



OVERVIEW* OF PRESCRIPTIVE PATH FOR COMPLIANCE WITH THE 2006 INTERNATIONAL ENERGY CONSERVATION CODE (Residential)

BUILDING THERMAL ENVELOPE REQUIREMENTS

WINDOWS AND INSULATION					FOUNDATION TYPE			
Window U-factor	Skylight U-factor	Ceiling R-value	Wood Frame Wall R-value	Mass Wall R-value	Floor R-value	Basement Wall R-value	Slab R-value and Depth	Crawl Space Wall R-value
0.40	0.60	R-38	R-13	R-5	R-19	R-10/13	R-10, 2 ft	R-10/13

1. This code applies to new construction as well as all additions, alterations and replacement windows in residential buildings with wood framing and/or mass walls. See Section 402.2.4 for steel framing requirements.
2. Window refers to any glazing in exterior openings in buildings, including skylights, sliding glass doors and glass block, including their accompanying sashes, frames, etc.
3. Window and skylight *U*-factor values are maximum acceptable levels. Window *U*-factor must be determined from a National Fenestration Rating Council (NFRC) label on the product or from the default values in the IECC. Up to 15 square feet of glazed fenestration *per dwelling unit* is exempt from the *U*-factor requirements. *U*-factors are the maximum levels allowed (*example: U- 0.30 is better than U- 0.40*).
4. Opaque exterior doors must meet the window *U*-factor requirements. One door is exempt.
5. Insulation R-values are the minimum acceptable levels. R-38 ceiling insulation that extends full height and uncompressed over the wall top plate at the eaves may be reduced to R-30.
6. For the two different values for basement and crawlspace insulation requirements, the first R-value applies to continuous insulation, the second to framing cavity insulation. Crawl space wall R-value applies only to unvented crawl spaces. Floors over outside air must meet ceiling requirements.
7. Slab-on-grade perimeter insulation is optional in the City of Maryville due to termite infestation conditions. If installed it must comply with 402.2.7.

AIR LEAKAGE, MOISTURE CONTROL AND SYSTEMS REQUIREMENTS

1. The building thermal envelope shall be durably sealed to limit air infiltration of joints, seams, and penetrations by caulking, gasketing, weather-stripping, or otherwise sealing with an air barrier material, suitable film or solid material. Vapor retarders are required in crawl spaces.
2. Supply and return ducts must be insulated to a minimum of R-8 except in floor trusses which must be a minimum of R-6. Ducts or portions of ducts located completely inside the thermal building envelope do not need to be insulated. Building framing cavities cannot be used as supply ducts.
3. Prescriptive requirements are based on normal HVAC efficiencies. The HVAC system is required to be properly sized using the procedure in the Air Conditioning Contractor's of America's (ACCA) Manual J. At least one thermostat shall be provided for each separate heating and cooling system.
4. Outdoor exhausts and intakes must have automatic or gravity dampers that close when the ventilation system is not operating.
5. The builder shall post a permanent certificate on the electrical distribution panel listing the predominant R-values, *U*-values and efficiency of HVAC equipment.

* This is not a list of all code requirements. Consult the code for additional information. See Section 402.1.4 for "Total UA Alternative" for Insulation and Fenestration alternatives, and see Section 404 for compliance by "Simulated Performance Alternative" method. REVISED 9-8-2010