Hanaway
HVAC Load Calculations

for

Susan Hanaway
234 E. Biddle Street
19380

Prepared By:

Dan Lippin
Oliver HVAC
101 Waverly Avenue
Morton, Pa. 19070
610-544-9920
Monday, October 24, 2016

Rhvac is an ACCA approved Manual J and Manual D computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.

Project Report

General Project Information

Project Title:	Hanaway
Designed By:	Dan Lippin
Project Date:	10/24/16
Project Comment:	
Client Name:	Susan Hanaway
Client Address:	234 E. Biddle Street
Client City:	19380
Client Fax:	None
Company Name:	Oliver HVAC
Company Representative:	Dan Lippin
Company Address:	101 Waverly Avenue
Company City:	Morton, Pa. 19070
Company Phone:	610-544-9920
Company Comment:	

Design Data

Reference City:		Philadelphia AP, Pennsylvania
Building Orientation:		Front door faces North
Daily Temperature Range:		Medium
Latitude:	39	Degrees
Elevation:	5	ft.
Altitude Factor:	1.000	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	15	14	n/a	n/a	70	n/a
Summer:	93	74	41%	50%	70	41

Check Figures

Total Building Supply CFM:	2,253	CFM Per Square ft.:	0.793
Square ft. of Room Area:	2,841	Square ft. Per Ton:	574
Volume (ft³) of Cond. Space:	23,924		

Building Loads

Total Heating Required Including Ventilation Air:	94,194	Btuh	94.194	MBH
Total Sensible Gain:	49,568	Btuh	83	%
Total Latent Gain:	9,826	Btuh	17	%
Total Cooling Required Including Ventilation Air:	59,393	Btuh	4.95	Tons (Based On Sensible + Latent)

Notes

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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
1C-cw: Glazing-Single pane window with storm, clear, wood frame, white or reflective color drapes with tight weave with 65% coverage, u-value 0.57, SHGC 0.56	192	6,019	0	5,506	5,506
1C-ca: Glazing-Single pane window with storm, clear, wood with metal clad frame, u-value 0.57, SHGC 0.56	212	6,646	0	7,516	7,516
11D: Door-Wood - Solid Core	42	900	0	556	556
12A-2bw: Wall-Frame, no insulation in stud cavity, R-2 board insulation, brick finish, wood studs	2911	31,062	0	14,345	14,345
16CR-11: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), Vented Attic with Radiant Barrier, Dark Asphalt Shingles or Dark Metal, Tar and Gravel or Membrane, R-11 insulation	216	962	0	840	840
16A-30: Roof/Ceiling-Under Attic with Insulation on Attic Floor (also use for Knee Walls and Partition Ceilings), Unvented Attic, No Radiant Barrier, Any Roofing Material, Any Roof Color, R-30 insulation	770	1,355	0	1,922	1,922
19A-2p: Floor-Over enclosed unconditioned crawl space, No insulation on exposed walls, sealed or vented space, passive, R-2 or R-3 board	1196	6,272	0	2,623	2,623
Subtotals for structure:		53,216	0	33,308	33,308
People:	6		1,200	1,380	2,580
Equipment:			1,000	500	1,500
Lighting:	0			0	0
Ductwork:		0	2,701	9,942	12,642
Infiltration: Winter CFM: 372, Summer CFM: 175		22,498	4,925	4,438	9,363
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
Hot Water Piping, 80 ft. Total:		18,480	0	0	0
Total Building Load Totals:		94,194	9,826	49,568	59,393

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