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www.nctlinc.com

Florida Building Code TAS 201-94
Florida Building Code TAS 202-94
Florida Building Code TAS 203-94

STRUCTURAL, IMPACT & CYCLING TEST REPORT SUMMARY

RENDERED TO:

Acurlite Structural Skylights
1017 North Vine Street
Berwick, PA 18603

PRODUCT TYPE: Fixed Skylight Assembly

SERIES/ MODEL: "Secure Series"

Summary of Results					
Specimen 1	TAS 202	+ 80.0	psf	- 80.0	psf
Specimens 2, 3, 4	TAS 201/203	+ 80.0	psf	- 80.0	psf
Air Infiltration per ASTM E283 in accordance with TAS 202-94					
		Infiltration: 0.10 cfm/ft^2			
Water Penetration Resistance per ASTM E331 in accordance with TAS 202-94					
		12 psf - Passed/No water penetration			
Static Air Pressure per ASTM E330 in accordance with TAS 202-94					
Design Load Pressure		+ 80.0	psf	- 80.0	psf
Overload/ Structural Load Pressure		+ 160.0	psf	- 160.0	psf
Forced Entry Resistance per ASTM F588 in accordance with TAS 202-94					
		Passed – Grade 10			
Specimens 2,3,4					
Large Missile Impact/ Pressure Loading in accordance with TAS 201-94 and TAS 203-94					
Impacts rejected without allowing penetration and the product shows no resultant failure or distress					

Test Completed: 06/02/21

Reference must be made to Report No. NCTL-110-24316-1-R1 dated 01/03/22 for complete test specimen description and data.

For National Certified Testing Laboratories

DIGITAL SIGNATURE

Justin L. Bupp
Laboratory Manager

JOSEPH A. REED
LICENSE
No. 58920
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Joseph A. Reed

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Florida Building Code TAS 203-94

STRUCTURAL, IMPACT & CYCLING PERFORMANCE TEST REPORT

NCTL-110-24316-1-R1

REPORT TO:

ACURLITE STRUCTURAL SKYLIGHTS
1017 NORTH VINE STREET
BERWICK, PA 18603

REPORT NUMBER: NCTL-110-24316-1-R1
REPORT DATE: 07/26/21
REVISION 1 DATE: 01/03/22

PRODUCT TYPE: FIXED SKYLIGHT ASSEMBLY

SERIES/ MODEL: "SECURE SERIES"

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Report Number NCTL-110-24316-1-R1

Report Date 07/26/21 (Revision 1, 01/03/22)

Report To Acurlite Structural Skylights
1017 North Vine Street
Berwick, PA 18603

Date Testing Started 05/25/21
Date Testing Completed 06/02/21

Specification:
Florida Building Code TAS 201-94
Impact Test Procedures

Florida Building Code TAS 202-94
Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components using Uniform Static Air Pressure

Florida Building Code TAS 203-94
Criteria for Testing Products Subjected to Cyclic Pressure Loading

Description of Specimen Tested

Note: All dimensions are in the order (Width x Height x Thickness) unless otherwise noted.

Model/ Series "Secure Series"

Configuration Fixed Skylight

Frame Size
Overall
Specimen 1 (sloped)
4331 mm x 3324 mm (170.5" x 130.875") high by 2235 mm (88") deep

Specimens 2-4
4331 mm x 3324 mm (170.5" x 130.875")

Viewing Area
All Specimens
Large Fixed
1324 mm x 2457 mm (52.125" x 96.75")

Small Fixed
1324 mm x 1194 mm (52.125" x 47")

Specimen 1
Gable End
2032 mm x 851 mm (80" x 33.5")

Frame Type Extruded aluminum

Joint Construction
Frame
The verticals were fastened to the horizontals with (2) screws. The purlins were fastened to the verticals with (6) screws and a metal mounting lug that was fastened with (3) 3/8" bolts.

Glazing Components

Overall	33 mm (1.317") nominal
Glass Thickness	(1) Lite of 6 mm (0.225") nominal tempered glass to the exterior and (1) lite of laminated glass to the interior
Laminated Glass	(2) Lites of 6 mm (0.220") nominal heat strengthened glass separated by a 2.29 mm (0.090") “SentryGlas Plus” interlayer
Spacer Type/Size	14.27 mm (0.562") Aluminum spacer (Type A1-D)
Glazing System	Exterior glazed with a multi-fin gasket and Dow 995 silicone back-bedding. The exterior glazing perimeters were sealed with a Dow 795 silicone

Weatherstrip No weatherseals employed

Operating Hardware No operating hardware employed

Auxiliary

Type	Extruded aluminum flashing
Location	Exterior perimeter of the sample
Type	Extruded aluminum/ plywood panel fillers
Location	Back side/ close off of mock up to chamber
Type	Extruded aluminum structural seal flange
Location	All members fastened with evenly spaced screws

Reinforcement No reinforcement employed

Weep Description

Size	19.05 mm (0.75") Gap in sill pan sponge gasket
Location	Sill/ rafter intersection

Interior/ Exterior Surface Finish Painted aluminum

Sealant

Location	Exterior perimeter of the glazing, horizontal member back-bedding flashing to frame
Material	Silicone

Insect Screen No screen employed

Installation Method The assembly was installed in a steel/ plywood test chamber. The assembly was fastened to the chamber with aluminum angles at each end of the rafters. The angles were fastened to the chamber with (2) 1/2 – 13 x 1 – 1/2 grade 5 Hex Hd per angle. The rafter was fastened to the angles with 2 1/2 – 13 x 4 1/2" long Hex Hd cap screw with lock washers and nuts. The gable end was fastened with aluminum angles at the sill and (2) 1/4 bolts and nuts.

Test Results - TAS 202

Test Method	Test
ASTM E283	Air Leakage Resistance

Information at 1.6 psf:

Maximum Allowable	=	0.30 cfm/ft^2
Infiltration Rate/ Area	=	0.10 cfm/ft^2

Test Method	Test
ASTM E547 ASTM E331	Water Resistance Test

The test specimen complies with the requirements of TAS 202 at 5.0 gph/ft²

No Leakage after 1 cycle of 15 minutes at 12 psf

Test Method	Test
ASTM E330	Static Air Pressure Tests

Half Test Load - ± **60 psf**

Positive	=	No damage
Negative	=	No damage

Design Loads - ± **80 psf**

Vertical

Measured Deflection $_{Positive}$	=	0.087 inches
Measured Deflection $_{Negative}$	=	0.052 inches
Measured Permanent Set $_{Positive}$	=	0.026 inches
Measured Permanent Set $_{Negative}$	=	0.001 inches

Horizontal

Measured Deflection $_{Positive}$	=	0.034 inches
Measured Deflection $_{Negative}$	=	0.060 inches
Measured Permanent Set $_{Positive}$	=	0.023 inches
Measured Permanent Set $_{Negative}$	=	0.018 inches

Purlin

Measured Deflection $_{Positive}$	=	0.002 inches
Measured Deflection $_{Negative}$	=	0.023 inches
Measured Permanent Set $_{Positive}$	=	0.005 inches
Measured Permanent Set $_{Negative}$	=	0.012 inches

Test Loads - ± **160 psf**

Vertical

Measured Deflection $_{Positive}$	=	0.132 inches
Measured Deflection $_{Negative}$	=	0.088 inches
Measured Permanent Set $_{Positive}$	=	0.033 inches
Measured Permanent Set $_{Negative}$	=	0.001 inches

Horizontal

Measured Deflection $_{Positive}$	=	0.022 inches
Measured Deflection $_{Negative}$	=	0.104 inches
Measured Permanent Set $_{Positive}$	=	0.033 inches
Measured Permanent Set $_{Negative}$	=	0.060 inches

Purlin

Measured Deflection $_{Positive}$	=	0.019 inches
Measured Deflection $_{Negative}$	=	0.022 inches
Measured Permanent Set $_{Positive}$	=	0.006 inches
Measured Permanent Set $_{Negative}$	=	0.052 inches

NOTE: Deflection and Permanent Set measurements taken on the vertical, horizontal and purlin with a 0.4%/ 9.65 mm (0.380") for the vertical, 5.38 mm (0.212") for the purlin and 17.27 mm (0.680”) for the horizontal permanent set limit.

NOTE: Upon completion of testing there was no structural distress indicative of failure

Test Results - TAS 201

Test
Large Missile Impact

Type and weight of missile
#2 Southern Yellow Pine 2x4, Length 102" & 9 lbs Speed 50.0 ft/ sec.

	Location
Specimen 2	
Impact	Center of Left Lite Glazing
Impact	Lower Left Corner of Left Lite Glazing
Specimen 3	
Impact	Upper Right Corner of Center Lite Glazing
Impact	Center of Center Lite Glazing
Impact	Midspan of Left Intermediate (Vertical) Glazing
Specimen 4	
Impact	Bottom Left Corner of Left Lite Glazing
Impact	Left Lite Glazing
Impact	Midspan of Horizontal Intermediate

NOTE: All missile impacts were rejected without penetration, tearing, or separation of the laminate. Shattered sacrificial and laminated glass. No visible damage to the frame was observed.

Test Results - TAS 203

Test
Cyclic Wind Pressure Loading

After completion of the impact tests, the test specimens were pressure cycled in accordance with Table 1626 of 2020 Florida Building Code Building.

Maximum Cyclic Load Test Pressure: +80 psf & -80 psf

Specimens 2, 3, 4

Positive Load

Range of Test	**Actual**					**# of Cycles**
+0.2 to +0.5 DP	16.0	psf	to	40.0	psf	3,500
+0.0 to +0.6 DP	00.0	psf	to	48.0	psf	300
+0.5 to +0.8 DP	40.0	psf	to	64.0	psf	600
+0.3 to +1.0 DP	24.0	psf	to	80.0	psf	100

Test
Cyclic Wind Pressure Loading

Negative Loads

Range of Test	**Actual**					**# of Cycles**
-0.3 to -1.0 DP	24.0	psf	to	80.0	psf	50
-0.5 to -0.8 DP	40.0	psf	to	64.0	psf	1,050
-0.0 to -0.6 DP	00.0	psf	to	48.0	psf	50
-0.2 to -0.5 DP	16.0	psf	to	40.0	psf	3,350

NOTE: Specimens showed no resultant failure distress or permanent deformation with a recovery of at least 90% over maximum deflection after cycle test. No failure of fasteners or separation of glass from the frame.

Test Method	Test
ASTM F588	Forced Entry Resistance

Type D Window Assembly/ Grade 10: = Pass

Specimen 1

Test	
Disassembly	= No Entry
Sash Manipulation	= No Entry

NOTE: 1. T1 = 5 minutes, L1 = 667 N (150 lbf), L2 = 333 N (75 lbf), L3 = 111 N (25 lbf)
2. Loads were held for 60 seconds.

Test Observers

Justin Bupp	NCTL, Inc.
Kyle Mayleth	Acurlite Structural Skylights

Where required, plastic film (2-mil) was used to seal against air leakage. The film did not affect the performance of the specimens or influence the results of the tests. All tests were conducted in accordance with the TAS 201, TAS 202 and TAS 203 test methods. Upon completion of all testing, the specimens meet the requirements of Sections 1606, 1620 and 1626 of the "Florida Building Code, Building" and the TAS 201, 202 and 203 protocols.

This test report was prepared by National Certified Testing Laboratory (NCTL), for the exclusive use of the above named client and it does not constitute certification of this product. The results are for the particular specimen tested and do not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. All testing was performed in compliance with the referenced test method or specification and any deviations are noted. Ambient conditions during the referenced testing are available upon request. Any film employed during testing had no effect upon test results.

The test specimen was supplied to NCTL by the above named client. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen are to be drawn from the ASTM E330-02(10) test. Forced entry resistance test equipment used is in compliance with Section 7 of the ASTM F588-07 test method. NCTL is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. Component drawings were reviewed for product verification. The bill of materials contains details with any deviations noted. Ambient conditions during the referenced testing are available upon request. A copy of this report along with representative sections of the test specimen will be retained by NCTL. This report does not constitute certification or approval of the product, which may only be granted by a certification program validator or recognized approval entity. All tests were conducted in full compliance with the referenced specifications and/or test methods. This report may not be reproduced, except in full, without the written consent of NCTL.

National Certified Testing Laboratories

Justin L. Bupp
Laboratory Manager

Joseph A. Reed, PE
Engineering Services

JLB/bnr
Attachments
Appendix A – Revision Summary
Appendix B – Drawings

Appendix A

Revision Log

Identification	Date	Page & Revision
Original Issue	07/26/21	Not Applicable
Revision 1	01/03/22	Review and seal by Florida PE

Appendix B

Drawings

Component Drawings, with Applicable Part Numbers, Manufacturing and Modeling Details, were reviewed (as submitted) for Product Verification. Detailed assembly drawings showing wall thicknesses of all members, corner construction and hardware application are on file and have been compared to the test sample submitted.

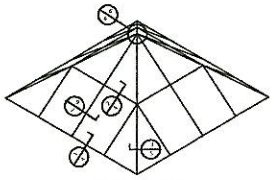
(Reference: NCTL-110-24316-1-R1)

See Attached Documentation;
any deviations noted.

Note: The above referenced component drawings (if applicable) along with representative sections of the test specimen will be retained by NCTL per applicable retention requirements. This testing facility assumes that all information provided by the client is accurate.

LARGE MISSILE

Notes:
1. The skylight system indicated on these shop drawings has been verified for compliance in accordance with the 2020 (7th Edition) Florida Building Code. Maximum design pressure +80psf and -80psf.
2. The skylight system may be installed in High Velocity Hurricane Zone.
3. These shop drawings are generic and do not provide information for site specific projects.
4. Structural adequacy of the supporting structure is not part of this product approval. Design of the supporting structure is the responsibility of the engineer of record for the project.
5. Design of the supporting structure shall take into account the loads being transferred from the skylight system (reactions) to the supporting structure.
6. The skylight system indicated on these shop drawings tested for small missile impact in accordance with TAS 201/202/203.
7. Aluminum in contact with dissimilar materials shall be protected in accordance with section 2003.8.4.2 of the Florida Building Code.



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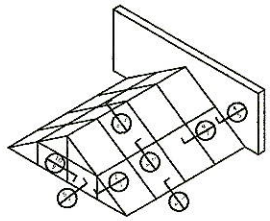
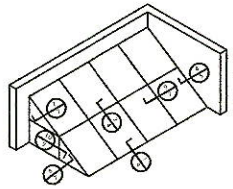
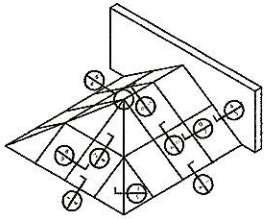


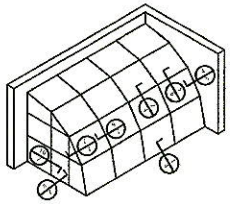
DOUBLE PITCH WITH GABLE



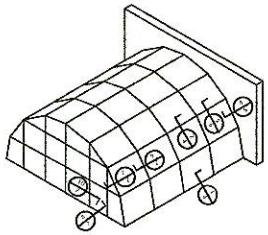
SINGLE PITCH WITH GABLE



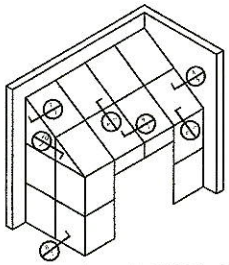
DOUBLE PITCH WITH HIP



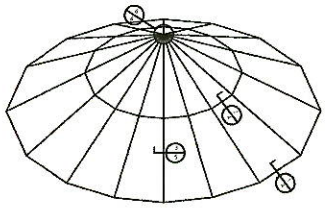
SEGMENTED BARRELL QUATER VAULT WITH GABLE



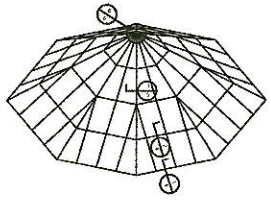
SEGMENTED BARRELL HALF VAULT WITH GABLE



STRAIGHT EAVE LEAN-TO WITH GABLE



POLYGON



POLYGON WITH JACK RAFTERS

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DOCUMENT NO.	SD1099-21
DRAWN BY:	JLB/JH
CHECKED BY:	
DATE:	1/27/21
SCALE	NONE
DRAWING FILE	
SHEET	1 of 13

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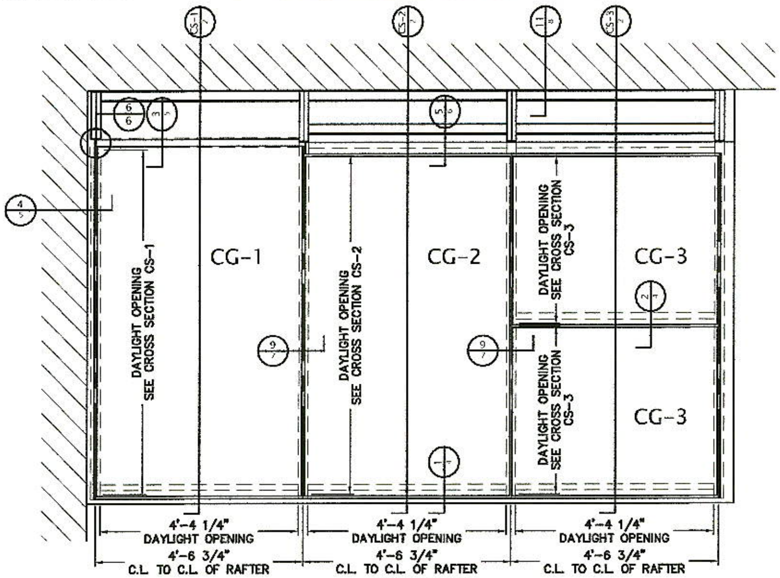
1/12/27/17 REVISED PER CALCS

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21



PLAN VIEW

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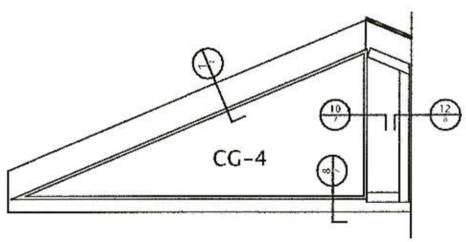
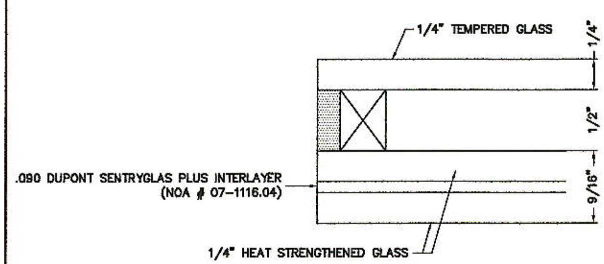


GABLE VIEW

SCALE : 3/8" = 1'-0"

	SIZE
CG-1	54 x 99
CG-2	54 x 96
CG-3	54 x 49 5/8
CG-4	SEE PATTERN



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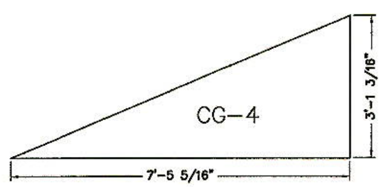

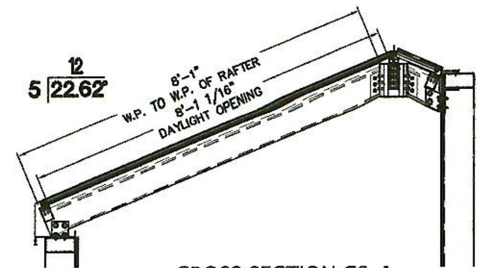

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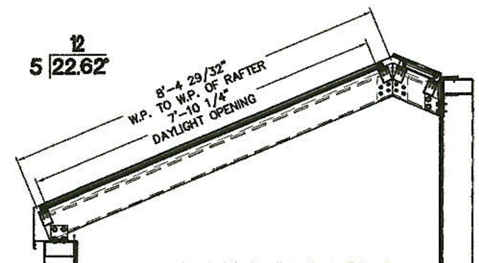

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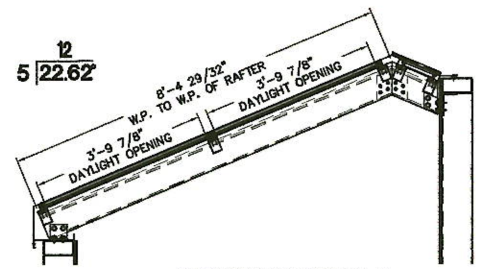

CROSS SECTION CS-3

SCALE : 3/8" = 1'-0"

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370.759.6882 www.acurlite.com sales@acurlite.com

PRODUCT NAME: SECURE SERIES

PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED

DRAWING TITLE: PLANS AND ELEVATIONS

DOCUMENT NO. SO1099-21

DRAWN BY: L. MAZZIE

CHECKED BY:

DATE: 1/27/21

SCALE: AS NOTED

DRAWING FILE:

SHEET 2 of 13

Test Specimen Complies With
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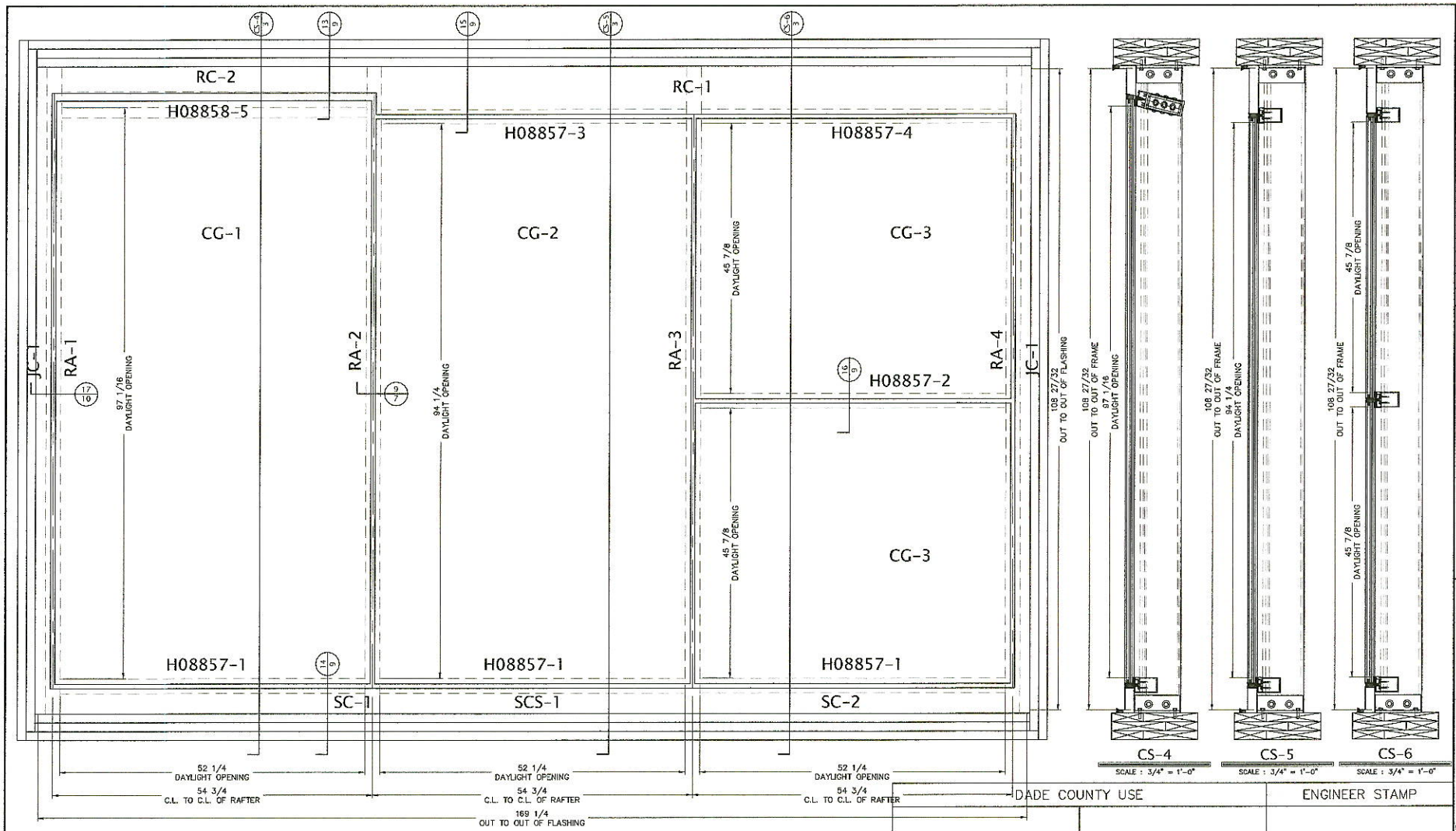
Report No. 24316-1 By: JLB
Test Date: 06/21/21



TEST SPECIMEN ELEVATION

SCALE : 3/4" = 1'-0"

(3) UNITS REQUIRED AS SHOWN

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PRODUCT NAME: SECURE SERIES
PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED
DRAWING TITLE: PLANS AND ELEVATIONS
DOCUMENT NO.: SD1099-21
DRAWN BY: J. MAZUR
CHECKED BY:
DATE: 1/27/21
SCALE: AS NOTED
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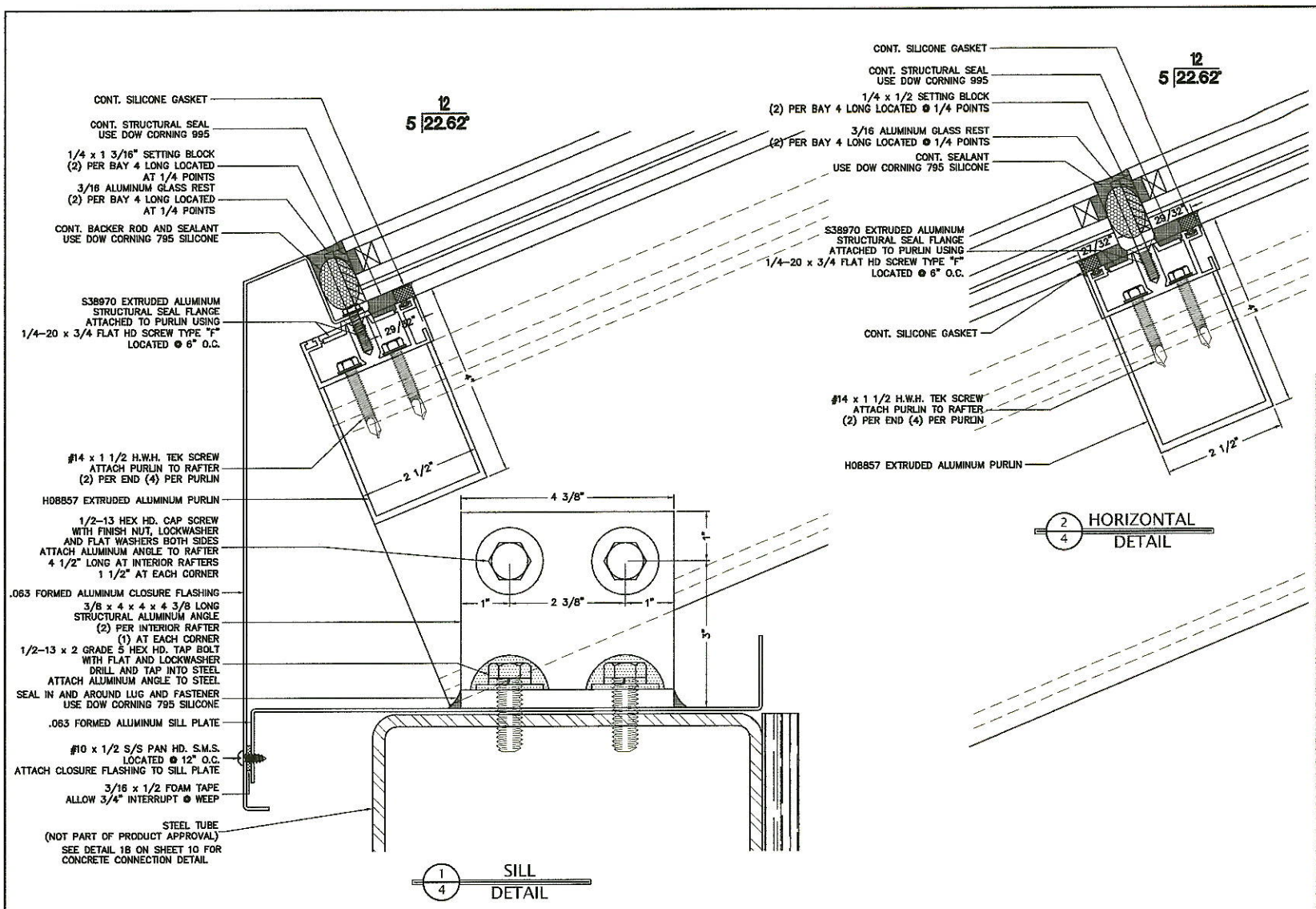

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PRODUCT NAME	SECURE SERIES
PRODUCT TYPE	LARGE MISSILE FLUSH GLAZED
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CHECKED BY	
DATE	1/27/21
SCALE	NONE
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P-T	12/27/17	REVISED PER CALCS

Test Specimen Complies With
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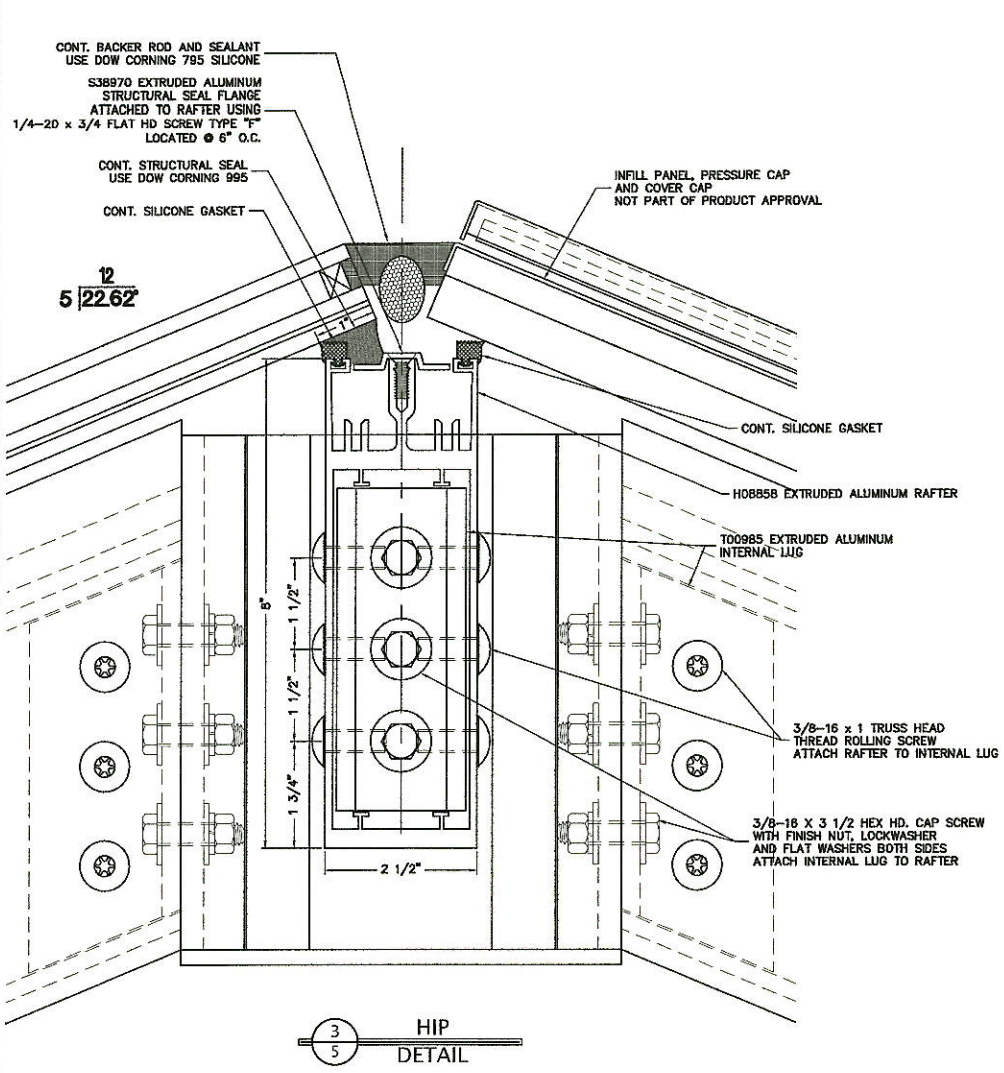

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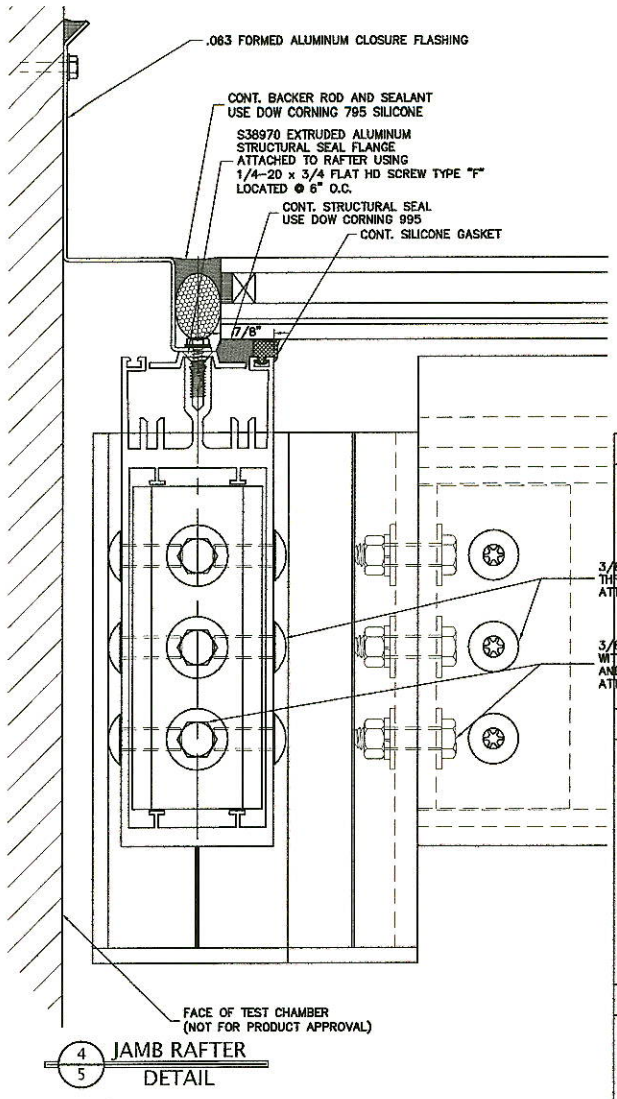

4/5 JAMB RAFTER DETAIL

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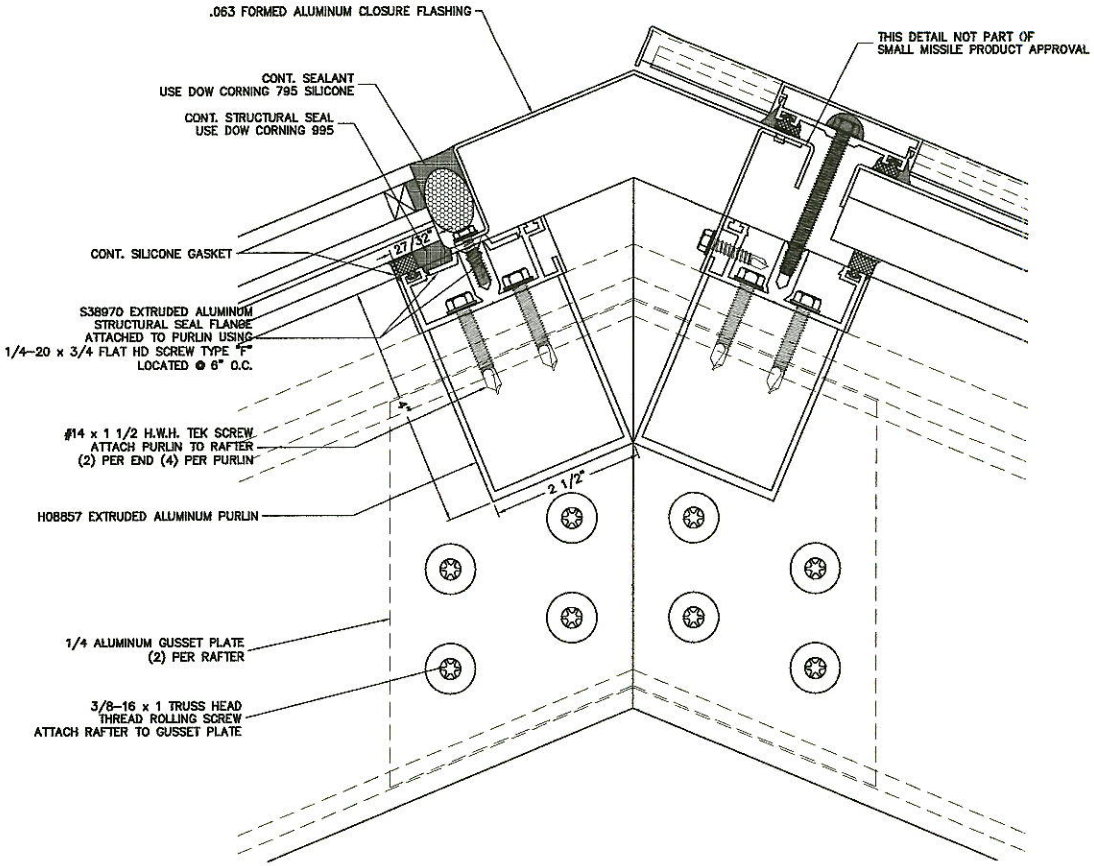
P3 12/27/17 REVISED PER CALCS

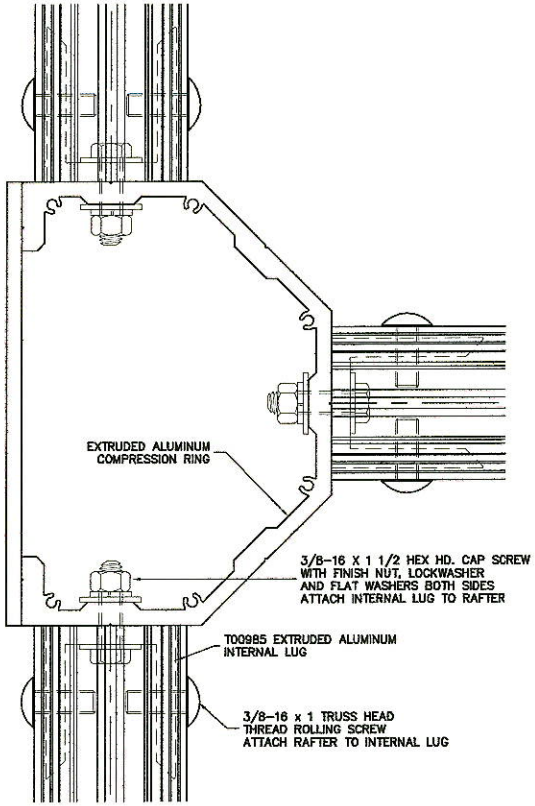
PRODUCT NAME: SECURE SERIES
PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED
DRAWING TITLE: DETAILS
DOCUMENT NO. SD1009.21
DRAWN BY: K. MAZZE
CHECKED BY:
DATE: 12/27/21
SCALE: HALF
DRAWING FILE:
SHEET 5 of 13

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21

12
5 22.62°



5/6 RIDGE/KNEE DETAIL



6/6 COMP. RING DETAIL

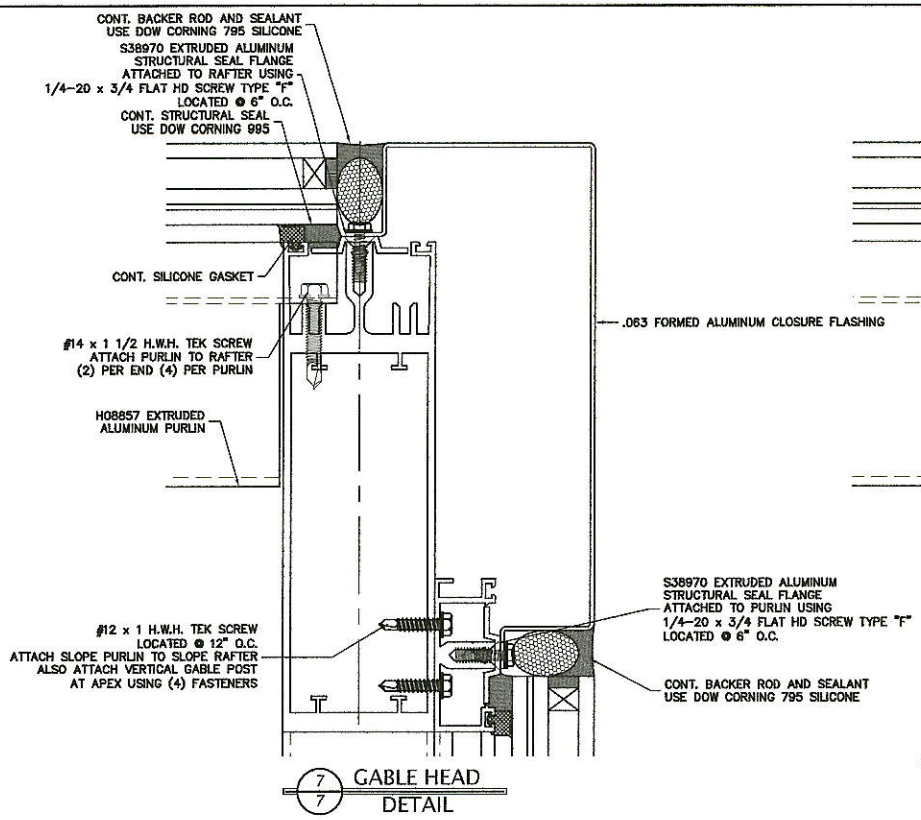
DADE COUNTY USE		ENGINEER STAMP

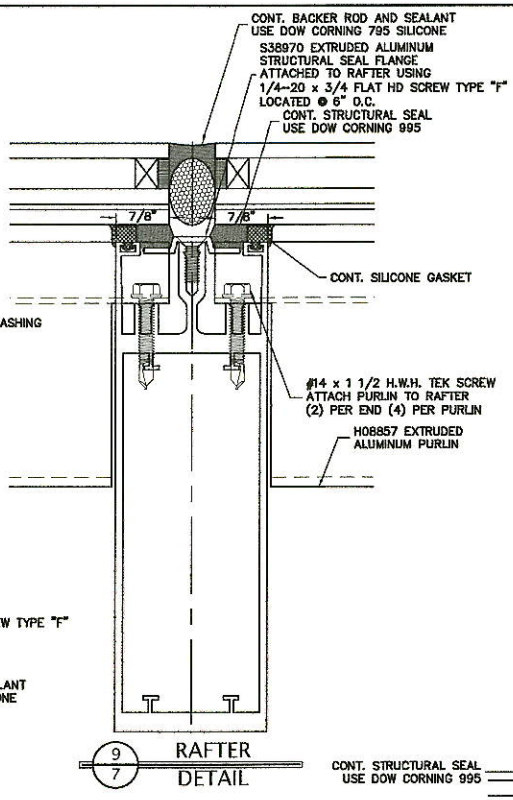
P.T. 12/27/17 REVISED PER CALCS

acurlite Structural Skylights, Inc.
570.739.6882 www.acurlite.com sales@acurlite.com

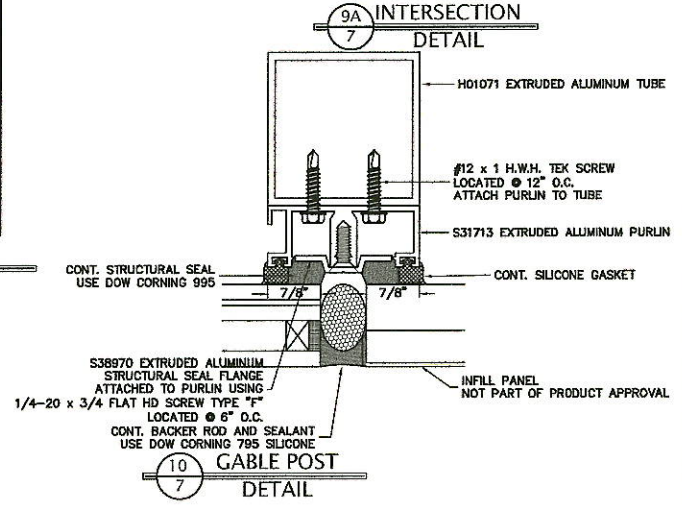
PRODUCT NAME: SECURE SERIES
PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED
DRAWING TITLE: DETAILS
DOCUMENT NO.: S210099-21
DRAWN BY: L. MAZUR
CHECKED BY:
DATE: 1/27/21
SCALE:
SHEET: 6 of 13

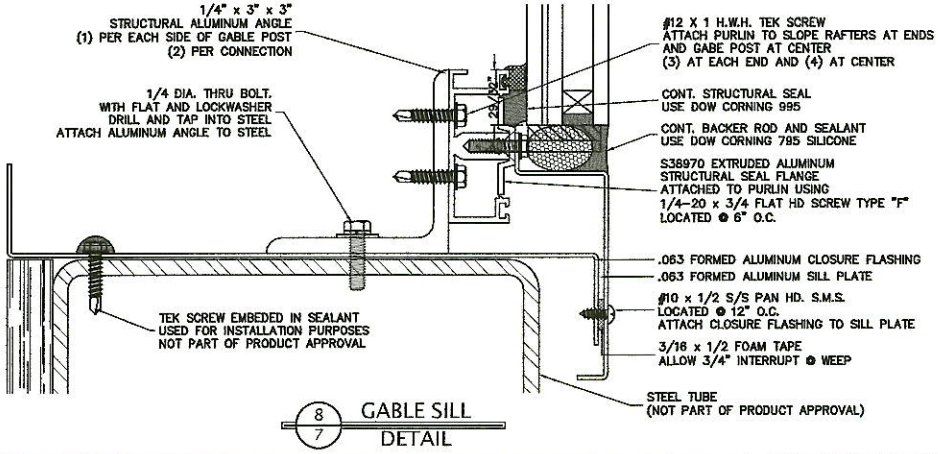
Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21





DETAIL NOT NEEDED





DADE COUNTY USE		ENGINEER STAMP

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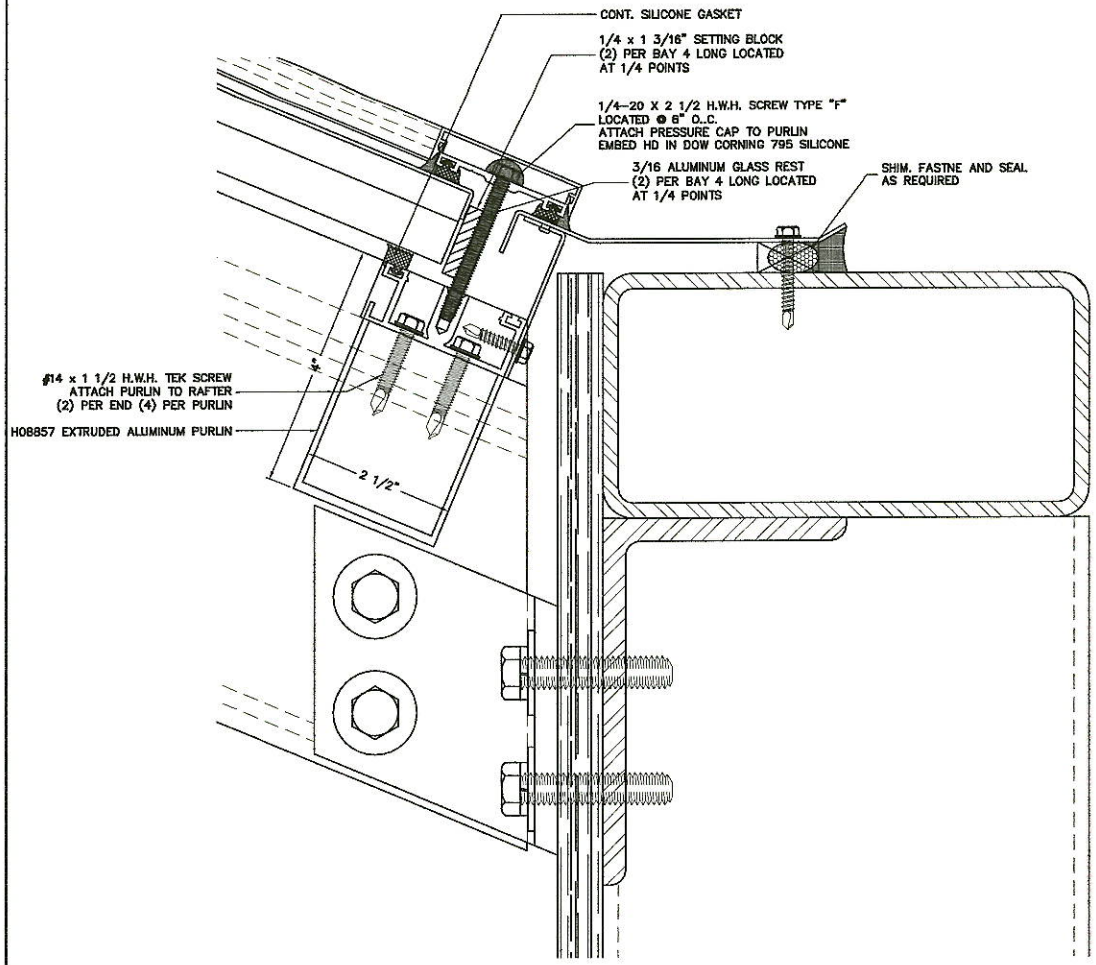
3 1/27/21 REVISED PER CALCS

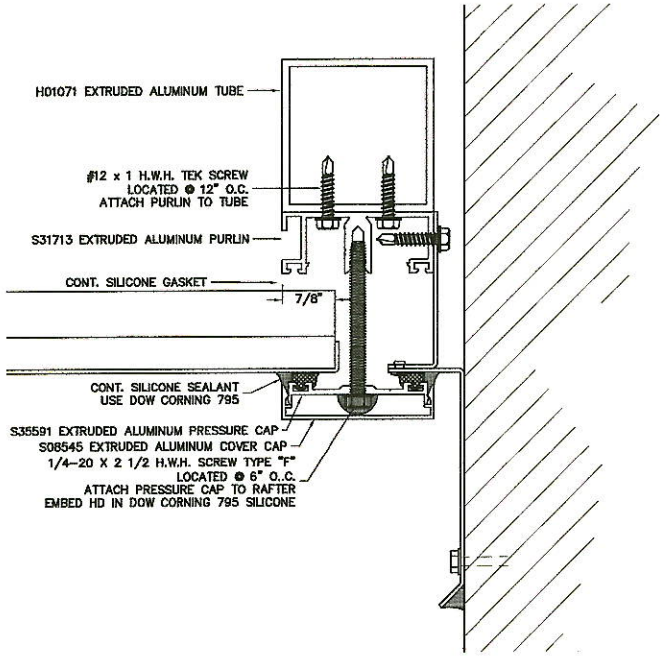
PRODUCT NAME: SECURE SERIES
PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED
DRAWING TITLE: DETAILS
DOCUMENT NO.: 501099-21
DRAWN BY: L. HAZA
CHECKED BY:
DATE: 1/27/21
SCALE: NONE
DRAWING FILE:
SHEET: 7 of 13

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21



11/8 SILL DETAIL

THIS DETAIL IS NOT PART OF PRODUCT APPROVAL



12/8 GABLE POST DETAIL

THIS DETAIL IS NOT PART OF PRODUCT APPROVAL

DADE COUNTY USE		ENGINEER STAMP

1	12/27/17 REVISED PER CALCS

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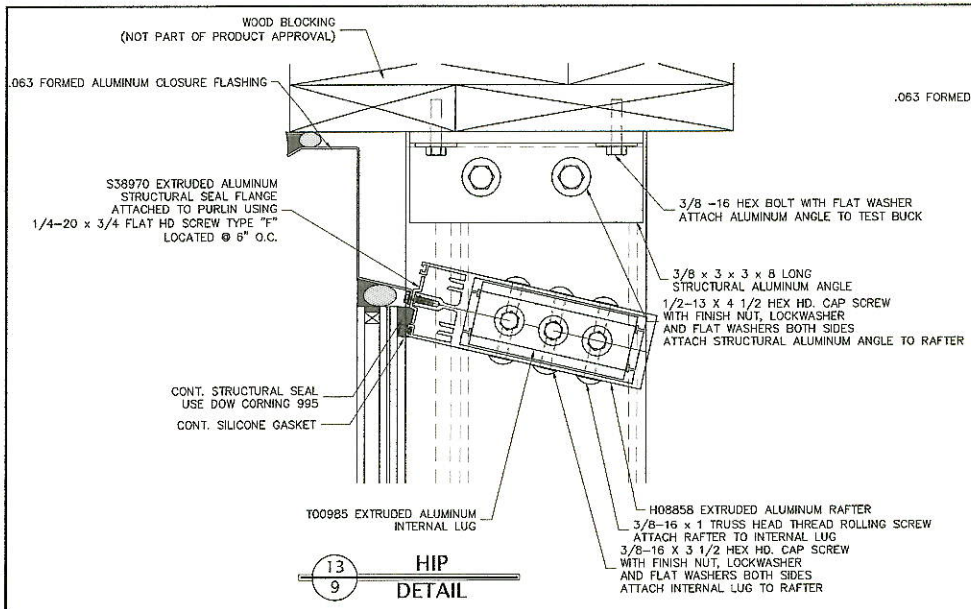
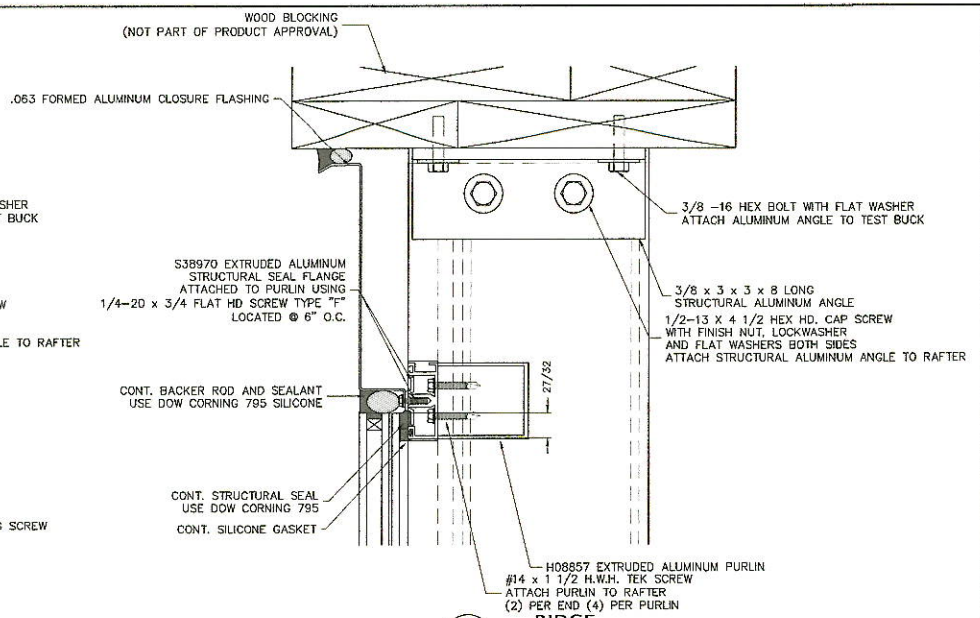
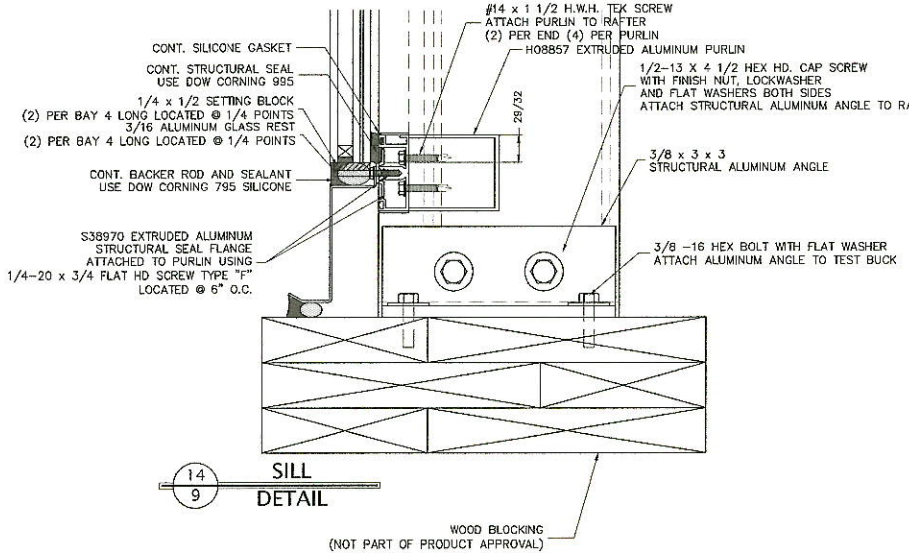
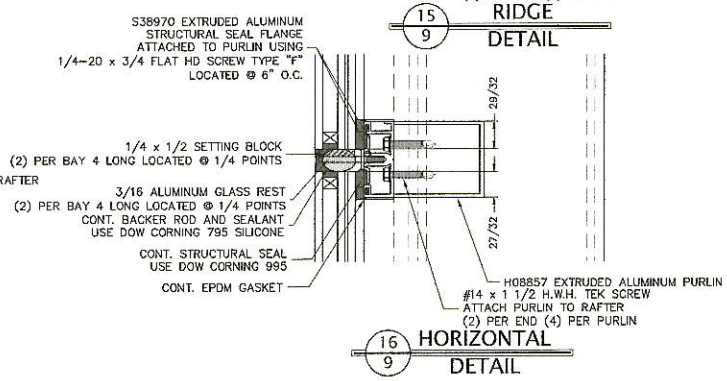
PRODUCT NAME: SECURE SERIES
PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED
DRAWING TITLE: DETAILS
DOCUMENT NO.: SO1099-21
DRAWN BY: JLB 1/27/21
CHECKED BY:
DATE: 1/27/21
SCALE: HALF
DRAWING NO.:
SHEET: 8 of 13

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21









DADE COUNTY USE		ENGINEER STAMP

P1 12/27/21 REVISED PER CALCS

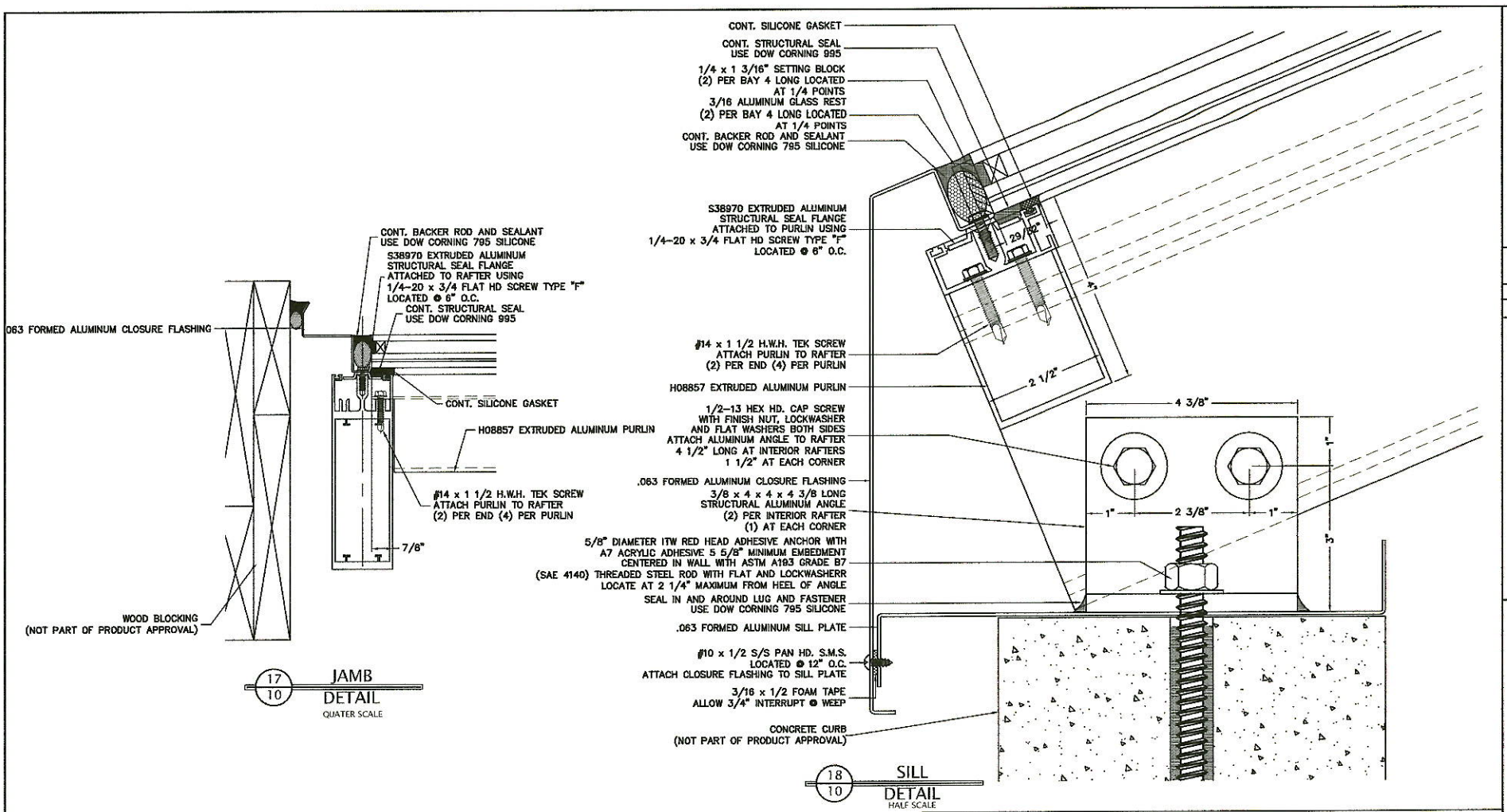
1/27/21

acurlite Structural Skylights, Inc.

570.753.6382 www.acurlite.com sales@acurlite.com

PRODUCT NAME: SECURE SERIES
PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED
DRAWING TITLE: DETAILS
DOCUMENT NO.: SO1609-21
DRAWN BY: L. MAZZIE
CHECKED BY:
DATE: 1/27/21
SCALE:
QUARTER:
DRAWING FILE:
SHEET 9 of 13

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21



DADE COUNTY USE	ENGINEER STAMP

PRODUCT NAME	SECURE SERIES
PRODUCT TYPE	LARGE MISSILE FLUSH GLAZED
DRAWING TITLE	DETAILS
DOCUMENT NO.	S01099-21
DRAWN BY:	L. MAZA
CHECKED BY:	
DATE:	1/27/21
SCALE:	AS NOTED
DRAWING FILE:	
SHEET	10 of 13

1 | 1/27/21 | REVISED PER CALCS

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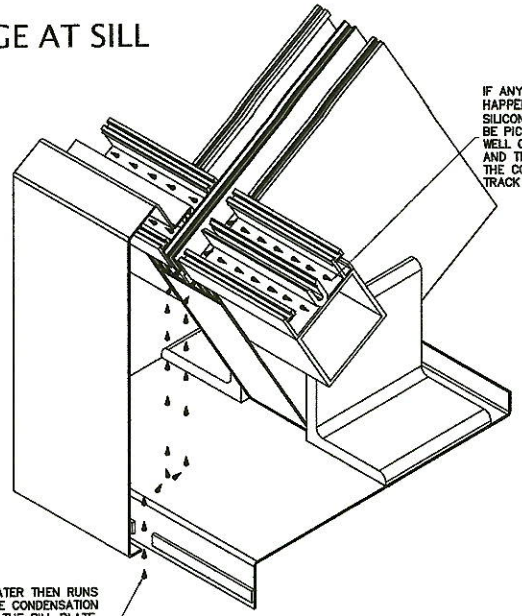
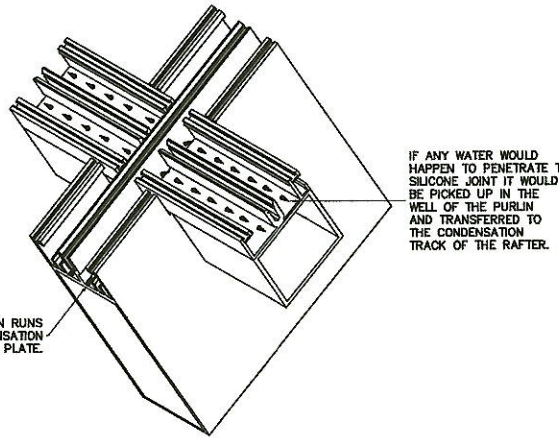
570.758.0882 www.acurlite.com sales@acurlite.com

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21

WEEPAGE AT SILL



WEEPAGE AT INTERMEDIATE



DADE COUNTY USE		ENGINEER STAMP

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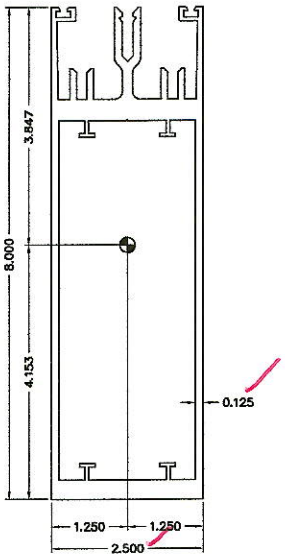
570.759.6882 www.acurlite.com sales@acurlite.com

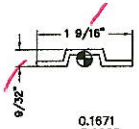
PRODUCT NAME	SECURE SERIES
PRODUCT TYPE	LARGE MISSILE FLUSH GLAZED
DRAWING TITLE	DETAILS
DOCUMENT NO.	501099-21
DRAWN BY:	AMM/21
CHECKED BY:	
DATE:	1/27/21
SCALE:	NTS
DRAWING FILE:	
SHEET	11 of 13

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21



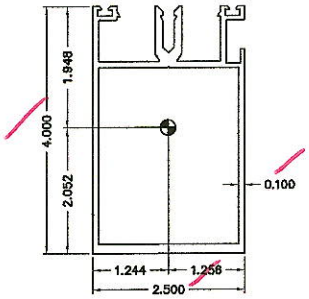
Area: 4.0777
Perimeter: 54.9115
Bounding box: X: −1.2500 — 1.2500
Y: −4.1528 — 3.8472
Moments of inertia: X: 31.3863
Y: 3.5664
Product of inertia: XY: 0.0000
Radii of gyration: X: 2.7743
Y: 0.9352
Principal moments and X−Y directions about centroid:
I: 3.5664 along [0.0000 1.0000]
J: 31.3863 along [−1.0000 0.0000]
Weight per lineal foot: 4.77 lbs.
Aluminum Alloy: 6063−T6

H08858 RAFTER
FULL SCALE



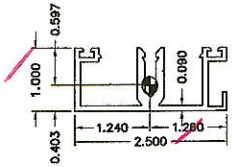
Area: 0.1671
Perimeter: 3.8925
Bounding box: X: −0.7885 — 0.7885
Y: −0.1177 — 0.1560
Moments of inertia: X: 0.0013
Y: 0.0317
Product of inertia: XY: 0.0000
Radii of gyration: X: 0.0882
Y: 0.4355
Principal moments and X−Y directions about centroid:
I: 0.0013 along [1.0000 0.0000]
J: 0.0317 along [0.0000 1.0000]
Weight per lineal foot: 0.200 lbs.
Aluminum Alloy: 6063−T6

S38970 STRUCTURAL SEAL FLANGE
FULL SCALE



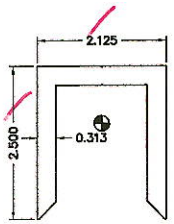
Area: 1.6983
Perimeter: 31.2602
Bounding box: X: −1.2438 — 1.2562
Y: −2.0520 — 1.9480
Moments of inertia: X: 3.4266
Y: 1.4491
Product of inertia: XY: −0.0162
Radii of gyration: X: 1.4204
Y: 0.9237
Principal moments and X−Y directions about centroid:
I: 1.4489 along [0.0082 −1.0000]
J: 3.4267 along [1.0000 0.0082]
Weight per lineal foot: 1.89 lbs.
Aluminum Alloy: 6063−T6

H08857 PURLIN
FULL SCALE



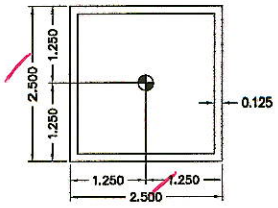
Area: 0.7307
Perimeter: 15.0209
Bounding box: X: −1.2403 — 1.2597
Y: −0.4032 — 0.5968
Moments of inertia: X: 0.0800
Y: 0.4177
Product of inertia: XY: −0.0027
Radii of gyration: X: 0.3309
Y: 0.7561
Principal moments and X−Y directions about centroid:
I: 0.0800 along [1.0000 −0.0080]
J: 0.4178 along [0.0080 1.0000]
Weight per lineal foot: 0.86 lbs.
Aluminum Alloy: 6063−T6

S31713 PURLIN
FULL SCALE



Area: 1.9456
Perimeter: 13.3068
Bounding box: X: −1.0624 — 1.0626
Y: −1.5635 — 0.9365
Moments of inertia: X: 1.0731
Y: 1.3224
Product of inertia: XY: −0.0001
Radii of gyration: X: 0.7427
Y: 0.8244
Principal moments and X−Y directions about centroid:
I: 1.0731 along [1.0000 −0.0004]
J: 1.3224 along [0.0004 1.0000]
Weight per lineal foot: 2.335 lbs.
Aluminum Alloy: 6063−T6

T00985 INTERNAL LUG
FULL SCALE



Area: 1.1875
Perimeter: 19.0000
Bounding box: X: −1.2500 — 1.2500
Y: −1.2500 — 1.2500
Moments of inertia: X: 1.1195
Y: 1.1195
Product of inertia: XY: 0.0000
Radii of gyration: X: 0.9709
Y: 0.9709
Principal moments and X−Y directions about centroid:
I: 1.1195 along [0.7071 −0.7071]
J: 1.1195 along [0.7071 0.7071]
Weight per lineal foot: 1.39 lbs.
Aluminum Alloy: 6063−T6

H01071 TUBE
FULL SCALE

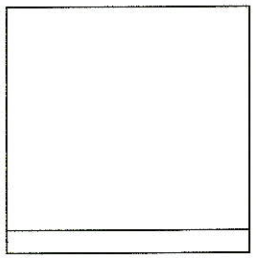
DADE COUNTY USE	ENGINEER STAMP

acurlite Structural Skylights, Inc.
370 759 6882 www.acurlite.com sales@acurlite.com

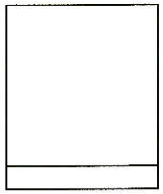
PRODUCT NAME:	SECURE SERIES
PRODUCT TYPE:	LARGE MISSILE FLUSH GLAZED
DRAWING TITLE:	BILL OF MATERIALS
DOCUMENT NO.	501069-21
DRAWN BY:	L. HARPER
CHECKED BY:	
DATE:	1/27/21
SCALE:	HALF
DRAWING FILE:	
SHEET	12 of 13

1	1/27/21	REVISED PER CALCS

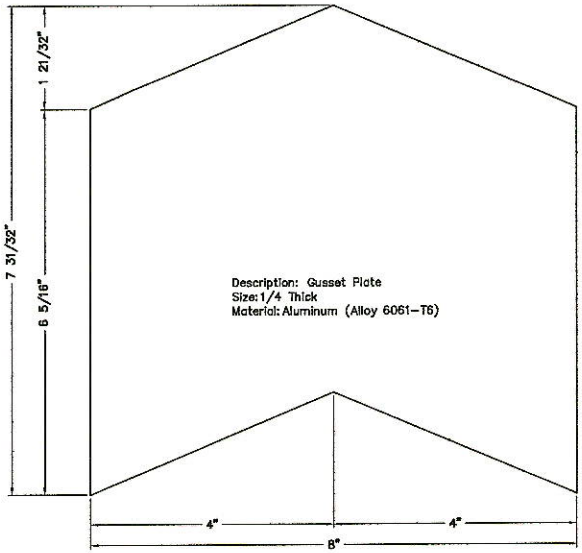
Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21



Description: Structural Aluminum Angle
Size: 3/8 x 4 x 4
Material: Aluminum (Alloy 6061-T6)

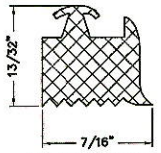


Description: Structural Aluminum Angle
Size: 3/8 x 3 x 3
Material: Aluminum (Alloy 6061-T6)

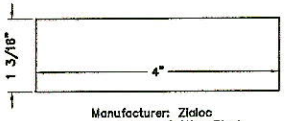


Description: Gusset Plate
Size: 1/4 Thick
Material: Aluminum (Alloy 6061-T6)

Description: Glass Rest
Size: 3/16 Thick
Material: Aluminum (Alloy 6061-T6)



Manufacturer: Trelleborg
Description: Gasket
Material: Silicone



Manufacturer: Zicloc
Description: Setting Block
Material: Silicone

Description: Pop Rivet
Size: 1/8 x 1/4
Material: Aluminum

Description: Pan Head Sheet Metal Screw (Pan Hd. S.M.S.)
Size: #10 x 1/2
Material: Stainless Steel

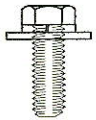
Description: Hex Washer Head Tek Screw (H.W.H. Tek Screw)
Size: #12 x 1
Material: SAE Grade 2 Steel

Description: Truss Head Thread Rolling Screw
Size: 3/8-16 x 1"
Material: SAE Grade 2 Steel

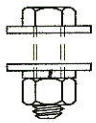
Description: Hex Washer Head Tek Screw (H.W.H. Tek Screw)
Size: #14 x 1 1/2
Material: SAE Grade 2 Steel

Description: Hex Washer Head Screw Type "F" (H.W.H. Screw Type "F")
Size: 1/4-20 x 2 1/2
Material: SAE Grade 2 Steel

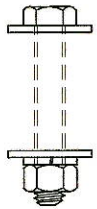
Description: Hex Head Cap Screw with Finish Nut, Flat Washers and Lockwasher
Size: 3/8-16 x 4 1/2
Material: ASTM Grade 2 Steel



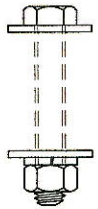
Description: Hex Head Tap Bolt with Flat Washer and Lockwasher
Size: 1/2-13 x 2
Material: ASTM A449 Grade 5



Description: Hex Head Tap Bolt with Finish Nut, Flat Washers and Lockwasher
Size: 1/2-13 x 1 1/2
Material: ASTM Grade 2 Steel



Description: Hex Head Cap Screw with Finish Nut, Flat Washers and Lockwasher
Size: 1/2-13 x 4 1/2
Material: SAE Grade 2 Steel



Description: Hex Head Cap Screw with Finish Nut, Flat Washers and Lockwasher
Size: 5/8-11 x 4 1/2
Material: ASTM A307 Steel

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P.T. 12/27/17 REVISED PER CALCS

PRODUCT NAME: SECURE SERIES
PRODUCT TYPE: LARGE MISSILE FLUSH GLAZED
DRAWING TITLE: BILL OF MATERIALS
DOCUMENT NO.
DRAWN BY:
CHECKED BY:
DATE:
SCALE:
DRAWING FILE:
SHEET: 13 of 13

Test Specimen Complies With
These Details. Any Deviation Is Noted.
Report No. 24316-1 By: JLB
Test Date: 06/21/21