

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Rodney Wade- Nelson
 Street: Rodney Wade- Nelson
 City, State, Zip: Fort White, FL,
 Owner: Rodney Wade- Nelson
 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	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	4
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft ²)	2163
Conditioned floor area below grade (ft ²)	0
7. Windows (228.0 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.40 150.00 ft ²
SHGC:	SHGC=0.20
b. U-Factor:	Dbl, default 48.00 ft ²
SHGC:	Clear, default
c. U-Factor:	Dbl, default 30.00 ft ²
SHGC:	Clear, default
Area Weighted Average Overhang Depth:	0.000 ft.
Area Weighted Average SHGC:	0.342
8. Skylights	Area
c. U-Factor:(AVG)	N/A ft ²
SHGC(AVG):	N/A
9. Floor Types (2158.4 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 2158.40 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²

10. Wall Types (2164.5 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 2164.50 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
11. Ceiling Types (2163.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 2163.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
12. Ducts	R ft ²
a. Sup: Attic, Ret: Attic, AH: Great Room	6 120
13. Cooling systems	kBtu/hr Efficiency
a. Central Unit	60.0 SEER:14.00
14. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	57.0 HSPF:8.20
15. Hot water systems	
a. Propane Tankless	Cap: 1 gallons
	EF: 0.590
b. Conservation features	
None	
16. Credits	None

Glass/Floor Area: 0.105

Total Proposed Modified Loads: 51.58

Total Baseline Loads: 59.14

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: 3-29-2021

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

OWNER/AGENT: [Signature]
 DATE: 03/29/21

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 0.020 Qn for whole house.

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Rodney Wade- Nelson	Bedrooms:	4	Address Type:	Street Address
Building Type:	User	Conditioned Area:	2163	Lot #	
Owner Name:	Rodney Wade- Nelson	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- Nelson
Permit Office:		Cross Ventilation:	No	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Fort White , FL ,
Family Type:	Detached				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

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

BLOCKS

Number	Name	Area	Volume
1	Entire House	2163	21813

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Bedroom 2	150	1350	No	2	1	1	No	Yes	Yes
2	Bath 2	72	644	No	0		1	No	Yes	Yes
3	Pantry	34	304	No	0		1	No	Yes	Yes
4	Bedroom 3	149	1341	No	2	1	1	No	Yes	Yes
5	Bath 3	58	522	No	0		1	No	Yes	Yes
6	Bedroom 4	149	1341	No	2	1	1	No	Yes	Yes
7	Den	158	1422	No	0		1	No	Yes	Yes
8	Kitchen	197	2364	No	0		1	No	Yes	Yes
9	Dining	213	2556	No	0		1	No	Yes	Yes
10	Great Room	372	4464	No	0		1	No	Yes	Yes
11	Master Bedroom	233	2097	No	2	1	1	No	Yes	Yes
12	Master Bath	144	1296	No	0		1	No	Yes	Yes
13	Laundry	140	1256	No	0		1	No	Yes	Yes
14	Closet	75	675	No	0		1	No	Yes	Yes
15	Toilet	19	173	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	Bedroom 2	24.5 ft	0	149.5 ft²	----	0	1	0
_____	2	Slab-On-Grade Edge Insulatio	Bath 2	18.5 ft	0	71.5 ft²	----	0	1	0
_____	3	Slab-On-Grade Edge Insulatio	Pantry	4.5 ft	0	33.8 ft²	----	0	1	0

INPUT SUMMARY CHECKLIST REPORT

FLOORS

✓	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	4	Slab-On-Grade Edge Insulatio	Bedroom 3	11 ft	0	148.5 ft²	----	0	1	0
_____	5	Slab-On-Grade Edge Insulatio	Bath 3	5.5 ft	0	57.8 ft²	----	0	1	0
_____	6	Slab-On-Grade Edge Insulatio	Bedroom 4	11 ft	0	148.5 ft²	----	0	1	0
_____	7	Slab-On-Grade Edge Insulatio	Den	35.5 ft	0	157.5 ft²	----	0	1	0
_____	8	Slab-On-Grade Edge Insulatio	Kitchen	6.5 ft	0	197 ft²	----	0	1	0
_____	9	Slab-On-Grade Edge Insulatio	Dining	12.5 ft	0	212.5 ft²	----	0	1	0
_____	10	Slab-On-Grade Edge Insulatio	Great Room	18.5 ft	0	372 ft²	----	0	1	0
_____	11	Slab-On-Grade Edge Insulatio	Master Bedroom	30.5 ft	0	232.5 ft²	----	0	1	0
_____	12	Slab-On-Grade Edge Insulatio	Master Bath	10.5 ft	0	143.5 ft²	----	0	1	0
_____	13	Slab-On-Grade Edge Insulatio	Laundry	33 ft	0	139.5 ft²	----	0	1	0
_____	14	Slab-On-Grade Edge Insulatio	Closet	6 ft	0	75 ft²	----	0	1	0
_____	15	Slab-On-Grade Edge Insulatio	Toilet	1 ft	0	19.3 ft²	----	0	1	0

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	Metal	2275 ft²	360 ft²	Unfinishe	N	0.35	No	0.4	No	0	18.43

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	2158 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Bedroom 2	38	Blown	150 ft²	0.1	Wood
_____	2	Under Attic (Vented)	Bath 2	38	Blown	72 ft²	0.1	Wood
_____	3	Under Attic (Vented)	Pantry	38	Blown	34 ft²	0.1	Wood
_____	4	Under Attic (Vented)	Bedroom 3	38	Blown	149 ft²	0.1	Wood
_____	5	Under Attic (Vented)	Bath 3	38	Blown	58 ft²	0.1	Wood
_____	6	Under Attic (Vented)	Bedroom 4	38	Blown	149 ft²	0.1	Wood
_____	7	Under Attic (Vented)	Den	38	Blown	158 ft²	0.1	Wood
_____	8	Under Attic (Vented)	Kitchen	38	Blown	197 ft²	0.1	Wood
_____	9	Under Attic (Vented)	Dining	38	Blown	213 ft²	0.1	Wood
_____	10	Under Attic (Vented)	Great Room	38	Blown	372 ft²	0.1	Wood
_____	11	Under Attic (Vented)	Master Bedroom	38	Blown	233 ft²	0.1	Wood
_____	12	Under Attic (Vented)	Master Bath	38	Blown	144 ft²	0.1	Wood
_____	13	Under Attic (Vented)	Laundry	38	Blown	140 ft²	0.1	Wood
_____	14	Under Attic (Vented)	Closet	38	Blown	75 ft²	0.1	Wood
_____	15	Under Attic (Vented)	Toilet	38	Blown	19 ft²	0.1	Wood

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%
___	1	N	Exterior	Frame - Wood	Bedroom 2	13	11	6	9	0	103.5 ft²	0	0.25	0.8	0
___	2	W	Exterior	Frame - Wood	Bedroom 2	13	13	0	9	0	117.0 ft²	0	0.25	0.8	0
___	3	N	Exterior	Frame - Wood	Bath 2	13	5	6	9	0	49.5 ft²	0	0.25	0.8	0
___	4	E	Exterior	Frame - Wood	Bath 2	13	13	0	9	0	117.0 ft²	0	0.25	0.8	0
___	5	W	Exterior	Frame - Wood	Pantry	13	4	6	9	0	40.5 ft²	0	0.25	0.8	0
___	6	W	Exterior	Frame - Wood	Bedroom 3	13	11	0	9	0	99.0 ft²	0	0.25	0.8	0
___	7	W	Exterior	Frame - Wood	Bath 3	13	5	6	9	0	49.5 ft²	0	0.25	0.8	0
___	8	W	Exterior	Frame - Wood	Bedroom 4	13	11	0	9	0	99.0 ft²	0	0.25	0.8	0
___	9	E	Exterior	Frame - Wood	Den	13	9	0	9	0	81.0 ft²	0	0.25	0.8	0
___	10	S	Exterior	Frame - Wood	Den	13	17	6	9	0	157.5 ft²	0	0.25	0.8	0
___	11	W	Exterior	Frame - Wood	Den	13	9	0	9	0	81.0 ft²	0	0.25	0.8	0
___	12	N	Exterior	Frame - Wood	Kitchen	13	6	6	12	0	78.0 ft²	0	0.25	0.8	0
___	13	N	Exterior	Frame - Wood	Dining	13	12	6	12	0	150.0 ft²	0	0.25	0.8	0
___	14	S	Exterior	Frame - Wood	Great Room	13	18	6	12	0	222.0 ft²	0	0.25	0.8	0
___	15	N	Exterior	Frame - Wood	Master Bedro	13	15	6	9	0	139.5 ft²	0	0.25	0.8	0
___	16	E	Exterior	Frame - Wood	Master Bedro	13	15	0	9	0	135.0 ft²	0	0.25	0.8	0
___	17	E	Exterior	Frame - Wood	Master Bath	13	10	6	9	0	94.5 ft²	0	0.25	0.8	0
___	18	E	Exterior	Frame - Wood	Laundry	13	9	0	9	0	81.0 ft²	0	0.25	0.8	0
___	19	S	Exterior	Frame - Wood	Laundry	13	15	6	9	0	139.5 ft²	0	0.25	0.8	0
___	20	W	Exterior	Frame - Wood	Laundry	13	8	6	9	0	76.5 ft²	0	0.25	0.8	0
___	21	E	Exterior	Frame - Wood	Closet	13	6	0	9	0	54.0 ft²	0	0.25	0.8	0

DOORS

✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
___	1	E	Insulated	Bath 2	None	.4	3		7		21 ft²
___	2	N	Insulated	Dining	None	.4	6		7		42 ft²
___	3	S	Insulated	Great Room	None	.4	3		7		21 ft²
___	4	N	Insulated	Master Bedro	None	.4	6		7		42 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	15.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	2	W	2	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	3	W	6	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	4	W	8	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	5	S	10	Vinyl	Double (Clear)	Yes	0.4	0.2	N	30.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	6	N	12	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	7	N	13	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	8	S	14	Vinyl	Double (Clear)	Yes	0.4	0.2	N	30.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	9	E	16	Vinyl	Double (Clear)	No	0.55	0.7	N	30.0 ft²	0 ft 0 in	0 ft 0 in	None	None
___	10	E	17	Vinyl	Double (Clear)	No	0.57	0.56	N	18.0 ft²	0 ft 0 in	0 ft 0 in	None	None

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	Separation	Int Shade	Screening
✓	11	S	19	Vinyl	Double (Clear)	No	0.57	0.56	N	30.0 ft²	0 ft 0 in	0 ft 0 in	None	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000448	2543.9	139.57	262.02	.1505	7

HEATING SYSTEM

✓	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
✓	1	Electric Heat Pump/	Split	Singl	HSPF:8.2	57 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	60 kBtu/hr	1800 cfm	0.7	1	sys#1

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Propane	Tankless	Exterior	0.59	1 gal	70 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	120 ft²	Attic	120 ft²	Proposed Qn	Great Roo	--- cfm	43.3 cfm	0.02	0.50	1	1

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programmable Thermostat: N

Ceiling Fans:

Cooling	☒ Jan	☒ Feb	☒ Mar	☒ Apr	☒ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☒ Oct	☒ Nov	☒ Dec
Heating	☒ Jan	☒ Feb	☒ Mar	☒ Apr	☒ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☒ Oct	☒ Nov	☒ Dec
Venting	☒ Jan	☒ Feb	☒ Mar	☒ Apr	☒ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☒ Oct	☒ Nov	☒ 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 ft ²	0 ft	0.3	Bedroom 2
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Bath 2
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Pantry
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Bedroom 3
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Bath 3
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Bedroom 4
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Den
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Kitchen
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Dining
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Great Room
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Master Bedroom
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Master Bath
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Laundry
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Closet
Default(8 lbs/sq.ft.	ft ²	ft	0.3	Toilet



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

Job: Rodney Wade- Nelson
Date: Mar 29, 2021
By:

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

Project Information

For: Rodney Wade- Nelson

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 N4H460GKG10
AHRI ref 9658602
Efficiency 8.2 HSPF
Heating input
Heating output 54500 Btuh @ 47°F
Temperature rise 26 °F
Actual air flow 1900 cfm
Air flow factor 0.048 cfm/Btuh
Static pressure 0.70 in H2O
Space thermostat
Capacity balance point = 26 °F

Backup: n/a n/a

Input = 11 kW. Output = 36281 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Comfortmaker
Trade 14 SEER N SERIES R410A HP
Cond N4H460GKG10
Coil FXM4X6000AL
AHRI ref 9658602
Efficiency 11.5 EER, 14 SEER
Sensible cooling 39900 Btuh
Latent cooling 17100 Btuh
Total cooling 57000 Btuh
Actual air flow 1900 cfm
Air flow factor 0.049 cfm/Btuh
Static pressure 0.70 in H2O
Load sensible heat ratio 0.88

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bedroom 2	150	3754	4037	181	198
Bath 2	72	2883	1284	139	63
Pantry	34	589	230	28	11
Bedroom 3	149	1825	3306	88	162
Bath 3	58	742	314	36	15
Bedroom 4	149	1825	3306	88	162
Den	158	5093	3897	246	191
Kitchen	197	1498	2812	72	138
Dining	213	3488	2316	168	114
Great Room	372	4311	4417	208	217
Master Bedroom	233	5696	5996	275	295
Master Bath	144	2055	3175	99	156
Laundry	140	4767	3182	230	156
Closet	75	825	367	40	18

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



Right-Suite® Universal 2019 19.0.15 RSU08917

2021-Mar-29 14:46:57

Page 1

...cuments\Wrightsoft HVAC\Rodney Wade- Nelson.rup Calc = MJ8 Front Door faces: N

Toilet	19	26	39	1	2
Entire House	2158	39378	38679	1900	1900
Other equip loads		0	0		
Equip. @ 0.97 RSM			37480		
Latent cooling			5170		
TOTALS	2158	39378	42650	1900	1900

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



Right-Suite® Universal 2019 19.0.15 RSU08917

...cuments\Wrightsoft HVAC\Rodney Wade- Nelson.rup Calc = MJ8 Front Door faces: N

2021-Mar-29 14:46:57

Page 2



Project Summary

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Nelson
Date: Mar 29, 2021
By:

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

Project Information

For: Rodney Wade- Nelson

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	27876 Btuh
Ducts	11502 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	39378 Btuh

Sensible Cooling Equipment Load Sizing

Structure	24378 Btuh
Ducts	14300 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	37480 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1600 Btuh
Ducts	3570 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	5170 Btuh

	Heating	Cooling
Area (ft ²)	2158	2158
Volume (ft ³)	21769	21769
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	116	58

Equipment Total Load (Sen+Lat)	42650 Btuh
Req. total capacity at 0.70 SHR	4.5 ton

Heating Equipment Summary

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Model	N4H460GKG10
AHRI ref	9658602
Efficiency	8.2 HSPF
Heating input	54500 Btuh @ 47°F
Temperature rise	26 °F
Actual air flow	1900 cfm
Air flow factor	0.048 cfm/Btuh
Static pressure	0.70 in H2O
Space thermostat	
Capacity balance point = 26 °F	
Backup: n/a n/a	
Input = 11 kW, Output = 36281 Btuh, 100 AFUE	

Cooling Equipment Summary

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Cond	N4H460GKG10
Coil	FXM4X6000AL
AHRI ref	9658602
Efficiency	11.5 EER, 14 SEER
Sensible cooling	39900 Btuh
Latent cooling	17100 Btuh
Total cooling	57000 Btuh
Actual air flow	1900 cfm
Air flow factor	0.049 cfm/Btuh
Static pressure	0.70 in H2O
Load sensible heat ratio	0.88

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



Right-Suite® Universal 2019 19.0.15 RSU08917

...cuments\Wrightsoft HVAC\Rodney Wade- Nelson.rup Calc = MJ8 Front Door faces: N

2021-Mar-29 14:46:57

Page 1

Right-J® Worksheet

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Nelson

Date: Mar 29, 2021

By:

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

1	Room name					Entire House				Bedroom 2				
2	Exposed wall					228.0 ft				24.5 ft				
3	Room height					10.1 ft				9.0 ft				
4	Room dimensions					d				11.5 x 13.0 ft				
5	Room area					2158.3 ft²				149.5 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	521	401	1334	887	104	92	305	203
11	G	1D-c2ov	0.570	n	20.86	21.29	36	0	751	766	12	0	250	255
	D	11J0	0.600	n	21.96	17.61	84	84	1845	1479	0	0	0	0
	W	12C-0sw	0.091	e	3.33	2.22	563	494	1644	1094	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	48	0	1001	3042	0	0	0	0
	D	11J0	0.600	e	21.96	17.61	21	21	461	370	0	0	0	0
	W	12C-0sw	0.091	s	3.33	2.22	519	426	1419	944	0	0	0	0
	G	1D-c2ov	0.570	s	20.86	25.00	72	0	1502	1800	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	563	527	1754	1167	117	105	350	233
	G	1D-c2ov	0.570	w	20.86	63.38	36	0	751	2282	12	0	250	761
	C	16B-38md	0.026	-	0.95	1.37	2158	2158	2054	2966	150	150	142	205
F	22A-tpi	0.989	-	36.20	0.00	2158	228	8253	0	150	25	887	0	
6	c) AED excursion								0				119	
	Envelope loss/gain							23229	17166			2184	1775	
12	a) Infiltration							4647	1073			473	109	
	b) Room ventilation							0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						8			1840 4300	2			460 200
	Subtotal (lines 6 to 13)								27876	24378			2658	2545
14	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
	Subtotal								27876	24378			2658	2545
15	Duct loads						41%	59%	11502	14300	41%	59%	1097	1493
	Total room load								39378	38679			3754	4037
	Air required (cfm)								1900	1900			181	198

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

Right-J® Worksheet

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Nelson

Date: Mar 29, 2021

By:

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

1	Room name					Bath 2				Pantry					
2	Exposed wall					18.5 ft				4.5 ft					
3	Room height					9.0 ft 5.5 x 13.0 ft				9.0 ft 7.5 x 4.5 ft					
4	Room dimensions					71.5 ft²				33.8 ft²					
5	Room area														
	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	50	50	165	110	0	0	0	0	
.	G	1D-c2ov	0.570	n	20.86	21.29	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	
11	W	12C-0sw	0.091	e	3.33	2.22	117	96	320	213	0	0	0	0	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	21	21	461	370	0	0	0	0	
	W	12C-0sw	0.091	s	3.33	2.22	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	s	20.86	25.00	0	0	0	0	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	41	41	135	90	
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	C	16B-38md	0.026	-	0.95	1.37	72	72	68	98	34	34	32	46	
	F	22A-tpl	0.989	-	36.20	0.00	72	19	670	0	34	5	163	0	
6	c) AED excursion									-63				-11	
	Envelope loss/gain								1683	727			330	125	
12	a) Infiltration								357	83			87	20	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230						0			0	0			0	0
	Appliances/other									0				0	0
	Subtotal (lines 6 to 13)								2041	810			417	145	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
14	Subtotal								2041	810			417	145	
15	Duct loads						41%	59%	842	475	41%	59%	172	85	
	Total room load								2883	1284			589	230	
	Air required (cfm)								139	63			28	11	

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

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

Job: Rodney Wade- Nelson

Date: Mar 29, 2021

By:

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

1	Room name					Bedroom 3					Bath 3				
2	Exposed wall					11.0 ft					5.5 ft				
3	Room height					9.0 ft					9.0 ft				
4	Room dimensions					13.5 x 11.0 ft					10.5 x 5.5 ft				
5	Room area					148.5 ft²					57.8 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	
11	D	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0	
		11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0	
		12C-0sw	0.091	e	3.33	2.22	0	0	0	0	0	0	0	0	
	W	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
		11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
		12C-0sw	0.091	s	3.33	2.22	0	0	0	0	0	0	0	0	
	D	1D-c2ov	0.570	s	20.86	25.00	0	0	0	0	0	0	0	0	
		11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0	
		12C-0sw	0.091	w	3.33	2.22	99	87	290	193	50	50	165	110	
	W	1D-c2ov	0.570	w	20.86	63.38	12	0	250	761	0	0	0	0	
		16B-38md	0.026	-	0.95	1.37	149	149	141	204	58	58	55	79	
22A-tpl		0.989	-	36.20	0.00	149	11	398	0	58	6	199	0		
6	c) AED excursion								217				-16		
	Envelope loss/gain							1080	1375			419	174		
12	a) Infiltration							213	49			106	25		
	b) Room ventilation							0	0			0	0		
13	Internal gains: Occupants @ 230 Appliances/other					2			460	200	0			0	
	Subtotal (lines 6 to 13)							1292	2084			525	198		
14	Less external load							0	0			0	0		
	Less transfer							0	0			0	0		
	Redistribution							0	0			0	0		
	Subtotal							1292	2084			525	198		
15	Duct loads					41%	59%	533	1222	41%	59%	217	116		
	Total room load							1825	3306			742	314		
	Air required (cfm)							88	162			36	15		

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

1	Room name					Bedroom 4					Den				
2	Exposed wall					11.0 ft					35.5 ft				
3	Room height					9.0 ft					9.0 ft				
4	Room dimensions					13.5 x 11.0 ft					17.5 x 9.0 ft				
5	Room area					148.5 ft²					157.5 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	
11	G	1D-c2ov	0.570	n	20.86	21.29	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	81	81	270	179	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.33	2.22	0	0	0	0	158	134	445	296	
	G	1D-c2ov	0.570	s	20.86	25.00	0	0	0	0	24	0	501	600	
	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	99	87	290	193	81	81	270	179	
	G	1D-c2ov	0.570	w	20.86	63.38	12	0	250	761	0	0	0	0	
	C	16B-38md	0.026	-	0.95	1.37	149	149	141	204	158	158	150	216	
F	22A-tpl	0.989	-	36.20	0.00	149	11	398	0	158	36	1285	0		
6	c) AED excursion								217				-73		
	Envelope loss/gain							1080	1375			2920	1398		
12	a) Infiltration							213	49			686	158		
	b) Room ventilation							0	0			0	0		
13	Internal gains: Occupants @ 230 Appliances/other						2			460 200	0			0 900	
	Subtotal (lines 6 to 13)								1292	2084			3606	2456	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
	Subtotal								1292	2084			3606	2456	
15	Duct loads						41%	59%	533	1222	41%	59%	1488	1441	
	Total room load								1825	3306			5093	3897	
	Air required (cfm)								88	162			246	191	

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

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

1	Room name					Kitchen					Dining				
2	Exposed wall					6.5 ft					12.5 ft				
3	Room height					12.0 ft					12.0 ft				
4	Room dimensions					1.0 x 197.0 ft					12.5 x 17.0 ft				
5	Room area					197.0 ft²					212.5 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	78	66	220	146	150	96	320	213	
11	G	1D-c2ov	0.570	n	20.86	21.29	12	0	250	255	12	0	250	255	
		11J0	0.600	n	21.96	17.61	0	0	0	0	42	42	922	740	
	W	12C-0sw	0.091	e	3.33	2.22	0	0	0	0	0	0	0	0	
		1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
		12C-0sw	0.091	s	3.33	2.22	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	s	20.86	25.00	0	0	0	0	0	0	0	0	
		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	
		1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	C	16B-38md	0.026	-	0.95	1.37	197	197	187	271	213	213	202	292	
F	22A-tpl	0.989	-	36.20	0.00	197	7	235	0	213	13	452	0		
6	c) AED excursion								-139				-114		
	Envelope loss/gain							893	533			2147	1385		
12	a) Infiltration							167	39			322	74		
	b) Room ventilation							0	0			0	0		
13	Internal gains: Occupants @ 230 Appliances/other					0			0	1200	0			0	
	Subtotal (lines 6 to 13)								1060	1772			2469	1460	
14	Less external load							0	0			0	0		
	Less transfer							0	0			0	0		
	Redistribution							0	0			0	0		
	Subtotal							1060	1772			2469	1460		
15	Duct loads					41%	59%	438	1040	41%	59%	1019	856		
	Total room load							1498	2812			3488	2316		
	Air required (cfm)							72	138			168	114		

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

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

1	Room name					Great Room					Master Bedroom				
2	Exposed wall					18.5 ft					30.5 ft				
3	Room height					12.0 ft					9.0 ft				
4	Room dimensions					1.0 x 372.0 ft					15.5 x 15.0 ft				
5	Room area					372.0 ft²					232.5 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 . . . 11	W	12C-0sw	0.091	n	3.33	2.22	0	0	0	0	140	98	325	216	
	└─┬─┐ G D	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0	
		11J0	0.600	n	21.96	17.61	0	0	0	0	42	42	922	740	
		W	12C-0sw	0.091	e	3.33	2.22	0	0	0	0	135	111	370	246
	└─┬─┐ G D	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	24	0	501	1521	
		11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
		W	12C-0sw	0.091	s	3.33	2.22	222	177	590	392	0	0	0	0
	└─┬─┐ G D	1D-c2ov	0.570	s	20.86	25.00	24	0	501	600	0	0	0	0	
		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 C	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
16B-38md		0.026	-	0.95	1.37	372	372	354	511	233	233	221	319		
F		22A-tpl	0.989	-	36.20	0.00	372	19	670	0	233	31	1104	0	
6	c) AED excursion									-99				-59	
	Envelope loss/gain								2575	1774			3443	2983	
12	a) Infiltration								477	110			589	136	
	b) Room ventilation								0	0			0	0	
13	Internal gains:		Occupants @	230		0				0	2			460	
			Appliances/other							900				200	
	Subtotal (lines 6 to 13)								3052	2784			4032	3779	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
15	Subtotal								3052	2784			4032	3779	
	Duct loads						41%	59%	1259	1633	41%	59%	1664	2217	
	Total room load								4311	4417			5696	5996	
	Air required (cfm)								208	217			275	295	

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

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

Job: Rodney Wade- Nelson

Date: Mar 29, 2021

By:

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

1	Room name					Master Bath					Laundry				
2	Exposed wall					10.5 ft					33.0 ft				
3	Room height					9.0 ft 1.0 x 143.5 ft					9.0 ft 15.5 x 9.0 ft				
4	Room dimensions					143.5 ft ²					139.5 ft ²				
5	Room area														
	Ty	Construction number	U-value (Btuh/ft ² ·°F)	Or	HTM (Btuh/ft ²)		Area (ft ²) or perimeter (ft)		Load (Btuh)		Area (ft ²) 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	0.570	n	20.86	21.29	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	
11	W	12C-0sw	0.091	e	3.33	2.22	95	71	235	156	81	81	270	179	
	G	1D-c2ov	0.570	e	20.86	63.38	24	0	501	1521	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.33	2.22	0	0	0	0	140	116	385	256	
	G	1D-c2ov	0.570	s	20.86	25.00	0	0	0	0	24	0	501	600	
	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	77	77	255	170	
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	C	16B-38md	0.026	-	0.95	1.37	144	144	137	197	140	140	133	192	
	F	22A-tpi	0.989	-	36.20	0.00	144	11	380	0	140	33	1195	0	
6	c) AED excursion									80				-38	
	Envelope loss/gain								1252	1955			2737	1358	
12	a) Infiltration								203	47			638	147	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						0			0	0	0		0	500
	Subtotal (lines 6 to 13)								1455	2001			3375	2006	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
14	Subtotal								1455	2001			3375	2006	
15	Duct loads						41%	59%	600	1174	41%	59%	1392	1176	
	Total room load								2055	3175			4767	3182	
	Air required (cfm)								99	156			230	156	

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

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

1	Room name					Closet 6.0 ft					Toilet 0 ft				
2	Exposed wall					9.0 ft 12.5 x 6.0 ft heat/cool					9.0 ft 5.5 x 3.5 ft heat/cool				
3	Room height														
4	Room dimensions														
5	Room area					75.0 ft²					19.3 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	
11	G	1D-c2ov	0.570	n	20.86	21.29	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	54	54	180	120	0	0	0	0	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.33	2.22	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	s	20.86	25.00	0	0	0	0	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	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	C	16B-38md	0.026	-	0.95	1.37	75	75	71	103	19	19	18	26	
F	22A-tpl	0.989	-	36.20	0.00	75	6	217	0	19	0	0	0		
6	c) AED excursion									-18				-2	
	Envelope loss/gain								468	205			18	25	
12	a) Infiltration								116	27			0	0	
	b) Room ventilation								0	0			0	0	
13	Internal gains:		Occupants @	230			0			0	0			0	0
			Appliances/other							0				0	0
	Subtotal (lines 6 to 13)								584	231			18	25	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
	Subtotal								584	231			18	25	
15	Duct loads							41%	59%	241	136	41%	59%	8	14
	Total room load									825	367			26	39
	Air required (cfm)									40	18			1	2

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



Manual S Compliance Report

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Nelson

Date: Mar 29, 2021

By:

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

Project Information

For: Rodney Wade- Nelson

Cooling Equipment

Design Conditions

Outdoor design DB: 91.9°F	Sensible gain: 38679 Btuh	Entering coil DB: 77.3°F
Outdoor design WB: 76.2°F	Latent gain: 5170 Btuh	Entering coil WB: 72.3°F
Indoor design DB: 75.0°F	Total gain: 43849 Btuh	
Indoor RH: 85%	Estimated airflow: 1900 cfm	

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP	
Manufacturer: Comfortmaker	Model: N4H460GKG10+FXM4X6000AL
Actual airflow: 1900 cfm	
Sensible capacity: 39900 Btuh	103% of load
Latent capacity: 17100 Btuh	331% of load
Total capacity: 57000 Btuh	130% of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB: 33.4°F	Heat loss: 39378 Btuh	Entering coil DB: 68.9°F
Indoor design DB: 70.0°F		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP	
Manufacturer: Comfortmaker	Model: N4H460GKG10+FXM4X6000AL
Actual airflow: 1900 cfm	
Output capacity: 54500 Btuh	138% of load
Supplemental heat required: 0 Btuh	
Capacity balance: 26 °F	
Economic balance: -99 °F	

Backup equipment type: Elec strip	
Manufacturer: n/a	Model: n/a+n/a
Actual airflow: 1900 cfm	
Output capacity: 10.6 kW	92% of load Temp. rise: 41 °F

Meets all requirements of ACCA Manual S.



Right-Suite® Universal 2019 19.0.15 RSU08917

...cuments\Wrightsoft HVAC\Rodney Wade- Nelson.rup Calc = MJ8 Front Door faces: N

2021-Mar-29 14:46:57

Page 1



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

Form
RPER 1
15 Mar 09

Header Information

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

Building plan #:

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

REQUIRED ATTACHMENTS

Manual J1 Form (and supporting worksheets):
or MJ1AE Form* (and supporting worksheets):
OEM performance data (heating, cooling, blower):
Manual D Friction Rate Worksheet:
Duct distribution sketch:

ATTACHED

Yes	☐	No	☐
Yes	☐	No	☐
Yes	☐	No	☐
Yes	☐	No	☐
Yes	☐	No	☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 33 °F
Indoor temperature: 70 °F
Total heat loss: 39378 Btuh

Summer Design Conditions

Outdoor temperature: 92 °F
Indoor temperature: 75 °F
Grains difference: 0 gr/lb @85% RH
Sensible heat gain: 39916 Btuh
Latent heat gain: 5336 Btuh
Total heat gain: 45252 Btuh

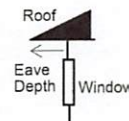
Building Construction Information

Building

Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
Number of bedrooms: 0
Conditioned floor area: 2158 ft²
Number of occupants: 8

Windows

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



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Split ASHP
Furnace, Heat pump, Boiler, etc.
Model: Comfortmaker
N4H460GKG10+FXM4X6000AL
Heating output capacity: 0 Btuh
Heat pumps - capacity at winter design outdoor conditions
Aux. heating output capacity: 36281 Btuh

Cooling Equipment Data

Equipment type: Split ASHP
Air Conditioner, Heat pump, etc.
Model: Comfortmaker
N4H460GKG10+FXM4X6000AL
Total cooling capacity: 0 Btuh
Sensible cooling capacity: 0 Btuh
Latent cooling capacity: 0 Btuh

Blower Data

Heating cfm: 1900
Cooling cfm: 1900
Static pressure: 0.70 in H2O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 1900 cfm	Longest supply duct: 358 ft	Duct Materials Used
Equipment design ESP: 0.70 in H2O	Longest return duct: 0 ft	Trunk duct: Sheet metal, Fiberglass board
Total device pressure losses: 0 in H2O	Total effective length (TEL): 358 ft	Branch duct: Round flex vinyl, Sheet metal
Available static pressure (ASP): 0.70 in H2O	Friction rate: 0.195 in/100ft Friction Rate = ASP ÷ (TEL x 100)	

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



Duct System Summary

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Nelson
Date: Mar 29, 2021
By:

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

Project Information

For: Rodney Wade- Nelson

	Heating	Cooling
External static pressure	0.70 in H ₂ O	0.70 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0.70 in H ₂ O	0.70 in H ₂ O
Supply / return available pressure	0.350 / 0.350 in H ₂ O	0.350 / 0.350 in H ₂ O
Lowest friction rate	0.195 in/100ft	0.195 in/100ft
Actual air flow	1900 cfm	1900 cfm
Total effective length (TEL)	358 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 2883	139	63	0.231	5.0	0x0	VIFx	48.2	255.0	st3
Bath 3	h 742	36	15	0.204	5.0	0x0	VIFx	34.0	310.0	st3
Bedroom 2	c 4037	181	198	0.236	7.0	0x0	VIFx	51.1	245.0	st3
Bedroom 3	c 3306	88	162	0.246	7.0	0x0	VIFx	39.2	245.0	st3
Bedroom 4	c 3306	88	162	0.246	7.0	0x0	VIFx	39.2	245.0	st3
Closet	h 825	40	18	0.366	5.0	0x0	VIFx	21.1	170.0	st1
Den	h 5093	246	191	0.196	7.0	0x0	VIFx	46.9	310.0	st3
Dining	h 3488	168	114	0.227	7.0	0x0	VIFx	28.2	280.0	st3
Great Room-A	c 4417	208	217	0.241	7.0	0x0	VIFx	20.7	270.0	st3
Kitchen	c 2812	72	138	0.237	7.0	0x0	VIFx	30.7	265.0	st3
Laundry	h 4767	230	156	0.269	6.0	0x0	VIFx	25.5	235.0	st2
Master Bath	c 3175	99	156	0.369	6.0	0x0	VIFx	19.6	170.0	st1
Master Bedroom-A	c 5996	275	295	0.275	7.0	0x0	VIFx	19.3	235.0	st2
Pantry	h 589	28	11	0.195	5.0	0x0	VIFx	48.5	310.0	st3
Toilet	c 39	1	2	0.283	5.0	0x0	VIFx	12.8	235.0	st2

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	506	453	0.269	759	8.7	8 x 12	ShtMetl	st1
st3	Peak AVF	1255	1273	0.195	721	18.0	0 x 0	RectFbg	st1
st1	Peak AVF	1900	1900	0.195	871	20.0	0 x 0	RectFbg	

Bold/italic values have been manually overridden



Right-Suite® Universal 2019 19.0.15 RSU08917

...cuments\Wrightsoft HVAC\Rodney Wade- Nelson.rup Calc = MJ8 Front Door faces: N

2021-Mar-29 14:46:57

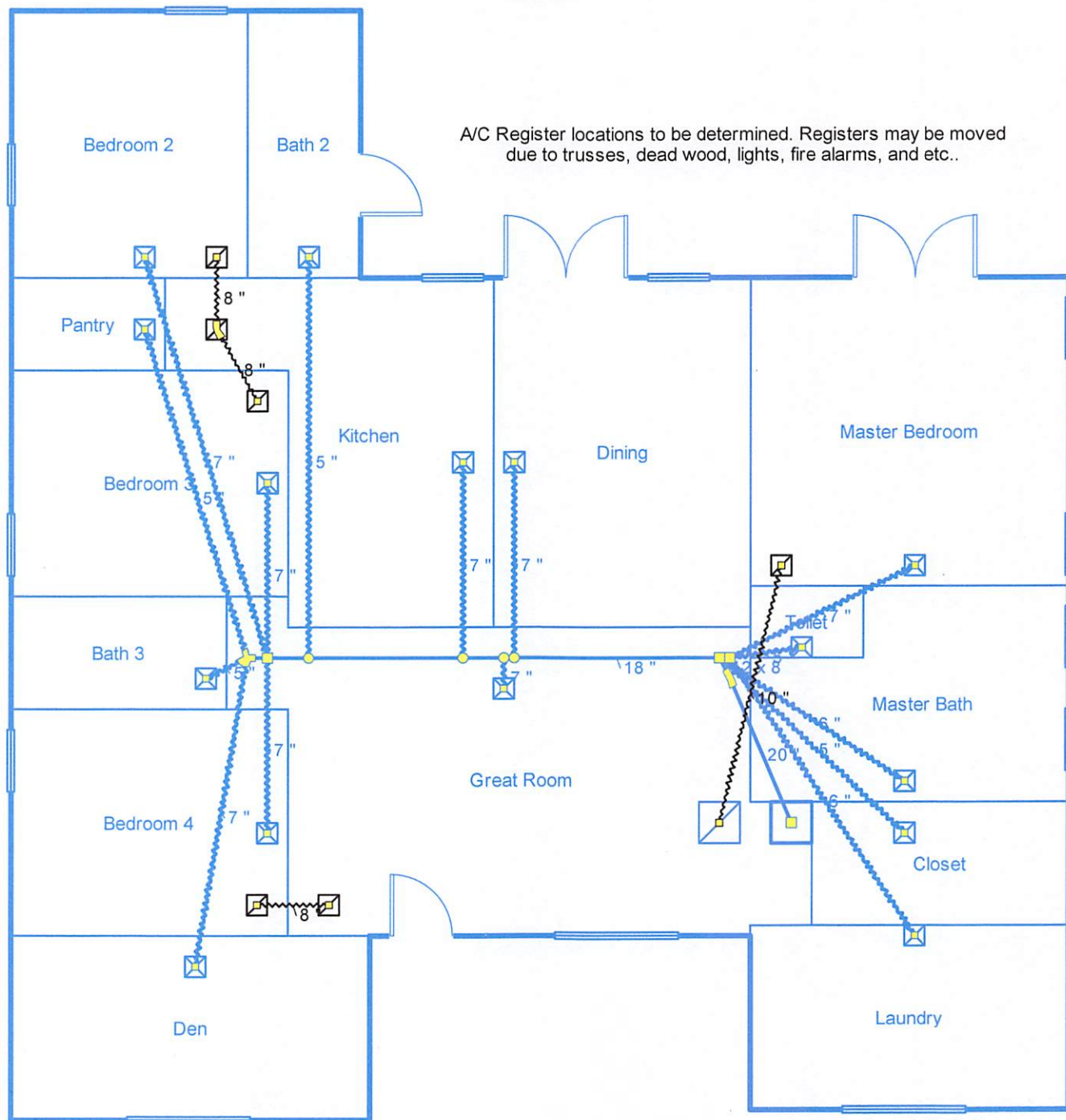
Page 1

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	1900	1900	0	0	0	0	0x 0		ShMt	



Level 2



Job #: Rodney Wade- Nelson
Performed for:
Rodney Wade- Nelson

Spann's Heating and Air INC.

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

Scale: 1 : 90

Page 1
Right-Suite® Universal 2019
19.0.15 RSU08917
2021-Mar-29 14:47:07
...oft HVAC\Rodney Wade- Nelson.rup