

# CHEBOYGAN COUNTY DEPARTMENT OF BUILDING SAFETY

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## 2009 MICHIGAN UNIFORM ENERGY CODE METHODS OF COMPLIANCE – CHEBOYGAN COUNTY ZONE 6A

Effective: March 9, 2011

**Prescriptive Method:** Follow the chart and sections of the 2009 MUEC for R Values of insulation on foundations, floors, walls, ceilings and the U Values for doors, windows and skylights, etc.

- Basements – Minimum R15 using foam sheet good or R19 using and insulated framed wall around the inside of the foundation.
- Crawlspace – Minimum R10 using foam sheet goods or R13 using an insulated framed wall around the perimeter of foundation.
- Floor Slab – Minimum R10 for 4' down.
- Floors – Minimum R30 over any unconditioned spaces.
- Walls – Minimum R20 framed cavity insulation or a combination of minimum R13 framed cavity insulation + minimum R5 foam sheathing.
- Ceilings – Minimum R49 (R38 allowed if full R38 extends out over wall exterior wall plates. Promotes the use of energy heal trusses).
- Door and window U Value equal to or less than .35.
- Skylight U Value equal to or less than .60.
- Replacement windows, doors, skylights – same as for new construction.
- Building thermal envelope sealed – joints caulked, doors and windows sealed and/or flashed, openings around doors, windows, skylights, etc, utility penetrations, walls and ceilings separating garages from conditioned spaces, behind tubs and showers on exterior walls, attic access openings, rim joist junctions, other possible sources of air infiltration.
- Air sealing and insulation verification by testing or by inspector verification.
- Wood burning fireplaces to have gasketed doors and outdoor combustion air.
- Recessed lighting to be of an approved type.
- Programmable thermostat for forced air heating systems.
- Duct insulation in unconditioned spaces, attics – R8, all other location R6.
- Mechanical piping systems – Minimum R3 if carrying fluids above 105 degrees F. or below 55 degrees F.
- Circulating hot water systems – minimum R2 insulation.
- Mechanical ventilation intakes and exhausts to have automatic or gravity dampers that close when system is not in operation.
- Minimum 50% of lamps installed in permanently installed fixtures to be high efficacy lamps.

### Simulated Performance Alternative (Performance)

- Building shall be provided with all of the prescriptive requirements considered to be mandatory in accordance with Section 401.2, all supply and return air ducts not completely inside the building thermal envelope are insulated to a minimum R6, and the proposed design to be shown to have an annual energy cost that is less than or equal to the annual energy cost of the standard design for the same building.
- Show compliance through a software based compliance program such as REScheck - free download from Department of Energy Website, [www.energycodes.gov/rescheck/](http://www.energycodes.gov/rescheck/)
- Energy Star rated certificate of compliance.
- HERS rated certificate of compliance.

## Compliance Certificate Instructions:

The 2009 MUEC requires posting of a certificate showing energy code compliance with construction projects per Section 401.3. The certificate is required to be posted on or inside of the electrical panel and when filled out with all the applicable information, will contain all of the items specified in the code as needing to be listed on the certificate.

The following information is required on the certificate:

- Job Site Location (address)
- Date of Form Completion
- Owner Name
- Builder Name
- Project/Permit Number
- Signature of Person Completing Form
- Insulation R Values
- Door, Window and Skylight U Values
- Heating Appliance Efficiency
- Cooling Appliance Efficiency
- Water Service (domestic hot water) Fuel Efficiency

## Sample of Certificate

Energy Efficiency Certificate			
Permit No. _____			
Address: _____			
Insulation Ratings		R-Value	
Roof/Ceiling:	With attic	R-	
	Without attic	R-	
Walls:	Frame	R-	
	Mass	R-	
	Basement	R-	
Floors:	Crawlspace	R-	
	Over unconditioned space	R-	
Ducts:	Slab-edge (depth)	R- /	ft
	Outside conditioned space	R-	
Fenestration Ratings		NFRC U-Factor	NFRC SHGC
Opaque doors:		U-	
Windows:		U-	
Skylights:		U-	
Equipment Performance		Efficiency	
Heating system:		HSPF/AFUE	
Cooling system:		COP/SEER	
Water Heater/Boiler:		EF/ $E_c$ or $E_t$	
Builder/Designer: _____			
Certified by: _____ Date: _____			
Adopted Code Edition: _____			
<b>THIS CERTIFICATE SHALL BE PERMANENTLY POSTED ON OR IN THE ELECTRICAL DISTRIBUTION PANEL AS REQUIRED BY ENERGY / RESIDENTIAL CODES</b>			

When providing the insulation R value information the following is required if applicable:

- Wood frame wall R value – pertains to all areas of exterior wood framed walls.
- Mass wall R values – pertains to exterior walls of types other than wood frame, such as log, SIPS panels, concrete, block and brick.
- Walls of other types R value and a description of those walls.
- Roof/ceiling R value – pertains to all insulated ceiling areas.
- Crawlspace wall R value – pertains to insulation placed on foundation walls.
- Basement wall R value – pertains to insulation products used in or around the basement walls, or framed walls constructed inside of foundation walls.
- Floor R values – pertains to insulation products placed within floor framing over unconditioned spaces or the exterior envelope of the building.
- Slab floor R value and depth – pertains to insulation products placed under the concrete floor slab, include the depth of the insulation product.
- Skylight U value – pertains to the insulating value of skylights installed.
- Fenestration U value – pertains to the insulation value of doors in the building.
- Glazed fenestration U value – pertains to the insulating value of all windows in the building.

**\*\*DO NOT APPLY ENERGY CODE LABEL OVER EXISTING LABELS IN ELECTRICAL PANEL\*\***