CHAPTER AWARD OF MERIT Recipient
ASPE 2024 – 2025

IN THIS ISSUE

ASPE American Society of Plumbing Engineers™ BALTIMORE

MEETING FORMAT

6:00 - 6:30	Social
6:30 - 6:45	Announcements & Table Tops
6:45	Dinner Served
7:00 - 8:00	Presentation

DATE:	October 15, 2025
TIME:	6:00pm to 8:00pm
PLACE:	Little Havana
TOPIC:	Medical Gas Design & NFPA 99 Code Changes
SPEAKER:	Nikita Patel, PE

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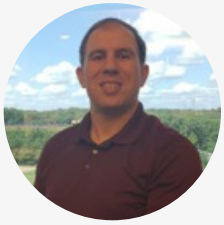

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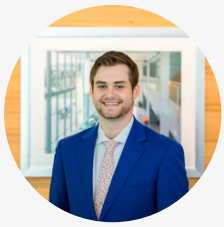

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PL-101

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Chuck Swope, PE, CPD, LEED AP BD+C
Chapter President

Greetings! I return to you from the great Sunshine State of Florida! As you may have heard, the 2025 ASPE Tech Symposium was in Orlando this year and there is no better place to learn about new technologies and to refresh yourself on familiar ones. I was happy to attend on behalf of the chapter board and hobnob with all of the other chapter presidents, Society Board, and other ASPE celebrities. You'll be happy to know that we have received the award of merit for the 8th year in a row!

The Award of Merit is a special commendation that recognizes the efforts that our chapter puts forward. It isn't just handed out to the best looking chapter, the Award uses a series of point systems in four categories, Chapter Activity, Education, Financial Aid, and Plumbing Engineering Awareness. Chapter Activity and Education is where we shine. Your chapter supports eight positions at the Society level in several committees and even a bona fide Board Position! Thanks Niki! Our education points are earned via our joint meetings with other chapters as well as our AYP and WOA events. Financial Aid points are earned for every dollar that we donate to the ASPE Education and Research Foundation and other charitable causes. Last, but not least, the Plumbing Engineering Awareness is one of the most fundamental categories. We earn points promoting plumbing engineering outside of our chapter. Your intrepid board members earn points for us just by spreading the word through peer networking and promoting ASPE outside of the chapter meeting. How can you attend a meeting if you've never heard of ASPE? This is just a glimpse into the effort that we all put into your chapter.

Alas, I will not be able to attend this month's meeting next week due to some business travel. Fear not! (As if you were afraid) I shall return next month with tales of my travels abroad. For funsies, I checked our logs, this will be the first meeting I've missed since we started keeping electronic records since 2017! I hadn't realized that it had been so long, probably because I look forward to coming to each and every meeting. We carefully select our meeting topics and speakers and this year is no different. As a special treat/torture, I happen to know November speaker very well. I'm very sorry that I'll miss Niki's presentation and I hope to see you all at the next meeting!

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ASPE YOUNG PROFESSIONALS

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Julian Chiveral, LEED AP BD+C
Vice President- Technical

Technical Report

The federal government may have shut down, but don't worry, the Baltimore ASPE chapter is still in session. I won't say we're more capable than a bunch of bureaucrats but I'll let it be implied.
On October 15th, we return to Little Havana for yet another technical presentation (and some delicious Cuban food too.) Nikita Patel, PE, sales engineer (and healthcare engineering extraordinaire) with Sherman Engineering will be leading a presentation on healthcare engineering and hospital design. Specifically, Niki plans to dig into designing Category 1 Patient Care Spaces according to NFPA 99, and will review the code changes between the NFPA 99 2021 & 2024 Code Book. Together we'll:

- Identify source system requirements
- Identify the proper arrangement of pipeline equipment from the source valve to the patient.
- Identify the specification requirements for valves and zone valve boxes, area and master alarm panels, and outlet keying styles
- Review the key changes between the 2021 & 2024 NFPA 99 Code Updates

Maybe you can already design a hospital in your sleep, or maybe you haven't been inside a hospital since the day you were born. Regardless, this meeting promises to be informative.

I'll see you there!
Julian

ASPE American Society of Plumbing Engineers™ BALTIMORE

Healthcare Facility Plumbing Deign

By Ron George, CPD

The healthcare industry touches the life of every person in the United States, either as a healthcare worker or as a patient. According to a recent survey, there are more than a half million healthcare facilities of various sizes throughout the United States. These facilities admit upwards of 36 million patients a year. Hospitals and healthcare facilities are among the most complex building types to design because they have critical plumbing systems. They also require special equipment for life support systems, which include medical gas systems and plumbing connections to other medical equipment. Equipment utilizing plumbing connections includes heart and lung machines, dialysis machines, distilled water systems, reverse osmosis water systems, lab water systems, ethylene oxide sterilizers, steam sterilizers, acid waste systems, lab sinks, chemical fume hoods, dietary equipment, back-up water supplies emergency power, and many others. Many of these systems require duplex equipment or back up systems to assure continuous operation.

Hospitals must also comply with regulations from numerous entities, including the Joint Commission for the Accreditation of Healthcare Facilities, the American Institute of Architects (AIA) Design Guides for healthcare facilities, numerous National Fire Protection Association (NFPA) documents, building code requirements and many other specialty and health code documents.

The plumbing design for a healthcare facility is a very involved process. Accredited hospitals must meet minimum requirements based on the type and level of care of the facility. Facility types include, but are not limited to, new hospitals, replacement or renovated hospitals, ambulatory care facilities, adult care homes, assisted living facilities, birthing centers, HIV support facilities, outpatient diagnostic centers, prescribed child care centers, residential homes for the aged, end stage renal disease centers, nursing homes, hospices, rehabilitation facilities, intermediate care facilities, occupational therapy centers, rural health clinics, clinical additions, energy centers or power plants, outpatient clinics, animal research facilities and laboratory facilities.

Commissioning

Ideally, the building owner should select the architect, engineer, construction management firm and a commissioning firm or person prior to beginning the design process. If one is not selected prior to the design, the commissioning agent should be involved during the preliminary or schematic design phase of a project. The design team can then employ total building commissioning practices tailored to the size and complexity of the building and its system components. This allows a commissioning firm or authority to verify performance of building components and systems when the building is occupied. The commissioning person or commissioning authority should perform the following tasks on a healthcare facility project:

1. Include commissioning requirements in construction documents.
2. Provide a commissioning plan.
3. Field verify the installation and performance of systems to be commissioned.
4. Provide a commissioning report upon completion of the project.

We continually improve the healthcare environment in the United States to the point that we have one of the best healthcare systems in the world. Dr. Lewis Thomas was the former head of New York's Sloan Kettering Cancer Research Center and the author of numerous books and articles explaining the advances in medicine. In the spring edition of the 1984 foreign policy journal, Foreign Matters, he wrote:

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Healthcare Facility Plumbing Deign

“There is no question that our health has improved in the last century. One thing seems certain: It did not happen because of medicine or medical science or even the presence of doctors. Much of the credit should go to the plumbers and sanitary engineers of the Western world. The contamination of drinking water by human feces was at one time the single greatest cause of human disease and death. It remains so, even with starvation and malaria, for the Third world countries. Typhoid fever, cholera and dysentery were chief threats to survival in the early years of the 19th century in New York City and other major east coast cities in the United States. When the plumbers and sanitary engineers had done their work in the construction of our cities, these diseases began to vanish. Today, cholera is unheard of in this country, but it would surely reappear if we went back to the old fashioned ways of finding water to drink.”

Water service entrance

The water service in a hospital is critical and needs to be from a reliable source. Water service entrance should be from two sources or water mains. A water quality test should be performed periodically on the water supplied to a healthcare facility to assure there is not a high bacteria content in the water supply that may warrant additional water treatment on site. Many connect to water mains from two different streets that are separated by isolation valves and backflow preventers. This assures that water is available in the event of a water main break or loss of water supply. If the hospital is in a remote location where dual service lines are not an option, a water storage tank may be required in which case water treatment will be necessary to assure that the water does not become contaminated. A water quality test must be performed periodically to check for high bacteria content that may warrant additional water treatment on site. Water meters, backflow preventers, chlorine injection pumps, ozonation equipment, copper silver ionization units, water softeners and other water treatment equipment should be located at the water service entrance, with duplex equipment where practical or with bypass lines to assure continuous operation during servicing of equipment. The designer should also provide a preliminary fixture unit count and determine a peak water flow calculation to determine whether there is a need for a booster pumping package.

Water quality

While the different types of healthcare facilities in the institutional market have many needs in common, it is the hospital environment that presents the most unique plumbing challenges. Sanitation is a key requirement for the plumbing areas in this environment. Generally, patients in hospitals that have a suppressed immune system are more susceptible to exposure of bacteria from patient to patient contact by staff or from exposure to organic pathogens growing in the water supply. Hand wash sinks in patient rooms must have a clean supply of water for staff to wash their hands. Water for cleaning instruments and equipment is also an important part of sanitation. For this reason, many healthcare facilities are exempt from water and energy conservation regulations. A recent study suggested that there may be a correlation between water conservation and increased bacteria content in the water. There was a study at John’s Hopkins University Hospital that indicated that there was a high bacteria content in metering faucets as compared to the bacteria count in non-metering faucets. The study implied that the hospital faucets with low-flow self metering faucets had lower flow rates. The lower flow rates did not allow enough flow to maintain the residual chlorine levels. The lower chlorine levels allowed the chlorine to dissipate over time in the branch piping to the low-flow faucets. Lower chlorine levels would allow bio-films to grow on the walls of the branch piping increasing the number of organic pathogens like Legionella. This study has caused quite a stir in both the plumbing and healthcare industries and it is being reviewed by many in the plumbing industry including members of the American Society of Plumbing Engineers to assure the research was not flawed and that the data is reliable. There will likely be additional information on this issue with recommended actions to minimize bacterial growth in hospital water systems in the near future.

Healthcare Facility Plumbing Deign

“Plumbing utilities

In the early stages of a project, it is important for the design professional to work closely with the architect and structural engineer to establish where plumbing chase walls will need to be. Adequate space should be provided for fixture carriers; there needs to be enough room so that plumbing risers can be routed up and down efficiently in multistory buildings. The plumbing supply and return risers should be grouped together at one end of a plumbing chase or shaft, as agreed with the other trades, to minimize conflicts with walls, structural elements, ductwork, cable trays and other utilities. The storm drain should be routed in vertical chases whenever possible.

Medical equipment

The medical air compressors, oxygen manifolds, nitrogen manifolds, nitrous oxide manifolds and medical vacuum pump systems are all life support systems that are part of the medical gas system and according to NFPA Standards need redundancy or duplex systems to provide a back-up or a reserve supply. These systems are generally located at the mechanical room, central utility plant or basement mechanical room. Cylinder manifolds are generally located in manifold storage rooms and they should meet the building code and the NFPA standard requirements based on the size and volume of the cylinders that are stored. When bulk liquid cylinders are used in larger hospitals for nitrogen or oxygen service, the liquid is always boiling off and being released or vaporized as a gas. This process causes a constant buildup of pressure. If the demand for that particular gas is not sufficient the pressure will build and the relief valve will discharge. The relief valve should be routed to a safe location as directed by NFPA 99. It is for this reason that bulk liquid cylinders should not be used in a reserve or stand-by situation, because the tank will continue to vaporize the liquid into a gas and it would be possible for a liquid storage tank to become empty in a stand-by or reserve condition. Reserve supplies of medical gases for nitrogen, and oxygen should be in gas cylinders unless special provisions are taken to draw from both bulk storage tanks and a bank of cylinders should still be utilized for a reserve supply. The designer should review NFPA requirements for bulk oxygen storage on site and determine the bulk oxygen tank location and make sure it has appropriate clearances from buildings if required.

Equipment schedules

Equipment schedules should be shown on the drawings to indicate the basis of design, including each plumbing utility, (cold water, hot water, gas, electrical voltage, horsepower, amps, steam, pressure, notes, etc.) The schedule should also indicate the utility connection sizes, the type of equipment, the maximum dimensions (if space is an issue), flow rates, the manufacturer and model number selected and performance requirements. The following is a list of common equipment schedules on the plumbing drawings: Plumbing fixture schedule, water filter schedule, water softener schedule, domestic water thermal expansion tank schedule, plumbing pump schedule, plumbing packaged booster pump schedule, storage tank schedule, electric water heater schedule, gas-fired water heater schedule, steam to hot water heat exchanger schedule, liquid to liquid heat exchanger schedule, storage tank with heat exchanger schedule, steam booster hot water heat exchanger schedule, packaged reverse osmosis water unit schedule, deionization water packaged unit schedule, gas pressure regulator valve schedule, pressure reducing valve station schedule, food service equipment utility demand schedule, medical equipment connection schedule, air compressor system schedule, vacuum pump system schedule, gas manifold systems.

Equipment pads

All floor-mounted equipment should be placed on concrete housekeeping pads that are 4 to 6 inches thick. Floor drains should be located near the equipment pads so equipment drains can be piped to the floor drains without causing trip hazards.

Healthcare Facility Plumbing Deign

"**Gathering information**

Obtain utility maps and drawings showing all of the adjacent utilities. Get a flow test report from a nearby fire hydrant from the water department or the fire department, showing the static and the residual or flowing water pressures with the flow rate shown for the residual pressure. The flow test report should include the information required to help determine whether a pressure booster system is required, and it should allow the designer to determine what the approximate suction pressure will be for the fire pump and the domestic water booster pump. The site utility plan should also include natural gas, sanitary sewer and storm water sewer information.

Code review

Work closely with the architect to perform a review of the building and plumbing code requirements to determine which model code or state code and which year edition of the codes will be enforced by the authority having jurisdiction (AHJ) for the project. Determine which year edition of the NFPA codes for medical gas systems and bulk oxygen storage systems will be used and identify any local health department requirements that address health care facilities. Inquire about local requirements for kitchen equipment, air gaps and grease interceptors. Ask local authorities or the local drain commission about any stormwater management requirements for retention ponds sizing criteria. Stormwater retention basins receive the storm flow in a large pond and allow the stormwater to drain out through a controlled outlet to minimize flash flooding downstream.

Utility coordination with civil engineers

Coordinate the utility requirements with the civil engineer by obtaining the existing and finished grades on a topographical plan, as well as temporary or intermediate grades used for any construction phasing purpose. Request the soil boring information, including ground water level for determining whether sub soil and perimeter drains will be required. The soil boring will indicate the soil type and the possible infiltration flow rate from that type of soil.

Coordinate with the project civil engineer to prepare a formal letter to the water and sewer utility requesting the following information for the project files:

1. Site plan from the utility company showing all water mains adjacent to the site
2. Depth of the bury of the water mains based on the datum taken from the site plan
3. Static and residual pressures in the water main (s)
4. Proposed location of domestic meter assembly installations
5. Requirements for minimum utility connection sizes for water and sewer taps
6. Requirements for pipe material requirements for water and sewer building service lines
7. Breakdown of work that will be performed by the utility and any work required by the contractor on water service lines
8. Requirements for backflow preventers
9. Minimum depth of bury acceptable for freeze protection of water mains in the jurisdiction

Coordinate water meter and backflow preventer assembly requirements and locations and prepare coordination documents that provide the following information to other design team members.

Healthcare Facility Plumbing Deign

“To civil engineer:

- Natural gas loads
- Building service water line size and water supply fixture unit totals
- Building sanitary and storm sewer line size and waste fixture unit totals

To electrical engineer:

- Plumbing equipment electrical requirements

To the medical facility engineer:

- Oxygen demand (also to gas supplier) If it is an existing hospital determine if the existing bulk supply has sufficient capacity)
- Medical gas and vacuum demand, If it is an addition, determine whether existing equipment has sufficient capacity
- Compressed air demand If it is an addition, determine whether existing equipment has sufficient capacity.

To the architect:

- Plumbing chase space/clearance requirements

To the mechanical engineer:

- Available water makeup line from a backflow preventer location
- Energy Management Control System (EMCS) point data

Riser diagrams

If the drawings are in two-dimension CAD format, the plumbing designer needs to sketch riser diagrams for domestic cold water, hot water, and hot water return piping, medical air piping, medical gas piping, medical vacuum piping and natural gas piping. With 3D CAD drawings in a Building Information Model (BIM) format, isometric riser drawings can be created by adjusting the view for a 3D image of the actual piping drawings. If a one-line riser diagram is preferred, the designer still may need to sketch the riser using the 3D model as a guide; pipe sizes must and fixture unit valves should be transferred to the one-line drawing. Riser diagrams should include all fixtures, equipment and rooms where plumbing fixtures and equipment are located.

Building Information Modeling (BIM)

Building information modeling has become a necessity on healthcare projects because of the complexity of the buildings. Each trade draws their systems in 3D, and the 3D files are merged into a 3D model using software designed to identify conflicts or collisions between the trades. The collisions are worked out among the trades and final dimensioned drawings are produced. Every contractor signs off on the drawings, agreeing to install their system at the elevation and locations indicated. BIM has saved tens of millions of dollars on some larger projects by allowing design professionals and contractors to build the building in a 3D virtual world prior to actually starting construction. This minimizes the amount of money spent on rework related to moving pipes or ducts to avoid interferences when one trade installs their system early and creates conflicts for other trades. BIM reduces the paperwork associated with requests for information (RFIs) and change orders and the associated conflicts that, in some cases, require removal and reinstallation of some systems. The plumbing designer also needs to prepare one-line riser drawings or 3D images of the waste and vent stacks in the building showing fixture unit values and pipe sizes on each section of pipe.

Healthcare Facility Plumbing Deign

Plumbing plan drawings

The following systems should be shown on plumbing drawings when indicated: domestic cold water, domestic hot water, domestic hot water return, laboratory (pure) water, process water, make-up water, building sanitary sewer, sanitary vent/sanitary waste, acid waste and vent systems, roof drains and roof conductors or roof drain leaders, reagent water, hemodialysis water, reverse osmosis water systems, demineralization or deionization water, natural gas, medical gases (oxygen, nitrogen, nitrous oxide, carbon dioxide), medical vacuum, compressed air, dental air, oral evacuation systems, hydro-therapy pool piping, potable water treatment, sub-soil drainage, reverse osmosis and other pure water equipment, water softeners, resin tanks and brine tanks, equipment pads and seismic restraint systems. This list does not include all of the systems that may be required for a healthcare facility project.

Pipe routing over critical areas

Plumbing over operating rooms; food preparation, serving and storage areas; and electrical rooms containing main distribution panels or motor control centers should be avoided where possible. Supply piping over such areas should only be made only after discussions with the architect and approval from the medical facility engineers. When piping is necessary in these areas, provide drain pans under the piping with tie rods on all drains in ceilings over critical areas. Indicate leakage protection or detection systems on the drawings or in the specifications and provide indirect drains from the drain pans to a visible area.

Floor penetration fire-stopping/waterproofing

Plumbing risers or stacks penetrating a floor above grade (not floor drains) should have sleeves that extend 3 inches above the floor and 1 inch below the floor and include a built-in water stop and appropriate seal. All penetrations should be protected according to the latest edition of the building code. This is to prevent a water leak on an upper floor from pouring down to the floors below through the void space between the pipe and the slab. Fire-stopping material, in accordance with ASTM E-119 and/or ASTM E814, should also be used for pipes penetrating fire wall or floors to prevent fire from migrating upward through a building when pipes pass through elevated floor slabs.

Hospital equipment plumbing connections

There is generally a medical equipment planner for a large hospital project. The healthcare medical equipment planner provides manufacturer cut sheets for the equipment that will be used in the hospital. The manufacturer's data sheets typically give the manufacturer and model number for the piece of equipment along with an equipment number that corresponds to an equipment plan. The manufacturer's data sheets also give the utility requirements and the capacities. The medical equipment manufacturer planner generally provides equipment drawings and an equipment schedule along with an equipment book showing the equipment selected for the project.

Next month, part 2 of this article will start with the medical equipment items that are commonly found in healthcare projects.

Ron George is president of Plumb-Tech Design and Consulting Services LLC. He has served as chairman of the International Residential Plumbing & Mechanical Code Committee. Visit www.Plumb-TechLLC.com, email Ron@Plumb-TechLLC.com or phone 734/755-1908.

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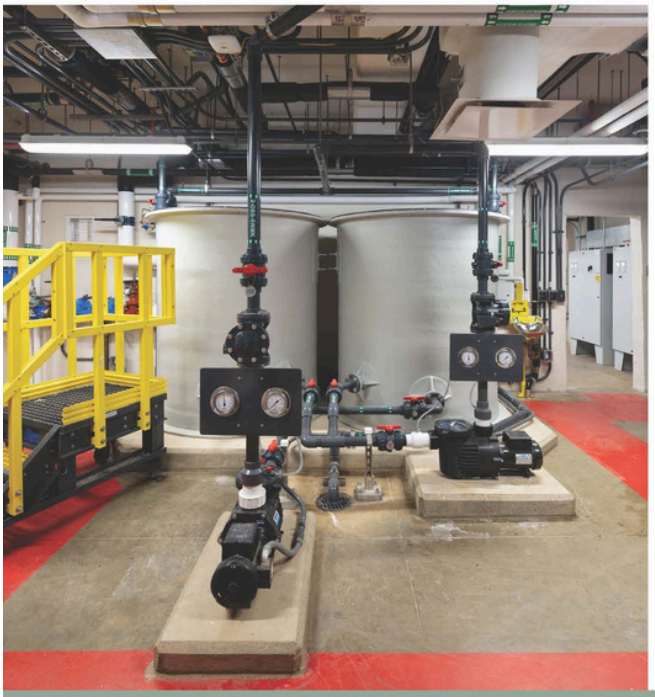

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Nicole Murphy
Vice President- Membership

Membership Report

Please join us in welcoming our newest members to the Baltimore Chapter!

- Hari Patel
- Gregg Marinari

We're delighted to have you as part of our community. A warm welcome to both of you! We look forward to seeing you at our next gathering. Welcoming new members is always a positive sign of growth for our Chapter. Your ideas and feedback are invaluable, please don't hesitate to share suggestions for increasing participation with any board member.

I encourage all members to commit to attending meetings and getting involved, not only for your professional development, but also for the continued success and advancement of our Chapter.

👉 Not yet a member? Now's the perfect time to join!
Already a member? Help us grow by inviting colleagues and peers to attend an event or explore membership.
🔗 Learn more or join here
Upcoming Events

- October 15th – Technical Meeting at Little Havana

Let's keep building our community and growing together this year—we can't wait to see you at our upcoming events!

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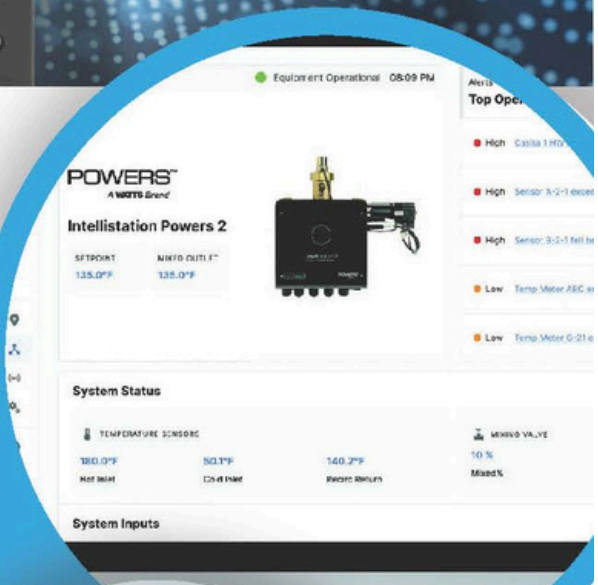

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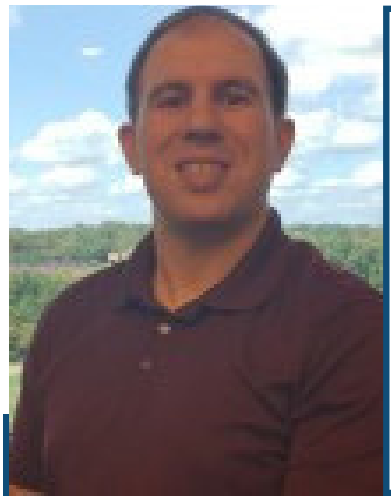

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Chris Imhof, PE, CPD
Vice President- Legislative

Legislative Report

IAPMO Elects President, Advances 2027 Uniform Codes at 2025 Annual Education and Business Conference

Jeremy Stettler, coordinator/inspector, Davis School District, Clearfield, Utah, and Brian Hamner, senior plumbing inspector, city of Des Moines, Iowa, were elected president and vice president, respectively.

Development of the 2027 Uniform Plumbing Code (UPC) and 2027 Uniform Mechanical Code (UMC) was advanced during the Association Technical Meeting Convention, part of IAPMO's ANSI-accredited consensus code development process.

Also of note, the Joseph Kneidinger Sustainability Professional of the Year was awarded to Billy Smith, ASPE executive director/CEO.

For more details, please visit,
https://iapmo.org/newsroom/press-releases/iapmo-elects-stettler-president-advances-2027-uniform-codes-at-2025-annual-education-and-business-conference

IAPMO Seeks USPSHTC Task Group Members

IAPMO is seeking applicants to serve as technical experts on the Uniform Swimming Pool, Spa and Hot Tub Code (USPSHTC) task group. The deadline to apply is Oct. 22.

For more info, please visit,
https://iapmo.org/newsroom/press-releases/iapmo-seeks-uspshtc-task-group-members-q4-2025

Washington County Launches Cross-Connection Control Program to Safeguard Public Water Supply

The Washington County Division of Environmental Management is launching a critical, state-mandated initiative to protect the public drinking water system from potential contamination: the Cross-Connection Control (CCC) Program.

This program focuses on identifying and mitigating risks of pollutants entering the water supply through backflow - a reversal of water flow that can occur in certain plumbing systems. All non-residential properties will eventually be surveyed as part of this important water safety initiative.

To read more, please see,
https://www.washco-md.net/news/washington-county-launches-cross-connection-control-program-to-safeguard-public-water-supply/

Chris Imhof, PE, CPD
Vice President – Legislative

ASPE
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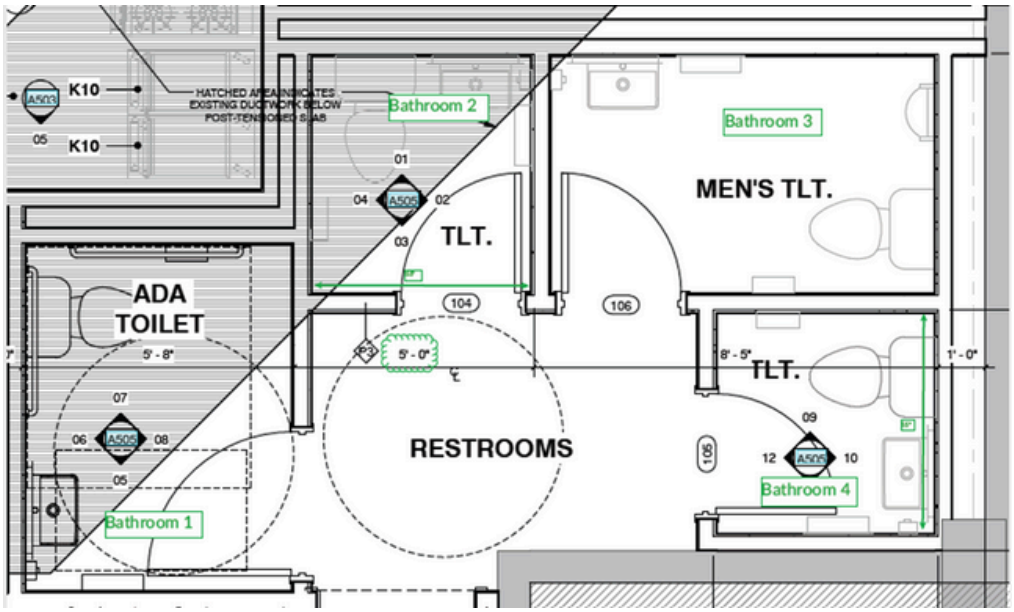
David Bailey
PLUMBING PLANS REVIEWER'S CORNER

Congratulation to David Shell who was the only attendee of the DC Chapter September meeting to answer correctly the issue regarding the BK-GT-40 passive flow-based grease interceptor. Manufacturers of such devices often include a numerical value in the model number representing either the flow capacity (in GPM) or grease retention (in pounds) as part of the model series. With the BK model in question, the 40 represents the rated pounds of grease retention whereby its flow capacity is half the numerical value or 20 GPM. 2021 WSSC Water P&FG Code requires that minimum flow capacity for a passive flow-based grease interceptor to 25 GPM. Thus, not only is the size critical but for the designer to be aware what the numerical value within the model number represents before moving forward with the design and specification thereof.

This month's issue involves the partial plan below introduced in a waiver procedure. Bathrooms #2 and #4 were approved by the County despite the fact their respective room widths were less than 60" whereby two adjacent plumbing fixtures in each toilet room would be unable to meet the installation requirement per 2021 IPC Section.405.3. Upon studying the plan further, I noticed that there was another issue. Are you able to determine what that may be? Come to the October meeting and disclose your finding(s).



On another topic, it was good to see the respective local ASPE Chapter Presidents (Chuck S. of Baltimore and Chuck P. of DC) at the 2025 ASPE Symposium in Orlando last week as well as Joe Niedzielski., Michelle Stilley, Jon Sargeant, Jun Cheng Yang, and others. Even though my trip was bookended in Disney with my three grandchildren, I found my Friday attendance at the ASPE event very rewarding with the scheduled morning Legislative Committee Meeting, mid-morning Product Show, and the afternoon seminars. However, it wasn't until a week later that I logged into "My Dashboard" to process the CEUs. I hope others have done the same since I understood that there was only a two-week window to acquired them. Wow, I was awarded 1.2 CEUs for my one-day event participation and follow-up processing (that involved several additional hours).

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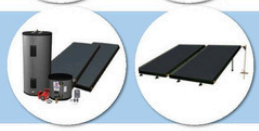

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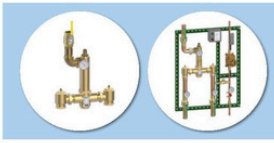

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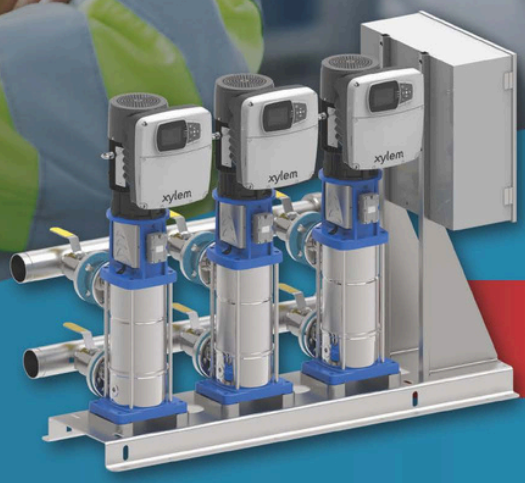

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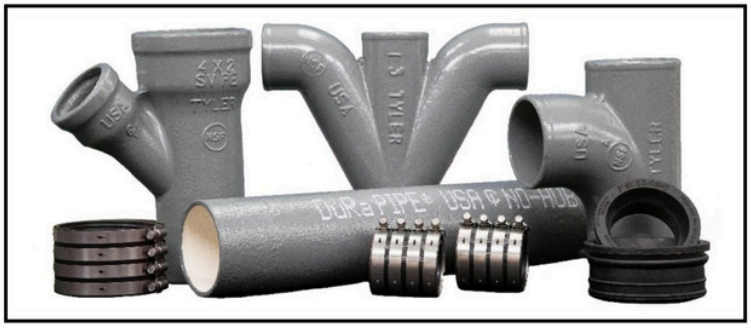

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Schedule of Meetings

DATE	Topic	Speaker
SEPT 17	Engineering Ethics And Dispute Resolution	Rebecca Bowman
OCT 15	Medical Gas	Niki Patel
NOV 19	Hot Water Recirculation Systems	Engineer Presentation - Chuck Swope (Mueller)
DEC 17	Everything We Do Wrong	Panel – moderator, code reviewer, Contractor, Sr. Engineer
JAN 28	Industry Night	Local UA5
FEB 18	Topic TBD	Engineer Presentation - Michael Do (Setty)
MAR 11	Communication Skills and Bridging Generational Gaps	Niki Patel and BJ Allen
APR 22	Fire Protection	Ken Isman
MAY 20	Topic TBD	Engineer Presentation - Joe Niedzielski (2RW)

If you have a specific topic, speaker, or case study you would like to see included in our program, please let us know. Likewise, if you or your firm would be interested in presenting at one of our sessions, we encourage you to share your availability.