QAI LABORATORIES
CERTIFICATION TESTING INSPECTION

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CLIENT: **Miracle Distribution Inc.**
#106, 2451 W. Grapevine Mills Cir.
Grapevine, TX 76051

Project No: MED-1245b	**Report Date: March 29, 2024**

SAMPLE ID: Series: Single Hung

SAMPLE DESCRIPTION: Width: 1200 mm; Height: 1500 mm; See page 3 for full description.

SAMPLEING DETAIL: Test sample information was submitted directly to QAI for evaluation

DATE OF RECEIPT: Documentation was received **January 8, 2024**

SIMULATION DATE: March 27, 2024

RETNETION DATE: March 27, 2029

SIMULATION LOCATION: 8148 NW 74TH Avenue Medley Florida 33166

AUTHORIZATION: Proposal Number 23MT05063R5, signed by John Hyuk Lee, dated December 6, 2023

TEST PROCEDURE: Testing to the following requirements:

- ANSI/NFRC 100-2020 Procedure for Determining Fenestration Product U-Factor
- ANSI/NFRC 200-2020 Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence
- NFRC 500-2017 Procedure for Determining Fenestration Product Condensation Resistance Values

TEST RESULTS: Based on evaluation conducted by QAI, energy performance values for **Miracle Distribution Inc. series Single Hung** product is found in Simulated Data section of this report for glazing options evaluated

CONTENTS: Test report pages 1 through 6.

Prepared By

Monika Sanchez

Monika Sanchez
NFRC Certified Simulator

Signed for and on behalf of
QAI Laboratory

Jose Sanchez

Jose Sanchez
Simulator-in-Responsible-Charge

Software: Therm 7.8.71.0 / Window v7.8.71.0 Simulation Manual
Spectral Data Library: IGDB v95.0

Baseline Product Validation

The baseline product must be tested in accordance with NFRC 102 “Test Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems” to validate the U Values indicated. NFRC 100-2020 states “The baseline product is the individual product selected for validation testing”. The individual product selected as the baseline product shall have a simulated U-factor within 0.10 Btu/h·ft²·F or 20% of the lowest simulated U-factor, whichever is greater.

Product Description	Product Number	Grouping Number	Pane Thickness #1	Pane Thickness #2	Gap	Emissivity Surface #2	U Factor
5mm SB70-ARG-5mm clear	4	00	0.197	0.197	0.500	0.018	0.30

Window Test Size: 1200 mm (47 1/4") by 1500 mm (59") high

Model Designation:	Single Hung Window
Operator Code:	VSSH
Simulated Model Size:	1200mm (47 1/4”) by 1500mm (59”) high

Frame and Vent Construction	
Frame Material and Finish:	(VY) vinyl members
Frame Material and Finish:	(VY) vinyl members

Glazing Number	**Laminates created in Optics**
None	None

Spacer Type	**Sealant Primary**	**Sealant Secondary**	**Desiccant**
Technoform Spacer	PIB	Silicone	Molecular Sieve

Edge of Glass Construction	
Interior Condition:	Silicone
Exterior Condition:	Vinyl glazing bead

Gas Type	**Filling Technique**	**Gas Fill Percentage**
Argon	Single Probe	90%

Weather Stripping		
Quantity	Description	Location
Single Row	Mohair	Vent jamb rails, vent bottom rail and vent meeting rail

Hardware		
Quantity	Description	Location
None	None	None

Only continuous elements which require modeling are listed

Reinforcement	
Material	**Location**
None	None

Dividers/Grids		
Grid Size	Material	Grid Pattern
None	None	None
Note: any deviations in grid pattern are noted here		

Modeling Assumptions: Nail fin was not simulated

Simulated Data

Product Description	Product ID Number	Grouping ID Number	Pane Thickness #1	Pane Thickness #2	Gap	Gap Fill	Emissivity Surface #2	Tint	Grid Type	Total Product U-Factor	Condensation Resistance	Total Product SHGC No Grid	Total Product VT No Grid
5mm DS30T-ARG-5mm clear	01	00	0.197	0.197	0.500	ARG	0.057	CL	N	0.31	54	0.17	0.24
5mm DS SteelGrey-ARG-5mm clear	02	00	0.197	0.197	0.500	ARG	0.068	GY	N	0.31	54	0.17	0.22
5mm SNX51/23-ARG-5mm clear	03	00	0.197	0.197	0.500	ARG	0.057	CL	N	0.30	55	0.19	0.41
5mm SB70-ARG-5mm clear	04	00	0.197	0.197	0.500	ARG	0.018	CL	N	0.30	55	0.22	0.53
5mm SB90-ARG-5mm clear	05	00	0.197	0.197	0.500	ARG	0.23	CL	N	0.30	55	0.19	0.42

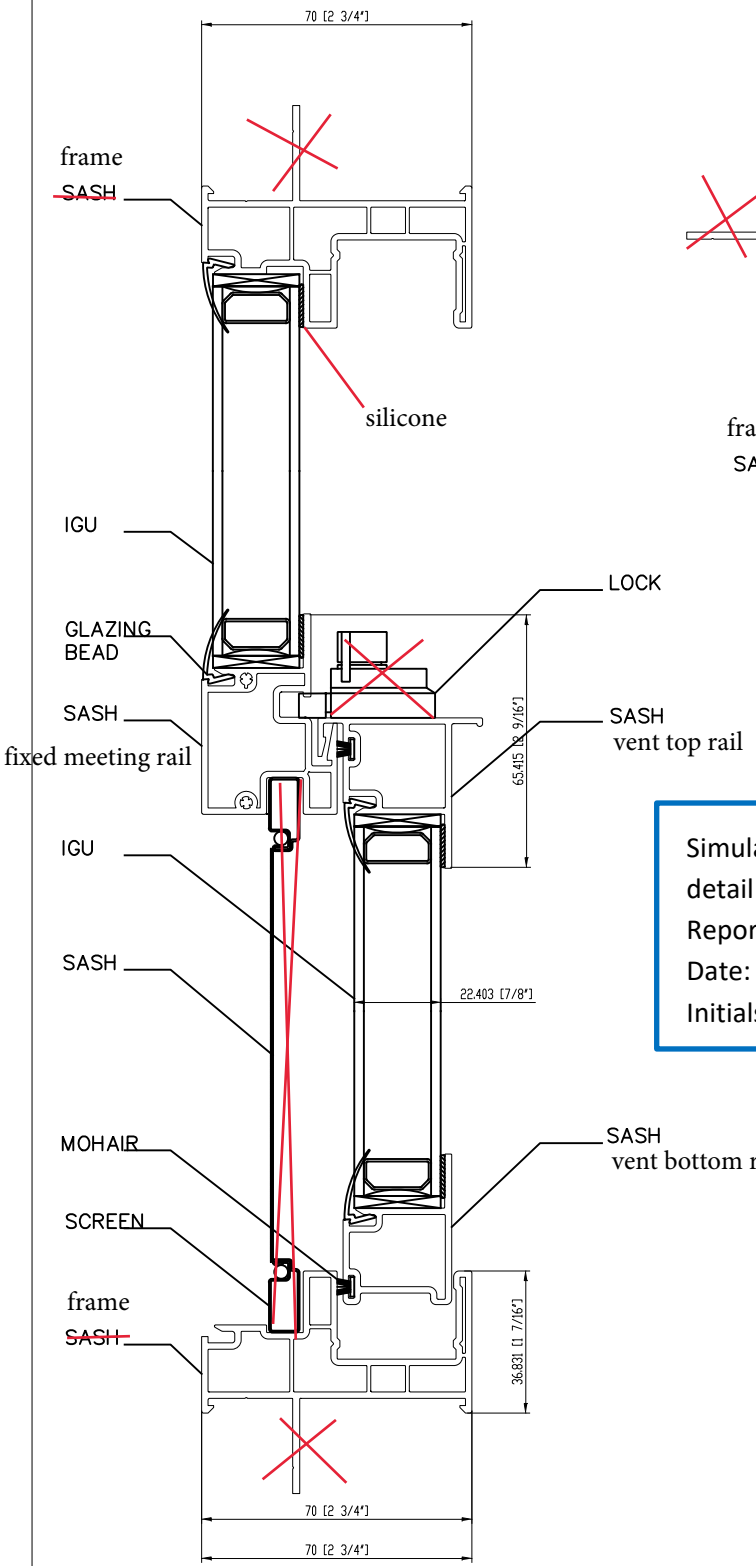
Remarks
"Rating values included in this report are for submittals to an NFRC licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certificate of Authorization (CA) by an NFRC accredited inspection agency (IA) are to be used for labeling purposes." "The values included in this report are not considered in compliance with ANSI/NFRC 100, ANSI/NFRC 200, and/or NFRC 500 unless the associated validation test requirements have been satisfied, as applicable." "The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening." Simulations were conducted in full compliance with NFRC requirements. Simulation relates only to the simulated Fenestration product. Rounding is per requirements of NFRC 601, NFRC Unit and Measurement Policy. U factors, Solar Heat Gain Coefficients, Visible Transmittance and Condensation Resistance values are calculated with a default frame absorption of 0.30 for all products other than glazed walls and slope glazing which have a frame absorption of 0.50. Drawings referenced in this document are an integral part of this report, therefore, are required when distributing this test report. Simulation results obtained represent the actual value of the simulated specimen and does not constitute opinion, endorsement or certification by this laboratory.

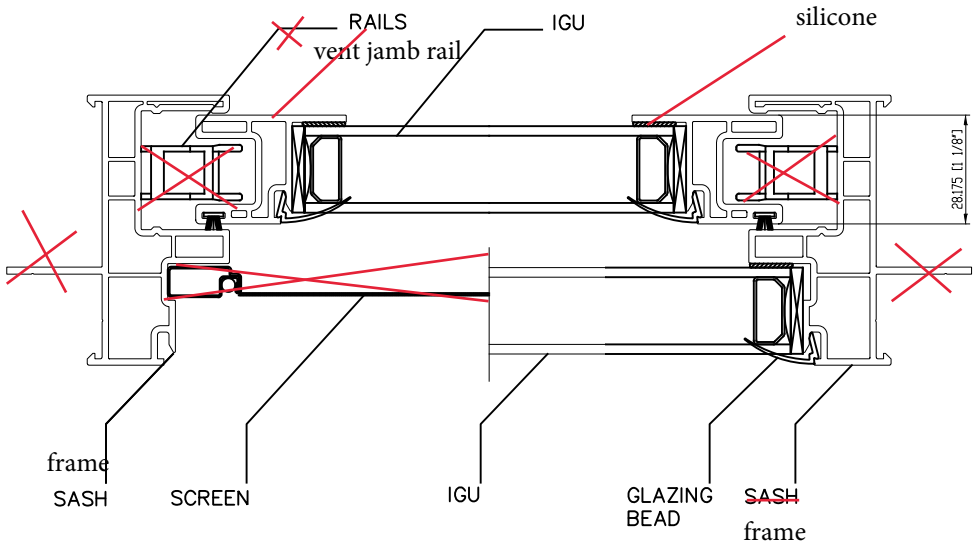
REVISION HISTORY:
3/29/2024: Initial report release

*********END REPORT*********

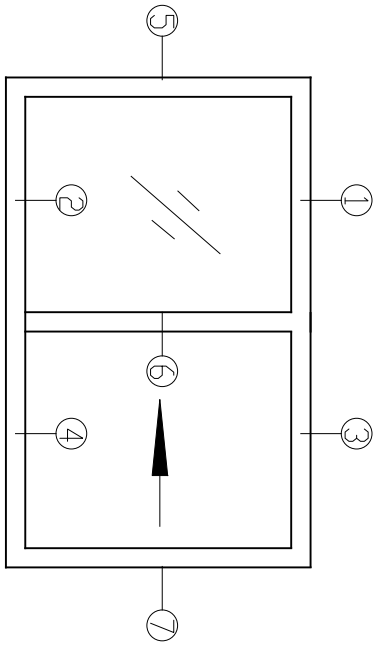
Appendix

Fenestration Simulated Product Drawings and Bill of Material





Simulated Specimen complies with this detail except where noted Simulation
Report Number: MED-1245b
Date: 3/29/2024
Initials: MS



??	PSH-040??	? ? ?

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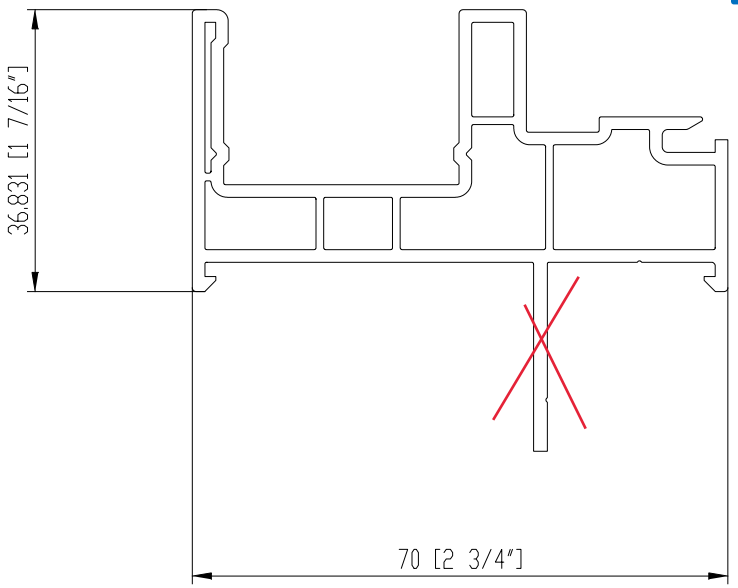
frame
rigid vinyl



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P.J.Y	23.03.10		
S.M: PRECISION		?? ?? H/S	? ? 3/1

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Simulated Specimen complies with this detail except where noted Simulation
Report Number: MED-1245b
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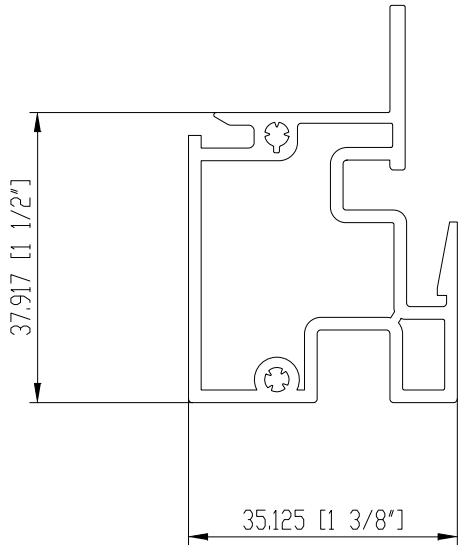
Initials: MS

fixed meeting rail
rigid vinyl



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P.J.Y	23.03.10		
S.M: PRECISION		?? ?? H/S	? ? 3/1

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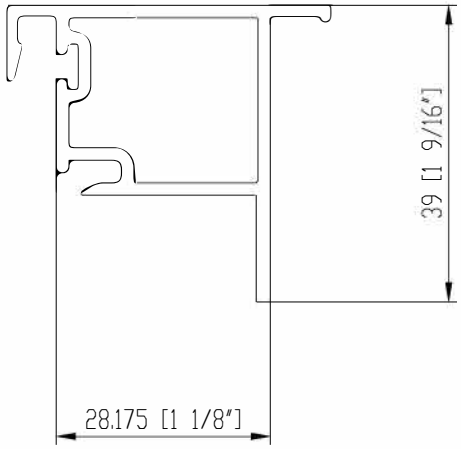
Simulated Specimen complies with this detail except where noted Simulation
Report Number: MED-1245b
Date: 3/29/2024
Initials: MS



vent top rail
rigid vinyl

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P.J.Y	23.03.10	
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Simulated Specimen complies with this detail except where noted Simulation
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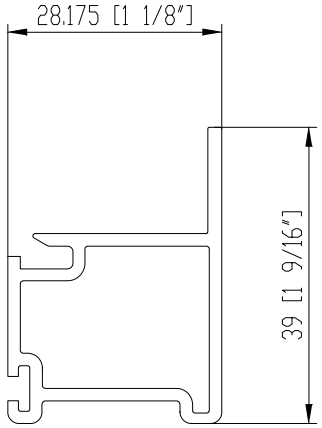

vent bottom rail
rigid vinyl

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P.J.Y	23.03.10	
S.M: PRECISION	?? ?? H/S	? ? 3/1

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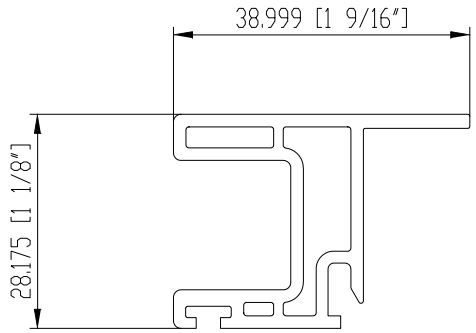

vent jamb rail
rigid vinyl

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P.J.Y	23.03.10	
S.M: PRECISION	?? ?? H/S	? ? 3/1

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Simulated Specimen complies with this detail except where noted Simulation
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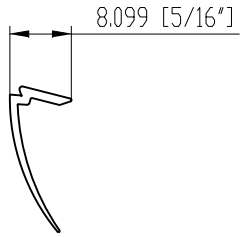

glazing bead
rigid vinyl

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P.J.Y	23.03.10	
S.M: PRECISION	?? ?? H/S	? ? 3/1

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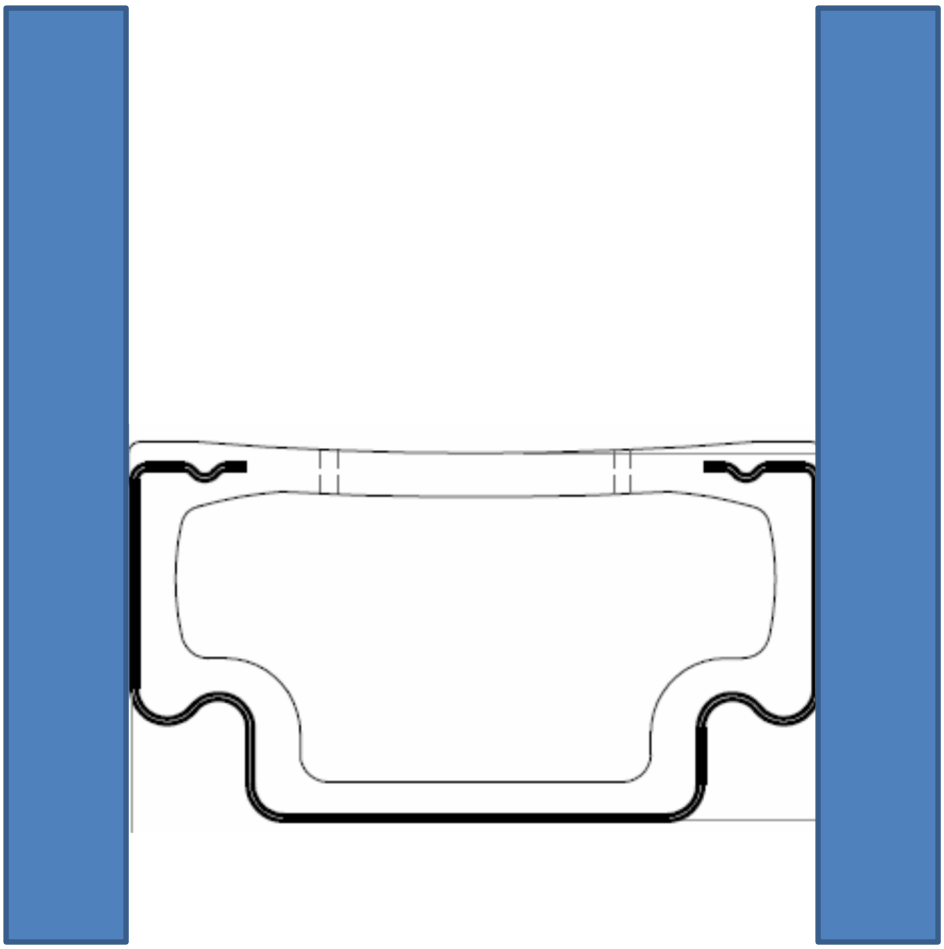

Primary Sealant: PIB 0.004" by 0.140" high
Secondary Sealant: Silicone
Spacer Material: Stainless Steel “Oxidized” and Polypropylene
Desiccant: Loose Fill Silica Gel

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