

## AGENDA

### UNIFORM BUILDING CODE COMMISSION MECHANICAL ADVISORY COMMITTEE MEETING

December 4, 2023 3:00

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Heber M Wells Building Rm 475  
160 E 300 S  
Salt Lake City UT 84114

*This agenda is subject to change up to 24 hours prior to the meeting.*

1. Roll call
2. Elect a new chairman and vice chair
3. Approve minutes from the June 28, 2022 and October 10, 2023 meetings
4. Review proposed amendment for IMC 505.4  
Discussion Item  
2021 IRC Chapter 11 amendments

Next Scheduled Meeting: as needed.

**If you do not plan on attending this meeting, please call Sharon at 530-6163 or email at [ssmalley@utah.gov](mailto:ssmalley@utah.gov)**



**In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting should notify Dave Taylor, ADA Coordinator, at least three working days prior to the meeting. Division of Occupational and Professional Licensing, 160 East 300 South, Salt Lake City UT 84115, Phone 530-6628 or toll-free in Utah only 866-275-3675.**



MINUTES

UNIFORM BUILDING CODE COMMISSION  
MECHANICAL ADVISORY COMMITTEE

Meeting

June 28, 2022 3:00 pm

Convened 3:04 PM

Adjourned 5:05

STAFF:

Steve Duncombe, Bureau Manager  
Sharon Smalley, Board Secretary

MECHANICAL ADVISORY COMMITTEE:

David Halverson	David Wilson
Clay Monroe (excused)	Chris Jensen
Terry Palmer	Alyssa Wahlin
Martin Carrillo	Trent Hunt, Commission Liaison (absent)

VISITORS:

Kevin Emerson	Shawn Teigen
Brent Ursenbach	Ron McArthur

MINUTES

A motion was made by Dave Wilson to approve the minutes from the June 14, 2022 meeting as written. The motion was seconded by Chris Jensen and passed unanimously.

REVIEW RECOMMENDATIONS FOR 2021 IECC AND ENERGY PORTION OF THE IRC

The committee reviewed all of the recommendations that have been made during the review of the 2021 IECC and the energy portion of the 2021 IRC, along with the current amendments.

A motion was made by Dave Wilson to add the words “after July 1, 2023, replace 3.5 with 3.25” in the amendment for Section N1102.4.1.3 (R402.4.1.3). The motion was seconded by Terry Palmer and passed unanimously.

A motion was made by Dave Wilson to keep the current language in the code for Section R403.3.6 and to delete the



current amendment. The motion was seconded by Martin Carrillo and passed unanimously.

In the review of the current amendment for Section N1106.4 (R406.4) it was noted that the section number needs to be changed to N1106.5 (R406.5). During the discussion on the section, a motion was made by Terry Palmer to change the numbers in the table by changing the 65 to 57, the 69 to 61, and the 68 to 61. The motion was seconded by Dave Wilson and passed unanimously.

The committee reviewed the commercial energy section. A motion was made by Dave Wilson to delete the current amendment for Section C403.11.2.3. The motion was seconded by Chris Jensen and passed unanimously.

Dave Wilson made a motion to approve the commercial section of the 2021 IECC as written. The motion was seconded by Terry Palmer and passed unanimously.

Terry Palmer made a motion to approve the 2021 residential energy code as modified. The motion was seconded by Dave Wilson and passed unanimously.

The meeting adjourned at 5:05.

*Note: These minutes are not intended to be a verbatim transcript but are intended to record the significant features of the business conducted in this meeting. Discussed items are not necessarily shown in the chronological order they occurred.*



MINUTES

UNIFORM BUILDING CODE COMMISSION  
MECHANICAL ADVISORY COMMITTEE

Meeting

October 10, 2023 3:00 pm

Convened 3:20 PM

Adjourned 3:50

STAFF:

Steve Duncombe, Bureau Manager  
Sharon Smalley, Board Secretary

MECHANICAL ADVISORY COMMITTEE:

David Wilson (excused)	
Clay Monroe (excused)	Chris Jensen (absent)
Terry Palmer (excused)	Alyssa Wahlin
Martin Carrillo	Trent Hunt, Commission Liaison

VISITORS:

Brent Ursenbach	Tom Peterson
A J Lowry	Ross Ford

ELECT A CHAIR AND  
VICE CHAIR

There was not a quorum present. A chair and vice chair will be elected at the next meeting. Martin Carrillo was acting chair for this meeting.

MINUTES

The minutes from the June 28,2022 meeting could not be approved as there was not a quorum present.

REVIEW CONVERSION  
FACTORS USED FROM  
SEER2 FOR RESCHECK

Those present discussed the conversion factors for SEER2 to RESHECK for energy efficiency in the energy code. There needs to be conversion formula developed that can be input into RESCHECK. An amendment needs to be added to both the residential portion of the energy code and the IRC. All present agreed to forward a positive recommendation to the UBC Commission to add a formula as a new amendment to both the residential portion of the energy code and Chapter 4 of the IRC.





The meeting adjourned at 3:50.

*Note: These minutes are not intended to be a verbatim transcript but are intended to record the significant features of the business conducted in this meeting. Discussed items are not necessarily shown in the chronological order they occurred.*



UTAH DEPARTMENT OF COMMERCE  
DIVISION OF OCCUPATIONAL AND PROFESSIONAL LICENSING  
160 East 300 South Salt Lake City UT 84111  
PO Box 146741 Salt Lake City UT 84114-6741  
E-mail: b8@utah.gov  
Web: www.dopl.utah.gov

REQUEST FOR CODE AMENDMENT

Requesting Agency/Person: Utah Home Builders	Date: 10-12-23
Street Address: 38W 13775 S suite 120	
City, State, Zip: Draper, Utah, 84020	
Contact Person: Ross Ford	Phone: 801-352-8266
Code to be Amended: 2021 IMC (Include edition)	
Section: 505.4	
Section Title: Make up air required	
AMENDMENT:	



Type proposed amendment in rule change form. (Using strikeout on portions being removed and underline on all new wording)

~~505.4~~ is deleted and replaced with. Where one or more gas, liquid or solid fuel-burning appliance that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air barrier, each exhaust system capable of exhausting in excess of 400 cubic feet per minute (0.19 m<sup>3</sup>/s) shall be mechanically or passively provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with not fewer than one damper complying with Section M1503.6.2.

Purpose of or Reason for the amendment:

This amendment will bring the residential portion of the IMC in line with the mechanical section of the IRC. There is no reason to provide make air unless there is a solid fuel burning appliance.

Cost or Savings Impact of Amendment:

This amendment will save thousands per unit, when it applies. This optioin can only be used with specific appliances.



Compliance Costs for Affected Persons (A Person@ means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}):

This amendment will have cost impact for government.

Signature:

Date:

**For Division Use:**

Date Received:

**Committee Action:**

Approved                       Denied  
 Approved with  
revisions  Referred to:   
Tabled

**UBC Commission Decision for Hearing:**

Approved for hearing  Denied   
Approved with revisions   
Referred to:  Tabled

Date Filed:

Public Hearing Date:

**UBC Commission Decision for Adoption:**

Approved                       Denied  
 Approved with  
revisions  Referred to:   
Tabled

Effective Date:

**UTAH UNIFORM BUILDING STANDARDS  
Form and Procedures for Code Amendments**

- (1) All requests for amendments:
  - (a) shall be submitted to the Division on the attached form and
  - (b) shall be submitted in correct code editing format and shall contain a cost impact analysis. (Editing format should include ~~strikeout~~ for deletion and underline for additions.)
  
- (2) The Division will review the proposed amendments for proper form and cost analysis and return them to the proponent if incorrect or incomplete.





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Web: www.dopl.utah.gov

REQUEST FOR CODE AMENDMENT

Requesting Agency/Person: Home Builders Association of Utah	Date: 11-1-2023
Street Address: 38 W13775 S Suite 120	
City, State, Zip Draper Ut 84020	
Contact Person: Ross Ford	Phone: 801-325-8266
Code to be Amended: 2021 IRC and corresponding sections of the 2021 IEEC (Include edition)	
Section: Chapter 11 and corresponding sections of the 2021 IEEC	
Section Title: Energy Efficiency	

AMENDMENT:

Type proposed amendment in rule change form. (Using strikeout on portions being removed and underline on all new wording.)

1. Include the entire section you wish to amend.
2. Attach additional sheets if necessary.

This is a proposal to adopted chapter 11 of the 2021 IRC and the corresponding sections of the 2021 IEEC with all the amendments included in the attached document. This proposal is not designed to debate and adopt each amendment separately.



Purpose of or Reason for the amendment: This proposal puts forward a cost-effective solution for Utah	
Cost or Savings Impact of Amendment: There is significant cost savings attached to this proposal. A detailed breakdown is in the process of being written up. It is the Home Builders belief that actual bids are more accurate than modling, however they take time to assemble. The full report will follow shortly.	
Compliance Costs for Affected Persons (APerson@ means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}): For the most part this proposal will have no impact on government. It should not add any new inspections or additional requirements of building departments.	
Signature:	Date:

**For Division Use:**

Date Received:	
<b>Committee Action:</b> <input type="checkbox"/> Approved <input type="checkbox"/> Denied <input type="checkbox"/> Approved with revisions <input type="checkbox"/> Referred to: <input type="checkbox"/> Tabled	<b>UBC Commission Decision for Hearing:</b> <input type="checkbox"/> Approved for hearing <input type="checkbox"/> Denied <input type="checkbox"/> Approved with revisions <input type="checkbox"/> Referred to: <input type="checkbox"/> Tabled
Date Filed:	Public Hearing Date:
<b>UBC Commission Decision for Adoption:</b> <input type="checkbox"/> Approved <input type="checkbox"/> Denied <input type="checkbox"/> Approved with revisions <input type="checkbox"/> Referred to: <input type="checkbox"/> Tabled	Effective Date:



**Effective 7/1/2024****15A-3-203 Amendments to Chapters 11 of IRC.**

- (1) In IRC , Sections N1101.4 (R102.1.1), a new section N1101.4.1 is added as follows:  
N1101.4.1 National Green Building Standard. Buildings complying with ICC 700-2020 National Green Building Standard and achieving the Gold rating level for the energy efficiency category shall be deemed to exceed the energy efficiency required by this code. The building shall also meet the requirements identified in table N1105.2 and the building thermal envelope efficiency is greater than or equal to levels of efficiency and solar heat gain coefficients (SHGC) in Tables N1102.2.2 and N1102.1.3 of the 2009 IRC.
- (2) In IRC, Section N1101.5 (R103.2), all words after the words "herein governed." are deleted and replaced with the following: "Construction documents required for building permits shall include only those items specified in 10-5-132(8) of the state building code"
- (3) In IRC, Section N1101.10.3 (R303.1.3) the following changes are made:
  - (a) The following is added at the end of the first sentence "or EN 14351-1:2006 + A1:2010."
  - (b) The word "accredited" is replaced with "approved" in the third sentence
  - (c) The following sentence is added after the third sentence: "A conversion factor of 5.678 shall be used to convert from U values expressed in SI units:  $(\ )/5.678 = .$ "
  - (d) After "NFRC 200" the following words are added : "or EN 14351-1:2006 + A1:2010", and in the same sentence the word "accredited" is replaced with approved.
  - (e) The following new sentence shall be inserted immediately prior to the last sentence: "Total Energy Transmittance values may be substituted for SHGC, and Luminous Transmission values may be substituted for VT".
- (4) In IRC, Section N1101.12 (R303.3), all wording after the first sentence is deleted.
- (5) In IRC, section N1101.13 (R401.2) in the first sentence, the words "Section N1101.13.5 and" are deleted
- (6) In IRC, Section N1101.13.5 (R401.2.5) is deleted
- (7) In IRC, Section N1101.14 (R401.3) Number 7 the words "and the compliance path used" are deleted.
- (8) In IRC, Table N1102.1.2 (R402.1.2),
  - (a) in the column titled Fenestration U-Factor the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete 0.30 and replace it with 0.32
    - (ii) In the row titled "Climate Zone 5 and Marine 4" delete 0.30 and replace it with 0.32
    - (iii) In the row titled "Climate Zone 6" delete 0.30 and replace with 0.32
  - (b) in the column titled Glazed Fenestration SHGC the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete 0.25 and replace it with 0.35
  - (c) in the column titled Ceiling U-Factor the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete 0.026 and replace it with 0.033
    - (ii) In the row titled "Climate Zone 5 and Marine 4" delete 0.024 and replace it with 0.030
    - (iii) In the row titled "Climate Zone 6" delete 0.024 and replace with 0.030
  - (d) in the column titled Wood Frame Wall U Factor the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete 0.060 and replace it with 0.065
    - (ii) In the row titled "Climate Zone 5 and Marine 4" delete 0.045 and replace it with 0.065



- (iii) In the row titled "Climate Zone 6" delete 0.045 and replace with 0.065
- (e) In the column titled "Basement Wall U-Factor" the following changes are made:
  - (i) In the row titled "Climate Zone 5 and Marine 4" delete 0.050 and replace it with 0.078
  - (ii) In the row titled "Climate Zone 6" delete 0.050 and replace it with 0.065
- (f) In the column titled "Crawl Space Wall U-Factor" the following changes are made:
  - (i) In the row titled "Climate Zone 5 and Marine 4" delete 0.055 and replace it with 0.078
  - (ii) In the row titled "Climate Zone 6" delete 0.055 and replace it with 0.065

(REVISED SEP 2023)  
 TABLE R1102.1.2 (R402.1.2)  
 MAXIMUM ASSEMBLY U-FACTORS AND FENESTRATION REQUIREMENTS

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC	CEILING U-FACTOR	WOOD FRAME WALL U-FACTOR	MASS WALL U-FACTOR	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
3	0.32	0.55	0.35	0.033	0.065	0.098	0.047	0.091	0.136
5 and Marine 4	0.32	0.55	NR	0.030	0.065	0.082	0.033	0.078	0.078
6	0.32	0.55	NR	0.030	0.065	0.060	0.033	0.065	0.065

- (9) In IRC, Table N1102.1.3 (R402.1.3) the following changes are made:
  - (a) In the column titled Fenestration U-Factor the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete 0.30 and replace it with 0.32.
    - (ii) In the row titled "Climate Zone 5 & Marine 4" delete 0.30 and replace it with 0.32
    - (iii) In the row titled "Climate Zone 6" delete 0.30 and replace it with 0.32
  - (b) In the column titled Glazed Fenestration SHGC the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete 0.25 and replace it with 0.35.
  - (c) In the column titled Ceiling R-Value the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete 49 and replace it with 32.
    - (ii) In the row titled "Climate Zone 5 & Marine 4" delete 60 and replace it with 38
    - (iii) In the row titled "Climate Zone 6" delete 60 and replace it with 38
  - (d) In the column titled Wood Frame Wall R-Value the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete all values and replace with 19 + 0ci or 11 + 5ci or 0 + 15ci.
    - (ii) In the row titled "Climate Zone 5 & Marine 4" delete all values and replace with 19 + 0ci or 13 + 5ci or 0 + 15ci
    - (iii) In the row titled "Climate Zone 6" delete all values and replace with 19 + 0ci or 13 + 5ci or 0 + 15ci
  - (e) In the column titled Basement Wall R-Value the following changes are made:
    - (i) In the row titled "Climate Zone 5 & Marine 4" delete all values and replace with 15 + 0ci or 0 + 11ci or 11 + 5ci
    - (ii) In the row titled "Climate Zone 6" delete all values and replace with 19 + 0ci or 0 + 13ci or 11 + 5ci
  - (f) In the column titled Slab R-Value and Depth the following changes are made:
    - (i) In the row titled "Climate Zone 3" delete "10ci, 2ft" and replace it with NR..
    - (ii) In the row titled "Climate Zone 5 & Marine 4" delete "4ft" and replace it with "2 ft".
  - (g) In the column titled Crawl Space Wall R-Value the following changes are made:
    - (i) In the row titled "Climate Zone 5 & Marine 4" delete all values and replace with 15 + 0ci or 0 + 11ci or 11 + 5ci
    - (ii) In the row titled "Climate Zone 6" delete all values and replace with 19 + 0ci or 0 +





13ci or 11 + 5ci

(REVISED SEP 2023)  
 TABLE N1102.1.3 (R402.1.3)  
 INSULATION MINIMUM R-VALUES AND FENESTRATION REQUIREMENTS BY COMPONENT \*

CLIMATE ZONE	FENESTRATION U-FACTOR <sup>b,1</sup>	SKYLIGHT <sup>b</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b,2</sup>	CEILING R-VALUE	WOOD FRAME WALL R-VALUE <sup>b</sup>	MASS WALL R-VALUE <sup>a</sup>	FLOOR R-VALUE	BASEMENT <sup>c,3</sup> WALL R-VALUE	SLAB <sup>b</sup> R-VALUE & DEPTH	CRAWL SPACE <sup>c,4</sup> WALL R-VALUE
3	0.32	0.55	0.35	32	19 + 0ci or 11 + 5ci or 0 + 15ci	8/13	19	5 ci or 13'	NR	5 ci or 13'
5 & Marine 4	0.32 <sup>1</sup>	0.55	0.40	38	19 + 0ci or 13 + 5ci or 0 + 15ci	13/17	30	15 + 0ci or 0 + 11ci or 11 + 5ci	10ci, 2 ft	15 + 0ci or 0 + 11ci or 11 + 5ci
6	0.32 <sup>1</sup>	0.55	NR	38	19 + 0ci or 13 + 5ci or 0 + 15ci	15/20	30	19 + 0ci or 0 + 13ci or 11 + 5ci	10ci, 4 ft	19 + 0ci or 0 + 13ci or 11 + 5ci

(10) In IRC, Table N1102.1.3 add footnote: "j. Log walls complying with ICC400 and with a minimum average wall thickness of 5 inches or greater shall be permitted in Zones 5 thorough 8 when overall window glazing has 0.30 U-factor or lower, minimum heating equipment efficiency is for gas 95 AFUE, or, for oil, 84 AFUE, and all other component requirements are met."

(11) In IRC, a new subsection N1102.1.5.1 (R402.1.5.1) is added as follows:

**1102.1.5.1 (R402.1.5.1) RESCheck 2012 Utah Energy Conservation Code.** Compliance with section N1102.1.5 (R402.1.5) may be satisfied using the software RESCheck 2012 Utah Energy Conservation Code, which shall satisfy the R-value and U-factor requirements of N1102.1, N1102.2, and N1102.3, provided the following conditions are met:

- a. In Climate Zone 5 and 6 the software result shall show "5% better than code", and
- b. In Climate Zone 3, the software result shall show "5% better than code" when software inputs for window U-factor = 0.65 and window SHGC = 0.40, notwithstanding actual windows installed shall conform to requirements of Tables N1102.1.2 (R402.1.2) and N1102.1.3 (R402.1.3).

(12) In IRC, Section N1102.2.1 (R402.2.1), a new Section N1102.2.1.1 (R402.2.1) is added as follows: "**N1102.2.1.1. Unvented attic and unvented enclosed rafter assemblies.** Unvented attic and unvented enclosed rafter assemblies conforming to Section R806.5 provided with an R-value of R-22 (maximum U-Factor of 0.045) in Climate Zone 3-B or an R-value of R-26 (maximum U-factor of 0.038) in Climate Zones 5-B and 6-B shall be permitted provided all the following conditions are met:

1. The unvented attic assembly complies with the requirements of the International Residential Code, R806.5.
2. The house shall attain a blower door test result < 2.5ACH 50.
3. The house shall require a whole house mechanical ventilation system that does not rely solely on a negative pressure strategy (must be positive, balanced or hybrid).
4. Where insulation is installed below the roof deck and the exposed portion of roof rafters are not already covered by the R-20 depth of the air-impermeable insulation, the exposed portion of the roof rafters shall be wrapped (covered) by minimum R-3 unless directly



covered by drywall/finished ceiling. Roof rafters are not required to be covered by minimum R-3 if a continuous insulation is installed above the roof deck.

5. Indoor heating, cooling and ventilation equipment (including ductwork) shall be inside the building thermal envelope."

- (13) In IRC, section N1102.2.9.1 (R402.2.9.1) the numeral (i) is added before the words "cut at a 45-degree" and the following is added after the words "exterior wall": ", or (ii) lowered from top of slab 4" when a 4" thermal break material such as, but not limited to, felt or asphalt impregnated fiber board, with a minimum thickness of ¼" is installed at the upper 4" of slab."
- (14) In IRC, Section N1102.4.1 (R402.4.1), in the first sentence, the word "and" is deleted and replaced with the word "or".
- (15) In IRC, Section N1102.4.1.1 (R402.4.1.1), the second and last sentences are deleted and replaced with the following: "Where required by the code official, the builder shall certify compliance with criteria indicated in Table 1102.4.1 for items which are not readily visible during regularly scheduled inspections."
- (16) In IRC, Table N1102.4.1.1 (R402.4.1.1) in the column titled COMPONENT, the following changes are made:
- (a) In the row "Rim Joists" the word "exterior" in the first sentence is deleted, and the second sentence is deleted.
  - (b) In the row "Electrical/phone box on the exterior walls" the last sentence is deleted and replaced with: "Alternatively, close cell foam, caulking or gaskets may be used, or air-sealed boxes may be installed."
- (17) In IRC, section N1102.4.1.2 (R402.4.1.2) the following changes are made:
- (a) In the fourth sentence, the word "third" is deleted;
  - (b) The following sentence is added after the fourth sentence: "The following parties shall be approved to conduct testing: Parties certified by BPI or RESNET, or licensed contractors who have completed training provided by Blower Door Test equipment manufacturers or other comparable training."
  - (c) In the first Exception the second sentence is deleted.
- (18) In IRC, Section N1102.4.1.3 (R402.4.1.3) the following changes are made:
- (a) In the first sentence, the words "5.0 air changes per hour in Climate Zones 0, 1 and 2, and 3.0" are deleted and replaced with "4.0.", and the words "in Climate Zone 3 through 8" are deleted.
  - (b) In the first sentence of the Exception, "0.28" is replaced with "5.0 air changes per hour or 0.30"
  - (c) In Number 2 the words "of conditioned floor area" are inserted before the words "or smaller".
- (19) In IRC, Section N1102.4.6 (R402.6) is deleted.
- (20) In IRC, Section N1103.3.1 (R403.3.1) is deleted and replaced with the following: "**Ducts located outside conditioned space.** Supply and return ducts in attics shall be insulated to a minimum of R-8 where 3 inches (76.2 mm) in diameter and greater and R-6 where less



than 3 inches (76.2 mm) in diameter. Supply and return ducts in other portions of the building shall be insulated to a minimum of R-6 where 3 inches (76.2 mm) in diameter or greater and R-4.2 where less than 3 inches (76.2 mm) in diameter.

**Exception:** Ducts or portions thereof located completely inside the *building thermal envelope*."

(21) In IRC, Section N1103.3.3 (R403.3.3) is deleted.

(22) In IRC, Section N1103.3.3.1 (R403.3.3.1) is deleted.

(23)

(24) In IRC, Section N1103.3.5 (R403.3.5) the following changes are made:

(a) In the first sentence of the second Exception, the words following "required" are replaced with "for any system designed such that no air handlers or ducts are located within unconditioned attics".

(b) And the following is added at the end of the Section:

"The following parties shall be approved to conduct testing:

1. Parties certified by BPI or RESNET.

2. Licensed contractors who have completed training provided by Duct Test equipment manufacturers or other comparable training."

(25) In IRC, Section N1103.3.6 (R403.3.6):

(a) in Subsection 1, the number 4.0 is changed to 6.0, the number 113.3 is changed to 170, the number 3.0 is changed to 5.0, the number 85 is changed to 141; and

(b) in Subsection 2: the number 4.0 is changed to 5.0 and the number 113.3 is changed to 141,

(c) Subsection 3 is deleted.

(26) In IRC, section N1103.3.7 (R403.3.7) the words "or plenums" are deleted.

(27) In IRC, section N1103.5.1.1 (R403.5.1.1) the words "Where installed," are added at the beginning of the first sentence.

(28) In IRC, section N1103.5.2 (R403.5.2)

(a) Subsections 5 and 6 are deleted.

(b) Subsection number 7 is renumbered to 5.

(29) IRC, Section N1103.6.2 (R403.6.2), is deleted and replaced with the following: "N1103.6.2 (R403.6.2) Whole-house mechanical ventilation system fan efficacy. Fans used to provide whole-house mechanical ventilation shall meet the efficacy requirements of Table N1103.6.2 (R403.6.2).

**Exception:** Where an air handler that is integral to tested and listed HVAC equipment is used to provide whole-house mechanical ventilation, the air handler shall be powered by an electronically commutated motor."

(30) In IRC, Section N1103.6.2 (R403.6.2), TABLE N1103.6.2 (R403.6.2) is deleted and replaced with the following:

"TABLE N1103.6.2 (R403.6.2)  
WHOLE DWELLING MECHANICAL VENTILATION SYSTEM FAN EFFICACY



FAN LOCATION	AIR FLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY (CFM/WATT)	AIR FLOW RATE MAXIMUM (CFM)
HRV or ERV	Any	1.2 cfm/watt	Any
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	<90
Bathroom, utility room	90	2.8 cfm/watt	Any"

(31) In IRC, Section N1103.6.3 (R403.6.3) is deleted:

(32) In IRC, Section N1103.7 the word "approved" is deleted in the first sentence and the following is added after the word methodologies ", complying with N1103.7.1 (R403.7.1)".

(33) In IRC, a new Section N1103.7.1 (R403.7.1) is added as follows:

**"N1103.7.1(R403.7.1) Qualifications.** An individual performing load calculations shall be qualified by completing HVAC training from one of the following:

1. HVAC load calculation education from ACCA;
2. A recognized educational institution;
3. HVAC equipment manufacturer's training; or
4. Other recognized industry certification."

(34) In IRC, Section N1104.1 (R404.1), The word "All" is replaced with "Not less than 90 percent of the lamps in".

(35) In IRC, Section N1104.1.1 (R404.1.1) is deleted.

(36) In IRC, section N1104.2 (R404.2) is deleted:

(37) In IRC, Section N1104.3 (R404.3) is deleted:

(38) In IRC, section N1105.2 (R405.2) the following changes are made:

- (a) In Subsection 3 the words "approved by the code official" are deleted, and
- (b) In Subsection 3 the following words are added at the end of the sentence: "when applicable and readily available".

(39) In IRC, Section N1106.3 (R406.3) Building thermal envelope is deleted, and replaced with "Building thermal envelope and on-site renewables. The proposed total building thermal envelope UA, which is the sum of U-factor times assembly area, shall be less than or equal to the building thermal envelope UA using the prescriptive U-factors from Table N1102.1.2 multiplied by 1.15 in accordance with Equation 11-4. The area-weighted maximum fenestration SHGC permitted in Climate Zones 0 through 3 shall be 0.30.

$$UA_{\text{Proposed design}} = 1.15 \times UA_{\text{Prescriptive reference design}}$$

(Equation 11-4)





(40) In IRC, Section N1106.3.1 (R406.3.1) is deleted:

(41) In IRC, section N1106.3.2 (R403.3.2) is deleted:

(42) In IRC, Section N1106.4 (R406.4) the following changes are made:

(a) In the first sentence, the words "in accordance with Equation 11-5" are deleted and replaced with: "permitted to be calculated using the minimum total air exchange rate for the rated home ( $Q_{tot}$ ) and for the index adjustment factor in accordance with Equation 11.5.",

(b) In equation 11-5, the words "Ventilation rate, CFM" are deleted and replaced with: " $Q_{tot}$ ", and

(c) In the last sentence the number "5" is deleted and replaced with "15".

(43) In IRC N1106.5, in the column titled "ENERGY RATING INDEX" of Table R406.5, the following changes are made:

(a) In the row for Climate Zone 3, "51" is deleted and replaced with 65

(b) In the row for Climate Zone 5, "55" is deleted and replaced with 69

(c) In the row for Climate Zone 6 "54" is deleted and replaced with 68

(44) In IRC, Section N1108 (R408) is deleted

(45) In IRC, Section M1307.2, the words "In Seismic Design Categories D0, D1, and D2, and in townhouses in Seismic Design Category C", are deleted, and in Subparagraph 1, the last sentence is deleted.

(46) In IRC, Section M1401.3 the word "approved" is deleted in the first sentence and the following is added after the word methodologies ", complying with M1401.3.1".

(47) A new IRC, Section M1401.3.1, is added as follows: "M1401.3.1 Qualifications. An individual performing load calculations shall be qualified by completing HVAC training from one of the following:

1. HVAC load calculation education from ACCA;
2. A recognized educational institution;
3. HVAC equipment manufacturer's training; or
4. Other recognized industry certification."

(48) In IRC, Section M1402.1, the following is added at the end of the second sentence: "or UL/ CSA 60335-2-40."

(49) In IRC, Section M1403.1, the characters "/ANCE" are deleted.

(50) In IRC, Section M1411.9, is deleted.

(51) In IRC, Section M1412.1, the characters "/ANCE" are deleted.

(52) In IRC, Section M1413.1, the characters "/ANCE" are deleted.

Amended by Chapter 209, 2023 General Session

