891-0001

DATE DRAWN:
11-21-2016

REVISION DATE:



PROJECT NUMBER:
**

DRAWN BY:
P.S.

SHEET

000



**LAMINATED GLASS LIMITED WARRANTY
MADE WITH POLYVINYL BUTYRAL (PVB)**

Customer: _____

Plant Location: _____

Address: _____

Project Name: _____

Project Location: _____

Invoice Date(s): _____

Invoice Number(s): _____

The one quarter inch (1/4") or thicker Laminated Glass product containing polyvinyl butyral (PVB) (the "Product") sold by the company named above (the "Company") under the invoice referenced above is warranted (1) to meet, in the United States, the quality and strength requirements of ASTM C 1172 and the safety criteria of CPSC 16 CFR 1201, (categories I and II), and, in Canada, the quality and strength requirements and the safety criteria of CAN/CGSB-12.1-M and (2) for five (5) years from the date of manufacture, under normal conditions of use, to suffer no material edge separation or obstruction of vision through the product as a result of delamination which is caused by defects in materials or workmanship.

The express limited warranty stated herein is exclusive and is in lieu of and replaces any and all other warranties, representations or conditions of any kind, whether written, oral or implied (including, without limitation, any implied warranties, representations or conditions of merchantability or fitness for a particular purpose, statutory or otherwise), and supersedes any oral or written warranties, representations or conditions made, asserted or implied by any distributor, agent, representative or employee or contained in any manual, brochure, literature, advertising or other materials. No distributor, agent, representative or employee has the authority to change, alter, amend or otherwise modify this limited warranty.

SEE OTHER LIMITATIONS, EXCLUSIONS AND EXCEPTIONS ON REVERSE.

LIMITATIONS, EXCLUSIONS AND EXCEPTIONS/LAMINATED GLASS LIMITED WARRANTY

All claims pursuant to this Limited Warranty must be presented in writing by the Purchaser of the Product (the "Purchaser") to the plant referenced on the reverse (the "Plant") within thirty (30) days of the Purchaser learning the facts upon which the claim is based. No warranty claim may be made after the passage of the applicable warranty period. Any legal action in respect of any claim under this Limited Warranty shall accrue on the date the Purchaser discovers or should have discovered with reasonable diligence the facts forming the basis for such claim. Notice of any claim under this Limited Warranty shall not be considered given unless it includes a copy of the Invoice referenced on the reverse; the date and place of purchase of the Product; the name, address and telephone number of the installer of the Product; and the name, address and telephone number of the Purchaser. **No claim under this limited warranty shall be available without proof of purchase of the applicable product by the Purchaser making the claim. Limited warranty claims made prior to payment in full by purchaser for the Product shall not be honored. Failure to make payment in full for the Product on or prior to the date payment is due therefore shall void this limited warranty.** Upon validation by the Company of any Limited Warranty claim, the Company, at its sole option, shall either (a) furnish the Purchaser with a replacement Product or, if the Product is no longer made, a substitute product which, in the sole discretion of the Company, is comparable to the original Product, F.O.B. the Plant, freight collect, or (b) refund the original purchase price which the Purchaser paid for the failed portion of the Product (less freight and other charges). **A comparable substitute product, whether fabricated by the Company or by a party chosen by the Company in its sole discretion, may have characteristics including, but not limited to, color, shading coefficient, U-value and/or surface appearance which vary from the original product but shall nonetheless satisfy the Company's obligation to replace the Product.** If the Company elects to supply a replacement or substitute product, the Limited Warranty on the replacement or substitute product shall extend only for the balance of the original Limited Warranty period of the failed Product. In no event shall the Company be responsible for any costs attendant to replacing nonconforming or defective Products (including, but not limited to, labor costs), other than as specified in this paragraph. At the Company's request, all defective Product which is replaced or substituted for pursuant to this Limited Warranty shall be returned to the Company, at the Purchaser's expense, within thirty (30) days after such replacement or substitution.

This limited warranty is not applicable to security glass (glass and polycarbonate laminates).

The heat treated laminated product must not be modified or fabricated (e.g., ground, drilled, sand blasted or otherwise) as this can weaken the glass and/or impair its safety characteristics. Any modification or fabrication of the Product voids this limited warranty.

The Company specifically disclaims responsibility for any damage to any product caused by, or which results from improper installation, including any installation not performed in a good and workmanlike manner in accordance with industry standards, including guidelines issued by the Laminating Division of GANA and applicable shop drawings, ordinances and safety codes; provided that, in addition, such installation shall be performed at any higher standards as shall be set forth in any glazing or installation instructions provided by the Company; improper maintenance; storage in other than a good and workmanlike manner; abuse; damage or breakage caused by person other than employees or agents of the Company while being handled, installed, shipped, glazed or used; damage or breakage caused by improper building design or construction; thermal breakage; building or foundation movement; use upon the Product of any cleansing or treating agents; atmospheric pollutants or contaminants, or runoff; leachate from building component, use of the Product with incompatible glazing or other materials; installed in any high moisture, heat, vibration or other unusual stress environment; if films other than clear, non solar absorbing and reflecting films are used on the surface of the product; or use of the Product for purposes not considered suitable therefore by the glass industry or, in its sole discretion, by the Company. No warranty is provided in respect of any damage to or failure caused by any of the foregoing. Any product shipped outside the United States and Canada is not warranted by Oldcastle BuildingEnvelope®, Inc.

For the purposes of this limited warranty, de-lamination shall be defined as any edge defect in the form of clear bubble shaped areas emanating from the edge that extend beyond a 5mm (3/16") perimeter of the laminate. No warranty shall be provided on any installation using non-standard glazing methods including but not limited to bolted connections, inserts and clips and other minimally supported systems unless written approval has been given by the company following a detailed project review.

The remedies provided herein and in the Company's invoice for the Products constitute the Purchaser's sole and exclusive remedy under any claim or theory of liability in respect of the Company's manufacture, sale or provision of the Product or any warranty in connection therewith, including, without limitation, claims based upon failure of, or defect in, the Product, whether a claim, however instituted, is based upon contract, indemnity, breach of warranty, tort (including negligence and/or strict liability) or otherwise. The Company shall not be liable for consequential, indirect, incidental, punitive, exemplary or special damages, claims or costs of any nature including, without limitation, labor costs of any kind relating to the removal of failed products and/or reinstallation of replacement products therefore, or damages, claims or costs otherwise arising from, or in connection with, alleged breach of any limited warranty or negligence on the part of the Company.

If Purchaser is sued by any third party for Product failure under warranty or any other theory, Purchaser shall provide the Company at its Plant at its address above with written notice thereof with a copy of any and all pleadings served upon Purchaser within ten (10) days of such service and provide the Company with an opportunity to inspect the allegedly defective Product. Failure to comply with the foregoing shall void this Limited Warranty.

Products not expressly warranted by the Company are sold "as is, with all faults" and product failures expressly excluded from this Limited Warranty (including for example, but not limited to, glass breakage) are not covered by any other warranty, representation or condition, express or implied, statutory or otherwise. The Company offers no warranty, express, implied or otherwise for annealed glass, products containing a film opacifier, or any coated glass provided as part of its products. For the sole convenience of the Customer, the Company will facilitate resolution of warranty issues which may occur between the customer and the coater. To the extent assignable, the Company assigns to the Purchaser any warranty on the Product provided by third parties, including any warranty by a third party glass coater. These assigned warranties will generally be limited and subject to exclusions and exceptions. The Purchaser is advised to apprise itself of such limitations, exclusions and exceptions, and the Company shall have no obligation to so apprise the Purchaser. (In general the limited warranty provided by glass coaters may be void if the coated glass is installed contrary to the Company's or the respective coater's instructions, damaged by improper handling or installation, or if damaged because of scratches or abrasions which may be caused by abrasive cleaners used on the coated surface.)

Any waiver by the Company of a deviation from any of the terms or conditions in this Limited Warranty shall only be for the specific deviation so waived and shall not be construed as a waiver of any other term or condition nor a continuing waiver of the term or condition so waived.

The Company reserves the absolute right to inspect in the field or at the Plant, any Product that is alleged by the Purchaser to be defective. Failure to afford the Company the right to inspect allegedly defective Product promptly upon the Purchaser becoming aware of any defect therein voids this Limited Warranty.

The Purchaser is solely responsible for all determinations of the compatibility of any glazing or other materials (e.g., sealants, gaskets, tapes, setting blocks, metal or finishes) with the Product. The Purchaser is advised that annealed, heat strengthened or wired glass does not meet the requirements of CPSC 16 CFR 1201 for safety glazing and should not be glazed in hazardous locations, including those defined by applicable codes and law. Hazardous locations should be glazed with approved safety glass.

It is the express wish of the parties that this limited warranty and any related documents be drawn up and executed in English only. Il est la volonté expresse des parties que cette garantie limitée et tous les documents s'y rattachent soient rédigés et signés en Anglais seulement. This limited warranty and any related documents are in the English language and shall be interpreted in accordance with the meanings or the words and phrases used herein as understood in the state or province of seller's plant indicated on the face of this limited warranty. This limited warranty shall be governed by, and construed and interpreted in accordance with, the laws of the state or province in which the Plant is located, without regard to principles of conflicts of laws. Any suit, action or proceeding arising out of or relating to this limited warranty shall be instituted in any court sitting in such province or, in the case of a state, in the county of the location of the Plant and any objection which may now or hereafter exist to the laying of the venue or to the jurisdiction of any such suit, action or proceeding in such province or county is waived. The bringing of any suit, action or proceeding by the Purchaser which is not in compliance with the foregoing shall void this limited warranty.

This limited warranty; the credit application, if any, completed by Purchaser; the Company's glazing instructions, if any; and the invoice for the purchase of the Product constitute the complete and exclusive statement of the terms of the agreement between the Company and Purchaser with respect to the subject matter hereof and supersede any other writing, document or agreement. This limited warranty may not be modified, including pursuant to any order made by Purchaser or in any other document, unless such modification is made in writing and executed on behalf of seller by its President.

This limited warranty is extended to the Purchaser of the Product only and any claim hereunder must be made solely by the Purchaser. This limited warranty is not transferable without the prior written consent of the Company, which may be withheld entirely in its discretion, and any attempted assignment without such prior written consent shall void this limited warranty.

LIMITED WARRANTY AND REMEDY

This is to certify that Kawneer Company, Inc. or its applicable affiliate or subsidiary selling the product ("Seller") warrants to its Customers and all subsequent purchasers and owners of the project incorporating Seller products (hereinafter "Customer(s)"), subject to every term, condition and limitation stated herein, that the products supplied by Seller shall be free from material defects, in material and workmanship, for a period of two (2) years from the date of substantial completion of the project, provided however, that the Limited Warranty shall begin in no event later than six (6) months from the date of shipment by Seller for the start of the warranty period hereunder.

This limited warranty ("Limited Warranty") applies only if Seller's products are installed and maintained according to Seller's recommended practices and installation instructions, and only to defects appearing within two (2) years from substantial completion of the project and only if Seller is notified in writing within sixty (60) days after such defects either (i) appears or (ii) should have been discovered after the exercise of reasonable diligence. Failure of the claiming party to notify Seller within such period shall automatically relieve Seller of any and all responsibility and/or liability under this Limited Warranty.

THE WARRANTIES SET FORTH IN THIS LIMITED WARRANTY AND REMEDY ARE IN LIEU OF ALL OTHER REPRESENTATIONS, WARRANTIES OR OTHER AGREEMENTS EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, WHICH ARE HEREBY DISCLAIMED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

In addition to Seller's standard Limited Warranty and Remedy, and applying solely and exclusively to Kawneer doors with welded, corner construction, the corner construction joinery of these doors shall be free from material defects in workmanship and material for the normal, useful life of the door.

In addition to Seller's standard Limited Warranty and Remedy, and applying solely and exclusively to Kawneer Flushline doors, the corner construction joinery, core and laminate shall be free from material defects in workmanship and material for the normal, useful life of the door.

This Limited Warranty does not cover, and Seller hereby disclaims all liability for, the installation of Seller products, any particular application or selection of the product for any particular project or design, any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Seller products, or any lack of performance of Seller products attributable to such items. SELLER PRODUCTS ARE PRODUCED FOR COMMERCIAL APPLICATIONS. THIS WARRANTY DOES NOT COVER, AND SELLER HEREBY DISCLAIMS ALL LIABILITY FOR, ANY PRODUCTS USED IN RESIDENTIAL INDIVIDUAL DETACHED SINGLE FAMILY DWELLINGS, ANY PRODUCTS WHICH HAVE BEEN SUBJECT TO ABUSE, ALTERATION, NEGLIGENCE, MISUSE, ABNORMAL USE, ACCIDENT, FIRE, WAR, FLOOD, EARTHQUAKES, ACTS OF GOD, OR TO WHICH PARTS, NOT SUPPLIED BY SELLER HAVE BEEN ADDED, OR TO DEFECTS CAUSED BY DEPRECIATION OR NORMAL WEAR. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs or affecting this Limited Warranty shall be made by Seller and shall be final and binding upon all parties.

The sole and exclusive remedy with respect to this Limited Warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Seller, however caused, and whether such claim is based upon breach of representation, warranty, condition, contract (fundamental or otherwise), tort (including negligence), strict liability, or any other theory is limited to, at Seller's option, repair or replacement of such products or repayment by Seller of the purchase price paid for it. The remedy with respect to claims made relating to Seller doors excludes the replacement of glass, gaskets, hardware, immediate framing, temporary enclosures or any related labor or installation costs. In no event does Seller's warranty cover the cost of labor or sundry materials required to remove and/or replace any defective product.

The products repaired, replaced, or otherwise restored shall be warranted to the same extent and to the expiration date from the original date of shipment, and this Limited Warranty shall not be deemed to have been extended from the date of such warranty work. At no time does this Limited Warranty confer upon the claiming party or any other party the right to proceed with repair, replacement, or restoration, without written notice and agreement by a duly authorized officer of Seller. Any such work undertaken by the claiming party or any other party shall be for the claiming party's own account and shall result in this Limited Warranty becoming null and void.

SELLER'S AGGREGATE TOTAL CUMULATIVE LIABILITY UNDER THIS LIMITED WARRANTY IS LIMITED TO THE DOLLAR AMOUNT OF THE PURCHASER'S ORIGINAL PAYMENT MADE TO SELLER FOR PRODUCT FURNISHED BY SELLER ONLY. IN CONSIDERATION OF THIS LIMITED WARRANTY, SELLER SHALL NOT BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF PROFITS OR GOODWILL, DAMAGES FOR NEGLIGENCE IN THE MANUFACTURE, DESIGN, OR INSTALLATION OF THE PRODUCTS, OR OTHER COMMERCIAL LOSS OR INJURY.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.
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This is the only warranty made in the connection with the sale and distribution of the Seller Products. No representative or any other person is authorized to make or makes any warranty, representation, or promise with respect to the Seller Products. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty shall be binding on Seller unless made in writing and signed by a duly authorized officer of Seller.

Laws and building and safety codes governing the design and use of glazed entrance, windows, and curtain wall products vary widely. Seller does not control the selection of product configurations, operating hardware, or glazing materials and assumes no responsibility therefore.

All notices given under or pursuant to this Limited Warranty shall be in writing and sent by registered mail, postage paid, and with return receipt request, to the party to whom such notices is to be given. All such notices as set forth above shall be considered served when received.

SALES TERMS AND CONDITIONS

These Sales Terms and Conditions shall be the sole terms and conditions governing the sale of goods by Kawneer Company, Inc. or any of its subsidiaries and affiliates ("Seller") selling Products to a purchaser ("Customer"). The identity of Customer, the identity of the goods being purchased (the "Products"), the quantity of Products being purchased, the destination for delivery of the Products, and other material information concerning Customer's order shall be set forth in Customer's purchase order (the "Purchase Order") and provided to Seller. These Terms and Conditions are hereby incorporated into and made a part of each such Purchase Order.

All orders are subject to approval and acceptance by a duly authorized representative of Seller. Upon the earlier of Seller's written acceptance of the Purchase Order or acceptance by Customer of Products furnished by Seller in response to such Purchase Order, the Purchase Order, the written acceptance, if any, and these Terms and Conditions shall be the complete and final agreement (the "Agreement") between Seller and Customer with respect to the purchase and sale of Products identified in the Purchase Order, provided, however, that any pre-printed or form language appearing in Customer's Purchase Order shall not become a part of the Agreement. SELLER'S ACCEPTANCE OF ANY CUSTOMER PURCHASE ORDER IS EXPRESSLY MADE CONDITIONAL UPON CUSTOMER'S ACCEPTANCE OF THESE TERMS AND CONDITIONS, AND SELLER OBJECTS TO ANY ADDITIONAL OR DIFFERENT TERMS AND CONDITIONS, WHETHER CONTAINED IN CUSTOMER'S PURCHASE ORDER OR OTHERWISE. SELLER WILL NOT BE DEEMED TO HAVE WAIVED THESE TERMS AND CONDITIONS OF SALE IF SELLER FAILS TO OBJECT TO PROVISIONS CONTAINED IN CUSTOMER'S PURCHASE ORDER, OTHER FORMS OR OTHERWISE. It is Customer's obligation to sign this sales agreement but Customer's acceptance of the product will constitute Agreement to these terms whether Customer has signed sales Agreement or not.

DETERMINATION OF PRICE – Prices given herein are list prices, unless otherwise specified, and are subject to discounts prevailing at the time the order is received. Prices shown do not include Provincial Sales Tax or Goods & Services Tax or any other tax or government charge upon the production, sale or shipment of material which is effective within the life of the sales contract, all of which will be paid by the Customer. All prices are subject to change without notice, and are not guaranteed against change. Inventory adjustments will not be made. Stenographic and clerical errors made by Seller on an acknowledgement or invoice shall be subject to correction.

NOTE: In the event that a discrepancy arises between the index and the body of the price catalog, the information contained in the body of the catalog will take precedence.

PRICE PROTECTION – In the event of a price decrease, unshipped orders, with the exception of special sales contracts covered by a lot or job estimates, will be invoiced at the new and lower prices. In the event of a price increase, orders on hand will be invoiced at the prices in effect when the orders were received, provided, however, those shipments are made at Seller's convenience thereafter. Seller quotations on specific jobs made in writing by Seller are valid (or firm) for sixty (60) days.

ACCEPTANCE OF ORDERS – The acceptance of orders constitutes a complete and binding contract which cannot be modified or canceled without written consent of Seller, except that all orders are accepted subject to delays caused by strikes, fires or any other causes (including those set out in the section "Force Majeure" below) beyond the control of Seller. All orders are accepted subject to governmental regulation on material usage, whenever applicable.

MINIMUM ORDER SIZE – Orders of less than \$100.00 list price will be billed at list price with no discount. All painted orders will be invoiced at a minimum of \$500.00 net per paint color.

PAYMENT – Seller stated payment terms are Net 30 day from date of invoice, unless otherwise approved in writing by a duly authorized representative of Seller. Early payment discounts are available. Please contact the Seller Credit Department for additional information. Receipt of payment by the purchaser is not a condition of payment to Seller. Purchaser's unsatisfactory credit status shall be cause for cessation of deliveries.

CREDIT CARD PAYMENT (U.S. Customers Only) – Seller will accept credit card payments. Credit Card invoices are paid immediately upon shipment. No early payment discounts are available with credit card payments. Please contact the Seller Credit Department for additional information.

FREIGHT CHARGES AND RISK OF LOSS – Unless stated otherwise, all items are shipped F.O.B. Seller manufacturing facility or service center.

CLAIMS – No claims due to errors, shortages or rejection because of defects or defective materials ascertainable on visual inspection will be considered unless reported to Seller within ten (10) days after receipt of shipment. Claims for damages resulting from delays or use of defective materials will not be honored.

DELIVERY – Orders should include complete shipping instructions. Seller reserves the right to ship as it deems advisable unless specific instructions are given. Seller will use reasonable efforts to meet delivery dates but such dates are deemed approximate and Seller shall be allowed a reasonable variance from all such dates. In no event is Seller subject to any charges, penalties, liquidated damages, back charges, penalties or liability of any kind for delayed delivery. Seller shall not be liable for damages caused by delays in delivery by carriers. Customer will file claims with carrier for all shortages, damages or delays delivered by common carriers.

FORCE MAJEURE – Seller shall not be liable for delays or inability to perform due to strikes, labor disputes, lockouts, fire, flood, war, declared or undeclared, insurrections, riots, acts of God, embargoes by foreign nations, inability to obtain or unusual delay in obtaining materials, shortages of power needed to operate Seller facilities, governmental regulations or priorities, or any other cause beyond the control of Seller. In case of any delays in receipt or shortages of materials or shortages of power needed to operate Seller facilities, Seller reserves the right in its sole discretion to determine the assignment of materials, and the order of priority in filling orders. Seller also reserves the right in its sole discretion to cancel order by written notice in the event Seller believes that by reason of the foregoing it will not be able to meet the scheduled completion date.

INDEMNIFICATION – Customer is solely responsible for proper selection and installation of Seller products as well as the incorporation of Seller products into other products (if this is applicable). Customer agrees that it will use Seller products only for their intended uses and according to specifications and limitations established by Seller from time to time. Customer acknowledges and agrees that Seller Products are to be used for commercial applications and not intended for residential individual single family dwellings. Customer shall indemnify, defend and hold Seller harmless from and against any and all damages arising out of or relating to use in residential individual single family dwellings, improper product selection, application, use, misuse, neglect, abuse of products or incorporation of products.

NO LIABILITY FOR LOCAL LAWS OR CODES – Laws and building and safety codes governing the design and use of glazed entrance, window and curtain wall products vary widely. Seller does not control the selection of product configurations, operating hardware or glazing materials, and assumes no responsibility therefore.

It is the responsibility of the Customer to determine at the time of order entry or revision, whether Seller material and products meet any federal, state, provincial and /or local law interpretation and regulations, including those relating to building construction, safety and to the Americans with Disabilities Act of 1990 and any other similar federal, state, provincial or local statutes.

ORDER CANCELLATION AND CHANGE CHARGES – In the event a Customer changes an order or cancels or partially cancels an order that has already been accepted by Seller, Seller may assess a charge to the Customer for costs incurred in performance of that portion of the order that has been changed or cancelled up to and until the time Seller receives notice of the change or cancellation. Customer orders for special materials (those not described in the effective price book), or for products fabricated specifically to Customer's dimensions or other specifications, or where special materials or services are procured by Seller for use on Customer's order, or where drafting or take-off services have been performed, will be subject to charges for cancellation or change for those costs incurred in performance of that portion of the order that has been cancelled or changed up to and until the time Seller receives notice of the change or cancellation.

SECURED CREDIT TERMS – No cash discount is allowed on merchandise delivered by truck, C.O.D. (including Parcel Post and Rail Express), and sight draft bill of lading on a net basis.

BALANCE DUE MATERIALS – Any portion of an order not included in an original shipment because of shortage of stock or other cause beyond Seller's control will be invoiced at the same price and on the same terms as if included in the original shipment. If the balance due shipment weighs 100 pounds or more, the transportation charge will be based on the combined weight of the original and balance due shipments. If the balance due shipment weighs less than 100 pounds, Seller will prepay and absorb the freight on that portion of the order.

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RETURNED MATERIAL – Seller will not accept any material returned for credit unless such return has been previously authorized in writing by Seller. Returns must be requested by Customer within thirty (30) days of receipt of material. Customer must return material within thirty (30) days of receipt of written authorization from Seller. Material returned under such an authorization will be subject to regular inspection by Seller. If found saleable without requiring reconditioning or further work, credit will be issued in the amount invoiced less a handling charge of 15% returned material charge or \$100.00 net, whichever is greater. No credit will be issued for goods produced to order, not meeting inspection requirements or for goods received more than thirty (30) days after authorization to return. All shipping charges for returns are the responsibility of the Customer.

INSTALLATION – Seller hereby disclaims all liability for, and is not responsible or liable for, any damages or costs that may result from improper installation of its products. It is the responsibility of the Customer purchasing a Seller product to ensure that the Seller product is installed properly and in accordance with Seller's printed instructions. This responsibility is retained by Customer even though the product may be resold for installation by a third party. Seller will not be liable for damages and costs that result from improper installation of Seller products, regardless of who actually performs the installation.

RESIDENTIAL USE - Seller hereby disclaims all liability for, and is not responsible or liable for, any damages or costs that may result herein from use of its products in residential individual detached single family dwellings.

ENTIRE AGREEMENT – The Limited Warranty and Remedy and Other Terms and Conditions set forth the entire agreement between the Customer and Seller relating to the sale of Seller's products to Customer. Any additional or different terms in the Customer's forms are hereby deemed to be material alterations and notice of objection to them and rejection of them is hereby given.

GOVERNING LAW AND VENUE – The sale of Seller products hereunder with shipping addresses located in the United States shall be governed by the laws of the Commonwealth of Pennsylvania, excluding its laws related to choice or conflicts of law. The sale of Seller products hereunder with shipping addresses located in Canada shall be governed by the laws of Ontario and the federal laws of Canada applicable therein. The United Nations Convention on Contracts for the International Sale of Goods is expressly disclaimed and does not apply to the sale of Seller products. Any and all disputes between the parties that may arise pursuant to this order will be heard and determined before an appropriate arbitrator, federal, or state court located in Pittsburgh, Pennsylvania. The Customer hereto acknowledges that such court has the jurisdiction to interpret and enforce the provisions herein and/or an arbitrator's judgment, and the Customer waives any and all objections that they may have as to personal jurisdiction or venue in any of the above courts.

ATTORNEY'S FEES – If any action or proceeding is commenced to enforce or interpret any of the provisions of this agreement, and Seller is the prevailing party in any such action or proceeding, then Seller shall be entitled to recover its reasonable attorneys' fees, expert witness fees, costs of suit and expenses, in addition to any other relief to which Seller may be entitled. As used herein, Seller is a "prevailing party" when, including but without limitation, a party dismisses an action against Seller for recovery hereunder in exchange for payment of the sums allegedly due, performance of covenants allegedly breached, or consideration substantially equal to the relief sought in the action brought by such party.

MISCELLANEOUS – (a) Headings used herein are for convenience only and shall not be used for interpretive purpose. (b) A party's failure to act with respect to another party's breach of any provision contained herein does not constitute a waiver. (c) If any provision herein is held to be invalid or unenforceable, such provision shall be narrowly construed, if possible, or otherwise deemed ineffective and the remaining provisions shall not be affected. (d) These terms and conditions will survive the fulfillment of any purchase order.

TOOLS AND DIES – Charges made for dies and tools do not convey to the Customer title or the right to remove them from the Seller facility.

SAMPLES – Standard samples are available at cost (net). Standard samples are shipped from the Seller Marketing Communications Department in Norcross, Georgia. Custom samples are not available through the Marketing Communications Department and must be ordered on a standard order form.

SPECIAL LENGTH CHARGES:

For special length painted material requirements, consult with a Seller Customer Service Coordinator for pricing.

For special length anodized material requirements, the following charges apply:

1-25 stock lengths: Use part number 036426,
\$200.00 net set up charge per shape.

More than 25 stock lengths: No set up charge.

CUT-TO-SIZE ORDERS – Orders for materials cut-to-size will be billed at the Customer's CMP price per foot. In addition, a \$35 net price per cut piece charge will be applied to the invoice under part number 036425 and cut offs will not be shipped.


SHOP DRAWINGS – Seller products may be detailed by Seller to confirm specifications. In such cases, drawings will be submitted to the Customer for approval. Seller will fabricate in accordance with dimensions and specifications shown on the Customer approved drawings but will take no responsibility for failure of the Customer to check drawings against job site conditions or for any other purpose. Special entrances cannot be scheduled for production until the approved detail, with the Customer's signature, has been received, and all special hardware is in Seller's possession. Changes made to any drawing after approval of details by Customer may involve additional charges on the order.

DOUBLE BOX CHARGE – Seller offers a double box option for additional protection of your material during shipment. Use part number 036598 at \$20.00 list. The charge will be applied per box.

ILLUSTRATIONS – The illustrations within this catalog are for part identification only, and do not indicate size or proportions by comparison.

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FINISH GROUPS

GROUP NO. DESIGNATION	FINISHES INCLUDED
#17 GRP	#17 CLEAR
#40 GRP	#40 BRONZE #22 STD. PAINT #14 CLEAR 
#29 GRP	#29 BLACK #18 CHAMPAGNE #26 LIGHT BRONZE #28 MEDIUM BRONZE

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CORRECTIVE FIELD REPAIRS

All corrective field labor and repairs are subject to the limitations set forth in the Limited Warranty and Remedy. In cases where a material defect covered under Seller's Limited Warranty and Remedy is detected after a product has been installed such that corrective field labor is required, the following procedure must be followed in order for any adjustment to be applied to the Customer's account:

- A. When Anticipated Labor Is Eight (8) Hours or Less – No preauthorization by Seller is required however, the Customer must submit detailed information to the Seller Credit Department, including details of the defect covered under the applicable Seller warranty and a description of the required corrective field labor, in order for any adjustment to be applied to the Customer's account.
- B. When Anticipated Labor Is More Than Eight (8) Hours – A Seller Customer Service Coordinator must be contacted prior to the performance of any corrective field labor.

Step 1 – On page 12 is a checklist of information that must be provided to the Customer Service Coordinator. Please have this information available prior to calling.

Step 2 – The Customer Service Coordinator will evaluate the anticipated corrective action as well as related costs and alternatives to rework and will determine which of the following procedures will be followed:

- a. If it is determined that the Customer should perform the rework, the Customer will be authorized by the Customer Service Coordinator. Written confirmation will follow immediately.
- b. If it is determined that Seller will do the rework, the Customer will be notified accordingly and a schedule determined.

The Customer's cooperation in following these procedures will assist Seller in reducing the time required to accomplish corrective measures and make it possible for proper reimbursement to be applied.

SELLER INVOICES SHALL NOT BE ADJUSTED BY CUSTOMER AND PAYMENT IN FULL IS DUE AS SET FORTH UNDER THESE TERMS AND CONDITIONS. WHEN CORRECTIVE FIELD LABOR IS REQUIRED, SELLER AGREES TO MAKE APPROPRIATE CREDITS OR OTHER ADJUSTMENTS TO INVOICES, PROVIDED THE PROCEDURE DESCRIBED ABOVE IS FOLLOWED BY THE CUSTOMER. SHOULD THIS PROCEDURE NOT BE FOLLOWED, CREDIT OR REIMBURSEMENT WILL NOT BE MADE BY SELLER, NOR WILL ANY CLAIM FOR SUCH BE CONSIDERED VALID. (see Step 2.a.)

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CORRECTIVE FIELD REPAIRS — PRE AUTHORIZATION FORM

CUSTOMER NAME: _____

NAME OF PERSON CALLING AND PHONE NUMBER: _____

JOB NAME: _____

S.O. NUMBER: _____

PRODUCT(S): _____

FAX INFORMATION	
Phone No.:	_____
No. of Pages:	_____
To:	_____
Co.:	_____
Dept.:	_____
Fax No.:	_____
From:	_____
Co.:	_____
Phone No.:	_____
Fax No.:	_____

ELEVATION, DOOR NUMBER OR UNIT MARK: _____

EXACTLY WHAT IS WRONG (I.E., MULLION IS 120" AND SHOULD BE 118". NOT, MULLION IS TOO LONG): _____

IF HARDWARE: NATURE OF PROBLEM -- IF MISLOCATED, WHERE? MEASURE AND FURNISH EXACT DIMENSIONS. _____

CAN IT BE CORRECTED IN THE FIELD? IF SO, YOUR RECOMMENDATION, ESTIMATED HOURS AND HOURLY RATE TO REPAIR.

FIELD CORRECTION YES NO

EST. HOURS: _____

HOURLY RATES: _____

WHEN DO YOU NEED TO START THE REWORK? _____

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HARDWARE FOLLOWS



STAR GLASS INC.

1000 WESTBANK EXPY.
GRETNA, LA 70053
P(504) 368-8826
F(504) 367-5802

Laurel School Refurbishment
820 Jackson Ave New Orleans, LA
70130 RSD Project No.
2011-0891-0001

DATE DRAWN:
11-21-2016

REVISION DATE:



PROJECT NUMBER:

**

DRAWN BY:
P.S.

SHEET

000

98/99 Rim exit device



The 299 Strike ships standard, optional strikes available

98 and 99 Rim exit devices for all types of single and double doors with mullion, UL listed for panic exit hardware. Devices are ANSI A156.3 – 2008 Grade 1. The 98 device has a smooth mechanism case and the 99 device has a grooved case. The rim device is non-handed except when the following device options are used: SD (special dogging), -2 (double cylinder) or SS (signal switch). See Opposite page for available outside trim and device functions. Covers stock hollow metal doors with 86 or 161 cutouts on single doors (may cover cutouts on pairs – consult template).

Hex key dogging comes standard on 98/99 Rim exit devices



Finishes – US3, US3A, US4, US4A, US10, US26, US26D, US26D-AM Antimicrobial, US28, 313, 315 & 643E. US15 and US32D available with 98 Series only.

Specifications

Device functions	Device ships EO/DT/NL. Field selectable. For TP, K or L remove NL drive screw from device.	
Device lengths	3'	2'4" to 3' (711mm to 914 mm) Door size
	4'	2'10" to 4' (864 mm to 1219 mm) Door size
Device centerline from finished floor	39 ¹³ / ₁₆ " (1011 mm) 39 ¹¹ / ₁₆ " (1008 mm) with mullion	
Center case dimensions	8" x 2 ³ / ₄ " x 2 ³ / ₈ " (203mm x 70mm x 60mm)	
Mechanism case dimensions	2 ¹ / ₄ " x 2 ¹ / ₄ " (57mm x 57mm)	
Projection	Pushbar neutral – 3 ¹³ / ₁₆ " (97 mm) Pushbar depressed – 3 ¹ / ₁₆ " (78 mm)	
Latch bolt	Deadlocking, ³ / ₄ " (19mm) throw	
Fasteners & sex bolts (SNB)	Includes screw pack for 1 ³ / ₄ " (44mm) and 2 ¹ / ₄ " (57mm) thick metal or wood doors. Optional 425 SNB available, see page 9 for quantities.	
Electric options	LX	Latchbolt monitor switch
	RX	Pushpad monitor switch
	RX2	Double pushpad monitor switch
	E	Electric locking & unlocking trim
	EL	Electric latch retraction
	QEL	Quiet electric latch retraction
	SS	Signal switch
	CX	Chexit delayed exit
	ALK	Alarm exit kit
	WP-RX	Waterproof request to exit
	CON	Allegion Connect
Mechanical options	-2	Double cylinder
	AX	Accessible device
	GBK	Glass bead kit
	PN	Pneumatic latch retraction
	XP	Extra protection
	SNB	Sex bolts
	SEC	Security screws
Dogging feature	Hex key dogging standard	
Dogging options	CD	Cylinder dogging
	SD	Special center case dogging
	LD	Less dogging
	DI	Dogging indicator
	CI	Cylinder dogging indicator
Strikes	299 – Dull black	

XP
Extra protection

- 90° latch-to-strike contact
- Force resistance of 2,000+ lbs.

CD
Cylinder dogging

- Replaces hex key dogging
- Requires 1 1/4" mortise cylinder with inverted cam

QEL
Quiet electric latch retraction

- Bolt retraction via switch
- Converts exit door to push-pull operation

RX
Pushpad monitor switch

- Signals use of an opening
- SPDT switch to monitor pushpad

CX
Chexit delayed exit

- Meets NFPA 101 requirements
- Self-contained controls, locking, alarm

AX
Accessible device

- UL certified to meet new 5 lb. maximum operating force requirement
- Exceeds ANSI/BHMA requirements

EL
Electric latch retraction

- Enables remote unlatching
- Alternative to manual dogging

ALK
Alarm exit kit

- Unauthorized opening triggers 85-decibel horn
- Set in armed or disarmed mode by key

PN
Pneumatic latch retraction

- For areas where electrical devices banned
- Special linkage for mechanical or pneumatic dogging

CON
Allegion Connectors

- Common connectors to connect various door hardware all the way to the power supply

9827/9927 Surface mounted vertical rod device



9827/9927 Surface mounted vertical rod device for all types of single or double doors, UL listed for panic exit hardware. Devices are ANSI A156.3 – 2008 Grade 1. Covers stock hollow metal doors with 86 or 161 cutouts. The 9827 device has a smooth mechanism case and the 9927 device has a grooved case. The surface vertical rod device is non-handed except when the following device options are used: SD (special dogging), SS (signal switch) or WS (Tornado/Hurricane). See opposite page for available outside trim and functions. Vertical rod and latch guards are available to protect the bottom rod of the exit device from damage by impacts of carts or gurneys passing through doors.

Finishes – US3, US3A, US4, US4A, US10, US26, US26D, US26D-AM Antimicrobial, US28, 313, 315 & 643E. US15 and US32D available with 98 Series only.

Specifications

Device functions	Device ships EO/DT/NL. Field selectable. For TP, K or L remove NL drive screw from device.	
Device lengths	2'	2' (610 mm) Door size
	3'	2'4" to 3' (711mm to 914 mm) Door size
	4'	2'10" to 4' (864 mm to 1219 mm) Door size
Device centerline from finished floor	39 ⁵ / ₈ " (1006 mm)	
Center case dimensions	8" x 2 ³ / ₄ " x 2 ³ / ₈ " (203mm x 70mm x 60mm)	
Mechanism case dimensions	2 ¹ / ₄ " x 2 ¹ / ₄ " (57mm x 57mm)	
Projection	Pushbar neutral – 3 ¹³ / ₁₆ " (97 mm) Pushbar depressed – 3 ¹ / ₁₆ " (78 mm)	
Latch bolt	Deadlocking anti-friction top & bottom bolt, ⁵ / ₈ " (16mm) throw	
Door undercut	1/4" (7mm) recommended	
Top & bottom Latch case	4 ¹ / ₂ " x 2 ¹ / ₈ " x 1 ¹ / ₂ " (114mm x 54mm x 38mm)	
Vertical rods	1/2" square tubing, standard rods accommodate 7' (2134mm) doors. Top rod length: 34 ¹⁵ / ₁₆ " (887mm); Bottom rod length: 31 ¹ / ₂ " (794mm) Extension rods available in 1' (205mm) or 3' (914mm) for doors over 7'. One piece top rod is available for 8' (2438mm) and 10' (3048mm) doors.	
Fasteners & sex bolts (SNB)	Includes screw pack for 1 ³ / ₄ " (44mm) to 2 ¹ / ₄ " (57mm) thick metal or wood doors, and 325 SNB for top and bottom latch. Optional 425 SNB available.	
Electric options	LX	Latchbolt monitor switch
	RX	Pushpad monitor switch
	RX2	Double pushpad monitor switch
	EL	Electric latch retraction
	QEL	Quiet electric latch retraction
	SS	Signal switch
	CX	Chexit delayed exit
	ALK	Alarm exit kit
	PN	Pneumatic latch retraction
	LBR	Less bottom rod
	WP-RX	Waterproof request to exit
	CON	Allegion Connect
Mechanical options	GBK	Glass bead kit
	PL	Pullman latch
	WS	Tornado and hurricane tested
	SNB	Sex bolts
	SEC	Security screws
Dogging feature	Hex key dogging standard	
Dogging option	CD	Cylinder dogging
	SD	Special center case dogging
	LD	Less dogging
	DI	Dogging indicator
	CI	Cylinder dogging indicator
Strikes	Top - 299 – Dull black, Bottom – 248L4 & 304L – Unfinished	



Hex key dogging comes standard on 9827/9927

WS
Windstorm

- Severe weather certified/tested
- FEMA and ICC compliant
- Tornado & hurricane tested

RX
Pushpad monitor switch

- Signals use of an opening
- SPDT switch to monitor pushpad

QEL
Quiet electric latch retraction

- Bolt retraction via switch
- Converts exit door to push-pull operation

CON
Allegion Connectors

- Common connectors to connect various door hardware all the way to the power supply

EL
Electric latch retraction

- Enables remote unlatching
- Alternative to manual dogging

ALK
Alarm exit kit

- Unauthorized opening triggers 85-decibel horn
- Set in armed or disarmed mode by key

E (E996L)
Electrified breakaway lever

- Electrified remote locking/unlocking
- Standard in fail safe condition

CX
Chexit delayed exit

- Meets NFPA 101 requirements
- Self-contained controls, locking, alarm

PN
Pneumatic latch retraction

- For areas where electrical devices banned
- Special linkage for mechanical or pneumatic dogging

SS
Signal switch

- Signals unauthorized use of an opening
- Switch makes latch bolt tamper-resistant

9827/9927 Surface mounted vertical rod device

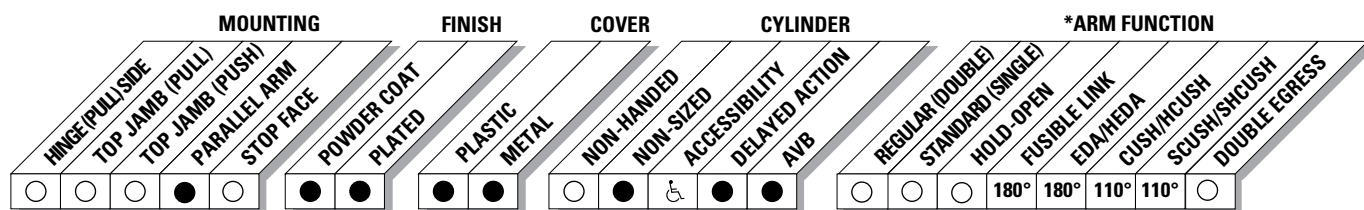


The 4110 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Plastic, Standard ■ Metal, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Parallel Arm (Push Side)
Handing	Handed	Arms	Extra-Duty arm
Templating	Peel-n-Stick templates - 2-1/2" x 6" Mounting Hole Pattern	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Spring Size 1-5, or Sized 6, Includes Patented Green Dial		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	30 years		

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



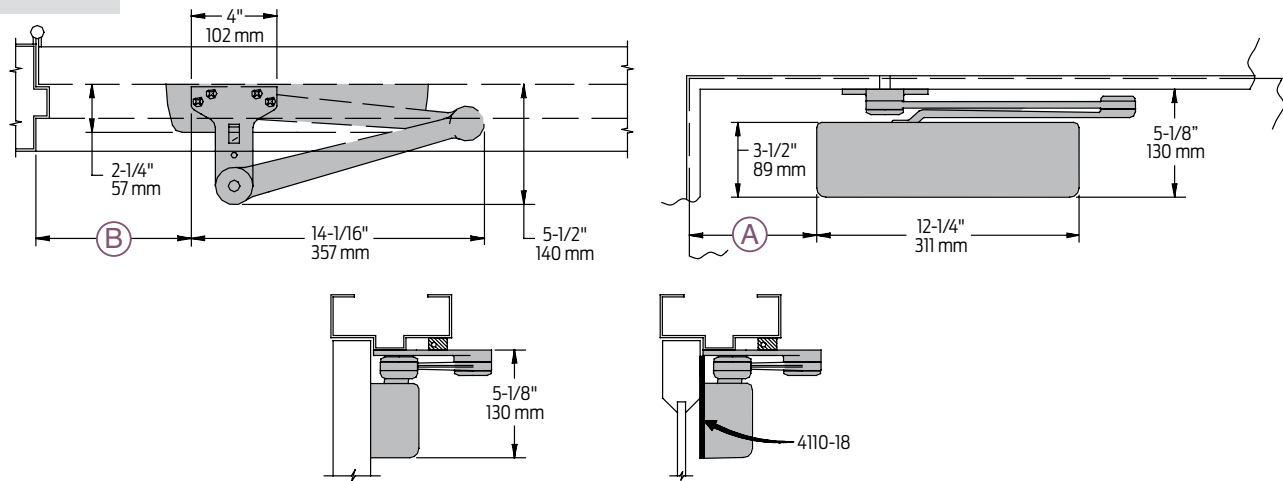
● AVAILABLE
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening/hold-open point with standard template.

4110 Series

Mounting details

Parallel Arm (Push Side) Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width	
Auxiliary Stop	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used	
Clearance	EDA, or CUSH shoe is 5-1/2" (140 mm) from door face	
Top Rail	<ul style="list-style-type: none"> Less than 5-1/8" (130 mm) measured from stop requires PLATE, 4110-18 Plate requires 2" (51 mm) minimum measured from the stop 	
Stop Width	Minimum 1" (25 mm)	
Head Frame	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4110-419	
Reveal	Less than 2-3/4" (70 mm), use CUSH SHOE SUPPORT, 4110-30 with CUSH arms	
Blade Stop Spacer	4110-61 required to clear 1/2" (13 mm) blade stop	
Crush Arm	Requires CUSH SHOE SUPPORT, 4110-30 for fifth screw anchorage with CUSH arms	
Delayed Action	<ul style="list-style-type: none"> Add suffix "DEL" to selected cylinder (eg. 4111 DEL) Not available with 4116 cylinder. Delays closing from maximum opening to approximately 70° Delay time adjustable up to approximately 1 minute 	
Advanced Variable Backcheck	<ul style="list-style-type: none"> Cylinder starts backcheck at approximately 45° instead of the normal 75° Add suffix "AVB" to selected cylinder 	
Maximum opening	EDA or Fusible Link arm can be templated for	CUSH arm can be templated for maximum opening at
	100° A = 5-15/16" (151 mm) B = 7-1/4" (184 mm)	85° A = 8-5/16" (211 mm) B = 9-5/8" (244 mm)
	140° A = 4-7/16" (113 mm) B = 5-3/4" (146 mm)	90° A = 7-11/16" (195 mm) B = 9" (229 mm)
	or 180° A = 2-15/16" (75 mm) B = 2-15/16" (75 mm)	or 110° A = 5-9/16" (141 mm) B = 6-7/8" (175 mm)
	<ul style="list-style-type: none"> Hold-open points up to maximum opening with HEDA or Fusible Link arm 	<ul style="list-style-type: none"> Hold-open point at maximum opening with HCUSH arm Spring Cush hold-open points are approximately 5° less than templated stop point

Cylinder



4111(6)-3071
Cast Iron Cylinder Assembly

- Handed
- Standard

Covers



4110-72
Plastic Cover

- Non-handed
- Standard



Left hand shown

4110-72MC
Metal Cover

- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

Arms



4110-3049EDA
Hold-Open Arm

- Handed
- Optional
- Provides hold-open function, adjustable at shoe



4110-3049FL
Fusible Link Arm

- Handed
- Releases hold-open function adjustable at shoe when exposed to temperatures above 165° F
- Optional

NOTE: Check local codes before specifying FL arms. NOT A life safety product!



4110-3077CNS
Cush-N-Stop Arm

- Non-handed
- Features solid forged steel main arm and forearm with built-in stop in soffit shoe



4110-3077EDA
Extra Duty Arm

- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations



4110-3077EDA/ 62G
Extra Duty Arm

- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations
- Optional 4110-62G thick hub shoe for blade stop clearance

Arms



4110-3049CNS
HCUSH Arm

- Non-handed
- Provides hold-open function with templated stop/ hold-open points.
- Handle controls hold-open function



4110-3077SCNS
Spring CUSH Arm

- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Optional



4110-3049SCNS
Spring HCUSH Arm

- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold-open function
- Optional

Installation Accessories



4110-18
Plate

- Required for push side mount where top rail is less than 5-1/8" (130 mm), measured from the stop
- Requires minimum 2" (51 mm) minimum top rail



4110-30
CUSH Shoe Support

- Provides anchorage for fifth screw used with CUSH arm, where reveal is less than 3-1/16" (78 mm)



4110-61
Blade Stop Spacer

- Lowers parallel arm shoe to clear 1/2" (13 mm) blade stop



4110-419
PA Flush Panel Adapter

- Provides horizontal mounting surface for CUSH shoe on single rabbeted or flush frame

How-to-order 4110 Series closers

1. Specify cylinder size

- 4111 (adjustable from size 1 to 5)
- 4116 (DEL, SHCUSH or HCUSH arm not available)

2. Specify hand

- RH
- LH

3. Select finish

- Standard Powder Coat _____
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

Closer will be shipped with:

- Standard cylinder
- Standard cover
- Extra duty arm
- Self-reaming and tapping screws unless options listed below are selected.

Closer options

Cylinder

- Delayed Action (DEL) (not available with 4116)
- Advanced Variable Backcheck (AVB)

Cover

- Metal (MC)

Finish

- Custom Powder Coat (RAL) _____
(handed metal cover required)
- Plated Finish, US _____
(handed metal cover required)
- SRI primer (use with powder coat finishes only)

Specify Arm

- Hold-Open Extra Duty (HEDA)
- Fusible Link, 165° F (FL)
- Cush-N-Stop (CUSH)
- H-Cush-N-Stop (n/a with 4116 cylinder) (HCUSH)
- Spring Cush (SCUSH)
- Spring H-Cush (n/a with 4116 cylinder) (SHCUSH)
- Extra Duty (EDA)
- H-Extra Duty (HEDA)

Screw Packs

- TB* Self-Reaming & Tapping (TBSRT)
- Wood & Machine Screw (WMS)
- TB* Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTRX)
* Specify door thickness if other than 1-3/4".

Installation Accessories

- Plate, 4110-18
- CUSH Shoe Support, 4110-30
- Blade Stop Spacer, 4110-61
- PA Flush Panel Adapter, 4110-419

Special Template

- ST- _____

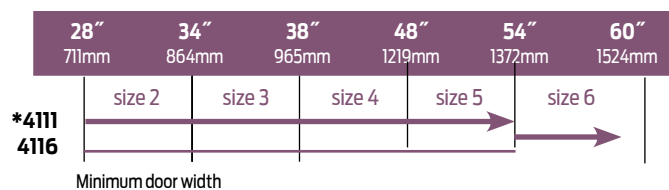
Table of sizes

- Select closer based on width of door.
- The spring power of non-sized 4111 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3.
- Sized 4116 series cylinders 6.
- Delayed action not available with 4116 cylinder
- H - CUSH and SPRING H-CUSH arm not available with 4116 cylinder.

Exterior (and vestibule) door width



Interior door width




→ Indicates recommended range of door width for closer size. * Adjustable Size 1 thru 5.

Reduced opening force 4110 Series closers

CAUTION! Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to AUTOMATIC OPERATORS section for information on systems that meet reduced opening force requirements without effecting closing power.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4111	4111	4111
5.0* lbs.	4111	4111	4111	

* Maximum opening force.



112HD Full Mortise Aluminum Geared Continuous Hinge

- Non Handed
- Flush Mounted, No Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors

For Doors Weighing up to 450 pounds without reinforcing, 600 pounds with reinforcing

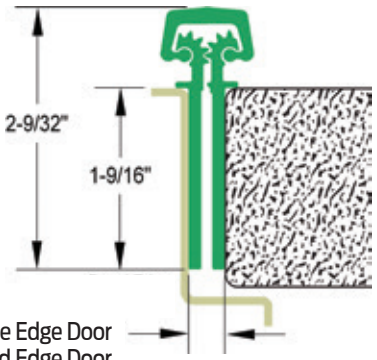
Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

12-24 X 3/4" Steel Self Drilling, Self Tapping Screws
Optional WD - Wood Screws or SEC - Security Fasteners Available

Finishes

Clear (CL), Dark Bronze (DB)
Custom Anodizing and Painting are available, consult factory.



Electrical Cutouts

Ives Aluminum Geared Continuous Hinges are available with factory modified cutouts to accommodate most electrical frame to door requirements. Special templates are required.

When ordering indicate the following:

1. Opening size.
2. Handing. LH, RH, RHR or LHR.
3. Manufacturer and model number of the electrical product being used. Example; Von Duprin EPT2

Because clearances may vary between door and frame manufacturer, and locations can be influenced by the door hardware it is always recommend contacting Ives Customer Technical for specific template information.

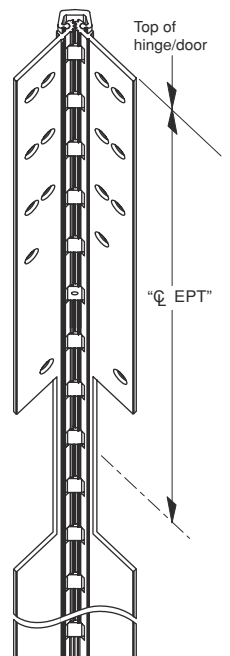
For your general information below are standard locations for Von Duprin EPT2 or EPT10, and monitor switch.

From Top Edge of Door to Center Line of Cut-Out

Standard Length	112HD EPT	224HD EPT	112HD/224HD TW
83"	30"	30"	41-1/2"
85"	32"	32"	42-1/2"
95"	42"	42"	57-3/4"
120"	67"	67"	81-25/32"

TWP option centered in hinge.

EPT 112HD



Note: See ordering guide in price book for proper placement.



ALLEGION™



Cylinders and key blanks

Quick reference guide



The height of security.

Introducing a whole new look for high-security key systems. With a new undercut design and patent protection until 2029, the all-new Everest 29™ key system delivers unparalleled security that can't be duplicated. Available in full size and SFIC cylinder formats, Everest 29 is backward compatible with current Everest B, C and D keyways, making migration of an existing key system less complex.

Schlage has reinvented high security key systems.

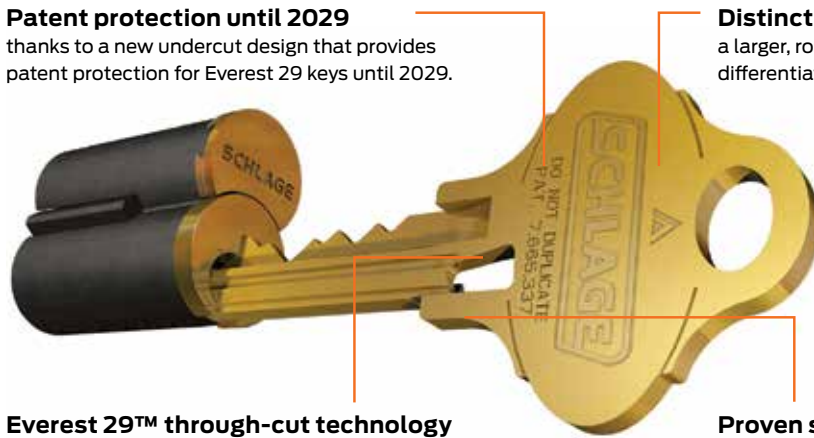
In settings like schools, hospitals and universities, key systems are the foundation of a comprehensive, multi-level security management system. Everest 29 delivers a higher level of security because it cannot be duplicated without authorization. Its distinctive design is based on creating a key like no other.

Patent protection until 2029

thanks to a new undercut design that provides patent protection for Everest 29 keys until 2029.

Distinctive bow

a larger, rounded key bow creates quick visual differentiation between Everest and Everest 29.



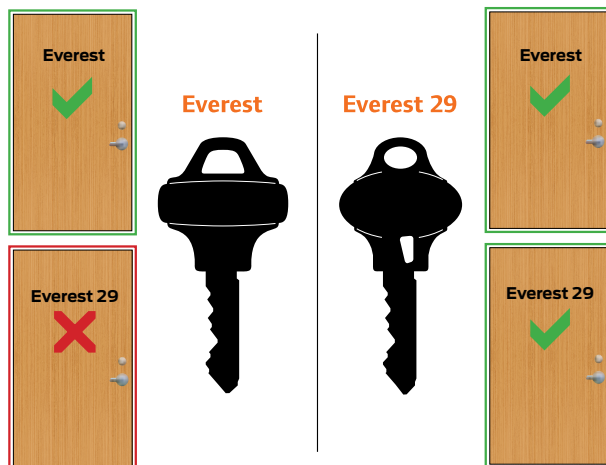
Everest 29™ through-cut technology

utilizes a unique process to create the patented Everest 29 undercut design.

Proven strength

shear-strength tested to perform with the same toughness and reliability the Everest family is known for.

Backward compatibility makes it simple to migrate your key system to Everest 29.

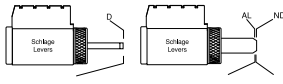


Everest	Everest 29	
B	▶ R	- SFIC - Restricted distribution by required authorization letters
C	▶ S	- Full size; open keyway - Restricted by channel only to commercial sale - Primus & Primus XP
D	▶ T	- Full size - Restricted distribution by required authorization letters - Primus & Primus XP

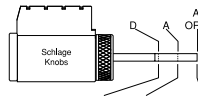
Everest 29 S123 are the default keyways for Schlage locks
 Everest 29 S145 are the default keyway for new master key systems
 Legacy Everest keyways are still available to order

Cylinders & key blanks

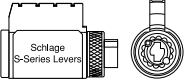
Cylinders for Schlage locks



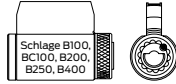
Conventional	23-013	21-020	23-065
Primus	20-750	20-728	20-765
Primus UL	20-550	20-528	20-565
Primus XP	20-750-XP	20-728-XP	20-765-XP
Primus XP UL	20-550-XP	20-528-XP	20-565-XP



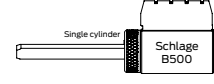
Conventional	23-001	21-002	21-002-122
Primus	20-748	20-724	20-724-122
Primus UL	20-548	20-524	20-524-122
Primus XP	20-748-XP	20-724-XP	20-724-122-XP
Primus XP UL	20-548-XP	20-524-XP	20-524-122-XP



Conventional	21-059
Primus	20-752
Primus UL	20-552
Primus XP	20-752-XP
Primus XP UL	20-552-XP



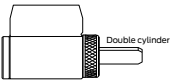
5-pin	22-001
6-pin	22-002
Primus	20-729
Primus UL	20-529
Primus XP	20-729-XP
Primus XP UL	20-529-XP



Conventional	22-003
Primus	20-188
Primus UL	20-190
Primus XP	20-188-XP
Primus XP UL	20-190-XP

*1 3/8" listed only

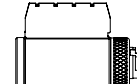
See literature for B-Series lazy tailpieces.



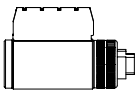
B600	B700	B800 Primus/
Conventional	Primus/	Primus XP UL
22-642	Primus XP	22-542
22-643		22-543
22-644		22-544
22-645		22-545
22-646		22-546



PL-Series padlock	
Conventional	47-410
Primus	47-740
Primus UL	47-540
Primus XP	47-740-XP
Primus XP UL	47-540-XP



KS-Series padlock	
Conventional	47-410
Primus	47-740
Primus UL	47-540
Primus XP	47-740-XP
Primus XP UL	47-540-XP



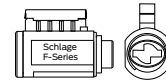
KC-Series cable	
47-414	
47-744	
47-543	



CL-Series cabinet	
20-172	
Primus	20-772
Primus UL	20-572
Primus XP	20-772-XP
Primus XP UL	47-572-XP

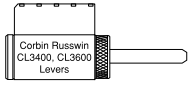


CL-Series drawer	
20-174	
Primus	20-774
Primus UL	20-574
Primus XP	20-774-XP
Primus XP UL	47-574-XP

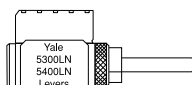


BEL, GEO, PLY, SIE	29-016 (shown)
ORB	29-017
ACC, FLA, AVA	29-018

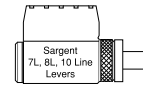
Cylinders for other brands of locks



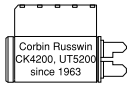
Conventional	24-139
Primus	20-739
Primus UL	20-539
Primus XP	20-739-XP
Primus XP UL	20-539-XP



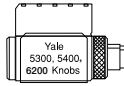
Conventional	24-147
Primus	20-747
Primus UL	20-547
Primus XP	20-747-XP
Primus XP UL	20-547-XP



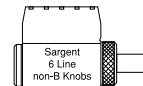
Conventional	24-119
Primus	20-719
Primus UL	20-519
Primus XP	20-719-XP
Primus XP UL	20-519-XP



Conventional	24-127
Primus	20-727
Primus UL	20-527
Primus XP	20-727-XP
Primus XP UL	20-527-XP

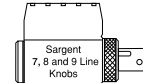


Conventional	24-123
Primus	20-723
Primus UL	20-523
Primus XP	20-723-XP
Primus XP UL	20-523-XP



Conventional	24-126
Primus	20-726
Primus UL	20-526
Primus XP	20-726-XP
Primus XP UL	20-526-XP

Note: Sargent and Yale require special plug with smaller head.



Conventional	24-120
Primus	20-720
Primus UL	20-520
Primus XP	20-720-XP
Primus XP UL	20-520-XP

Mortise cylinders

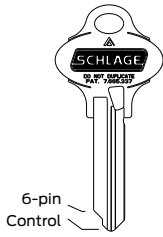
Consult product literature for hotel function cylinders and variations with collars.

			L	Straight	Adams Rite	AR 4070
Standard		Conventional Primus Primus UL	30-021 20-793 20-593	26-021 20-701 20-501	20-013* 20-706* 20-506*	26-073 20-708 20-508
Full size interchangeable core		Less core Standard core Primus core	30-016 30-008* 20-798*	L9060 only 30-032 30-030* 20-782	Other applications 20-059 26-091* 20-763	26-060 20-062* 20-766* 20-090 20-091* 20-722*
Small format interchangeable core (best style)		Less core Everest core	80-108 80-308	L9060 only 80-104 80-304	Other applications 80-102 80-302 80-103 80-303	80-105 80-305

* Designates numbers which include collars. See price book for additional cam and collar variations.

EVEREST 29™

Conventional



6-pin Control



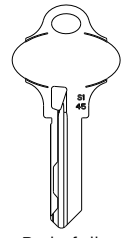
Standard for all control keys and all T Family keys. Optional for S Family 35-268 operating 35-269 control



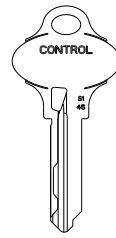
Standard front for S Family 35-270



Plain both sides 35-272



Back of all except 35-272



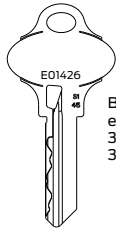
Back of 35-269

Primus®XP

All Primus XP blanks require proper authorization.



Standard Front 35-199-XP Operating 35-273-XP Control



Back of all except 35-215-XP 35-138-XP



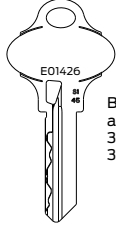
Plain both sides 35-138-XP control 35-215-XP operating

PRIMUS

All Primus blanks require proper authorization.



Standard front 35-199 operating 35-273 control



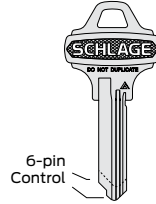
Back of all except 35-215 35-138



Plain both sides 35-138 control 35-215 operating

EVEREST®

Conventional



6-pin Control



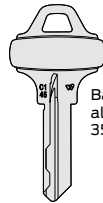
Standard for all control keys and all D Family keys. Optional for C Family 35-002 operating 35-003 control



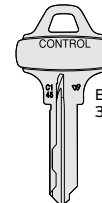
Standard front For C Family 35-009



Plain both sides 35-015



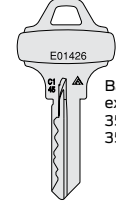
Back of all except 35-015



Back of 35-003



Standard front 35-004-XP operating 35-005-XP control



Back of all except 35-012-XP 35-013-XP



Plain both sides 35-013-XP control 35-012-XP operating

Interchangeable cores

Full size



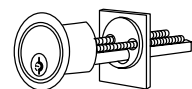
Conventional 23-030
Primus 20-740
Primus XP 20-740-XP

Small format



Everest restricted uncombined 80-036
Everest restricted combined 80-037
Generic 7-pin uncombined 80-033
Generic 6-pin uncombined 80-043

Rim cylinders



Standard (shown)

Conventional 20-022
Primus 20-710
Primus UL 20-510

Full size IC

Less core 20-079
Conventional core 20-057
Primus core 20-757

Small format IC

Less core 80-129
Everest core 80-329

Pins & springs

For full size cylinders

	0	34-300
	1	34-301
	2	34-302
	3	34-303
	4	34-304
	5	34-305
	6	34-306
	7	34-307
	8	34-308
	9	34-309

	2	34-202
	3	34-203
	4	34-204
	5	34-205
	6	34-206
	7	34-207
	8	34-208
	9	34-209

	1	34-101
	2	34-102
	3	34-103

"T" F506-451

Std. C503-113
"T" F506-453
Top pin springs

C603-951
Check pin spring

34-007
Everest check pin

C603-827 IC Cap pin

Mortise cylinder cams

Schlage L Series Modular cylinder cams most functions

L583-475 For cyl. length 1 1/4", 1 1/2", 1 3/4"

L583-474 For cyl. length 1 1/8", 1 3/8", 1 5/8"

Schlage L Series (Legacy) cams most functions



L582-254 Classic conv. hole pattern



L583-153 Everest & Primus hole pattern



L583-255 Interchangeable core hole pattern



XL11-895 Corbin Russwin IC



L583-198 Corbin Russwin non-IC



L583-197 Sargent & Yale non-IC

Schlage L9060 and non-deadbolt functions of many other brands. Also most old cast iron locks



B502-191 B502-948 K510-680 K510-730 L583-476 L583-477

Adams Rite® MS and 4700 Series Lori 4500 deadlock CR DL3000 deadlock



L583-446 L583-447 B502-292 B502-944 K510-711

Most Corbin Russwin® and Best® functions



B520-233 B520-309 B520-253

Sargent® & Yale®



B520-256 B520-329 B520-296

Corbin Russwin DL4000 Series deadlock



B520-295 B520-366 B520-254

Adams Rite® 4070



B502-380 B502-945 B520-378

For other cams, consult the latest Schlage price book.



Cam screw

B502-468 Classic conventional
B502-942 Everest 29 & Primus XP
L583-200 Full size IC
B520-484 Small format IC



B520-692 1"



B520-691 3/4"



B520-690 1/2"

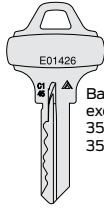
CLASSIC

Primus

All Primus blanks require proper authorization.



Standard front
35-004 operating
35-005 control

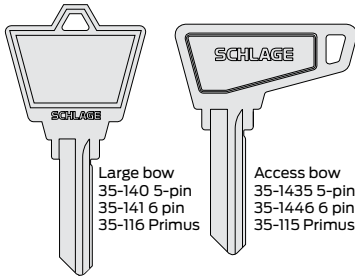


Back of all except
35-012
35-013



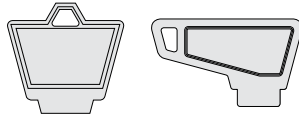
Plain both sides
35-013 control
35-012 operating

Classic



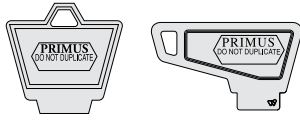
Large bow
35-140 5-pin
35-141 6 pin
35-116 Primus

Access bow
35-1435 5-pin
35-1446 6 pin
35-115 Primus



Conventional back

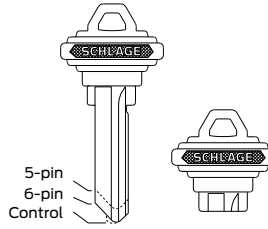
Conventional back



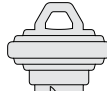
Primus back

Primus back

Conventional



5-pin
6-pin
Control



Standard front and back
35-100 5-pin
35-101 6 pin
35-056 control



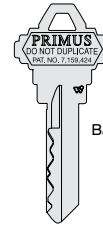
Plain both sides
35-130 5-pin
35-131 6 pin
35-076 control

Primus^{XP}

All Primus XP blanks require proper authorization.



Standard front
35-157-XP operating
35-158-XP control



Back of all



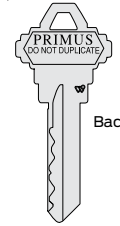
Plain front
35-053-XP operating
35-052-XP control

Primus

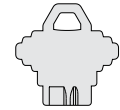
All Primus blanks require proper authorization.



Standard front
35-157 operating
35-158 control



Back of all



Plain front
35-053 operating
35-052 control

SFIC

Small format IC

Everest B Family
restricted keyways

Everest 29 R Family
restricted Keyways



35-401
Front and back

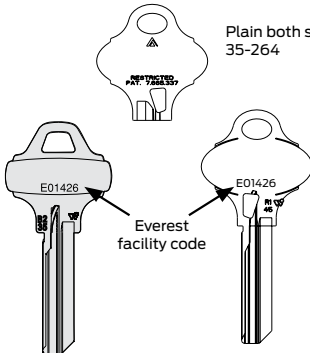
35-021
Plain both sides

End user and dealer keyways all require proper authorization



35-400
Standard front and back

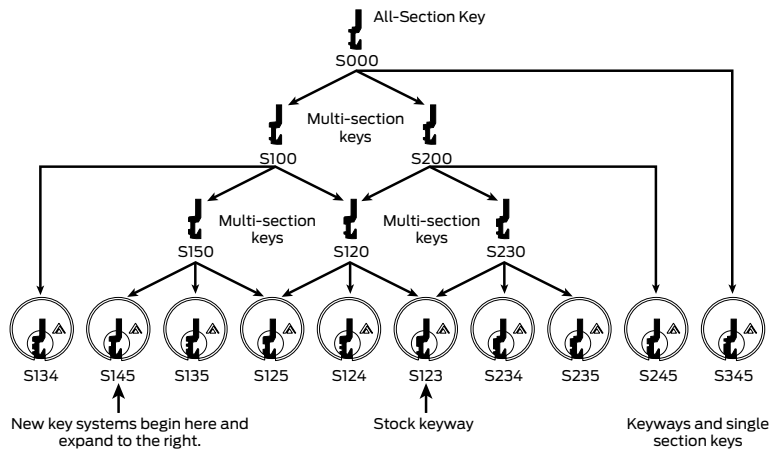
Plain both sides
35-264



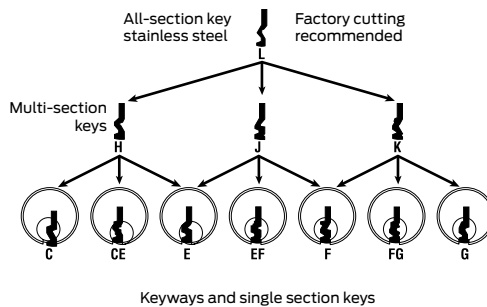
Everest code

S Family Open Keyway

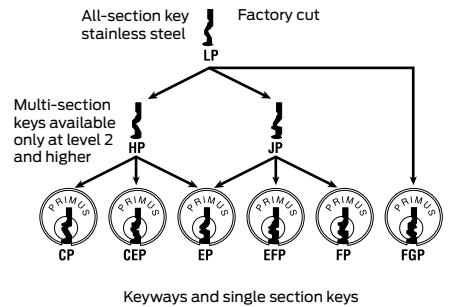
Same for Conventional and Primus



Conventional obverse keyways



Primus obverse keyways



About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a \$2 billion provider of security solutions for homes and businesses, Allegion employs more than 8,000 people and sells products in more than 120 countries across the world. Allegion comprises more than 25 global brands, including strategic brands CISA®, Interflex®, LCN®, Schlage® and Von Duprin®.

For more, visit www.allegion.com

aptiQ ■ LCN ■ **SCHLAGE** ■ STEELCRAFT ■ VON DUPRIN



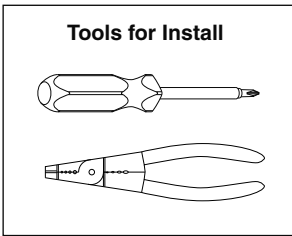
VON DUPRIN®

Installation Instructions

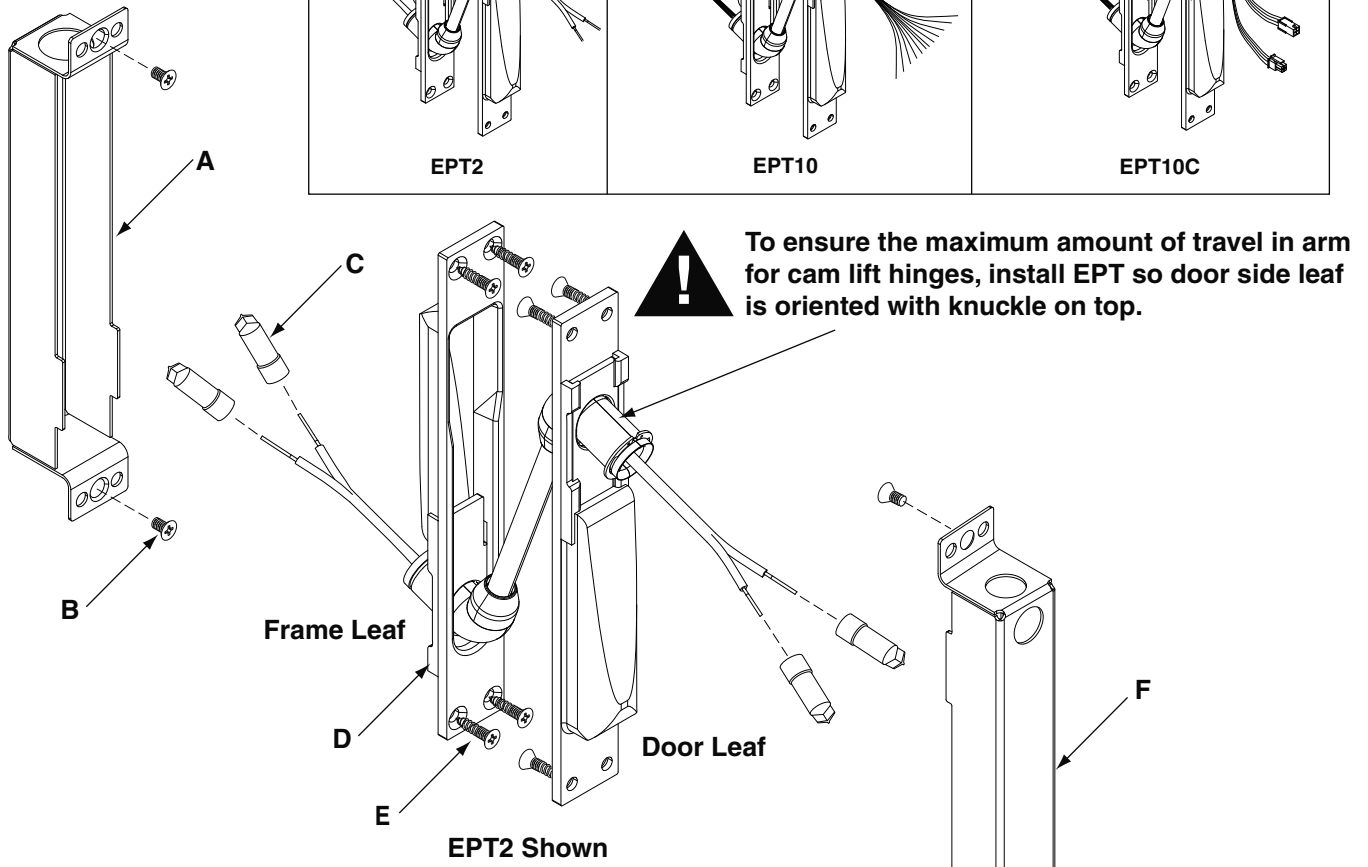
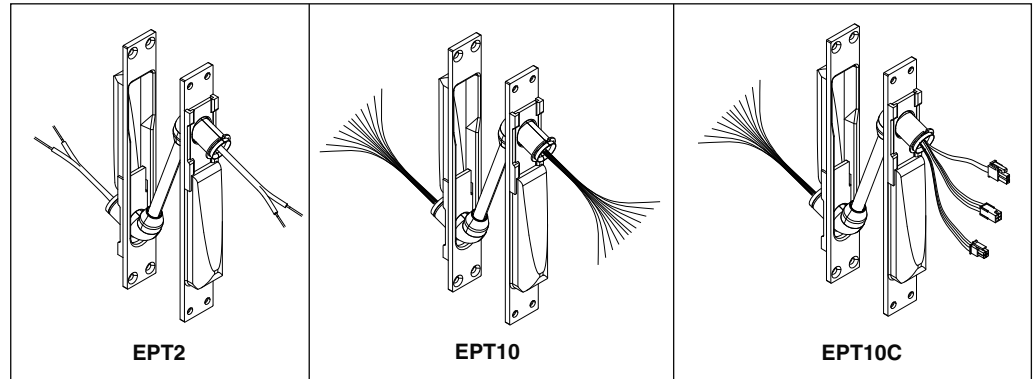
EPT2, EPT10, & EPT10C Electric Power Transfer (EPT)



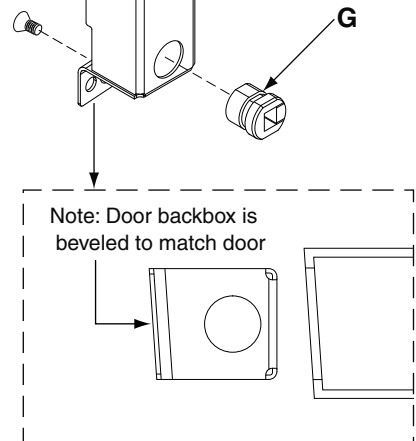
941071-00



Read all Warnings Before Starting Installation!



- A. Frame Backbox
- B. Metal - #10-24 x 3/8" Flat Phillips Head Machine Screw (4)
Wood - #10 x 3/4" Flat Phillips Head Wood Screw (4)
- C. EPT2 - Wire Connectors 12 Gauge Yellow (4)
EPT10 - Wire Connectors 18 Gauge Violet (20)
EPT10C - Wire Connectors 18 Gauge Violet (20)
- D. EPT Assembly
- E. Metal - #10-24 x 3/4" Flat Phillips Head Machine Screw (8)
Wood - #10 x 3/4" Flat Phillips Head Wood Screw (8)
- F. Door Backbox
- G. Strain Relief



General Information

An electric power transfer (EPT) provides a wiring path from the door to the frame.

These instructions assume that a factory-prepped door and frame are being used. If the door and frame have not been factory-prepped, see the included dimensioned template.

Before beginning the installation, review "Specifications" and "Warnings".

Specifications

Applications

EPT **can** be used for:

- Door Thickness - 1-3/4" minimum
- Note: The following specifications apply to a 1-3/4" thick door.**
- 0 - 180° opening with up to 5" butt hinges
 - 0 - 180° opening with up to 3/4" offset pivots
 - 0 - 130° opening with 5-1/2" butt hinges
 - 0 - 110° opening with 6" butt hinges

EPT **cannot** be used for:

- 1-1/2" offset pivots
- larger than 6" butt hinges
- pocket pivots
- swing clear hinges
- center hung door (center pivot)
- balanced door

Electrical Ratings

EPT2

- Two 18AWG wires
- Max. Rating: 24VDC, 5A or 120VAC NEC Class 3

EPT10 & EPT10C

- Ten 24AWG wires
- Max Rating: 24VDC, 1A

Read all Warnings Before Starting Installation!



CAUTION

Do not exceed rated specifications (shown above).



CAUTION

EPT must be installed in accordance with these instructions by a qualified electrician.



CAUTION

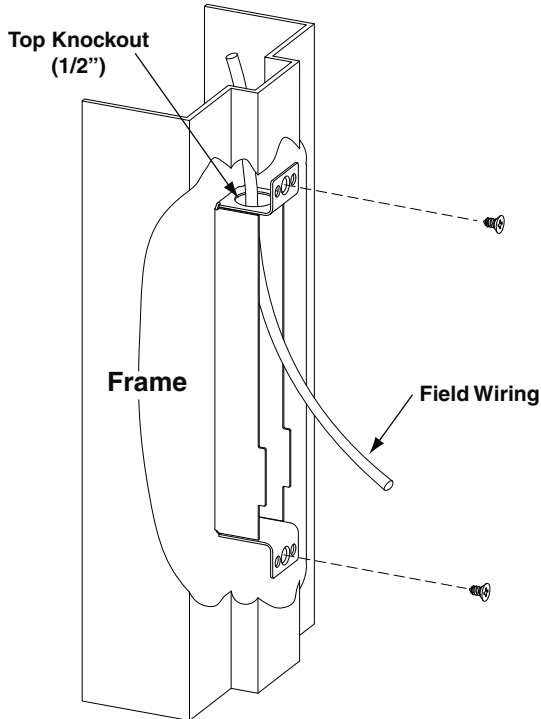
Wiring must be in accordance with all local codes and regulations.

Installation

1 Use Template from Back Page to Verify Preparation

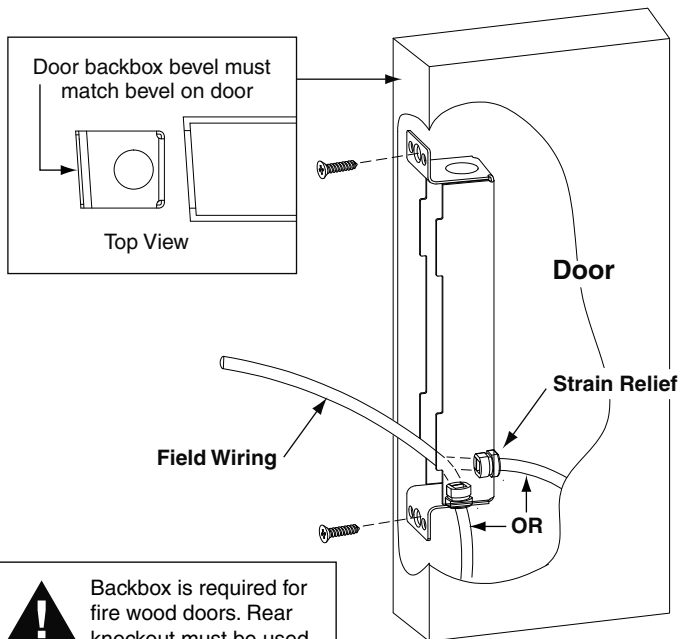
2 Mount Frame Backbox

- A. Remove knockout from top
- B. Install 1/2" conduit, if used
- C. Pull 5" of field wiring through knockout

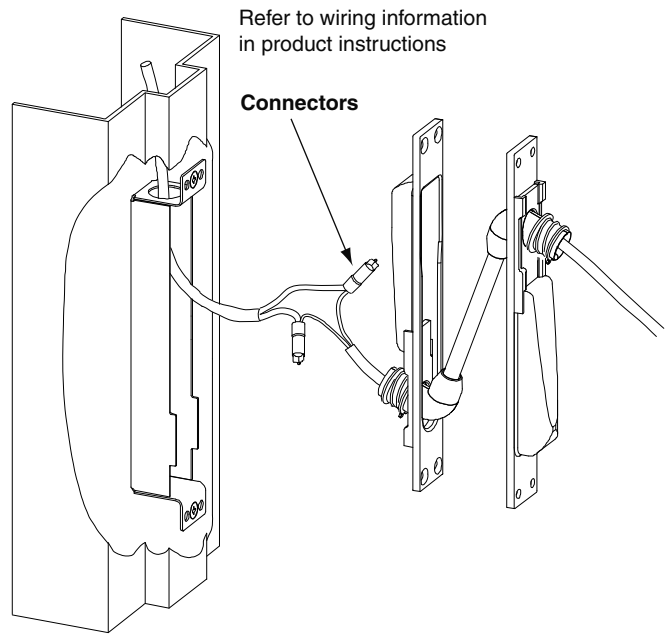


3 Mount Door Backbox

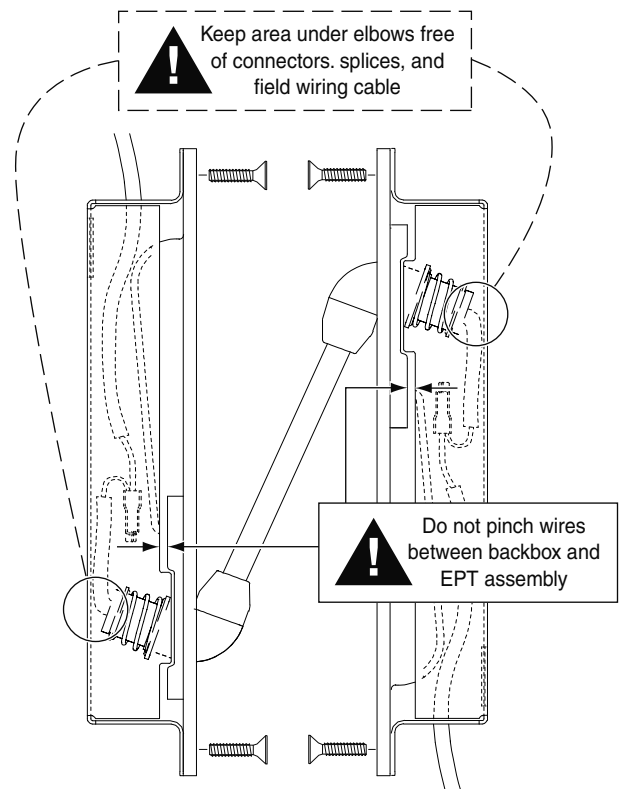
- A. Ensure backbox bevel matches door bevel
- B. Remove knockout: - from bottom for **metal** doors - from back for **wood** doors
- C. Pull 5" of field wiring through knockout
- D. Install strain relief



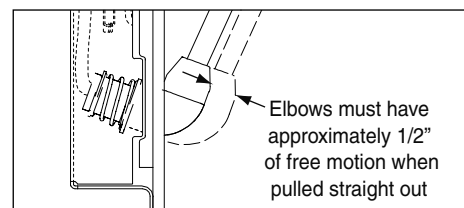
4 Connect Wires



5 Mount EPT Assembly

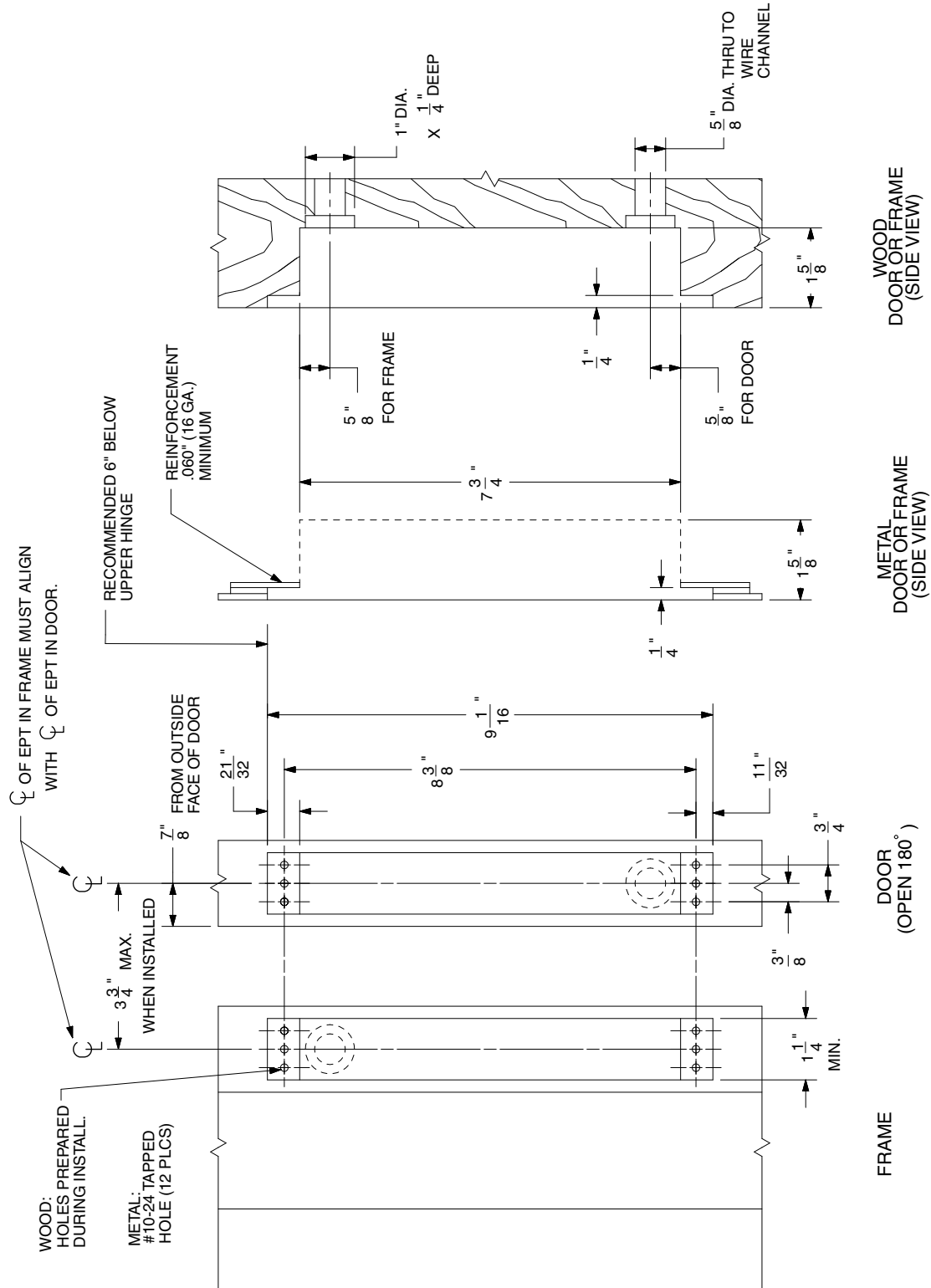


6 Verify that door opens and closes properly without binding and that electrical components function



Template

Note: This drawing is not to scale



*ALL DIMENSIONS ARE TYPICAL

A
Hinges & Pivots

B5
Pulls & Plates

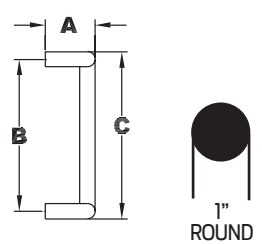
C
Flush Bolts & Coordinators

D
Latches, Catches & Bolts

E
Stops

F
Exterior Hardware

G
Miscellaneous Hardware



8190HD 90° Offset Door Pull

Available mounting – with heavy duty 3/8-16” mounting screws, standard H-I-L, N or O see page B15 and B17

Available Sizes
8”, 10”, 12”, 18”

Product No.	Projection “A”	Clearance	Center to Center “B”	Overall Length “C”
8190-8	3-1/4”	2-1/4”	8”	9”
8190-0	3-1/4”	2-1/4”	10”	11”
8190-2	3-1/4”	2-1/4”	12”	13”
8190-18	3-1/4”	2-1/4”	18”	19”

Finishes brass

US Number	US3	US4	US10	US10B	US15	US26	US26D*
BHMA	605	606	612	613	619	625	626

Finishes stainless steel

US Number	US32	US32D*
BHMA	629	630

* Available with Antimicrobial Coating, use suffix AM

VON DUPRIN®

PS914

4 amp high in rush
power supply

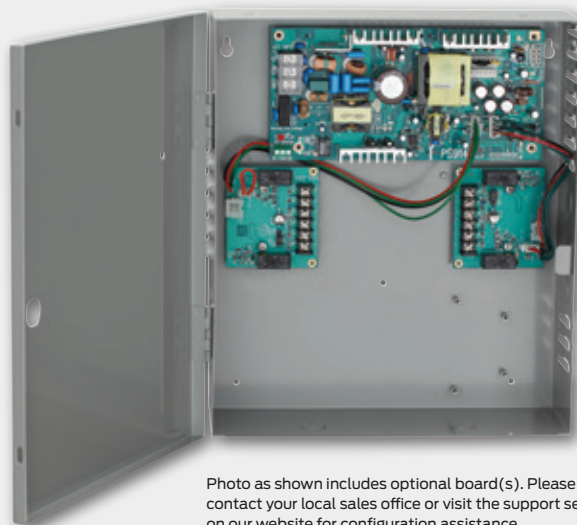


Photo as shown includes optional board(s). Please contact your local sales office or visit the support section on our website for configuration assistance.

Overview

Von Duprin power supply and option board products were designed to meet the specific requirements of electrified fire exit devices.

Installation is simplified by utilizing a flat mounting design and polarized locking connectors for option boards. This design eliminates the need for racks and side connectors. The flat mounting of the option boards also provides for easier access to the terminal blocks for connection of electrified devices (such as electrified panic devices, strikes, card readers, etc.).

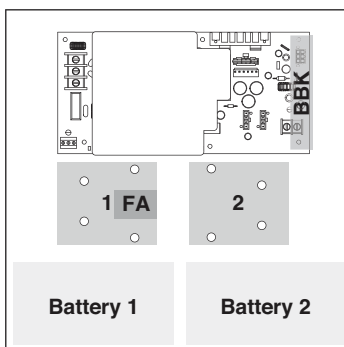
Common to the line of PS900 Series power supplies is a constant output rating at both 12v and 24v settings, universal 120 VAC to 240 VAC input, and polarized option board connectors. New fire alarm interface board mounting allows outputs to be configured as switched (power cut) or unswitched (power continues) when signal is provided.

Features and benefits

- 4A @ 12/24 VDC constant output, field selectable with jumper
- Designed for use with electrified panic devices requiring high in rush current
- Provides low-voltage, Class 2, filtered and regulated power
- Universal 120-240 VAC, fused primary input
- Two polarized option board connectors
- AC input and DC output monitoring circuit with LED indicators
- Externally visible AC input indicator with isolated SPDT contacts
- High-voltage protective cover for AC circuitry (not shown)
- Battery back-up board auto-selects voltage
- Optional Fire Alarm plug-in board available
- UL 294, ULC-S318, RoHS, and FCC Part 15 certified

Configuration options

Available option board, fire alarm and battery backup connection locations:



Exit device support

Von Duprin QEL	Up to 8 ¹
Von Duprin EL	Up to 8 ^{1,2}
Falcon EL	Up to 8 ^{1,2}

1. Requires the use of two 900-4RL option boards

2. Distance from power supply may be limited with multiple EL applications - consult technical support for wire run lengths

PS914 power supply specifications

Specification	Description
Input voltage	120/240 VAC, 50/60 Hz, universal input
Output voltage	4A @ 12 or 24 VDC Field selectable with jumper Switching supply, 5% regulation, 360mVpp max ripple
Enclosure	Grey/baked enamel 14" x 12" x 4" (H x W x D) Eight 1/2" x 3/4" knockouts Hinged cover with lock down screws
Operating temperature	32° - 120°F (0° - 49°C)
Certifications	ANSI/UL 294 ULC-S318 RoHS FCC Part 15 Class 2
Battery backup (install on main board)	900-BB: Battery backup board only 900-BBK: Battery backup kit (backup board plus battery pack)
Available option boards	900-FA: Plug-in fire alarm (must be installed on option board) 900-2RS*: 2 Relay option board capable of individual or sequential operation for single and pair door applications 900-4R*: 4 Relay option board 900-4RL*: 4 Relay option board with integrated logic and individual or sequential operation capability for controlling security interlocks, auto operators and time delay function 900-8F*: Fused, 8 zone option board 900-8P*: PTC, 8 zone option board
AC primary fuse size	6.3A, 250v, 5 x 20mm
Battery fuse size	7.5A 32v ATO blade style
DC output protection	Overload protection - current limited foldback circuit
Indicators	LED indicators: - AC input (visible on outside of enclosure) - DC output Isolated SPDT contacts to monitor AC power status
Weight (power supply)	Approx. 9.0 lbs
Weight (each battery)	4.0 lbs
AC input termination	3 position terminal block with protective cover Wire capacity: 10 AWG max.
DC output termination	2 position terminal block Wire capacity: 12 AWG max.
Option board connectors	2
Fire alarm board connector	Yes (requires connection on option board)
Keylock	Optional
Accessories	900-BAT: Backup battery pack

* Compatible with plug-in fire alarm board (900-FA)

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About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries. For more, visit www.allegion.com.

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