



Success with 2012 NC Energy Conservation  
Code in North Carolina:  
*Tech Tips for Builders*

# FOUNDATION





# TECH TIPS: FOUNDATION

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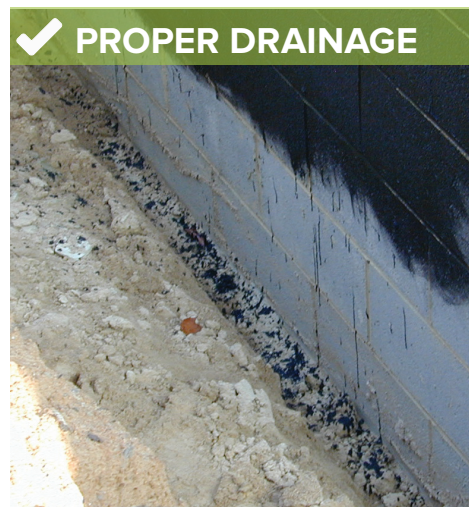
1. If installing poly sheeting, install at least 6-mil thickness and overlap at least 12 inches.



2. Damp proof the exterior of all below-grade walls.



3. Install a drainage system along entire foundation footing of below-grade walls.



4. Install exterior insulation without gaps, voids, misalignments or compression and with a rigid, opaque and weather-resistant protective covering.





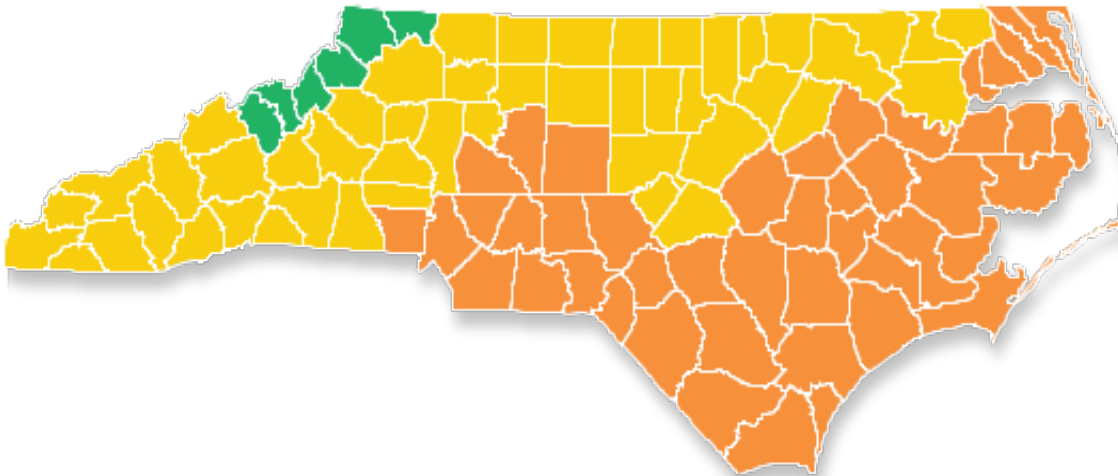


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## 5. Install exterior insulation to meet the NC 2012 Energy Conservation Code.

CLIMATE ZONE	CEILING	FRAME WALL	MASS WALL <sup>c</sup>	FLOOR	BASEMENT WALL <sup>e</sup>	CRAWL SPACE WALL <sup>e</sup>	SLAB <sup>g,h</sup>
Zone 3	R-30	R-13	R-5/10	R-19	R-10/13 <sup>f</sup>	R-5/13	0
Zone 4	R-38 or R-30 cont.	R-15 or R-13+R.25 <sup>b</sup>	R-5/10	R-19	R-10/13	R-10/13	10, 2 ft.
Zone 5	R-38 or R-30 cont.	R-19 or R-13+R-5 or R-15+R3 <sup>b</sup>	R-13/17	R-30 <sup>d</sup>	R-10/13	R-15/19	10, 2 ft.



- R-Values are minimums.
- "R-13+R-5" means R-13 cavity insulation, plus R-5 insulated sheathing. If structural sheathing covers 25 percent or less of the exterior, insulated sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of the exterior, structural sheathing shall be supplemented with insulation sheathing of at least R-2.
- The second R-value applies when more than half of the insulation is on the interior of the mass wall.
- Sufficient insulation to fill the cavity, R-19 minimum.
- "R-15/19" means R-15 continuous insulation sheathing on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "R-10/13" means R-10 continuous insulated sheathing or R-10 cavity insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
- Basement wall insulation is not required in warm-humid locations defined by Figure 301.1 and Table 301.1 of the IECC.
- R-values are minimums.
- R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or two feet, whichever is less in Climate Zones 1-3 for heated slabs.

Interactive Map:

<http://energycode.pnl.gov/EnergyCodeReqs/>