



Load Short Form Entire House

Job:
Date: November 18, 2009
By: CAD

Project Information

For: High Velocity Example
Tallahassee, FL

Design Information

	Htg	Clg		Infiltration
Outside db (°F)	28	95	Method	Simplified
Inside db (°F)	70	75	Construction quality	Semi-tight
Design TD (°F)	42	20	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	15	44		

HEATING EQUIPMENT

Make	Generic
Trade	
Model	SEER 18.0, HSPF 9.1
ARI ref no.	
Efficiency	9.1 HSPF
Heating input	
Heating output	26866 Btuh @ 47°F
Temperature rise	31 °F
Actual air flow	793 cfm
Air flow factor	0.035 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	Generic
Trade	
Cond	SEER 18.0, HSPF 9.1
Coil	
ARI ref no.	
Efficiency	18 SEER
Sensible cooling	18900 Btuh
Latent cooling	8100 Btuh
Total cooling	27000 Btuh
Actual air flow	689 cfm
Air flow factor	0.043 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.85

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Living	378	7211	5325	255	229
Dining	165	1850	1176	65	51
Kitchen	138	1098	2186	39	94
M. Bedroom	206	2328	1189	82	51
Bedroom 1	93	979	644	35	28
M. Bath	78	2262	1720	80	74
W&D	32	0	0	0	0
1/2 Bath	27	0	0	0	0
Bedroom 2	108	2591	1820	92	78
Hall	91	0	0	0	0
Bath	78	1185	863	42	37
Mud	74	2916	1116	103	48

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Entire House	1465	22419	16041	793	689
Other equip loads		1698	827		
Equip. @ 1.00 RSM			16918		
Latent cooling			2932		
TOTALS	1465	24117	19850	793	689

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Project Information

For: High Velocity Example
Tallahassee, FL

Design Conditions

Location:

Tallahassee, FL, US
Elevation: 69 ft
Latitude: 30°N

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

28
-
-
15.0

Cooling

95
19 (M)
77
7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
42
30
14.9

Cooling

75
20
50
44.4

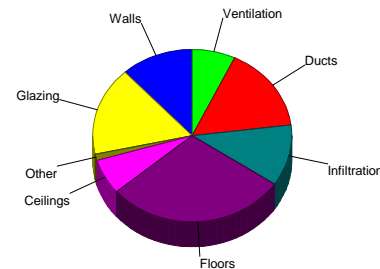
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Semi-tight
0

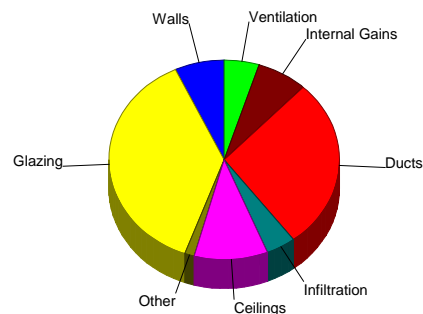
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.5	2859	11.9
Glazing	19.6	3995	16.6
Doors	7.1	298	1.2
Ceilings	1.1	1588	6.6
Floors	4.8	7059	29.3
Infiltration	2.0	2770	11.5
Ducts		3850	16.0
Piping		0	0
Humidification		0	0
Ventilation		1698	7.0
Adjustments		0	0
Total		24117	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.0	1176	7.0
Glazing	31.0	6321	37.5
Doors	5.5	230	1.4
Ceilings	1.2	1742	10.3
Floors	0	0	0
Infiltration	0.5	696	4.1
Ducts		4675	27.7
Ventilation		827	4.9
Internal gains		1200	7.1
Blower		0	0
Adjustments		-0	0
Total		16867	100.0



Overall U-value = 0.088 Btuh/ft²·°F

Data entries checked.

Project Information

For: High Velocity Example
Tallahassee, FL

Design Conditions

Location: Tallahassee, FL, US Elevation: 69 ft Latitude: 30°N			Indoor: Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	Heating 70 42 30 14.9	Cooling 75 20 50 44.4
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 28 - - 15.0	Cooling 95 19 (M) 77 7.5	Infiltration: Method Construction quality Fireplaces	Simplified Semi-tight 0	

Construction descriptions

	Or	Area ft ²	U-value Btuh/ft ² -°F	Insul R ft ² -°F/Btuh	Htg HTM Btuh/ft ²	Loss Btuh	Clg HTM Btuh/ft ²	Gain Btuh
Walls								
13C-5ocws: Blk wall, stucco ext, 2"x4" wood int frm, r-5 ext bd ins, 8" thk, r-13 cav ins, 1/2" gypsum board int fnsh								
	n	298	0.061	0	2.54	758	1.05	312
	ne	18	0.061	0	2.54	45	1.05	18
	e	217	0.061	0	2.54	552	1.05	227
	se	17	0.061	0	2.54	43	1.05	18
	s	320	0.061	0	2.54	813	1.05	334
	w	255	0.061	0	2.54	649	1.05	267
	all	1124	0.061	0	2.54	2859	1.05	1176
Partitions								
(none)								
Windows								
4A3-2ov: 2 glazing, clr low-e outr, argon gas, insulated vinyl frm mat, clr innr, clr strm, 1/4" gap, 1/8" thk								
	n	68	0.470	0	19.6	1333	18.0	1227
	ne	11	0.470	0	19.6	222	37.0	419
	e	36	0.470	0	19.6	706	48.9	1759
	se	12	0.470	0	19.6	235	38.8	465
	s	47	0.470	0	19.6	911	21.2	985
	w	30	0.470	0	19.6	588	48.9	1466
	all	204	0.470	0	19.6	3995	31.0	6321
Doors								
11Q0: Door, mtl pur core type, mtl strm strm								
	e	21	0.170	10.5	7.09	149	5.48	115
	w	21	0.170	10.5	7.09	149	5.48	115
	all	42	0.170	10.5	7.09	298	5.48	230
Ceilings								
16CR-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh								
		1465	0.026	38.0	1.08	1588	1.19	1742
Floors								
22A-cpl: Bg floor, light dry soil, carpet flr fnsh								
		171	0.989	0	41.2	7059	0	0



Project Summary

Entire House

Job:
Date: November 18, 2009
By: CAD

Project Information

For: High Velocity Example
Tallahassee, FL

Notes:

Design Information

Weather: Tallahassee, FL, US

Winter Design Conditions

Outside db	28 °F
Inside db	70 °F
Design TD	42 °F

Summer Design Conditions

Outside db	95 °F
Inside db	75 °F
Design TD	20 °F
Daily range	M
Relative humidity	50 %
Moisture difference	44 gr/lb

Heating Summary

Structure	18569 Btuh
Ducts	3850 Btuh
Central vent (37 cfm)	1698 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	24117 Btuh

Sensible Cooling Equipment Load Sizing

Structure	11365 Btuh
Ducts	4675 Btuh
Central vent (37 cfm)	827 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	1.00
Equipment sensible load	16918 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	941 Btuh
Ducts	874 Btuh
Central vent (37 cfm)	1117 Btuh
Equipment latent load	2932 Btuh
Equipment total load	19850 Btuh
Req. total capacity at 0.70 SHR	2.0 ton

	Heating	Cooling
Area (ft ²)	1465	1465
Volume (ft ³)	11718	11718
Air changes/hour	0.31	0.16
Equiv. AVF (cfm)	61	31

Heating Equipment Summary

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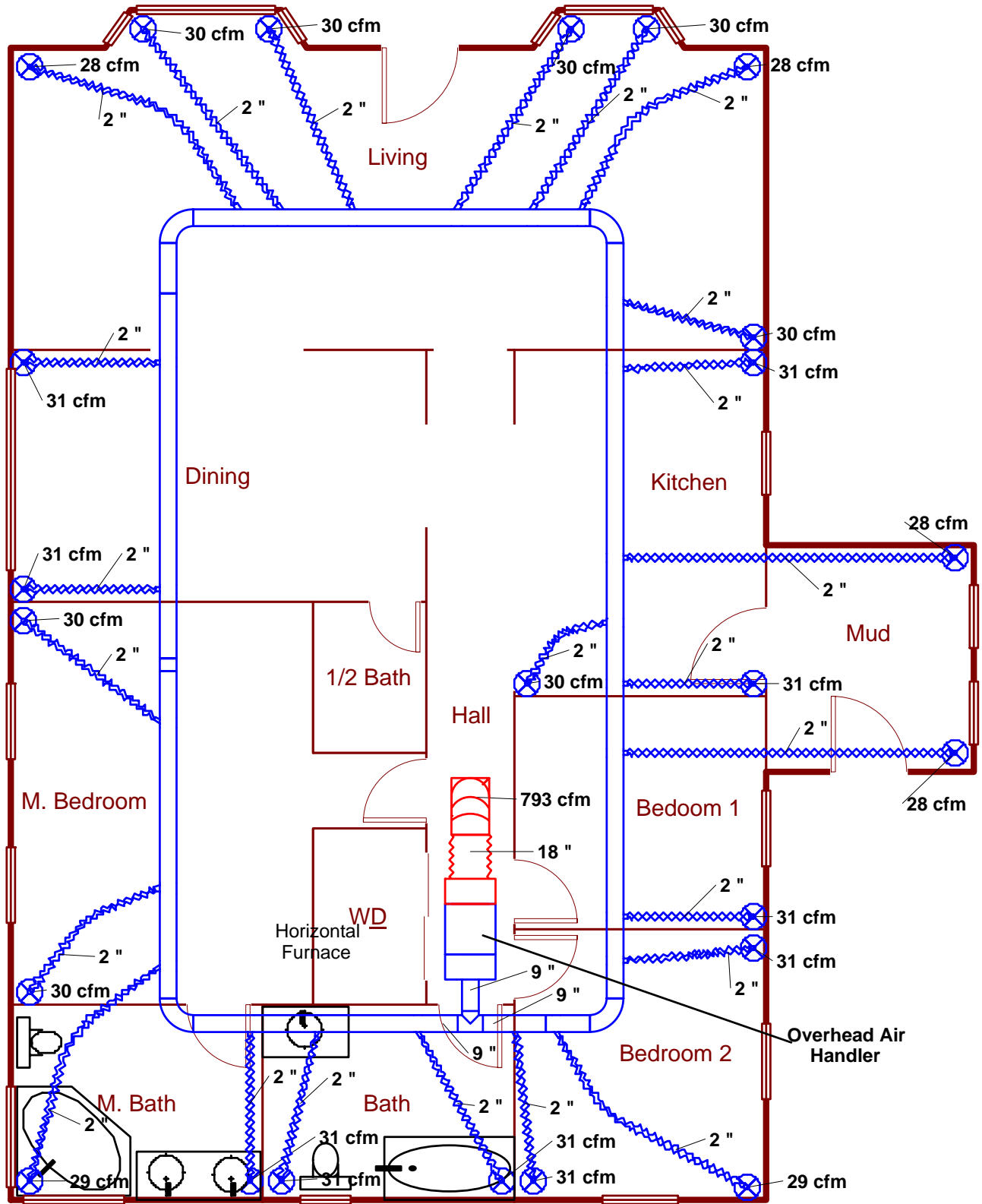
Cooling Equipment Summary

Make	Generic
Trade	
Cond	SEER 18.0, HSPF 9.1
Coil	
ARI ref no.	
Efficiency	18 SEER
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1st Floor



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 Performed by CAD for:
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 Tallahassee, FL

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