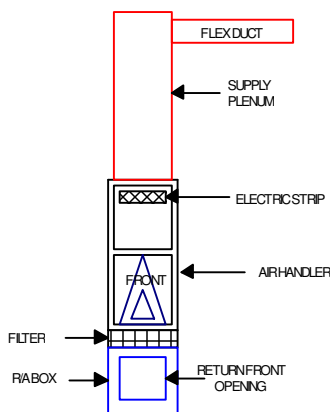


Notes

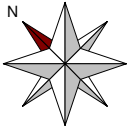
CITED NOTES	
①	
②	RANGE EXHAUST DUCT SIZE AS PER MANF. REQ. 3.25 X 10 DUCT, C/W WALL HOOD AND BACKDRAFT DAMPER (FOR ELECTRIC RANGE)
③	LAUNDRY ROOM COMBUSTION NAIR FOR OPTIONAL GAS DRYER, SEE LOCAL CODES AND MANF. SPEC TO VERIFY
④	4" OR 6" VENT TO OUTSIDE, C/W BACKDRAFT DAMPER AND HOOD (ROOF)
⑤	4" OR 6" VENT TO OUTSIDE, C/W BACKDRAFT DAMPER AND HOOD (WALL)

GENERAL NOTES	
VERIFY NO STRUCTURAL INTERFERENCE BEFORE CUTTING OPENING FOR TRANSFER GRILLE ABOVE DOOR	
THERMOSTAT HEIGHT OF 60" TO THE TOP. WHEN A DESIGN MUST MEET ADA REQUIREMENTS, THERMOSTAT HEIGHT SHALL BE SPECIFIED AT 48" TO THE TOP.	



Carrier
25HBC530AP0300
FX4DNB037L
Elec strip Carrier KFCEH2601C10
FILTER TYPE: FLANDERS PRE PLEATED 40 LPD MERV 8 FILTER THICKNESS: 1" FILTER PRESSURE DROP: 0.15 IWC
FX4D CORRECTION COMPONENT PRESSURE DROP (DRY TO WET COIL): 0.055 IWC @ 888 CFM
FAN SPEED TAP: 2

Job #: Performed for: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH SWBRE Lane Lake City, FL 32024	MiTek Wrightsoft 131 Hartwell Ave Lexington, MA 02421 Phone: 800-225-8697 Fax: 781-861-2058 www.wrightsoft.com	Scale: 1 : 100 Page 2 Right-Suite@ Universal 2021 21.0.08 RSU00000 2021-Oct-15 18:42:12 ...Jewel Lake P2_FrmA1_LS20_LH.rup
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MITEK-WRIGHTSOFT DESIGN DETAIL SUMMARY

MITEK'S RESPONSIBILITY IS SOLELY FOR DESIGN OF THE HVAC SYSTEM BASED UPON THE DESIGN INFORMATION AND CONDITIONS PROVIDED TO IT THAT ARE SPECIFIED IN THE DRAWING AND ACCOMPANYING ACCA MANUAL J, S, D AND T REPORTS. THE HVAC DESIGN IS BASED ONLY UPON THE DESIGN INFORMATION AND CONDITIONS SHOWN, WHICH HAVE NOT BEEN VERIFIED BY THE MITEK-WRIGHTSOFT DESIGN TEAM.

BEFORE USE, THE BUILDING DESIGNER MUST VERIFY THE APPLICABILITY OF THE DESIGN INFORMATION AND CONDITIONS, AND PROPERLY INCORPORATE THIS HVAC DESIGN INTO THE OVERALL BUILDING DESIGN. THE HVAC DESIGN SHOWN IS ONLY VALID FOR THE BUILDING LAYOUT, ELEVATIONS, ORIENTATION, INTERIOR FLOOR PLAN, CONSTRUCTION MATERIALS, EQUIPMENT, AND WEATHER BIN DATA SPECIFIED IN THE DRAWING.

ANY CHANGE TO THE DESIGN INFORMATION AND CONDITIONS, OR DEVIATION FROM THIS DESIGN WILL REQUIRE AN UPDATED HVAC DESIGN. MITEK TAKES NO RESPONSIBILITY FOR DEVIATIONS FROM ITS HVAC DESIGN, USE OF ITS DESIGNS FOR PURPOSE OTHER THAN AS INTENDED BY MITEK-WRIGHTSOFT, OR FOR THE IMPROPER CONSTRUCTION OR INSTALLATION OF HVAC SYSTEMS BASED ON ITS DESIGNS.

MITEK IS NOT RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEM OR THE PERFORMANCE OF EQUIPMENT REFERENCED IN THE HVAC DESIGN. THE HVAC DESIGNS ASSUME FABRICATION AND INSTALLATION BY A CERTIFIED HVAC CONTRACTOR IN STRICT CONFORMANCE WITH HVAC DESIGNS AND THE GUIDELINES PUBLISHED BY ACCA RESIDENTIAL QUALITY INSTALLATION CHECKLIST. FOR GENERAL GUIDANCE REGARDING THE INSTALLATION AND TESTING OF THE HVAC SYSTEM(S), PLEASE SEE ACCA MANUAL D, ACCA MANUAL B, IBC, IMC, AND IRC.

Job #:
Performed for:
Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH
SW BRE Lane
Lake City, FL 32024

MiTek Wrightsoft
131 Hartwell Ave
Lexington, MA 02421
Phone: 800-225-8697 Fax: 781-861-2058
www.wrightsoft.com

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Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Blower door
Inside db (°F)	70	75	Shielding / stories	3 (partial) / 1
Design TD (°F)	37	17	Pressure / AVF	50 Pa / 1434 cfm
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	11	45		

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)
System 1	1774	27400	19778	0	888
Uncond Garage	405	0	0	0	0
Entire House	2179	27400	19778	0	888
Other equip loads		0	0		
Equip. @ 1.00 RSM			19778		
Latent cooling			3996		
TOTALS	2179	27400	23774	0	888

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

Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Blower door
Inside db (°F)	70	75	Shielding / stories	4 (substantial) / 1
Design TD (°F)	37	17	Pressure / AVF	50 Pa / 1434 cfm
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	11	45		

HEATING EQUIPMENT

Make	Carrier
Trade	CARRIER
Model	25HBC530AP0300
AHRI ref	204837254
Efficiency	8.5 HSPF
Heating input	
Heating output	28400 Btuh @ 47°F
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 33 °F	

Backup: Carrier KFCEH2601C10

Input = 10 kW, Output = 34121 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	Carrier
Trade	CARRIER
Cond	25HBC530AP0300
Coil	FX4DNB037L
AHRI ref	204837254
Efficiency	12.5 EER, 15 SEER
Sensible cooling	22170 Btuh
Latent cooling	4866 Btuh
Total cooling	27036 Btuh
Actual air flow	888 cfm
Air flow factor	0.045 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.83

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BEDROOM 3	149	4765	3296	0	148
BATH 2	54	1393	507	0	23
BEDROOM 4	147	2922	2126	0	95
HVAC	25	0	0	0	0
LAU	42	704	979	0	44
O. BATH	100	1515	785	0	35
O.WIC	65	89	135	0	6
OWNER'S SUITE	217	4806	3308	0	149
GREAT ROOM	268	2517	1946	0	87
FOYER	215	0	0	0	0
BEDROOM 2	152	2454	2234	0	100
PANTRY	20	559	183	0	8
DINING	162	4282	2117	0	95
KITCHEN	160	1393	2160	0	97

Bold/italic values have been manually overridden

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

System 1	1774	27400	19778	<i>0</i>	<i>888</i>
Other equip loads		0	0		
Equip. @ 1.00 RSM			19778		
Latent cooling			3996		
TOTALS	1774	27400	23774	<i>0</i>	<i>888</i>

Bold/italic values have been manually overridden

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

Project Information

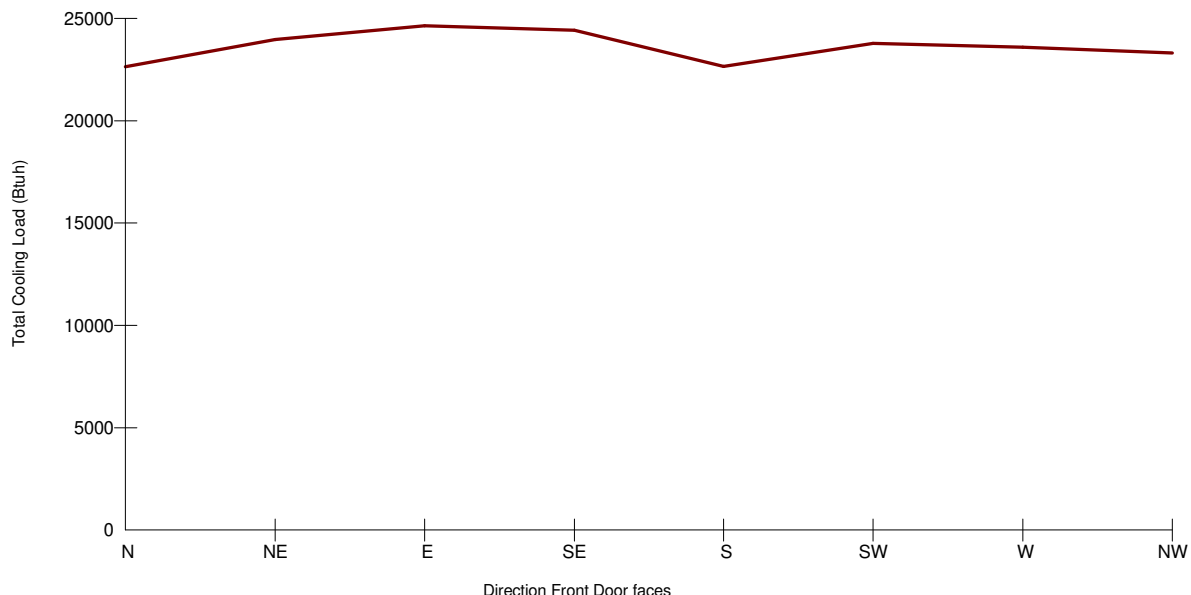
For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	70	75
Elevation:	164 ft		Design TD (°F)	37	17
Latitude:	30°N		Relative humidity (%)	30	50
			Moisture difference (gr/lb)	10.6	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	18637	19981	20651	20440	18662	19778	19603	19317
Latent Load (Btuh)	3996	3996	3996	3996	3996	3996	3996	3996
Total Load (Btuh)	22634	23977	24647	24436	22658	23774	23599	23314
Heating AVF (cfm)	0	0	0	0	0	0	0	0
Cooling AVF (cfm)	888	888	888	888	888	888	888	888

Building Orientation Cooling Load



Current Orientation: Front Door faces Southwest
Highest Cooling Load: Front Door faces East

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

Project Information

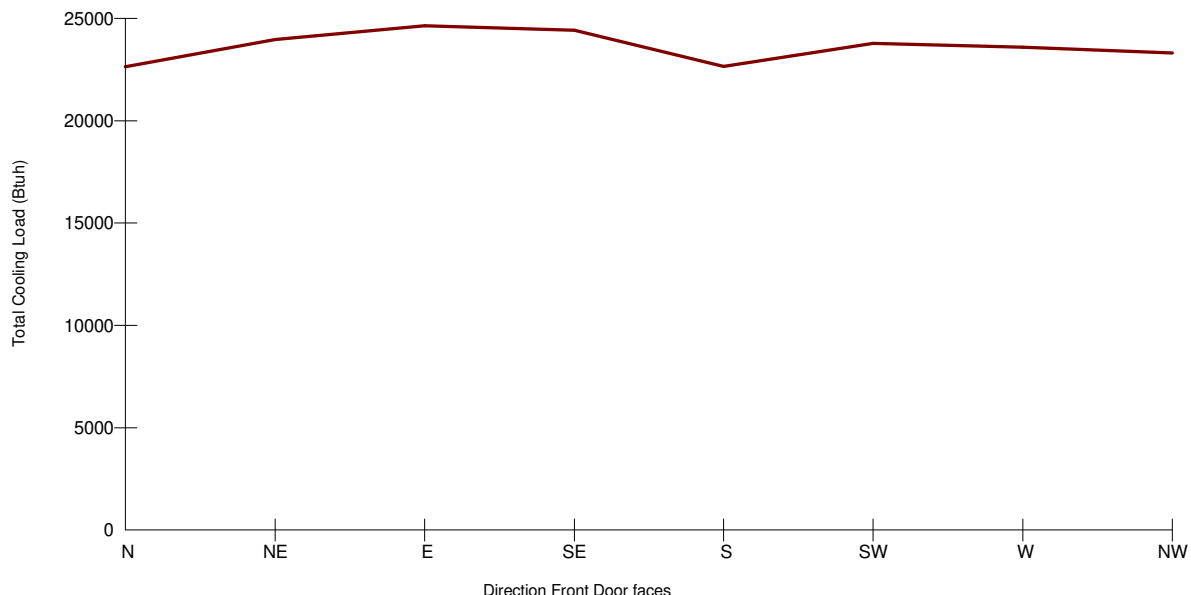
For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	70	75
Elevation:	164 ft		Design TD (°F)	37	17
Latitude:	30°N		Relative humidity (%)	30	50
			Moisture difference (gr/lb)	10.6	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	18637	19981	20651	20440	18662	19778	19603	19317
Latent Load (Btuh)	3996	3996	3996	3996	3996	3996	3996	3996
Total Load (Btuh)	22634	23977	24647	24436	22658	23774	23599	23314
Heating AVF (cfm)	0	0	0	0	0	0	0	0
Cooling AVF (cfm)	888	888	888	888	888	888	888	888

Building Orientation Cooling Load



Current Orientation: Front Door faces Southwest
Highest Cooling Load: Front Door faces East

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

Project Information

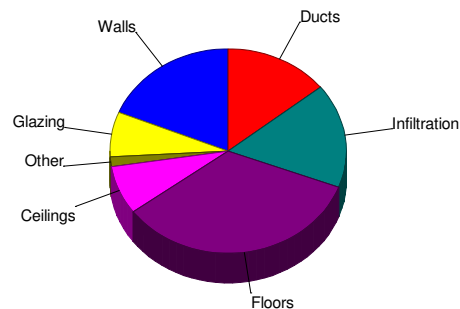
For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	70	75
Elevation: 164 ft			Design TD (°F)	37	17
Latitude: 30°N			Relative humidity (%)	30	50
			Moisture difference (gr/lb)	10.6	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Blower door	
Daily range (°F)	-	20 (M)	Shielding / stories	3 (partial) / 1	
Wet bulb (°F)	-	76	Pressure / AVF	50 Pa / 1434 cfm	
Wind speed (mph)	15.0	7.5			

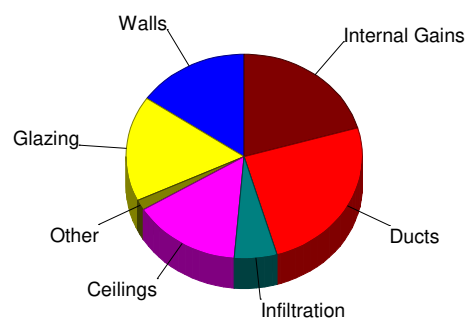
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.9	5153	18.8
Glazing	12.2	1945	7.1
Doors	2.8	429	1.6
Ceilings	1.0	2100	7.7
Floors	4.3	9343	34.1
Infiltration	2.5	4520	16.5
Ducts		3909	14.3
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		27400	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.7	3045	15.4
Glazing	20.7	3296	16.7
Doors	2.2	331	1.7
Ceilings	1.4	2951	14.9
Floors	0	0	0
Infiltration	0.6	1152	5.8
Ducts		4953	25.0
Ventilation		0	0
Internal gains		4050	20.5
Blower		0	0
Adjustments		0	0
Total		19778	100.0



Latent Cooling Load = 3996 Btuh
Overall U-value = 0.104 Btuh/ft²-°F

Data entries checked.

Project Information

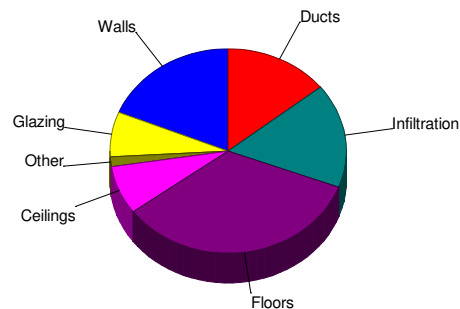
For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		70	75
Elevation: 164 ft		Design TD (°F)		37	17
Latitude: 30°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		10.6	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Blower door		
Wet bulb (°F)	-	76	Shielding / stories		
Wind speed (mph)	15.0	7.5	Pressure / AVF		
			50 Pa / 1434 cfm		

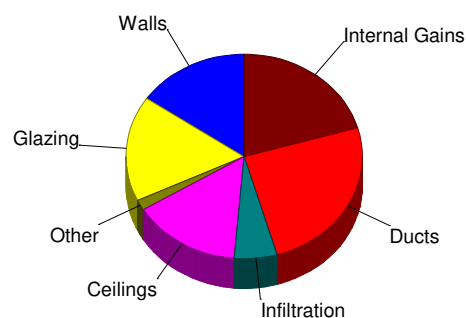
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.4	5153	18.8
Glazing	12.2	1945	7.1
Doors	10.7	429	1.6
Ceilings	1.2	2100	7.7
Floors	5.3	9343	34.1
Infiltration	3.1	4520	16.5
Ducts		3909	14.3
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		27400	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.0	3045	15.4
Glazing	20.7	3296	16.7
Doors	8.3	331	1.7
Ceilings	1.7	2951	14.9
Floors	0	0	0
Infiltration	0.8	1152	5.8
Ducts		4953	25.0
Ventilation		0	0
Internal gains		4050	20.5
Blower		0	0
Adjustments		0	0
Total		19778	100.0



Latent Cooling Load = 3996 Btuh
Overall U-value = 0.097 Btuh/ft²-°F

Data entries checked.

J1 Form - Worksheet A

Entire House

MiTek Wrightsoft

Job:
Date: Oct 07, 2021
By:

131 Hartwell Ave, Lexington, MA 02421 Phone: 800-225-8697 Fax: 781-861-2058 Web: www.wrightsoft.com

Supporting Detail	
Project Name: CMP-FL-39-1776_Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH	Date: Oct 07, 2021
Address: SW BRE Lane, Lake City, FL 32024	
Phone:	Job ID:

Worksheet A Location and Design Conditions		
Weather Location: Gainesville Regional AP, FL, US	Elevation = 164	Latitude = 30
Indoor Conditions, Heating: DB = 70 °F RH = 30 %	Indoor Conditions, Cooling: DB = 75 °F RH = 50 %	
Table 1 Conditions 99% DB = 33 °F 1% DB = 92 °F	Grains Difference = 45 gr/lb	Daily Range = M
Design Temperature Differences	HTD = 37 °F	CTD = 17 °F

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

Supporting Detail	
Project Name: CMP-FL-39-1776_Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH	Date: Oct 07, 2021
Address: SW BRE Lane, Lake City, FL 32024	
Phone:	Job ID:

Worksheet A Location and Design Conditions		
Weather Location: Gainesville Regional AP, FL, US	Elevation = 164	Latitude = 30
Indoor Conditions, Heating: DB = 70 °F RH = 30 %	Indoor Conditions, Cooling: DB = 75 °F RH = 50 %	
Table 1 Conditions 99% DB = 33 °F 1% DB = 92 °F	Grains Difference = 45 gr/lb	Daily Range = M
Design Temperature Differences	HTD = 37 °F	CTD = 17 °F

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

Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		70	75
Elevation:	164 ft	Design TD (°F)		37	17
Latitude:	30°N	Relative humidity (%)		30	50
		Moisture difference (gr/lb)		10.6	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Blower door		
Wet bulb (°F)	-	76	Shielding / stories		
Wind speed (mph)	15.0	7.5	Pressure / AVF		
				3 (partial) / 1	
				50 Pa / 1434 cfm	

Construction descriptions

	Or	Area ft²	U-value Btu/h/ft²·°F	Insul R ft²·°F/Btu/h	Htg HTM Btu/h/ft²	Loss Btu/h	Clg HTM Btu/h/ft²	Gain Btu/h
Walls								
12C-0sw: Fm wall, wd ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board	ne	222	0.091	13.0	3.37	747	2.14	475
int fnsh, 2"x4" wood frm, 16" o.c. stud	se	587	0.091	13.0	3.07	1800	1.95	1143
	sw	153	0.091	13.0	2.28	349	1.45	222
	nw	581	0.091	13.0	2.42	1406	1.54	893
	all	1544	0.091	13.0	2.79	4302	1.77	2732
Partitions								
12C-0sw: Fm wall, 1/2" gyp.bd ext, r-13 cav ins, 1/2" gypsum board int fnsh,		253	0.091	13.0	3.37	851	1.24	313
2"x4" wood frm, 16" o.c. stud								
Windows								
Century Florida Jacksonville SGD: Door; NFRC rated (SHGC=0.29); 50% outdoor insect screen; 9 ft overhang (6.67 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	33	0.330	0	12.2	407	22.6	752
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 1 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	60	0.330	0	12.2	733	20.0	1198
	se	15	0.330	0	12.2	183	19.6	294
	nw	15	0.330	0	12.2	183	20.0	300
	all	90	0.330	0	12.2	1099	19.9	1792
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 1 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	sw	30	0.330	0	12.2	366	21.1	632
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 1 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	nw	6	0.330	0	12.2	73	20.0	120
Doors								
11J0: Door; ovhd mtl, fg core type	sw	112	0.600	6.3	0	0	0	0
11P0: Door; mtl pur core type	sw	20	0.290	10.5	10.7	215	8.26	165
	n	20	0.290	10.5	10.7	215	8.26	165
	all	40	0.290	10.5	10.7	429	8.26	331
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		2179	0.032	30.0	0.96	2100	1.35	2951

Floors

22A-tpm:Bg floor, heavy dry or light damp soil, on grade depth	261	1.180	0	35.8	9343	0	0
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Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	70	75
Elevation:	164 ft		Design TD (°F)	37	17
Latitude:	30°N		Relative humidity (%)	30	50
			Moisture difference (gr/lb)	10.6	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Blower door		
Wet bulb (°F)	-	76	Shielding / stories		
Wind speed (mph)	15.0	7.5	Pressure / AVF		
			4 (substantial) / 1		
			50 Pa / 1434 cfm		

Construction descriptions

	Or	Area ft²	U-value Btu/h/ft²·°F	Insul R ft²·°F/Btu/h	Htg HTM Btu/h/ft²	Loss Btu/h	Clg HTM Btu/h/ft²	Gain Btu/h
Walls								
12C-0sw: Frm wall, wd ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board	ne	222	0.091	13.0	3.37	747	2.14	475
int fnsh, 2"x4" wood frm, 16" o.c. stud	se	535	0.091	13.0	3.37	1800	2.14	1143
	sw	104	0.091	13.0	3.37	349	2.14	222
	nw	418	0.091	13.0	3.37	1406	2.14	893
	all	1278	0.091	13.0	3.37	4302	2.14	2732
Partitions								
12C-0sw: Frm wall, 1/2" gyp.bd ext, r-13 cav ins, 1/2" gypsum board int fnsh,		253	0.091	13.0	3.37	851	1.24	313
2"x4" wood frm, 16" o.c. stud								
Windows								
Century Florida Jacksonville SGD: Door; NFRC rated (SHGC=0.29); 50% outdoor insect screen; 9 ft overhang (6.67 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	33	0.330	0	12.2	407	22.6	752
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 1 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	60	0.330	0	12.2	733	20.0	1198
	se	15	0.330	0	12.2	183	19.6	294
	nw	15	0.330	0	12.2	183	20.0	300
	all	90	0.330	0	12.2	1099	19.9	1792
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 1 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	sw	30	0.330	0	12.2	366	21.1	632
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 1 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	nw	6	0.330	0	12.2	73	20.0	120
Doors								
11P0: Door, mtl pur core type	sw	20	0.290	10.5	10.7	215	8.26	165
	n	20	0.290	10.5	10.7	215	8.26	165
	all	40	0.290	10.5	10.7	429	8.26	331
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		1774	0.032	30.0	1.18	2100	1.66	2951

Floors

22A-tpm: Bg floor, heavy dry or light damp soil, on grade depth

214

1.180

0

43.7

9343

0

0



A Mitek® / Berkshire Hathaway Company

Right-Suite® Universal 2021 21.0.08 RSU00000

...SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH.rup Calc = MJ8 Front Door faces: SW

2021-Oct-15 18:41:58

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Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
 SW BRE Lane, Lake City, FL 32024

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	70 °F
Design TD	37 °F

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	50 %
Moisture difference	45 gr/lb

Heating Summary

Structure	23491 Btuh
Ducts	3909 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	27400 Btuh

Sensible Cooling Equipment Load Sizing

Structure	14825 Btuh
Ducts	4953 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	19778 Btuh

Infiltration

Method	Blower door
Shielding / stories	3 (partial) / 1
Pressure / AVF	50 Pa / 1434 cfm

Latent Cooling Equipment Load Sizing

Structure	2903 Btuh
Ducts	1093 Btuh
Central vent (0 cfm)	0 Btuh
Equipment latent load	3996 Btuh
Equipment Total Load (Sen+Lat)	23774 Btuh
Req. total capacity at 0.70 SHR	2.4 ton

	Heating	Cooling
Area (ft²)	1774	1774
Volume (ft³)	14336	14336
Air changes/hour	0.47	0.26
Equiv. AVF (cfm)	112	62

Heating Equipment Summary

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

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	70 °F
Design TD	37 °F

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	50 %
Moisture difference	45 gr/lb

Heating Summary

Structure	23491 Btuh
Ducts	3909 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	27400 Btuh

Sensible Cooling Equipment Load Sizing

Structure	14825 Btuh
Ducts	4953 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	19778 Btuh

Infiltration

Method	Blower door
Shielding / stories	4 (substantial) / 1
Pressure / AVF	50 Pa / 1434 cfm

Latent Cooling Equipment Load Sizing

Structure	2903 Btuh
Ducts	1093 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	3996 Btuh

	Heating	Cooling
Area (ft²)	1774	1774
Volume (ft³)	14336	14336
Air changes/hour	0.47	0.26
Equiv. AVF (cfm)	112	62

Equipment Total Load (Sen+Lat)	23774 Btuh
Req. total capacity at 0.82 SHR	2.0 ton

Heating Equipment Summary

Make	Carrier
Trade	CARRIER
Model	25HBC530AP0300
AHRI ref	204837254
Efficiency	8.5 HSPF
Heating input	
Heating output	28400 Btuh @ 47°F
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 33 °F	

Backup: Carrier KFCEH2601C10
Input = 10 kW, Output = 34121 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Carrier
Trade	CARRIER
Cond	25HBC530AP0300
Coil	FX4DNB037L
AHRI ref	204837254
Efficiency	12.5 EER, 15 SEER
Sensible cooling	22170 Btuh
Latent cooling	4866 Btuh
Total cooling	27036 Btuh
Actual air flow	888 cfm
Air flow factor	0.045 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.83

Bold/italic values have been manually overridden

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

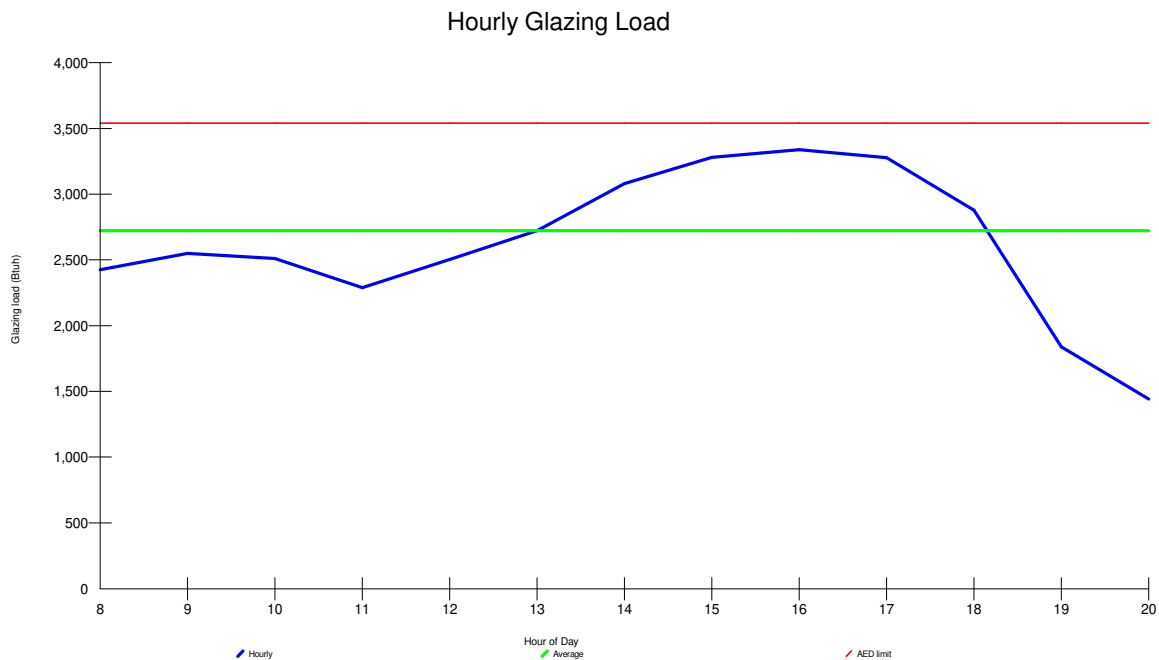
Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
 SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		70	75
Elevation: 164 ft		Design TD (°F)		37	17
Latitude: 30°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		10.6	45.4
Outdoor:		Heating	Cooling	Infiltration:	
Dry bulb (°F)		33	92		
Daily range (°F)		-	20 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 22.6%.

House has adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 0 Btu/h

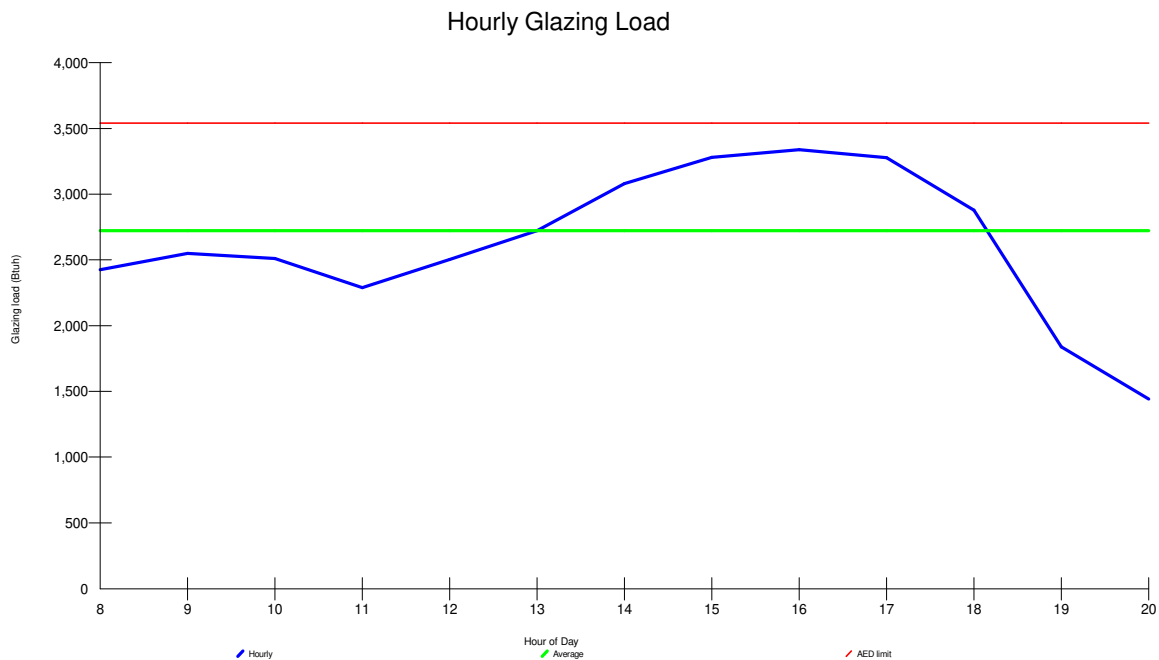
Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		70	75
Elevation: 164 ft		Design TD (°F)		37	17
Latitude: 30°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		10.6	45.4
Outdoor:		Heating	Cooling	Infiltration:	
Dry bulb (°F)		33	92		
Daily range (°F)		-	20 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 22.6%.

Zone has adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 0 Btu/h

For: Radford SLAB Reserve at Jewel Lake
800-225-8697
Lake City, FL 32024

Notes:

Src	Part #	Description	Qty	Unit price	Extension
		Equipment			
CARR	KFCEH2601C10	10KW,ELECT HTR,W/CIRC BRKR,1-PH,WIND SEA	1.00	0	0
		Subtotal, Equipment			0
		Duct System Equipment			
WSF	DDVn04	Round vinyl duct, D = 4"	69.0	1.40	96.60
WSF	FBTJ-4	Ceiling rect register, size 4"	7.00	24.00	168.00
HACL	301-8X4	301 Curved-Blade Register 8 x 4	7.00	0	0
WSF	DDVn06	Round vinyl duct, D = 6"	40.0	1.60	64.00
WSF	FBTJ-6	Ceiling rect register, size 6"	4.00	26.80	107.20
HACL	301-10X6	301 Curved-Blade Register 10 x 6	6.00	0	0
WSF	DDVn08	Round vinyl duct, D = 8"	8.00	1.80	14.40
PGM	FBTJ-8	Ceiling rect boot, size 8"	1.00	38.00	38.00
WSF	FCLR-8	Collar, d = 8"	1.00	0	0
WSF	FCLR-10	Collar, d = 10"	4.00	0	0
WSF	FCLR-4	Collar, d = 4"	7.00	0	0
WSF	FCLR-6	Collar, d = 6"	4.00	0	0
WSF	FJB-10	Junction box, size 10"	2.00	32.40	64.80
PGM	FRGRMCR-1010	Rectangular metal ceiling register one way, 10" x 10"	1.00	0	0
WSF	DDVn05	Round vinyl duct, D = 5"	41.0	1.50	61.50
WSF	FBTJ-5	Ceiling rect register, size 5"	2.00	25.40	50.80
WSF	FCLR-5	Collar, d = 5"	2.00	0	0
WSF	FCLR-12	Collar, d = 12"	2.00	0	0
WSF	FJB-12	Junction box, size 12"	1.00	35.20	35.20
WSF	DDVn12	Round vinyl duct, D = 12"	24.0	2.20	52.80
PGM	FPLH-12	Plenum rect tapered take off, size 12"	1.00	40.00	40.00
PGM	FJB-15	Junction box, size 20" x 10"	1.00	63.20	63.20
WSF	DRFg2010	Rectangular fiberglass duct, 20" x 10"	9.00	5.10	45.90
WSF	DDVn10	Round vinyl duct, D = 10"	22.0	2.00	44.00
PGM	FPLH-10	Plenum rect tapered take off, size 10"	2.00	40.00	80.00
WSF	DDVn16	Round vinyl duct, D = 16"	4.00	2.60	10.40
WSF	FPLG-16	Plenum side round take off, size 16"	1.00	0	0
PGM	FBTD-16	Vert floor boot from round duct, size 16"	1.00	40.80	40.80
HACL	LW-672-18X24	672 Return Air Grille 18 x 24	1.00	0	0
WSF	FBTS-12	Angle boot without transition, size 12"	2.00	0	0
PGM	FRGRMWG-2404	Rectangular metal high wall grille, 24" x 4"	3.00	0	0
HACL	650-14X14	650 Return Air Grille 14 x 14	2.00	0	0
		Subtotal, Duct System Equipment			1077.60
		Overall total			1077.60

Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.50	0.50
Pressure losses		
Coil	0	0.05
Heat exchanger	0	0
Supply diffusers	0.05	0.05
Return grilles	0.03	0.03
Filter	0.15	0.15
Humidifier	0	0
Balancing damper	0.02	0.02
Other device	0	0
Available static pressure	0.25	0.19

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	22	4
Measured length of trunk	22	0
Equivalent length of fittings	130	60
Total length	174	64
Total effective length		238

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.105	OK	0.082	OK
Return Ducts	0.105	OK	0.082	OK

Fitting Equivalent Length Details

Supply 4AD=60, 11A=20, 11G=5, 11G=5, 11G=5, 1D=10, 11A=20, 11G=5: TotalEL=130

Return 5B=40, 6N=10, 11I=10: TotalEL=60

Duct System Summary

System 1

MiTek Wrightsoft

Job:
Date: Oct 07, 2021
By:

131 Hartwell Ave, Lexington, MA 02421 Phone: 800-225-8697 Fax: 781-861-2058 Web: www.wrightsoft.com

Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

	Heating	Cooling
External static pressure	0.50 in H ₂ O	0.50 in H ₂ O
Pressure losses	0.25 in H ₂ O	0.31 in H ₂ O
Available static pressure	0.25 in H ₂ O	0.19 in H ₂ O
Supply / return available pressure	0.183 / 0.067 in H ₂ O	0.143 / 0.052 in H ₂ O
Lowest friction rate	0.105 in/100ft	0.082 in/100ft
Actual air flow	0 cfm	888 cfm
Total effective length (TEL)	238 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	c 507	0	23	0.115	4.0	0x0	VIFx	8.5	115.0	st2
BEDROOM 2	c 2234	0	100	0.110	6.0	0x0	VIFx	14.6	115.0	st2
BEDROOM 3	c 3296	0	148	0.107	8.0	0x0	VIFx	13.3	120.0	st2
BEDROOM 4	c 2126	0	95	0.096	6.0	0x0	VIFx	27.7	120.0	st1
DINING	c 2117	0	95	0.096	6.0	0x0	VIFx	32.9	115.0	st3
GREAT ROOM-C	c 973	0	44	0.101	4.0	0x0	VIFx	21.8	120.0	st3
GREAT ROOM-D	c 973	0	44	0.094	4.0	0x0	VIFx	31.6	120.0	st3
KITCHEN	c 2160	0	97	0.104	6.0	0x0	VIFx	22.5	115.0	st3
LAU	c 979	0	44	0.095	4.0	0x0	VIFx	30.4	120.0	st1
O. BATH	c 785	0	35	0.091	4.0	0x0	VIFx	36.5	120.0	st1
O.WIC-A	c 135	0	6	0.093	4.0	0x0	VIFx	33.5	120.0	st1
OWNER'S SUITE	c 1654	0	74	0.082	5.0	0x0	VIFx	44.0	130.0	st1
OWNER'S SUITE-A	c 1654	0	74	0.086	5.0	0x0	VIFx	40.0	125.0	st1
PANTRY	c 183	0	8	0.103	4.0	0x0	VIFx	23.3	115.0	st3

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	0	329	0.082	419	12.0	0 x 0	VinIFlx	srs1
srs1	Peak AVF	0	888	0.082	639	14.5	10 x 20	RectFbg	srs1
st2	Peak AVF	0	271	0.107	497	10.0	0 x 0	VinIFlx	srs1
st3	Peak AVF	0	288	0.094	527	10.0	0 x 0	VinIFlx	srs1

Bold/italic values have been manually overridden

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	0	888	64.0	0.082	636	16.0	0x 0		VIFx	

Project Information

For: Radford_SLAB_Reserve at Jewel Lake P2_FrmA1_LS20_LH, Century CMP Florida
SW BRE Lane, Lake City, FL 32024

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	19778	Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	76.0°F	Latent gain:	3996	Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	23774	Btuh		
Indoor RH:	50%	Estimated airflow:	888	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Carrier	Model:	25HBC530AP0300+FX4DNB037L		
Actual airflow:	888	cfm			
Sensible capacity:	22115	Btuh	112%	of load	
Latent capacity:	4921	Btuh	123%	of load	
Total capacity:	27036	Btuh	114%	of load	SHR: 82%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	27400	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Carrier	Model:	25HBC530AP0300+FX4DNB037L		
Actual airflow:	0	cfm			
Output capacity:	28400	Btuh	104%	of load	Capacity balance: 33 °F
Supplemental heat required:	0	Btuh			Economic balance: -99 °F

Backup equipment type:	Elec strip				
Manufacturer:	Carrier	Model:	KFCEH2601C10		
Actual airflow:	0	cfm			
Output capacity:	10.0	kW	125%	of load	Temp. rise: 35 °F

Meets all requirements of ACCA Manual S.