Residential Energy Code Guide – Mt. Pleasant

This code applies to new homes, additions and major alterations. It is important to note these are **not all** of the requirements for Climate Zone 6a, and the property owner should consult the full state energy code to check for full compliance.

Mt. Pleasant meet here

Thermal envelope insulation

N1101.12.1

R-value mark shall be applied to each piece of *building thermal envelope* insulation 12 inches or greater in width.

Blown or sprayed roof/ceiling insulation

N1101.12.1

Thickness of insulation shall be written in inches on markers for every 300 square feet throughout the attic space. Each marker shall face the attic access opening.

Access hatches and doors

N1102.2.4

Access doors from conditioned to unconditioned spaces shall be weather stripped and insulated to a level equivalent to the insulation on the surrounding surfaces.

Air leakage testing

N1102.4.1.2

The building shall be tested and verified as having an air leakage rate not exceeding the limits of the compliance method chosen.

Fenestration air leakage (mandatory)

N1102.4.3

Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot, and swinging doors no more than 0.5 cfm per square foot when tested to NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440.

Recessed lighting (mandatory)

N1102.4.4

Recessed luminaries installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaries shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm when tested with ASTM E283 at a 1.57 psf pressure differential.

Thermostat

N1103.1 & N1103.1.1

At least one programmable thermostat shall be provided for each separate heating and cooling system.

Heat pump supplementary heat (mandatory)

N1103.1.2

Heat pumps having supplementary electric resistance heat shall have controls that prevent supplemental heat operation when the heat pump compressor can meet the heating load.

Sealing (mandatory)

N1103.2.2

Ducts, air handlers, and filter boxes shall be sealed, including joints and seams with exception to the following: *air-impermeable spray foam products may be applied without additional joint seals; where a duct connection is made that is partially inaccessible, 3 screws shall be equally spaced on the exposed portion of the joint; continuously welded and locking-type longitudinal joints and seams, of other than snap-lock and button-type per Section M1601.4.1, in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.*

Building Cavities

N1103.2.3

Building framing cavities shall not be used as ducts or plenums.

Mechanical system piping insulation

N1103.3

Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

Protection of piping insulation

N1103.3.1

Piping insulation exposed to weather shall be protected from damage caused by sunlight, moisture, equipment maintenance, and wind and shall provide shielding from solar radiation. Adhesive tape shall not be permitted.

Circulating hot water systems

N1103.4.1

Circulating hot water systems shall be provided with an automatic or readily *accessible* manual that can turn the system on and off.

Mechanical ventilation (mandatory)

N1103.5

The building shall be provided with ventilation that meets the requirements of Section M1507 of this code or the International Mechanical Code, as applicable, or with other approved means of ventilation. Outdoor are intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

Heating and cooling equipment sizing (mandatory)

N1103.6

Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies.

Lighting equipment (mandatory)

N1104.1

A minimum of 75 percent of all lamps in permanently installed in lighting fixtures shall be high-efficiency lamps or at a minimum of 75 percent of the permanently installed lighting fixtures shall contain only high-efficiency lamps. Exception: Low-voltage lighting shall not be required to utilize high-efficiency lamps.

OWNER INFORMATION		
Name:	Phone:	Mobile:
Address:	City/State/Zip:	
E-mail:		

PROJECT DESCRIPTION	
Address of Project:	County: Isabella/Zone 6A
Project Type: ☐ *New Home* ☐ *Addition* ☐ *Alteration (Describe)*	

Prescriptive Method Requirements

Building Components	Prescriptive Standard	Proposed Value	Remarks
Insulation (Code N1102.2); Prescriptive Standard is a Minimum R-Value			
Ceilings with/*without** Attic	R-49, *R-30**		R-49 for standard truss, can be reduced to R-30 with Raised Heel/Energy Truss; **Limited to 500 SF or 20% of the total insulated ceiling area, whichever is less*
Wood Frame Wall	R-20 or 13+5		R-20 for interior cavity, or R-13 for interior cavity plus R-5 continuous insulation
Floors over unconditioned space	R-30		May use sufficient insulation to fill the framing cavity R-19 minimum
Basement Wall	R-15/19		R-15 continuous insulation on the interior or exterior, or R-19 for interior wall cavity
Slab-on-grade Floors	R-10, 4 feet		Insulation shall be from top of slab edge to 4 feet below grade in CZ 6. If slab is heated, an additional R-5 is needed on the slab edge
Crawl Space Walls	R-15/19		R-15 continuous insulation on the interior or exterior, or 19 for interior wall cavity
Fenestrations (Code N1102.3); Prescriptive Standard is a Minimum R-Value			
Windows, glass doors, and opaque swinging doors with >50% glazing	U-0.32		An area weighted average may be used to satisfy the U-factor requirements but must include all windows, skylights, glass doors and glazed opaque doors (provide documentation)
Skylights	U-0.55		
Other Prescriptive Requirements			
Ducts outside building thermal envelope (i.e. attic spaces)	R-8		
Ducts within building but outside conditioned space (i.e. crawl spaces)	R-6		
Ducts within building envelope assembly, insulation placed between duct and unconditioned space	R-8		
Attic Access Doors			Doors must be weather-stripped and insulated to a level equivalent to surroundings