

*Addition and Interior Remodeling for Residence
HVAC Load Calculations*

for

Vanessa Shapiro
7901 SW 136th Street
Pinecrest, FL 33156



Prepared By:

Fausto Guerrero
P. E. 50465
19552 SW 123 Ave
Miami FL 33177

Monday, August 18, 2025



Project Report

General Project Information

Project Title: Addition and Interior Remodeling for Residence
 Designed By: Nereyda Quintana
 Project Date: Monday, August 18, 2025
 Client Name: Vanessa Shapiro
 Client Address: 7901 SW 136th Street
 Client City: Pinecrest, FL 33156
 Company Name: P. E. 50465
 Company Representative: Fausto Guerrero
 Company Address: 19552 SW 123 Ave
 Company City: Miami FL 33177
 Company Comment:

Design Data

Reference City: Miami, Florida
 Building Orientation: Front door faces South
 Daily Temperature Range: Low
 Latitude: 25 Degrees
 Elevation: 7 ft.
 Altitude Factor: 1.000

	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	47	44.1	n/a	n/a	72	n/a
Summer:	90	77	56%	50%	75	55

Check Figures

Total Building Supply CFM:	1,650	CFM Per Square ft.:	0.780
Square ft. of Room Area:	2,115	Square ft. Per Ton:	517
Volume (ft ³):	16,920		

Building Loads

Total Heating Required Including Ventilation Air:	36,425 Btuh	36.425 MBH
Total Sensible Gain:	39,987 Btuh	81 %
Total Latent Gain:	9,126 Btuh	19 %
Total Cooling Required Including Ventilation Air:	49,113 Btuh	4.09 Tons (Based On Sensible + Latent)

Notes

Rhvac is an ACCA approved Manual J, D and S computer program.
 Calculations are performed per ACCA Manual J 8th Edition, Version 2.50, and ACCA Manual D.
 All computed results are estimates as building use and weather may vary.
 Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.



Total Building Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
UV10050: Glazing-Operable Window, single clear, no break, ground reflectance = 0.32, U-value 1, SHGC 0.5	278.4	6,961	0	9,876	9,876
13A-5ocs: Wall-Block, board insulation only, R-5 board insulation, open core, siding finish, U-value 0.125	1204.8	3,764	0	2,906	2,906
Interio Wall: Wall-Frame, Custom, R-11 insulation 3-5/8" metal stud, U-value 0.097	160	388	0	259	259
16BR-30-ml: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), unvented attic with radiant barrier, R-30 insulation, light metal, U-value 0.032	2115	1,692	0	3,655	3,655
22A-ph: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy moist soil, U-value 1.358	205	6,960	0	0	0
Subtotals for structure:		19,765	0	16,696	16,696
People:	5		1,150	1,500	2,650
Equipment:			683	4,113	4,796
Lighting:	2000			6,820	6,820
Ductwork:		9,295	2,064	8,532	10,596
Infiltration: Winter CFM: 268, Summer CFM: 141		7,365	5,229	2,326	7,555
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
Total Building Load Totals:		36,425	9,126	39,987	49,113

Check Figures

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System 1 A/C-1 Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
UV10050: Glazing-Operable Window, single clear, no break, ground reflectance = 0.32, U-value 1, SHGC 0.5	278.4	6,961	0	9,876	9,876
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Subtotals for structure:		19,765	0	16,696	16,696
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Infiltration: Winter CFM: 268, Summer CFM: 141		7,365	5,229	2,326	7,555
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
System 1 A/C-1 Load Totals:		36,425	9,126	39,987	49,113

Check Figures

Supply CFM:	1,650	CFM Per Square ft.:	0.780
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Volume (ft ³):	16,920		

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