## Update: 3/20/2016

## 2009 Energy Code Checklist For Residential Construction

(Required for all New Single-Family and Multi-Family Dwellings, Additions and Renovations)

The State of South Carolina has adopted the 2009 International Energy Conservation Code (IECC), which goes into effect beginning January 1st, 2013. This form is required to be filled out and submitted prior to issuance of the Certificate of Occupancy.

Project Address:	Permit #		
Builder:	License #		
Phone:	Email:	Date	
Project Type: Single-Family Dw	velling Townhome Duplex Addition	Renovation	
Required Documentation:			
<u> </u>	e One method. All methods must meet the Mandat	ory Requirements (2)	
<b>.</b>		, ,	`
	andatory Requirements (2), Prescriptive Requirements (		
	datory Requirements (2) and Energy Certificate (4). Att		on
_	o: www.energycodes.gov/rescheck (It's easy and free		
	fundatory Requirements (2), Energy Certificate (4). Att must include standard reference design and proposed d		
•	Building envelope air tightness and insulation instal		
demonstrated to comply with the			
Mandatany Daquiyamanta			
Mandatory Requirements			
1. Building Thermal Envelope (402.4.1) limit infiltration.	Complied		
2. Air Sealing and Insulation (402.4.2) demonstrated to comply with one of the sealing and Insulation (402.4.2)			
Blower Door Test – Individual p Certified	Complied N/A	1	
Air leakage is less than (7) seven a			
Test Performed By:			
Address:			
Date Test Was Performed:			
HERS Certified	BPI Certified		
To locate a certified professional log onto:	http://www.energy.sc.gov/		
	http://www.resnet.us/trade/home-energy-raters-hers-raters http://www.bpi.org/		
Visual Inspection – Ruilding on	velope tightness and insulation inspection shall be	Complied with	
considered acceptable when item	Table 402.4.2	A	

Mandatory Requirements -	Continued						
	Wood burning	fireplaces shall have tight-fitting flue dampers a	nd Complied	□ N/A			
outdoor combustion air.  4. Fenestration Air Leakage (402.4.4) – Windows, sliding glass doors, skylights < 0.3 cfm/sf  Complied							
5. Fenestration Air Leakage (402.4.4	Complied	□ N/A □ N/A					
6. Recessed Lighting (402.4.5) – IC	Complied	N/A					
7. Heating/Cooling System Controls	Complied	N/A					
8. HVAC Duct Sealing (403.2) – Al	Complied	N/A					
9. HVAC Duct Tightness Testing (403.2.2) CHOOSE ONE Note: Individual performing test							
is required to be HERS or BPI C							
Post Construction Test – Leaconditiond floor area or a total floor area at a pressure difference of the construction Test – Leacondition floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test – Leacond floor area at a pressure difference of the construction Test –		□ N/A					
Rough In Test - Total leakag at a pressure differential of 25 Handler is not installed, total l		N/A					
Test Performed By:							
Address:							
Date Test Was Performed: HERS Certified BPI Certified							
10. Building Cavities (403.2.3) - Bu	Complied	□ N/A					
11. Mechanical Piping Insulation (4)			Complied	∏ N/A			
12. Circulating Hot Water System (4			Complied	□ N/A			
13. Mechanical Ventilation (403.5)			Complied	□ N/A			
		installed in permanent lighting fixtures shall be	Complied	∏ N/A			
high efficiency (CFL's, LED's, e	tc.)	inment shall be sized based on building loads	F				
	15. HVAC Equipment Sizing (403.6) – HVAC equipment shall be sized based on building loads calculated in accordance with ACCA Manual J.						
Builder Signature: Date:							
3. Prescriptive Requirement	3. Prescriptive Requirements						
Minimum Fenestration, Insu	llation and E	nergy Requirements					
(Climater)	ate Zone 3)						
Fenestration U-Factor	0.50	Windows, Opaque Doors, Glazed Doors U = Thermal Transmittance Factor	Complied	□ N/A			
Glazed Fenestration SHGC	0.30	SHGC = Solar Heat Gain Coefficient	Complied	N/A			
Skylight U-Factor	0.65		Complied	N/A			
Ceiling Insulation	R30		Complied	N/A			
Exterior Wood Frame Wall	R13		Complied	N/A			
Floor Over Un-Conditioned Space	R19		Complied	∏ N/A			
HVAC Ducts in Attics	R8	R6 required in unconditioned basements and crawl spaces	Complied	∏ N/A			
Conditioned Basement Wall	R 5/13	R5 Continuous or R13 Cavity	Complied	□ N/A			
Mass Wall	R 5/8		Complied	□ N/A			
Crawl Space Wall (Closed)	R 5/13	R5 Continuous or R13 Cavity	Complied	□ N/A			
Slab on Grade Floors	0	R5 For Heated Slabs on Grade	Complied	∏ N/A			
Cold Formed Steel Framing	Table 402.2.5	Cold Formed Steel Framing R Values meet the requirements of Table 402.2.5	Complied	□ N/A			
Access Hatches and Doors - Doors stripped and insulated.	from conditone	d to unconditioned spaces shall be weather	Complied	□ N/A			
Builder Signature:			Date:				

**4. Energy Certificate** – This form is required to be filled out complete and posted on or in the electrical panel box.

Energy	y Efficiency Certificat	te
Permit #		
Address:		
Insulation Ratings		R-Value
ROOF/CEILING	With Attic	R
	Without Attic	R -
WALLS		
Frame R	Basement	R
Mass R -	Crawlspace	
<b>FLOORS</b> C	Over Unconditioned Space	R
HVAC DUCTS	Attice Space	R
Base	ements and Crawl Space	R -
<b>Fenestration Ratings</b>	U - Factor	SHGC
Opaque Doors		
Windows		
Skylights		
<b>Equipment Performa</b>	Efficiency	
Heating System	HSPF/AFUE	
Cooling System	SEER/COP	
Water Heater/Boiler	EF/Ec or E1	
Builder Signature:		
Date:		<del></del>
Adopted Energy Code	Edition:	
THIS CERTIFICATE S OR IN THE ELECTRIC	SHALL BE PERMANENTLY CAL PANEL BOX	Y POSTED O

**AFUE** = Annual fuel utilization efficiency. Standard measurement of efficiency for gas and oil-fired furnaces. (*Minimum Efficiency of 78% Required*)

**COP** = Coefficient of Performance

**EF** = Energy Factor

**SHGC** = Solar Heat Gain Coefficient

**SEER** = Seasonal Energy Efficiency Ratio is a measure of the cooling efficiency of your air conditoner or Heat Pump. (*Minimum 13 SEER Required*)

**HSPF** = Heating Seasonal Performance Factor is a measure of the heating efficiency of a heat pump. *(Minimum 7.7 HSPF Required)* 

Table 402.4.2 identifies the items required to be field verified if "**Visual Inspection**" is checked under the Mandatory Requirements (Item #2)

Table 402.4.2				
	Complied N/A	Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier.		
Air Barrier and Thermal Barrier	Complied N/A	Breaks or joints in the air barrier are filled or repaired.		
	Complied N/A	Air permeable insulation is not used as a sealing material		
	Complied N/A	Air permeable insulation is inside of an air barrier		
Ceiling/Attic	Complied N/A	Air barrier in any dropped ceiling/soffit is substantially aligned with insulation and any gaps are sealed.		
	Complied N/A	Attic access (except unvented attic), knee wall door, or drop down stair is sealed.		
Walls	Complied N/A	Corners and headers are insulated.		
	Complied N/A	Junction of foundation and sill plate is sealed.		
Windows and Doors	Complied N/A	Space between window/door jambs and framing is sealed.		
Rim Joists	Complied N/A	Rim Joists are insulated and include an air barrier.		
Floors (Including above-garage and cantilevered floors)	Complied N/A	Insulation is installed to maintain permanent contact with underside of subfloor decking. Air barrier is installed at any exposed edge of insulation.		
Crowd Cross Walls	Complied N/A	Insulation is permanently attached to walls.		
Crawl Space Walls (Closed Crawl Space)	Complied N/A	Exposed earth in unvented crawl spaces is covered with a Class I vapor retarder with overlapping joints taped.		
Shafts, Penetrations	Complied N/A	Duct shafts, utility penetrations, knee walls and flue shafts opening to exterior or unconditioned space are sealed.		
Narrow cavities	☐ Complied ☐ N/A	Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.		
Garage Separation	Complied N/A	Air sealing is provided between the garage and conditioned spaces.		
Recessed Lighting	Complied N/A	Recessed light fixtures are air tight, IC rated, and sealed to drywall. Exception: Fixtures in conditioned space.		
Plumbing and Wiring	Complied N/A	Insulation is placed between outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.		
Shower/Tub on Exterior Wall	Complied N/A	Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.		
Electrical/Phone Box on Exterior Wall	Complied N/A	Air barrier extends behind boxes or air sealed type boxes are installed.		
Common Wall	Complied N/A	Air barrier is installed in common wall between dwelling units.		
HVAC Register Boots	Complied N/A	HVAC register boots that penetrate building envelope are sealed to subfloor or drywall		
Fireplace	Complied N/A	Fireplace walls include an air barrier.		

Table 402.4.2 is not required to be submitted to the Community Development Department but is to be used as a checklist to field verify the items as noted.