

**1322.1101 IRC SECTION N1101, GENERAL.**

Subpart 1. **IRC Section N1101.1.** IRC Section N1101.1 is amended to read as follows:

**N1101.1 Scope.** This chapter regulates energy efficiency for the design and construction of buildings regulated by the International Residential Code (IRC) as adopted and amended by the state of Minnesota. This chapter shall also be used to regulate the energy efficiency for the design and construction of new residential buildings regulated by the International Building Code (IBC) as adopted and amended by the state of Minnesota that are not more than three stories in height and contain no conditioned common space that is shared between dwellings, and each dwelling unit contains a separate means of egress. The intent of these criteria is to provide a means for furnishing quality indoor air, assuring building durability, and permitting energy efficient operation. Pursuant to part 1322.2100, Appendix F of the 2006 International Residential Code (IRC) applies to all residential buildings covered by this chapter. Enforcement of this chapter must not abridge safety, health, or environmental requirements under other applicable codes or ordinances.

**Exceptions:**

1. Portions of the building that do not enclose conditioned space, including garages.
2. Insulation R-values, air barrier, and vapor retarder requirements are not required for existing foundations, crawl space walls, and basements in existing dwellings or existing dwelling units whose alteration or repair require a permit if the original dwelling's permit was issued before the effective date of this chapter.
3. Additions to existing dwellings or dwelling units may be made without making the entire dwelling or dwelling unit comply, provided that the addition complies with all the requirements of this chapter.
4. Alteration or repairs to existing dwellings or dwelling units may be made without making the entire dwelling or dwelling unit comply, provided the alteration complies with as many requirements of this chapter as feasible, as determined by the designated building official.
5. Buildings that have been specifically designated as historically significant by the state or local governing body, or listed or determined to be eligible for listing in the National Register of Historic Places.
6. If a building houses more than one occupancy, each portion of the building must conform to the requirements for the occupancy housed in that portion.
7. This chapter does not cover buildings, structures, or portions of buildings or structures whose peak design energy rate usage is less than 3.4 Btu per hour per square foot or 1.0 Watt per square foot of floor area for all purposes.

Subp. 2. **IRC Section N1101.2.** IRC Section N1101.2 is amended to read as follows:

**N1101.2 Compliance.** Compliance shall be demonstrated by meeting the requirements of this chapter. Climate zones from Table N1101.2.1 shall be used in determining the applicable requirements from this chapter.

Subp. 3. **IRC Section N1101.2.1.** IRC Section N1101.2.1 is deleted in its entirety.

Subp. 4. **IRC Figure N1101.2.** IRC Figure N1101.2 is deleted in its entirety.

Subp. 5. **IRC Table N1101.2.** IRC Table N1101.2 is deleted and replaced with the following:

Table N1101.2 Minnesota Climate Zones

Northern Zone	Southern Zone
Aitkin	Anoka
Becker	Benton
Beltrami	Big Stone
Carlton	Blue Earth
Cass	Brown
Clay	Carver
Clearwater	Chippewa
Cook	Chisago
Crow Wing	Cottonwood
Douglas	Dodge
Grant	Dakota
Hubbard	Faribault
Itasca	Fillmore
Kanabec	Freeborn
Kittson	Goodhue
Koochiching	Hennepin
Lake	Houston
Lake of the Woods	Isanti
Mahnomen	Jackson
Marshall	Kandiyohi
Mille Lacs	Lac qui Parle

Morrison	Le Sueur
Norman	Lincoln
Otter Tail	Lyon
Pennington	Martin
Pine	McLeod
Polk	Meeker
Red Lake	Mower
Roseau	Murray
St. Louis	Nicollet
Todd	Nobles
Traverse	Olmsted
Wadena	Pipestone
Wilkin	Pope
	Ramsey
	Redwood
	Renville
	Rice
	Rock
	Scott
	Sherburne
	Sibley
	Stearns
	Steele
	Stevens
	Swift
	Yellow Medicine
	Wabasha
	Waseca
	Watonwan

Winona  
Wright

Subp. 6. **IRC Table N1101.2.1.** IRC Table N1101.2.1 is deleted in its entirety.

Subp. 7. **IRC Section 1101.3.** IRC Section N1101.3 is amended to read:

**N1101.3 Identification.** Materials, systems, and equipment shall be identified in a manner that will allow a determination of compliance with the applicable provisions of this chapter.

**N1101.3.1 Plans and specifications.** Plans and specifications shall show in sufficient detail pertinent data and features of the building, the equipment, and the systems as governed by this chapter, including, but not limited to: design criteria, exterior envelope component materials and their locations, U-factors of the envelope systems, R-values of insulating materials, size and type of apparatus and equipment, equipment and system controls, and other pertinent data to indicate conformance with the requirements of this chapter.

Subp. 8. **IRC Section N1101.4.** IRC Section N1101.4 is deleted in its entirety and replaced with the following:

**N1101.4 Building thermal envelope insulation.** All thermal insulation must conform to Minnesota Rules, chapter 7640, Minnesota Thermal Insulation Standards, adopted by the Department of Commerce. Insulation shall be manufactured for its intended use, installed according to the manufacturer's specifications, and be no less than the stated performance at winter design conditions. Insulation used on the exterior for the purpose of insulating foundation walls shall be a water-resistant material and comply with ASTM C578 or C612. If an R-value identification mark has not already been applied by the manufacturer to each piece of building thermal envelope insulation 12 inches (305 mm) or more wide, the insulation installers shall provide a certification listing the type, manufacturer, and R-value of insulation installed in each element of the building thermal envelope as described in section N1101.8. For blown or sprayed insulation (fiberglass and cellulose), the initial installed thickness, settled thickness, settled R-value, installed density, coverage area, and number of bags installed shall be listed on the certification. For sprayed polyurethane foam (SPF) insulation, the installed thickness of the area covered and R-value of installed thickness shall be listed on the certificate. When using blown or sprayed insulation (fiberglass, cellulose, or sprayed polyurethane foam) requirements from Sections N1101.4.1, N1101.4.1.1, and N1101.4.1.2 shall be met accordingly.

**N1101.4.1 Blown or sprayed roof/ceiling insulation.** Installation of blown or sprayed roof/ceiling insulation must comply with sections N1104.1.1 and N1104.1.2.

**N1101.4.1.1 Attic thickness markers.** The thickness of blown in or sprayed roof/ceiling insulation (fiberglass or cellulose) shall be written in inches (mm) on markers that are installed at least one for every 100 ft<sup>2</sup> (9.3 m<sup>2</sup>) throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers a minimum of 1 inch (25 mm) high. Each marker shall face the attic access opening. Spray polyurethane foam thickness and installed R-value shall be listed on the certificate provided by the insulation installer.

**N1101.4.1.2 Attic insulation card.** A signed and dated insulation receipt attic card must be attached to the framing near the access opening, in a clearly visible place, and posted with the certificate required by section N1101.8. The attic card must identify the type of insulation installed, the manufacturer, the installer, the R-value per inch, the designed settled thickness, the square footage of attic coverage area, and the number of bags installed.

**N1101.4.2 Insulation mark installation.** Insulating materials shall be installed such that the manufacturer's R-value mark is readily observable upon inspection.

Subp. 9. **IRC Section N1101.5.** IRC Section N1101.5 is deleted in its entirety and replaced with the following:

**N1101.5 Fenestration product rating.** U-factors of fenestration products (windows, doors, and skylights) shall be determined in accordance with NFRC 100-2001, air leakage shall be determined in accordance with Section N1102.4.2. Products lacking such a labeled U-factor shall be assigned a default U-factor from Tables N1101.5(1) and N1101.5(2).

Subp. 10. **IRC Table N1101.5(1).** IRC Table N1101.5(1) is amended to read as follows:

Table N1101.5(1)				
Default Glazed Fenestration U-Factors				
			Skylight	
Frame Type	Single Pane	Double Pane	Single Pane	Double Pane
Metal	1.20	0.80	1.60	1.05
Metal with Thermal Break	1.1	0.65	1.9	1.1

Non-Metal or Metal Clad	0.95	0.55	1.25	0.80
Glazed Block	0.60			

Subp. 11. **IRC Table N1101.5(2).**

Table N1101.5(2)

Default Door U-Factors

Door Type	U-Factor
Uninsulated Metal	1.2
Insulated Metal	0.6
Wood	0.5
Insulated, Non-metal edge, max 45% glazing, any glazing double pane	0.35

Subp. 12. **IRC Table N1101.5(3).** IRC Table N1101.5(3) is deleted in its entirety.

Subp. 13. **IRC Section N1101.6.** IRC Section N1101.6 is amended to read as follows:

**N1101.6 Installation.** Materials, systems, and equipment shall be installed according to the manufacturer's installation instructions, the conditions of any listing or required certifications, and this code.

Subp. 14. **IRC Section N1101.7.** IRC Section N1101.7 is deleted in its entirety.

Subp. 15. **IRC Section N1101.8.** IRC Section N1101.8 is deleted in its entirety and replaced with the following:

**N1101.8 Building certificate.** A building certificate shall be posted in a permanently visible location inside the building. The certificate shall be completed by the builder and shall list information and values of components listed in Table N1101.8.

Table N1101.8	
Component	Certificate requirements
Date certificate is installed	Posted date
Dwelling or dwelling unit location	Mailing address and city
Residential contractor	Name and license number of residential contractor

Insulation installed in or on ceiling/roof, walls, slab-on-grade, and floor	Type and installed R-value
Rim joist and foundation wall insulation	Installed R-value, type, and whether the insulation is exterior, integral, or interior
Fenestration	Average U-factor and SHGC
Ducts outside conditioned spaces	Installed R-value
Mechanical ventilation system	Type, location, and design continuous and total ventilation rates
Make-up air and combustion air systems (if installed)	Type, location, and size
Heating system	Type, input rating, AFUE or HSPF, manufacturer, model, and the structure's calculated heat loss
Domestic water heater	Type, size, manufacturer, and model
Cooling system (if installed)	Type, output rating, SEER, manufacturer, model, calculated cooling load, and the structure's calculated heat gain
Radon control system	Passive or active

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