

MEMORANDUM

TO: All Interested Parties
FROM: Enrique Gonzalez, Staff Liaison
DATE: January 18, 2017
SUBJECT: Proposed TIA (Log No. 002-15) to UNIFORM PLUMBING CODE, Section 205.0 and Section 911.0.

In accordance with the IAPMO Regulations Governing Committee Projects, the attached proposed Tentative Interim Amendment (TIA) to the 2015 edition of the UNIFORM PLUMBING CODE is being submitted for public comment. The TIA (Log No. 002-15) is on UPC, Section 205.0 and Section 911.0.

We invite all interested parties to review the proposed TIA. If you wish to submit a comment in regards to this TIA, fill out the [TIA Comment Form](#). Email the completed form to enrique.gonzalez@iapmo.org. The initial closing date for submitting comment forms for this TIA is Friday, February 3, 2017.

Thank you for your time and interest in the development of the Uniform Plumbing Code.

In accordance with the IAPMO [Regulations Governing Committee Projects](#) this, a proposed TIA which has been submitted for processing pursuant to Section 5-1 of the Regulations Governing Committee Projects, will be automatically docketed as an appeal on the agenda of the IAPMO Standards Council. Any party may advocate their position before the Council. Please note that most Council meetings are held via teleconference.

Parties wishing to address the Council shall notify the Council Secretary no later than 48 hours prior to the Council meeting. Although not required, parties wishing to advocate a position are encouraged, to the extent practicable, to file written submissions in general conformance with sections 1-6.3 and 1-6.4 of the Regulations Governing Committee Projects in advance of the meeting at which action will be considered.

When an automatically docketed appeal has not been pursued by any party, the Council will not consider the matter as an appeal.

This TIA will be on the Council agenda schedule – date to be determined.

FORM FOR TIA COMMENT ON IAPMO UPC/UMC COMMITTEE DOCUMENT

NOTE: All comments MUST be received by 5:00 PM PST on Friday, February 3, 2017.

For further information on the standards-making process, please contact
Codes and Standards Administration at 909-472-4110

For technical assistance, please call IAPMO at 909-230-5535

FOR OFFICE USE ONLY

RESP # : _____

DATE REC'D: _____

Date: _____ Name: _____ Telephone #: _____

Company: _____

Street Address: _____ City: _____ State: _____ Zip: _____

Please Indicate Organization Represented (if any): _____

1. a) IAPMO Document Title: Uniform Plumbing Code Document Year: 2015

b) Section/Paragraph: Section 205.0 and Section 911.0

c) Comment on TIA: UPC 002-15

2. Comment Recommends (check one): AGREE DISAGREE

3. Substantiation for Comment:

Signature (**Required**): _____

Please use separate form for each comment.

INSTRUCTIONS FOR SUBMITTING COMMENTS
– PLEASE READ CAREFULLY –

1. Complete form digitally by filling in each item described.
2. Check the appropriate box to indicate whether this comment recommends agreeing or disagreeing with the proposed TIA.
3. In the space title “Substantiation for Comment”, state the reason for your comment.
4. Sign the comment. (Required)

NOTE: The IAPMO Regulations Governing Committee Projects in Section 5-4(c): All public comments, ballots, and comments on ballot on the proposed TIA shall be summarized in a staff report and forwarded to the Council for action in accordance with Section 5-5.

UNIFORM PLUMBING CODE TIA FORM™ - 2015

Reference Code Sections: 205.0 and 911.0

Submitter Name: Steve Nastruz

Company: Seattle/King County Health Dept.

Address: 19600 20th Ave NW, Shoreline, WA 98177

Phone number: 206 931-4397

Organization Represented: IAPMO Ad-hoc Committee on Circuit Venting

Proposed language for TIA:

1. *Revise 205.0 to read as follows:*

205.0

Circuit Vent – The vent that connects to a horizontal drainage branch and vents two traps to a maximum of eight traps connected into a battery of fixtures.

2. *Revise 911.0 to read as follows:*

911.0 Circuit Venting.

911.1 Circuit Vent Permitted. A maximum of eight ~~fixtures~~ floor-outlet water closets, showers, bathtubs, or floor drains connected to a horizontal branch ~~drain~~ shall be permitted to be circuit vented. Each ~~fixture drain trap arm~~ shall connect horizontally to the horizontal branch being circuit vented in accordance with Table 1002.2. The horizontal branch ~~drain~~ shall be classified as a drain and a vent from the most downstream ~~fixture drain trap arm~~ connection to the most upstream ~~fixture drain trap arm~~ connection to the horizontal branch.

Exception: Back-outlet water closets shall be permitted to be circuit vented provided that no floor-outlet fixtures are connected to the same horizontal branch.

~~911.1.1 Multiple Circuit Vented Branches. Circuit-vented horizontal branch drains are permitted to be connected together. Each group of a maximum of eight fixtures shall be considered a separate circuit vent and shall be in accordance with the of this section.~~

911.2 Circuit Vent Size and Connection. The circuit vent size shall be in accordance with Table 703.2 according to the number of circuit vented fixtures connected to the horizontal branch but shall be not less than 2 inches (50 mm) in diameter and the connection shall be located between the two most upstream fixture drains. The vent shall connect to the horizontal branch on the vertical between the two most upstream trap arms. The circuit vent pipe shall not receive the discharge of a soil or waste.

911.2.1 Multiple Circuit Vents. When multiple circuit vents are interconnected according to Section 911.4.1, each individual circuit vent shall be sized according to Section 911.2. The vent pipe connecting each circuit vent shall be sized according to Table 703.2.

911.3 Slope and Size of Horizontal Branch. The slope of the vent section of the horizontal branch drain shall be not more than 1 inch per foot (83.3 mm/m). The entire length of the vented section of the horizontal branch drain shall be sized for the total drainage discharge to the branch.

~~911.3.1 Size of Multiple Circuit Vent. Multiple circuit vented branches shall be permitted to connect on the same floor level. Each separate circuit-vented horizontal branch that is interconnected shall be sized independently in accordance with Section 911.3. The downstream circuit-vented horizontal branch shall be sized for the total discharge into the branch, including the upstream branches and the fixtures within the branch.~~

911.4-911.3 Relief Vent. A 2 inch (50 mm) relief vent shall be provided for circuit-vented horizontal branches receiving the discharge of four or more water closets and when connecting to a drainage stack that receives the discharge of soil or waste from upper horizontal branches.

911.4.1-911.3.1 Connection and Installation. The relief vent shall connect to the horizontal branch drain between the stack and the most downstream fixture drain trap arm of the circuit vent. The relief vent shall be installed on the vertical to the horizontal branch.

911.4.2-911.3.2 Fixture Drain or Branch. The relief vent is permitted to be serve as a fixture drain or fixture branch for a fixture located within the same branch interval as the circuit-vented horizontal branch. Fixtures The discharging to a relief vent shall be one or two fixture unit fixtures but shall not exceed a total of 4 fixture units.

911.4 Slope and Size of Horizontal Branch. The vented section of the horizontal branch shall be uniformly sloped and not more than 1 inch per foot (83.3 mm/m). The entire length of the vented section of the horizontal branch shall be sized for the total drainage discharge to the branch according to Table 703.2.

911.4.1 Multiple Circuit-Vented Branches. Circuit-vented horizontal branches are permitted to be connected together. Each group of a maximum of eight fixtures shall be considered a separate circuit vent and shall be in accordance with Section 911.4.1.1 and Section 911.4.1.2.

911.4.1.1 Size of Parallel Horizontal Branches. Parallel horizontal circuit vented branches shall be permitted to connect on the same floor level. Each separate circuit-vented horizontal branch that is interconnected shall be sized independently in accordance with Section 911.4.

911.4.1.2 Size of Continuous Horizontal Branches. Two or more circuit vented systems continuous on the same horizontal branch shall be uniformly sized for the total discharge into the branch.

911.5 Additional Fixtures. Fixtures, other than the circuit-vented fixtures, are permitted to discharge to the horizontal branch drain. Such fixtures shall be located on the same floor as the circuit-vented fixtures and shall be either individually or common vented.

Substantiation:

Technical Merit:

1. Because of the public concern that the current code language is confusing and unclear as to the meaning, application, and enforcement of circuit venting, increasing the liability of incorrect and unintended installations, the committee recommends this Tentative Interim Amendment. The proposed changes rectify this confusion by adding significant clarity to the provisions of the code, correcting improper terminology, removing uncertain phrases, and by arranging the provisions more suitable to the components of the system.

The revision begins with adding a definition for circuit venting and identifying the number and specific kinds of fixtures allowed for a circuit vent that is not present in the current edition. This will curtail unintended installations. Circuit venting is applied only to specific floor mounted fixtures in battery. The term fixture drain is improperly used and is corrected with the proper term of trap arm. A reference to Table 1002.2 was needed to limit trap arm length. An exception was added to allow back-outlet water closets commonly used in commercial applications, which are not floor-outlet fixtures.

The rest of the provisions are arranged by components. First, the circuit vent pipe provisions. Second, the relief vent pipe provisions. Third, the horizontal branch provisions. Fourth, additional fixtures connected to the circuit vented horizontal branch.

The revision adds circuit vent sizing by referencing Table 703.2. Currently, there is no guidance for circuit vent sizing other than a minimum size of two inches. For example, eight public water closets on a circuit vented horizontal branch is a total of 32 fixture units. Referring to Table 703.2, the vent is required to be three inches rather than two. Without this Table reference, there was no guidance to suggest an increase of the circuit vent size. Furthermore, the provisions allow other than circuit vented fixtures to connect to the circuit vent without indicating how they impact the size of the circuit vent. Therefore, clarity was added to identify only the circuit vented fixtures are used with Table 703.2 to size the circuit vent. Multiple circuit vented branches are also allowed to connect together without any guidance on how to size the horizontal vent connecting all the individual circuit vents. Hence, a new subsection, 911.2.1 was added to address this omission.

The relief vent can also serve as a fixture drain with a total of four fixture units. This needed restriction since fixtures such as clothes washers, public wash fountains, and commercial sinks were not intended to discharge into the relief vent. Therefore, the revision restricts the discharges to one and two fixture unit fixtures.

The horizontal branch provisions needed the most revision. Section 911.3.1 is mistitled since the provisions do not apply to the circuit vent, but to the horizontal branch. Furthermore, the language is confusing and suggests more a parallel application than a continuous application for multiple circuit vented horizontal branches connecting together. Therefore, the revision makes a distinction in application of multiple circuit vented branches – parallel and continuous. The sizing is different for each application. For the parallel application, the circuit vented horizontal branches are sized independently. For the continuous application, the circuit vented horizontal branches are uniformly sized for the combined discharge into the branch.

- The figures illustrate the intent of the proposed code language. **Figure 1** displays the basic requirements of where the circuit vent needs to connect to the horizontal branch, the maximum number of fixtures allowed, and the uniform sizing of the horizontal branch. **Figure 2** displays trap arm distance requirements. **Figure 3** illustrates multiple circuit vented branches. On one horizontal branch, the first group of eight fixtures include six water closets and two floor drains. Assuming emergency floor drains with 0 fixture units, the upstream circuit vent is two inches serving the first group of 24 fixture units. The downstream circuit vent is two inches, serving the second group of four water closets and one floor drain having 16 fixture units. Where the two circuit vents connect, Table 703.2 requires the vent size to increase to three inches serving 40 fixture units. **Figure 4** displays the requirement of a relief vent needed when there is a battery of toilets discharging into a stack receiving waste from above.

Emergency nature:

- The current code language has the potential for unintended installations and consequences. There is unclear guidance for both the installation and inspection of a proper circuit vented system. Misapplication could result in a health and safety hazard. For example, without sizing guidance an improper circuit vent size could result in compromising trap seals for fixtures connected to the horizontal branch. Another misapplication would be combining floor outlet fixtures with above floor fixtures using the same circuit vent. The current code language allows any combination of fixtures without discrimination to have the same circuit vent. This could result in a system that is improperly vented and sized.

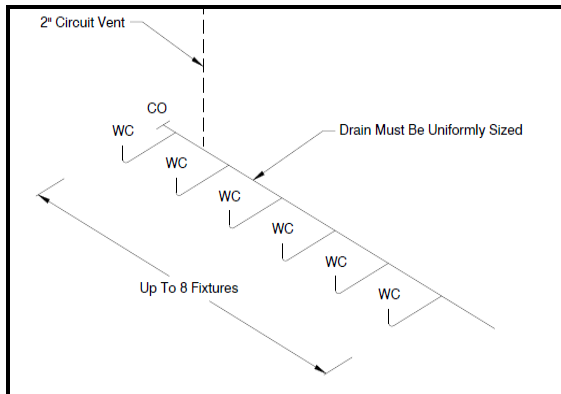


Figure 1 Circuit Vent

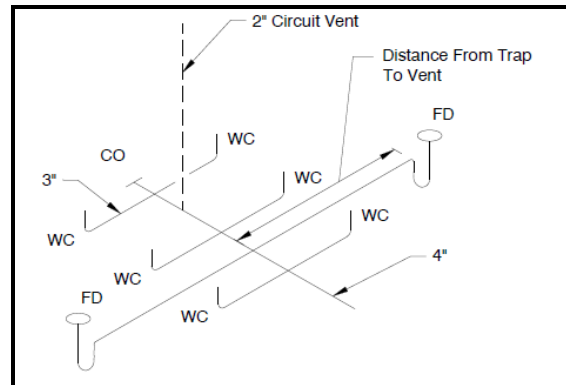


Figure 2 Trap Distance

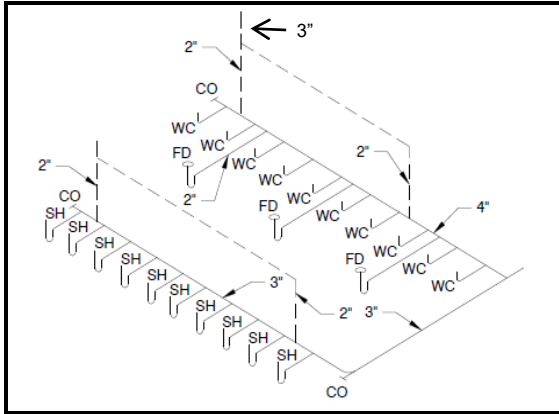


Figure 3 Multiple Circuit Vented Branches

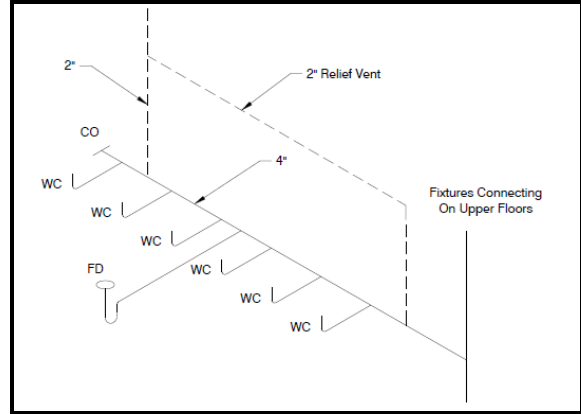


Figure 4 Relief Vent

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Submitter signature (required): *Steven J. Mastny* Date: 1-13-17

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 FAX: 909-472-4198 or 909-472-4246