



# REScheck Software Version 4.6.5 Compliance Certificate

Project 410 Rhett Butler

Energy Code: **2009 IECC**  
 Location: **Charleston, South Carolina**  
 Construction Type: **Single-family**  
 Project Type: **New Construction**  
 Orientation: **Bldg. faces 225 deg. from North**  
 Conditioned Floor Area: **2,526 ft2**  
 Glazing Area **7%**  
 Climate Zone: **3 (1866 HDD)**  
 Permit Date:  
 Permit Number:

Construction Site:  
 410 Rhett Butler  
 Charleston, SC 29414

Owner/Agent:  
 Elyssa Wingard

Designer/Contractor:  
 Pendium Group  
 4265 Duck Club Rd  
 Ravenel, SC 29470

## Compliance: Passes using UA trade-off

Compliance: **14.7% Better Than Code** Maximum UA: **681** Your UA: **581** Maximum SHGC: **0.30** Your SHGC: **0.30**

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
Wall Detail - 1: Wood Frame, 16" o.c. Orientation: Back	264	19.0	0.0	0.060	10
Door 1: Solid Orientation: Back	21			0.300	6
Door 2: Solid Orientation: Back	21			0.300	6
Window 1: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	18			0.300	5
Window 2: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	18			0.300	5
Window 3: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	18			0.300	5
Wall Detail - 4: Wood Frame, 16" o.c. Orientation: Left side	293	19.0	0.0	0.060	18
Wall Detail - 6: Wood Frame, 24" o.c. Orientation: Front	6	15.0	0.0	0.074	0
Wall Detail - 7: Wood Frame, 16" o.c. Orientation: Right side	25	15.0	0.0	0.077	2
Wall Detail - 8: Wood Frame, 16" o.c. Orientation: Front	183	15.0	0.0	0.077	12
Door 3: Solid Orientation: Front	24			0.300	7

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Wall Detail - 11: Wood Frame, 16" o.c. Orientation: Front	95	19.0	0.0	0.060	5
Window 4: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Front	18			0.300	5
Wall Detail - 16: Wood Frame, 24" o.c. Orientation: Left side	73	15.0	0.0	0.074	5
Wall Detail - 17: Wood Frame, 16" o.c. Orientation: Front	21	15.0	0.0	0.077	2
Wall Detail - 18: Wood Frame, 24" o.c. Orientation: Left side	10	15.0	0.0	0.074	1
Wall Detail - 19: Wood Frame, 24" o.c. Orientation: Back	25	15.0	0.0	0.074	2
Wall Detail - 19 (2): Wood Frame, 24" o.c. Orientation: Back	19	21.0	0.0	0.056	1
Door 4: Solid Orientation: Back	9			0.300	3
Wall Detail - 20: Wood Frame, 24" o.c. Orientation: Front	15	15.0	0.0	0.074	1
Wall Detail - 23: Wood Frame, 16" o.c. Orientation: Front	196	19.0	0.0	0.060	9
Door 5: Solid Orientation: Front	24			0.300	7
Window 5: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Front	17			0.300	5
Wall Detail - 24: Wood Frame, 16" o.c. Orientation: Back	289	19.0	0.0	0.060	9
Door 6: Solid Orientation: Back	21			0.300	6
Door 7: Solid Orientation: Back	21			0.300	6
Door 8: Solid Orientation: Back	24			0.300	7
Door 9: Solid Orientation: Back	24			0.300	7
Window 6: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	14			0.300	4
Window 7: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	14			0.300	4
Window 8: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	14			0.300	4
Wall Detail - 25: Wood Frame, 16" o.c. Orientation: Left side	39	0.0	0.0	0.238	9
Wall Detail - 27: Wood Frame, 16" o.c. Orientation: Right side	131	0.0	0.0	0.238	27
Door 10: Solid Orientation: Right side	19			0.300	6
Wall Detail - 29: Wood Frame, 16" o.c. Orientation: Right side	274	15.0	0.0	0.077	20
Window 9: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Right side	11			0.300	3
Wall Detail - 39: Wood Frame, 16" o.c. Orientation: Left side	35	19.0	0.0	0.060	2

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Wall Detail - 49: Wood Frame, 24" o.c. Orientation: Front	47	0.0	0.0	0.241	11
Wall Detail - 1 (2): Wood Frame, 16" o.c. Orientation: Back	203	15.0	0.0	0.077	11
Window 10: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	31			0.300	9
Window 11: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Back	31			0.300	9
Wall Detail - 2: Wood Frame, 16" o.c. Orientation: Right side	275	15.0	0.0	0.077	20
Window 12: Vinyl Frame:Double Pane with Low-E SHGC: 0.30 Orientation: Right side	12			0.300	4
Wall Detail - 3: Wood Frame, 16" o.c. Orientation: Front	39	15.0	0.0	0.077	3
Wall Detail - 3 (2): Wood Frame, 16" o.c. Orientation: Front	144	15.0	0.0	0.077	10
Door 11: Solid Orientation: Front	20			0.300	6
Wall Detail - 12: Wood Frame, 16" o.c. Orientation: Left side	158	15.0	0.0	0.077	11
Door 12: Solid Orientation: Left side	17			0.300	5
Wall Detail - 13: Wood Frame, 16" o.c. Orientation: Left side	25	15.0	0.0	0.077	2
Wall Detail - 15: Wood Frame, 16" o.c. Orientation: Back	61	15.0	0.0	0.077	5
Wall Detail - 38: Wood Frame, 16" o.c. Orientation: Left side	80	15.0	0.0	0.077	6
Wall Detail - 39 (2): Wood Frame, 16" o.c. Orientation: Front	89	15.0	0.0	0.077	7
Floor 1: Slab-On-Grade:Unheated Insulation depth: 0.0' Comment: Floor Number 1	164		0.0	1.042	171
Ceiling 1: Flat Ceiling or Scissor Truss Comment: Floor Number 1	925	30.0	0.0	0.035	32
Ceiling 2: Flat Ceiling or Scissor Truss Comment: Floor Number 2	657	30.0	0.0	0.035	23

*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 2009 IECC requirements in REScheck Version 4.6.5 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Tom \_\_\_\_\_  
Name - Title Signature Date



# Inspection Checklist

Energy Code: 2009 IECC

Requirements: 48.0% 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
103.2 [PR1] <sup>1</sup> 	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
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 commercial code.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.6 [PR2] <sup>2</sup> 	Heating and cooling equipment is sized per ACCA Manual S based on loads per ACCA Manual J or other approved methods.	Heating: Btu/hr _____ Cooling: Btu/hr _____	Heating: Btu/hr _____ Cooling: Btu/hr _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Envelope Assemblies table for values.</i>
303.2, 402.2.8 [FO2] <sup>1</sup>	Slab edge insulation installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.1.1 [FO3] <sup>1</sup>	Slab edge insulation depth/length.	____ ft	____ ft	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Envelope Assemblies table for values.</i>
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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement is not applicable.
403.8 [FO12] <sup>2</sup>	Snow- and ice-melting system controls installed.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1] <sup>1</sup>	Door U-factor.	U-____	U-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] <sup>1</sup>	Glazing U-factor (area-weighted average).	U-____	U-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
402.1.1, 402.3.2, 402.3.3, 402.5 [FR3] <sup>1</sup>	Glazing SHGC value (area-weighted average).	SHGC:____	SHGC:____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.1.3 [FR4] <sup>1</sup>	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.4.4 [FR20] <sup>1</sup>	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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.4.5 [FR16] <sup>2</sup>	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
403.2.1 [FR12] <sup>1</sup>	Supply ducts in attics are insulated to ≥R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6.	R-____ R-____	R-____ R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2 [FR13] <sup>1</sup>	All joints and seams of air ducts, air handlers, filter boxes, and building cavities used as return ducts are sealed.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.3 [FR15] <sup>3</sup>	Building cavities are not used for supply ducts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.3 [FR17] <sup>2</sup>	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to ≥R-3.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [FR18] <sup>2</sup>	Circulating service hot water pipes are insulated to R-2.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.5 [FR19] <sup>2</sup>	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

**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	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.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.1.1, 402.2.4, 402.2.5 [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.	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2 [IN4] <sup>1</sup>	Wall insulation is installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

**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	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2 [F11] <sup>1</sup>	Ceiling insulation R-value. Where > R-30 is required, R-30 can be used if insulation is not compressed at eaves. R-30 may be used for 500 ft <sup>2</sup> or 20% (whichever is less) where sufficient space is not available.	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.1.1.1, 303.2 [F12] <sup>1</sup>	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft <sup>2</sup> .			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.2.3 [F13] <sup>1</sup>	Attic access hatch and door insulation ≥R-value of the adjacent assembly.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
402.4.2, 402.4.2.1 [F17] <sup>1</sup>	Building envelope tightness verified by blower door test result of <7 ACH at 50 Pa. This requirement may instead be met via visual inspection, in which case verification may need to occur during Insulation Inspection.	ACH 50 = ____	ACH 50 = ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
403.2.2 [F14] <sup>1</sup>	Post construction duct tightness test result of ≤8 cfm to outdoors, or ≤12 cfm across systems. Or, rough-in test result of ≤6 cfm across systems or ≤4 cfm without air handler. Rough-in test verification may need to occur during Framing Inspection.	____ cfm	____ cfm	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.1 [F19] <sup>2</sup>	Programmable thermostats installed on forced air furnaces.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.2 [F110] <sup>2</sup>	Heat pump thermostat installed on heat pumps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [F111] <sup>2</sup>	Circulating service hot water systems have automatic or accessible manual controls.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
404.1 [F16] <sup>1</sup>	50% of lamps in permanent fixtures are high efficacy lamps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
401.3 [F17] <sup>2</sup>	Compliance certificate posted.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
303.3 [F118] <sup>3</sup>	Manufacturer manuals for mechanical and water heating equipment have been provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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# 2009 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
Above-Grade Wall	19.00
Below-Grade Wall	0.00
Floor	0.00
Ceiling / Roof	30.00
Ductwork (unconditioned spaces):	_____

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

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

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Comments