



HUERFANO COUNTY BOARD OF REVIEW AGENDA

May 31, 2023 at 10:00 AM

Commissioners Meeting Room - 401 Main Street, Suite 309, Walsenburg, CO 81089

Office: 719-738-3000 ex 200 | Fax: 719-738-3996

1. Join by
Zoom: <https://us02web.zoom.us/j/83429735658?pwd=S2ZlSENWK0ZHR3Y0RkxBOEp3c2xGdz09>
Meeting ID: 834-2973-5658 | Passcode: 915234
2. PLEDGE OF ALLEGIANCE
3. **ROLL CALL**
4. **MINUTES REVIEW**
 - [a.](#) Minutes
5. **OLD BUSINESS**
 - [a.](#) Election of Chairperson
 - [b.](#) 2021 IBC
6. **ADJOURNMENT**

Huerfano County
Land Use Department
401 Main Street, Suite 304
Walsenburg, Colorado 81089
719-738-1220, Ext. 103(Bldg Department)



HCBOR -Meeting 02032022

Meeting Started at 10:02am

Pledge of Allegiance

Roll Call

Minutes review of last meeting: No minutes, First meeting of HCBOR Meeting.
 Bruce Roscoe stated there would be no name calling at this meeting.

Appointments: Introductions done by all Board Members as well as the Huerfano County Staff. Bruce Roscoe was nominated to be the Chairperson by Ray Garcia, seconded by Rick Gonzales, passed unanimously. Vice Chair nominated by Ray Garcia to be Rick Gonzales and was seconded by Bruce Roscoe, passed unanimously.

New Business: Gregory and Rhonda Low.

Point one: Terry Sandoval read minutes of all previous HCRBA meetings that the Lows were involved in the last few months. The only thing the Lows have done per recommendation by the HCRBA is pay the double fine on the illegal build. No third-party engineer has been hired to inspect the structure as of date per recommendations of the HCRBA.

Mr. Low stated he didn't know why they were here. Mr. Low stated he knew nothing about the third party engineer. Mr. Low read the Code Enforcement Policy. Rick interrupted Mr. Low.

Mr. Roscoe asked if there was a specific letter sent to the Low's on letterhead informing them of the third party engineer needing to inspect the illegal build. Which the Building Department did not. Bruce Roscoe made a movement to send out a Letter on official letterhead to have the Low's come into compliance with the illegal build as stated by the HCRBA. Ray Garcia stated the structure should stay intact since the Low's already had the building. Rick Gonzales stated the building needs to be up to Code and should be inspected. Bruce Roscoe said the building needs to be inspected. Rick Gonzales said it is the responsibility of the builder to pay for the third-party inspector/take pictures of the building and foundation and send them in to make sure the building is anchored to the foundation. Bruce Roscoe made a motion to provide the Low's with a letter, stating details of the building need to be sent as well as photos showing the building is properly anchored. 30 days given to send in information and have Bruce Roscoe look at to make sure the building is safe and up to Code. The motion was Seconded by Ray Garcia. Voted on and passed by Bruce Roscoe and Ray Garcia; but disagreed by Rick Gonzales. Motion passed by majority vote.

Point number two: Need to have a solid surface not pavers for the front entrance. Roscoe read the I.R.C. from 2015. Terry read page 155 from the I.R.C.. Discussion by committee on what the Building Codes state. Motion made by Ray Garcia and seconded by Rick Gonzales to have the Lows follow the I.R.C. Building Codes as discussed and put in a solid surface. Voted on and passed unanimously. Bruce Roscoe adjourned the meeting with no further discussion.

Meeting adjourned at 10:56 am

Huerfano County Land Use Department
 401 Main Street, Suite 304
 Walsenburg, Colorado 81089
 719-738-1220, Ext. 506



RESOLUTION NO: 23—??

A RESOLUTION FOR ALTERING AND AMENDING HUERFANO COUNTY BOARD OF COUNTY COMMISSIONERS RESOLUTION 17-12 PERTAINING TO BUILDING CONSTRUCTION FOR ALL UNINCORPORATED AREAS OF HUERFANO COUNTY, COLORADO.

WHEREAS, the City of Walsenburg, the Town of La Veta, and the Huerfano County Board of County Commissioners have entered into an intergovernmental agreement and created a Regional Building Authority with the intent to adopt as nearly identical building codes as possible and,

WHEREAS, the Huerfano County Regional Building Authority have recommended each jurisdiction adopt as appropriate and with any necessary amendments the 2021 edition of the building codes published by the International Code Council, Inc. 500 New jersey Avenue, NW, 6th floor, Washington, DC 20001-2070 and,

WHEREAS, pursuant to C.R.S. § 30-28-201 the Huerfano County Board of County Commissioners by Resolution 86-12 adopted Uniformed Codes on April 16, 1986 and, amended said code to the International Code Council, LLC by Resolution 05-10 on June 29, 2005 and, Resolution 08-10 June 8, 2008, Resolution 17-12 January 31, 2017 and, Resolution 23---?? June ??, 2023

WHEREAS, pursuant to C.R.S. § 30-28-204 the Huerfano County Board of County Commissioners desire to amend said codes, and a public hearing was held on January 31, 2017 after being publicized in the World Journal on January 5, 2017.

Now THEREFORE, BE IT RESOLVED, by the Board of County Commissioners that said amended code shall be known as the Huerfano County Building Code and that said code shall apply to all areas of unincorporated Huerfano County.

BE IT FURTHER RESOLVED, the building standards adopted within resolution ~~23-??~~ are rescinded in their entirety and the following codes are here by adopted by reference, with the additions, insertions, attachments, deletions and changes prescribed in exhibits "A" all to have the same force and effect as if set forth herein in every particular. for the purpose of protecting the public health, safety and general welfare:

International Building Code "IBC" 2021 edition, including appendix chapters C, & F;
International Residential Code "IRC" 2021 edition. including appendix chapters F, J, R.
& S; International Mechanical Code "IMC" 2021 edition;

International Energy Conservation Code "IECC" 2021 edition

International Fuel Gas Code "IFGC" 2021 edition

American National Standard on the design and Construction of Log Structures "ICC 400-2012"

EXHIBIT A

1. Conflict Between Codes

In the event there shall be a conflict between the provision of the Huerfano County Building Code and Huerfano County's specific Land-use Regulations, Huerfano County's Land-use Regulations shall prevail.

2. Savings Clause

If any part, section, subsection, sentence, clause or phrase of this Resolution or of the code adopted hereby is for any reason held to be invalid, such decision shall not affect the validity of the remaining sections of this Resolution or of the referenced code in any part, section, subsection, sentence, clause or phrase thereof; and the Huerfano County Board of County Commissioners hereby declares that it would have passed this Resolution and adopted said code in each part, section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more parts, sections, subsections, sentences, clauses or phrases be declared invalid.

3. References in other Resolutions

All references to the building codes in the various Resolutions of Huerfano County, or in any other Huerfano County Regulation whatsoever, shall be interpreted to refer to the Huerfano County Building Code as amended and adopted by this Resolution.

4. Repeal

Any or all resolutions or parts of resolutions of Huerfano County, Colorado, in conflict or inconsistent herewith are hereby repealed, provided however, that the repeal of any resolution or parts of resolutions of Huerfano County shall not revive any other section of any resolution or resolutions here before repealed or superseded.

5. Matters Not Affected by Repeal

The repeal of resolutions and parts of resolutions of a permanent or general nature shall not affect any offense committed or act done, any penalty or forfeiture incurred, or any contracts right or obligation, established prior to the time when said resolution and parts of resolutions are repealed.

6. Amendments / Deletions

References in all Codes to electrical requirements; *change to read:* All installation and repairs must comply with the adopted Rules and Regulations of the Colorado State Electrical Board, pursuant to C.R.S. § 12-34-104 (2)(a).

References in all Codes to plumbing and fuel gas piping requirements; *change to read:* All installation and repairs must comply with the State of Colorado Model Plumbing and Fuel Gas Code of Standards, determined by the Colorado State Examining Board of Plumbers.

References in all Codes to Building Official; *change to read:* Huerfano County Code Enforcement Officer.

Construction of agricultural structures on lands without a one-or-two family dwelling shall only be allow within an agricultural zoning district, and must meet the requirement of the IBC Appendix "C".

IBC, IRC, IMC, & IECC 101.1 Title. *Change to read:* These Regulations shall be known as the Huerfano County Building Code, hereinafter referred to as "the code".

IBC, IRC, IMC, & IECC 103.1 Creation of enforcement agency. *Change to read:* Administration and enforcement of this Code and all related and secondary codes are hereby delegated to the Huerfano County Land-Use Department. Wherever in this code the phrase "building official" appears, it shall be construed to refer to the Huerfano County Code Enforcement Officer.

IBC 105.1.1 Annual Permit. *Delete.*

IBC 105.2 Work exempt from permit. *Delete Number ten (10):*

IRC R106.1 Submittal documents. *Add;*

106.1.5 Applications. An application for building permits shall be made to the County Building Inspector on forms provided by Huerfano County.

- 106.1.6 Sanitation.** Pursuant to C.R.S. §25-10-112 (1) and section 11.05 of the Huerfano County Land Development Guide the applicant must show proof of an approved sanitation system.
- 106.1.7 Water.** Show proof of adequate water pursuant to Huerfano County Board of County Commissioners Resolution No: 10-11.
- 106.1.8 Right to develop.** Applicant must show proof of property ownership. If the applicant is different than the property owner, they must hold a Huerfano County Contractor license that is appropriate for the type of construction being permit and have written authorization to act as the owner's agent. Proof of ownership must include a complete property description. unless otherwise approved by the building inspector.
- 106.1.9 Exterior elevations.** Show each view. Show vertical dimensions and heights. Show openings and identify materials and show lateral bracing system, where applicable. Show dimensions and schedules.
- 106.1.10 Foundation plan.** Show all foundations and footings. Indicate size, locations, thickness, materials and strengths, and reinforcing. Show all imbedded anchoring such as anchor bolts, hold-downs, post bases, etc. Show dimensions for the location and size of all components delineated on the . foundation plan. Each set of foundation plans shall meet the requirements of Huerfano County Board of County Commissioner Resolution No: 09-16.
- 106.1.11 Floor plan.** Show all floors including basements. Show all rooms, with their use. Overall dimensions and location of all structural elements and openings. Show all doors and windows. Provide door and window schedules. All fire resistance rated assemblies, area of refuge, occupancy separations; fire blocking and draft stopping shall be shown. Show dimensions for the size of all rooms and the locations of other components delineated on the floor plans.

106.1.12 Framing plan. Show all structural and non-structural members, their size, methods and details of attachment, connections, location and materials for floor, roof, and wall section. When required by this code show all fire rated assemblies and fire resistant penetrations.

IRC R106.2 & IBC 107.2.5 Site Plan. *Change to read:* The site plan shall include the following items:

1. In all zoning districts (with the exception of agricultural) a site improvement survey, seal by a Colorado Registered Land Surveyor is required in addition to items two through ten.
2. A legible sheet or map, drawn to an appropriate scale, as accepted by the Building Inspector, showing the location, height and approximate dimensions or envelope location of each existing and proposed structure, and the uses to be contained within the existing and/or proposed structures.
3. The existing and proposed building setbacks and the building area with reference to property lines, highway, street or road rights-of-way, watercourses, and other natural and historic features of the site.
4. The location, size, number of spaces and surfacing of any existing or proposed parking and loading areas.
5. The location of any existing and proposed roads, streets, footpaths, traffic devices, and driveways.
6. The location, if any, and pertinent characteristics of any existing or proposed signs, lighting fixtures, and landscaping.
7. The location of any easements on the property.
8. The anticipated location of all water, sewage disposal, electrical, telephone, and other utilities.
9. All finished grading and storm water runoff.
10. A vicinity map locating the proposed site in relationship to the surrounding area within 500 feet of the boundaries.

IBC 108 & IRC R107.1 Temporary Structures. *Change to read:* Permits for temporary structures and uses shall be issued in accordance with Section 1.12 of the Huerfano County Zoning Regulations.

IMC 106.5.3 IFGC 106.6.3 Fee refunds. *Delete #2 & #3*

IBC 109.2, IRC R108.2 and IMC 106.5.2 Schedule of Permit Fees. *Change to read;* On buildings, structures, or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with attachment II of this code. Fee schedules are established by the Huerfano County Board of County Commissioners, and are subject to change by resolution.

IBC 109.3 & IRC R108.3 Building Permit valuations. *Change to read;* Building valuation will be set in accordance with Attachment I of this code. Building valuations are established by the Huerfano County Board of County Commissioners, and are subject to change by Resolution.

IBC & IRC R108.6 Fee Refunds. *Change to read;* The Building Official shall not authorize refunding of any building permit fee, except upon written request by the property owner within 30 days of the day the permit was issued.

IBC 113.3 & IRC R112.3 Board of Appeals Qualifications. *Change to read;* The board of appeals shall consist of members of the Huerfano County Regional Building Authority.

IRC R301.2 Climatic and geographic design criteria. *Add the following criteria to Table R301.2 (1)*

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY
	SPEED MPH	TOPOGRAPHIC EFFECTS	SPECIAL WIND REGION	WIND-BORNE DEBRIS ZONE	
See Attachment 3	130	NO	YES	NO	B

SUBJECT TO DAMAGE FROM							
WEATHERING	FROST LINE DEPTH	TERMITE	WINTER DESIGN TEMP.	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP.
Severe	See Attachment 4	Moderate to Heavy	0 °F	YES (apply to elevations above 6200 ft)	See Section 1612.3 amended	2000	Walsenburg 51.3 °F Rye 46.6 °F Westcliffe 42.2 °F

IBC 1608.2 Ground snow loads. *Changed to read;* reference IRC R301.2 as amended.

IBC 1609.1.1 Determination of wind loads. *Changed to read;* reference IRC R301.2 as amended.

IBC Table 602.1 H Fire-resistance rating requirements. *Add foot note h:* Where the distance between aircraft hangers is five feet or greater, construction is of non-combustible materials, and there are no penetrations in the structures adjacent wall the fire-resistance rating for the exterior walls is zero hours.

IRC R302.13 Fire Protection of floors. *Delete.*

IRC R313.2 One-and two-family dwellings automatic fire systems. *Delete.*

IRC 608.1 General ICF construction. *Change the last sentence to read:* When ACI 318 or the provisions of this section are used to design insulation concrete form walls, project drawings, typical details and specification are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the Colorado State law, Huerfano County Resolution, or the Huerfano County Code Enforcement Officer.

IBC 705.3 Building on the same lot. *Add exception 3 to read:* This section shall not apply to S- 1 Aircraft Hangers installed at the Huerfano County Airport.

IRC Table N1102.1.2, IECC Table R402.1.2, & ICC 400-2012 table 305.3.1.2 Insulation and Fenestration Requirements by Component. *Change by amending climate zone 5 as follows;*

- Ceiling R-value: from R-49 to R-38.
- Wood framed walls cavity insulation: from R-20 to R-19.
- Basement wall R-value: from 15/19 to 10/13.
- Crawl space wall R-Value: from 15/19 to 10/13.

IRC N1102.4.1.2 & IECC R402.4.1.2 Testing. *Delete.*

IRC N1103.3.5 & IECC 403.3.5 Building Cavities. *Change to read:* Building framing cavities shall not be used as supply ducts.

IRC M1901.2.1 Cooking Appliances *Add;* Commercial gas cooking appliances are allowed as long as the entire kitchen follows the 2021 IBC Codes for commercial kitchens.

IECC C401.3 Thermal Envelope Certificate. *Change to read;* shall be completed by the Building Official or their designee to be included on the Certificate of Occupancy.

IECC R402.2.1 Ceilings with attics. *Delete*

IECC 2021 Table R402.1.2 Maximum Assembly U-Factors and Fenestration Requirements. *Change to IECC 2018 Table R402.1.2*

IECC 2021 Table R402.1.3 Insulation Minimum R-Values and Fenestration Requirements by Component. *Change to IECC 2018 Table R402.1.3*

IECC R 402.2.3 Eave Baffle. *Delete*

IECC R 402.2.4 Access Hatches and Doors. *Delete*

IECC R 402.2.7 Floors. *Delete* **IECC R 402.2.8 Bas IECC R 402.2.10 Crawl Space Walls.** *Delete*
ement Walls. *Delete*

IECC R 402.2.8 Basement Walls. *Delete*

IECC R 402.2.9 Slab-on-grade floors. *Delete everything but the first sentence*

IECC R 402.2.10 Crawl Space Walls. *Delete*

IECC R 402.3.5 Sunroom and Heated Garage fenestration. *Delete*

IECC R 402.4.1.1 Building Thermal Envelope Installation. *Delete*

IECC R 402.4.1.2 Building Thermal Envelope Testing. *Delete*

IECC R 403.1.1 Programmable Thermostat. *Delete*

IECC R 403.3.2 Ducts Located in Conditioned Spaces. *Change to IECC 2018 Code*

IECC R 403.6.3 Mechanical Ventilation Testing. *Delete*

7. Public Welfare Statement

This resolution is deemed by the Board of County Commissioners for Huerfano County to be in the best interest of the public health, safety, morals, and general welfare and the safety, protection, and sanitation of such dwellings, buildings and structures as affected thereby.

THIS RESOLUTION WAS INTRODUCED, READ, AND ADOPTED ON THIS
BOARD OF COUNTY
COMMISSIONERS OF
HUERFANO COUNTY,
COLORADO

By _____

HUERFANO COUNTY SNOW AND FROST DEPTH CHART			
Place	Elevation	Snow Load	Frost Depth
	6000	30	33
Walsenburg (courthouse)	6200	30	33
Lascar Rd (at 660)	6310	30	33
Silver Spurs (310 and 312)	6470	32	34
	6500	34	34
Gardner	6980	38	37
	7000	38	38
La Veta	7050	38	38
Navajo (510 and Navajo Rd)	7080	38	38
	7500	42	41
	8000	44	43
Cuchara (downtown)	8500	46	47
	9000	48	49
Panadero (at the mercantile)	9260	50	52
	9500	52	55

C402.4 Fenestration (Prescriptive).

Fenestration shall comply with Sections C402.4.1 through C402.4.5 and Table C402.4. Daylight responsive controls shall comply with this section and Section C405.2.3.1.

apps

TABLE C402.4 BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENTS

CLIMATE ZONE	1	2	3	4 EXCEPT MARINE	5 AND MARINE 4	6	7	8
U-factor								
Vertical fenestration								
Fixed fenestration	0.50	0.50	0.46	0.38	0.38	0.36	0.29	0.29
Operable fenestration	0.65	0.65	0.60	0.45	0.45	0.43	0.37	0.37
Entrance doors	1.10	0.83	0.77	0.77	0.77	0.77	0.77	0.77
SHGC								
Skylights								
Orientation ^a	SEW	N	SEW	N	SEW	N	SEW	N
PF < 0.2	0.25	0.33	0.25	0.33	0.36	0.48	0.40	0.53
0.2 ≤ PF < 0.5	0.30	0.37	0.30	0.37	0.43	0.53	0.48	0.58
PF ≥ 0.5	0.40	0.40	0.40	0.40	0.58	0.58	0.64	0.64
Skylights								
U-factor	0.75	0.65	0.55	0.50	0.50	0.50	0.50	0.50
SHGC	0.35	0.35	0.35	0.40	0.40	0.40	NR	NR

NR = No Requirement, PF = Projection Factor.

a. "N" indicates vertical fenestration oriented within 45 degrees of true north. "SEW" indicates orientations other than "N." For buildings in the southern hemisphere, reverse south and north. Buildings located at less than 23.5 degrees latitude shall use SEW for all orientations.

C402.1.3 Insulation component R-value-based method.

Building thermal envelope opaque assemblies shall comply with the requirements of Sections C402.2 and C402.4 based on the climate zone specified in Chapter 3. For opaque portions of the building thermal envelope intended to comply on an insulation component R-value basis, the R-values for insulation shall be not less than that specified in Table C402.1.3. Commercial buildings or portions of commercial buildings enclosing Group R occupancies shall use the R-values from the "Group R" column of Table C402.1.3. Commercial buildings or portions of commercial buildings enclosing occupancies other than Group R shall use the R-values from the "All other" column of Table C402.1.3.

TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD^{a,1}

CLIMATE ZONE	1		2		3		4 EXCEPT MARINE		5 AND MARINE 4		6		7		8	
	All other	Group R	All other	Group R	All other	Group R	All other	Group R	All other	Group R	All other	Group R	All other	Group R	All other	Group R
Roofs																
Insulation entirely above roof deck	R-20ci	R-25ci	R-25ci	R-25ci	R-25ci	R-25ci	R-30ci	R-30ci	R-30ci	R-30ci	R-30ci	R-30ci	R-35ci	R-35ci	R-35ci	R-35ci
Metal buildings ^b	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-19 + R-11 LS	R-25 + R-11 LS	R-25 + R-11 LS	R-30 + R-11 LS	R-30 + R-11 LS	R-30 + R-11 LS	R-30 + R-11 LS
Attic and other	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-49	R-49	R-49	R-49	R-49	R-49
Walls, above grade																
Mass ^g	R-5.7ci ^c	R-5.7ci ^c	R-7.6ci	R-7.6ci	R-9.5ci	R-9.5ci	R-11.4ci	R-11.4ci	R-13.3ci	R-13.3ci	R-13.3ci	R-13.3ci	R-15.2ci	R-15.2ci	R-15.2ci	R-25ci
Metal building	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci	R-13 + R-6.5ci
Metal framed	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci	R-13 + R-5ci
Wood framed and other	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20	R-13 + R-3.8ci ^d or R-20
Walls, below grade																
Below-grade wall ^e	NR	NR	NR	NR	NR	NR	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-10ci	R-10ci	R-10ci	R-12.5ci
Floors																
Mass ^e	NR	NR	R-6.3ci	R-8.3ci	R-10ci	R-10ci	R-10ci	R-10.4ci	R-12.5ci	R-12.5ci	R-12.5ci	R-12.5ci	R-15ci	R-16.7ci	R-15ci	R-16.7ci
Joist/framing	NR	NR	R-30	R-30	R-30	R-30	R-30	R-30	R-30	R-30	R-30	R-30	R-30 ^f	R-30 ^f	R-30 ^f	R-30 ^f
Slab-on-grade floors																
Unheated slabs	NR	NR	NR	NR	NR	NR	R-10 for 24" below	R-10 for 24" below	R-10 for 24" below	R-10 for 24" below	R-10 for 24" below	R-10 for 24" below	R-15 for 24" below	R-15 for 24" below	R-15 for 24" below	R-20 for 24" below
Heated slabs ^h	R-7.5 for 12" below + R-5 full slab	R-7.5 for 12" below + R-5 full slab	R-7.5 for 12" below + R-5 full slab	R-7.5 for 12" below + R-5 full slab	R-10 for 24" below + R-5 full slab	R-10 for 24" below + R-5 full slab	R-15 for 24" below + R-5 full slab	R-15 for 24" below + R-5 full slab	R-15 for 24" below + R-5 full slab	R-15 for 24" below + R-5 full slab	R-15 for 24" below + R-5 full slab	R-15 for 24" below + R-5 full slab	R-20 for 48" below + R-5 full slab	R-20 for 48" below + R-5 full slab	R-20 for 48" below + R-5 full slab	R-20 for 48" below + R-5 full slab
Opaque doors																
Nonswinging	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75	R-4.75

For SI: 1 inch = 25.4 mm; 1 pound per square foot = 4.88 kg/m²; 1 pound per cubic foot = 16 kg/m³.

a = Continuous insulation; NR = No Requirement; LS = Linear System.

b. Assembly descriptions can be found in ANSI/APA/ICC-2015 Appendix A.

c. Where using R-value compliance method, a thermal spacer block shall be provided, otherwise use the U-factor compliance method in Table C402.1.3.

d. R-5 is allowed to be substituted with extruded polystyrene (XPS) complying with ASTM C300, ungrouted or partially grouted at 32 inches or less on center vertically and 48 inches or less on center horizontally, with ungrouted cores filled with materials having a maximum thermal conductivity of 0.44 Btu-in/h²-F.

e. Where heated slabs and below grade below grade walls shall comply with the exterior insulation requirements for heated slabs.

f. "Mass floors" shall be in accordance with Section C402.2.3.

g. Steel floor joist systems shall be insulated to R-38.

h. "Mass walls" shall be in accordance with Section C402.2.2.

i. The first value is for perimeter insulation and the second value is for slab insulation. Perimeter insulation is not required to extend below the bottom of the slab.

j. Not applicable to garage floors. See Table C402.1.4.