State Maps and Prescriptive Packages

April 2000

The State Maps and Prescriptive Packages contain supporting materials that are needed when using the Envelope and Mechanical Compliance Guides. Insulation and other building envelope requirements and some mechanical system requirements vary by climate. The State Maps divide the United States into 33 different climate zones at a county level. Zones are numbered from 1 through 19 (consistent with the IECC and MEC*check* climate zones) and have a, b, and c designations to reflect climate differences that affect cooling; e.g., cooling degree days and solar radiation. The climate maps are unchanged from Version 1.

To determine the climate zone to use with your building, locate the map for your state and identify the zone number from the legend or county list.

To determine insulation and other building envelope requirements, find the prescriptive package number corresponding to your climate zone. The *Envelope Compliance Guide* employs a package approach that requires all components in your design to meet or exceed the prescribed efficiency levels contained in the prescriptive package. If you find the prescriptive packages too constraining, consider using the COM*check-EZ* software, which allows tradeoffs among building envelope components.

NEBRASKA

Zone	County
13B	Adams
14B	Antelope
14B	Arthur
14B	Banner
14B	Blaine
14B	Boone
15	Box Butte
14B	Boyd
14B	Brown
13B	Buffalo
14B	Burt
13B	Butler

Zone	County
13B	Cass
14B	Cedar
13B	Chase
14B	Cherry
14B	Cheyenne
13B	Clay
13B	Colfax
14B	Cuming
14B	Custer
14B	Dakota
15	Dawes
13B	Dawson

Zone	County
14B	Deuel
14B	Dixon
13B	Dodge
13B	Douglas
13B	Dundy
13B	Fillmore
13B	Franklin
13B	Frontier
13B	Furnas
13B	Gage
14B	Garden
14B	Garfield

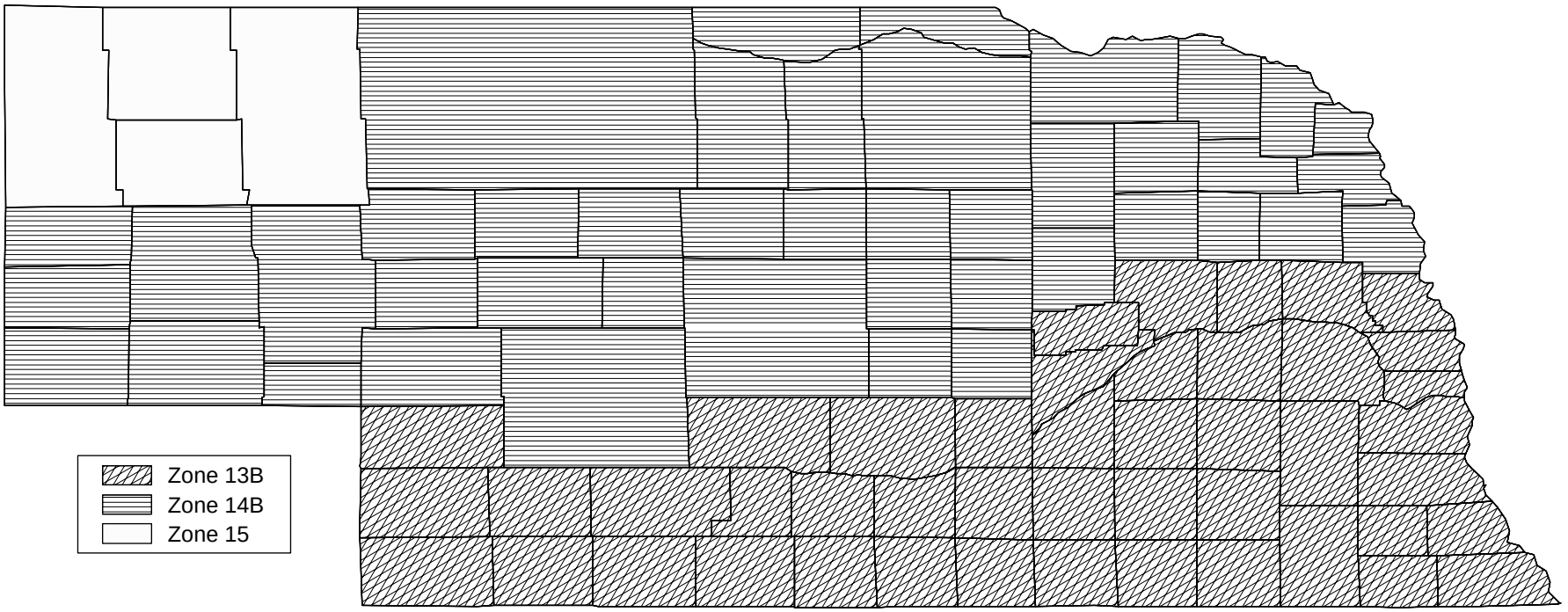
Zone	County
13B	Gosper
14B	Grant
14B	Greeley
13B	Hall
13B	Hamilton
13B	Harlan
13B	Hayes
13B	Hitchcock
14B	Holt
14B	Hooker
14B	Howard
13B	Jefferson

Zone	County
13B	Johnson
13B	Kearney
14B	Keith
14B	Keya Paha
14B	Kimball
14B	Knox
13B	Lancaster
14B	Lincoln
14B	Logan
14B	Loup
14B	Madison
14B	Mcpherson

Zone	County
13B	Merrick
14B	Morrill
13B	Nance
13B	Nemaha
13B	Nuckolls
13B	Otoe
13B	Pawnee
13B	Perkins
13B	Phelps
14B	Pierce
13B	Platte

Zone	County
13B	Polk
13B	Red Willow
13B	Richardson
14B	Rock
13B	Saline
13B	Sarpy
13B	Saunders
14B	Scotts Bluff
13B	Seward
15	Sheridan
14B	Sherman

Zone	County
15	Sioux
14B	Stanton
13B	Thayer
14B	Thomas
14B	Thurston
14B	Valley
13B	Washington
14B	Wayne
13B	Webster
14B	Wheeler
13B	York



COMcheck-EZ™ Prescriptive Packages Climate Zone 13b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
Walls (a,b)	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Framed *Minimum Cavity R-Value (c)*	NA	13	11	NA	13	11	NA	13	11	NA	13	13
Any Spacing *Minimum Continuous R-Value (d)*	NA	0	0	NA	0	0	NA	0	0	NA	7	3
CMU, 8 in. or greater *Minimum Cavity R-Value*	NA	11	11	NA	11	11	NA	11	11	NA	11	11
with Integral Insulation(e) *Minimum Continuous R-Value*	5	0	0	5	0	0	5	0	0	5	0	0
All Other *Minimum Cavity R-Value*	NA	11	11	NA	11	11	NA	11	11	NA	11	11
Masonry Walls(f) *Minimum Continuous R-Value*	5	0	0	5	0	0	5	0	0	5	0	0
Windows	No Projection	[3].25 Projection	[3].5 Projection	No Projection	[3].25 Projection	[3].5 Projection	No Projection	[3].25 Projection	[3].5 Projection	No Projection	[3].25 Projection	[3].5 Projection
Maximum Solar Heat Gain Coefficient	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.4	0.5	0.6
Maximum U-Factor	Any	Any	Any	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
Skylight (Limit 3% of Roof Area)												
Maximum U-Factor		0.8			0.8			0.8			0.8	
Roof	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	18		25	19		25	23		30	23		30
Nonwood Joist/Truss *Minimum R-Value*	19		25	20		25	24		30	24		30
Concrete Slab or Deck *Minimum R-Value*	18		NA	19		NA	23		NA	23		NA
Metal Purlin with Thermal Break *Minimum R-Value*	19		30	20		30	24		X	24		38
Metal Purlin without Thermal Break *Minimum R-Value*	19		X	20		X	24		X	24		49
Floor	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	17		19	17		19	17		19	17		19
Nonwood Joist/Truss *Minimum R-Value*	17		25	17		25	17		25	17		25
Concrete Slab or Deck *Minimum R-Value*	17		NA	17		NA	17		NA	17		NA
Slab Edge or Basement Walls	Insulation			Insulation			Insulation			Insulation		
Minimum R-Value	0			0			8			8		

Notes:

(a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.

(b) Where values are shown for both cavity and continuous insulation, both requirements must be met.

(c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.

(d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undimished by compression or bridging.

(e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.

(f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages Climate Zone 14b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)				Medium Fenestration Area (10%-25% Window-Wall Ratio)				High Fenestration Area (25%-40% Window-Wall Ratio)				Very High Fenestration Area (40%-50% Window-Wall Ratio)			
Walls (a,b)	No Framing	or	Metal Framing	or Wood Framing	No Framing	or	Metal Framing	or Wood Framing	No Framing	or	Metal Framing	or Wood Framing	No Framing	or	Metal Framing	or Wood Framing
Framed *Minimum Cavity R-Value (c)*	NA		13	11	NA		13	11	NA		13	11	NA		13	13
Any Spacing *Minimum Continuous R-Value (d)*	NA		3	0	NA		3	0	NA		3	0	NA		7	3
CMU, 8 in. or greater *Minimum Cavity R-Value*	NA		11	11	NA		11	11	NA		11	11	NA		11	11
with Integral Insulation(e) *Minimum Continuous R-Value*	5		0	0	5		0	0	5		0	0	5		0	0
All Other *Minimum Cavity R-Value*	NA		11	11	NA		11	11	NA		11	11	NA		11	11
Masonry Walls(f) *Minimum Continuous R-Value*	5		0	0	5		0	0	5		0	0	5		0	0
Windows	No Projection		[3].25 Projection	[3].5 Projection	No Projection		[3].25 Projection	[3].5 Projection	No Projection		[3].25 Projection	[3].5 Projection	No Projection		[3].25 Projection	[3].5 Projection
Maximum Solar Heat Gain Coefficient	Any		Any	Any	0.5		0.6	0.7	0.4		0.5	0.6	0.4		0.5	0.6
Maximum U-Factor	0.7		0.7	0.7	0.5		0.5	0.5	0.5		0.5	0.5	0.4		0.4	0.4
Skylight (Limit 3% of Roof Area)																
Maximum U-Factor			0.8				0.8				0.8				0.8	
Roof	Continuous Insulation	or		Roof Cavity Insulation	Continuous Insulation	or		Roof Cavity Insulation	Continuous Insulation	or		Roof Cavity Insulation	Continuous Insulation	or		Roof Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	19			25	19			25	23			30	23			30
Nonwood Joist/Truss *Minimum R-Value*	20			25	20			25	24			30	24			30
Concrete Slab or Deck *Minimum R-Value*	19			NA	19			NA	23			NA	23			NA
Metal Purlin with Thermal Break *Minimum R-Value*	20			30	20			30	24			X	24			38
Metal Purlin without Thermal Break *Minimum R-Value*	20			X	20			X	24			X	24			49
Floor	Continuous Insulation	or		Cavity Insulation	Continuous Insulation	or		Cavity Insulation	Continuous Insulation	or		Cavity Insulation	Continuous Insulation	or		Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	19			25	19			25	19			25	19			25
Nonwood Joist/Truss *Minimum R-Value*	19			25	19			25	19			25	19			25
Concrete Slab or Deck *Minimum R-Value*	19			NA	19			NA	19			NA	19			NA
Slab Edge or Basement Walls	Insulation				Insulation				Insulation				Insulation			
Minimum R-Value	0				8				8				8			

Notes:

(a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.

(b) Where values are shown for both cavity and continuous insulation, both requirements must be met.

(c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.

(d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undimished by compression or bridging.

(e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.

(f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages Climate Zone 15

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)				Medium Fenestration Area (10%-25% Window-Wall Ratio)				High Fenestration Area (25%-40% Window-Wall Ratio)				Very High Fenestration Area (40%-50% Window-Wall Ratio)			
Walls (a,b)	No Framing	or	Metal Framing	or Wood Framing	No Framing	or	Metal Framing	or Wood Framing	No Framing	or	Metal Framing	or Wood Framing	No Framing	or	Metal Framing	or Wood Framing
Framed *Minimum Cavity R-Value (c)*	NA		13	11	NA		13	11	NA		13	11	NA		13	13
Any Spacing *Minimum Continuous R-Value (d)*	NA		3	0	NA		3	0	NA		3	0	NA		7	4
CMU, 8 in. or greater *Minimum Cavity R-Value*	NA		11	11	NA		11	11	NA		11	11	NA		13	11
with Integral Insulation(e) *Minimum Continuous R-Value*	5		0	0	5		0	0	5		0	0	5		0	0
All Other *Minimum Cavity R-Value*	NA		11	11	NA		11	11	NA		13	11	NA		13	11
Masonry Walls(f) *Minimum Continuous R-Value*	5		0	0	5		0	0	6		0	0	6		3	0
Windows	No Projection		[3].25 Projection	[3].5 Projection	No Projection		[3].25 Projection	[3].5 Projection	No Projection		[3].25 Projection	[3].5 Projection	No Projection		[3].25 Projection	[3].5 Projection
Maximum Solar Heat Gain Coefficient	Any		Any	Any	0.5		0.6	0.7	0.5		0.6	0.7	0.4		0.5	0.7
Maximum U-Factor	0.7		0.7	0.7	0.5		0.5	0.5	0.4		0.4	0.4	0.4		0.4	0.4
Skylight (Limit 3% of Roof Area)																
Maximum U-Factor	0.6				0.6				0.6				0.6			
Roof	Continuous Insulation	or	Roof Cavity Insulation		Continuous Insulation	or	Roof Cavity Insulation		Continuous Insulation	or	Roof Cavity Insulation		Continuous Insulation	or	Roof Cavity Insulation	
All-Wood Joist/Truss *Minimum R-Value*	19		25		19		25		23		30		23		30	
Nonwood Joist/Truss *Minimum R-Value*	20		25		20		25		24		30		24		30	
Concrete Slab or Deck *Minimum R-Value*	19		NA		19		NA		23		NA		23		NA	
Metal Purlin with Thermal Break *Minimum R-Value*	20		30		20		30		24		X		24		38	
Metal Purlin without Thermal Break *Minimum R-Value*	20		X		20		X		24		X		24		NA	
Floor	Continuous Insulation	or	Cavity Insulation		Continuous Insulation	or	Cavity Insulation		Continuous Insulation	or	Cavity Insulation		Continuous Insulation	or	Cavity Insulation	
All-Wood Joist/Truss *Minimum R-Value*	22		25		22		25		22		25		22		25	
Nonwood Joist/Truss *Minimum R-Value*	23		30		23		30		23		30		23		30	
Concrete Slab or Deck *Minimum R-Value*	22		NA		22		NA		22		NA		22		NA	
Slab Edge or Basement Walls	Insulation				Insulation				Insulation				Insulation			
Minimum R-Value	0				8				8				8			

Notes:

(a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.

(b) Where values are shown for both cavity and continuous insulation, both requirements must be met.

(c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.

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- "NA" indicates the category is not applicable.
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