

Project Information

For: THOMAS RESIDENCE
708 SW Bluff Drive, Ft White, FL 32038

Notes:

Design Information

Weather: Gainesville Regional, 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 44 gr/lb

Heating Summary

Structure 8463 Btuh
Ducts 1626 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 10089 Btuh

Sensible Cooling Equipment Load Sizing

Structure 12364 Btuh
Ducts 2508 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Blower 0 Btuh
Use manufacturer's data y
Rate/swing multiplier 1.00
Equipment sensible load 14872 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 1210 Btuh
Ducts 530 Btuh
Central vent (0 cfm)
(none) 0 Btuh
Equipment latent load 1740 Btuh

	Heating	Cooling
Area (ft²)	640	640
Volume (ft³)	5120	5120
Air changes/hour	0.61	0.32
Equiv. AVF (cfm)	52	27

Equipment Total Load (Sen+Lat) 16612 Btuh
Req. total capacity at 0.80 SHR 1.5 ton

Heating Equipment Summary

Make Trane
Trade TRANE
Model 4TWR6018H1
AHRI ref 8937191
Efficiency 9 HSPF
Heating input 16800 Btuh @ 47°F
Heating output 24 °F
Temperature rise 627 cfm
Actual air flow 0.062 cfm/Btuh
Air flow factor 0.53 in H2O
Static pressure
Space thermostat
Capacity balance point = 21 °F
Backup:
Input = 3 kW, Output = 9071 Btuh, 100 AFUE

Cooling Equipment Summary

Make Trane
Trade TRANE
Cond 4TWR6018H1
Coil TEM6A0B24H21++TDR
AHRI ref 8937191
Efficiency 12.5 EER, 16 SEER
Sensible cooling 15040 Btuh
Latent cooling 3760 Btuh
Total cooling 18800 Btuh
Actual air flow 627 cfm
Air flow factor 0.042 cfm/Btuh
Static pressure 0.53 in H2O
Load sensible heat ratio 0.90

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



Manual S Compliance Report

Entire House

Job: J-9098 - C-1309

Date: Oct 17, 2022

By: FD

Project Information

For: THOMAS RESIDENCE
708 SW Bluff Drive, Ft White, FL 32038

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	14872	Btuh	Entering coil DB:	77.3°F
Outdoor design WB:	75.8°F	Latent gain:	1740	Btuh	Entering coil WB:	63.6°F
Indoor design DB:	75.0°F	Total gain:	16612	Btuh		
Indoor RH:	50%	Estimated airflow:	627	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	4TWR6018H1+TEM6A0B24H21++TDR
Actual airflow:	627	cfm	
Sensible capacity:	15040	Btuh	101% of load
Latent capacity:	3760	Btuh	216% of load
Total capacity:	18800	Btuh	113% of load SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	10089	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:	Trane	Model:	4TWR6018H1+TEM6A0B24H21++TDR
Actual airflow:	627	cfm	
Output capacity:	16800	Btuh	167% of load
Supplemental heat required:	0	Btuh	
			Capacity balance: 21 °F
			Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	627	cfm	
Output capacity:	2.7	kW	90% of load Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.

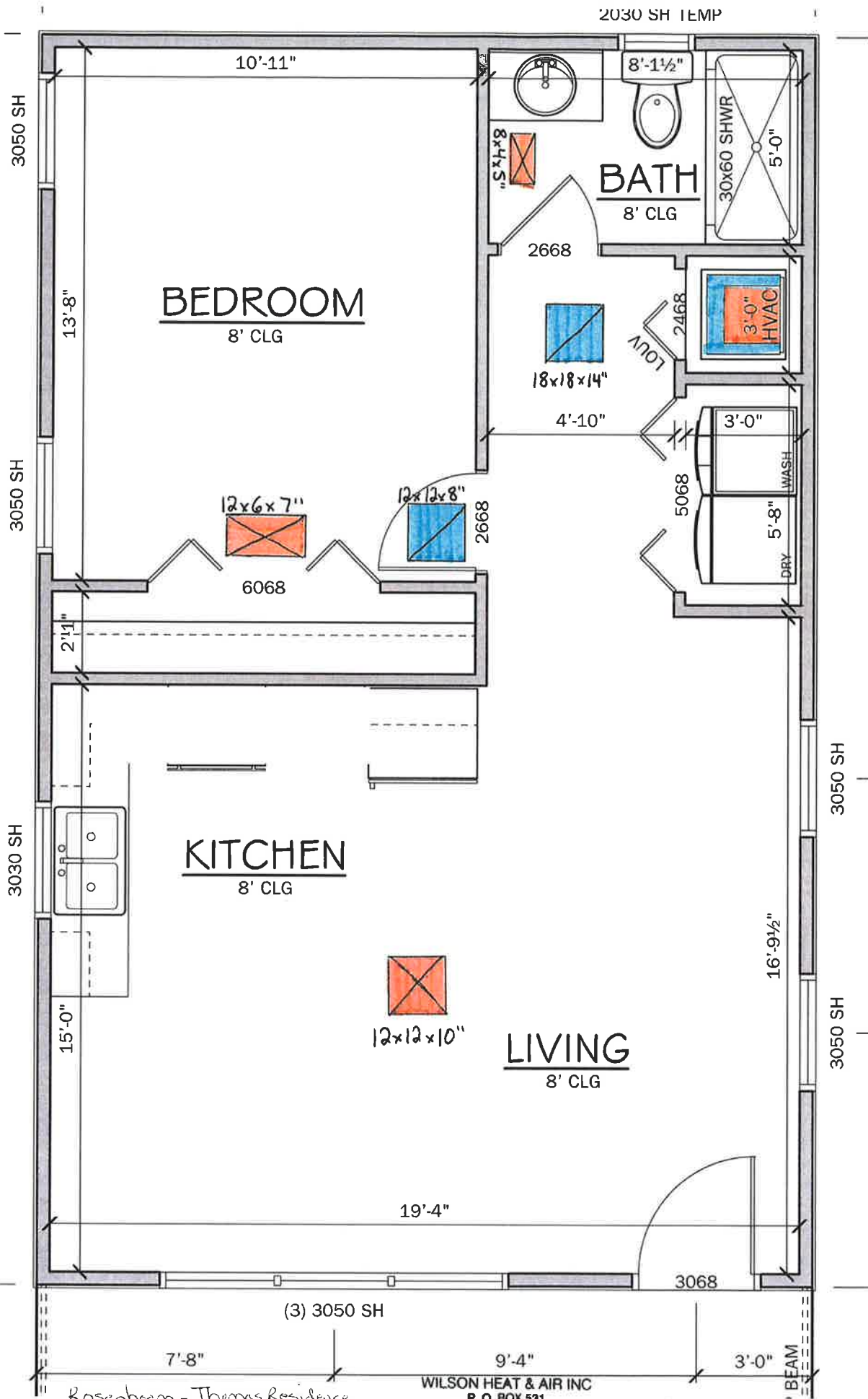


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A- Incoming U-9098 - C-1309 U-9098 - C-1309.rup Calc = MJ8 Front Door faces: W





This combination qualifies for a Federal Energy Efficiency Tax Credit when placed in service between 1/1/2015 and 12/31/2020.

Certificate of Product Ratings

AHRI Certified Reference Number : 8937191

Date : 11-24-2020

Model Status : Active

AHRI Type : HRCU-A-CB (Split System: Heat Pump with Remote Outdoor Unit-Air-Source)

Series : XR16

Outdoor Unit Brand Name : TRANE

Outdoor Unit Model Number (Condenser or Single Package) : 4TWR6018H1

Indoor Unit Model Number (Evaporator and/or Air Handler) : TEM6A0B24H21+TDR

The manufacturer of this TRANE product is responsible for the rating of this system combination.

Rated as follows in accordance with the latest edition of AHRI 210/240 with Addendum 1, Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (A2) - Single or High Stage (95F), btuh : 18800

SEER : 16.00

EER (A2) - Single or High Stage (95F) : 12.50

Heating Capacity (H12) - Single or High Stage (47F) : 16800

HSPF (Region IV) : 9.00



†"Active" Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale; OR new models that are being marketed but are not yet being produced. "Production Stopped" Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale.
Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating.

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