FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Rodney Wade- Roach	Builder Name:	Spann's Heating and Air INC.
Street:	Rodney Wade- Roach	Permit Office:	
City, State, Zip:	Ft. White , FL ,	Permit Number:	
Owner:	Rodney Wade- Roach	Jurisdiction:	
Design Location:	FL, Gainesville	County:	columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	2
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1070
Conditioned floor area below grade (ft²)	0

7. Windows(66.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.40	66.00 ft²
SHGC:	SHGC=0.20	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		1.000 ft.
Area Weighted Average SHGC:		0.200

8. Skylights		Area
c. U-Factor:(AVG)	N/A	ft²
SHGC(AVG):	N/A	

9. Floor Types (1069.5 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1069.50 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Type$1144.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1144.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

11. Ceiling Types (1070.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=38.0	1070.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

12. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Bedroom 2	6	85

13. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	24.0	SEER:14.00

14. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	24.0	HSPF:8.20

15. Hot water systems	
a. Electric	Cap: 40 gallons
	EF: 0.960
b. Conservation features	
None	
16. Credits	None

Glass/Floor Area: 0.062

Total Proposed Modified Loads: 29.22

Total Baseline Loads: 30.46

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____

DATE: 6-10-2021

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: 6/10/21

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.

- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).

- Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.010 Qn for whole house.

FORM R405-2020

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 96

The lower the EnergyPerformance Index, the more efficient the home.

Rodney Wade- Roach, Ft. White, FL,

1. New construction or existing		New (From Plans)	
2. Single family or multiple family		Detached	
3. Number of units, if multiple family		1	
4. Number of Bedrooms		2	
5. Is this a worst case?		No	
6. Conditioned floor area (ft²)		1070	
7. Windows**	Description		Area
a. U-Factor:	Dbl, U=0.40		66.00 ft²
SHGC:	SHGC=0.20		
b. U-Factor:	N/A		ft²
SHGC:			
c. U-Factor:	N/A		ft²
SHGC:			
d. U-Factor:	N/A		ft²
SHGC:			
Area Weighted Average Overhang Depth:			1.000 ft.
Area Weighted Average SHGC:			0.200
8. Skylights	Description		Area
a. U-Factor(AVG):	N/A		ft²
SHGC(AVG):	N/A		
9. Floor Types		Insulation	Area
a. Slab-On-Grade Edge Insulation		R=0.0	1069.50 ft²
b. N/A		R=	ft²
c. N/A		R=	ft²

10. Wall Type and Insulation	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1144.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²
11. Ceiling Type and insulation level	Insulation	Area
a. Under Attic (Vented)	R=38.0	1070.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
12. Ducts, location & insulation level		R ft²
a. Sup: Attic, Ret: Attic, AH: Bedroom 2		6 85
13. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	24.0	SEER:14.00
14. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	24.0	HSPF:8.20
15. Hot water systems		
a. Electric		Cap: 40 gallons
		EF: 0.96
b. Conservation features		
None		
Credits (Performance method)		None

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: 6/10/21

Address of New Home: 409 Buffalo Ct. City/FL Zip: Fort White, FL 32038

*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Rodney Wade- Roach	Bedrooms:	2	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1070	Lot #	
Owner Name:	Rodney Wade- Roach	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Spann's Heating and Air INC.	Rotate Angle:	0	Street:	Rodney Wade- Roach
Permit Office:		Cross Ventilation:	No	County:	columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Ft. White , FL ,
Family Type:	Detached				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Entire House	1070	10009

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Closet	45	360	No	0		1	No	Yes	Yes
2	Master Bath	81	648	No	0		1	No	Yes	Yes
3	Master Bedroom	187	1496	No	2	1	1	No	Yes	Yes
4	Great Room	220	2420	No	2		1	No	Yes	Yes
5	Kitchen	263	2893	No	2		1	No	Yes	Yes
6	Bedroom 2	214	1712	No	2	1	1	No	Yes	Yes
7	Bath 2	60	480	No	0		1	No	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Closet	14 ft	0	45 ft²	----	0	1	0
_____	2	Slab-On-Grade Edge Insulatio	Master Bath	9 ft	0	81 ft²	----	0	1	0
_____	3	Slab-On-Grade Edge Insulatio	Master Bedroom	28 ft	0	187 ft²	----	0	1	0
_____	4	Slab-On-Grade Edge Insulatio	Great Room	12.5 ft	0	220 ft²	----	0	1	0
_____	5	Slab-On-Grade Edge Insulatio	Kitchen	19.5 ft	0	263 ft²	----	0	1	0
_____	6	Slab-On-Grade Edge Insulatio	Bedroom 2	32 ft	0	213.5 ft²	----	0	1	0
_____	7	Slab-On-Grade Edge Insulatio	Bath 2	16 ft	0	60 ft²	----	0	1	0

FORM R405-2020 **INPUT SUMMARY CHECKLIST REPORT**

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or Shed	Composition shingles	1128 ft²	178 ft²	Dark	N	0.6	No	0.9	No	0	18.43

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1070 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Closet	38	Blown	45 ft²	0.1	Wood
_____	2	Under Attic (Vented)	Master Bath	38	Blown	81 ft²	0.1	Wood
_____	3	Under Attic (Vented)	Master Bedroom	38	Blown	187 ft²	0.1	Wood
_____	4	Under Attic (Vented)	Great Room	38	Blown	220 ft²	0.1	Wood
_____	5	Under Attic (Vented)	Kitchen	38	Blown	263 ft²	0.1	Wood
_____	6	Under Attic (Vented)	Bedroom 2	38	Blown	214 ft²	0.1	Wood
_____	7	Under Attic (Vented)	Bath 2	38	Blown	60 ft²	0.1	Wood

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
___	1	N	Exterior	Frame - Wood	Closet	13	9	0	8	0	72.0 ft²	0	0.25	0.8	0
___	2	W	Exterior	Frame - Wood	Closet	13	5	0	8	0	40.0 ft²	0	0.25	0.8	0
___	3	W	Exterior	Frame - Wood	Master Bath	13	9	0	8	0	72.0 ft²	0	0.25	0.8	0
___	4	S	Exterior	Frame - Wood	Master Bedro	13	11	0	8	0	88.0 ft²	0	0.25	0.8	0
___	5	W	Exterior	Frame - Wood	Master Bedro	13	17	0	8	0	136.0 ft²	0	0.25	0.8	0
___	6	S	Exterior	Frame - Wood	Great Room	13	12	6	11	0	137.5 ft²	0	0.25	0.8	0
___	7	N	Exterior	Frame - Wood	Kitchen	13	19	6	11	0	214.5 ft²	0	0.25	0.8	0
___	8	E	Exterior	Frame - Wood	Bedroom 2	13	21	0	8	0	168.0 ft²	0	0.25	0.8	0
___	9	S	Exterior	Frame - Wood	Bedroom 2	13	11	0	8	0	88.0 ft²	0	0.25	0.8	0
___	10	N	Exterior	Frame - Wood	Bath 2	13	6	0	8	0	48.0 ft²	0	0.25	0.8	0
___	11	E	Exterior	Frame - Wood	Bath 2	13	10	0	8	0	80.0 ft²	0	0.25	0.8	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	S	Insulated	Great Room	None	.4	3		7		21 ft²
_____	2	N	Insulated	Kitchen	None	.4	3		7		21 ft²

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INPUT SUMMARY CHECKLIST REPORT

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	W	3	Vinyl	Double (Clear)	Yes	0.4	0.2	N	6.0 ft²	1 ft 0 in	1 ft 0 in	None	None
_____	2	S	4	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	1 ft 0 in	1 ft 0 in	None	None
_____	3	S	6	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	1 ft 0 in	1 ft 0 in	None	None
_____	4	N	7	Vinyl	Double (Clear)	Yes	0.4	0.2	N	9.0 ft²	1 ft 0 in	1 ft 0 in	None	None
_____	5	S	9	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	1 ft 0 in	1 ft 0 in	None	None
_____	6	E	11	Vinyl	Double (Clear)	Yes	0.4	0.2	N	6.0 ft²	1 ft 0 in	1 ft 0 in	None	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000416	1167.7	64.06	120.27	.146	7

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	Split	Singl	HSPF:8.2	24 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	Split	Singl	SEER: 14	24 kBtu/hr	720 cfm	0.7	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Bedroom 2	0.96	40 gal	50 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
_____	None	None			ft²		

DUCTS

√	#	Supply Location	Supply R-Value	Supply Area	Return Location	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
_____	1	Attic	6	85 ft²	Attic	85 ft²	Proposed Qn	Bedroom 2	--- cfm	10.7 cfm	0.01	0.50	1	1

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programable Thermostat: N

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Heating (WD)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	Closet
Default(8 lbs/sq.ft.	ft²	ft	0.3	Master Bath
Default(8 lbs/sq.ft.	ft²	ft	0.3	Master Bedroom
Default(8 lbs/sq.ft.	ft²	ft	0.3	Great Room
Default(8 lbs/sq.ft.	ft²	ft	0.3	Kitchen
Default(8 lbs/sq.ft.	ft²	ft	0.3	Bedroom 2
Default(8 lbs/sq.ft.	ft²	ft	0.3	Bath 2

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Load Short Form
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

Project Information

For: Rodney Wade- Roach

Design Information

	Htg	Clg
Outside db (°F)	33	92
Inside db (°F)	70	75
Design TD (°F)	37	17
Daily range	-	M
Inside humidity (%)	65	85
Moisture difference (gr/lb)	49	0

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Model	N4H424GKG10
AHRI ref	9675364

Efficiency	8.2 HSPF	
Heating input		
Heating output	21800	Btuh @ 47°F
Temperature rise	27	°F
Actual air flow	733	cfm
Air flow factor	0.043	cfm/Btuh
Static pressure	0.70	in H2O

Space thermostat
Capacity balance point = 28 °F

Backup: n/a n/a
Input = 5 kW, Output = 16308 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Cond	N4H424GKG10
Coil	FXM4X2400AL
AHRI ref	9675364

Efficiency	11.5 EER, 14 SEER	
Sensible cooling	15400	Btuh
Latent cooling	6600	Btuh
Total cooling	22000	Btuh
Actual air flow	733	cfm
Air flow factor	0.058	cfm/Btuh
Static pressure	0.70	in H2O
Load sensible heat ratio	0.83	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Closet	45	1480	541	63	31
Master Bath	81	1094	1032	47	60
Master Bedroom	187	3278	2415	140	140
Great Room	220	2483	2306	106	134
Kitchen	263	3317	2610	142	151
Bedroom 2	214	3717	2596	159	151
Bath 2	60	1784	1142	76	66

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

Entire House	d	1070	17153	12642	733	733
Other equip loads			0	0		
Equip. @ 0.97	RSM			12250		
Latent cooling				2529		
TOTALS		1070	17153	14780	733	733

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

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Project Summary
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

Project Information

For: Rodney Wade- Roach

Notes:

Design Information

Weather: Gainesville Rgnl, 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	85	%
Moisture difference	0	gr/lb

Heating Summary

Structure	14102	Btuh
Ducts	3051	Btuh
Central vent (0 cfm) (none)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	17153	Btuh

Sensible Cooling Equipment Load Sizing

Structure	8762	Btuh
Ducts	3880	Btuh
Central vent (0 cfm) (none)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	12250	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1070	1070
Volume (ft³)	10005	10005
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	75	38

Latent Cooling Equipment Load Sizing

Structure	1600	Btuh
Ducts	929	Btuh
Central vent (0 cfm) (none)	0	Btuh
Equipment latent load	2529	Btuh
Equipment Total Load (Sen+Lat)	14780	Btuh
Req. total capacity at 0.70 SHR	1.5	ton

Heating Equipment Summary

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Model	N4H424GKG10
AHRI ref	9675364

Efficiency	8.2 HSPF	
Heating input		
Heating output	21800	Btuh @ 47°F
Temperature rise	27	°F
Actual air flow	733	cfm
Air flow factor	0.043	cfm/Btuh
Static pressure	0.70	in H2O
Space thermostat		

Capacity balance point = 28 °F

Backup: n/a n/a
Input = 5 kW, Output = 16308 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Cond	N4H424GKG10
Coil	FXM4X2400AL
AHRI ref	9675364

Efficiency	11.5 EER, 14 SEER	
Sensible cooling	15400	Btuh
Latent cooling	6600	Btuh
Total cooling	22000	Btuh
Actual air flow	733	cfm
Air flow factor	0.058	cfm/Btuh
Static pressure	0.70	in H2O
Load sensible heat ratio	0.83	

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

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Right-J® Worksheet
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

		Entire House	Closet
1	Room name	131.0 ft	14.0 ft
2	Exposed wall		
3	Room height	9.4 ft	d 8.0 ft heat/cool
4	Room dimensions		9.0 x 5.0 ft
5	Room area	1069.5 ft²	45.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.33	2.22	335	305	1014	675	72	72	240	160
.	├─G	1D-c2ov	0.400	n	14.64	10.92	9	0	132	98	0	0	0	0
.	└─D	11J0	0.600	n	21.96	17.61	21	21	461	370	0	0	0	0
.	W	12C-0sw	0.091	e	3.33	2.22	248	242	806	536	0	0	0	0
11	└─G	1D-c2ov	0.400	e	14.64	25.95	6	0	88	156	0	0	0	0
	W	12C-0sw	0.091	s	3.33	2.22	314	248	824	548	0	0	0	0
	├─G	1D-c2ov	0.400	s	14.64	11.08	45	79	659	499	0	0	0	0
	└─D	11J0	0.600	s	21.96	17.61	21	21	461	370	0	0	0	0
	W	12C-0sw	0.091	w	3.33	2.22	248	242	806	536	40	40	133	89
	└─G	1D-c2ov	0.400	w	14.64	25.95	6	0	88	156	0	0	0	0
	C	16B-38ad	0.026	-	0.95	1.37	1070	1070	1018	1470	45	45	43	62
	F	22A-tpl	0.989	-	36.20	0.00	1070	131	4742	0	45	14	507	0
6	c) AED excursion									0				-5
	Envelope loss/gain								11099	5413			923	305
12	a) Infiltration								3003	709			294	69
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					8			1840	0			0
		Appliances/other								800				0
	Subtotal (lines 6 to 13)								14102	8762			1217	375
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								14102	8762			1217	375
15	Duct loads						22%	44%	3051	3880	22%	44%	263	166
	Total room load								17153	12642			1480	541
	Air required (cfm)								733	733			63	31

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

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Right-J® Worksheet
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

1	Room name						Master Bath					Master Bedroom			
2	Exposed wall						9.0 ft					28.0 ft			
3	Room height						8.0 ft				heat/cool	8.0 ft			heat/cool
4	Room dimensions						9.0 x 9.0 ft					11.0 x 17.0 ft			
5	Room area						81.0 ft²					187.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)			Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool		Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.33	2.22	0	0	0	0		0	0	0	0
.	G	1D-c2ov	0.400	n	14.64	10.92	0	0	0	0		0	0	0	0
.	D	11J0	0.600	n	21.96	17.61	0	0	0	0		0	0	0	0
.	W	12C-0sw	0.091	e	3.33	2.22	0	0	0	0		0	0	0	0
11	G	1D-c2ov	0.400	e	14.64	25.95	0	0	0	0		0	0	0	0
	W	12C-0sw	0.091	s	3.33	2.22	0	0	0	0		88	73	243	162
	G	1D-c2ov	0.400	s	14.64	11.08	0	0	0	0		15	13	220	166
	D	11J0	0.600	s	21.96	17.61	0	0	0	0		0	0	0	0
	W	12C-0sw	0.091	w	3.33	2.22	72	66	220	146		136	136	453	301
	G	1D-c2ov	0.400	w	14.64	25.95	6	0	88	156		0	0	0	0
	C	16B-38ad	0.026	-	0.95	1.37	81	81	77	111		187	187	178	257
	F	22A-tpl	0.989	-	36.20	0.00	81	9	326	0		187	28	1014	0
6	c) AED excursion									57					-11
	Envelope loss/gain								711	471				2107	875
12	a) Infiltration								189	45				588	139
	b) Room ventilation								0	0				0	0
13	Internal gains:	Occupants @ 230					0			0		2			460
		Appliances/other								200					200
	Subtotal (lines 6 to 13)								900	715				2695	1674
	Less external load								0	0				0	0
	Less transfer								0	0				0	0
	Redistribution								0	0				0	0
14	Subtotal								900	715				2695	1674
15	Duct loads						22%	44%	195	317		22%	44%	583	741
	Total room load								1094	1032				3278	2415
	Air required (cfm)								47	60				140	140

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

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Right-J® Worksheet
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

							Great Room 12.5 ft 11.0 ft heat/cool 1.0 x 220.0 ft 220.0 ft²				Kitchen 19.5 ft 11.0 ft heat/cool 1.0 x 263.0 ft 263.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
1	Room name													
2	Exposed wall													
3	Room height													
4	Room dimensions													
5	Room area													
6	W	12C-0sw	0.091	n	3.33	2.22	0	0	0	0	215	185	614	409
.	├─G	1D-c2ov	0.400	n	14.64	10.92	0	0	0	0	9	0	132	98
.	└─D	11J0	0.600	n	21.96	17.61	0	0	0	0	21	21	461	370
.	W	12C-0sw	0.091	e	3.33	2.22	0	0	0	0	0	0	0	0
11	└─G	1D-c2ov	0.400	e	14.64	25.95	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.33	2.22	138	102	338	225	0	0	0	0
	├─G	1D-c2ov	0.400	s	14.64	11.08	15	13	220	166	0	0	0	0
	└─D	11J0	0.600	s	21.96	17.61	21	21	461	370	0	0	0	0
	W	12C-0sw	0.091	w	3.33	2.22	0	0	0	0	0	0	0	0
	└─G	1D-c2ov	0.400	w	14.64	25.95	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.95	1.37	220	220	209	302	263	263	250	361
	F	22A-tpl	0.989	-	36.20	0.00	220	13	452	0	263	20	706	0
6	c) AED excursion									-10				-22
	Envelope loss/gain								1681	1053			2164	1216
12	a) Infiltration								361	85			563	133
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					2			460	2			460
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								2042	1598			2727	1809
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2042	1598			2727	1809
15	Duct loads						22%	44%	442	708	22%	44%	590	801
	Total room load								2483	2306			3317	2610
	Air required (cfm)								106	134			142	151

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

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Right-J® Worksheet
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

1	Room name				Bedroom 2						Bath 2				
2	Exposed wall				32.0 ft						16.0 ft				
3	Room height				8.0 ft				heat/cool		8.0 ft				heat/cool
4	Room dimensions				1.0		x	213.5 ft			6.0		x	10.0 ft	
5	Room area				213.5 ft²						60.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.33	2.22	0	0	0	0	48	48	160	106	
.	G	1D-c2ov	0.400	n	14.64	10.92	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	e	3.33	2.22	168	168	560	372	80	74	246	164	
11	G	1D-c2ov	0.400	e	14.64	25.95	0	0	0	0	6	0	88	156	
	W	12C-0sw	0.091	s	3.33	2.22	88	73	243	162	0	0	0	0	
	G	1D-c2ov	0.400	s	14.64	11.08	15	13	220	166	0	0	0	0	
	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.33	2.22	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.400	w	14.64	25.95	0	0	0	0	0	0	0	0	
	C	16B-38ad	0.026	-	0.95	1.37	214	214	203	293	60	60	57	82	
	F	22A-tpl	0.989	-	36.20	0.00	214	32	1158	0	60	16	579	0	
6	c) AED excursion									-13				3	
	Envelope loss/gain								2384	981			1130	512	
12	a) Infiltration								672	159			336	79	
	b) Room ventilation								0	0			0	0	
13	Internal gains:	Occupants @ 230					2			460	0			0	
		Appliances/other								200				200	
	Subtotal (lines 6 to 13)								3056	1799			1466	791	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
14	Subtotal								3056	1799			1466	791	
15	Duct loads						22%	44%	661	797	22%	44%	317	350	
	Total room load								3717	2596			1784	1142	
	Air required (cfm)								159	151			76	66	

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

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Manual S Compliance Report
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

Project Information

For: Rodney Wade- Roach

Cooling Equipment

Design Conditions

Outdoor design DB:	91.9°F	Sensible gain:	12642	Btuh	Entering coil DB:	76.8°F
Outdoor design WB:	76.2°F	Latent gain:	2529	Btuh	Entering coil WB:	72.1°F
Indoor design DB:	75.0°F	Total gain:	15171	Btuh		
Indoor RH:	85%	Estimated airflow:	733	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Comfortmaker Model: N4H424GKG10+FXM4X2400AL

Actual airflow:	733	cfm		
Sensible capacity:	15400	Btuh	122% of load	
Latent capacity:	6600	Btuh	261% of load	
Total capacity:	22000	Btuh	145% of load	SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	17153	Btuh	Entering coil DB: 69.1°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Comfortmaker Model: N4H424GKG10+FXM4X2400AL

Actual airflow:	733	cfm			
Output capacity:	21800	Btuh	127% of load	Capacity balance:	28 °F
Supplemental heat required:	0	Btuh		Economic balance:	-99 °F

Backup equipment type: Elec strip
Manufacturer: n/a Model: n/a+n/a

Actual airflow:	733	cfm			
Output capacity:	4.8	kW	95% of load	Temp. rise:	18 °F

Meets all requirements of ACCA Manual S.

Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

Air Conditioning Contractors of America

Header Information

Contractor: Spann's Heating and Air INC.
Jack Spann

Mechanical license:

Building plan #:

Home address (Street or Lot#, Block, Subdivision): , Entire House

REQUIRED ATTACHMENTS	ATTACHED
Manual J1 Form (and supporting worksheets):	Yes ☐ No ☐
or MJ1AE Form* (and supporting worksheets):	Yes ☐ No ☐
OEM performance data (heating, cooling, blower):	Yes ☐ No ☐
Manual D Friction Rate Worksheet:	Yes ☐ No ☐
Duct distribution sketch:	Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature:	33	°F
Indoor temperature:	70	°F
Total heat loss:	17153	Btuh

Summer Design Conditions

Outdoor temperature:	92	°F
Indoor temperature:	75	°F
Grains difference:	0 gr/lb @	85% RH
Sensible heat gain:	13047	Btuh
Latent heat gain:	2610	Btuh
Total heat gain:	15657	Btuh

Building Construction Information

Building

Orientation: Front Door faces West
North, East, West, South, Northeast, Northwest, Southeast, Southwest

Number of bedrooms:	0	
Conditioned floor area:	1070	ft²
Number of occupants:	8	

Windows

Eave overhang depth:	1.0	ft
Internal shade: (Blinds, drapes, etc.)	none	
Number of skylights:	0	

HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: (Furnace, Heat pump, Boiler, etc.)	Split ASHP
Model:	Comfortmaker N4H424GKG10+FXM4X2400AL
Heating output capacity: (Heat pumps - capacity at winter design outdoor conditions)	0 Btuh
Aux. heating output capacity:	16308 Btuh

Cooling Equipment Data

Equipment type: (Air Conditioner, Heat pump, etc.)	Split ASHP
Model:	Comfortmaker N4H424GKG10+FXM4X2400AL
Total cooling capacity:	0 Btuh
Sensible cooling capacity:	0 Btuh
Latent cooling capacity:	0 Btuh

Blower Data

Heating cfm:	733
Cooling cfm:	733
Static pressure: (Fan's rated external static pressure for design airflow)	0.70 in H2O

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	733	cfm	Longest supply duct:	332	ft
Equipment design ESP:	0.70	in H2O	Longest return duct:	0	ft
Total device pressure losses:	0	in H2O	**Total effective length (TEL):**	332	ft
Available static pressure (ASP):	0.70	in H2O	**Friction rate:** (Friction Rate = ASP ÷ (TEL x 100))	0.211	in/100ft

Duct Materials Used

Trunk duct: Sheet metal

Branch duct: Round flex vinyl, Sheet metal

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

wrightsoft

Duct System Summary
Entire House
Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, Fl 32693 Phone: 3524636440 Email: spann21@bellsouth.met

Project Information

For: Rodney Wade- Roach

	Heating	Cooling
External static pressure	0.70 in H2O	0.70 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.70 in H2O	0.70 in H2O
Supply / return available pressure	0.350 / 0.350 in H2O	0.350 / 0.350 in H2O
Lowest friction rate	0.211 in/100ft	0.211 in/100ft
Actual air flow	733 cfm	733 cfm
Total effective length (TEL)	332 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bath 2	h 1784	76	66	0.526	***5.0***	***0*** x ***0***	VlFx	8.2	125.0	
Bedroom 2	h 3717	159	151	0.541	***7.0***	***0*** x ***0***	VlFx	4.3	125.0	
Closet	h 1480	63	31	0.211	***5.0***	***0*** x ***0***	VlFx	31.5	300.0	st1
Great Room	c 2306	106	134	0.284	***7.0***	***0*** x ***0***	VlFx	11.5	235.0	st1
Kitchen	c 2610	142	151	0.283	***7.0***	***0*** x ***0***	VlFx	12.5	235.0	st1
Master Bath	c 1032	47	60	0.216	***6.0***	***0*** x ***0***	VlFx	23.7	300.0	st1
Master Bedroom	c 3278	140	140	0.217	***7.0***	***0*** x ***0***	VlFx	22.5	300.0	st1

Supply Trunk Detail Table

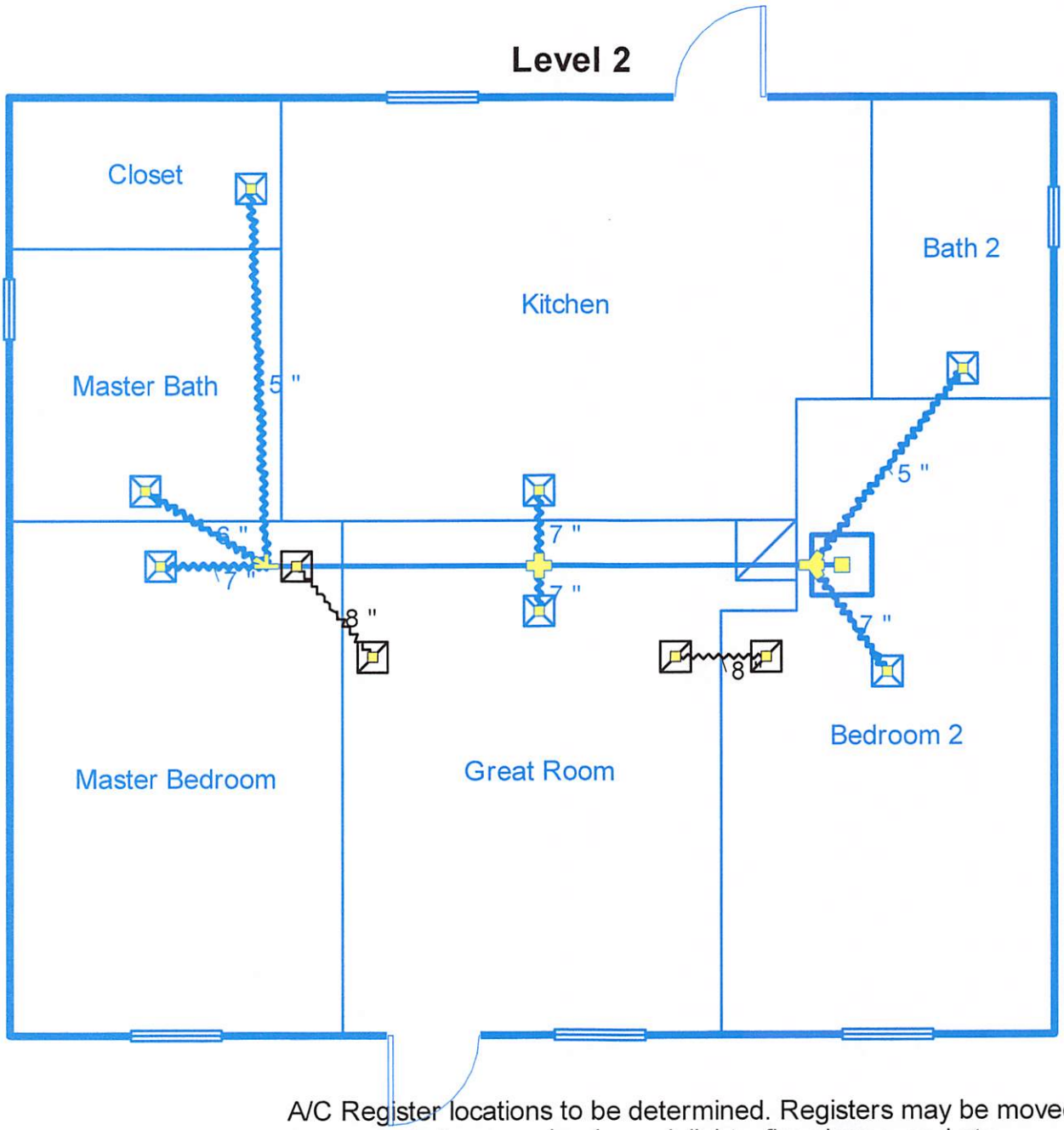
Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	498	516	0.211	0	***7.9***	***8*** x ***0***	ShtMetl	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x0	733	733	0	0	0	0	0x 0		ShMt	

Bold/italic values have been manually overridden

Level 2



A/C Register locations to be determined. Registers may be moved due to trusses, dead wood, lights, fire alarms, and etc..

Job #: Rodney Wade- Roach **Performed for:** Rodney Wade- Roach	**Spann's Heating and Air INC.** 16051 NW 30th Av e Trenton, Fl 32693 Phone: 3524636440 spann21@bellsouth.met	Scale: 1 : 65 Page 1 Right-Suite® Universal 2019 19.0.15 RSU08917 2021-Jun-10 10:40:06 ...soft HVAC\Rodney Wade- Roach.rup