

## ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee

### Meeting #1 Minutes - March 30, 2023

The first meeting of the ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV) was held on March 30, 2023 in virtual format. The meeting was conducted in accordance with ICC’s Consensus Procedures. [https://www.iccsafe.org/wp-content/uploads/ICC-Consensus-Procedures-ANSI-approved-8\\_2\\_21-BOD-apprvd-8\\_27\\_21.pdf](https://www.iccsafe.org/wp-content/uploads/ICC-Consensus-Procedures-ANSI-approved-8_2_21-BOD-apprvd-8_27_21.pdf)

1. Welcome  
Staff Secretariat, Ramiro Mata, welcomed attendees and convened the meeting at 2:03pm EDT.
2. Housekeeping Items - Mata noted the following items prior to calling the meeting to order:
  - a. The meeting will be conducted in accordance with Robert’s Rules of Order.
  - b. All attendees will have an equal opportunity to speak but must first be recognized to do so. The raise hand feature in Teams may be used for this purpose.
  - c. Only committee members may call for and vote on motions.
  - d. Attendees must abide by ICC’s code of Ethics and Anti-Trust Policy which can be found in the publicly accessible website <https://www.iccsafe.org/products-and-services/standards-development/is-swddv/>
3. Roll Call – Mata call the meeting to order with a roll call of IS-SWDDV committee members – Symbol  indicates present. With attendance below, Mata indicated the threshold of 10 for quorum has been met. ICC Staff Members present: Matt Sigler (ICC-PMG)

Regulator		User		Manufacturer		Builder	
<input checked="" type="checkbox"/>	Joseph Alexander	<input checked="" type="checkbox"/>	Esber Andiroglu PhD, PE	<input checked="" type="checkbox"/>	Marcus Elmer	<input checked="" type="checkbox"/>	Dan Buuck
<input checked="" type="checkbox"/>	Richard Grace	<input checked="" type="checkbox"/>	Gary Klein	<input checked="" type="checkbox"/>	Dave Parney	<input checked="" type="checkbox"/>	Joshua Trujillo
<input checked="" type="checkbox"/>	Terry Haughn	<input checked="" type="checkbox"/>	John Lansing	<input checked="" type="checkbox"/>	Lance MacNevin PE	<b>Consumer</b>	
<input checked="" type="checkbox"/>	Thomas Roberts	<input checked="" type="checkbox"/>	Juneseok Lee PhD, PE	<input checked="" type="checkbox"/>	Kyle Thompson PE	<input checked="" type="checkbox"/>	Tim Keane
<input checked="" type="checkbox"/>	Ross Wakefield	<input checked="" type="checkbox"/>	Philip Parisi Jr. PE			<b>SDO/Test Lab</b>	
						<input checked="" type="checkbox"/>	Kathryn (Katie) Foster

4. University of Miami Pipe Sizing Presentation – Drew Rich, PhD Candidate provided a slideshow about the research project underway. The slideshow will be stored in the meeting minutes folder of the standard website previously mentioned. A question-and-answer session followed the presentation with Rich and Primary Research Director, Esber Andiroglu PhD PE, responding. Highlights are as follows:

- a. MacNevin: What is the timeline? Andiroglu: Research began August 2022. Phase I projected to be completed August 2023, Phase II on August 2024 and Phase III on August 2025.
  - b. Klein: Suggest monitoring actual residences using different pipe sizing approaches and compare. Andiroglu: First we must fully understand the various approaches.
  - c. Buuck: Prefers the holistic approach that influence pipe sizing.
  - d. Keane: Water scarcity was not considered when designing piping systems.
  - e. Parisi: Suggest focusing on large buildings. Single family homes are more dependent on occupants rather than piping systems.
  - f. Roberts: Agree with Parisi. Australia focused on apartments first. Found no value in single family homes.
  - g. Rich: What should frequency of monitoring be?
  - h. Andiroglu: Request water use field data.
  - i. Sigler: This is a large undertaking. Committee should decide on scope of the standard.
  - j. Lansing: Agrees with Parisi. Large buildings will have a greater impact.
  - k. Klein: Is the waste system in the scope of this new standard? Need to look at tracking/monitoring methods for waste systems. Andiroglu: Yes, waste systems are in the scope including venting. We have to look at tracking methods.
  - l. Keane: Many research papers are not guided by experts. Suggest having committee members review papers prior to them being included in the research project.
  - m. Klein: Will the slideshow be uploaded to the webpage folder? Mata: Yes, we will get it uploaded.
  - n. Klein: Plumbing systems are currently designed for the 99% peak use. Most systems are normally operating at 12% of peak.
  - o. Keane: Compare code requirements from other countries and compare with US codes to determine how they are different.
  - p. Roberts: Must determine effects of pipe sizing via monitoring of actual use.
  - q. Lee: Why are we developing this standard? IAPMO and AWWA have flow rate data available. Rich: This standard is not intended to reinvent the wheel. We will look at water demand calculator and determine if some of its aspects can be used.
  - r. Lansing: There are a couple of books from Heriot Watt University that may be of use to the committee:
    - i. <https://www.routledge.com/Transient-Free-Surface-Flows-in-Building-Drainage-Systems/Swaffield/p/book/9780367377809>
    - ii. <https://www.routledge.com/Transient-Airflow-in-Building-Drainage-Systems/Swaffield/p/book/9780367577186>
5. A 10 minute recess was called at 3:35pm EDT. The meeting reconvened at 3:45pm EDT.
6. Introductions
- a. Committee Members
  - b. Interested Parties
    - i. David Yashar – NIST

- ii. Tania Ullah – NIST
  - iii. Steve Buchberger – University of Cincinnati
7. Nomination and Election of Chair and Vice Chair
- a. Philip Parisi and Gary Klein volunteered and were nominated.
  - b. Election results were 9 votes for Klein and 8 votes for Parisi. Katie Foster stepped out and was not present for voting.
  - c. Parisi agreed to assume the role of Vice Chair.
8. Meeting Cadence – The committee agreed to have 4-hour meetings once per month 2p-4pm EDT. Fridays were ruled out because of the substantial time difference with Australia and New Zealand. The Chair suggested sending a doodle poll for Mondays and Thursdays.
9. Next Steps- Title/Purpose/Scope
- a. Scope-
    - i. Lansing: Large buildings will have greater impact. Roberts, Keane, Elmer, Parisi all agreed.
    - ii. Parisi: Must include mixed-use buildings because more are being built.
    - iii. The committee reviewed residential occupancy types in the International Building Code.
    - iv. Sigler: Permanent residences is the intent for ICC 815 rather than transient occupancies.
    - v. Chat discussions (additional information included in attachment):
      - 1. Lansing posted a copy of the German peak flow chart.
      - 2. Keane: Occupancy classifications are important factors in the development of this standard. Mixed use independent living and skilled nursing fall under a different code even if in the same building. Skilled nursing falls under the health code and independent living does not.
      - 3. Roberts posted a table showing frequency factors in the Australian Plumbing Code.
      - 4. Lansing: Australian frequency factors make sense and is reflected in European and Asian codes.
      - 5. Lansing posted frequency factors in harmonized European standard.
      - 6. Rich: How do frequency factors affect pipe sizing? Roberts posted an equation showing the relationship and also a link to the Australian Plumbing Code.
      - 7. Lansing posted a link to better understand German standards <https://www.beuth.de/de/publikation/ermittlung-und-berechnung-der-rohrdurchmesser/166088100>
  - b. Purpose-
    - i. Klein asked to see the purpose submitted to ANSI.
    - ii. Sigler shared a copy of the ICC 815 PINS through Teams.
  - c. Title – Tabled to be discussed at the next meeting
10. Action Items
- a. Send doodle poll and invitations for future meetings – Mata
  - b. Upload research presentation onto public website – Mata

- c. Provide guidance to committee regarding the use of MS Teams for file sharing - Mata
11. Meeting adjourned at 6:04pm EDT.