

## Project

**Energy Code: 2012 IECC** 

Location: **Houston, Texas Single-family** Construction Type: Project Type: **New Construction** 

Conditioned Floor Area: 2,204 ft2

Glazing Area 3%

Climate Zone: 2 (1371 HDD)

Permit Date: Permit Number:

Construction Site: 3009 Building Lane

Houston, TX

Owner/Agent: **Buildy Builderson**  Designer/Contractor: **Builder's Building Plans** 

## Compliance: Passes using UA trade-off

Compliance: 12.6% Better Than Code Maximum SHGC: 0.25 Maximum UA: 483

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.

## **Envelope Assemblies**

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling area of home forming top of insulation envelope: Flat Ceiling or Scissor Truss	2,204	38.0	0.0	0.030	66
Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.	601	19.0	0.0	0.060	31
Window area of the home using energy efficient units: Vinyl/Fiberglass Frame:Double Pane with Low-E SHGC: 0.22	50			0.310	16
Energy efficient door unit: Glass SHGC: 0.25	21			0.350	7
Energy efficient door unit: Solid	21			0.200	4
Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.	612	19.0	0.0	0.060	37
Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.	584	19.0	0.0	0.060	34
Energy efficient door unit: Solid	21			0.200	4
Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.	563	19.0	0.0	0.060	34
Slab perimeter of home forming bottom of insulation envelope: Slab-On-Grade:Unheated Insulation depth: 0.0'	181		0.0	1.042	189

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Compliance Statement: The proposed calculations submitted with the permit REScheck Version 4.6.5 and to comply	building design described here is consistent with the application. The proposed building has been design with the mandatory requirements listed in the RESc	e building plans, specifications, and other ed to meet the 2012 IECC requirements in heck Inspection Checklist.
Name - Title	Signature	Date

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## **REScheck Software Version 4.6.5 Inspection Checklist**

Energy Code: 2012 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] <sup>1</sup>	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
103.1, 103.2, 403.7 [PR3] <sup>1</sup>	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, 403.6 [PR2] <sup>2</sup>	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:** 

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

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Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO1] <sup>1</sup>	Slab edge insulation R-value.	R Unheated Heated	R Unheated Heated	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
303.2, 402.2.9 [FO2] <sup>1</sup>	Slab edge insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.1.1 [FO3] <sup>1</sup>	Slab edge insulation depth/length.	ft	ft	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
303.2.1 [FO11] <sup>2</sup>	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	
403.8 [FO12] <sup>2</sup>	Snow- and ice-melting system controls installed.			□Complies □Does Not □Not Observable □Not Applicable	

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

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Section	Funning / Bough In Inquestion	Plans Verified	Field Verified	Complian?	Commonts/Accommtions
# & Req.ID	Framing / Rough-In Inspection	Value	Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1] <sup>1</sup>	Door U-factor.	U	U	$\square$ Complies $\square$ Does Not	See the Envelope Assemblies table for values.
(i KT)			 	□Not Observable □Not Applicable	
402.1.1, 402.3.1,	Glazing U-factor (area-weighted average).	U	U	□Complies □Does Not	See the Envelope Assemblies table for values.
402.3.3, 402.3.6, 402.5 [FR2] <sup>1</sup>				□Not Observable □Not Applicable	
402.1.1, 402.3.2,	Glazing SHGC value (areaweighted average).	SHGC:	SHGC:	□Complies □Does Not	See the Envelope Assemblies table for values.
402.3.3, 402.3.6, 402.5 [FR3] <sup>1</sup>				□Not Observable □Not Applicable	
303.1.3 [FR4] <sup>1</sup>	U-factors of fenestration products are determined in accordance		† 	□Complies □Does Not	 
(2)	with the NFRC test procedure or taken from the default table.			□Not Observable □Not Applicable	
402.4.1.1 [FR23] <sup>1</sup>	Air barrier and thermal barrier installed per manufacturer's			□Complies □Does Not	 
	instructions.			□Not Observable	 
402.4.3	Fenestration that is not site built			□Not Applicable □Complies	
[FR20] <sup>1</sup>	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.			□Does Not □Not Observable □Not Applicable	
402.4.4 [FR16] <sup>2</sup>	IC-rated recessed lighting fixtures sealed at housing/interior finish			□Complies □Does Not	
•	and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			□Not Observable □Not Applicable	
403.2.1 [FR12] <sup>1</sup>	Supply ducts in attics are insulated to ≥R-8. All other ducts	R R-	R	□Complies □Does Not	 
•	in unconditioned spaces or outside the building envelope are insulated to ≥R-6.	N	R	□Not Observable □Not Applicable	
403.2.2 [FR13] <sup>1</sup>	All joints and seams of air ducts, air handlers, and filter boxes are			□Complies □Does Not	
•	sealed.			□Not Observable □Not Applicable	1 1 1 1 1
403.2.3 [FR15] <sup>3</sup>	Building cavities are not used as ducts or plenums.			□Complies □Does Not	
•				□Not Observable □Not Applicable	
403.3 [FR17] <sup>2</sup>	HVAC piping conveying fluids above 105 ºF or chilled fluids	R	R	□Complies □Does Not	
•	below 55 $^{\circ}$ F are insulated to $\geq$ R-3.		; 	□Not Observable □Not Applicable	
403.3.1 [FR24] <sup>1</sup>	Protection of insulation on HVAC piping.			□Complies □Does Not	
				□Not Observable □Not Applicable	
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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.4.2 [FR18] <sup>2</sup>	Hot water pipes are insulated to ≥R-3.	R	R	□Complies □Does Not	
•				□Not Observable □Not Applicable	
403.5 [FR19] <sup>2</sup>	Automatic or gravity dampers are installed on all outdoor air			□Complies □Does Not	
•	intakes and exhausts.			□Not Observable □Not Applicable	

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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] <sup>2</sup>	All installed insulation is labeled or the installed R-values provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.1.1, 402.2.5, 402.2.6 [IN3] <sup>1</sup>	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] <sup>1</sup>	Wall insulation is installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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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] <sup>1</sup>	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] <sup>1</sup>	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft <sup>2</sup> .			□Complies □Does Not □Not Observable □Not Applicable	
402.2.3 [FI22] <sup>2</sup>	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] <sup>1</sup>	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] <sup>1</sup>	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	
403.2.2 [FI4] <sup>1</sup>	Duct tightness test result of <=4 cfm/100 ft2 across the system or <=3 cfm/100 ft2 without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection.	cfm/100 ft <sup>2</sup>	cfm/100	□Complies □Does Not □Not Observable □Not Applicable	
403.2.2.1 [FI24] <sup>1</sup>	Air handler leakage designated by manufacturer at <=2% of design air flow.			□Complies □Does Not □Not Observable □Not Applicable	
403.1.1 [FI9] <sup>2</sup>	Programmable thermostats installed on forced air furnaces.			□Complies □Does Not □Not Observable □Not Applicable	
403.1.2 [FI10] <sup>2</sup>	Heat pump thermostat installed on heat pumps.			□Complies □Does Not □Not Observable □Not Applicable	
403.4.1 [FI11] <sup>2</sup>	Circulating service hot water systems have automatic or accessible manual controls.			□Complies □Does Not □Not Observable □Not Applicable	
403.5.1 [FI25] <sup>2</sup>	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
404.1 [FI6] <sup>1</sup>	75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps. Does not apply to low-voltage lighting.			□Complies □Does Not □Not Observable □Not Applicable	

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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
404.1.1 [FI23] <sup>3</sup>	Fuel gas lighting systems have no continuous pilot light.			□Complies □Does Not	
				□Not Observable □Not Applicable	
401.3 [FI7] <sup>2</sup>	Compliance certificate posted.			□Complies □Does Not	
•				□Not Observable □Not Applicable	
303.3 [FI18] <sup>3</sup>	Manufacturer manuals for mechanical and water heating			□Complies □Does Not	
•	systems have been provided.			□Not Observable □Not Applicable	

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Insulation Rating	R-Value	
Above-Grade Wall	19.00	
Below-Grade Wall	0.00	
Floor	0.00	
Ceiling / Roof	38.00	
Ductwork (unconditioned spaces):		
Glass & Door Rating	U-Factor	SHGC

Glass & Door Rating	U-Factor	SHGC
Window	0.31	0.22
Door	0.35	0.25
Heating & Cooling Equipment	Efficiency	
Heating System:		
Cooling System:		
Water Heater:		
Name .	D-t	

**Comments**