

ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV)

Meeting #16 - Minutes

June 20, 2024

Chair: Gary Klein

Vice Chair: Philip Parisi

Secretariat- Ramiro Mata

The sixteenth meeting of the ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV) was held on June 20, 2024, 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

1. Welcome – Chairman, Gary Klein, convened the meeting and welcomed attendees at 2:03pm Eastern time along with Staff Secretariat, Ramiro Mata. Mata reminded attendees about the ICC Code of Ethics and the Anti-Trust Policy, both of which can be found on the ICC 815 (IS-SWDDV) webpage. Mata also announced that the meeting will be recorded for internal reference only and that recording by anyone other than ICC staff is prohibited.
2. Roll Call – Klein called the meeting to order with a roll call of ICC 815 (IS-SWDDV) committee members – Symbol indicates present, indicates absent.

Committee Members

Regulator		User		Manufacturer		Builder	
<input checked="" type="checkbox"/>	Jim Richardson	<input 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 type="checkbox"/>	Dave Parney	<input type="checkbox"/>	Joshua Trujillo
<input type="checkbox"/>	Terry Haughn	<input checked="" type="checkbox"/>	John Lansing	<input type="checkbox"/>	Lance MacNevin PE	Consumer	
<input checked="" type="checkbox"/>	Ross Wakefield	<input type="checkbox"/>	Philip Parisi Jr. PE	<input type="checkbox"/>	Kyle Thompson PE	<input checked="" type="checkbox"/>	Tim Keane
		<input checked="" type="checkbox"/>	Tom Wise			SDO/Test Lab	
						<input type="checkbox"/>	Kathryn (Katie) Foster

ICC Staff – None

Interested Parties and Guests – Drew Rich, David Nickelson, Dan Cole, Michael Cudahy, Frank Schmidt, Lavanya Muttayan, Dann Holmes,

First Time Attendees –

- Jassim Daurewo – Technical Chair of the Society of Public Health Engineers (SoPHE).
 - Nhat Nguyen – Plumbing engineer from Vietnam specializing in designing plumbing systems for buildings with minimal infrastructure.
3. Quorum and Membership Review - With eight committee members in attendance, Mata announced the threshold for quorum was not met.
 4. Approval of Meeting #15 Minutes from May 20, 2024 – Tabled due to lack of quorum.
 5. Agenda Review and Approval – Tabled due to lack of quorum.

6. Research Update – Rich

a. Phase II Supply –

Reported additional difficulties with the University of Miami’s Facility Department with regard to collecting pipe samples from the Stanford building because the construction management team has now taken control. The plan is to take photos of pipe samples since it is no longer feasible to conduct further analysis.

b. Phase I DWV –

- i. Discussed the objectives and structure of a literature review on sanitary drainage systems in buildings, focusing on primary conditions, design and development methods, international design guides, scientific literature agreement, future methodologies, and recent guidelines.
- ii. Reviewed a table that university researchers developed showing various plumbing codes from other countries and the corresponding plumbing codes they utilize for drainage system design.
- iii. Daureewao expressed interest in contributing to the technical memorandum on tall building drainage and suggested involving Michael Gormley in the project due to their regular communication and his expertise. Rich expressed interest in getting insights from Michael Gormley, particularly regarding literature review papers authored by him.
- iv. Daureewao mentioned ongoing research in the UK related to positive and negative pressure in buildings. They highlighted their contribution to a technical memorandum for tall building drainage and expressed willingness to collaborate with others. Rich acknowledged their familiarity with this work and emphasized the importance of separate design systems for tall buildings.

7. Working Group Updates

a. Measurement – Lansing

- i. Discussed reaching out to Phil Parisi’s clients for access to new buildings. Lansing confirmed completion of the testing request letter to building owners and expressed willingness to send it to clients on the West Coast as well. The aim is to secure options from multiple buildings, considering that obtaining six buildings may result in only one being available.
- ii. Klein discussed gaining access to new apartment buildings in Rome, New York for a housing developer project. He highlighted potential opportunities for meetings at these locations.
- iii. Mata raised questions concerning building owner inquiries related to instrument installation impact on building operations, shutdown requirements during installation, duration of instrument placement, associated benefits, approval process, logistics, as well as installation procedures post-approval.

b. Water Service – Wise

- i. Discussed exploring transience within the water supply system and identifying failure points for materials and components. The group plans to commence high-level papers on different failure causes within specific components, such as

considering factors like cyclic pressure management when choosing copper tubes.

- ii. Detailed primary outputs related to water services supply side, including quantifiable performance requirements, research schedules, best practice guidelines, and definitions for key terms. The group also considered moving towards an average approach rather than a 99th percentile approach in order to improve efficiencies.
 - iii. Klein expressed his preference for using average flow rates over peak flow rates when designing pipe sizes due to the rarity of peak flows in practical scenarios. He highlighted that industry professionals often lack practical measurement experience which could influence their design decisions.
- c. DWV – Lansing
- i. Provided an overview of ongoing work related to reassessing design guidance for gravity drainage systems.
 - ii. Discussed the scope of the framework, focusing on residential applications, particularly mid and high-rise buildings. They considered potential issues such as fats, oils, greases in plumbing systems and antimicrobial resistant bugs.
 - iii. Daureewao discussed the methodology for determining loading units in the UK and US based on different goods, emphasizing that irrespective of the methodology used, a specific discharge flow rate should be allowed. The conversation also touched upon converting flow rates into drainage fixture units or discharge units in the UK. John Lansing expressed interest in being one of the peer reviewers for this initiative.
 - iv. There was a discussion about flow rates related to maximum flow rates in European standards (EN 1256) with concerns raised about potential overestimation due to outdated methodologies. Additionally, there were queries regarding velocity within stacks and how many toilets flushing simultaneously would achieve certain flow rates.
 - v. Klein raised questions about sizing considerations for buildings with large numbers of apartments managed by small stacks based on given flow rate values. This led to discussions around overestimation not necessarily being negative but potentially impacting horizontal sizing considerations.
 - vi. Highlighted disagreements among European countries regarding drainage methodology standards based on Transient Airflow and Building Drainage Systems book by John Swaffield and mentioned issues with outdated airflow methodology from Wiley Eaton papers leading to reliance on US standards despite known inaccuracies.
 - vii. A discussion ensued regarding potential problems associated with water closets located close or further away from stacks impacting surge flows into them due to simultaneous discharges from multiple fixtures at varying distances within drainage systems.
- d. Rosetta Stone – Mata reported for MacNevin
- i. The WG last met on May 21, 2024 due to MacNevin’s heavy travel schedule.

- ii. The WG reviewed an Excel file containing tabs with information on different types of pipes such as copper tubing, PEX tubing, and CPVC tubing. It is currently organized based on North American piping products but will extend to other regions worldwide.
 - iii. Plans were outlined for transitioning from Excel files to an online database or menu-based system due to potential limitations posed by managing extensive data solely through Excel files.
 - iv. The next WG meeting is scheduled for June 26, 2024
 - v. Mata stated that he met with ICC VP of IT, Chris Hristov and that a follow up meeting will be arranged to include WG Chair.
8. Review of Action Items
- a. Follow up on database creation for Rosetta Stone WG – Completed. Mata met with ICC VP of IT, Chris Hristov, to provide an introduction as to the needs of the Rosetta Stone WG and arrange a meeting with WG Chair, Lance MacNevin to discuss details.
 - b. Contact Steve White to request sharing of Lift Tower presentation and slides with committee – Completed. Mata contacted Mr. White who gave his approval to share the presentation to the committee which are now stored in the committee’s Supporting Documents folder.
 - c. Develop Working Group Work Plans – Working Group Chairs. Still in development.
 - d. Submit draft of Phase I DWV Research Report – Andiroglu/Rich. Completed. Draft sent to ICC staff for initial review prior to distribution to committee.
9. New Action Items
- a. Review initial draft of Phase I DWV literature review – ICC staff/Lansing
 - b. Develop Working Group Work Plans – WG Chairs
10. New Business
11. Old Business
12. Next Meeting – July 18, 2024, at 1pm-3:30pm Central (2pm-4:30pm Eastern)
13. Adjournment – Meeting adjourned at 3:30 Central (4:30pm Eastern).