



PUBLIC CODE CHANGE PROPOSAL FORM FOR PUBLIC PROPOSALS IN THE INTERNATIONAL CODES

2007/2008 CODE DEVELOPMENT CYCLE

CLOSING DATE: All Proposals Must Be Received by August 20, 2007

The 2007/2008 Code Development Hearings are tentatively scheduled for
February 18 – March 2, 2008, location TBD.

1) **Name:** Ronald Majette **Date:** August 19, 2007
Jurisdiction/Company: U.S. Department of Energy
Submitted on Behalf of: U.S. Department of Energy
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2) **Copyright Release:** In accordance with Council Policy #28 Code Development, all Code Change Proposals, Floor Modifications and Public Comments are required to include a copyright release. A copy of the copyright release form is included at the end of this form. Please follow the directions on the form. This form as well as an alternative release form can also be downloaded from the ICC website at www.iccsafe.org. If you have previously executed the copyright release, please check the box below:

X 2007/2008 Cycle copyright release on file

3) Indicate appropriate International Code(s) associated with this Public Proposal – Please use Acronym: _____ IRC _____
 If you have also submitted a separate coordination change to another I-Code, please indicate the code: _____
 (See section below for list of names and acronyms for the International Codes).

4) **Be sure to format your proposal and include all information as indicated on Page 2 of this form.**

5) Proposals should be sent to the following offices via regular mail or email. An e-mail submittal is preferred, including an electronic version, in either Wordperfect or Word. The only formatting that is needed is **BOLDING, STRIKEOUT AND UNDERLINING**. Please do not provide additional formatting such as tabs, columns, etc., as this will be done by ICC. **REMOVE TRACKING CHANGES, AUTOMATIC NUMBERING, OR ANY OTHER ADVANCED FORMATTING TOOLS THAT ARE PROVIDED BY WORD, FROM FILES CONTAINING YOUR CODE CHANGE PROPOSAL THAT YOU SEND TO ICC.**

Please use a separate form for each proposal submitted. Note: All code changes received will receive an acknowledgment.

Please check here if separate graphic file provided.

Graphic materials (Graphs, maps, drawings, charts, photographs, etc.) must be submitted as separate electronic files in .CDR, .IA, .TIF or .JPG format (300 DPI Minimum resolution; 600 DPI or more preferred) even though they may also be embedded in your Word or Wordperfect submittal.

Code

- IBC - International Building Code
- IEBC - International Existing Building Code
- IFC - International Fire Code
- IFGC - International Fuel Gas Code
- IPC - International Plumbing Code
- IPSDC - International Private Sewage Disposal Code
- IPMC - International Property Maintenance Code
- IWUIC - International Wildland-Urban Interface Code
- IZC - International Zoning Code
- ELECT - International Code Council Electrical Code– Administrative Provisions

Send to:

International Code Council
 Chicago District Office
 Attn: Diane Schoonover
 4051 West Flossmoor Road
 Country Club Hills, IL 60478-5795
 Fax: 708/799-0320
codechanges@iccsafe.org

- IECC - International Energy Conservation Code
- ICC PC - ICC Performance Code
- IMC - International Mechanical Code
- IRC - International Residential Code

International Code Council
 Birmingham District Office
 Attn: Annette Sundberg
 900 Montclair Road
 Birmingham, AL 35213-1206
 Fax: 205/592-7001
codechangesbhm@iccsafe.org

CODE CHANGE PROPOSAL

Please provide all of the following items in your code change proposal. Your proposal may be entered on the following form, or you may attach a separate file. However, please read the instructions provided for each part of the code change proposal. The sections identified in parentheses are the applicable sections from CP #28 Code Development. The full procedures can be downloaded from www.iccsafe.org.

Code Sections/Tables/Figures Proposed for Revision (3.3.2): IRC Table N1102.1, Table N1102.1.2, Section N1102.1.2, and Section N1102.2.3.

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

Name/Company/Representing (3.3.1): Ronald Majette / U.S. Department of Energy

Note: You must indicate your name and the full name of who you are representing. Do not use acronyms.

Proposal: NOTE: PLEASE READ ITEM 5) of the first page of this form for formatting instructions.

Revise as follows:

Table N1102.1 Insulation and Fenestration Requirements by Component^(a)

Climate Zone	Fenestration U-Factor	Skylight ^(b) U-Factor	Glazed Fenestration SHGC	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value ^(h)	Floor R-Value	Basement ^(c) Wall R-Value	Slab ^(d) R-Value & Depth	Crawl Space ^(e) Wall R-Value
1	1.20	0.75	0.40	30	13	3/4	13	0	0	0
2	0.75	0.75	0.40	30	13	4/6	13	0	0	0
3	0.65	0.65	0.40 ^(e)	30	13	5/8	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5/10	19	10 / 13	10, 2 ft	10 / 13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5 ^(g)	13/17	30 ^(f)	10 / 13	10, 2 ft	10 / 13
6	0.35	0.60	NR	49	19 or 13+5 ^(g)	15/19	30 ^(f)	10 / 13	10, 4 ft	10 / 13
7 and 8	0.35	0.60	NR	49	21	19/21	30 ^(f)	10 / 13	10, 4 ft	10 / 13

h. The second R-value applies when more than half the insulation is on the interior of the mass wall.

Remainder of table unchanged.

Table N1102.1.2. Equivalent U-Factors^(a)

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^(b)	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	1.20	0.75	0.035	0.082	0.197	0.064	0.360	0.477
2	0.75	0.75	0.035	0.082	0.165	0.064	0.360	0.477
3	0.65	0.65	0.035	0.082	0.141	0.047	0.360	0.136
4 except Marine	0.40	0.60	0.030	0.082	0.141	0.047	0.059	0.065
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.037	0.059	0.065
6	0.35	0.60	0.026	0.060	0.060	0.033	0.059	0.065
7 and 8	0.35	0.60	0.026	0.057	0.057	0.033	0.059	0.065

(a) Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

(b) When more than half the insulation is on the interior, the mass wall U-factors shall be a maximum of 0.17 in zone 1, 0.14 in zone 2, 0.12 in zone 3, 0.10 in zone 4 except Marine, and the same as the frame wall U-factor in Marine zone 4 and zones 5 through 8.

N1102.1.2 U-factor alternative. An assembly with a *U*-factor equal to or less than that specified in Table N1102.1.2 shall be permitted as an alternative to the *R*-value in Table N1102.1.

Exception: For mass walls not meeting the criterion for insulation location in Section N1102.2.3, the *U* factor shall be permitted to be:

1. *U* factor of 0.17 in Climate Zone 1
2. *U* factor of 0.14 in Climate Zone 2
3. *U* factor of 0.12 in Climate Zone 3
4. *U* factor of 0.10 in Climate Zone 4 except Marine
5. *U* factor of 0.082 in Climate Zone 5 and Marine 4

N1102.2.3 Mass walls. Mass walls for this chapter shall be considered above-grade walls of concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth (adobe, compressed earth block, rammed earth) and solid timber/logs. The provisions of Section N1102.1 for mass walls shall be applicable when at least 50 percent of the required insulation *R* value is on the exterior of, or integral to, the wall. Walls not meeting this criterion for insulation placement shall meet the wood frame wall insulation requirements of Section N1102.1.

1. *R* value of 4 in Climate Zone 1
2. *R* value of 6 in Climate Zone 2
3. *R* value of 8 in Climate Zone 3
4. *R* value of 10 in Climate Zone 4 except Marine
5. *R* value of 13 in climate Zone 5 and Marine 4

Supporting Information (3.3.4 & 3.4):

The purpose of this code change is to match the mass wall requirements in the IRC to those in the IECC both in format and requirements. In the 2006 I-Codes, the IECC had more stringent mass wall requirements than the IRC. In the 06/07 code change cycle, a proposed code change (EC34-06/07) suggested to match up the IRC and IECC by lowering some of the IECC requirements and raising some of the IRC requirements. This was a reasonable and fair compromise. The proposal for the IECC was approved but the corresponding proposal for the IRC was not.

The new proposal presented here reproduces the proposed requirements in EC34-06/07 for the IRC. This would increase the mass wall insulation from R-13 to R-17 in climate zone 5 and Marine zone 4 in the IRC when the insulation is towards the inside surface of the wall relative to the mass (with a corresponding change to the U-factor requirements). This would still leave the mass wall requirements less stringent than the wood-frame wall requirements of R-19 in zone 5 and Marine 4. The heat storage benefits of mass are mitigated when the mass is to the outside of the insulation because the insulation blocks the heat transfer from the mass to inside of the building. Therefore, the reduction in insulation requirements for a wall with mass on the outside should be minimal relative to a low-mass wall such as a wood frame wall.

As mentioned above, this change would also simplify the format of the mass wall requirements and match the format and requirements of the IECC.

Referenced Standards (3.4 & 3.6):

Cost Impact (3.3.4.6):

The code change proposal will increase the cost of construction.