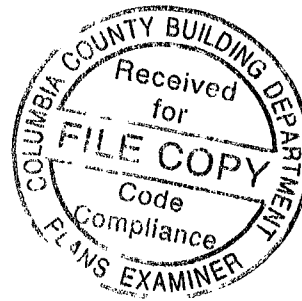


YATES ADDITION HVAC LOAD ANALYSIS

for

DON REED CONSTRUCTION LLC.

2230 SE BAYA DR.
LAKE CITY, FL. 32025



Prepared By:

DAVID HALL
DAVID HALL'S INC.
PO BOX 244
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02/24/14

Miscellaneous Project Data

Project File Name: UNTITLED

System Input Data

---System 1---	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum.	Indoor Dry Bulb	Grains Difference
Winter:	31	N/A	N/A	72	N/A
Summer:	96	78	50%	75	52

External Overhangs

No.	Projection	Offset	No.	Projection	Offset
1	3	1	6	0	0
2	5	0	7	0	0
3	4	0.5	8	0	0
4	0	0	9	0	0
5	0	0	10	0	0

Duct Sizing Inputs

	<u>Runouts</u>	<u>Main Trunk</u>
Duct Material:	Flexible Duct	Fiberglass Duct Board
Roughness Factor:	0.010000	0.003000
Pressure Drop:	0.1000 In.wg/100 Ft.	0.1000 In.wg/100 Ft.
Minimum Velocity:	450.0 Ft./Minute	650.0 Ft./Minute
Maximum Velocity:	750.0 Ft./Minute	900.0 Ft./Minute
Minimum Height:	0 Inches	0 Inches
Maximum Height:	0 Inches	0 Inches

Outside Air Data

	<u>Winter</u>	<u>Summer</u>
Infiltration:	0.900 AC/Hr	0.400 AC/Hr
Volume of Conditioned Space:	X 5294 Cu.Ft.	X 5294 Cu.Ft.
	4,765 Cu.Ft./Hr	2,118 Cu.Ft./Hr
	X 0.0167	X 0.0167
Total Building Infiltration:	79.41 CFM	35.29333 CFM
Total Building Ventilation:	0 CFM	0 CFM
---System 1---		
Infiltration & Ventilation Sensible Gain Multiplier:	23.10 = (1.10 X 21.00 Summer Temp. Difference)	
Infiltration & Ventilation Latent Gain Multiplier:	35.12 = (0.68 X 51.65 Grains Difference)	
Infiltration & Ventilation Sensible Loss Multiplier:	45.10 = (1.10 X 41.00 Winter Temp. Difference)	

Total Building Summary Loads

Component Description	Area Quan	Sen. Loss	Lat. Gain	Sen. Gain	Total Gain
1H Window Low Emit Glass e=.4 TIM Frame	150	5,318	0	8,820	8,820
8O Glass Door Double Clear Glass Metal Frame	63	1,872	0	3,847	3,847
12G Wall R-13 + 3/4" ExtPoly Board(R-3.8)	447	1,190	0	714	714
16G Ceiling R-30 Insulation	557	754	0	827	827
22A Slab on Grade No Edge Insulation	70	2,325	0	0	0
Subtotals for structure:	1,287	11,459	0	14,208	14,208
Active People:	5	0	1,150	1,500	2,650
Inactive People:	0	0	0	0	0
Appliances:	0	0	0	0	0
Lighting:	0	0		1,023	
Ductwork:	0	752	0	1,755	1,755
Infiltration: Winter CFM: 79.4, Summer CFM: 35.3	213	3,581	1,240	815	2,055
Ventilation: Winter CFM: 0.0, Summer CFM: 0.0	0	0	0	0	0
Sensible Gain Total:				19,301	
Temperature Swing Multiplier:				X1.00	
Building Load Totals:		15,792	2,390	19,301	21,691

Check Figures

Total Building Supply CFM: 877	CFM per square foot: 1.575
Square feet of room area: 557	Square feet per ton: 266.654

Building Loads

Total heating required with outside air:	15,792 Btuh	15.792 MBH
Total sensible gain:	19,301 Btuh	89 %
Total latent gain:	2,390 Btuh	11 %
Total cooling required with outside air:	21,691 Btuh	1.808 Tons (based on sensible + latent)
		2.089 Tons (based on 77% sensible capacity)

Notes

Calculations are based on 7th edition of ACCA Manual J.
 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.

Room Load Summary Reports

System #1 Room Load Summary

No	Room Name	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Run Duct Vel	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Zone Adj Fact	Clg Adj CFM	Air Sys CFM
---Zone 1---												
1	Florida Room	557	15,792	205	10-6	603	19,301	2,390	877	1.35	1,184	877
System 1 Totals		557	15,792	205			19,301	2,390	877		1,184	877
												Main Trunk Size: 14x12 in.

System #1 Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	1.808	89%/11%	19,301	2,390	21,691
Recommended:	2.089	77%/23%	19,301	5,765	25,066
Actual:	2.000				24,000



Project Information

Project:	YATES ADDITION	Company:	DAVID HALL'S INC.
Client:	DON REED CONSTRUCTION LLC.	Representative:	DAVID HALL
Address:	2230 SE BAYA DR.	Address:	PO BOX 244
City:	LAKE CITY, FL. 32025	City:	LAKE CITY FL 32056
Phone:	386-752-4072	Phone:	386-755-9792
Fax:		Fax:	386-755-9100
		Comment:	

Equipment and Labor Data

	Cooling System	Heating System
Description	MINI SPLIT	MINI SPLIT
Model Number	4TYK6524A10NOB	4MYW6524A10NOB
Model Type	Air Source Heat Pump	Air Source Heat Pump
Capacity	24,000 BTU	24,000 BTU
Efficiency	SEER 16	HSPF 10

Notes:

We propose hereby to furnish material and labor-complete in accordance with above specifications, for the sum of: \$0,000.00

Terms and Conditions

Payment to be made as follows: Upon completion

ACCEPTANCE OF PROPOSAL:

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date: _____ Signature: _____