Code Amendment Proposal Form

For public amendments proposed to the 2021 editions of the International Codes

Instructions: Upload this form and all accompanying documentation. If you are submitting your proposal on a separate sheet, make sure it includes all information requested below.

All proposals must be received by **July 23, 2021.**

CONTACT INFORMATION

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Organization or Representing Self: Denver's CPD - Residential Plan Review

By signing below, I hereby grant and assign to City and County of Denver all rights in copyright I may have in any authorship contributions I make to City and County of Denver in connection with this proposal. I understand that I will have no rights in any City and County of Denver publications that use such contributions in the form submitted by me or another similar form and certify that such contributions are not protected by the copyright of any other person or entity.

Signature: Mikaela Firnhaber

AMENDMENT PROPOSAL

Please use a separate form for each proposal.

1) Code(s) associated with this proposal. Please use acronym: IRC, IECC

If you submitted a separate coordination change to another code, please indicate which code: _____

Acronym	Code Name
DBC-AP	Denver Building Code–Administrative Provisions
DBC-*xxxx*	Denver Building Code–*xxxx (code)* amendments (e.g., DBC-IBC, DBC-IEBC)
IBC	International Building Code
IEBC	International Existing Building Code
IECC	International Energy Conservation Code

Acronym	Code Name
IFC	International Fire Code
IFGC	International Fuel Gas Code
IRC	International Residential Code
IMC	International Mechanical Code
IPC	International Plumbing Code
DGC	Denver Green Code

2) Please check here if a separate graphic file is provided: ☐
Graphics may also be embedded within your proposal below.

3) Use this template to submit your proposal or attach a separate file, but please include all items requested below in your proposal. The only formatting needed is **BOLDING**, ~~STRIKEOUT~~ AND UNDERLINING. Please do not provide additional formatting such as tabs, columns, etc., as this will be done by CPD.

Code Sections/Tables/Figures Proposed for Revision:

IRC Section N1113
IECC Section R505
IECC Section C505

Note: If the proposal is for a new section, indicate (new).

Proposal:

See attached.

Supporting Information:

Purpose:
This proposal clarifies the change of occupancy requirements in Chapter 11 of the IRC and in the commercial and residential provisions of the IECC. The proposal adapts Denver's amendment to Section C505 of the IECC and modifies it to address a change in use or occupancy from an IBC structure to an IRC structure and vice versa.

Reasons for IRC Section N1113 and IECC Section R505:
The City and County of Denver encourages the reuse of structures. In Denver, we often see IBC occupancies converted to IRC uses. The current provisions place an undo hardship on applicants that choose or are considering to reuse a structure. For example, a change in occupancy from an IBC lodging house to a dwelling unit would require an applicant to comply with the requirements of the IECC for new construction. This will often require an applicant to make substantial alterations where the initial scope of the project may have had limited to no proposed alterations. The structure would be required to meet all of the mandatory provisions of the IECC. The residential provisions further clarify that any change in use or occupancy is required to comply with the provisions for additions, alterations, and repairs. This applies to accessory structures being converted to dwelling units. The proposed amendments will provide reviewers and applicants with clear direction as to when a change in use or occupancy requires complete adherence to the IECC provisions for new construction.

Reasons for IECC Section C505:
The proposal clarifies that IRC uses would be in the same energy-demand category as IBC R occupancies. This will clarify the application of IECC Section C505 when there is a change in occupancy from an IRC use to an IBC occupancy.

Substantiation:
The residential change in occupancy provisions are more restrictive than the commercial change in occupancy requirements. The residential proposal aligns the residential provisions of the IECC with Denver's commercial provisions of the IECC.

Referenced Standards:

Note: List any new referenced standards that are proposed to be referenced in the code.

Impact:

This proposal will require fewer alterations to a structure when a change in occupancy is from a higher-energy demand occupancy to a lower energy-demand occupancy. This reduces design cost and the cost of construction. The proposal is less restrictive than the I-codes.

Note: Discuss the impact of this proposal in this section AND indicate the impact of this amendment proposal for each of the following:

- The effect of the proposal on the cost of construction: ☐ Increase ☒ Reduce ☐ No Effect
- The effect of the proposal on the cost of design: ☐ Increase ☒ Reduce ☐ No Effect
- Is the proposal more or less restrictive than the I-codes: ☐ More ☒ Less ☐ Same

Departmental Impact: (To be filled out by CPD staff)

This proposal will require fewer alterations to a structure when a change in occupancy is from a higher-energy demand occupancy to a lower energy-demand occupancy. This provides a clear table for our team to utilize to determine energy-demand based on occupancy/use. This allows us to provide clear direction to applicants up front without having to require additional documentation to determine energy use. The amendment also clarifies which energy demand category IRC uses fall under.

Note: CITY STAFF ONLY. Discuss the impact of this proposal in this section AND indicate the impact of this amendment proposal for each of the following:

- The effect of the proposal on the cost of review: ☐ Increase ☒ Reduce ☐ No Effect

- The effect of the proposal on the cost of enforcement/inspection: ☐ Increase ☒ Reduce ☐ No Effect

Delete and substitute as follows:

INTERNATIONAL RESIDENTIAL CODE
SECTION N1113 (R505), CHANGE OF OCCUPANCY OR USE

~~**N1113.1 (R505.1) General**~~
~~Any space that is converted to a dwelling unit or portion thereof from another use or occupancy shall comply with this chapter.~~

~~**Exception:** Where the simulated performance option in Section N1105 (R405) is used to comply with this section, the annual energy cost of the proposed design is permitted to be 110 percent of the annual energy cost allowed by Section N1105.2 (R405.2).~~

~~**N1113.1.1 (R505.1.1) Unconditioned space.**~~
~~Any unconditioned or low-energy space that is altered to become a conditioned space shall comply with Section N1108 (R408).~~

N1113.1 (R505.1) General.
Spaces undergoing a change in occupancy or use to a higher energy-demand category (higher number) as shown in Table R505.1 shall comply with the requirements of this chapter for new construction. Any space that is converted to a residential building shall comply with the requirements of this chapter for additions, alterations, and repairs.

Exceptions:

1. A change in use or occupancy from a lower-energy demand category to a residential building where it is calculated that it will not result in an increase in demand for fossil fuel and electrical energy.
2. Where the Total UA Alternative option in Section N1102.1.5 (R402.1.5) is used to comply with this section, the total building thermal envelope UA shall not be greater than 110 percent of the total UA calculated by using the U-factors in Table R402.1.4.
3. Where the total building performance option in Section N1105 (R405) is used to comply with this section, the annual energy cost of the proposed design is permitted to be 110 percent of the annual energy cost allowed by Section N1105.2 (R405.2).

TABLE R505.1

ENERGY-DEMAND CATEGORY	IBC OCCUPANCIES	IRC USES
4 (highest energy-demand)	A, B small assembly space	
3	B gym, E, I-4, M	
2	B (except as listed above), I-1, I-2, I-3, R	All uses permitted in IRC structures
1 (lowest energy-demand)	F, H, S	

Delete and substitute as follows:

INTERNATIONAL ENERGY CONSERVATION CODE
SECTION R505, CHANGE OF OCCUPANCY OR USE

~~**R505.1 General**~~
~~Any space that is converted to a dwelling unit or portion thereof from another use or occupancy shall comply with this chapter.~~

~~**Exception:** Where the simulated performance option in Section R405 is used to comply with this section, the annual energy cost of the proposed design is permitted to be 110 percent of the annual energy cost allowed by Section R405.2.~~

~~**N1113.1.1 (R505.1.1) Unconditioned space.**~~
~~Any unconditioned or low-energy space that is altered to become a conditioned space shall comply with Section R408.~~

R505.1 General.
Spaces undergoing a change in occupancy or use to a higher energy-demand category (higher number) as shown in Table R505.1 shall comply with the requirements of this chapter for new construction. Any space that is converted to a residential building shall comply with the requirements of this chapter for additions, alterations, and repairs.

Exceptions:

1. A change in use or occupancy from a lower-energy demand category to a residential building where it is calculated that it will not result in an increase in demand for fossil fuel and electrical energy.
2. Where the Total UA Alternative option in Section R402.1.5 is used to comply with this section, the total building thermal envelope UA shall not be greater than 110 percent of the total UA calculated by using the U-factors in Table R402.1.4.
3. Where the total building performance option in R405 is used to comply with this section, the annual energy cost of the proposed design is permitted to be 110 percent of the annual energy cost allowed by R405.2.

TABLE R505.1

ENERGY-DEMAND CATEGORY	IBC OCCUPANCIES	IRC USES
4 (highest energy-demand)	A, B small assembly space	
3	B gym, E, I-4, M	
2	B (except as listed above), I-1, I-2, I-3, R	All uses permitted in IRC structures
1 (lowest energy-demand)	F, H, S	

Add new text as follows:

DENVER AMENDMENTS TO SECTION C505 OF THE INTERNATIONAL ENERGY CONSERVATION CODE

TABLE C505.1, ENERGY-DEMAND CATEGORIES

TABLE C505.1

ENERGY-DEMAND CATEGORY	**IBC OCCUPANCIES**	**IRC USES**
4 (highest energy-demand)	A, B small assembly space	
3	B gym, E, I-4, M	
2	B (except as listed above), I-1, I-2, I-3, R	All uses permitted in IRC structures
1 (lowest energy-demand)	F, H, S	Accessory structures