

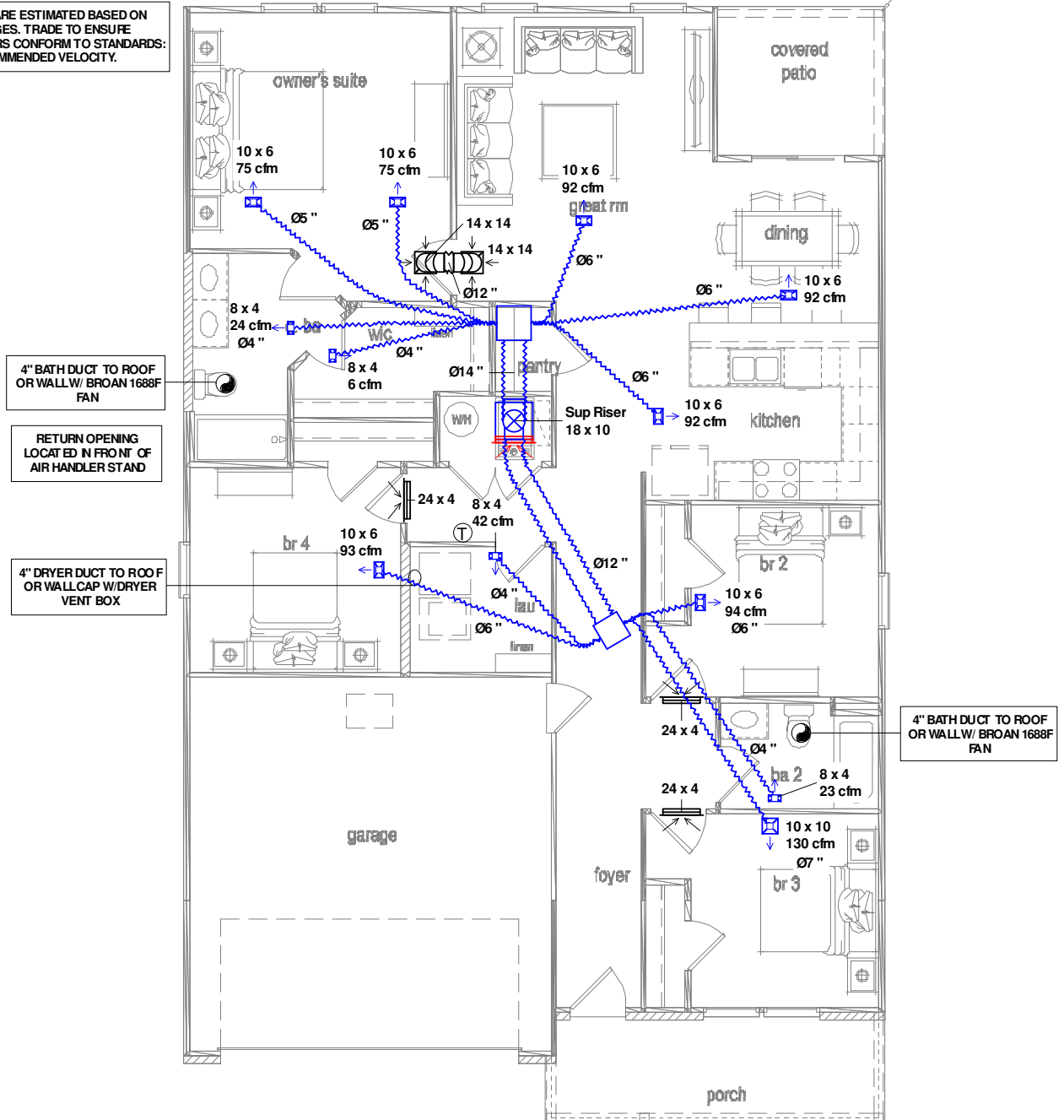
Main Floor

FRONT DOOR ORIENTATION IS
SET PER SITE PLAN

IMPORTANT: ANY DEVIATION FROM THIS
DESIGN, IE: ORIENTATION, WEATHER
LOCATION OR OPTIONS WILL REQUIRE
AN UPDATED H/VAC DESIGN

NOTE: MUST PROVIDE UNRESTRICTED 1 INCH
UNDERCUT BELOW DOORS TO HABITABLE ROOMS.
TRANSFER DUCTS/GRILLES SIZED IN COMPLIANCE WITH
FLORIDA RESIDENTIAL BUILDING CODE M16024
BALANCED RETURN AIR. EXCEPTIONS 1-3

REGISTER SIZES ARE ESTIMATED BASED ON
INDUSTRY AVERAGES. TRADE TO ENSURE
ACTUAL REGISTERS CONFORM TO STANDARDS:
500-700 FPM RECOMMENDED VELOCITY.



Job #:
Performed for:

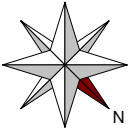
Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH
SW Jewel Lake Drive
Lake City, FL 32024

MiTek Wrightsoft

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

Scale: 1 : 104

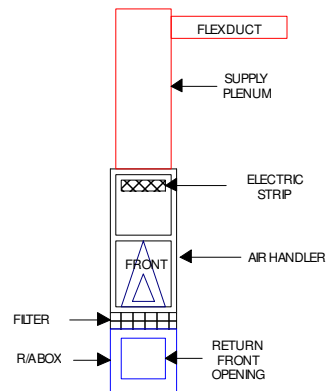
Page 1
Right-Suite® Universal 2021
21.0.08 RSU00000
2021-Oct-15 11:21:18
... Jewel Lake P2_FrmB1_LS25_LH.rup



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 AIR 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
25HBC524AP0300
FB4CNP025L
Elec strip Carrier KFCEH2501C08
FILTER TYPE: FLANDERS PRE PLEATED 40 LPD MERV 8 FILTER THICKNESS: 1" FILTER PRESSURE DROP: 0.151 IWC
FB4C CORRECTION COMPONENT PRESSURE DROP (DRY TO WET COIL): 0.052 IWC @ 835 CFM
FAN SPEED TAP: 5

Job #:
Performed for:

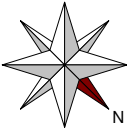
Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH
SW Jewel Lake Drive
Lake City, FL 32024

MiTek Wrightsoft

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

Scale: 1 : 104

Page 2
Right-Suite® Universal 2021
21.0.08 RSU00000
2021-Oct-15 11:21:18
... Jewel Lake P2_FrmB1_LS25_LH.rup



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:

Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH
SW Jewel Lake Drive
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 : 104

Page 3
Right-Suite® Universal 2021
21.0.08 RSU00000
2021-Oct-15 11:21:18
... Jewel Lake P2_FrmB1_LS25_LH.rup

Project Information

For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

Design Information

	Htg	Clg	Infiltration
Outside db (°F)	33	92	Blower door
Inside db (°F)	70	75	3 (partial) / 1
Design TD (°F)	37	17	50 Pa / 1299 cfm
Daily range	-	M	
Inside humidity (%)	30	50	
Moisture difference (gr/lb)	11	45	
			Method
			Shielding / stories
			Pressure / AVF

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	1607	23568	17953	0	835
Uncond Garage	405	0	0	0	0
Entire House	2012	23568	17953	0	835
Other equip loads		0	0		
Equip. @ 1.00 RSM			17953		
Latent cooling			3505		
TOTALS	2012	23568	21458	0	835

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

Project Information

For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, 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 / 1299 cfm
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	11	45		

HEATING EQUIPMENT

Make Carrier
Trade CARRIER
Model 25HBC524AP0300
AHRI ref 204837248

Efficiency 9 HSPF
Heating input
Heating output 24000 Btuh @ 47°F
Temperature rise 0 °F
Actual air flow 0 cfm
Air flow factor 0 cfm/Btuh
Static pressure 0.40 in H2O
Space thermostat
Capacity balance point = 34 °F

Backup: Carrier KFCEH2501C08
Input = 8 kW, Output = 27297 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Carrier
Trade CARRIER
Cond 25HBC524AP0300
Coil FB4CNP025L
AHRI ref 204837248
Efficiency 12.5 EER, 15.5 SEER
Sensible cooling 18845 Btuh
Latent cooling 3589 Btuh
Total cooling 22434 Btuh
Actual air flow 835 cfm
Air flow factor 0.047 cfm/Btuh
Static pressure 0.40 in H2O
Load sensible heat ratio 0.84

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BEDROOM 3	140	4573	2793	0	130
BATH 2	54	1319	493	0	23
BEDROOM 4	152	2605	1993	0	93
HVAC	26	0	0	0	0
LAU	58	795	901	0	42
O. BATH	78	1434	509	0	24
O.WIC	57	87	131	0	6
OWNER'S SUITE	210	3697	3212	0	149
GREAT/DIN/KIT	495	6974	5904	0	275
FOYER	110	0	0	0	0
BEDROOM 2	140	2083	2017	0	94
HALL	89	0	0	0	0

Bold/italic values have been manually overridden

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

System 1	1607	23568	17953	<i>0</i>	<i>835</i>
Other equip loads		0	0		
Equip. @ 1.00 RSM			17953		
Latent cooling			3505		
TOTALS	1607	23568	21458	<i>0</i>	<i>835</i>

Bold/italic values have been manually overridden

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



Right-Suite® Universal 2021 21.0.08 RSU00000

2021-Oct-15 11:21:16

Page 3

...SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH.rup Calc = MJ8 Front Door faces: NE

Loads for Multiple Orientations

Entire House

MiTek Wrightsoft

Job:
Date: Oct 06, 2021
By:

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

Project Information

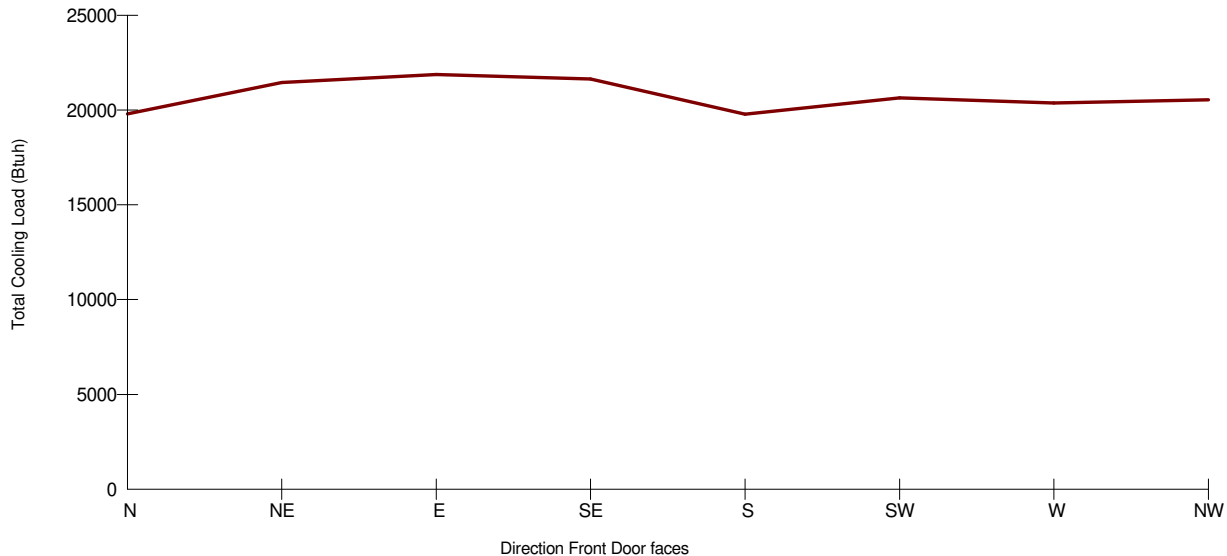
For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

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)	16299	17953	18374	18127	16285	17123	16859	17020
Latent Load (Btuh)	3505	3505	3505	3505	3505	3505	3505	3505
Total Load (Btuh)	19804	21458	21879	21632	19790	20629	20364	20525
Heating AVF (cfm)	0	0	0	0	0	0	0	0
Cooling AVF (cfm)	835	835	835	835	835	835	835	835

Building Orientation Cooling Load



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

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

Project Information

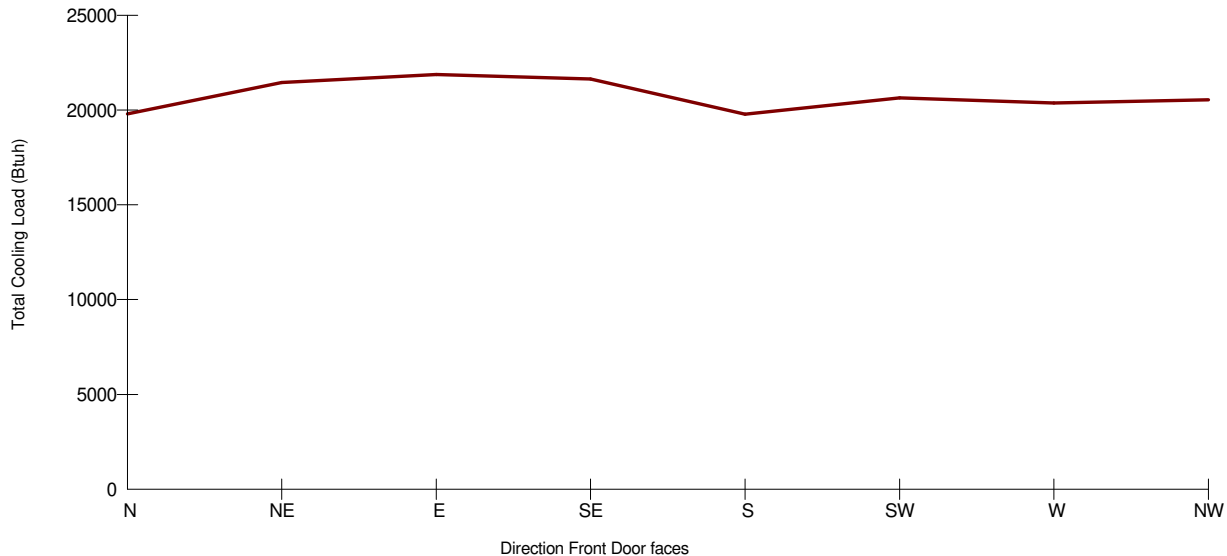
For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

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)	16299	17953	18374	18127	16285	17123	16859	17020
Latent Load (Btuh)	3505	3505	3505	3505	3505	3505	3505	3505
Total Load (Btuh)	19804	21458	21879	21632	19790	20629	20364	20525
Heating AVF (cfm)	0	0	0	0	0	0	0	0
Cooling AVF (cfm)	835	835	835	835	835	835	835	835

Building Orientation Cooling Load



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

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

Project Information

For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

Design Conditions

Location:

Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:

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

Heating

33
-
-
15.0

Cooling

92
20 (M)
76
7.5

Indoor:

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

Heating

70
37
30
10.6

Cooling

75
17
50
45.4

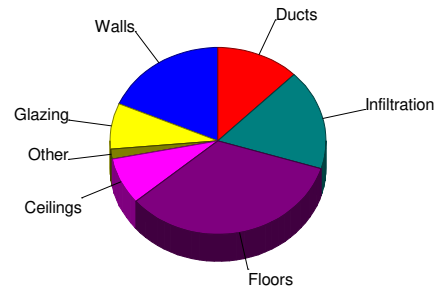
Infiltration:

Method
Shielding / stories
Pressure / AVF

Blower door
3 (partial) / 1
50 Pa / 1299 cfm

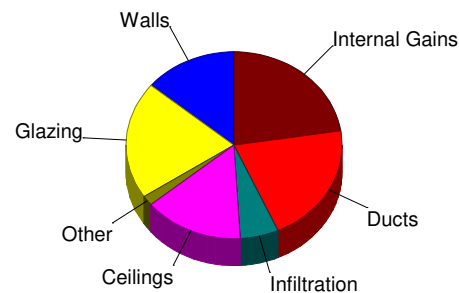
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.9	4351	18.5
Glazing	12.2	1872	7.9
Doors	2.7	405	1.7
Ceilings	0.9	1902	8.1
Floors	4.0	8012	34.0
Infiltration	2.7	4095	17.4
Ducts		2931	12.4
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		23568	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.6	2503	13.9
Glazing	23.8	3648	20.3
Doors	2.1	312	1.7
Ceilings	1.3	2673	14.9
Floors	0	0	0
Infiltration	0.7	1043	5.8
Ducts		3723	20.7
Ventilation		0	0
Internal gains		4050	22.6
Blower		0	0
Adjustments		0	0
Total		17953	100.0



Latent Cooling Load = 3505 Btuh
Overall U-value = 0.102 Btuh/ft²-°F

Data entries checked.

Project Information

For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

Design Conditions

Location:

Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:

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

Heating

33
-
-
15.0

Cooling

92
20 (M)
76
7.5

Indoor:

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

Heating

70
37
30
10.6

Cooling

75
17
50
45.4

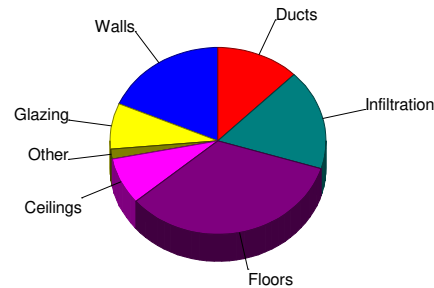
Infiltration:

Method
Shielding / stories
Pressure / AVF

Blower door
4 (substantial) / 1
50 Pa / 1299 cfm

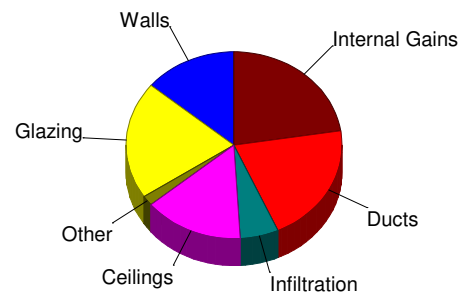
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.4	4351	18.5
Glazing	12.2	1872	7.9
Doors	10.7	405	1.7
Ceilings	1.2	1902	8.1
Floors	5.0	8012	34.0
Infiltration	3.5	4095	17.4
Ducts		2931	12.4
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		23568	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	2503	13.9
Glazing	23.8	3648	20.3
Doors	8.3	312	1.7
Ceilings	1.7	2673	14.9
Floors	0	0	0
Infiltration	0.9	1043	5.8
Ducts		3723	20.7
Ventilation		0	0
Internal gains		4050	22.6
Blower		0	0
Adjustments		0	0
Total		17953	100.0



Latent Cooling Load = 3505 Btuh
Overall U-value = 0.095 Btuh/ft²-°F

Data entries checked.

J1 Form - Worksheet A

Entire House

MiTek Wrightsoft

Job:
Date: Oct 06, 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-38-1607_Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH
Date:	Oct 06, 2021
Address:	SW Jewel Lake Drive, 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.

J1 Form - Worksheet A

System 1

MiTek Wrightsoft

Job:
Date: Oct 06, 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-38-1607_Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH	Date: Oct 06, 2021
Address: SW Jewel Lake Drive, 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: Covington SLAB Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, 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
Outdoor:		Moisture difference (gr/lb)		10.6	45.4
Heating		Cooling			
Dry bulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			
		Infiltration:			
		Method		Blower door	
		Shielding / stories		3 (partial) / 1	
		Pressure / AVF		50 Pa / 1299 cfm	

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								
12C-0sw: Frm wall, wd ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	ne	143	0.091	13.0	2.20	315	1.40	200
	se	440	0.091	13.0	2.11	929	1.34	590
	sw	212	0.091	13.0	3.37	713	2.14	453
	nw	440	0.091	13.0	3.23	1419	2.05	901
	all	1234	0.091	13.0	2.74	3376	1.74	2144

Partitions

12C-0sw: Frm wall, 1/2" gyp.bd ext, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud		289	0.091	13.0	3.37	974	1.24	358
---	--	-----	-------	------	------	-----	------	-----

Windows

Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 7 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	30	0.330	0	12.2	366	20.0	599
---	----	----	-------	---	------	-----	------	-----

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	se	15	0.330	0	12.2	183	19.6	294
	sw	60	0.330	0	12.2	733	19.6	1174
	nw	15	0.330	0	12.2	183	20.0	300
	all	90	0.330	0	12.2	1099	19.6	1767

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	sw	33	0.330	0	12.2	407	10.5	349
--	----	----	-------	---	------	-----	------	-----

Doors

11J0: Door, ovhd mtl, fg core type	ne	112	0.600	6.3	0	0	0	0
11P0: Door, mtl pur core type	ne	20	0.290	10.5	10.7	215	8.26	165
	n	18	0.290	10.5	10.7	191	8.26	147
	all	38	0.290	10.5	10.7	405	8.26	312

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		2012	0.032	30.0	0.95	1902	1.33	2673
---	--	------	-------	------	------	------	------	------

Floors

22A-tpm: Bg floor, heavy dry or light damp soil, on grade depth		226	1.180	0	35.4	8012	0	0
---	--	-----	-------	---	------	------	---	---



wrightsoft®
A Mitsub* / Berkshire Hathaway Company

Right-Suite® Universal 2021 21.0.08 RSU00000

...SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH.rup Calc = MJ8 Front Door faces: NE

2021-Oct-15 11:21:17

Page 2

Project Information

For: Covington SLAB Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, 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
Outdoor:		Moisture difference (gr/lb)		10.6	45.4
Heating		Infiltration:			
Dry bulb (°F)	33	Method		Blower door	
Daily range (°F)	-	Shielding / stories		4 (substantial) / 1	
Wet bulb (°F)	-	Pressure / AVF		50 Pa / 1299 cfm	
Wind speed (mph)	15.0				
Cooling					
	92				
	20 (M)				
	76				
	7.5				

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								
12C-0sw: Frm wall, wd ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	ne	93	0.091	13.0	3.37	315	2.14	200
	se	276	0.091	13.0	3.37	929	2.14	590
	sw	212	0.091	13.0	3.37	713	2.14	453
	nw	422	0.091	13.0	3.37	1419	2.14	901
	all	1003	0.091	13.0	3.37	3376	2.14	2144
Partitions								
12C-0sw: Frm wall, 1/2" gyp.bd ext, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud		289	0.091	13.0	3.37	974	1.24	358
Windows								
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 7 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	ne	30	0.330	0	12.2	366	20.0	599
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	se	15	0.330	0	12.2	183	19.6	294
	sw	60	0.330	0	12.2	733	19.6	1174
	nw	15	0.330	0	12.2	183	20.0	300
	all	90	0.330	0	12.2	1099	19.6	1767
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	sw	33	0.330	0	12.2	407	10.5	349
Doors								
11P0: Door, mtl pur core type	ne	20	0.290	10.5	10.7	215	8.26	165
	n	18	0.290	10.5	10.7	191	8.26	147
	all	38	0.290	10.5	10.7	405	8.26	312
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		1607	0.032	30.0	1.18	1902	1.66	2673
Floors								
22A-tpm: Bg floor, heavy dry or light damp soil, on grade depth		184	1.180	0	43.7	8012	0	0



wrightsoft®
A Mitsub* / Berkshire Hathaway Company

Right-Suite® Universal 2021 21.0.08 RSU00000

...SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH.rup Calc = MJ8 Front Door faces: NE

2021-Oct-15 11:21:17

Page 4

Project Information

For: Covington, SLAB Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
 SW Jewel Lake Drive, 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	20637 Btuh
Ducts	2931 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	23568 Btuh

Sensible Cooling Equipment Load Sizing

Structure	14230 Btuh
Ducts	3723 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	17953 Btuh

Infiltration

Method	Blower door
Shielding / stories	3 (partial) / 1
Pressure / AVF	50 Pa / 1299 cfm

Latent Cooling Equipment Load Sizing

Structure	2724 Btuh
Ducts	781 Btuh
Central vent (0 cfm)	0 Btuh

	Heating	Cooling
Area (ft²)	1607	1607
Volume (ft³)	12986	12986
Air changes/hour	0.47	0.26
Equiv. AVF (cfm)	101	56

Equipment latent load	3505 Btuh
Equipment Total Load (Sen+Lat)	21458 Btuh
Req. total capacity at 0.70 SHR	2.1 ton

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: Covington SLAB Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, 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	20637 Btuh
Ducts	2931 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	23568 Btuh

Sensible Cooling Equipment Load Sizing

Structure	14230 Btuh
Ducts	3723 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	17953 Btuh

Infiltration

Method	Blower door
Shielding / stories	4 (substantial) / 1
Pressure / AVF	50 Pa / 1299 cfm

Latent Cooling Equipment Load Sizing

Structure	2724 Btuh
Ducts	781 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	3505 Btuh

	Heating	Cooling
Area (ft²)	1607	1607
Volume (ft³)	12986	12986
Air changes/hour	0.47	0.26
Equiv. AVF (cfm)	101	56

Equipment Total Load (Sen+Lat)	21458 Btuh
Req. total capacity at 0.84 SHR	1.8 ton

Heating Equipment Summary

Make	Carrier
Trade	CARRIER
Model	25HBC524AP0300
AHRI ref	204837248
Efficiency	9 HSPF
Heating input	
Heating output	24000 Btuh @ 47°F
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0.40 in H2O
Space thermostat	
Capacity balance point = 34 °F	
Backup: Carrier KFCEH2501C08	
Input = 8 kW, Output = 27297 Btuh, 100 AFUE	

Cooling Equipment Summary

Make	Carrier
Trade	CARRIER
Cond	25HBC524AP0300
Coil	FB4CNP025L
AHRI ref	204837248
Efficiency	12.5 EER, 15.5 SEER
Sensible cooling	18845 Btuh
Latent cooling	3589 Btuh
Total cooling	22434 Btuh
Actual air flow	835 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0.40 in H2O
Load sensible heat ratio	0.84

Bold/italic values have been manually overridden

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

Project Information

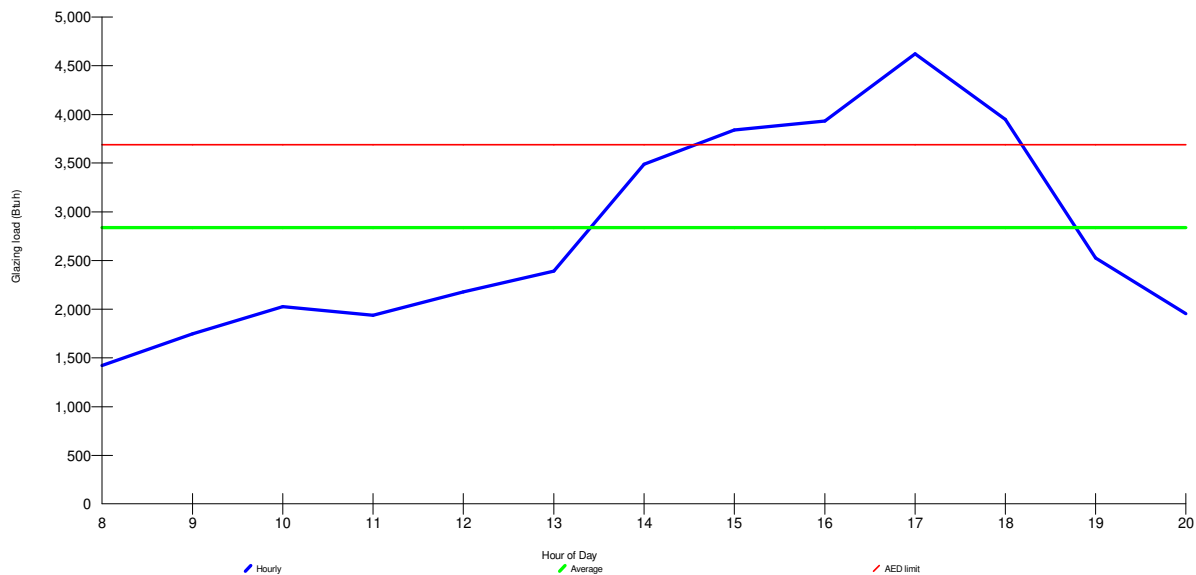
For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
 SW Jewel Lake Drive, Lake City, FL 32024

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

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 62.9%.

House does not have adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 933 Btuh (PFG - 1.3*AFG)

Project Information

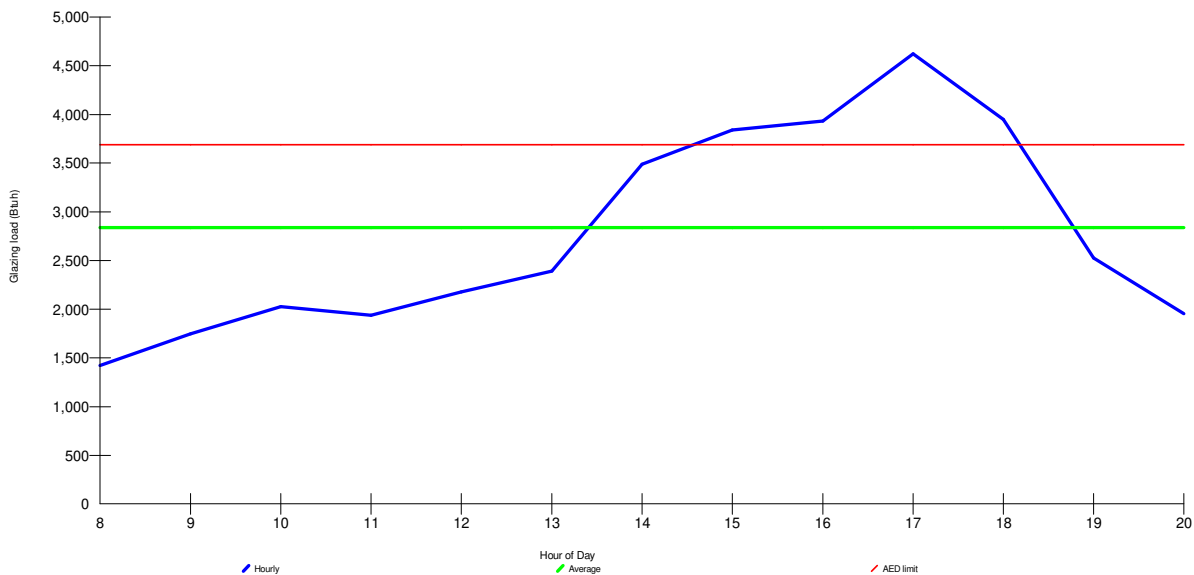
For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
 SW Jewel Lake Drive, Lake City, FL 32024

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

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 62.9%.

Zone does not have adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 933 Btuh (PFG - 1.3*AFG)

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

For: Covington_SLAB_Reserve at Jewel Lake
82 Jewell Lake Drive
Lake City, FL 32024

Notes:

Src	Part #	Description	Qty	Unit price	Extension
CARR	KFCEH2501C08	Equipment 8KW,ELECT HTR,W/CIRC BRKR,1-PH,WIND SEAL	1.00	0	0
		Subtotal, Equipment			0
		Duct System Equipment			
WSF	DDVn04	Round vinyl duct, D = 4"	45.0	1.40	63.00
WSF	FBTJ-4	Ceiling rect register, size 4"	4.00	24.00	96.00
HACL	301-8X4	301 Curved-Blade Register 8 x 4	4.00	0	0
WSF	DDVn06	Round vinyl duct, D = 6"	51.0	1.60	81.60
WSF	FBTJ-6	Ceiling rect register, size 6"	5.00	26.80	134.00
HACL	301-10X6	301 Curved-Blade Register 10 x 6	7.00	0	0
WSF	DDVn07	Round vinyl duct, D = 7"	15.0	1.70	25.50
WSF	FBTJ-7	Ceiling rect register, size 7"	1.00	28.20	28.20
PGM	FRGRMCR-1010	Rectangular metal ceiling register one way, 10" x 10"	1.00	0	0
WSF	FCLR-4	Collar, d = 4"	4.00	0	0
WSF	FCLR-12	Collar, d = 12"	2.00	0	0
WSF	FCLR-6	Collar, d = 6"	5.00	0	0
WSF	FCLR-7	Collar, d = 7"	1.00	0	0
WSF	FJB-12	Junction box, size 12"	1.00	35.20	35.20
WSF	DDVn05	Round vinyl duct, D = 5"	27.0	1.50	40.50
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-14	Collar, d = 14"	2.00	0	0
PGM	FJB-14	Junction box, size 14"	2.00	54.80	109.60
WSF	DDVn14	Round vinyl duct, D = 14"	6.00	2.40	14.40
PGM	FPLI-14	Plenum rect take off, size 14"	1.00	43.60	43.60
WSF	DRFg1810	Rectangular fiberglass duct, 18" x 10"	9.00	4.90	44.10
WSF	DDVn12	Round vinyl duct, D = 12"	16.0	2.20	35.20
PGM	FPLI-12	Plenum rect take off, size 12"	1.00	43.60	43.60
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			845.30
		Overall total			845.30

Static Pressure and Friction Rate

System 1

MiTek Wrightsoft

Job:
Date: Oct 06, 2021
By:

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

Project Information

For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.40	0.40
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	0.15	0.10

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	16	0
Measured length of trunk	5	0
Equivalent length of fittings	89	0
Total length	111	0
Total effective length		111

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.136	OK	0.089	OK
Return Ducts	0.136	OK	0.089	OK

Fitting Equivalent Length Details

Supply 4AD=60, 11D=60, 11G=5, 11G=5, 1C=35, 11F=95, VelAdj=-171: TotalEL=89

Return TotalEL=0

Duct System Summary

System 1

MiTek Wrightsoft

Job:
Date: Oct 06, 2021
By:

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

Project Information

For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

	Heating	Cooling
External static pressure	0.40 in H ₂ O	0.40 in H ₂ O
Pressure losses	0.25 in H ₂ O	0.30 in H ₂ O
Available static pressure	0.15 in H ₂ O	0.10 in H ₂ O
Supply / return available pressure	0.075 / 0.075 in H ₂ O	0.049 / 0.049 in H ₂ O
Lowest friction rate	0.136 in/100ft	0.089 in/100ft
Actual air flow	0 cfm	835 cfm
Total effective length (TEL)	111 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 493	0	23	0.141	4.0	0x0	VIFx	27.0	42.4	st2
BEDROOM 2	C 2017	0	94	0.119	6.0	0x0	VIFx	17.7	64.8	st2
BEDROOM 3	C 2793	0	130	0.097	7.0	0x0	VIFx	27.4	73.6	st2
BEDROOM 4	C 1993	0	93	0.103	6.0	0x0	VIFx	26.3	68.5	st2
GREAT/DINKIT	C 1968	0	92	0.106	6.0	0x0	VIFx	20.1	72.3	st1
GREAT/DINKIT-A	C 1968	0	92	0.119	6.0	0x0	VIFx	12.9	69.6	st1
GREAT/DINKIT-B	C 1968	0	92	0.115	6.0	0x0	VIFx	14.9	70.4	st1
LAU	C 901	0	42	0.110	4.0	0x0	VIFx	21.4	67.5	st2
O. BATH	C 509	0	24	0.138	4.0	0x0	VIFx	17.3	53.9	st1
O.WIC-A	C 131	0	6	0.157	4.0	0x0	VIFx	15.2	47.4	st1
OWNER'S SUITE	C 1606	0	75	0.089	5.0	0x0	VIFx	21.2	89.3	st1
OWNER'S SUITE-A	C 1606	0	75	0.094	5.0	0x0	VIFx	16.1	88.5	st1

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	454	0.089	424	14.0	0 x 0	VinIFlx	srs1
srs1	Peak AVF	0	835	0.089	668	13.9	10 x 18	RectFbg	
st2	Peak AVF	0	381	0.097	485	12.0	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	835	0	0	0	0	0x 0		VIFx	

Project Information

For: Covington_SLAB_Reserve at Jewel Lake P2_FrmB1_LS25_LH, Century CMP Florida
SW Jewel Lake Drive, Lake City, FL 32024

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	17953	Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	76.0°F	Latent gain:	3505	Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	21458	Btuh		
Indoor RH:	50%	Estimated airflow:	835	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Carrier	Model:	25HBC524AP0300+FB4CNP025L		
Actual airflow:	835	cfm			
Sensible capacity:	18556	Btuh	103%	of load	
Latent capacity:	3878	Btuh	111%	of load	
Total capacity:	22434	Btuh	105%	of load	SHR: 83%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	23568	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:	25HBC524AP0300+FB4CNP025L		
Actual airflow:	0	cfm			
Output capacity:	24000	Btuh	102%	of load	Capacity balance: 34 °F
Supplemental heat required:	0	Btuh			Economic balance: -99 °F

Backup equipment type:	Elec strip				
Manufacturer:	Carrier	Model:	KFCEH2501C08		
Actual airflow:	0	cfm			
Output capacity:	8.0	kW	116%	of load	Temp. rise: 30 °F

Meets all requirements of ACCA Manual S.