



November 20, 2017

Steven Buchberger  
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Cincinnati, OH 45221-0012

Re: IAPMO Standards Council Decision  
TIA UPC-001-18  
Decision date: November 20, 2017\*\*  
*Uniform Plumbing Code – Section M 102.8, Table 1, and Chart A 105.1(1)*

Dear Mr. Buchberger:

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 request for the issuance of proposed TIA UPC-001-18 in the 2018 edition of the *Uniform Plumbing Code*. The proposed Tentative Interim Amendment requested revisions to section M 102.8, Table 1, and Chart A 105.1(1) as follows:

**M 102.8 Examples Illustrating Use of Water Demand Calculator with Appendix A. Example 1: Indoor Water Use Only** – Use the information given below to find the pipe size for the building supply to a residential building with six indoor fixtures as shown in Figure 1 [Pipe Section 4].

**Given Information:**

Type of construction:	Residential, one-bathroom	Friction loss per 100 ft: 15 psi
Type of pipe material:	L-copper	Maximum velocity: <del>40</del> <u>8</u> ft/s
Fixture number/type:	1 combination bath/shower	1 kitchen faucet
	1 lavatory faucet	1 dishwasher
	1 WC	1 clothes dryer

(Figure 1 and Figure 2 remain the same.)  
(Solution: Step 1 of 2 remains the same.)

**Solution: Step 2 of 2 – Determine the Pipe Size of the Building Supply**

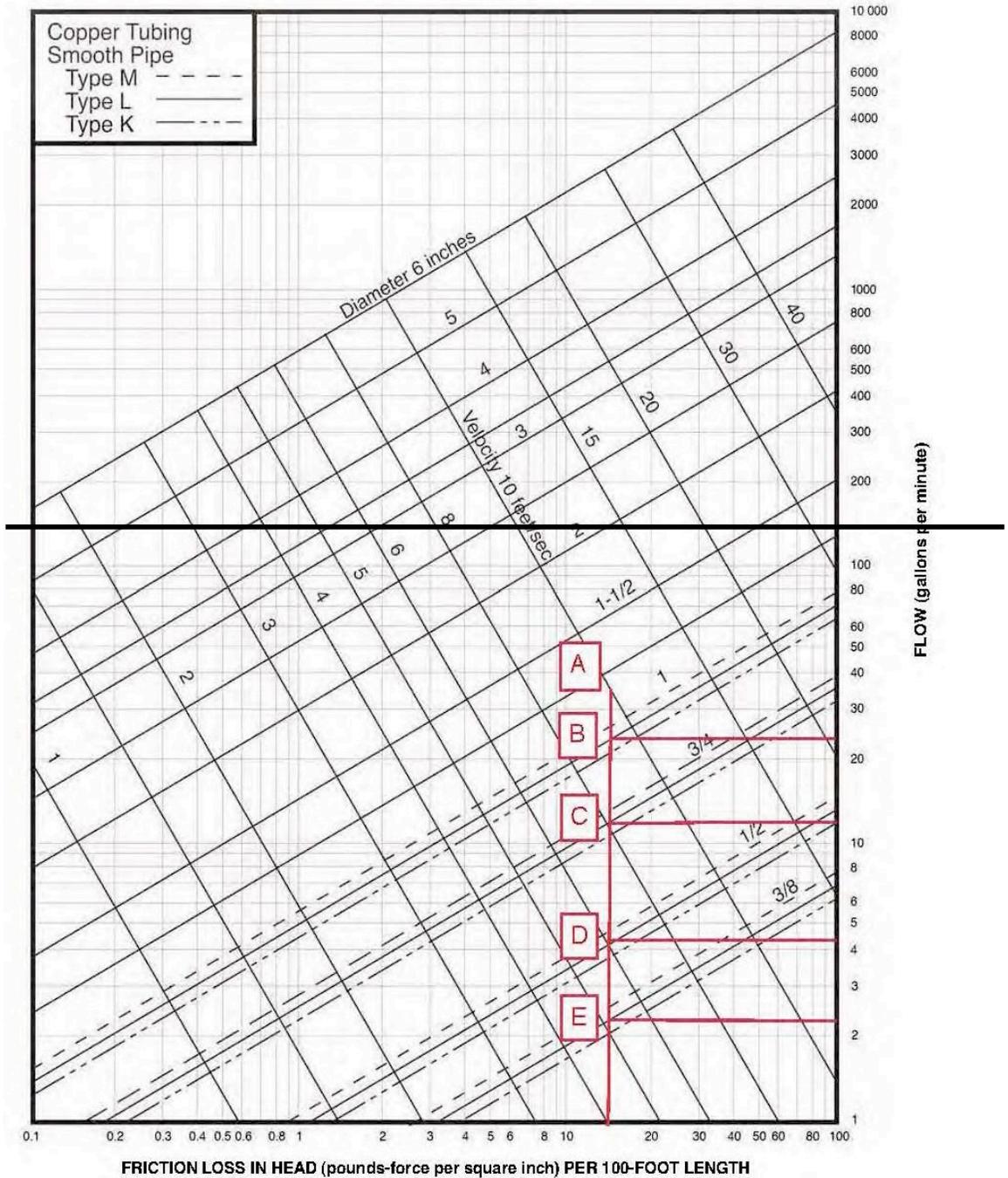
Chart A 105.1(1) for copper piping systems (from Appendix A of the UPC, shown in Figure 3) is used to determine the pipe size, based on given friction loss, given maximum allowable pipe velocity, given pipe material and the demand load computed in Step 1. In Figure 3, the intersection of the given friction loss (15 psi) and the maximum allowable pipe velocity (~~40~~ 8 ft/s) is labeled point A. The vertical line that descends from point A to the base of the chart intersects four nominal sizes for L-copper pipe. These intersection points are labeled B, C, D, E and correspond to pipe sizes of 1 inch,  $\frac{3}{4}$  inch,  $\frac{1}{2}$  inch and  $\frac{3}{8}$  inch, respectively. A horizontal line from points B, C, D, E to the right-hand side of the chart gives maximum flow rates of ~~24~~ 20 gpm, 12 gpm, 4.5 gpm, and 2.3 gpm, respectively. These results are summarized in Table 1 which shows that a  $\frac{3}{4}$ -inch L-copper line is the minimum size that can convey the peak water demand of 8.5 gpm.

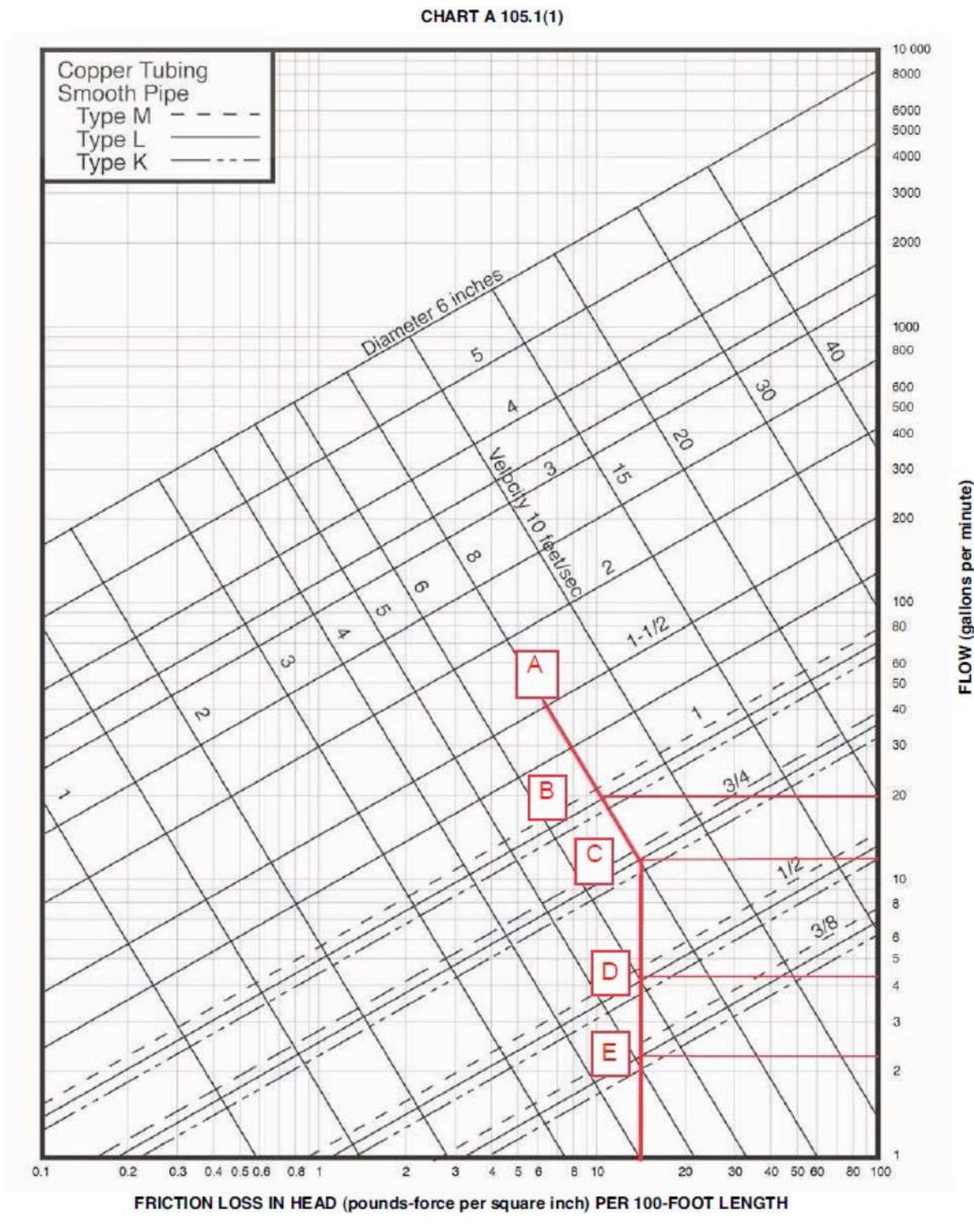
**TABLE 1  
PIPE SIZE OPTIONS FOR BUILDING SUPPLY**

POINT IN FIGURE 3	PIPE DIAMETER (INCH)	MAXIMUM FLOW (GPM)	OK FOR BUILDING SUPPLY <sup>1</sup>
E	$\frac{3}{8}$	2.3	No
D	$\frac{1}{2}$	4.5	No
C	$\frac{3}{4}$	12	Yes
B	1	24 20	Yes

<sup>1</sup> For Building in Examples 1, 2, 3, and 4.

**CHART A 105.1(1)**





**Figure 3. Chart A 105.1(1) for finding pipe size.**

(Remaining sections and figures remain the same)

Prior to the November 15 meeting, the proposed TIA was balloted through the Plumbing 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 and subsequently came to the IAPMO Standards Council, as prescribed by the Regulations.

Upon review of the full record, the Council hereby rejects the proposed TIA.

Sincerely,



Gabriella Davis  
Secretary, Standards Council

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

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#### **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).

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

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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.