

Lawrence Pennell
Examiner-License No.

PX2707

11/09/2021

Main Floor

NOTE: MUST PROVIDE UNRESTRICTED 1 INCH UNDERCUT BELOW DOORS TO HABITABLE ROOMS. TRANSFER DUCTS/GRILLES SIZED IN COMPLIANCE WITH FLORIDA RESIDENTIAL BUILDING CODE M1 02.4 BALANCED RETURN AIR. EXCEPTIONS 1-3

FRONT DOOR ORIENTATION IS SET PER SITE PLAN

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

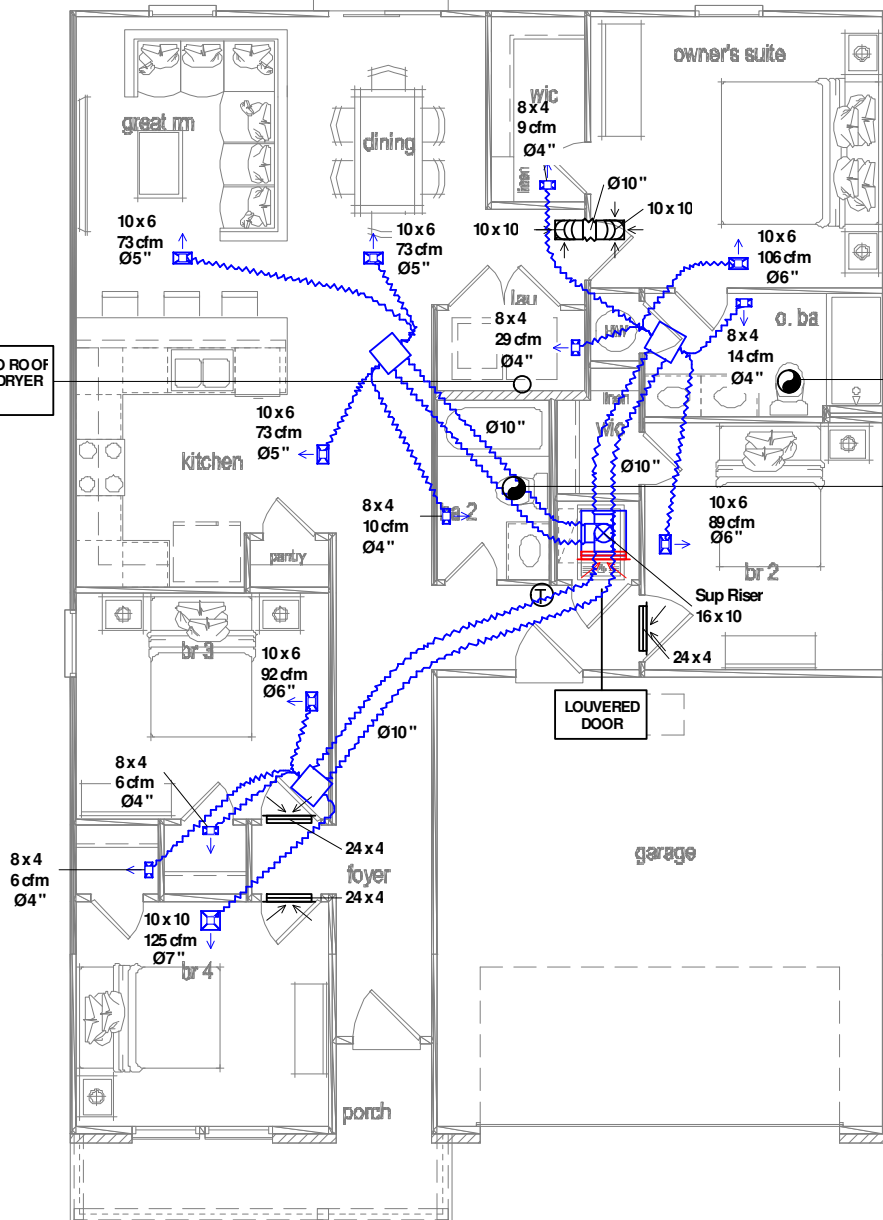
REGISTER SIZES ARE ESTIMATED BASED ON INDUSTRY AVERAGES. TRADE TO ENSURE ACTUAL REGISTERS CONFORM TO STANDARDS: 500-700 FPM RECOMMENDED VELOCITY.

4" DRYER DUCT TO ROOF OR WALL CAP W/ DRYER VENT BOX

4" BATH DUCT TO ROOF OR WALL W/ BROAN 1688F FAN

4" BATH DUCT TO ROOF OR WALL W/ BROAN 1688F FAN

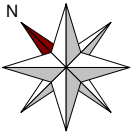
RETURN OPENING LOCATED IN FRONT OF AIR HANDLER STAND



Job #:
Performed for:
Carlisle_SLAB_Reserve at Jewel Lake P2_FmB1_LS05_RH
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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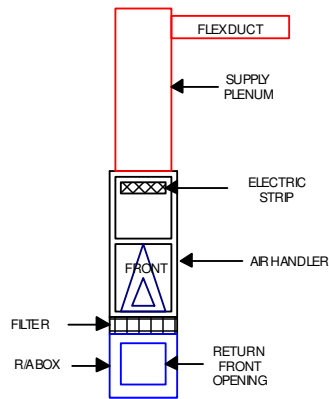
PX2707

11/09/2021

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: 0.15 IWC
FB4C CORRECTION COMPONENT PRESSURE DROP (DRY TO WET COIL): 0.039 IWC @ 706 CFM
FAN SPEED TAP: 3 OR 4 (SAME SPEED)

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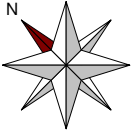
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MITEK-WRIGHTSOFT DESIGN DETAIL SUMMARY

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, B C, IMC, AND IRC.

Job #:
Performed for:

Carlisle_SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH
SW BRE LANE
Lake City, FL 32024

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Project Information

PX2707

11/08/2021

For: Carlisle_SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH, 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 / 1129 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	1397	21597	15701	0	706
Uncond Garage	410	0	0	0	0
Entire House	1807	21597	15701	0	706
Other equip loads		0	0		
Equip. @ 1.00 RSM			15701		
Latent cooling			3240		
TOTALS	1807	21597	18940	0	706

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



Project Information

PX2707

11/08/2021

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
SW BRE LANE, Lake City, FL 32024

Design Information

	Htg	Clg	Infiltration
Outside db (°F)	33	92	Blower door
Inside db (°F)	70	75	4 (substantial) / 1
Design TD (°F)	37	17	50 Pa / 1129 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 0.50 in H2O
Space thermostat
Capacity balance point = 32 °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 17831 Btuh
Latent cooling 3914 Btuh
Total cooling 21745 Btuh
Actual air flow 706 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	120	2558	2055	0	92
BATH 2	45	367	230	0	10
BEDROOM 4	123	4294	2776	0	125
HVAC	15	0	0	0	0
LAU	25	39	656	0	29
O. BATH	71	745	320	0	14
O.WIC	39	553	207	0	9
OWNER'S SUITE	169	3267	2360	0	106
GREAT/DIN/KIT	467	6296	4869	0	219
FOYER	86	0	0	0	0
BEDROOM 2	127	2742	1976	0	89
WIC 2	22	0	0	0	0
HALL	58	0	0	0	0
WIC 3	14	329	122	0	6

Bold/italic values have been manually overridden

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

WIC 4	14	408	128	0	6
System 1	1397	21597	15701	0	706
Other equip loads		0	0		
Equip. @ 1.00 RSM			15701		
Latent cooling			6240		
TOTALS	1397	21597	18940	0	706



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A Mittek® / Berkshire Hathaway Company

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...SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH.rup Calc = MJ8 Front Door faces: SW

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Project Information

PX2707

11/08/2021

For: Carlisle SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
SW BRE LANE, Lake City, FL 32024

Design Conditions

Location:

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

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

Outdoor:

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

Heating

33
-
-
15.0

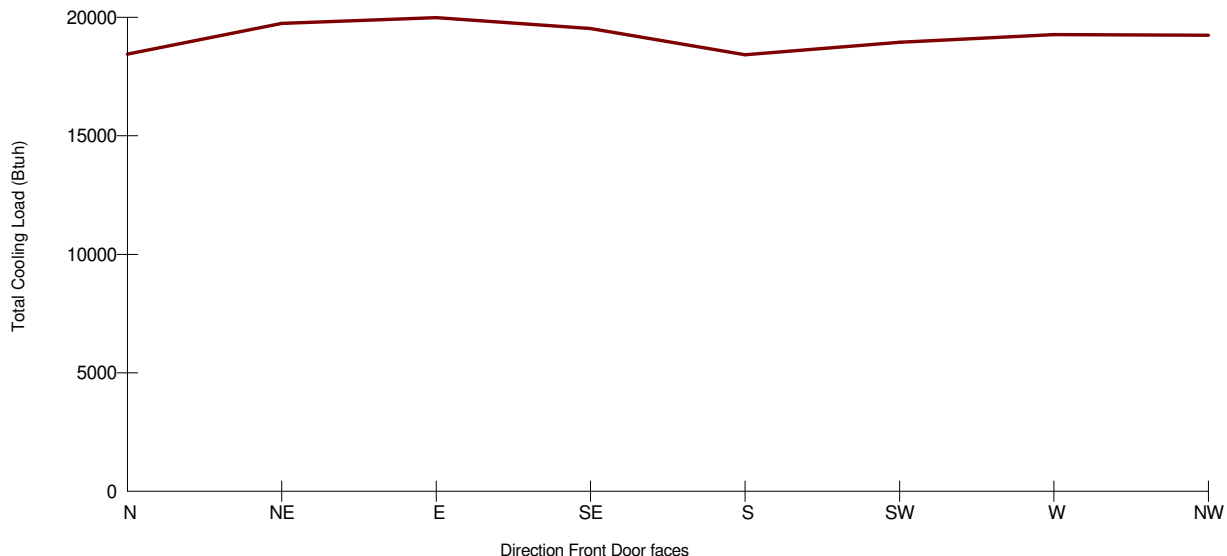
Cooling

92
20 (M)
76
7.5

Infiltration:

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	15209	16497	16751	16282	15181	15701	16035	15999
Latent Load (Btuh)	3240	3240	3240	3240	3240	3240	3240	3240
Total Load (Btuh)	18449	19737	19991	19521	18421	18940	19275	19239
Heating AVF (cfm)	0	0	0	0	0	0	0	0
Cooling AVF (cfm)	706	706	706	706	706	706	706	706

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

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11/08/2021

For: Carlisle SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
SW BRE LANE, Lake City, FL 32024

Design Conditions

Location:

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

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

Outdoor:

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

Heating

33
-
-
15.0

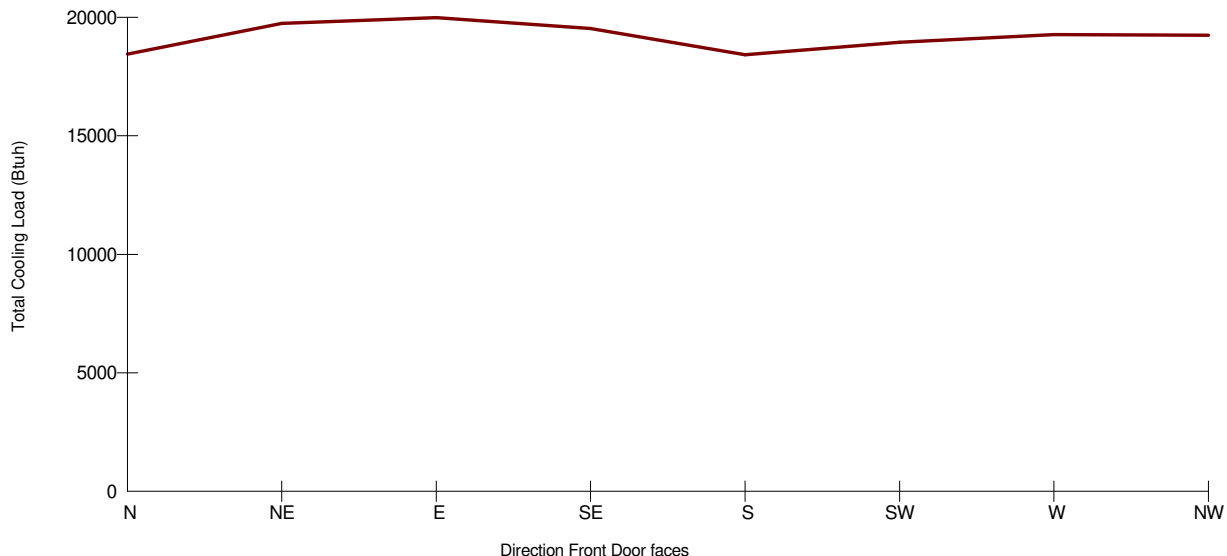
Cooling

92
20 (M)
76
7.5

Infiltration:

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	15209	16497	16751	16282	15181	15701	16035	15999
Latent Load (Btuh)	3240	3240	3240	3240	3240	3240	3240	3240
Total Load (Btuh)	18449	19737	19991	19521	18421	18940	19275	19239
Heating AVF (cfm)	0	0	0	0	0	0	0	0
Cooling AVF (cfm)	706	706	706	706	706	706	706	706

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: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMI Florida
SW BRE LANE, Lake City, FL 32024

Examiner-License No.

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

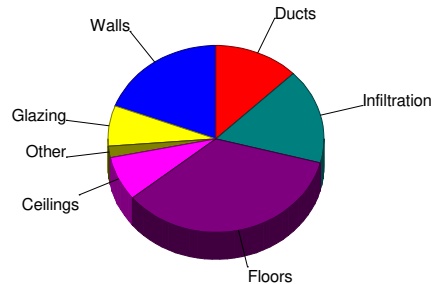
Infiltration:

Method
Shielding / stories
Pressure / AVF

Blower door
3 (partial) / 1
50 Pa / 1129 cfm

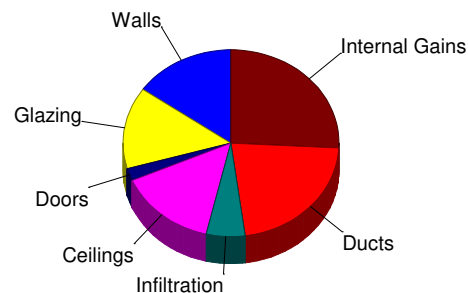
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	2.8	4159	19.3
Glazing	12.2	1506	7.0
Doors	2.8	429	2.0
Ceilings	0.9	1654	7.7
Floors	4.2	7553	35.0
Infiltration	2.4	3561	16.5
Ducts		2736	12.7
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		21597	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.6	2393	15.2
Glazing	18.0	2225	14.2
Doors	2.2	331	2.1
Ceilings	1.3	2325	14.8
Floors	0	0	0
Infiltration	0.6	907	5.8
Ducts		3470	22.1
Ventilation		0	0
Internal gains		4050	25.8
Blower		0	0
Adjustments		0	0
Total		15701	100.0



Latent Cooling Load = 3240 Btuh
Overall U-value = 0.106 Btuh/ft²-°F

Data entries checked.



Project Information

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMI Florida
SW BRE LANE, Lake City, FL 32024

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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

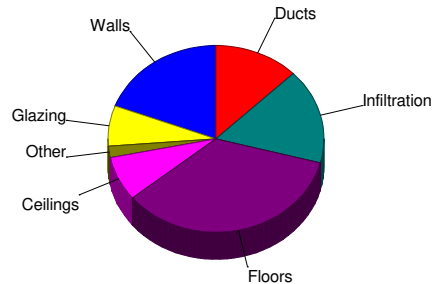
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Method
Shielding / stories
Pressure / AVF

Blower door
4 (substantial) / 1
50 Pa / 1129 cfm

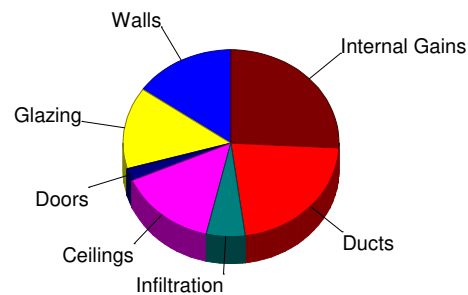
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.4	4159	19.3
Glazing	12.2	1506	7.0
Doors	10.7	429	2.0
Ceilings	1.2	1654	7.7
Floors	5.4	7553	35.0
Infiltration	3.2	3561	16.5
Ducts		2736	12.7
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		21597	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	2393	15.2
Glazing	18.0	2225	14.2
Doors	8.3	331	2.1
Ceilings	1.7	2325	14.8
Floors	0	0	0
Infiltration	0.8	907	5.8
Ducts		3470	22.1
Ventilation		0	0
Internal gains		4050	25.8
Blower		0	0
Adjustments		0	0
Total		15701	100.0



Latent Cooling Load = 3240 Btuh
Overall U-value = 0.099 Btuh/ft²-°F

Data entries checked.



Lawrence Parnell

PX2707

11/09/2021

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Supporting Detail

Project Name:	CMP-FL-37-1398_Carlisle_SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH	Date:	Oct 06, 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.



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Supporting Detail

Project Name: CMP-FL-37-1398_Carlisle_SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH		Date: Oct 06, 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

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Project Information

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11/09/2021

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, 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 / 1129 cfm	
Wind speed (mph)	15.0	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	232	0.091	13.0	3.37	780	2.14	496
	se	422	0.091	13.0	2.06	868	1.31	551
	sw	133	0.091	13.0	2.06	274	1.31	174
	nw	422	0.091	13.0	3.11	1310	1.97	832
	all	1208	0.091	13.0	2.68	3232	1.70	2053
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		275	0.091	13.0	3.37	926	1.24	340
Windows								
Century Florida Jacksonville SGD: Door; NFRC rated (SHGC=0.29); 50% outdoor insect screen; 1 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	30	0.330	0	12.2	366	20.0	599
	se	15	0.330	0	12.2	183	19.6	294
	nw	15	0.330	0	12.2	183	20.0	300
	all	60	0.330	0	12.2	733	19.9	1192
Century Florida Jacksonville Wnd: Window; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 50% outdoor insect screen; 5 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	sw	30	0.330	0	12.2	366	9.17	275
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		1807	0.032	30.0	0.92	1654	1.29	2325
Floors								
22A-tpm: Bg floor, heavy dry or light damp soil, on grade depth		218	1.180	0	34.7	7553	0	0



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...SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH.rup Calc = MJ8 Front Door faces: SW

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Project Information

PX2707

11/09/2021

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, 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	4 (substantial) / 1	
Wet bulb (°F)	-	76	Pressure / AVF	50 Pa / 1129 cfm	
Wind speed (mph)	15.0	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	232	0.091	13.0	3.37	780	2.14	496
	se	258	0.091	13.0	3.37	868	2.14	551
	sw	81	0.091	13.0	3.37	274	2.14	174
	nw	389	0.091	13.0	3.37	1310	2.14	832
	all	960	0.091	13.0	3.37	3232	2.14	2053
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		275	0.091	13.0	3.37	926	1.24	340
Windows								
Century Florida Jacksonville SGD: Door; NFRC rated (SHGC=0.29); 50% outdoor insect screen; 1 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
	se	15	0.330	0	12.2	183	19.6	294
	nw	15	0.330	0	12.2	183	20.0	300
	all	60	0.330	0	12.2	733	19.9	1192
	sw	30	0.330	0	12.2	366	9.17	275
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	30	0.330	0	12.2	366	20.0	599
	se	15	0.330	0	12.2	183	19.6	294
	nw	15	0.330	0	12.2	183	20.0	300
	all	60	0.330	0	12.2	733	19.9	1192
	sw	30	0.330	0	12.2	366	9.17	275
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		1397	0.032	30.0	1.18	1654	1.66	2325
Floors								
22A-tpm: Bg floor, heavy dry or light damp soil, on grade depth		173	1.180	0	43.7	7553	0	0



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...SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH.rup Calc = MJ8 Front Door faces: SW

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Project Information

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
 SW BRE LANE, Lake City, FL 32024

PX2707 11/09/2021

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 18861 Btuh
 Ducts 2736 Btuh
 Central vent (0 cfm) 0 Btuh
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 21597 Btuh

Sensible Cooling Equipment Load Sizing

Structure 12231 Btuh
 Ducts 3470 Btuh
 Central vent (0 cfm) 0 Btuh
 Blower 0 Btuh
 Use manufacturer's data y
 Rate/swing multiplier 1.00
 Equipment sensible load 15701 Btuh

Infiltration

Method Blower door
 Shielding / stories 3 (partial) / 1
 Pressure / AVF 50 Pa / 1129 cfm

Latent Cooling Equipment Load Sizing

Structure 2499 Btuh
 Ducts 740 Btuh
 Central vent (0 cfm) 0 Btuh

	Heating	Cooling
Area (ft²)	1397	1397
Volume (ft³)	11292	11292
Air changes/hour	0.47	0.26
Equiv. AVF (cfm)	88	49

Equipment latent load 3240 Btuh
Equipment Total Load (Sen+Lat) 18940 Btuh
 Req. total capacity at 0.70 SHR 1.9 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 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 Information

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
SW BRE LANE, Lake City, FL 32024

PX2707

11/09/2021

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 18861 Btuh
Ducts 2736 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 21597 Btuh

Sensible Cooling Equipment Load Sizing

Structure 12231 Btuh
Ducts 3470 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Blower 0 Btuh
Use manufacturer's data y
Rate/swing multiplier 1.00
Equipment sensible load 15701 Btuh

Infiltration

Method Blower door
Shielding / stories 4 (substantial) / 1
Pressure / AVF 50 Pa / 1129 cfm

Latent Cooling Equipment Load Sizing

Structure 2499 Btuh
Ducts 740 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Equipment latent load 3240 Btuh

	Heating	Cooling
Area (ft ²)	1397	1397
Volume (ft ³)	11292	11292
Air changes/hour	0.47	0.26
Equiv. AVF (cfm)	88	49

Equipment Total Load (Sen+Lat) 18940 Btuh
Req. total capacity at 0.82 SHR 1.6 ton

Heating Equipment Summary

Make Carrier
Trade CARRIER
Model 25HBC524AP0300
AHRI ref 204837248
Efficiency 9 HSPF
Heating input 24000 Btuh @ 47°F
Heating output 0 °F
Temperature rise 0 cfm
Actual air flow 0 cfm/Btuh
Air flow factor 0.50 in H2O
Static pressure
Space thermostat
Capacity balance point = 32 °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 17831 Btuh
Latent cooling 3914 Btuh
Total cooling 21745 Btuh
Actual air flow 706 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

PX2707

11/09/2021

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
 SW BRE LANE, Lake City, FL 32024

Design Conditions

Location:

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

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

Outdoor:

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

Heating

33
 -
 -
 15.0

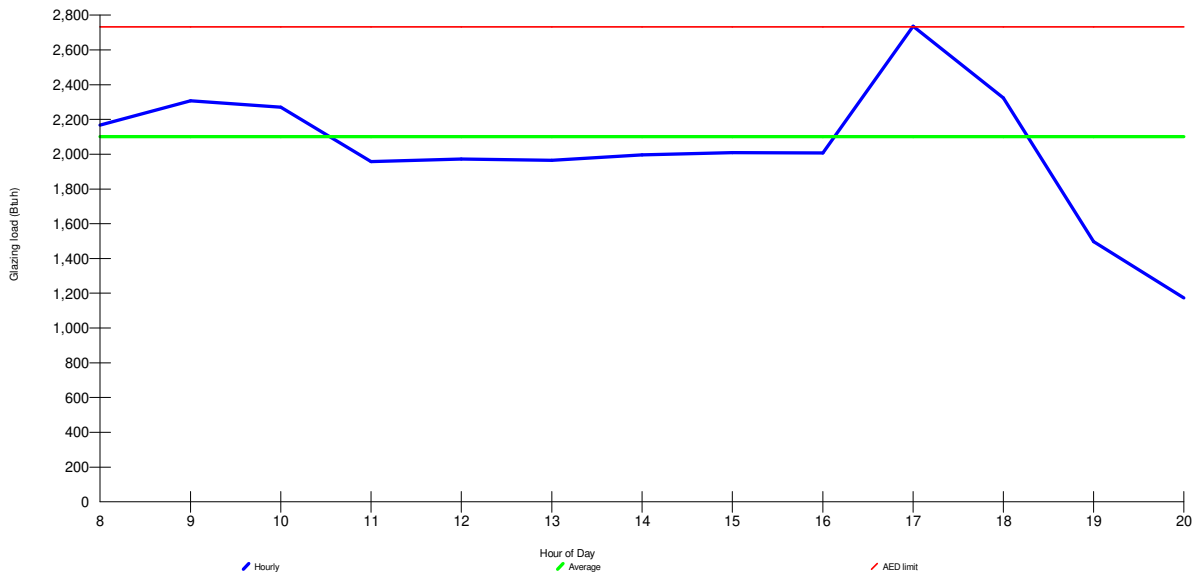
Cooling

92
 20 (M)
 76
 7.5

Infiltration:

Test for Adequate Exposure Diversity

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 30.3%.

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

AED excursion: 6 Btuh (PFG - 1.3*AFG)



Project Information

PX2707

11/09/2021

For: Carlisle SLAB Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
 SW BRE LANE, Lake City, FL 32024

Design Conditions

Location:

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

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

Outdoor:

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

Heating

33
 -
 -
 15.0

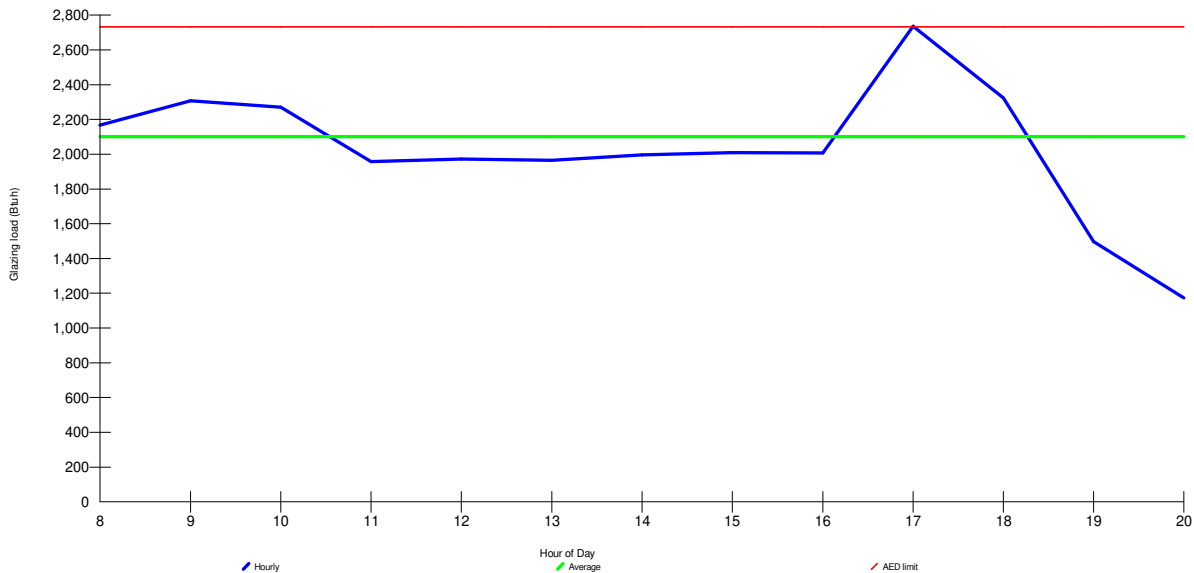
Cooling

92
 20 (M)
 76
 7.5

Infiltration:

Test for Adequate Exposure Diversity

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 30.3%.

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

AED excursion: 6 Btuh (PFG - 1.3*AFG)


For: Carlisle SLAB_Reserve at Jewel Lake
 SW BRIDGE 05_RH
 Lake City, FL 32024


 Examiner-License No.

PX2707

11/09/2021

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"	43.0	1.40	60.20
WSF	FBTJ-4	Ceiling rect register, size 4"	6.00	24.00	144.00
WSF	FCLR-4	Collar, d = 4"	6.00	0	0
WSF	FCLR-10	Collar, d = 10"	6.00	0	0
WSF	FCLR-5	Collar, d = 5"	3.00	0	0
WSF	FJB-10	Junction box, size 10"	3.00	32.40	97.20
HACL	301-8X4	301 Curved-Blade Register 8 x 4	6.00	0	0
WSF	DDVn06	Round vinyl duct, D = 6"	22.0	1.60	35.20
WSF	FBTJ-6	Ceiling rect register, size 6"	3.00	26.80	80.40
HACL	301-10X6	301 Curved-Blade Register 10 x 6	6.00	0	0
WSF	DDVn07	Round vinyl duct, D = 7"	10.0	1.70	17.00
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	DDVn05	Round vinyl duct, D = 5"	24.0	1.50	36.00
WSF	FBTJ-5	Ceiling rect register, size 5"	3.00	25.40	76.20
WSF	FCLR-6	Collar, d = 6"	3.00	0	0
WSF	FCLR-7	Collar, d = 7"	1.00	0	0
WSF	DDVn10	Round vinyl duct, D = 10"	44.0	2.00	88.00
PGM	FPLH-10	Plenum rect tapered take off, size 10"	3.00	35.20	105.60
PGM	FJB-13	Junction box, size 16" x 10"	1.00	57.60	57.60
WSF	DRFg1610	Rectangular fiberglass duct, 16" x 10"	9.00	4.70	42.30
WSF	FBTS-10	Angle boot without transition, size 10"	2.00	0	0
PGM	FRGRMWG-2404	Rectangular metal high wall grille, 24" x 4"	3.00	0	0
HACL	650-10X10	650 Return Air Grille 10 x 10	2.00	0	0
		Subtotal, Duct System Equipment			867.90
		Overall total			867.90



Project Information

PX2707

11/08/2021

For: Carlisle_SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH, 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	0.04
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	0.21

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	9	0
Measured length of trunk	19	0
Equivalent length of fittings	170	0
Total length	198	0
Total effective length		198

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.126	OK	0.107	OK
Return Ducts	0.126	OK	0.107	OK

Fitting Equivalent Length Details

Supply 4AD=60, 11A=20, 11G=5, 11G=5, 1D=10, 11D=60, 11G=5, 11G=5: TotalEL=170

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



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Project Information

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For: Carlisle SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH, 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	0.29 in H ₂ O
Available static pressure	0.25 in H ₂ O	0.21 in H ₂ O
Supply / return available pressure	0.125 / 0.125 in H ₂ O	0.105 / 0.105 in H ₂ O
Lowest friction rate	0.126 in/100ft	0.107 in/100ft
Actual air flow	0 cfm	706 cfm
Total effective length (TEL)	198 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 230	0	10	0.116	4.0	0x0	VIFx	21.6	160.0	st2
BEDROOM 2	C 1976	0	89	0.118	6.0	0x0	VIFx	19.1	160.0	st3
BEDROOM 3	C 2055	0	92	0.112	6.0	0x0	VIFx	23.2	165.0	st1
BEDROOM 4	C 2776	0	125	0.109	7.0	0x0	VIFx	28.0	165.0	st1
GREAT/DINKIT	C 1623	0	73	0.111	5.0	0x0	VIFx	25.8	165.0	st2
GREAT/DINKIT-A	C 1623	0	73	0.118	5.0	0x0	VIFx	18.5	160.0	st2
GREAT/DINKIT-B	C 1623	0	73	0.118	5.0	0x0	VIFx	18.5	160.0	st2
LAU	C 656	0	29	0.122	4.0	0x0	VIFx	13.7	160.0	st3
O. BATH	C 320	0	14	0.121	4.0	0x0	VIFx	14.0	160.0	st3
O.WIC-A	C 207	0	9	0.115	4.0	0x0	VIFx	19.1	165.0	st3
OWNER'S SUITE	C 2360	0	106	0.116	6.0	0x0	VIFx	16.5	165.0	st3
WIC 3	C 122	0	6	0.111	4.0	0x0	VIFx	24.5	165.0	st1
WIC 4	C 128	0	6	0.107	4.0	0x0	VIFx	27.9	170.0	st1

Supply Trunk Detail Table

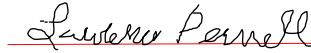
Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	0	228	0.107	419	10.0	0 x 0	VinIFlx	srs1
srs1	Peak AVF	0	706	0.107	635	12.6	10 x 16	RectFbg	
st2	Peak AVF	0	229	0.111	420	10.0	0 x 0	VinIFlx	srs1
st3	Peak AVF	0	248	0.115	455	10.0	0 x 0	VinIFlx	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	0x0	0	706	0	0	 0	0	0x0		VIFx	

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PX2707

11/09/2021



Manual S Compliance Report System 1

MiTek Wrightsoft



Review for Code Compliance
Universal Engineering Science

Job:
Date: Oct 06, 2021
By:

Lawrence Parnell

PX2707

11/09/2021

Examiner-License No.

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

Project Information

For: Carlisle_SLAB_Reserve at Jewel Lake P2_FrmB1_LS05_RH, Century CMP Florida
SW BRE LANE, Lake City, FL 32024

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	15701 Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	76.0°F	Latent gain:	3240 Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	18940 Btuh		
Indoor RH:	50%	Estimated airflow:	706 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	25HBC524AP0300+FB4CNP025L
Actual airflow:	706 cfm		
Sensible capacity:	17774 Btuh	113% of load	
Latent capacity:	3971 Btuh	123% of load	
Total capacity:	21745 Btuh	115% of load	SHR: 82%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	21597 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	111% of load	
Supplemental heat required:	0 Btuh		
		Capacity balance:	32 °F
		Economic balance:	-99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Carrier	Model:	KFCEH2501C08
Actual airflow:	0 cfm		
Output capacity:	8.0 kW	126% of load	Temp. rise: 31 °F

Meets all requirements of ACCA Manual S.



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