Load Short Form
Entire House
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Information

	Htg	Clg
Outside db (°F)	7	95
Inside db (°F)	70	72
Design TD (°F)	63	23
Daily range	-	H
Inside humidity (%)	30	30
Moisture difference (gr/lb)	31	7

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	n/a

COOLING EQUIPMENT

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Basement	2172	25470	0	836	0
Casita	648	18231	9606	580	580
Main	2104	23696	16320	913	913
Upstairs	719	7795	3202	1082	1082
Entire House	5642	75192	28909	3411	2575
Other equip loads		0	0		
Equip. @ 1.00 RSM			28823		
Latent cooling			2055		
TOTALS	5642	75192	30878	3411	2575

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Basement
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Information

	Htg	Clg
Outside db (°F)	7	95
Inside db (°F)	70	72
Design TD (°F)	63	23
Daily range	-	H
Inside humidity (%)	30	30
Moisture difference (gr/lb)	31	7

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Day & Night
Trade	DAY & NIGHT
Model	R95ESN0401410AA2
AHRI ref	4705685

Efficiency	96 AFUE	
Heating input	40000	Btuh
Heating output	39000	Btuh
Temperature rise	50	°F
Actual air flow	836	cfm
Air flow factor	0.033	cfm/Btuh
Static pressure	0.60	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a

Efficiency	n/a	
Sensible cooling	0	Btuh
Latent cooling	0	Btuh
Total cooling	0	Btuh
Actual air flow	0	cfm
Air flow factor	0	cfm/Btuh
Static pressure	0	in H2O
Load sensible heat ratio	0	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bath	119	3115	0	102	0
Bed 1	203	2205	0	72	0
Bed 2	261	3542	0	116	0
Flex	301	5060	0	166	0
Mechanical	365	0	0	0	0
Rec	820	11548	0	379	0
Stairs	104	0	0	0	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Basement	2172	25470	0	836	0
Other equip loads		0	0		
Equip. @ 1.00 RSM			0		
Latent cooling			0		
TOTALS	2172	25470	0	836	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Casita
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Information

	Htg	Clg
Outside db (°F)	7	95
Inside db (°F)	70	72
Design TD (°F)	63	23
Daily range	-	H
Inside humidity (%)	30	30
Moisture difference (gr/lb)	31	7

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Day & Night
Trade	DAY & NIGHT
Model	N95ESN0261410A
AHRI ref	0

Efficiency	96 AFUE	
Heating input	26000	Btuh
Heating output	25000	Btuh
Temperature rise	46	°F
Actual air flow	580	cfm
Air flow factor	0.032	cfm/Btuh
Static pressure	0.60	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	Day & Night
Trade	Day and Night
Cond	N4A318GKF10
Coil	ENH4X24L17A1
AHRI ref	0

Efficiency	11.5 EER, 14 SEER	
Sensible cooling	12180	Btuh
Latent cooling	5220	Btuh
Total cooling	17400	Btuh
Actual air flow	580	cfm
Air flow factor	0.060	cfm/Btuh
Static pressure	0.60	in H2O
Load sensible heat ratio	0.94	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Casita Bath/WIC	187	5165	1099	164	66
Casita Kitchen	128	3089	1696	98	102
Casita Living	153	5711	4563	182	276
Casita Master	180	4266	2248	136	136
Casita	648	18231	9606	580	580
Other equip loads		0	0		
Equip. @ 1.00 RSM			9577		
Latent cooling			633		
TOTALS	648	18231	10210	580	580

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Main
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Information

	Htg	Clg
Outside db (°F)	7	95
Inside db (°F)	70	72
Design TD (°F)	63	23
Daily range	-	H
Inside humidity (%)	30	30
Moisture difference (gr/lb)	31	7

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Day & Night
Trade	DAY & NIGHT
Model	R95ESN0401712AA1
AHRI ref	6311614

Efficiency	96 AFUE	
Heating input	40000	Btuh
Heating output	39000	Btuh
Temperature rise	46	°F
Actual air flow	913	cfm
Air flow factor	0.039	cfm/Btuh
Static pressure	0.70	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	Day & Night
Trade	Day and Night
Cond	N4A330GKN2
Coil	END4X36L17A1++TDR
AHRI ref	9423214

Efficiency	10.5 EER, 13 SEER	
Sensible cooling	19180	Btuh
Latent cooling	8220	Btuh
Total cooling	27400	Btuh
Actual air flow	913	cfm
Air flow factor	0.056	cfm/Btuh
Static pressure	0.70	in H2O
Load sensible heat ratio	0.93	

ROOM NAME	Area (ft^2)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bath 2	78	1998	730	77	41
Bella	215	2102	934	81	52
Entry/ Hall	154	1525	2348	59	131
Great Room	306	3828	3252	147	182
Kitchen	377	1842	1777	71	99
Laundry	94	439	564	17	32
Master	333	5553	4165	214	233
Master Bath	232	2441	918	94	51
Powder	30	1175	397	45	22
Stairs 2	104	0	0	0	0
Study	182	2795	1235	108	69

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Main	2104	23696	16320	913	913
Other equip loads		0	0		
Equip. @ 1.00 RSM			16271		
Latent cooling			1223		
TOTALS	2104	23696	17493	913	913

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Load Short Form
Upstairs
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Information

	Htg	Clg
Outside db (°F)	7	95
Inside db (°F)	70	72
Design TD (°F)	63	23
Daily range	-	H
Inside humidity (%)	30	30
Moisture difference (gr/lb)	31	7

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Fujitsu General
Trade	Fujitsu
Model	FAOU9RLS3
AHRI ref	

Efficiency	9.1 HSPF	
Heating input		
Heating output	14578	Btuh @ 47°F
Temperature rise	14	°F
Actual air flow	1082	cfm
Air flow factor	0.139	cfm/Btuh
Static pressure	0.60	in H2O
Space thermostat		

Capacity balance point = 21 °F

COOLING EQUIPMENT

Make	Fujitsu General
Trade	Fujitsu
Cond	FAOU9RLS3
Coil	FASU9RLS3Y
AHRI ref	

Efficiency	33 SEER	
Sensible cooling	8400	Btuh
Latent cooling	3600	Btuh
Total cooling	12000	Btuh
Actual air flow	1082	cfm
Air flow factor	0.338	cfm/Btuh
Static pressure	0.60	in H2O
Load sensible heat ratio	0.86	

Backup:
Input = 2 kW, Output = 7795 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bath 3	70	0	0	0	0
Bunk Room	493	7795	3202	1082	1082
Landing	68	0	0	0	0
Stairs 3	88	0	0	0	0
Upstairs	719	7795	3202	1082	1082
Other equip loads		0	0		
Equip. @ 1.00 RSM			3192		
Latent cooling			526		
TOTALS	719	7795	3719	1082	1082

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Building Analysis
Entire House
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

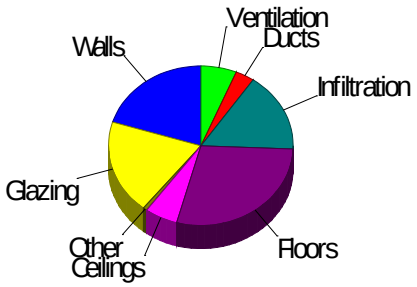
Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1
Infiltration:		
Method	Simplified	
Construction quality	Average	
Fireplaces	0	

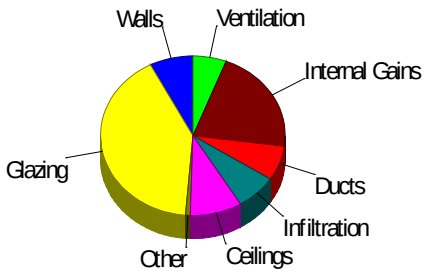
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.8	15188	20.2
Glazing	22.0	14362	19.1
Doors	24.6	516	0.7
Ceilings	1.5	4338	5.8
Floors	7.6	21492	28.6
Infiltration	3.1	12101	16.1
Ducts		2495	3.3
Piping		0	0
Humidification		0	0
Ventilation		4700	6.3
Adjustments		0	
Total		**75192**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.4	2194	7.6
Glazing	18.3	11894	41.1
Doors	11.5	241	0.8
Ceilings	0.9	2620	9.1
Floors	0	0	0
Infiltration	0.5	2093	7.2
Ducts		2034	7.0
Ventilation		1694	5.9
Internal gains		6140	21.2
Blower		0	0
Adjustments		0	
Total		**28909**	**100.0**



Latent Cooling Load = 2055 Btuh
Overall U-value = 0.109 Btuh/ft²-°F

Data entries checked.

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Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

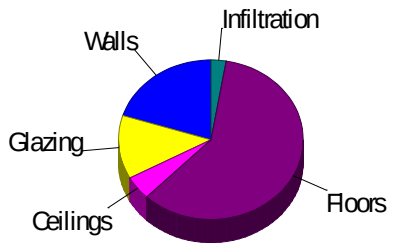
Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1
Infiltration:		
Method	Simplified	
Construction quality	Average	
Fireplaces	0	

Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.8	5125	20.1
Glazing	22.0	3281	12.9
Doors	0	0	0
Ceilings	17.9	1219	4.8
Floors	7.0	15162	59.5
Infiltration	3.1	683	2.7
Ducts		0	0
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	
Total		**25470**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0	0	0
Glazing	0	0	0
Doors	0	0	0
Ceilings	0	0	0
Floors	0	0	0
Infiltration	0	0	0
Ducts		0	0
Ventilation		0	0
Internal gains		0	0
Blower		0	0
Adjustments		0	
Total		**0**	**0**

Latent Cooling Load = 0 Btuh
Overall U-value = 0.187 Btuh/ft²-°F

Data entries checked.

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Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

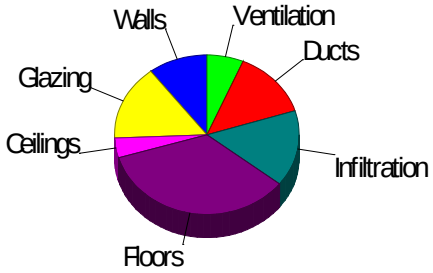
Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

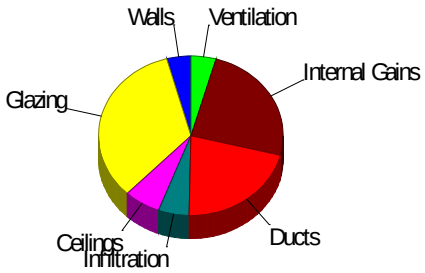
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.4	1891	10.4
Glazing	22.0	2786	15.3
Doors	0	0	0
Ceilings	1.1	734	4.0
Floors	9.8	6329	34.7
Infiltration	3.1	2820	15.5
Ducts		2495	13.7
Piping		0	0
Humidification		0	0
Ventilation		1175	6.4
Adjustments		0	
Total		**18231**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.5	405	4.2
Glazing	25.6	3234	33.7
Doors	0	0	0
Ceilings	1.0	617	6.4
Floors	0	0	0
Infiltration	0.6	517	5.4
Ducts		2049	21.3
Ventilation		423	4.4
Internal gains		2360	24.6
Blower		0	0
Adjustments		0	
Total		**9606**	**100.0**



Latent Cooling Load = 633 Btuh
Overall U-value = 0.084 Btuh/ft²-°F

Data entries checked.

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

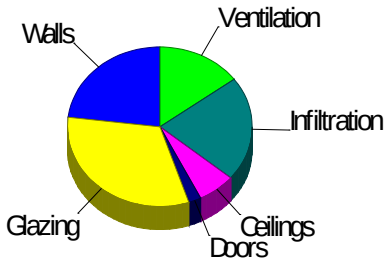
Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

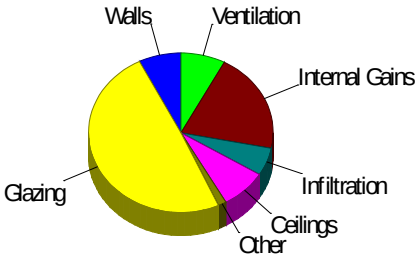
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	5469	23.1
Glazing	22.0	7590	32.0
Doors	24.6	516	2.2
Ceilings	1.1	1571	6.6
Floors	0	0	0
Infiltration	3.1	5026	21.2
Ducts		0	0
Piping		0	0
Humidification		0	0
Ventilation		3525	14.9
Adjustments		0	
Total		**23696**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.7	1210	7.4
Glazing	23.4	8038	49.3
Doors	11.5	241	1.5
Ceilings	1.0	1319	8.1
Floors	0	0	0
Infiltration	0.6	921	5.6
Ducts		0	0
Ventilation		1270	7.8
Internal gains		3320	20.3
Blower		0	0
Adjustments		0	
Total		**16320**	**100.0**



Latent Cooling Load = 1223 Btuh
Overall U-value = 0.070 Btuh/ft²-°F

Data entries checked.

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

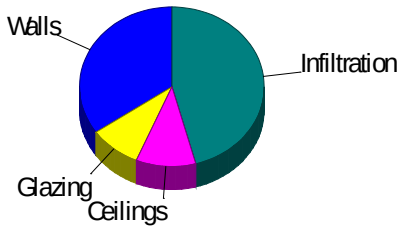
Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

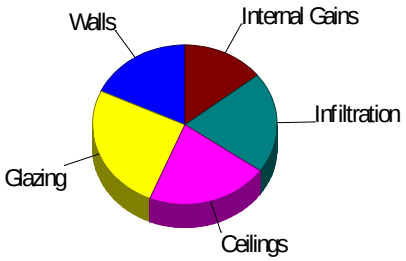
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.4	2703	34.7
Glazing	22.0	706	9.1
Doors	0	0	0
Ceilings	1.1	815	10.5
Floors	0	0	0
Infiltration	3.1	3572	45.8
Ducts		0	0
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	
Total		**7795**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.5	579	18.1
Glazing	25.7	824	25.7
Doors	0	0	0
Ceilings	1.0	684	21.4
Floors	0	0	0
Infiltration	0.6	655	20.5
Ducts		0	0
Ventilation		0	0
Internal gains		460	14.4
Blower		0	0
Adjustments		0	
Total		**3202**	**100.0**



Latent Cooling Load = 526 Btuh
Overall U-value = 0.036 Btuh/ft²-°F

WARNING: window to floor area ratio = 4.5% - less than 5%.

Component Constructions
Entire House
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:
Method: Simplified
Construction quality: Average
Fireplaces: 0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	647	0.038	23.8	2.39	1549	0.51	332
	ne	175	0.038	23.8	2.39	419	0.51	90
	e	396	0.038	23.8	2.39	947	0.51	203
	se	157	0.038	23.8	2.39	376	0.51	81
	s	788	0.038	23.8	2.39	1886	0.51	404
	sw	223	0.038	23.8	2.39	533	0.51	114
	w	588	0.038	23.8	2.39	1408	0.51	302
	nw	235	0.038	23.8	2.39	564	0.51	121
	all	3208	0.038	23.8	2.39	7681	0.51	1646
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	n	644	0.043	17.0	2.88	1856	0	0
	e	356	0.043	17.0	2.88	1025	0	0
	s	495	0.043	17.0	2.46	1218	0	0
	w	356	0.043	17.0	2.88	1025	0	0
	all	1849	0.043	17.0	2.77	5125	0	0
Partitions								
12C-0sw: Frm wall, stucco ext, r-13 cav ins, 2"x4" wood frm, 16" o.c. stud		416	0.091	13.0	5.73	2382	1.32	548
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	n	64	0.350	0	22.0	1411	13.8	882
	ne	23	0.350	0	22.0	515	19.3	450
	ne	25	0.350	0	22.0	542	27.6	678
	e	54	0.350	0	22.0	1200	26.6	1447
	e	18	0.350	0	22.0	397	38.0	684
	se	54	0.350	0	22.0	1187	23.1	1246
	se	25	0.350	0	22.0	542	33.1	813
	s	54	0.350	0	22.0	1200	14.6	796
	s	112	0.350	0	22.0	2470	20.9	2341
	s	109	0.350	0	22.0	2399	0	0
	s	40	0.350	0	22.0	882	0	0
	w	20	0.350	0	22.0	450	26.6	543
	w	53	0.350	0	22.0	1169	38.0	2014
	all	651	0.350	0	22.0	14362	18.3	11894

Doors								
11D0: Door, wd sc type	n	21	0.390	0	24.6	516	11.5	241
Ceilings								
16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh		1	0.026	38.0	1.64	1	0	0
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		2751	0.018	56.0	1.13	3120	0.95	2620
17A-0zd: Flat ceiling, membrane roof mat, 140 lb/ft³ concrete deck, 6" thkns		67	0.287	0	18.1	1217	0	0
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		2172	0.295	0	6.98	15162	0	0
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		102	0.989	0	62.3	6329	0	0

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Daily range (°F)	-	30 (H)
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Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall,	n	644	0.043	17.0	2.88	1856	0	0
r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	e	356	0.043	17.0	2.88	1025	0	0
	s	495	0.043	17.0	2.46	1218	0	0
	w	356	0.043	17.0	2.88	1025	0	0
	all	1849	0.043	17.0	2.77	5125	0	0
Partitions								
(none)								
Windows								
10B-v: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk;	s	109	0.350	0	22.0	2399	0	0
NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	40	0.350	0	22.0	882	0	0
	all	149	0.350	0	22.0	3281	0	0
Doors								
(none)								
Ceilings								
16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh		1	0.026	38.0	1.64	1	0	0
17A-0zd: Flat ceiling, membrane roof mat, 140 lb/ft³ concrete deck, 6" thkns		67	0.287	0	18.1	1217	0	0
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		2172	0.295	0	6.98	15162	0	0

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Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	275	0.038	23.8	2.39	657	0.51	141
	e	306	0.038	23.8	2.39	733	0.51	157
	s	243	0.038	23.8	2.39	581	0.51	124
	w	306	0.038	23.8	2.39	733	0.51	157
	all	1129	0.038	23.8	2.39	2703	0.51	579
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	32	0.350	0	22.0	706	20.9	669
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		719	0.018	56.0	1.13	815	0.95	684
Floors								
(none)								

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Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	373	0.038	23.8	2.39	892	0.51	191
	e	90	0.038	23.8	2.39	215	0.51	46
	s	545	0.038	23.8	2.39	1305	0.51	280
	w	282	0.038	23.8	2.39	675	0.51	145
	all	1289	0.038	23.8	2.39	3087	0.51	661
Partitions								
12C-0sw: Frm wall, stucco ext, r-13 cav ins, 2"x4" wood frm, 16" o.c. stud		416	0.091	13.0	5.73	2382	1.32	548
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	n	64	0.350	0	22.0	1411	13.8	882
	e	54	0.350	0	22.0	1200	26.6	1447
	e	18	0.350	0	22.0	397	38.0	684
	s	54	0.350	0	22.0	1200	14.6	796
	s	80	0.350	0	22.0	1764	20.9	1672
	w	20	0.350	0	22.0	450	26.6	543
	w	53	0.350	0	22.0	1169	38.0	2014
	all	344	0.350	0	22.0	7590	23.4	8038
Doors								
11D0: Door, wd sc type	n	21	0.390	0	24.6	516	11.5	241
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		1385	0.018	56.0	1.13	1571	0.95	1319
Floors								
(none)								

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Design Conditions

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Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
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Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	ne	175	0.038	23.8	2.39	419	0.51	90
	se	157	0.038	23.8	2.39	376	0.51	81
	sw	223	0.038	23.8	2.39	533	0.51	114
	nw	235	0.038	23.8	2.39	564	0.51	121
	all	790	0.038	23.8	2.39	1891	0.51	405
Partitions								
(none)								
Windows								
10B-v: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk;	ne	23	0.350	0	22.0	515	19.3	450
NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	ne	25	0.350	0	22.0	542	27.6	678
	se	54	0.350	0	22.0	1187	23.1	1246
	se	25	0.350	0	22.0	542	33.1	813
	all	126	0.350	0	22.0	2786	25.2	3187
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		648	0.018	56.0	1.13	734	0.95	617
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		102	0.989	0	62.3	6329	0	0

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Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	n	126	0.043	17.0	2.88	363	0	0
	s	36	0.043	17.0	2.88	104	0	0
	w	194	0.043	17.0	2.88	558	0	0
	all	356	0.043	17.0	2.88	1025	0	0
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh		1	0.026	38.0	1.64	1	0	0
17A-0zd: Flat ceiling, membrane roof mat, 140 lb/ft³ concrete deck, 6" thkns		67	0.287	0	18.1	1217	0	0
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		301	0.295	0	6.98	2101	0	0

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Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	n	72	0.043	17.0	2.88	208	0	0
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
(none)								
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		104	0.295	0	6.98	726	0	0

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Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall,	n	203	0.043	17.0	2.88	584	0	0
r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	e	117	0.043	17.0	2.88	337	0	0
	all	320	0.043	17.0	2.88	921	0	0
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
(none)								
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		365	0.295	0	6.98	2547	0	0

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Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	e	77	0.043	17.0	2.88	221	0	0
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
(none)								
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		119	0.295	0	6.98	831	0	0

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Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	n	113	0.043	17.0	2.88	324	0	0
	s	233	0.043	17.0	2.23	520	0	0
	w	162	0.043	17.0	2.88	467	0	0
	all	508	0.043	17.0	2.58	1312	0	0
Partitions								
(none)								
Windows								
10B-v: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	109	0.350	0	22.0	2399	0	0
Doors								
(none)								
Ceilings								
(none)								
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		820	0.295	0	6.98	5721	0	0

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	s	115	0.043	17.0	2.64	304	0	0
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	20	0.350	0	22.0	441	0	0
Doors								
(none)								
Ceilings								
(none)								
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		203	0.295	0	6.98	1414	0	0

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Outdoor:	**Heating**	**Cooling**
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Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
15B13-4wc-8: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-2 ins, r-13 cav ins, 10" thk, 1/2" gypsum board int fnsh	n	131	0.043	17.0	2.88	376	0	0
	e	162	0.043	17.0	2.88	467	0	0
	s	111	0.043	17.0	2.63	291	0	0
	all	403	0.043	17.0	2.81	1134	0	0
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	20	0.350	0	22.0	441	0	0
Doors								
(none)								
Ceilings								
(none)								
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		261	0.295	0	6.98	1822	0	0

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Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	e	90	0.038	23.8	2.39	215	0.51	46
	s	96	0.038	23.8	2.39	230	0.51	49
	all	186	0.038	23.8	2.39	444	0.51	95
Partitions								
12C-0sw: Frm wall, stucco ext, r-13 cav ins, 2"x4" wood frm, 16" o.c. stud		198	0.091	13.0	5.73	1135	1.32	261
Windows								
10B-v: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk;	e	54	0.350	0	22.0	1200	26.6	1447
NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	e	18	0.350	0	22.0	397	38.0	684
	s	48	0.350	0	22.0	1058	20.9	1003
	all	120	0.350	0	22.0	2655	26.0	3135
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		333	0.018	56.0	1.13	378	0.95	317
Floors								
(none)								

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Wind speed (mph)	15.0	7.5

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Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	s	158	0.038	23.8	2.39	377	0.51	81
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	9	0.350	0	22.0	198	20.9	188
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		157	0.018	56.0	1.13	178	0.95	149
Floors								
(none)								

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Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
12C-0sw: Frm wall, stucco ext, r-13 cav ins, 2"x4" wood frm, 16" o.c. stud		77	0.091	13.0	5.73	439	1.32	101
Windows								
(none)								
Doors								
(none)								
Ceilings								
(none)								
Floors								
(none)								

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Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
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Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	128	0.038	23.8	2.39	305	0.51	65
Partitions								
12C-0sw: Frm wall, stucco ext, r-13 cav ins, 2"x4" wood frm, 16" o.c. stud		117	0.091	13.0	5.73	671	1.32	154
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	n	21	0.350	0	22.0	463	13.8	289
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		182	0.018	56.0	1.13	206	0.95	173
Floors								
(none)								

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Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	39	0.038	23.8	2.39	93	0.51	20
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	n	15	0.350	0	22.0	331	13.8	207
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		66	0.018	56.0	1.13	75	0.95	63
Floors								
(none)								

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Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	72	0.038	23.8	2.39	172	0.51	37
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		16	0.018	56.0	1.13	18	0.95	15
Floors								
(none)								

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Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	98	0.038	23.8	2.39	235	0.51	50
	s	64	0.038	23.8	2.39	153	0.51	33
	w	117	0.038	23.8	2.39	280	0.51	60
	all	279	0.038	23.8	2.39	668	0.51	143
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	n	28	0.350	0	22.0	617	13.8	386
	s	8	0.350	0	22.0	176	20.9	167
	all	36	0.350	0	22.0	794	15.4	553
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		182	0.018	56.0	1.13	206	0.95	173
Floors								
(none)								

Component Constructions
Entry/ Hall

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

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Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	w	28	0.038	23.8	2.39	67	0.51	14
Partitions								
(none)								
Windows								
10B-v: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk;	w	20	0.350	0	22.0	450	26.6	543
NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	w	28	0.350	0	22.0	617	38.0	1064
	all	48	0.350	0	22.0	1067	33.2	1607
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		51	0.018	56.0	1.13	58	0.95	49
Floors								
(none)								

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Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions

	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
(none)								
Floors								
(none)								

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Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	s	129	0.038	23.8	2.39	309	0.51	66
Partitions								
12C-0sw: Frm wall, stucco ext, r-13 cav ins, 2"x4" wood frm, 16" o.c. stud		24	0.091	13.0	5.73	138	1.32	32
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	15	0.350	0	22.0	331	20.9	314
Doors								
11D0: Door, wd sc type	n	21	0.390	0	24.6	516	11.5	241
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		93	0.018	56.0	1.13	105	0.95	89
Floors								
(none)								

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Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	36	0.038	23.8	2.39	86	0.51	18
	s	99	0.038	23.8	2.39	236	0.51	51
	w	137	0.038	23.8	2.39	328	0.51	70
	all	272	0.038	23.8	2.39	650	0.51	139
Partitions								
(none)								
Windows								
10B-v: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk;	s	54	0.350	0	22.0	1200	14.6	796
NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	w	25	0.350	0	22.0	551	38.0	950
	all	79	0.350	0	22.0	1751	22.0	1746
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		306	0.018	56.0	1.13	347	0.95	291
Floors								
(none)								

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	ne	108	0.038	23.8	2.39	259	0.51	56
	nw	95	0.038	23.8	2.39	229	0.51	49
	all	204	0.038	23.8	2.39	488	0.51	104
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		128	0.018	56.0	1.13	145	0.95	121
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		23	0.989	0	62.3	1407	0	0

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Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	ne	67	0.038	23.8	2.39	160	0.51	34
	se	54	0.038	23.8	2.39	130	0.51	28
	all	121	0.038	23.8	2.39	290	0.51	62
Partitions								
(none)								
Windows								
10B-v: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk;	ne	23	0.350	0	22.0	515	19.3	450
NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	ne	25	0.350	0	22.0	542	27.6	678
	se	54	0.350	0	22.0	1187	23.1	1246
	all	102	0.350	0	22.0	2244	23.3	2374
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		153	0.018	56.0	1.13	174	0.95	146
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		25	0.989	0	62.3	1537	0	0

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	se	103	0.038	23.8	2.39	246	0.51	53
	sw	115	0.038	23.8	2.39	274	0.51	59
	all	217	0.038	23.8	2.39	520	0.51	111
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	se	25	0.350	0	22.0	542	33.1	813
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		180	0.018	56.0	1.13	204	0.95	171
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		27	0.989	0	62.3	1672	0	0

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Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	sw	108	0.038	23.8	2.39	259	0.51	56
	nw	140	0.038	23.8	2.39	335	0.51	72
	all	248	0.038	23.8	2.39	594	0.51	127
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		187	0.018	56.0	1.13	212	0.95	178
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		28	0.989	0	62.3	1713	0	0

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Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	72	0.038	23.8	2.39	172	0.51	37
	e	81	0.038	23.8	2.39	194	0.51	42
	w	99	0.038	23.8	2.39	237	0.51	51
	all	252	0.038	23.8	2.39	603	0.51	129
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		88	0.018	56.0	1.13	100	0.95	84
Floors								
(none)								

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Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	s	72	0.038	23.8	2.39	172	0.51	37
	w	77	0.038	23.8	2.39	183	0.51	39
	all	149	0.038	23.8	2.39	356	0.51	76
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		68	0.018	56.0	1.13	77	0.95	65
Floors								
(none)								

Component Constructions
Bath 3

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	90	0.038	23.8	2.39	215	0.51	46
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		70	0.018	56.0	1.13	79	0.95	67
Floors								
(none)								

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Design Conditions

Location:
Provo Muni, UT, US
Elevation: 4498 ft
Latitude: 40°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	7	95
Daily range (°F)	-	30 (H)
Wet bulb (°F)	-	62
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	70	72
Design TD (°F)	63	23
Relative humidity (%)	30	30
Moisture difference (gr/lb)	31.1	7.1

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
14D-28s: Misc. wall, 6" thk, 1/2" gypsum board int fnsh	n	113	0.038	23.8	2.39	269	0.51	58
	e	225	0.038	23.8	2.39	539	0.51	115
	s	171	0.038	23.8	2.39	408	0.51	87
	w	131	0.038	23.8	2.39	312	0.51	67
	all	639	0.038	23.8	2.39	1529	0.51	328
Partitions								
(none)								
Windows								
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.34); 50% indoor insect screen; 6.67 ft head ht	s	32	0.350	0	22.0	706	20.9	669
Doors								
(none)								
Ceilings								
16B-56ad: Attic ceiling, asphalt shingles roof mat, r-56 ceil ins, 1/2" gypsum board int fnsh		493	0.018	56.0	1.13	558	0.95	469
Floors								
(none)								

Project Summary
Entire House
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Notes:

Design Information

Weather: Provo Muni, UT, US

Winter Design Conditions

Outside db	7	°F
Inside db	70	°F
Design TD	63	°F

Summer Design Conditions

Outside db	95	°F
Inside db	72	°F
Design TD	23	°F
Daily range	H	
Relative humidity	30	%
Moisture difference	7	gr/lb

Heating Summary

Structure	72697	Btuh
Ducts	2495	Btuh
Central vent (0 cfm)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	75192	Btuh

Sensible Cooling Equipment Load Sizing

Structure	26875	Btuh
Ducts	2034	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	1.00	
Equipment sensible load	28823	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	5642	3470
Volume (ft³)	33400	31228
Air changes/hour	0.37	0.19
Equiv. AVF (cfm)	206	99

Latent Cooling Equipment Load Sizing

Structure	2004	Btuh
Ducts	51	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	2055	Btuh
Equipment Total Load (Sen+Lat)	30878	Btuh
Req. total capacity at 0.70 SHR	3.4	ton

Heating Equipment Summary

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	n/a

Cooling Equipment Summary

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Basement
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Notes:

Design Information

Weather: Provo Muni, UT, US

Winter Design Conditions

Outside db	7	°F
Inside db	70	°F
Design TD	63	°F

Summer Design Conditions

Outside db	95	°F
Inside db	72	°F
Design TD	23	°F
Daily range	H	
Relative humidity	30	%
Moisture difference	7	gr/lb

Heating Summary

Structure	25470	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
(none)		
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	25470	Btuh

Sensible Cooling Equipment Load Sizing

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

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	2172	0
Volume (ft³)	2172	0
Air changes/hour	0.32	0
Equiv. AVF (cfm)	12	0

Latent Cooling Equipment Load Sizing

Structure	0	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	0	Btuh
Equipment Total Load (Sen+Lat)	0	Btuh
Req. total capacity at 0.70 SHR	0	ton

Heating Equipment Summary

Make	Day & Night
Trade	DAY & NIGHT
Model	R95ESN0401410AA2
AHRI ref	4705685

Efficiency	96	AFUE
Heating input	40000	Btuh
Heating output	39000	Btuh
Temperature rise	50	°F
Actual air flow	836	cfm
Air flow factor	0.033	cfm/Btuh
Static pressure	0.60	in H2O
Space thermostat		

Cooling Equipment Summary

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a

Efficiency	n/a	
Sensible cooling	0	Btuh
Latent cooling	0	Btuh
Total cooling	0	Btuh
Actual air flow	0	cfm
Air flow factor	0	cfm/Btuh
Static pressure	0	in H2O
Load sensible heat ratio	0	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Casita
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Notes:

Design Information

Weather: Provo Muni, UT, US

Winter Design Conditions

Outside db	7	°F
Inside db	70	°F
Design TD	63	°F

Summer Design Conditions

Outside db	95	°F
Inside db	72	°F
Design TD	23	°F
Daily range	H	
Relative humidity	30	%
Moisture difference	7	gr/lb

Heating Summary

Structure	15735	Btuh
Ducts	2495	Btuh
Central vent (0 cfm) (none)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	18231	Btuh

Sensible Cooling Equipment Load Sizing

Structure	7557	Btuh
Ducts	2049	Btuh
Central vent (0 cfm) (none)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	1.00	
Equipment sensible load	9577	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	648	648
Volume (ft³)	5828	5828
Air changes/hour	0.49	0.25
Equiv. AVF (cfm)	48	24

Latent Cooling Equipment Load Sizing

Structure	581	Btuh
Ducts	51	Btuh
Central vent (0 cfm) (none)	0	Btuh
Equipment latent load	633	Btuh
Equipment Total Load (Sen+Lat)	10210	Btuh
Req. total capacity at 0.70 SHR	1.1	ton

Heating Equipment Summary

Make	Day & Night
Trade	DAY & NIGHT
Model	N95ESN0261410A
AHRI ref	0

Efficiency	96	AFUE
Heating input	26000	Btuh
Heating output	25000	Btuh
Temperature rise	46	°F
Actual air flow	580	cfm
Air flow factor	0.032	cfm/Btuh
Static pressure	0.60	in H2O
Space thermostat		

Cooling Equipment Summary

Make	Day & Night
Trade	Day and Night
Cond	N4A318GKF10
Coil	ENH4X24L17A1
AHRI ref	0

Efficiency	11.5 EER, 14 SEER	
Sensible cooling	12180	Btuh
Latent cooling	5220	Btuh
Total cooling	17400	Btuh
Actual air flow	580	cfm
Air flow factor	0.060	cfm/Btuh
Static pressure	0.60	in H2O
Load sensible heat ratio	0.94	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Main
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Notes:

Design Information

Weather: Provo Muni, UT, US

Winter Design Conditions

Outside db	7	°F
Inside db	70	°F
Design TD	63	°F

Summer Design Conditions

Outside db	95	°F
Inside db	72	°F
Design TD	23	°F
Daily range	H	
Relative humidity	30	%
Moisture difference	7	gr/lb

Heating Summary

Structure	23696	Btuh
Ducts	0	Btuh
Central vent (0 cfm) (none)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	23696	Btuh

Sensible Cooling Equipment Load Sizing

Structure	16320	Btuh
Ducts	0	Btuh
Central vent (0 cfm) (none)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	1.00	
Equipment sensible load	16271	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	2104	2104
Volume (ft³)	18934	18934
Air changes/hour	0.27	0.14
Equiv. AVF (cfm)	86	44

Latent Cooling Equipment Load Sizing

Structure	1223	Btuh
Ducts	0	Btuh
Central vent (0 cfm) (none)	0	Btuh
Equipment latent load	1223	Btuh
Equipment Total Load (Sen+Lat)	17493	Btuh
Req. total capacity at 0.70 SHR	1.9	ton

Heating Equipment Summary

Make	Day & Night
Trade	DAY & NIGHT
Model	R95ESN0401712AA1
AHRI ref	6311614

Efficiency	96	AFUE
Heating input	40000	Btuh
Heating output	39000	Btuh
Temperature rise	46	°F
Actual air flow	913	cfm
Air flow factor	0.039	cfm/Btuh
Static pressure	0.70	in H2O
Space thermostat		

Cooling Equipment Summary

Make	Day & Night
Trade	Day and Night
Cond	N4A330GKN2
Coil	END4X36L17A1++TDR
AHRI ref	9423214

Efficiency	10.5 EER, 13 SEER	
Sensible cooling	19180	Btuh
Latent cooling	8220	Btuh
Total cooling	27400	Btuh
Actual air flow	913	cfm
Air flow factor	0.056	cfm/Btuh
Static pressure	0.70	in H2O
Load sensible heat ratio	0.93	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Summary
Upstairs
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

Notes:

Design Information

Weather: Provo Muni, UT, US

Winter Design Conditions

Outside db	7	°F
Inside db	70	°F
Design TD	63	°F

Summer Design Conditions

Outside db	95	°F
Inside db	72	°F
Design TD	23	°F
Daily range	H	
Relative humidity	30	%
Moisture difference	7	gr/lb

Heating Summary

Structure	7795	Btuh
Ducts	0	Btuh
Central vent (0 cfm) (none)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	7795	Btuh

Sensible Cooling Equipment Load Sizing

Structure	3202	Btuh
Ducts	0	Btuh
Central vent (0 cfm) (none)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	1.00	
Equipment sensible load	3192	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	719	719
Volume (ft³)	6467	6467
Air changes/hour	0.56	0.29
Equiv. AVF (cfm)	61	31

Latent Cooling Equipment Load Sizing

Structure	526	Btuh
Ducts	0	Btuh
Central vent (0 cfm) (none)	0	Btuh
Equipment latent load	526	Btuh
Equipment Total Load (Sen+Lat)	3719	Btuh
Req. total capacity at 0.70 SHR	0.4	ton

Heating Equipment Summary

Make	Fujitsu General
Trade	Fujitsu
Model	FAOU9RLS3
AHRI ref	

Efficiency	9.1 HSPF	
Heating input		
Heating output	14578	Btuh @ 47°F
Temperature rise	14	°F
Actual air flow	1082	cfm
Air flow factor	0.139	cfm/Btuh
Static pressure	0.60	in H2O
Space thermostat		

Capacity balance point = 21 °F

Backup:
Input = 2 kW, Output = 7795 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Fujitsu General
Trade	Fujitsu
Cond	FAOU9RLS3
Coil	FASU9RLS3Y
AHRI ref	

Efficiency	33 SEER	
Sensible cooling	8400	Btuh
Latent cooling	3600	Btuh
Total cooling	12000	Btuh
Actual air flow	1082	cfm
Air flow factor	0.338	cfm/Btuh
Static pressure	0.60	in H2O
Load sensible heat ratio	0.86	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Entire House
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

							Entire House				Basement			
1	Room name													
2	Exposed wall						634.1 ft				222.0 ft			
3	Room height						9.0 ft				9.0 ft			
4	Room dimensions													
5	Room area						5641.5 ft²				2171.8 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	711	647	1549	332	0	0	0	0
.	└G	1D-c2ov	0.350	n	22.05	13.78	64	0	1411	882	0	0	0	0
.	W	15B13-4wc-8	0.068	n	2.88	0.00	644	644	1856	0	644	644	1856	0
.	W	14D-28s	0.038	ne	2.39	0.51	223	175	419	90	0	0	0	0
11	├G	10B-v	0.350	ne	22.05	19.30	23	0	514	450	0	0	0	0
	└G	1D-c2ov	0.350	ne	22.05	27.57	25	0	542	678	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	468	396	947	203	0	0	0	0
	├G	10B-v	0.350	e	22.05	26.60	54	0	1200	1447	0	0	0	0
	└G	1D-c2ov	0.350	e	22.05	38.01	18	0	397	684	0	0	0	0
	W	15B13-4wc-8	0.068	e	2.88	0.00	356	356	1025	0	356	356	1025	0
	W	14D-28s	0.038	se	2.39	0.51	235	157	376	81	0	0	0	0
	├G	10B-v	0.350	se	22.05	23.14	54	0	1187	1246	0	0	0	0
	└G	1D-c2ov	0.350	se	22.05	33.06	25	0	542	813	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	954	788	1886	404	0	0	0	0
	├G	10B-v	0.350	s	22.05	14.63	54	0	1200	796	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	20.90	112	0	2470	2341	0	0	0	0
	W	15B13-4wc-8	0.068	s	2.46	0.00	644	495	1218	0	644	495	1218	0
	├G	10B-v	0.350	s	22.05	0.00	109	0	2399	0	109	0	2399	0
	└G	1D-c2ov	0.350	s	22.05	0.00	40	0	882	0	40	0	882	0
	W	14D-28s	0.038	sw	2.39	0.51	223	223	533	114	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	662	588	1408	302	0	0	0	0
	├G	10B-v	0.350	w	22.05	26.60	20	0	450	543	0	0	0	0
	└G	1D-c2ov	0.350	w	22.05	38.01	53	0	1169	2014	0	0	0	0
	W	15B13-4wc-8	0.068	w	2.88	0.00	356	356	1025	0	356	356	1025	0
	W	14D-28s	0.038	nw	2.39	0.51	235	235	564	121	0	0	0	0
	P	12C-0sw	0.091	-	5.73	1.32	437	416	2382	548	0	0	0	0
	└D	11D0	0.390	n	24.57	11.47	21	21	516	241	0	0	0	0
	C	16B-38ad	0.026	-	1.64	0.00	1	1	1	0	1	1	1	0
	C	16B-56ad	0.018	-	1.13	0.95	2751	2751	3120	2620	0	0	0	0
	C	17A-0zd	0.287	-	18.08	0.00	67	67	1217	0	67	67	1217	0
	F	19A-0bscp	0.295	-	6.98	0.00	2172	2172	15162	0	2172	2172	15162	0
	F	22A-tpl	0.989	-	62.31	0.00	648	102	6329	0	0	0	0	0
6	c) AED excursion									0				0
	Envelope loss/gain								55896	16948			24787	0
12	a) Infiltration								12101	2093			683	0
	b) Room ventilation								4700	1694			0	0
13	Internal gains:	Occupants @	230				10			1840	2			0
		Appliances/other								4300				0
	Subtotal (lines 6 to 13)								72697	26875			25470	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								72697	26875			25470	0
15	Duct loads						3%	8%	2495	2034	0%	0%	0	0
	Total room load								75192	28909			25470	0
	Air required (cfm)								3411	2575			836	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Entire House

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

							Casita				Main			
1	Room name													
2	Exposed wall						101.6 ft				181.5 ft			
3	Room height						9.0 ft				9.0 ft			
4	Room dimensions													
5	Room area						647.5 ft²				2103.8 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	0	0	0	0	437	373	892	191
.	G	1D-c2ov	0.350	n	22.05	13.78	0	0	0	0	64	0	1411	882
.	W	15B13-4wc-8	0.068	n	2.88	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	2.39	0.51	223	175	419	90	0	0	0	0
11	G	10B-v	0.350	ne	22.05	19.30	23	0	514	450	0	0	0	0
	G	1D-c2ov	0.350	ne	22.05	27.57	25	0	542	678	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	0	0	0	0	162	90	215	46
	G	10B-v	0.350	e	22.05	26.60	0	0	0	0	54	0	1200	1447
	G	1D-c2ov	0.350	e	22.05	38.01	0	0	0	0	18	0	397	684
	W	15B13-4wc-8	0.068	e	2.88	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	2.39	0.51	235	157	376	81	0	0	0	0
	G	10B-v	0.350	se	22.05	23.14	54	0	1187	1246	0	0	0	0
	G	1D-c2ov	0.350	se	22.05	33.06	25	0	542	813	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	0	0	0	0	680	545	1305	280
	G	10B-v	0.350	s	22.05	14.63	0	0	0	0	54	0	1200	796
	G	1D-c2ov	0.350	s	22.05	20.90	0	0	0	0	80	0	1764	1672
	W	15B13-4wc-8	0.068	s	2.46	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	22.05	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	22.05	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	2.39	0.51	223	223	533	114	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	0	0	0	0	356	282	675	145
	G	10B-v	0.350	w	22.05	26.60	0	0	0	0	20	0	450	543
	G	1D-c2ov	0.350	w	22.05	38.01	0	0	0	0	53	0	1169	2014
	W	15B13-4wc-8	0.068	w	2.88	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	2.39	0.51	235	235	564	121	0	0	0	0
	P	12C-0sw	0.091	-	5.73	1.32	0	0	0	0	437	416	2382	548
	D	11D0	0.390	n	24.57	11.47	0	0	0	0	21	21	516	241
	C	16B-38ad	0.026	-	1.64	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	648	648	734	617	1385	1385	1571	1319
	C	17A-0zd	0.287	-	18.08	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	6.98	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	62.31	0.00	648	102	6329	0	0	0	0	0
6	c) AED excursion									48				0
	Envelope loss/gain								11741	4256			15145	10808
12	a) Infiltration								2820	517			5026	921
	b) Room ventilation								1175	423			3525	1270
13	Internal gains:	Occupants @	230				2			460	4			920
		Appliances/other								1900				2400
	Subtotal (lines 6 to 13)								15735	7557			23696	16320
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								15735	7557			23696	16320
15	Duct loads						16%	27%	2495	2049	0%	0%	0	0
	Total room load								18231	9606			23696	16320
	Air required (cfm)								580	580			913	913

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Entire House
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

1	Room name						Upstairs								
2	Exposed wall						129.0 ft								
3	Room height						9.0 ft								
4	Room dimensions														
5	Room area						718.5 ft²								
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area or perimeter (ft²) (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	275	275	657	141				
.	└G	1D-c2ov	0.350	n	22.05	13.78	0	0	0	0				
.	W	15B13-4wc-8	0.068	n	2.88	0.00	0	0	0	0				
.	W	14D-28s	0.038	ne	2.39	0.51	0	0	0	0				
11	├G	10B-v	0.350	ne	22.05	19.30	0	0	0	0				
	└G	1D-c2ov	0.350	ne	22.05	27.57	0	0	0	0				
	W	14D-28s	0.038	e	2.39	0.51	306	306	733	157				
	├G	10B-v	0.350	e	22.05	26.60	0	0	0	0				
	└G	1D-c2ov	0.350	e	22.05	38.01	0	0	0	0				
	W	15B13-4wc-8	0.068	e	2.88	0.00	0	0	0	0				
	W	14D-28s	0.038	se	2.39	0.51	0	0	0	0				
	├G	10B-v	0.350	se	22.05	23.14	0	0	0	0				
	└G	1D-c2ov	0.350	se	22.05	33.06	0	0	0	0				
	W	14D-28s	0.038	s	2.39	0.51	275	243	581	124				
	├G	10B-v	0.350	s	22.05	14.63	0	0	0	0				
	└G	1D-c2ov	0.350	s	22.05	20.90	32	0	706	669				
	W	15B13-4wc-8	0.068	s	2.46	0.00	0	0	0	0				
	├G	10B-v	0.350	s	22.05	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	s	22.05	0.00	0	0	0	0				
	W	14D-28s	0.038	sw	2.39	0.51	0	0	0	0				
	W	14D-28s	0.038	w	2.39	0.51	306	306	733	157				
	├G	10B-v	0.350	w	22.05	26.60	0	0	0	0				
	└G	1D-c2ov	0.350	w	22.05	38.01	0	0	0	0				
	W	15B13-4wc-8	0.068	w	2.88	0.00	0	0	0	0				
	W	14D-28s	0.038	nw	2.39	0.51	0	0	0	0				
	P	12C-0sw	0.091	-	5.73	1.32	0	0	0	0				
	└D	11D0	0.390	n	24.57	11.47	0	0	0	0				
	C	16B-38ad	0.026	-	1.64	0.00	0	0	0	0				
	C	16B-56ad	0.018	-	1.13	0.95	719	719	815	684				
	C	17A-0zd	0.287	-	18.08	0.00	0	0	0	0				
	F	19A-0bscp	0.295	-	6.98	0.00	0	0	0	0				
	F	22A-tpl	0.989	-	62.31	0.00	0	0	0	0				
6	c) AED excursion									155				
	Envelope loss/gain								4223	2087				
12	a) Infiltration								3572	655				
	b) Room ventilation								0	0				
13	Internal gains:	Occupants @ 230					2			460				
		Appliances/other								0				
	Subtotal (lines 6 to 13)								7795	3202				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								7795	3202				
15	Duct loads						0%	0%	0	0				
	Total room load								7795	3202				
	Air required (cfm)								1082	1082				

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Basement
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Basement	Bath
1	Room name		
2	Exposed wall	222.0 ft	8.5 ft
3	Room height	9.0 ft	9.0 ft heat only
4	Room dimensions		14.0 x 8.5 ft
5	Room area	2171.8 ft²	119.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	0.00	0.00	0	0	0	0	0	0	0	0
.	└G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	2.88	0.00	644	644	1856	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	2.88	0.00	356	356	1025	0	77	77	221	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	s	2.46	0.00	644	495	1218	0	0	0	0	0
	├G	10B-v	0.350	s	22.05	0.00	109	0	2399	0	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	0.00	40	0	882	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	2.88	0.00	356	356	1025	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	1.64	0.00	1	1	1	0	0	0	0	0
	C	16B-56ad	0.018	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	17A-0zd	0.287	-	18.08	0.00	67	67	1217	0	0	0	0	0
	F	19A-0bscp	0.295	-	6.98	0.00	2172	2172	15162	0	119	119	831	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0

6	c) AED excursion									0				0
	Envelope loss/gain								24787	0			1051	0
12	a) Infiltration								683	0			26	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				2			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								25470	0			1078	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			2038	0
14	Subtotal								25470	0			3115	0
15	Duct loads						0%	0%	0	0	-0%	0%	0	0
	Total room load								25470	0			3115	0
	Air required (cfm)								836	0			102	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Basement

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Bed 1	Bed 2
1	Room name		
2	Exposed wall	15.0 ft	47.0 ft
3	Room height	9.0 ft heat only	9.0 ft heat only
4	Room dimensions	15.0 x 13.5 ft	14.5 x 18.0 ft
5	Room area	202.5 ft²	261.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	2.88	0.00	0	0	0	0	131	131	376	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	2.88	0.00	0	0	0	0	162	162	467	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	s	2.46	0.00	135	115	304	0	131	111	291	0
	G	10B-v	0.350	s	22.05	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	22.05	0.00	20	0	441	0	20	0	441	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	2.88	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	1.64	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	17A-0zd	0.287	-	18.08	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	6.98	0.00	203	203	1414	0	261	261	1822	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				0
	Envelope loss/gain								2158	0			3397	0
12	a) Infiltration								46	0			145	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					1			0	1			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								2205	0			3542	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2205	0			3542	0
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								2205	0			3542	0
	Air required (cfm)								72	0			116	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Basement
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Flex	Mechanical
1	Room name		
2	Exposed wall	39.5 ft	35.5 ft
3	Room height	9.0 ft heat only	9.0 ft heat only
4	Room dimensions	14.0 x 21.5 ft	1.0 x 364.8 ft
5	Room area	301.0 ft²	364.8 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	2.88	0.00	126	126	363	0	203	203	584	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	2.88	0.00	0	0	0	0	117	117	337	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	s	2.46	0.00	36	36	104	0	0	0	0	0
	G	10B-v	0.350	s	22.05	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	22.05	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	2.88	0.00	194	194	558	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	1.64	0.00	1	1	1	0	0	0	0	0
	C	16B-56ad	0.018	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	17A-0zd	0.287	-	18.08	0.00	67	67	1217	0	0	0	0	0
	F	19A-0bscp	0.295	-	6.98	0.00	301	301	2101	0	365	365	2547	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0

6	c) AED excursion									0				0
	Envelope loss/gain								4345	0			3468	0
12	a) Infiltration								122	0			109	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								4467	0			3577	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								593	0			-3577	0
14	Subtotal								5060	0			0	0
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								5060	0			0	0
	Air required (cfm)								166	0			0	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Basement
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Rec	Stairs
1	Room name		
2	Exposed wall	68.5 ft	8.0 ft
3	Room height	9.0 ft	9.0 ft
4	Room dimensions	heat only	heat only
		1.0 x 819.5 ft	8.0 x 13.0 ft
5	Room area	819.5 ft²	104.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	0.00	0.00	0	0	0	0	0	0	0	0
.	└G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	2.88	0.00	113	113	324	0	72	72	208	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	2.88	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	s	2.46	0.00	342	233	520	0	0	0	0	0
	├G	10B-v	0.350	s	22.05	0.00	109	0	2399	0	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	2.88	0.00	162	162	467	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	1.64	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	17A-0zd	0.287	-	18.08	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	6.98	0.00	820	820	5721	0	104	104	726	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				0
	Envelope loss/gain								9432	0			934	0
12	a) Infiltration								211	0			25	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								9643	0			958	0
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								1905	0			-958	0
14	Subtotal								11548	0			0	0
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								11548	0			0	0
	Air required (cfm)								379	0			0	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Casita
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Casita	Casita Bath/WIC
1	Room name		
2	Exposed wall	101.6 ft	27.5 ft
3	Room height	9.0 ft	9.0 ft
4	Room dimensions		heat/cool
			1.0 x 187.0 ft
5	Room area	647.5 ft²	187.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	2.39	0.51	223	175	419	90	0	0	0	0
11	G	10B-v	0.350	ne	22.05	19.30	23	0	514	450	0	0	0	0
	G	1D-c2ov	0.350	ne	22.05	27.57	25	0	542	678	0	0	0	0
	W	14D-28s	0.038	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	2.39	0.51	235	157	376	81	0	0	0	0
	G	10B-v	0.350	se	22.05	23.14	54	0	1187	1246	0	0	0	0
	G	1D-c2ov	0.350	se	22.05	33.06	25	0	542	813	0	0	0	0
	W	14D-28s	0.038	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	2.39	0.51	223	223	533	114	108	108	259	56
	W	14D-28s	0.038	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	2.39	0.51	235	235	564	121	140	140	335	72
	P	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	648	648	734	617	187	187	212	178
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	62.31	0.00	648	102	6329	0	187	28	1713	0
6	c) AED excursion									48				-4
	Envelope loss/gain								11741	4256			2520	301
12	a) Infiltration								2820	517			764	140
	b) Room ventilation								1175	423			1175	423
13	Internal gains:	Occupants @ 230					2			460	0			0
		Appliances/other								1900				0
	Subtotal (lines 6 to 13)								15735	7557			4458	865
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								15735	7557			4458	865
15	Duct loads						16%	27%	2495	2049	16%	27%	707	234
	Total room load								18231	9606			5165	1099
	Air required (cfm)								580	580			164	66

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Right-J® Worksheet
Casita

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Casita Kitchen	Casita Living
1	Room name		
2	Exposed wall	22.6 ft	24.7 ft
3	Room height	9.0 ft	9.0 ft
4	Room dimensions	heat/cool 1.0 x 127.5 ft	heat/cool 1.0 x 153.0 ft
5	Room area	127.5 ft²	153.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	0.00	0.00	0	0	0	0	0	0	0	0
.	G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	2.39	0.51	108	108	259	56	115	67	160	34
11	G	10B-v	0.350	ne	22.05	19.30	0	0	0	0	23	0	514	450
	G	1D-c2ov	0.350	ne	22.05	27.57	0	0	0	0	25	0	542	678
	W	14D-28s	0.038	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	2.39	0.51	0	0	0	0	108	54	130	28
	G	10B-v	0.350	se	22.05	23.14	0	0	0	0	54	0	1187	1246
	G	1D-c2ov	0.350	se	22.05	33.06	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	2.39	0.51	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	2.39	0.51	95	95	229	49	0	0	0	0
	P	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	128	128	145	121	153	153	174	146
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	62.31	0.00	128	23	1407	0	153	25	1537	0
6	c) AED excursion									-7				-18
	Envelope loss/gain								2039	219			4244	2564
12	a) Infiltration								627	115			685	126
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								1000				900
	Subtotal (lines 6 to 13)								2666	1334			4929	3589
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2666	1334			4929	3589
15	Duct loads						16%	27%	423	362	16%	27%	782	973
	Total room load								3089	1696			5711	4563
	Air required (cfm)								98	102			182	276

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Casita

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

1	Room name					Casita Master									
2	Exposed wall					26.8 ft									
3	Room height					9.0 ft				heat/cool					
4	Room dimensions					1.0 x 180.0 ft									
5	Room area					180.0 ft²									
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area or perimeter (ft²) (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	0.00	0.00	0	0	0	0				
.	└G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0				
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0				
.	W	14D-28s	0.038	ne	2.39	0.51	0	0	0	0				
11	├G	10B-v	0.350	ne	22.05	19.30	0	0	0	0				
	└G	1D-c2ov	0.350	ne	22.05	27.57	0	0	0	0				
	W	14D-28s	0.038	e	0.00	0.00	0	0	0	0				
	├G	10B-v	0.350	e	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0				
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	se	2.39	0.51	127	103	246	53				
	├G	10B-v	0.350	se	22.05	23.14	0	0	0	0				
	└G	1D-c2ov	0.350	se	22.05	33.06	25	0	542	813				
	W	14D-28s	0.038	s	0.00	0.00	0	0	0	0				
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0				
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0				
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	sw	2.39	0.51	115	115	274	59				
	W	14D-28s	0.038	w	0.00	0.00	0	0	0	0				
	├G	10B-v	0.350	w	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0				
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	nw	2.39	0.51	0	0	0	0				
	R	12C-0sw	0.091	-	0.00	0.00	0	0	0	0				
	└D	11D0	0.390	n	0.00	0.00	0	0	0	0				
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0				
	C	16B-56ad	0.018	-	1.13	0.95	180	180	204	171				
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0				
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0				
	F	22A-tpl	0.989	-	62.31	0.00	180	27	1672	0				
6	c) AED excursion									76				
	Envelope loss/gain								2938	1172				
12	a) Infiltration								744	136				
	b) Room ventilation								0	0				
13	Internal gains:	Occupants @ 230					2			460				
		Appliances/other								0				
	Subtotal (lines 6 to 13)								3682	1768				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								3682	1768				
15	Duct loads						16%	27%	584	480				
	Total room load								4266	2248				
	Air required (cfm)								136	136				

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Main

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Main	Bath 2
1	Room name		
2	Exposed wall	181.5 ft	6.0 ft
3	Room height	9.0 ft	9.0 ft heat/cool
4	Room dimensions		6.0 x 13.0 ft
5	Room area	2103.8 ft²	78.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	437	373	892	191	54	39	93	20
.	G	1D-c2ov	0.350	n	22.05	13.78	64	0	1411	882	15	0	331	207
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	162	90	215	46	0	0	0	0
	G	10B-v	0.350	e	22.05	26.60	54	0	1200	1447	0	0	0	0
	G	1D-c2ov	0.350	e	22.05	38.01	18	0	397	684	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	680	545	1305	280	0	0	0	0
	G	10B-v	0.350	s	22.05	14.63	54	0	1200	796	0	0	0	0
	G	1D-c2ov	0.350	s	22.05	20.90	80	0	1764	1672	0	0	0	0
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	356	282	675	145	0	0	0	0
	G	10B-v	0.350	w	22.05	26.60	20	0	450	543	0	0	0	0
	G	1D-c2ov	0.350	w	22.05	38.01	53	0	1169	2014	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	5.73	1.32	437	416	2382	548	0	0	0	0
	D	11D0	0.390	n	24.57	11.47	21	21	516	241	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	1385	1385	1571	1319	66	66	75	63
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				-46
	Envelope loss/gain								15145	10808			499	243
12	a) Infiltration								5026	921			166	30
	b) Room ventilation								3525	1270			1175	423
13	Internal gains:	Occupants @	230				4			920	0			0
		Appliances/other								2400				0
	Subtotal (lines 6 to 13)								23696	16320			1840	697
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			158	33
14	Subtotal								23696	16320			1998	730
15	Duct loads						0%	0%	0	0	-0%	0%	0	0
	Total room load								23696	16320			1998	730
	Air required (cfm)								913	913			77	41

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Main

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

1	Room name					Bella						Entry/ Hall			
2	Exposed wall					16.5 ft						8.5 ft			
3	Room height					9.0 ft			heat/cool			9.0 ft			heat/cool
4	Room dimensions					16.5 x 13.0 ft						1.0 x 153.5 ft			
5	Room area					214.5 ft²						153.5 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	149	128	305	65	0	0	0	0
.	└G	1D-c2ov	0.350	n	22.05	13.78	21	0	463	289	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	e	22.05	26.60	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	e	22.05	38.01	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	22.05	14.63	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	20.90	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	0	0	0	0	77	28	67	14
	├G	10B-v	0.350	w	22.05	26.60	0	0	0	0	20	0	450	543
	└G	1D-c2ov	0.350	w	22.05	38.01	0	0	0	0	28	0	617	1064
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	5.73	1.32	117	117	671	154	0	0	0	0
	└D	11D0	0.390	n	24.57	11.47	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	182	182	206	173	51	51	58	49
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-62				614
	Envelope loss/gain								1645	620			1192	2284
12	a) Infiltration								457	84			235	43
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					1			230	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								2102	934			1428	2327
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			97	20
14	Subtotal								2102	934			1525	2348
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								2102	934			1525	2348
	Air required (cfm)								81	52			59	131

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Main

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Great Room	Kitchen
1	Room name		
2	Exposed wall	39.0 ft	16.0 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	17.0 x 18.0 ft	1.0 x 377.3 ft
5	Room area	306.0 ft²	377.3 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Great Room Area (ft²) or perimeter (ft)		Great Room Load (Btuh)		Kitchen Area (ft²) or perimeter (ft)		Kitchen Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	36	36	86	18	0	0	0	0
.	└G	1D-c2ov	0.350	n	22.05	13.78	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	e	22.05	26.60	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	e	22.05	38.01	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	153	99	236	51	144	129	309	66
	├G	10B-v	0.350	s	22.05	14.63	54	0	1200	796	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	20.90	0	0	0	0	15	0	331	314
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	162	137	328	70	0	0	0	0
	├G	10B-v	0.350	w	22.05	26.60	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	w	22.05	38.01	25	0	551	950	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	5.73	1.32	0	0	0	0	45	24	138	32
	└D	11D0	0.390	n	24.57	11.47	0	0	0	0	21	21	516	241
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	306	306	347	291	93	93	105	89
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-23				-45
	Envelope loss/gain								2748	2154			1399	695
12	a) Infiltration								1080	198			443	81
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								900				1000
	Subtotal (lines 6 to 13)								3828	3252			1842	1777
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								3828	3252			1842	1777
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								3828	3252			1842	1777
	Air required (cfm)								147	182			71	99

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Main

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Laundry	Master
1	Room name		
2	Exposed wall	0 ft	34.0 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	11.0 x 8.5 ft	1.0 x 333.0 ft
5	Room area	93.5 ft²	333.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	0	0	0	0	0	0	0	0
.	└G	1D-c2ov	0.350	n	22.05	13.78	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	0	0	0	0	162	90	215	46
	├G	10B-v	0.350	e	22.05	26.60	0	0	0	0	54	0	1200	1447
	└G	1D-c2ov	0.350	e	22.05	38.01	0	0	0	0	18	0	397	684
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	0	0	0	0	144	96	230	49
	├G	10B-v	0.350	s	22.05	14.63	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	20.90	0	0	0	0	48	0	1058	1003
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	w	22.05	26.60	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	w	22.05	38.01	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	5.73	1.32	77	77	439	101	198	198	1135	261
	└D	11D0	0.390	n	24.57	11.47	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	0	0	0	0	333	333	378	317
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-37				-276
	Envelope loss/gain								439	64			4612	3532
12	a) Infiltration								0	0			942	173
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	2			460
		Appliances/other								500				0
	Subtotal (lines 6 to 13)								439	564			5553	4165
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								439	564			5553	4165
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								439	564			5553	4165
	Air required (cfm)								17	32			214	233

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Main

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Master Bath	Powder
1	Room name		
2	Exposed wall	18.5 ft	0 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	1.0 x 231.8 ft	5.5 x 5.5 ft
5	Room area	231.8 ft²	30.3 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	0	0	0	0	0	0	0	0
.	G	1D-c2ov	0.350	n	22.05	13.78	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	0	0	0	0	0	0	0	0
	G	10B-v	0.350	e	22.05	26.60	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	e	22.05	38.01	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	167	158	377	81	0	0	0	0
	G	10B-v	0.350	s	22.05	14.63	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	22.05	20.90	9	0	198	188	0	0	0	0
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	0	0	0	0	0	0	0	0
	G	10B-v	0.350	w	22.05	26.60	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	w	22.05	38.01	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	5.73	1.32	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	24.57	11.47	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	157	157	178	149	0	0	0	0
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-17				-26
	Envelope loss/gain								753	401			0	-26
12	a) Infiltration								512	94			0	0
	b) Room ventilation								1175	423			1175	423
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								2441	918			1175	397
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2441	918			1175	397
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								2441	918			1175	397
	Air required (cfm)								94	51			45	22

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Main

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Stairs 2	Study
1	Room name	Stairs 2	Study
2	Exposed wall	8.0 ft	35.0 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	8.0 x 13.0 ft	14.0 x 13.0 ft
5	Room area	104.0 ft²	182.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	72	72	172	37	126	98	235	50
.	G	1D-c2ov	0.350	n	22.05	13.78	0	0	0	0	28	0	617	386
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	0	0	0	0	0	0	0	0
	G	10B-v	0.350	e	22.05	26.60	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	e	22.05	38.01	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	0	0	0	0	72	64	153	33
	G	10B-v	0.350	s	22.05	14.63	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	22.05	20.90	0	0	0	0	8	0	176	167
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	0	0	0	0	117	117	280	60
	G	10B-v	0.350	w	22.05	26.60	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.350	w	22.05	38.01	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	5.73	1.32	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	24.57	11.47	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	16	16	18	15	182	182	206	173
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-6				-75
	Envelope loss/gain								191	46			1668	794
12	a) Infiltration								222	41			969	178
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	1			230
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								412	87			2637	1202
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								-412	-87			158	33
14	Subtotal								0	0			2795	1235
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								0	0			2795	1235
	Air required (cfm)								0	0			108	69

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Upstairs
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Upstairs	Bath 3
1	Room name		
2	Exposed wall	129.0 ft	10.0 ft
3	Room height	9.0 ft	9.0 ft
4	Room dimensions		10.0 x 7.0 ft
5	Room area	718.5 ft²	70.0 ft²
			heat/cool

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	275	275	657	141	90	90	215	46
.	└G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	306	306	733	157	0	0	0	0
	├G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	275	243	581	124	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	20.90	32	0	706	669	0	0	0	0
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	306	306	733	157	0	0	0	0
	├G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	719	719	815	684	70	70	79	67
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									155				0
	Envelope loss/gain								4223	2087			295	113
12	a) Infiltration								3572	655			277	51
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					2			460	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								7795	3202			572	164
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			-572	-164
14	Subtotal								7795	3202			0	0
15	Duct loads						0%	0%	0	0	-0%	0%	0	0
	Total room load								7795	3202			0	0
	Air required (cfm)								1082	1082			0	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

wrightsoft

Right-J® Worksheet
Upstairs
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

		Bunk Room	Landing
1	Room name		
2	Exposed wall	74.5 ft	16.5 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	1.0 x 492.5 ft	8.0 x 8.5 ft
5	Room area	492.5 ft²	68.0 ft²

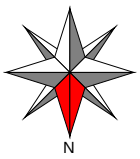
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	113	113	269	58	0	0	0	0
.	└G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0	0	0	0	0
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0	0	0	0	0
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	e	2.39	0.51	225	225	539	115	0	0	0	0
	├G	10B-v	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	s	2.39	0.51	203	171	408	87	72	72	172	37
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	22.05	20.90	32	0	706	669	0	0	0	0
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0	0	0	0	0
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	w	2.39	0.51	131	131	312	67	77	77	183	39
	├G	10B-v	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	└G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	0.00	0.00	0	0	0	0	0	0	0	0
	└D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-56ad	0.018	-	1.13	0.95	493	493	558	469	68	68	77	65
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									155				0
	Envelope loss/gain								2793	1620			433	141
12	a) Infiltration								2063	378			457	84
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					2			460	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								4856	2458			890	225
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								2940	744			-890	-225
14	Subtotal								7795	3202			0	0
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								7795	3202			0	0
	Air required (cfm)								1082	1082			0	0

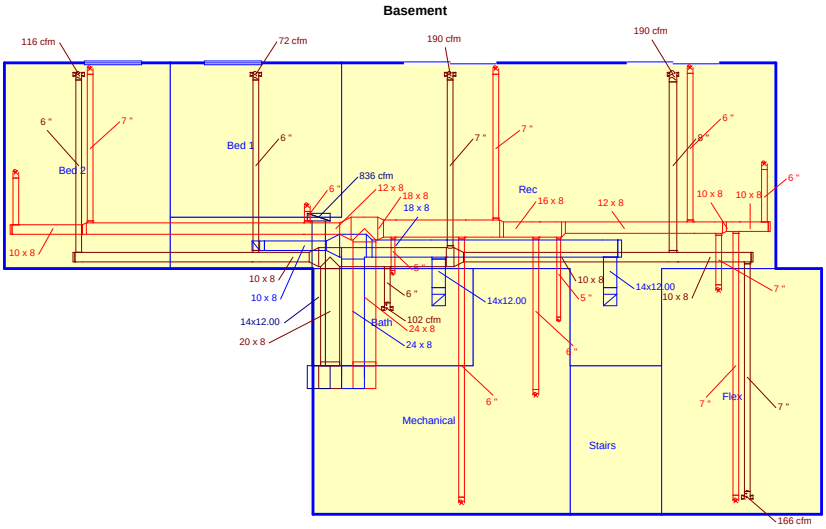
Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

1	Room name					Stairs 3									
2	Exposed wall					28.0 ft									
3	Room height					9.0 ft			heat/cool						
4	Room dimensions					8.0 x 11.0 ft									
5	Room area					88.0 ft²									
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area or perimeter (ft²) (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-28s	0.038	n	2.39	0.51	72	72	172	37				
.	└G	1D-c2ov	0.350	n	0.00	0.00	0	0	0	0				
.	W	15B13-4wc-8	0.068	n	0.00	0.00	0	0	0	0				
.	W	14D-28s	0.038	ne	0.00	0.00	0	0	0	0				
11	├G	10B-v	0.350	ne	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	ne	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	e	2.39	0.51	81	81	194	42				
	├G	10B-v	0.350	e	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	e	0.00	0.00	0	0	0	0				
	W	15B13-4wc-8	0.068	e	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	se	0.00	0.00	0	0	0	0				
	├G	10B-v	0.350	se	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	se	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	s	2.39	0.51	0	0	0	0				
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	s	22.05	20.90	0	0	0	0				
	W	15B13-4wc-8	0.068	s	0.00	0.00	0	0	0	0				
	├G	10B-v	0.350	s	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	s	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	sw	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	w	2.39	0.51	99	99	237	51				
	├G	10B-v	0.350	w	0.00	0.00	0	0	0	0				
	└G	1D-c2ov	0.350	w	0.00	0.00	0	0	0	0				
	W	15B13-4wc-8	0.068	w	0.00	0.00	0	0	0	0				
	W	14D-28s	0.038	nw	0.00	0.00	0	0	0	0				
	P	12C-0sw	0.091	-	0.00	0.00	0	0	0	0				
	└D	11D0	0.390	n	0.00	0.00	0	0	0	0				
	C	16B-38ad	0.026	-	0.00	0.00	0	0	0	0				
	C	16B-56ad	0.018	-	1.13	0.95	88	88	100	84				
	C	17A-0zd	0.287	-	0.00	0.00	0	0	0	0				
	F	19A-0bscp	0.295	-	0.00	0.00	0	0	0	0				
	F	22A-tpl	0.989	-	0.00	0.00	0	0	0	0				
6	c) AED excursion									0				
	Envelope loss/gain								703	213				
12	a) Infiltration								775	142				
	b) Room ventilation								0	0				
13	Internal gains:	Occupants @ 230					0			0				
		Appliances/other								0				
	Subtotal (lines 6 to 13)								1478	355				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								-1478	-355				
14	Subtotal								0	0				
15	Duct loads						-0%	0%	0	0				
	Total room load								0	0				
	Air required (cfm)								0	0				

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.





Job #: Hancock Residence
Performed by Matt LeFevre for:

Hancock Residence
9600 Hancock Place
Highland, UT

Heat Loss Calcs By: Matt LLC

544 East 600 South
St. George, UT 84770
Phone: 801-865-1299
www.heatlosscalcs.com heatlosscalcs@gmail.com

Scale: 1 : 202

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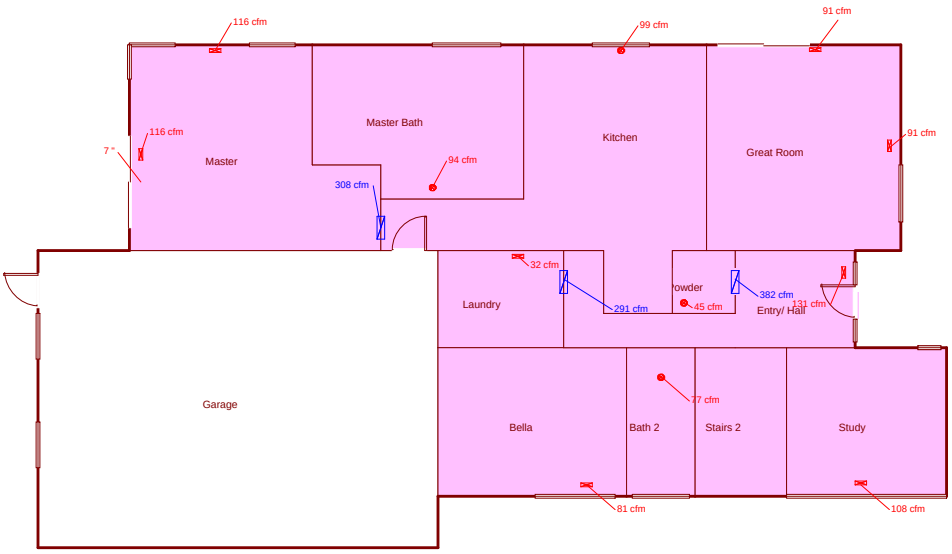

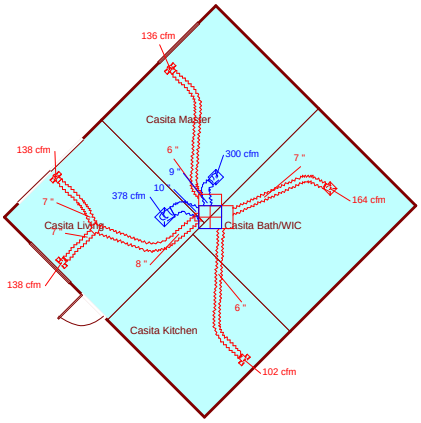

Job #: Hancock Residence
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Highland, UT

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544 East 600 South
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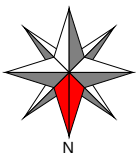

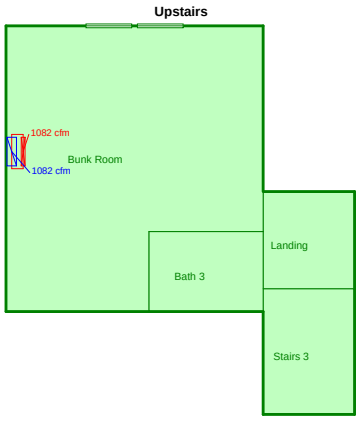

Job #: Hancock Residence
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Highland, UT

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Duct System Summary

Basement

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

	Heating	Cooling
External static pressure	0.60 in H2O	0 in H2O
Pressure losses	0.11 in H2O	0 in H2O
Available static pressure	0.49 in H2O	0 in H2O
Supply / return available pressure	0.395 / 0.095 in H2O	0.000 / 0.000 in H2O
Lowest friction rate	0.129 in/100ft	0 in/100ft
Actual air flow	836 cfm	0 cfm
Total effective length (TEL)	381 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bath	h 3115	102	0	0.162	6.0	0x 0	ShMt	19.0	225.0	st3
Bed 1	h 2205	72	0	0.154	6.0	0x 0	ShMt	32.0	225.0	st12
Bed 2	h 3542	116	0	0.153	6.0	0x 0	ShMt	47.5	210.0	st12
Flex	h 5060	166	0	0.129	7.0	0x 0	ShMt	67.0	240.0	st11
Rec	h 5774	190	0	0.131	7.0	0x 0	ShMt	36.0	265.0	st3
Rec-A	h 5774	190	0	0.129	8.0	0x 0	ShMt	55.5	250.0	st3A

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st11	Peak AVF	166	0	0.129	299	7.5	8 x 10	ShtMetl	st3A
st3A	Peak AVF	356	0	0.129	640	8.9	8 x 10	ShtMetl	st3
st3	Peak AVF	836	0	0.129	752	13.7	8 x 20	ShtMetl	
st12	Peak AVF	189	0	0.153	340	7.6	8 x 10	ShtMetl	st3

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x 0	836	0	74.0	0.129	717	12.2	12.00x14	10x34	SJSp	

Duct System Summary

Casita

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

	Heating	Cooling
External static pressure	0.60 in H2O	0.60 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.60 in H2O	0.60 in H2O
Supply / return available pressure	0.407 / 0.193 in H2O	0.407 / 0.193 in H2O
Lowest friction rate	0.278 in/100ft	0.278 in/100ft
Actual air flow	580 cfm	580 cfm
Total effective length (TEL)	216 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Casita Bath/WIC	h 5165	164	66	0.368	7.0	0x 0	VlFx	10.5	100.0	
Casita Kitchen	c 1696	98	102	0.358	6.0	0x 0	VlFx	13.5	100.0	
Casita Living	c 2281	91	138	0.278	7.0	0x 0	VlFx	16.2	130.0	st1
Casita Living-A	c 2281	91	138	0.281	7.0	0x 0	VlFx	14.7	130.0	st1
Casita Master	c 2248	136	136	0.343	6.0	0x 0	VlFx	13.7	105.0	

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	182	275	0.278	789	8.0	0 x 0	VinlFlx	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb4	0x 0	300	202	69.0	0.280	679	9.0	0x 0		VlFx	
rb7	0x 0	280	378	69.5	0.278	693	10.0	0x 0		VlFx	

Duct System Summary
Main

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

544 East 600 South, St. George, UT 84770 Phone: 801-865-1299 Email: heatlosscalcs@gmail.com Web: www.heatlosscalcs.com

Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

	Heating	Cooling
External static pressure	0.70 in H2O	0.70 in H2O
Pressure losses	0.32 in H2O	0.32 in H2O
Available static pressure	0.38 in H2O	0.38 in H2O
Supply / return available pressure	0.247 / 0.133 in H2O	0.247 / 0.133 in H2O
Lowest friction rate	0.081 in/100ft	0.081 in/100ft
Actual air flow	913 cfm	913 cfm
Total effective length (TEL)	468 ft	

Supply Branch Detail Table

Name		Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bath 2	h	1998	77	41	0.082	6.0	0x 0	ShMt	41.5	260.0	st5
Bella	h	2102	81	52	0.081	6.0	0x 0	ShMt	44.5	260.0	st4
Entry/ Hall	c	2348	59	131	0.087	7.0	0x 0	ShMt	48.5	235.0	st6
Great Room	c	1626	74	91	0.083	6.0	0x 0	ShMt	54.5	245.0	st6
Great Room-A	c	1626	74	91	0.094	6.0	0x 0	ShMt	52.5	210.0	st8
Kitchen	c	1777	71	99	0.083	7.0	0x 0	ShMt	37.5	260.0	st4
Laundry	c	564	17	32	0.089	5.0	0x 0	ShMt	18.5	260.0	st4
Master	c	2082	107	116	0.090	7.0	0x 0	ShMt	50.0	225.0	st9
Master Bath	h	2441	94	51	0.097	6.0	0x 0	ShMt	19.0	235.0	st9
Master-A	c	2082	107	116	0.096	7.0	0x 0	ShMt	47.5	210.0	st10
Powder	h	1175	45	22	0.086	5.0	0x 0	ShMt	37.0	250.0	st5
Study	h	2795	108	69	0.084	7.0	0x 0	ShMt	68.5	225.0	st7

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st4	Peak AVF	605	629	0.081	629	12.1	8 x 18	ShtMetl	st2
st5	Peak AVF	436	445	0.082	501	8.9	8 x 16	ShtMetl	st4
st6	Peak AVF	314	382	0.083	574	8.4	8 x 12	ShtMetl	st5
st8	Peak AVF	74	91	0.094	164	4.8	8 x 10	ShtMetl	st7
st7	Peak AVF	181	160	0.084	327	6.3	8 x 10	ShtMetl	st6
st10	Peak AVF	107	116	0.096	210	8.0	8 x 10	ShtMetl	st9
st9	Peak AVF	308	284	0.090	462	7.5	8 x 12	ShtMetl	st2
st2	Peak AVF	913	913	0.081	685	13.9	8 x 24	ShtMetl	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb5	0x 0	291	246	128.5	0.103	249	8.6	12.00x14	10x34	SJSp	rt2
rb6	0x 0	314	382	163.5	0.081	328	10.0	12.00x14	10x34	SJSp	rt2
rb3	0x 0	308	284	100.0	0.133	554	7.6	8x 10		ShMt	rt1

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt2	Peak AVF	605	629	0.081	629	12.1	8 x 18	ShtMetl	rt1
rt1	Peak AVF	913	913	0.081	685	13.9	8 x 24	ShtMetl	

Duct System Summary
Upstairs
Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

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Project Information

For: Hancock Residence, Heating and Cooling Guys
9600 Hancock Place, Highland, UT

	Heating	Cooling
External static pressure	0.60 in H2O	0.60 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.60 in H2O	0.60 in H2O
Supply / return available pressure	0.300 / 0.300 in H2O	0.300 / 0.300 in H2O
Lowest friction rate	0 in/100ft	0 in/100ft
Actual air flow	1082 cfm	1082 cfm
Total effective length (TEL)	0 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bunk Room	c 3202	1082	1082	0	0	0x 0	ShMt	0	0	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb2	0x 0	1082	1082	0	0	3424	0	3.25x14	10x9	SJSp	

Static Pressure and Friction Rate

Basement

Heat Loss Calcs By: Matt LLC

Job: Hancock Residence
Date: Aug 28, 2020
By: Matt LeFevre
Plan: Custom

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Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.60	0
Pressure losses		
Coil	0	0
Heat exchanger	0	0
Supply diffusers	0.03	0
Return grilles	0.03	0
Filter	0.05	0
Humidifier	0	0
Balancing damper	0	0
Other device	0	0
Available static pressure	0.49	0

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	21	14
Measured length of trunk	46	0
Equivalent length of fittings	240	60
Total length	307	74
Total effective length		381

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.129	OK	0	< 0.06
Return Ducts	0.129	OK	0	< 0.06

Fitting Equivalent Length Details

Supply 4AD=60, 2A0=35, 9I2=5, 12H1=20, 9I1=85, 1A=35: TotalEL=240

Return 5A=40, 6M=20: TotalEL=60

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Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.60	0.60
Pressure losses		
Coil	0	0
Heat exchanger	0	0
Supply diffusers	0	0
Return grilles	0	0
Filter	0	0
Humidifier	0	0
Balancing damper	0	0
Other device	0	0
Available static pressure	0.60	0.60

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	6	4
Measured length of trunk	10	0
Equivalent length of fittings	130	65
Total length	146	69
Total effective length		216

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.278	> 0.18	0.278	> 0.18
Return Ducts	0.278	> 0.18	0.278	> 0.18

Fitting Equivalent Length Details

Supply 11T=25, 4AD=60, 11G=5, 1A=35, 11G=5: TotalEL=130

Return 6M=20, 5D=40, 11G=5: TotalEL=65

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Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.70	0.70
Pressure losses		
Coil	0.21	0.21
Heat exchanger	0	0
Supply diffusers	0.03	0.03
Return grilles	0.03	0.03
Filter	0.05	0.05
Humidifier	0	0
Balancing damper	0	0
Other device	0	0
Available static pressure	0.38	0.38

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	24	5
Measured length of trunk	21	34
Equivalent length of fittings	260	125
Total length	305	164
Total effective length		468

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.081	OK	0.081	OK
Return Ducts	0.081	OK	0.081	OK

Fitting Equivalent Length Details

Supply 4AD=60, 2A5=80, 9I1=85, 1A=35: TotalEL=260

Return 6M=20, 8B5=30, 6BB=25, 5D=40, 6BA=10: TotalEL=125

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Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.60	0.60
Pressure losses		
Coil	0	0
Heat exchanger	0	0
Supply diffusers	0	0
Return grilles	0	0
Filter	0	0
Humidifier	0	0
Balancing damper	0	0
Other device	0	0
Available static pressure	0.60	0.60

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	0	0
Measured length of trunk	0	0
Equivalent length of fittings	0	0
Total length	0	0
Total effective length		0

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0	< 0.06	0	< 0.06
Return Ducts	0	< 0.06	0	< 0.06

Fitting Equivalent Length Details

Supply TotalEL=0

Return TotalEL=0