

Single Family House Energy Report

Project Details

Project Name: 5606 Lea Crest
Builder Name: P&P Barragan
Builder Phone: 469-207-7694
Builder Email: plansandpermitsbarragan
Address: 5606 Lea Crest
City: FORT WORTH
County: TARRANT
Zip: 76135

Certificate #: 1272574
Date Issued: 11/1/2022

Notes:

Emissions Reduction

NOx: 0 lbs.
SOx: 0 lbs.
CO2: -113 lbs.



Above Code

This single family residential project was found to be in compliance with the performance measures described in the 2015 IECC as calculated by the Energy Systems Laboratory, a division of the Texas A&M Engineering Experiment Station using IC3 version 4.5.8



ENERGY SYSTEMS LABORATORY
TEXAS A&M ENGINEERING EXPERIMENT STATION

The values produced are generated by the DOE-2 building energy analysis program. These values do not constitute a guarantee of actual energy usage by ESL or TEES.

IC3 performs the hourly annual energy calculation in accordance with the International Energy Conservation Code Section R405, Simulated Performance Alternative. IC3 does not address the adequacy of the sizing of the heating/cooling system.

Authorized Signature:

Mark Devine, ICC #8177308-79

Project Information

General

Number of Bedrooms: 4
Wall Cavity Insulation: R- 13
Wall Continuous Insulation: R- 0
Orientation: West

Windows

SHGC: 0.2
U-Factor: 0.29

Roof

Cladding Type: Composite Shingle
Radiant Barrier: Yes
Sealed Attic: No
Roof Insulation: R - 38
Attic Area: 1726 sq. ft.
Cathedral Ceiling Area: 0 sq. ft.
Flat Roof Area: 0 sq. ft.
Wall Area Next to Attic: 0 sq. ft.

Foundation

Foundation Type: Slab on Grade
Foundation Insulation: R- 0

A/C

SEER: 14
Tonnage: 5

Structural

Exterior Finish: Fibrous Cement Boa
Stud Type: 2 x 4
Stud Spacing: 16 in.

Mechanical

Blower Door Test: 3 @ACH50
Ventilation Type: Exhaust Only
Ventilation Rate: 190 CFM
Ventilation Operation: 8 hrs.
Fan Power: 25 Watts
Fraction Outside: 0.75
Duct Tightness Test: 50 @CFM25
Supply Duct Insulation: R - 6
Return Duct Insulation: R - 6

Heating

Heating Type: Heat Pump
Heating Efficiency: 8.2 HSPF

Water Heater

Water Heater Type: Electric
Energy Factor: 0.91
Size: N/A
Burner Capacity: N/A

Floor 1

Floor Area: 1726 sq. ft.
Floor Wall Height: 8 ft.
Front Side Length: 36 ft
Right Side Length: 48 ft
Front Side Window Area: 12 sq. ft.
Right Side Window Area: 45 sq. ft.
Front Side Shading: 0 in
Right Side Shading: 12 in
Back Side Length: 36 ft
Left Side Length: 48 ft
Back Side Window Area: 30 sq. ft.
Left Side Window Area: 100 sq. ft.
Back Side Shading: 0 in
Left Side Shading: 12 in

Floor 2

Floor Area: 809 sq. ft.
Area over Unconditioned: 0 sq. ft.
Floor Wall Height: 9 ft.
Right Side Length: 48 ft
Front Side Length: 24 ft
Right Side Window Area: 6 sq. ft.
Front Side Window Area: 30 sq. ft.
Right Side Shading: 12 in
Front Side Shading: 12 in
Left Side Length: 48 ft
Back Side Length: 24 ft
Left Side Window Area: 12 sq. ft.
Back Side Window Area: 40 sq. ft.
Left Side Shading: 12 in
Back Side Shading: 12 in

Estimated Annual Energy Usage

Proposed Peak Electric Demand: 7.4 kW

Proposed Total Area Lights: 1,407 kWh

Energy Usage Category	Proposed Design		Standard Reference	
	Gas (therms)	Electric (kWh)	Gas (therms)	Electric (kWh)
Pumps and Miscellaneous	0	88	0	59
Ventilation Fans	0	946	0	985
Mechanical Ventilation	0	73	0	249
Space Cooling	0	2,755	0	3,048
Space Heating	0	2,521	0	2,022
Domestic Hot Water	0	3,429	0	3,429
Site Energy	0	9,813	0	9,792
Source Energy (MMBtu) *		105.7		105.4

* Conversion factors:
 Site to source factor: 3.16 for electric or 1.1 for natural gas (IECC 2015 R405.3)
 Unit: 1 MMBtu = 10 therms or 1 MMBtu = 293.1 kWh