

Pikes Peak **REGIONAL** Building Department

INTERNATIONAL ENERGY CONSERVATION CODE (IECC) RESIDENTIAL INSULATION CERTIFICATE

This certificate is based on the 2021 International Energy Conservation Code (IECC), **as amended** by the 2023 Pikes Peak Regional Building Code. This certificate is applicable to One- and Two- family Dwellings as well as Townhouses, R2, R-3 and R-4 buildings three stories or less in height. *This certificate is required to be submitted as part of the plan review package.*

ADDRESS OR MASTER #: _____

GARAGE IS: HEATED UNHEATED N/A

ADDITIONAL ENERGY EFFICIENCY OPTION (MUST CHOOSE ONE)

- | | |
|---|---|
| Enhanced envelope performance (IECC R408.2.1) | More efficient duct thermal distribution system (IECC R408.2.4) |
| More efficient HVAC equipment performance (IECC R408.2.2) | Improved air sealing and efficient ventilation system (IECC R408.2.5) |
| Reduced energy use in service water-heating (IECC R408.2.3) | |

METHOD OF ENERGY CODE COMPLIANCE:

The IECC provides various options for compliance with minimum standards. Check the box to indicate the method of compliance and proceed to indicated form section. If additional documentation is required, it must accompany this form.

- | | |
|---|---|
| <input type="checkbox"/> U-factor (IECC R402.1.2)
See Section 1 | <input type="checkbox"/> Heated garage or sunroom (IECC 402.2.12)
See Section 4 |
| <input type="checkbox"/> R-value alternative (IECC R402.1.3)
See Section 2 | <input type="checkbox"/> Total Building Performance (IECC R405)
See Section 5 |
| <input type="checkbox"/> Total UA alternative (IECC R402.1.5)
See Section 3 | <input type="checkbox"/> Energy Rating Index Compliance Alternative (IECC R406)
See Section 6 |
| <input type="checkbox"/> ResCheck (IECC R402.1.5)
See Section 3 | |

For the following tables, ci = continuous insulation

SECTION 1 U FACTOR (Table R402.1.2)

Door and Window U-Factor	Skylight U-Factor	Ceiling U-Value	Wood Frame Wall U-Value	Mass Wall U-Value	Floor U-Value	Basement Wall U-Value	Slab R-Value/Depth	Crawlspace Wall U-Value
0.32	0.55	0.026	0.06	0.082	0.033	0.050	10ci/2 ft	0.055

- | | | |
|--|---|------------------------|
| _____ Wall U-Value
(wood frame or mass) | _____ Basement Wall U-Value | _____ Glazing U-Factor |
| _____ Ceiling U-Value | _____ Crawlspace Wall U-Value | _____ Door(s) U-Factor |
| _____ Floor U-Value | _____ Slab perimeter R-Value
(24" minimum) | |

SECTION 2 R VALUE ALTERNATIVE (Table R402.1.3)

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.32	0.55	49	20 or 13+5ci	13/17	30	19 or 15ci or 13+5ci	10/2 ft	19 or 15ci or 13+5ci

_____ Wall R-Value (wood frame or mass) _____ Basement Wall R-Value _____ Glazing U-Factor
 _____ Ceiling R-Value _____ Crawlspace Wall R-Value _____ Door(s) U-Factor
 _____ Floor R-Value _____ Slab perimeter R-Value (24" minimum)

SECTION 3 TOTAL UA ALTERNATIVE AND/OR RESCHECK (IECC R402.1.5)

This method requires additional documentation to prove compliance. Provide calculations showing the total building thermal envelope UA is less than or equal to the total UA resulting from multiplying the U-factors in Table R402.1.2 by the same assembly area as in the proposed building. This can either be manual calculations, or RESCheck calculations using the Department of Energy RESCheck software.

_____ Wall R/U-Value (wood frame or mass) _____ Basement Wall R/U-Value _____ Glazing U-Factor
 _____ Ceiling R/U-Value _____ Crawlspace Wall R/U-Value _____ Door(s) U-Factor
 _____ Floor R/U-Value _____ Slab perimeter R/U-Value (24" minimum)

SECTION 4 HEATED GARAGE OR SUNROOM (IECC R402.2.12)

This section applies to sunrooms and heated garages only. Roof and wall insulation is allowed to be reduced due to these areas not being considered living spaces.

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.32	0.55	24	13	13/17	30	19 or 15ci or 13+5ci	10/2 ft	19 or 15ci or 13+5ci

_____ Wall R-Value (wood frame or mass) _____ Basement Wall R-Value _____ Glazing U-Factor
 _____ Ceiling R-Value _____ Crawlspace Wall R-Value _____ Door(s) U-Factor
 _____ Floor R-Value _____ Slab perimeter R-Value (24" minimum)

SECTION 5 TOTAL BUILDING PERFORMANCE (IECC R405)

This method requires additional documentation to prove compliance. Provide the compliance software compliance report and summarize the values below. *Available only to design professionals licensed in the State of Colorado or by qualified persons as approved by the Building Official.*

_____ Wall R/U-Value (wood frame or mass) _____ Basement Wall R/U-Value _____ Glazing U-Factor
 _____ Ceiling R/U-Value _____ Crawlspace Wall R/U-Value _____ Door(s) U-Factor
 _____ Floor R/U-Value _____ Slab perimeter R/U-Value (24" minimum)

SECTION 6 ENERGY RATING INDEX COMPLIANCE ALTERNATIVE (IECC R406)

This method requires additional documentation to prove compliance. Provide the compliance software compliance report and summarize the values below. *Available only to design professionals licensed in the State of Colorado or by qualified persons as approved by the Building Official.*

_____ Wall R/U-Value
(wood frame or mass)

_____ Basement Wall R/U-Value

_____ Glazing U-Factor

_____ Crawlspace Wall R/U-Value

_____ Door(s) U-Factor

_____ Ceiling R/U-Value

_____ Slab perimeter R/U-Value
(48" minimum)

_____ Floor R/U-Value

INSPECTION REQUIREMENTS

Section R402.4 of the IECC requires the thermal envelope to be sealed to limit infiltration. The IECC requires the thermal envelope to be visually inspected and tested to demonstrate compliance with building envelope tightness requirements. Selection of the method of compliance shall occur when the Building Frame Inspection is scheduled. Below is a summary of the methods.

1. Third party visual inspection and testing with documentation required at time of final inspection.
2. RBD visual inspection and third party testing with documentation required at time of final inspection.

NOTE: *The Total Building Performance and Energy Rating Index Alternatives require third party inspections.*