

International Association of Plumbing and Mechanical Officials

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November 21, 2017

April Trafton Donald Dickerson Associates 18425 Burbank Blvd. Tarzana, CA 91356

Re: IAPMO Standards Council Decision

TIA UMC-004-18

Decision date: November 21, 2017**

Uniform Mechanical Code – Section E 605.1.3.2 – E 605.1.3.3,

E 605.1.7 – E 605.1.7.3

Dear Ms. Trafton:

I am transmitting to you herewith the following decision of the Standards Council. At its meeting on November 15, 2017, the Standards Council considered your written request for the issuance of proposed TIA UMC-004-18 in the 2018 edition of the *Uniform Mechanical Code*. The proposed Tentative Interim Amendment requested revisions to sections E 605.1.3.2 – E 605.1.3.3, and E 605.1.7 – E 605.1.7.3 as follows:

ASHRAE	E 605.1.3.2 Effective Annual Average Infiltration Rate (Q_{inf}) . Effective Annual Average Infiltration Rate (Q_{inf})
ASHRAE	shall be calculated using Equation E 605.1.3.2:
ASHRAE	======================================
ASHRAE	$Q_{inf}(cfm) = (NL \times wsf \times A_{floor}) / (7.3)*$ [Equation 605.1.3.2]
ASHRAE	Ziji (Mil) (M2 Kwaj Kn jioorj) (7.3) [Equation 003.1.3.2]
ASHRAE	Where:
ASHRAE	$\frac{\text{where.}}{NL}$ = normalized leakage
ASHRAE	
ASHRAE	wsf = weather and shielding factor from ASHRAE 62.2.
ASHRAE	$A_{floor} = floor \text{ area of residence, } ft^2(m^2)$
ASHRAE	* Replace 7.3 with 1.44 for metric units. [ASHRAE 62.2:4.1.2(e)]
ASHRAE	
ASHRAE	E 605.1.3.3 Required Mechanical Ventilation Rate (Q_{fan}). Required Mechanical Ventilation Rate (Q_{fan}) shall be
ASHRAE	calculated using Equation E 605.1.3.3:
ASHRAE	$Q_{fan} = Q_{tot} - (Q_{inf} \times A_{ext})$ [Equation 605.1.3.3]
ASHRAE	
ASHRAE	Where:
ASHRAE	Q_{fan} = required mechanical ventilation rate, cfm (L/s)
ASHRAE	$\overline{Q_{rot}}$ = total required ventilation rate, cfm (L/s)
ASHRAE	$\overline{Q_{inf}}$ = may be not greater than $2/3 \times Q_{tot}$
ASHRAE ASHRAE	(see ASHRAE 62.2 for exceptions for existing buildings)
ASHRAE	$A_{ext} = 1$ for single-family detached homes, or the ratio of exterior envelope surface area that is not attached to
ASHRAE	garages or other dwelling units to total envelope surface area for single-family attached homes. [ASHRAE]
ASHRAE	62.2:4.1.2(f)]
ASHRAE	===
ASHRAE	E 605.1.7 Variable Mechanical Ventilation. Dwelling-unit mechanical ventilation systems designed to provide
ASHRAE	variable ventilation shall comply with Section E 605.1.7.1 or Section E 605.1.7.2 or ASHRAE 62.2 Section E
ASHRAE	605.1.7.3. Section E 605.1.7.2 and ASHRAE 62.2 Section E 605.1.7.3 also require compliance with ASHRAE 62.2
ASHRAE	and require verification with supporting documentation from the manufacturer, designer, or specifier of the
ASHRAE	ventilation control system that the system meets the requirements of these sections. Where the dwelling-unit
ASHRAE	ventilation rate varies based on occupancy, occupancy shall be determined by occupancy sensors or by an occupant-
ASHRAE	programmable schedule. [ASHRAE 62.2:4.5]
ASHRAE	programmatic schedule. [ASTIVAE 02.2.4.3]
ASHRAE	

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Uniform Mechanical Code – Section E 605.1.3.2 – E 605.1.3.3,

E 605.1.7 - E 605.1.7.3

ASHRAE ASHRAE ASHRAE ASHRAE **E 605.1.7.1 Short-Term Average Ventilation.** To comply with this section, a variable ventilation system shall be installed to provide an average dwelling-unit ventilation rate over any three-hour period that is greater than or equal to Q_{fan} as determined in accordance with ASHRAE 62.2 Section E 605.1.3.3. [ASHRAE 62.2:4.5.1]

ASHRAE ASHRAE ASHRAE ASHRAE ASHRAE **E 605.1.7.2 Scheduled Ventilation.** This section shall <u>only</u> be allowed to be used where one or more fixed patterns of designed ventilation are known at the time compliance to <u>ASHRAE 62.2 Section E 605.0</u> is being determined. Such patterns include those both clock-driven and driven by typical meteorological data. Compliance with this section shall be in accordance with <u>ASHRAE 62.2 either Section E 6005.1.7.2.1</u> or <u>Section E 605.1.7.2.2</u>. [ASHRAE 62.2:4.5.2]

ASHRAE ASHRAE ASHRAE ASHRAE ASHRAE ASHRAE E 605.1.7.2.1 Annual Average Schedule. An annual schedule of ventilation complies with this section when the annual average relative exposure during occupied periods is not more than unity as calculated in accordance with ASHRAE 62.2. [ASHRAE 62.2:4.5.2.1]

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ASHRAE ASHRAE E 605.1.7.2.2 Block Scheduling. The schedule of ventilation complies with this section when it is broken into blocks of time and each block individually has an average relative exposure during occupied periods that is not more than unity as calculated in ASHRAE 62.2. [ASHRAE 62.2:4.5.2.2]

E 605.1.7.3 Real-Time Control. A real-time ventilation controller complies with this section when it is designed to adjust the ventilation system based on real-time input to the ventilation calculations so that the average relative exposure during occupied periods is not more than unity as calculated in ASHRAE 62.2. The averaging period shall be not less than one day but not more than one year and shall be based on simple, recursive or running average, but not extrapolation. [ASHRAE 62.2:4.5.3]

Prior to the November 15 meeting, the proposed TIA was balloted through the Mechanical Technical Committee in accordance with the Regulations Governing Committee Projects to determine if there existed the necessary three-fourths majority support on technical merit and emergency nature to establish the recommendation for issuance. The ballot failed on both accounts. The recommendation of the Mechanical Technical Committee is to not issue the TIA.

When considering an application for a TIA, the Standards Council accords great respect and deference to the IAPMO codes and standards development process. In conducting its review, the Council will overturn the result recommended through that process only where a clear and substantial basis for doing so is demonstrated.

Upon a full review and consideration of all of the information available to it, the Council concludes that a clear and substantial basis exists to amend sections E 605.1.3.2 – E 605.1.3.3 and E 605.1.7 – E 605.1.7.3 of the 2018 edition of the *Uniform Mechanical Code* – as noted above – to read consistently with *ASHRAE* 62.2 – 2016, the source of the extracted text. Of equal importance, the TIA resolves conflicting language between the *UMC* and *ASHRAE* 62.2.

Thus, the Council hereby issues the proposed TIA.

Sincerely,

Gabriella Davis

Secretary, Standards Council

IAPMO Standards Council Decision TIA UMC-004-18

Decision date: November 21, 2017**

Uniform Mechanical Code – Section E 605.1.3.2 – E 605.1.3.3,

E 605.1.7 - E 605.1.7.3

CC: Monte Bogatz, Executive VP & General Counsel Hugo Aguilar, VP, Codes & Standards Development IAPMO Standards Council Members of the Mechanical TC

**NOTE: Participants in IAPMO's codes and standards making process are advised that limited review of this decision may be sought from the IAPMO Board of Directors. For the rules describing the available review and the method for petitioning the Board of Directors for review, please consult Section 1-7 of the IAPMO Regulations Governing Committee Projects and the IAPMO Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council. Notice of the Intent to file such a petition must be submitted to the Petitions Clerk of the Board of Directors within 15 calendar days of the Date of Decision noted in the subject line of this letter. As this document is an American National Standard (ANS), any persons who have directly and materially affected interests by this decision have the right to appeal to ANSI in accordance with ANSI procedures.

IAPMO Regulations Governing Committee Projects

Section 1-7

1-7 Petitions to the Board of Directors.

- **1-7.1 General.** The Standards Council has been delegated the responsibility for the administration of the codes and standards development process and the issuance of Documents. However, where extraordinary circumstances requiring the intervention of the Board of Directors exist, the Board of Directors may take any action necessary to fulfill its obligations to preserve the integrity of the standards development process. Anyone seeking such intervention of the Board of Directors may petition the Board of Directors concerning Standards Council action on any matters. Such petitions shall be filed and processed in accordance with the Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council.
- **1-7.2 Notice of Intent to File the Petition.** Anyone wishing to petition the Board of Directors concerning an Standards Council action related to the issuance of a document, shall file a Notice of Intent to File a Petition within 15 days following the Standards Council action. A Standards Council action related to the issuance of a document includes any action of the Council that issues or returns a Document or that affects the text of a Document. Petitions concerning other Standards Council actions shall be filed within a reasonable period of time.
- 1-7.3 Effect of Filing. The filing of a Petition will not serve to stay the effective date of a Document or a Tentative Interim Amendment unless the Chief Executive Officer of the Association or the Board of Directors acts, pursuant to 4-7.2 or 5-6, to delay the effective date. Any Petition pending at the time a Document or Tentative Interim Amendment becomes effective will be treated as a Petition to withdraw the Document or Tentative Interim Amendment.
- **1-8 Use of Visual Aids and Demonstrations Before the Standards Council or Board of Directors.** The policy for the use of visual aids and physical demonstrations to the Standards Council and Board of Directors shall be the same as that required for TCCs, TCs, and Task Groups, in accordance with 3-3.3.3(e) and 3-3.3.3(f).

IAPMO Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council

ADOPTED BY THE IAPMO BOARD OF DIRECTORS SEPTEMBER 4, 2000. Amended in January 2007.

Section 1 Scope of and Authority for these Regulations.

- (a) These regulations have been issued by the Board of Directors pursuant to its authority under Article 5, 6 and 8 of the IAPMO Bylaws.
- (b) These regulations set forth the procedures to be used for the filing and processing of all petitions to the Board of Directors filed pursuant to 1-7 of the Regulations Governing Committee Projects.
- (c) The Board of Directors can amend these regulations from time to time and waive or supplement, in whole or in part, at any time or times at its discretion.

(d) For the purposes of these regulations, the Standards Council Secretary, or such other person as the Chair of the Board of Directors may appoint, shall act as a petitions clerk.

Section 2 Subcommittees of the Board of Directors. Unless the Board of Directors otherwise orders, the authority to consider and make recommendations on the disposition of a petition by the Board of Directors shall be delegated to a subcommittee of the Board of Directors, which shall be appointed, in accordance with 2.1 of these regulations. Subcommittees shall be appointed by the Chair of the Board of Directors.

- **2-1 Composition of Subcommittees.** Subcommittees shall consist of three or more members of the Board of Directors. The criteria for selection and appointment of subcommittee members shall be as follows:
- (a) A subcommittee member shall be a person who can decide the petition on the merits in an impartial manner.
- (b) A subcommittee member shall not have any conflict of interest. (A conflict of interest is defined as any situation in which a decision on a petition could substantially and materially affect the member's financial or business interest.)
- (c) Each subcommittee member shall, to the extent practicable, represent diverse interests within the association.

In making a decision of whether or not to serve on a subcommittee, the member may consult with the IAPMO general counsel.

Section 3 The Scope of Review. The petitioner shall generally confine the argument in the petition to matters that were presented below and shall not raise any new matters that could have but were not presented within the standards development process. A petition to the Board of Directors shall not be regarded as simply another opportunity to reargue a position that was rejected by the Standards Council. In considering a petition, the subcommittee shall give due deference to the judgment of the Standards Council and shall not intervene unless it can be demonstrated that extraordinary circumstances exist requiring the Board of Director's intervention to protect the integrity of the standards development process.

Section 4 The Record. In its consideration of the petition, the subcommittee shall have before it the entire record that was before the Standards Council, as well as all proceedings and decisions of the Standards Council on the issue. In addition, the subcommittee may consult any other records of the association that it deems pertinent to the issue, and the subcommittee may seek technical assistance from staff, the technical committee, or any other source or persons that it deems appropriate.

Section 5 Notice of Intent to File the Petition. Anyone wishing to petition the Board of Directors concerning a Standards Council action related to the issuance of a document, shall file a Notice of Intent to File a Petition within 15 days following the Standards Council action. A Standards Council action related to the issuance of a document includes any action of the Council that issues or returns a document or that affects the text of a document. Petitions concerning other Standards Council actions shall be filed within a reasonable period of time.

Section 6 Filing and Contents of the Petition.

- (a) Within 15 days following the receipt of the notice of intent to file, or within such other time as the petitions clerk may allow, the petitioner shall file the petition together with 20 copies. The petition shall be no more than 10 pages in length and shall contain, in separately denominated sections, the following:
 - (1) Name, affiliation, and address of the petitioner;
- (2) Statement identifying the particular Standards Council action to which the petition relates;

- (3) Argument setting forth the grounds for the petition and, in particular, addressing why there exist extraordinary circumstances requiring the intervention of the Board of Directors (see the preceding Section 3 and 1-7 of the Regulations Governing Committee Projects); and
 - (4) Statement of the precise relief requested.
- (b) Any part of the record related to the standards development process that is referenced or discussed in the petition should be clearly cited in the petition using available markings such as the title, author, date, and page of the record. Since the full record will be available to the subcommittee during its review, attachments and appendices shall not accompany the petition, unless express permission has been obtained from the petitions clerk.

Section 7 Consideration of the Petition.

- **7-1 Initial Review.** The petitions clerk may, at his or her discretion, arrange for initial review of the petition by meeting, correspondence, or telephone conference. If upon such initial review of the petition and any relevant portions of the record, the subcommittee determines that the petition has no merit, it may dismiss the petition.
- **7-2 Full Review.** If initial review is not conducted, or, if upon such review, the subcommittee determines that further review is warranted, it shall afford the opportunity for responses to be filed by interested parties. Responses, together with 20 copies, shall be filed within 15 days or within such other time as the petitions clerk may allow.
- (a) Responses shall be no more than 10 pages in length and shall contain, in separately denominated sections, the following:
 - (1) Name, affiliation, and address of the respondent;
- (2) Statement identifying the petition to which the response relates and stating whether the respondent supports or opposes the petition; and
- (3) Argument setting forth the grounds for opposing or supporting the petition and, in particular, addressing why there does or does not exist extraordinary circumstances requiring the intervention of the Board of Directors (see the preceding Section 3 and 1-7 of the Regulations Governing Committee Projects).
- (b) Any part of the record related to the standards development process that is referenced or discussed in a response should be clearly cited in the response using available markings such as the title, author, date, and page of the record. Since the full record will be available to the subcommittee during its review, attachments and appendices shall not accompany the response, unless express permission has been obtained from the petitions clerk.
 - (c) So as to avoid unnecessary repetition and duplication of effort, parties are encouraged to file joint responses where possible and appropriate.
 - (d) Unless a hearing has been requested and granted by the subcommittee (see Section 8), the subcommittee shall, either by meeting or telephone conference, review and render a decision on the petition based on the written submissions of the parties and the record before it.

Section 8 Requests for Hearings. If the petitioner requests a hearing on the petition and that hearing is granted, the petitioner shall be assessed a filing fee of \$2,500 to be posted following the granting of the request. This fee may be reduced or waived by the Chief Executive Officer upon application of the petitioner if good cause for reducing or waiving the fee is presented. If a hearing is granted, the Procedures for Hearings shall be followed.

Section 9 Waiver of Regulations. Any of the deadlines or requirements set forth in these regulations may be waived by the subcommittee upon application of the petitioner or any other party for good cause shown, or in the discretion of the subcommittee.

Section 10 Subcommittee Report to the Board of Directors. The subcommittee shall file with the Board of Directors a written report concerning each petition that it has determined.