

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Rodney Wade- Caldwell
 Street: Rodney Wade- Caldwell
 City, State, Zip: Ft. White, FL,
 Owner: Rodney Wade- Caldwell
 Design Location: FL, Gainesville

Builder Name: Spann's Heating and Air INC.
 Permit Office:
 Permit Number:
 Jurisdiction:
 County: Columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Single-family
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 (ft ²)	1592
Conditioned floor area below grade (ft ²)	0
7. Windows(195.0 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.40 195.00 ft ²
SHGC:	SHGC=0.20
b. U-Factor:	N/A ft ²
SHGC:	
c. U-Factor:	N/A ft ²
SHGC:	
d. U-Factor:	N/A ft ²
SHGC:	
Area Weighted Average Overhang Depth:	1.000 ft.
Area Weighted Average SHGC:	0.200
8. Floor Types (1590.6 sqft.)	Insulation Area
a. Raised Floor	R=19.0 1590.60 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²

9. Wall Types (1384.0 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 1384.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
10. Ceiling Types (1592.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 1592.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
11. Ducts	R ft ²
a. Sup: Attic, Ret: Attic, AH: Mechanical	6 150
12. Cooling systems	kBtu/hr Efficiency
a. Central Unit	36.0 SEER:14.00
13. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	36.0 HSPF:8.20
14. Hot water systems	
a. Electric	Cap: 40 gallons EF: 0.920
b. Conservation features	None
15. Credits	None

Glass/Floor Area: 0.122

Total Proposed Modified Loads: 50.55

Total Baseline Loads: 54.41

PASS

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

PREPARED BY: [Signature]
 DATE: 11-24-2020

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

OWNER/AGENT: [Signature]
 DATE: 11/24/20

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 0.030 Qn for whole house.

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 93

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. <u>New (From Plans)</u>	12. Ducts, location & insulation level	
2. Single-family or multiple-family	2. <u>Single-family</u>	a) Supply ducts	R <u>6.0</u>
3. No. of units (if multiple-family)	3. <u>1</u>	b) Return ducts	R <u>6.0</u>
4. Number of bedrooms	4. <u>2</u>	c) AHU location	Attic/Attic
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling system:	Capacity <u>36.0</u>
6. Conditioned floor area (sq. ft.)	6. <u>1592</u>	a) Split system	SEER <u>14.0</u>
7. Windows, type and area		b) Single package	SEER <u> </u>
a) U-factor:(weighted average)	7a. <u>0.400</u>	c) Ground/water source	SEER/COP <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	7b. <u>0.200</u>	d) Room unit/PTAC	EER <u> </u>
c) Area	7c. <u>195.0</u>	e) Other	<u> </u>
8. Skylights		14. Heating system:	Capacity <u>36.0</u>
a) U-factor:(weighted average)	8a. <u>NA</u>	a) Split system heat pump	HSPF <u>8.2</u>
b) Solar Heat Gain Coefficient (SHGC)	8b. <u>NA</u>	b) Single package heat pump	HSPF <u> </u>
9. Floor type, insulation level:		c) Electric resistance	COP <u> </u>
a) Slab-on-grade (R-value)	9a. <u> </u>	d) Gas furnace, natural gas	AFUE <u> </u>
b) Wood, raised (R-value)	9b. <u>19.0</u>	e) Gas furnace, LPG	AFUE <u> </u>
c) Concrete, raised (R-value)	9c. <u> </u>	f) Other	<u> </u>
10. Wall type and insulation:		15. Water heating system	
A. Exterior:		a) Electric resistance	EF <u>0.92</u>
1. Wood frame (Insulation R-value)	10A1. <u>13.0</u>	b) Gas fired, natural gas	EF <u> </u>
2. Masonry (Insulation R-value)	10A2. <u> </u>	c) Gas fired, LPG	EF <u> </u>
B. Adjacent:		d) Solar system with tank	EF <u> </u>
1. Wood frame (Insulation R-value)	10B1. <u> </u>	e) Dedicated heat pump with tank	EF <u> </u>
2. Masonry (Insulation R-value)	10B2. <u> </u>	f) Heat recovery unit	HeatRec% <u> </u>
11. Ceiling type and insulation level		g) Other	<u> </u>
a) Under attic	11a. <u>38.0</u>	16. HVAC credits claimed (Performance Method)	
b) Single assembly	11b. <u> </u>	a) Ceiling fans	<u> </u>
c) Knee walls/skylight walls	11c. <u> </u>	b) Cross ventilation	<u>No</u>
d) Radiant barrier installed	11d. <u>No</u>	c) Whole house fan	<u>No</u>
		d) Multizone cooling credit	<u> </u>
		e) Multizone heating credit	<u> </u>
		f) Programmable thermostat	<u>No</u>

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

I certify that this home has complied with the Florida Building Code, Energy Conservation, 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: [Signature]

Date: 11/24/20

Address of New Home: Rodney Wade- Caldwell

City/FL Zip: Ft. White, FL

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Rodney Wade- Caldwell	Bedrooms:	2	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1592	Lot #	
Owner Name:	Rodney Wade- Caldwell	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- Caldwell
Permit Office:		Cross Ventilation:	No	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Ft. White , FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	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	1592	14328

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Bedroom 3	163	1467	No	2	1	1	No	Yes	Yes
2	Mechanical	89	801	No	0		1	No	Yes	Yes
3	Bedroom 2	153	1377	No	2	1	1	No	Yes	Yes
4	Bath 2	50	450	No	0		1	No	Yes	Yes
5	Kitchen	287	2583	No	0		1	No	Yes	Yes
6	Great Room	401	3609	No	0		1	No	Yes	Yes
7	Master Bedroom	215	1935	No	2		1	No	Yes	Yes
8	Master Bath	85	765	No	0		1	No	Yes	Yes
9	Closet	55	495	No	0		1	No	Yes	Yes
10	Laundry	94	846	No	0		1	No	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Raised Floor	Bedroom 3	----	----	162.5 ft²	19	0	1	0
_____	2	Raised Floor	Mechanical	----	----	89 ft²	19	0	1	0
_____	3	Raised Floor	Bedroom 2	----	----	152.5 ft²	19	0	1	0
_____	4	Raised Floor	Bath 2	----	----	50 ft²	19	0	1	0
_____	5	Raised Floor	Kitchen	----	----	287 ft²	19	0	1	0
_____	6	Raised Floor	Great Room	----	----	401 ft²	19	0	1	0
_____	7	Raised Floor	Master Bedroom	----	----	214.5 ft²	19	0	1	0

INPUT SUMMARY CHECKLIST REPORT

FLOORS

✓	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
✓	8	Raised Floor	Master Bath	----	----	85 ft ²	19	0	1	0
✓	9	Raised Floor	Closet	----	----	55.3 ft ²	19	0	1	0
✓	10	Raised Floor	Laundry	----	----	93.8 ft ²	19	0	1	0

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
✓	1	Gable or Shed	Metal	1677 ft ²	264 ft ²	Unfinishe	0.6	No	0.4	No	0	18.4

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
✓	1	Full attic	Vented	300	1591 ft ²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
✓	1	Under Attic (Vented)	Bedroom 3	38	Blown	163 ft ²	0.1	Wood
✓	2	Under Attic (Vented)	Mechanical	38	Blown	89 ft ²	0.1	Wood
✓	3	Under Attic (Vented)	Bedroom 2	38	Blown	153 ft ²	0.1	Wood
✓	4	Under Attic (Vented)	Bath 2	38	Blown	50 ft ²	0.1	Wood
✓	5	Under Attic (Vented)	Kitchen	38	Blown	287 ft ²	0.1	Wood
✓	6	Under Attic (Vented)	Great Room	38	Blown	401 ft ²	0.1	Wood
✓	7	Under Attic (Vented)	Master Bedroom	38	Blown	215 ft ²	0.1	Wood
✓	8	Under Attic (Vented)	Master Bath	38	Blown	85 ft ²	0.1	Wood
✓	9	Under Attic (Vented)	Closet	38	Blown	55 ft ²	0.1	Wood
✓	10	Under Attic (Vented)	Laundry	38	Blown	94 ft ²	0.1	Wood

WALLS

✓	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
✓	1	N	Exterior	Frame - Wood	Bedroom 3	13	14	0	8	0	112.0 ft ²	0	0.25	0.8	0
✓	2	W	Exterior	Frame - Wood	Bedroom 3	13	10	0	8	0	80.0 ft ²	0	0.25	0.8	0
✓	3	N	Exterior	Frame - Wood	Mechanical	13	9	6	8	0	76.0 ft ²	0	0.25	0.8	0
✓	4	E	Exterior	Frame - Wood	Mechanical	13	11	6	8	0	92.0 ft ²	0	0.25	0.8	0
✓	5	W	Exterior	Frame - Wood	Bedroom 2	13	12	6	8	0	100.0 ft ²	0	0.25	0.8	0
✓	6	E	Exterior	Frame - Wood	Bath 2	13	2	6	8	0	20.0 ft ²	0	0.25	0.8	0
✓	7	S	Exterior	Frame - Wood	Kitchen	13	14	0	8	0	112.0 ft ²	0	0.25	0.8	0
✓	8	W	Exterior	Frame - Wood	Kitchen	13	20	6	8	0	164.0 ft ²	0	0.25	0.8	0
✓	9	N	Exterior	Frame - Wood	Great Room	13	7	6	8	0	60.0 ft ²	0	0.25	0.8	0
✓	10	S	Exterior	Frame - Wood	Great Room	13	13	0	8	0	104.0 ft ²	0	0.25	0.8	0
✓	11	E	Exterior	Frame - Wood	Master Bedro	13	13	0	8	0	104.0 ft ²	0	0.25	0.8	0
✓	12	S	Exterior	Frame - Wood	Master Bedro	13	16	6	8	0	132.0 ft ²	0	0.25	0.8	0

INPUT SUMMARY CHECKLIST REPORT

WALLS

✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
13	E	Exterior	Frame - Wood	Master Bath	13	8	6	8	0	68.0 ft²	0	0.25	0.8	0
14	N	Exterior	Frame - Wood	Laundry	13	12	6	8	0	100.0 ft²	0	0.25	0.8	0
15	E	Exterior	Frame - Wood	Laundry	13	7	6	8	0	60.0 ft²	0	0.25	0.8	0

DOORS

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

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
1	N	1	Vinyl	Double (Clear)	Yes	0.4	0.2	N	30.0 ft²	1 ft 0 in	1 ft 0 in	None	None
2	W	5	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	1 ft 0 in	1 ft 0 in	None	None
3	S	7	Vinyl	Double (Clear)	Yes	0.4	0.2	N	30.0 ft²	1 ft 0 in	1 ft 0 in	None	None
4	W	8	Vinyl	Double (Clear)	Yes	0.4	0.2	N	9.0 ft²	1 ft 0 in	1 ft 0 in	None	None
5	W	8	Vinyl	Double (Clear)	Yes	0.4	0.2	N	30.0 ft²	1 ft 0 in	1 ft 0 in	None	None
6	S	10	Vinyl	Double (Clear)	Yes	0.4	0.2	N	30.0 ft²	1 ft 0 in	1 ft 0 in	None	None
7	S	12	Vinyl	Double (Clear)	Yes	0.4	0.2	N	30.0 ft²	1 ft 0 in	1 ft 0 in	None	None
8	E	13	Vinyl	Double (Clear)	Yes	0.4	0.2	N	6.0 ft²	1 ft 0 in	1 ft 0 in	None	None
9	N	14	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 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)	.0004	1671.6	91.77	172.58	.3169	7

HEATING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Block	Ducts
1	Electric Heat Pump/	Split	HSPF:8.2	36 kBtu/hr	1	sys#1

COOLING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
1	Central Unit/	Split	SEER: 14	36 kBtu/hr	1080 cfm	0.7	1	sys#1

INPUT SUMMARY CHECKLIST REPORT

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Mechanical	0.92	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	R-Value	Area	--- Return --- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	Cool
✓	1	Attic	6	150 ft²	Attic	150 ft²	Proposed Qn	Mechanical	--- cfm	47.8 cfm	0.03	0.50	1	1

TEMPERATURES

Programable Thermostat: N

Ceiling Fans:

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

Thermostat Schedule: HERS 2006 Reference

Hours

Schedule Type		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	Bedroom 3
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Mechanical
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Bedroom 2
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Bath 2
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Kitchen
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Great Room
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Master Bedroom
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Master Bath
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Closet
Default(8 lbs/sq.ft.)	ft²	ft	0.3	Laundry

Name:

Signature: _____

Rating Compant:

Date: _____



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

Job: Rodney Wade- Caldwell

Date: Nov 24, 2020

By:

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

Project Information

For: Rodney Wade- Caldwell

Design Information

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

HEATING EQUIPMENT

Make Comfortmaker
Trade 14 SEER N SERIES R410A HP
Model N4H436GKG21
AHRI ref 9661635
Efficiency 8.2 HSPF
Heating input
Heating output 33800 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 1100 cfm
Air flow factor 0.051 cfm/Btuh
Static pressure 0.70 in H2O
Space thermostat
Capacity balance point = 23 °F

Backup: n/a n/a

Input = 6 kW. Output = 21551 Btuh. 100 AFUE

COOLING EQUIPMENT

Make Comfortmaker
Trade 14 SEER N SERIES R410A HP
Cond N4H436GKG21
Coil FEM4X3600BL
AHRI ref 9661635
Efficiency 11.5 EER, 14 SEER
Sensible cooling 23100 Btuh
Latent cooling 9900 Btuh
Total cooling 33000 Btuh
Actual air flow 1100 cfm
Air flow factor 0.043 cfm/Btuh
Static pressure 0.70 in H2O
Load sensible heat ratio 0.90

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bedroom 3	163	2726	2481	139	105
Mechanical	89	1585	1502	81	64
Bedroom 2	153	1623	3194	83	136
Bath 2	50	316	205	16	9
Kitchen	287	4710	8532	240	363
Great Room	401	4346	4027	222	171
Master Bedroom	215	3234	2897	165	123
Master Bath	85	943	1031	48	44
Closet	55	178	146	9	6
Laundry	94	1898	1860	97	79

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



Right-Suite® Universal 2019 19.0.15 RSU08917

...ments\Wrightsoft HVAC\Rodney Wade- Caldwell.rup Calc = MJ8 Front Door faces: SW

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Entire House	d	1591	21559	25876	1100	1100
Other equip loads			0	0		
Equip. @ 0.97 RSM				25074		
Latent cooling				2987		
TOTALS		1591	21559	28060	1100	1100

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



Right-Suite® Universal 2019 19.0.15 RSU08917

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...ments\Wrightsoft HVAC\Rodney Wade- Caldwell.rup Calc = MJ8 Front Door faces: SW