



Generated by REScheck-Web Software Compliance Certificate

Project 4800 TAMARISK LANE

Energy Code: **2018 IECC**
Location: **Bellaire, Texas**
Construction Type: **Single-family**
Project Type: **New Construction**
Orientation: **Bldg. faces 180 deg. from North**
Conditioned Floor Area: **5,441 ft²**
Glazing Area: **15%**
Climate Zone: **2 (1371 HDD)**
Permit Date:
Permit Number:

Construction Site:
4800 TAMARISK LANE
BELLAIRE, TX 77401

Owner/Agent:
RMDT Developers LLC
281-683-6425

Designer/Contractor:
RICH K
LINEA Design Studio Inc.
2020 RICHMOND AVE., STE 202
HOUSTON, TX 77098
7135892335
info@lineadesignstudio.com

Compliance: Passes using UA trade-off

Compliance: **2.2% Better Than Code** Maximum UA: **847** Your UA: **828** Maximum SHGC: **0.25** Your SHGC: **0.25**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Slab-on-grade tradeoffs are no longer considered in the UA or performance compliance path in REScheck. Each slab-on-grade assembly in the specified climate zone must meet the minimum energy code insulation R-value and depth requirements.

Envelope Assemblies

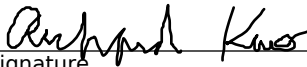
Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Ceiling: Flat Ceiling or Scissor Truss	3,115	20.0	0.0	0.048	0.030	150	93
Front Wall: Wood Frame, 16" o.c. Orientation: Front	1,374	13.0	0.0	0.082	0.084	92	95
Door: Glass Door (over 50% glazing) SHGC: 0.25 Orientation: Front	60			0.300	0.400	18	24
Window: Metal Frame w/ Thermal Break SHGC: 0.25 Orientation: Front	188			0.300	0.400	56	75
Right Wall: Wood Frame, 16" o.c. Orientation: Right side	1,915	13.0	0.0	0.082	0.084	142	145
Window 1: Metal Frame w/ Thermal Break SHGC: 0.25 Orientation: Right side	183			0.300	0.400	55	73
Back Wall: Wood Frame, 16" o.c. Orientation: Back	1,227	13.0	0.0	0.082	0.084	80	82
Sliding Door 1: Glass Door (over 50% glazing) SHGC: 0.25 Orientation: Back	132			0.300	0.400	40	53

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Window 2: Metal Frame w/ Thermal Break SHGC: 0.25 Orientation: Back	118			0.300	0.400	35	47
Floor: All-Wood Joist/Truss	2,497	13.0	0.0	0.064	0.064	160	160

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2018 IECC requirements in REScheck Version : REScheck-Web and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Richard Kao - Designer

Name - Title


Signature

10-11-23

Date



Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the REScheck software

Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.1, 103.2 [PR1] ¹ 	Construction drawings and documentation demonstrate energy code compliance for the building envelope. Thermal envelope represented on construction documents.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
103.1, 103.2, 403.7 [PR3] ¹ 	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the IECC Commercial Provisions.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
302.1, 403.7 [PR2] ² 	Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official.	Heating: Btu/hr____ Cooling: Btu/hr____	Heating: Btu/hr____ Cooling: Btu/hr____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Foundation Inspection	Complies?	Comments/Assumptions
303.2.1 [FO11] ² 	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.9 [FO12] ² 	Snow- and ice-melting system controls installed.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] ¹ 	Glazing U-factor (area-weighted average).	U-_____	U-_____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
402.1.1, 402.3.2, 402.3.3, 402.5 [FR3] ¹ 	Glazing SHGC value (area-weighted average).	SHGC:_____	SHGC:_____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.1.3 [FR4] ¹ 	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.4.1.1 [FR23] ¹ 	Air barrier and thermal barrier installed per manufacturer's instructions.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.4.3 [FR20] ¹ 	Fenestration that is not site built is listed and labeled as meeting AAMA /WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.4.5 [FR16] ²	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.3.1 [FR12] ¹ 	Supply and return ducts in attics insulated ≥ R-8 where duct is ≥ 3 inches in diameter and ≥ R-6 where < 3 inches. Supply and return ducts in other portions of the building insulated ≥ R-6 for diameter ≥ 3 inches and R-4.2 for < 3 inches in diameter.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.3.2 [FR13] ¹ 	Ducts, air handlers and filter boxes are sealed with joints/seams compliant with International Mechanical Code or International Residential Code, as applicable.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.3.5 [FR15] ³ 	Building cavities are not used as ducts or plenums.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.3.7 [FR28] ³ 	Ducts declared to be within the conditioned space are either 1) completely within the continuous air barrier and within the building thermal envelope, 2) buried within ceiling insulation in accordance with Section R403.3.6 and the air handler is located completely within the continuous air barrier and within the building thermal envelope and the duct leakage is ≤ 1.5 cfm / 100 square feet of conditioned floor area served by the duct system, or 3) the ceiling insulation R-value installed against and above the insulated duct $\geq$ to the proposed ceiling insulation R-value, less the R-value of the insulation on the			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.4 [FR17] ² 	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to $\geq R-3$.	R-_____	R-_____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.4.1 [FR24] ¹ 	Protection of insulation on HVAC piping.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.5.3 [FR18] ² 	Hot water pipes are insulated to $\geq R-3$.	R-_____	R-_____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.6 [FR19] ²	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] ² 	All installed insulation is labeled or the installed R-values provided.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.1.1, 402.2.6 [IN1] ¹ 	Floor insulation R-value.	R-_____ ☐ Wood ☐ Steel	R-_____ ☐ Wood ☐ Steel	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.2, 402.2.8 [IN2] ¹ 	Floor insulation installed per manufacturer's instructions and in substantial contact with the underside of the subfloor, or floor framing cavity insulation is in contact with the top side of sheathing, or continuous insulation is installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.1.1, 402.2.5, 402.2.6 [IN3] ¹ 	Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies (FR10).	R-_____ ☐ Wood ☐ Mass ☐ Steel	R-_____ ☐ Wood ☐ Mass ☐ Steel	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.2 [IN4] ¹	Wall insulation is installed per manufacturer's instructions.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2, 402.2.6 [FI1] ¹	Ceiling insulation R-value.	R-____ ☐ Wood ☐ Steel	R-____ ☐ Wood ☐ Steel	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.1.1.1, 303.2 [FI2] ¹	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft ² .			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.2.3 [FI22] ²	Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.2.4 [FI3] ¹	Attic access hatch and door insulation ≥ R-value of the adjacent assembly.	R-____	R-____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
402.4.1.2 [FI17] ¹	Blower door test @ 50 Pa. ≤ 5 ach in Climate Zones 1-2, and ≤ 3 ach in Climate Zones 3-8.	ACH 50 = ____	ACH 50 = ____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.3.3 [FI27] ¹	Ducts are pressure tested to determine air leakage with either: Rough-in test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the system including the manufacturer's air handler enclosure if installed at time of test. Postconstruction test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the entire system including the manufacturer's air handler enclosure.	____ cfm/100 ft ²	____ cfm/100 ft ²	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.3.4 [FI4] ¹	Duct tightness test result of ≤ 4 cfm/100 ft ² across the system or ≤ 3 cfm/100 ft ² without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection.	____ cfm/100 ft ²	____ cfm/100 ft ²	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.3.2.1 [FI24] ¹	Air handler leakage designated by manufacturer at ≤ 2% of design air flow.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.1.1 [FI9] ²	Programmable thermostats installed for control of primary heating and cooling systems and initially set by manufacturer to code specifications.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.1.2 [FI10] ²	Heat pump thermostat installed on heat pumps.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.5.1 [FI11] ²	Circulating service hot water systems have automatic or accessible manual controls.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.6.1 [FI25] ²	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits per Table R403.6.1.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.2 [FI26] ²	Hot water boilers supplying heat through one- or two-pipe heating systems have outdoor setback control to lower boiler water temperature based on outdoor temperature.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.5.1.1 [FI28] ²	Heated water circulation systems have a circulation pump. The system return pipe is a dedicated return pipe or a cold water supply pipe. Gravity and thermos-syphon circulation systems are not present. Controls for circulating hot water system pumps start the pump with signal for hot water demand within the occupancy. Controls automatically turn off the pump when water is in circulation loop is at set-point temperature and no demand for hot water exists.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.5.1.2 [FI29] ²	Electric heat trace systems comply with IEEE 515.1 or UL 515. Controls automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.5.2 [FI30] ²	Demand recirculation water systems have controls that manage operation of the pump and limit the temperature of the water entering the cold water piping to ≤ 104°F.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
403.5.4 [FI31] ²	Drain water heat recovery units tested in accordance with CSA B55.1. Potable water-side pressure loss of drain water heat recovery units < 3 psi for individual units connected to one or two showers. Potable water-side pressure loss of drain water heat recovery units < 2 psi for individual units connected to three or more showers.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
404.1 [FI6] ¹	90% or more of permanent fixtures have high efficacy lamps.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
404.1.1 [FI23] ³ 	Fuel gas lighting systems have no continuous pilot light.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
401.3 [FI7] ²	Compliance certificate posted.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.3 [FI18] ³	Manufacturer manuals for mechanical and water heating systems have been provided.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:



2018 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
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Above-Grade Wall	13.00
Below-Grade Wall	0.00
Floor	13.00
Ceiling / Roof	20.00
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
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Window	0.30	0.25
Door	0.30	0.25

Heating & Cooling Equipment	Efficiency
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Heating System: _____	_____
Cooling System: _____	_____
Water Heater: _____	_____

Name: _____ Date: _____

Comments