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 HVAC equipment performance (IECC R408.2.2)
- ☐ Reduced energy use in service water-heating (IECC R408.2.3)
- ☐ More efficient duct thermal distribution system (IECC R408.2.4)
- ☐ Improved air sealing and efficient ventilation system (IECC R408.2.5)
- ☐ N/A - at least 5% energy savings using Total Building Performance or Energy rating index (R401.2.5 items 2.2 or 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.

- ☐ U-factor (*IECC R402.1.2)* ***See Section 1***
- ☐ R-value alternative (*IECC R402.1.3)* ***See Section 2***
- ☐ Total UA alternative (*IECC R402.1.5)* ***See Section 3***
- ☐ ResCheck (*IECC R402.1.5)* ***See Section 3***
- ☐ Heated garage or sunroom (IECC 402.2.12) ***See Section 4***
- ☐ Total Building Performance (*IECC R405)* ***See Section 5***
- ☐ Energy Rating Index Compliance Alternative (*IECC R406* ***See Section 6***

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)

_____Ceiling U-Value

_____Floor U-Value

_____Basement Wall U-Value

_____Crawlspace Wall U-Value

_____Slab perimeter R-Value (*24" minimum)*

_____Glazing U-Factor

_____Door(s) U-Factor

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)

_____Ceiling R-Value

_____Floor R-Value

_____Basement Wall R-Value

_____Crawlspace Wall R-Value

_____Slab perimeter R-Value (*24" minimum)*

_____Glazing U-Factor

_____Door(s) U-Factor

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)

_____Ceiling R/U-Value

_____Floor R/U-Value

_____Basement Wall R/U-Value

_____Crawlspace Wall R/U-Value

_____Slab perimeter R/U-Value (*24" minimum)*

_____Glazing U-Factor

_____Door(s) U-Factor

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

This section applies only to thermally isolated sunrooms and heated garages. 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
0.45	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)

_____Ceiling R-Value

_____Floor R-Value

_____Basement Wall R-Value

_____Crawlspace Wall R-Value

_____Slab perimeter R-Value (*24" minimum)*

_____Glazing U-Factor

_____Door(s) U-Factor

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
	_____Crawlspace Wall R/U-Value	_____Door(s) U-Factor
_____Ceiling R/U-Value	_____Slab perimeter R/U-Value	
_____Floor 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	_____Basement Wall R/U-Value	_____Glazing U-Factor
(wood frame or mass)	_____Crawlspace Wall R/U-Value	_____Door(s) U-Factor
_____Ceiling R/U-Value	_____Slab perimeter R/U-Value	
_____Floor R/U-Value	(*48" minimum)*	

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.*