

VINTAGE IRONWORKS

STEEL FIXED WINDOW

GENEREAL NOTES:

INSTALLATION ANCHORAGE DETAILS

1.

THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
2.

THE PRODUCT DETAILS CONTAINED HEREIN ARE BASED UPON SIGNED AND SEALED TEST REPORT #NCTL-210-3485-1 DATED 12-04-07 AND NCTL-2945-1 DATED 3-16-04 AND ASSOCIATED LABORATORY STAMPED DRAWINGS.
3.

WOOD FRAMING, 2X WOOD BUCK AND CONCRETE/MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE/MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD. APPROVED INSTALLATION SUBSTRATES INCLUDE THE FOLLOWING:

3.1.

WOOD FRAMING

3.2.

CONCRETE AND/OR MASONRY
4.

1X BUCK OVER CONCRETE/MASONRY IS OPTIONAL. WHERE 1X BUCKS ARE USED, INSTALLATION ANCHORS WILL PASS THROUGH WINDOW FRAME AND 1X BUCK INTO CONCRETE/MASONRY SUBSTRATE. WHERE 1X BUCK IS NOT USED, INSTALLATION ANCHORS WILL PASS THROUGH WINDOW FRAME INTO CONCRETE/MASONRY SUBSTRATE. DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
5.

SITE CONDITIONS THAT DEVIATE FROM THE DETAILS OF THIS DRAWING REQUIRE THE FOLLOWING:

5.1.

IN NON-HVHZ, FURTHER ENGINEERING ANALYSIS BY A LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.

5.2.

IN HVHZ, FURTHER ENGINEERING ANALYSIS BY A LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT AND ONE TIME APPROVAL FROM THE LOCAL AUTHORITY HAVING JURISDICTION IS REQUIRED.
6.

IN HVHZ AREAS, USE OF AN APPROVED IMPACT PROTECTIVE SYSTEM COMPLYING WITH THE HVHZ REQUIREMENTS OF THE FBC IS NOT REQUIRED FOR THE PRODUCT(S) HEREIN. IN NON-HVHZ AREAS WHERE WINDDBORNE DEBRIS REQUIREMENTS EXIST, USE OF AN IMPACT PROTECTIVE SYSTEM COMPLYING WITH THE FBC REQUIREMENTS FOR WINDBORNE DEBRIS REGIONS IS NOT REQUIRED FOR THE PRODUCT(S) HEREIN.
7.

FRAME AND COMPONENT MATERIALS:

7.1.

SEE BILL OF MATERIALS FOR COMPONENT TYPES AND MATERIALS.

7.2.

STEEL SHALL BE PROTECTED IN ACCORDANCE WITH CURRENT EDITION FBC.

7.3.

APPROVED INTERLAYER: EASTMAN CHEMICAL CO. SAFLEX HP PER CURRENT MIAMI DADE NOTICE OF ACCEPTANCE (N.O.A.).
8.

GLAZING

8.1.

GLASS MEETS THE REQUIREMENTS OF ASTM E1300-12ae1.

8.2.

SEE GLAZING DETAIL ON SHEET 3 OF 5.

8.3.

GLASS SHALL MEET SAFETY GLAZING REQUIREMENTS PER CURRENT EDITION OF THE FLORIDA BUILDING CODE.

8.4.

ALL SETTING BLOCKS SHALL BE IN COMPLIANCE WITH THE CURRENT EDITION OF THE FLORIDA BUILDING CODE. SETTING BLOCKS SHALL BE NEOPRENE WITH A 70 TO 90 SHORE A DUROMETER.
9.

DESIGNATIONS O" STANDS FOR FIXED PANEL
10.

INTERIOR AND EXTERIOR FINISHING AND SEALING ARE FOR ILLUSTRATIVE PURPOSES ONLY. THESE DRAWINGS CERTIFY THE WINDOW INSTALLATION ONLY. WATER PROOFING OF THE INSTALLED WINDOW IS NOT PART OF THIS INSTALLATION INSTRUCTION.

PRODUCT PERFORMANCE RATING	
DESIGN PRESSURE RATING (PSF)	IMPACT RATING
±80.0	LARGE MISSILE IMPACT WIND ZONE 4 - MISSILE LEVEL D

INSTALLATION NOTES:

1.

ONE (1) INSTALLATION ANCHOR SHALL BE USED AT EACH ANCHOR LOCATION SHOWN IN ELEVATION ON SHEET 2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
2.

SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
3.

ANCHOR QUANTITIES AND SPACING / EMBEDMENT AND EDGE DISTANCE

3.1.

THE NUMBER OF INSTALLATION ANCHORS IS BASED ON THE MAXIMUM END DISTANCE (ED) AND THE MAXIMUM ON CENTER (O.C.) SPACING PLACEMENT OF ANCHORS IN ACCORDANCE WITH ELEVATION ON SHEET 2.

3.2.

END DISTANCES AND O.C. SPACING LESS THAN THAT SHOWN IN THE ELEVATION ON SHEET 2 ARE ACCEPTABLE.

3.3.

FOR WINDOW SIZES SMALLER THAN THOSE SHOWN, ANCHOR QUANTITIES CAN BE REDUCED WHILE MAINTAINING EDGE DISTANCE AND O.C. SPACING REQUIREMENTS.

3.4.

ANCHOR QUANTITIES AND SPACING SHOWN ARE BASED ON THE LOWER OF ANCHOR SPACING USED IN TESTING OR REQUIRED BY LOADING AT DESIGN PRESSURE.
4.

SUBSTRATE ANCHORING METHODS:

4.1.

FOR ANCHORING INTO CONCRETE/MASONRY USE:

4.1.1.

5/16" TAPCON XL WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT INTO CONCRETE WITH 1 9/16" MINIMUM EDGE DISTANCE AND 1 1/4" MINIMUM EMBEDMENT INTO MASONRY WITH 4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.

4.1.2.

1/4" FLAT HEAD OR HEX HEAD TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/2" MINIMUM EMBEDMENT INTO CONCRETE WITH 1 1/2" MINIMUM EDGE DISTANCE AND 1" MINIMUM EMBEDMENT INTO MASONRY WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.

4.1.3.

ALTERNATE CONCRETE / MASONRY INSTALLATION ANCHORS OF EQUIVALENT PERFORMANCE CHARACTERISTICS CAN BE USED UPON APPROVAL OF THE ARCHITECT OR ENGINEER OF RECORD.

4.1.4.

FOR HOLLOW BLOCK AND GROUT FILLED BLOCK, DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS MEASURED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT INTO FACE SHELL OF BLOCK.

4.2.

FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE

4.2.1.

#14 FLAT HEAD OR PAN HEAD WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.

4.3.

MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES (INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING).

5.

ALL FASTENERS TO BE CORROSION RESISTANT.

6.

INTERIOR AND EXTERIOR FINISHES BY OTHERS. NOT SHOWN FOR CLARITY.

7.

PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED AND/OR SPECIFIED IN ACCORDANCE WITH ASTM E2112.

8.

INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:

8.1.

WOOD - MINIMUM SPECIFIC GRAVITY OF G=0.55 (HVHZ) AND 0.42 (NON-HVHZ)

8.2.

CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI FOR TAPCON AND 3000 PSI FOR TAPCON XL

8.3.

MASONRY - FOR TAPCON, STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT WITH DENSITY > 117 PCF AND FOR TAPCON XL, 1600 PSI COMPRESSIVE STRENGTH.

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2	ELEVATION & ANCHOR LAYOUT
3	SECTIONS
4	BILL OF MATERIALS AND COMPONENTS
5	APPROVED SHAPES

PROJECT# 421-1105

VINTAGE IRONWORKS

987 JOSIANE COURT, SUITE 1064

ALTAMONTE SPRINGS, FLORIDA 32701

TITLE:

STEEL FIXED WINDOW

GENERAL NOTES, INSTALLATION NOTES & D.P. CHART

PREPARED BY:

DRAWN BY:

DATE:

SCALE:

DRAWING NO:

SHEET:

REV:

1

OF

5

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STATE OF FLORIDA

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by Robert J

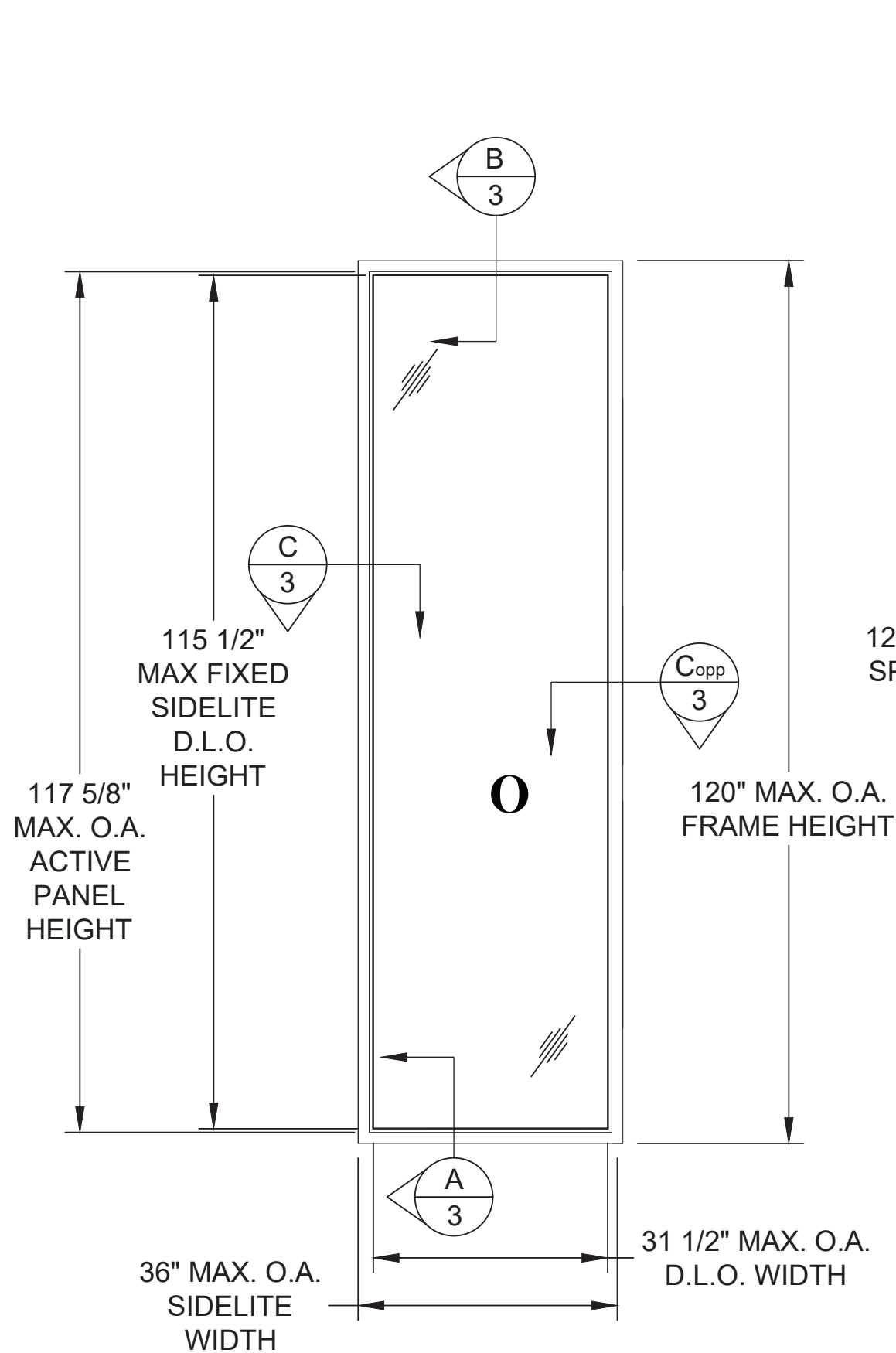
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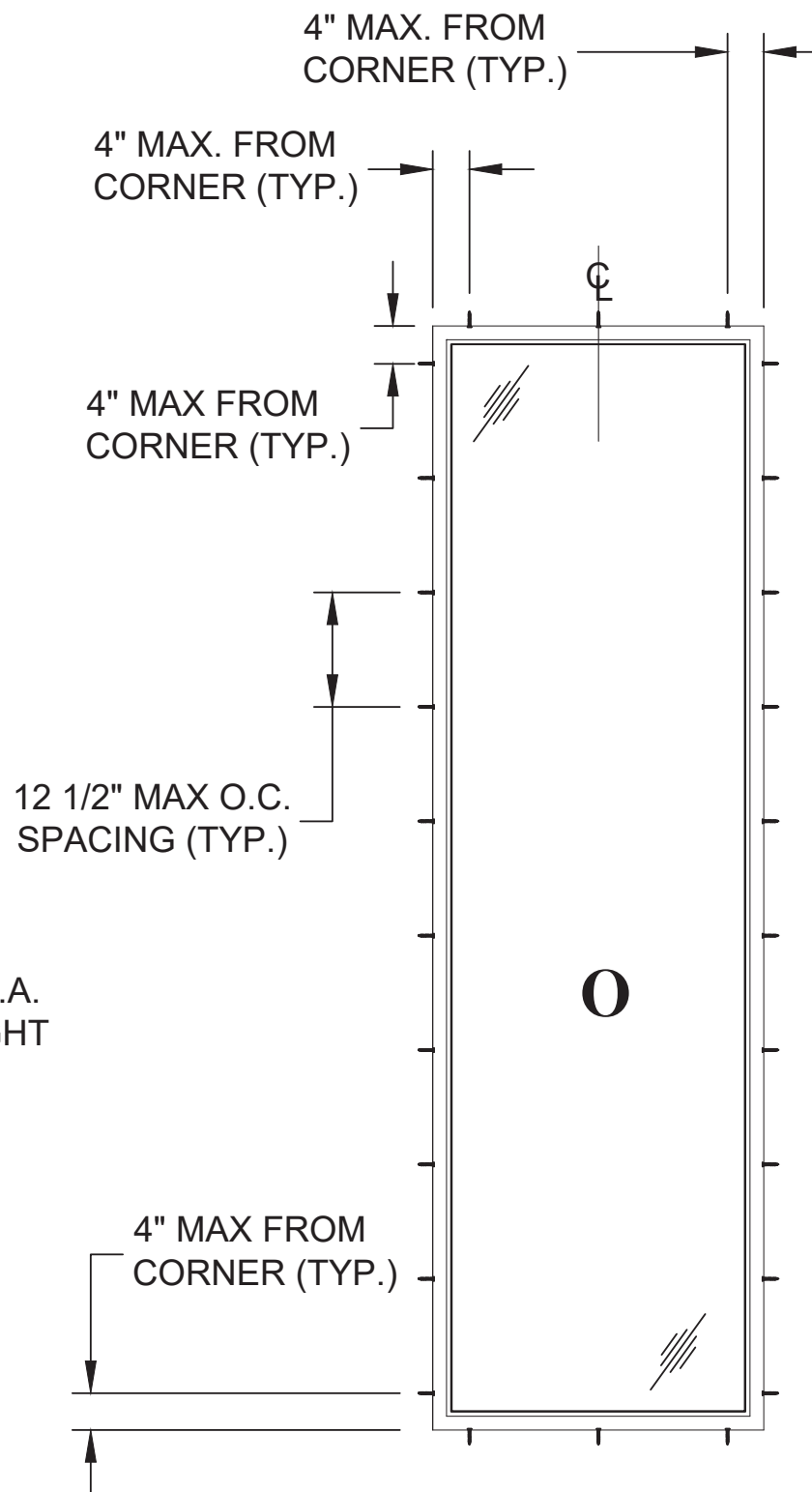
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ELEVATION
INTERIOR VIEW



ANCHOR LAYOUT
INTERIOR VIEW

DAYLIGHT OPENINGS (D.L.O.) ARE APPROXIMATE

WINDOW ORIENTATION:

- ORIENTATION SHOWN IS W = 36" x H = 120"
- ORIENTATION (W x H) IS NOT LIMITED TO THAT SHOWN.
- ORIENTATION MAY BE ROTATED 90 DEG. TO W = 120" x H = 36".
- RADIUS TOP AND SHAPED WINDOWS QUALIFIED WITHIN DIMENSIONS STATED AT LEFT AND ANCHOR DETAILS SHOWN.

PROJECT# 421-1105

VINTAGE IRONWORKS
987 JOSIANE COURT, SUITE 1064
ALTAMONTE SPRINGS, FLORIDA 32701

TITLE: STEEL FIXED WINDOW
ELEVATION & ANCHOR LAYOUT

DRAWN BY: RJA

DATE: 3/30/23

DRAWING NO: VIN0006

SHEET: 2 OF 5

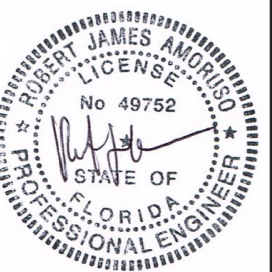
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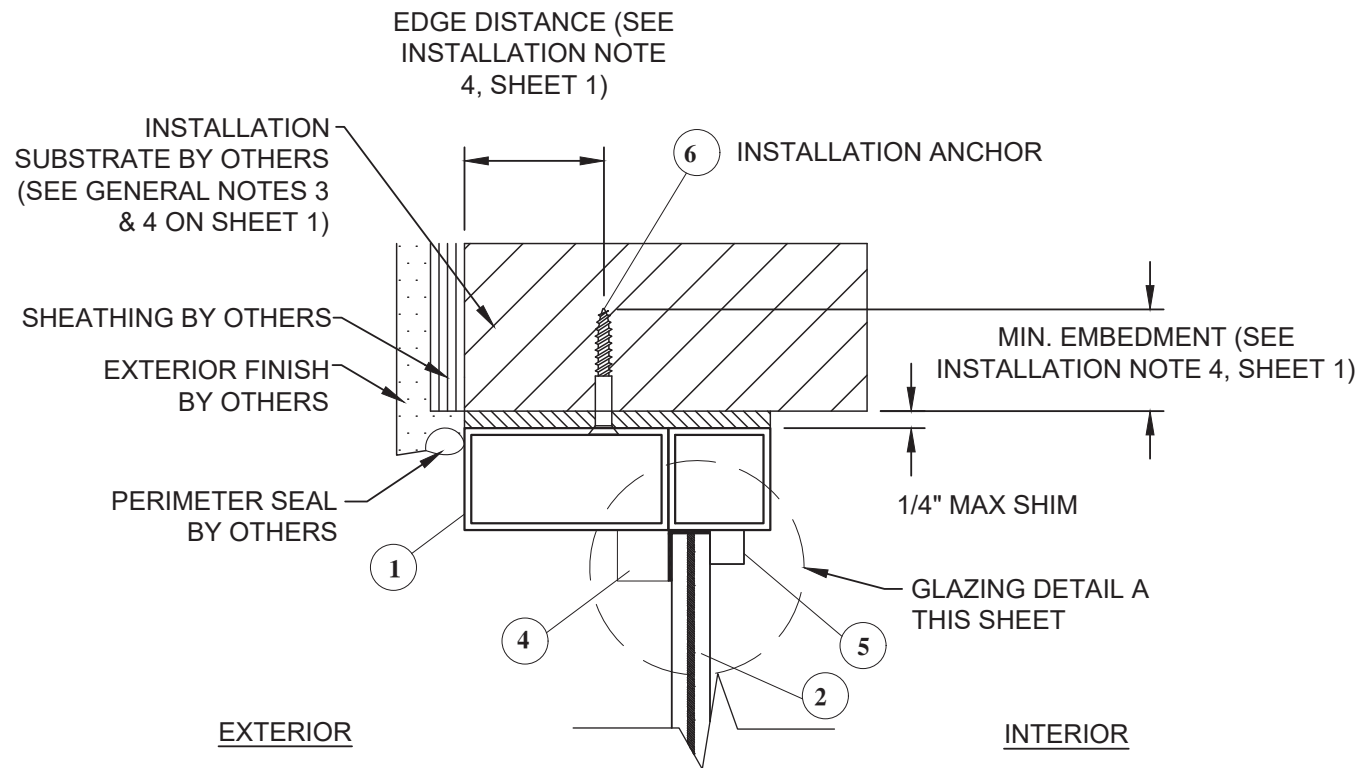
Robert J. Amoruso P.E.
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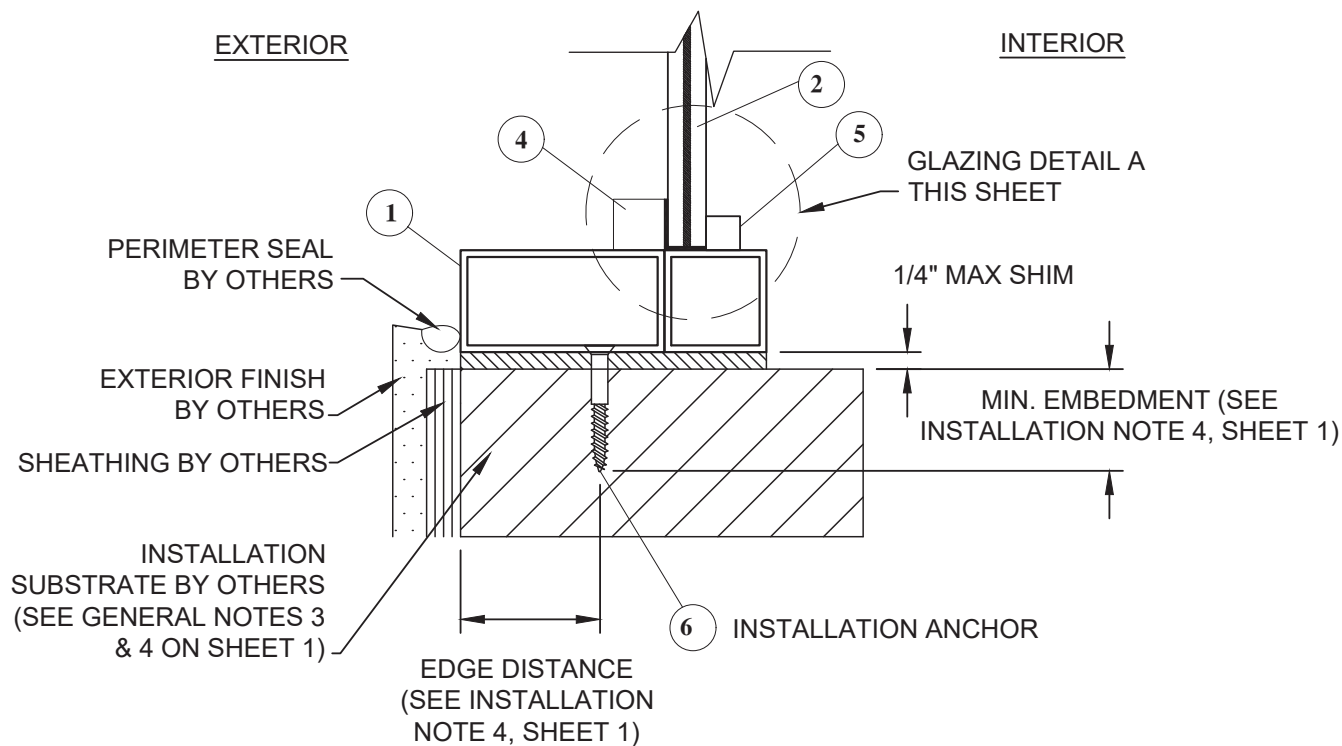
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Amoruso

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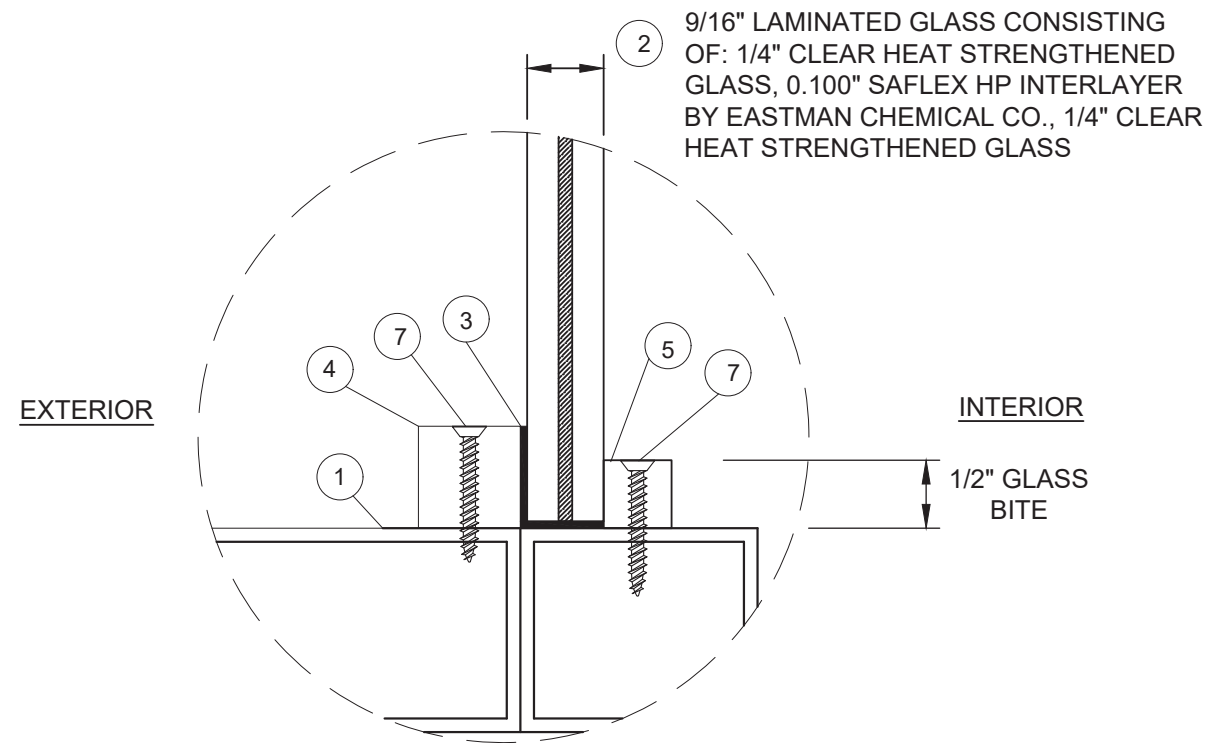
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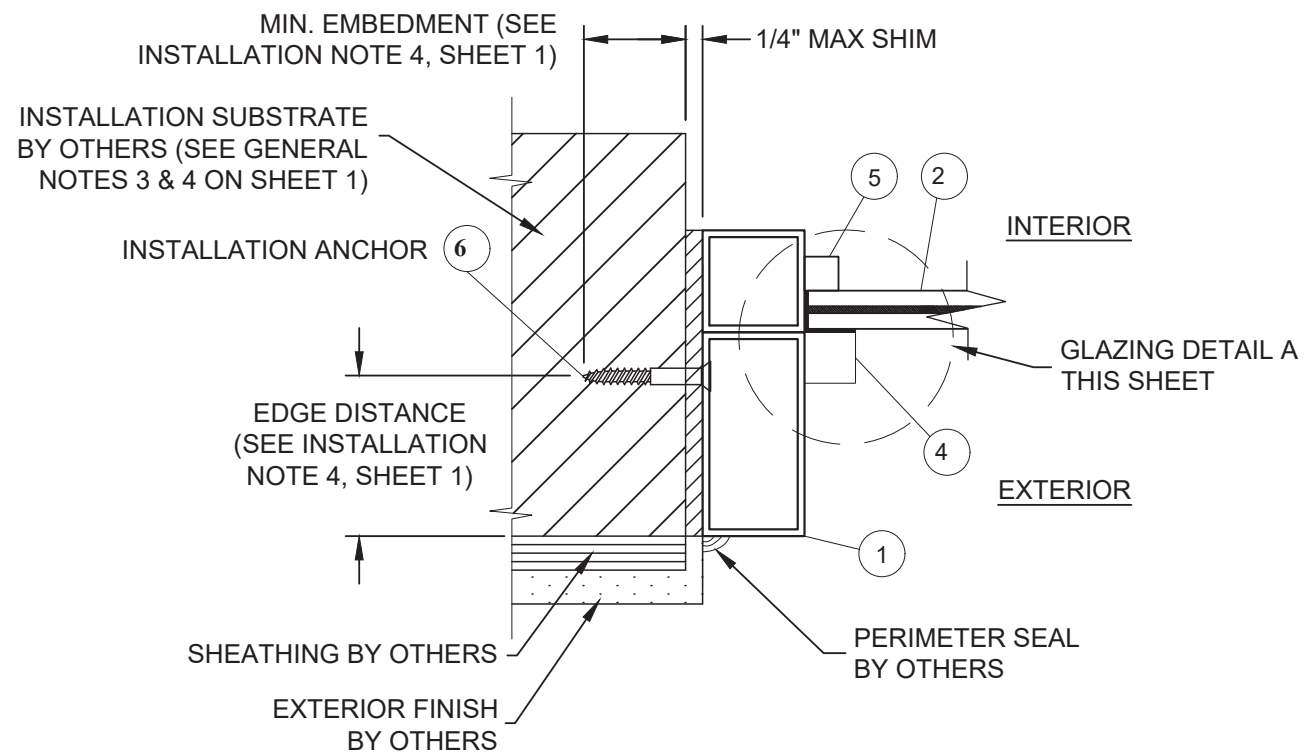
B
3 **VERTICAL SECTION**
HEAD



A
3 **VERTICAL SECTION**
SILL



GLAZING DETAIL A



C
3 **HORIZONTAL SECTION**
JAMB

PROJECT# 421-1105

VINTAGE IRONWORKS
987 JOSIANE COURT, SUITE 1064
ALTAMONTE SPRINGS, FLORIDA 32701

DATE: 3/30/23
DRAWING NO: VIN0006
SHEET: 3 OF 5

SCALE: N.T.S.

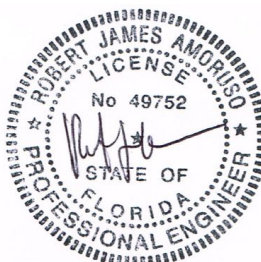
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DATE

BY

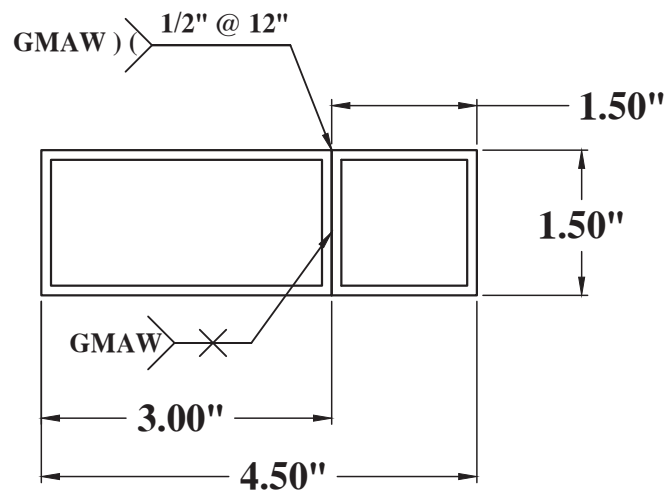
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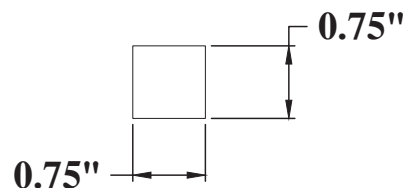
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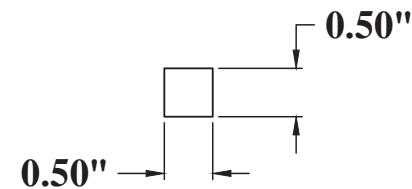
1 **EXTERIOR FRAME**
14 GA. STEEL
(SQUARE TO RECTANGULAR TUBE WELDING)



4 **EXTERIOR
GLASS STOP**



5 **INTERIOR
GLASS STOP**



BILL OF MATERIALS

NO.	DESCRIPTION	MATERIAL	MANUF.
1	EXTERIOR FRAME: 1-14 GA. RECTANGULAR TUBE 1.50" X 3.00" AND 1-14 GA. SQUARE TUBE 1.50" X 1.50"	ASTM A500, GRADE B or ASTM A513	
2	9/16" LAMINATED GLASS CONSISTING OF: 0.25" H.S. GLASS/ 0.100" SAFLEX HP INTERLAYER BY EASTMAN CHEMICAL CO./ 0.25" H.S. GLASS	GLASS / INTERLAYER	EASTMAN CHEMICAL INETERLAYER
3	DOW CORNING 995 SILICONE (GLAZING COMPOUND)	SILICONE	DOW CORNING
4	EXTERIOR GLASS STOP 0.75" X 0.75" SOLID IRON BAR	ASTM A36	
5	INTERIOR GLASS STOP 0.50" X 0.50" SQUARE BAR	ASTM A36	
6	INSTALLATION ANCHOR (SEE INSTALLATION NOTE 4, SHEET 1)	MATERIAL	
7	#6 X 1" PFH SELF-TAPPING SCREW	STEEL	

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TITLE:
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BILL OF MATERIALS & COMPONENTS

PREPARED BY:
RJA
SCALE:
N.T.S.

DATE:
3/30/23

DRAWING NO:
VIN0006

REV:

SHEET:
4 OF 5

BY
DATE

DESCRIPTION

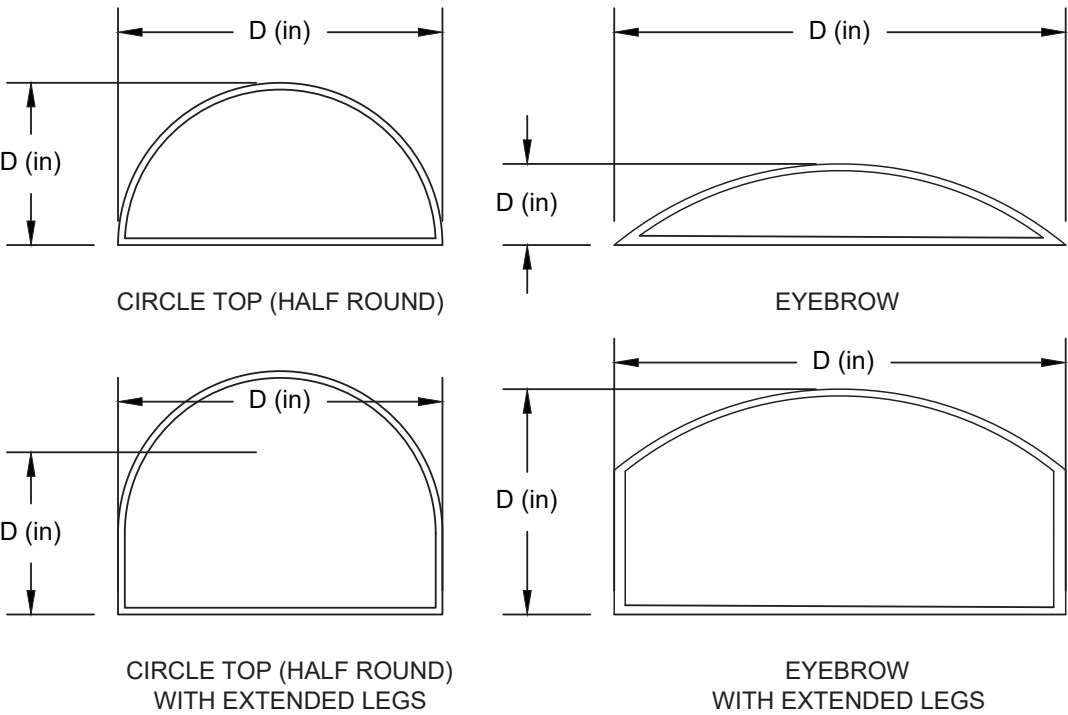
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APPROVED GEOMETRIC SHAPES
EXTERIOR VIEW



- SHAPES OTHER THAN SHOWN BELOW ARE APPROVED PROVIDING THEY ARE LIKE THOSE SHOWN & HAVE SAME CORNER CONSTRUCTION PER AS-TESTED RECTANGULAR UNITS.
- ALL GEOMETRIC SHAPED WINDOW UNITS MUST FIT INSCRIBED WITHIN THE AS-TESTED RECTANGULAR WINDOW DIMENSIONS (SEE SHEET 2) & BE GOVERNED BY THE ALLOWABLE DESIGN PRESSURE OF THE AS-TESTED UNIT SIZE.
- WINDOW SIZE ASPECT RATIO MUST NOT EXCEED A RATIO OF 5:1 WHERE ASPECT RATIO = D_{max}/D_{min} :1. D_{max} = LONG SIDE OF WINDOW AND D_{min} SHORT SIDE OF WINDOW

TYPICAL 5:1 ASPECT RATIO WINDOW SIZES					
Dmax (in)	Dmin (in)	Aspect Ratio	Dmax (in)	Dmin (in)	Aspect Ratio
5	1	5:1	65	13	5:1
10	2	5:1	70	14	5:1
15	3	5:1	75	15	5:1
20	4	5:1	80	16	5:1
25	5	5:1	85	17	5:1
30	6	5:1	90	18	5:1
35	7	5:1	95	19	5:1
40	8	5:1	100	20	5:1
45	9	5:1	105	21	5:1
50	10	5:1	110	22	5:1
55	11	5:1	115	23	5:1
60	12	5:1	120	24	5:1

ASPECT RATIO EVALUATION

MAXIMUM WINDOW SIZE IS 36" X 120"

- $D_{max} = 120$ and $D_{min} = 36$
- Aspect Ratio = $120/36 = 5$ which translates to an Aspect Ratio of 5:1
- Therefore, this window size is acceptable.

WINDOW SIZE IS 60" X 9"

- $D_{max} = 60$ and $D_{min} = 9$
- Aspect Ratio = $60/9 = 6.6$ which translates to an Aspect Ratio of $6.67:1 > 5:1$ Aspect Ratio
- Therefore, this window size is unacceptable.

PROJECT# 421-1105

VINTAGE IRONWORKS

987 JOSIANE COURT, SUITE 1064

ALTAMONTE SPRINGS, FLORIDA 32701

TITLE:

STEEL FIXED WINDOW

APPROVED SHAPES

DATE:

3/30/23

DRAWING NO:

VIN0006

SHEET:

5 OF 5

PREPARED BY:

RJA

SCALE:

N.T.S.

REV:

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