General Meeting
Thursday February 19, 2009

The Parthenon
314 South Halsted
Chicago, Illinois
Free Valet Parking

AGENDA

5:30pm-6:30pm  Cocktail Hour; Beer Laureate Reliable Fire Equipment and ANSUL (free beer and wine)

6:00pm-6:30pm  Primer: Sprinkler Heads and Cover Plates
Walter Barker, Viking

6:30pm  Dinner - $30 Members / $35 Non-Members

MENU

Appetizers
● Saganaki, Taramosalata and Gyros

Dinner
● Greek salad
● Moussaka (eggplant w/meat sauce)
● Pastitsio (Baked macaroni w/ meat sauce)
● Dolmades (Grape leaves stuffed w/meat and rice)

Dessert
● Rotisserie Roasted Lamb (Mutton for you Australians out there)
● Baklava
● Galaktoboureko (fancy dessert, really good)
● Coffee

RSVP as soon as possible to Bruce Weiss, VP Technical!
● Return the enclosed card for those of you getting this via US Mail
● Call 312 212.2022
● Fax 312 212.6401
● Email Chicago.ASPE.RSVP@gmail.com

Local Chapters are not authorized to speak for the Society
**PRESIDENT’S MESSAGE**

Happy Groundhog Day!

SO what could a groundhog know anyway? There is always 6 more weeks of winter after Groundhog Day. SO, what’s with that? It infers that maybe the Vernal Equinox is just going to pop up on our calendars a few weeks early?

They say a shadow of a groundhog means six more weeks of winter and no shadow means spring is around the corner. Groundhog Day proponents state that the rodents’ forecasts are accurate 75% to 90%. A Canadian study for 13 cities in the past 30 to 40 years puts success rate level at 37%. Also, the National Climatic Data Center (http://en.wikipedia.org/wiki/National_Climatic_Data_Center) reportedly has stated that the overall predictions accuracy rate is around 39%. I’m a little skeptical. But as far as the weather goes, it’s going to a beautiful spring and it’s coming early! (I saw my shadow and that’s what it told me!)

**NO ACTUAL GROUNDHOGS WERE KILLED OR INJURED IN THE PRODUCTION OF THIS DOCUMENT!**

January Meeting

Rosewood Restaurant was great and we enjoyed another tasty meal at our January meeting. It was a bargain for the prices that we charge. The brave souls that trudged into the cold dark night were aptly rewarded. Congratulations for having the fortitude to venture out. And special thanks to those who RSVP’d and followed through with their commitment! We even had several National Board Members in attendance!

The speakers were interesting. Plastic piping is a big subject and a bit of a foreign language to us Chicagoans. George’s presentation on Alternative Venting Methods was a lively topic. Again, Chicago people are in a bit of a vacuum because we are more limited than other parts of the world might be. That’s not always a bad thing. These alternatives require thought to insure that they are the appropriate answers for your application. There may be “adverse” affects. We need to consider all of the consequences. That’s why Plumbing Engineers get the big bucks! 8^)

**ASPE CHICAGO 40th ANNIVERSARY!**

Well, we are in our 40th year as a Chapter, and we haven’t celebrated yet! How is that possible? We will unleash Phase 1 or our celebration at the February meeting. In honor of the great amount of time that we have been chartered as a Chapter, we will be giving away a Grandfather’s Clock. One lucky person will be enjoying the warm chimes of Father Time in his/her home or office. That’s all I can say at this time. (No pun intended—it just happened!)

Don’t forget that the Product Show is coming soon. If you want to be an exhibitor, be sure to get your paperwork and checks in ASAP. OR YOU MAY BE A SPECTATOR! If you are a spectator, not that there is anything WRONG with that, mark your calendar and be there for the seminars and the Show. We will have some new exhibitors this year, as well as all of your favorites! We have prizes and surprises as well. There’s dinner, too, as you know. Watch for announcements of the Product Show Committee meetings. Frank Sanchez is the Product Show Chairman again this year, so contact him if you have any questions or comments. Thanks Frank and Phill Kroll (Co-chair)!

(continued on page 3)
PRESIDENT’S MESSAGE (continued)

Plan Now to Attend the 2009 ASPE Technical Symposium
The ASPE Technical Symposium will be held Oct. 23-25, 2009 in Dearborn, Michigan. Intense educational sessions and fun special events will be included. The Engineered Plumbing Exposition (EPE) promises an array of exhibitors who will showcase the newest products in the industry. Attendees will have numerous opportunities to win prizes. Visit www.aspe.org for more updates.

Look for more info in future issues of the ASPE News, as well as PS&D, and The Pipeline. And read the whole ASPE Newsletter! You’re probably spending plenty of time indoors lately, so read the newsletter! You never know what you might be missing. Stay tuned for more details.

Next CPD Exam Will Be Held April 17 & 18, 2009
The Certified in Plumbing Design examination will be administered on Friday and Saturday, April 17 or 18, 2008, depending on available sites. The exam is an online proctored exam with approximately 200 possible testing sites throughout the U.S. and Canada. The testing fee for the examination is $375 for ASPE members, $300 for ASPE members with PE, and $625 for nonmembers or $550 for nonmembers with PE. Download the CPD Bulletin for more information - http://aspe.org/new/CPD/cpd.php. Registration Closes April 3, 2009!

FREE (for ASPE Members in Good Standing) CPD REVIEW CLASS
David DeBord, your FAVORITE “CURRENT” ASPE President, and Jason McDonald, your favorite Newsletter Editor, will present the famous Ficek/McDonald CPD Review Class - Saturday March 14 at the luxurious offices of Grumman/Butkus in beautiful downtown Evanston, IL! If you are planning to take the exam, this is the PERFECT way to target your studying energy in the right direction! Watch for more details soon! Please contact Jason if you are interested in attending - jsm@grummanbutkus.com.

Free Webinar in March
ASPE is presenting a webinar on LEED Point Strategies on March 18. The webinar will be free to ASPE members thanks to sponsorship by Bradley. The presenter, ME, much appreciates their sponsorship and the opportunity to wow you with LEED information. Go to the ASPE website and register today - http://aspe.org/new/RSA/Webinar/info/LeadPoint.php.

Plumbing Engineering Design Handbook Volume 2
ASPE Wisconsin Chapter is taking care of Volume 2 and can use your help. They are looking for writers/editors for the following chapters:

- Fuel-Gas Piping Systems
- Private Onsite Wastewater Treatment Systems (POWTS)
- Private Water Wells
- Water Treatment, Conditioning and Purification

If you want to help, you can either contact me or Sarah Balz, Wisconsin Chapter President at sbalz@aeieng.com.

Make sure that you don’t miss any upcoming meetings! We only have a few left this season! Thanks for your support! See you February 19th at The Parthenon at 314 S Halsted in Chicago! We’ll hear about Sprinkler Heads and Cover Plates, and our main topic will be about Clean Agent Fire Systems.

RSVP as soon as possible for the February meeting to Bruce Weiss, VP Technical! Email Chicago.ASPE.RSVP@gmail.com OR, if you can’t email: Call 312 212.2022; Fax 312 212.6401.

Also, we still have about 30 Tables books. They will be available at the Feb meeting. Payment by check is best so I don’t have to keep track of the cash.

David DeBord, CPD LEED AP; President
ddebord@esdesign.com; 312 456.2359
**JANUARY MEETING RECAP**

**Primer Recap**

*Acid waste and high purity piping systems*; Presented by Steve Mutton of Simtech

Steve had a nice table top display of acid waste piping and joining methods. Thank you to everyone who dropped by and talked to Steve.

**Main Presentation Recap**

*Alternate Venting Methods - Venting beyond individual fixture venting*; Presented by: George B. Swietczak, Plumbing Inspector for the Village of Villa Park, Illinois

George did an excellent job on presenting an often misunderstood section of the plumbing code. He explained the basics of venting and more. He was able to give brief explanations of the other types of venting besides individual fixture venting.

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**FEBRUARY MEETING**

**Primer**

*Sprinkler Heads and Cover Plates*; Presented by Walter Barker, National Technical Representative of Viking

We have had a change from what we originally advertised (CPVC piping); however this will be just as good. Steve will bring a display of the latest sprinkler heads and cover plates. He will discuss the features and benefits of various models and specific applications of certain sprinklers.

**Main Technical Presentation**

*Clean Agent Fire Systems and Proper Room Design*; Presented by Larry Raddatz of Reliable Fire

There will be a brief overview of clean agent systems and the gases currently available on the market.

The main emphasis will be on the design of clean agent systems, detection methods and what design considerations to take into account during the preparation of bid documents. Larry will discuss each of the components required within a room protected by a clean agent system. He will also touch on items to consider that interface with other trades such as mechanical and electrical requirements.

**Bruce Weiss, CPD LEED AP; Vice President Technical**

bweiss@aeieng.com; 312 212.2022

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**MEMBERSHIP UPDATES**

Remember that if you change companies, email addresses, personal information and the like, PLEASE contact your VP Membership Rick Butler ASAP (rick@luczak.com or 847 781.5100). This will ensure that you keep getting your ASPE mailings and that your directory information will be accurate. Thanks!

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**FELLOW AFFILIATES – PRODUCT SHOW IS COMING!**

January is over and hopefully we will see a warm up in the near future. Speaking of the future, don’t forget our upcoming Product Show. Your Product Show Committee is working very hard to make this our best show ever. Look for some minor changes to the format and layout to improve the display area and also attendance. Watch your mail for more info.

**Richard Simms, Affiliate Liaison**

dsimms@deery-pardue.com; 630 350.7575
LEGISLATIVE CORNER

The Great City of Chicago Plumbing Code “Informal” Interpretations

There are more topics I will be covering in future newsletters. So far, I received interesting comments and feedback, but I still want to hear from you! I will skip the “Chitown Informal Interpretations” this month, because I want to pass along some info regarding a commonly misinterpreted 18” rule.

Please remember that you should always check your local codes and contact the authorities having jurisdiction because they have the final word on code interpretations.

The City of Chicago Plumbing Bureau can be reached at 312 743.7477; fax number 312 743.7434. All questions should be submitted to Mr. John Flynn, Plumbing Inspector.

Maintaining 18-inch Clear Space below Sprinkler Deflectors

During a recent survey, I noticed this line painted along the wall at the storage rooms. Have you seen them? It is used as a way to maintain the 18” clearance below the deflectors.

Although many nursing homes and hospitals have been told that storage is not permitted within 18” of the ceiling in a sprinklered building, this is not totally correct. Just like this place I visited, some facilities have even been told to paint a line along the wall 18” inches below the ceiling.

**Question:** Can a facility store items within 18-inches of the ceiling in a sprinklered building?

**Answer:** Yes. Note that the storage along a wall shall not be directly below a sprinkler head. Otherwise, it will be considered an obstruction.

The 18” rule is meant to prevent objects (storage, lights, ducts, etc) from interfering with the spray pattern of the sprinkler head during a fire. However, since the only thing between storage to the ceiling along a wall and a sprinkler head is a wall itself, the Code allows storage to the ceiling. This would apply to storage on shelving units, wardrobes, etc.

Note that you cannot store to the ceiling along the walls if:
- The storage will interfere with the spray pattern of a sidewall sprinkler head.
- The storage is directly below a sprinkler head. This will apply to sidewall and pendent sprinklers. It is rare when you find sprinklers installed that are close to a wall on a storage room, but if that is the case, you need to respect the 18” rule.

This is important because facilities can gain a lot of storage space. However, you need to consult with the local authority and inform him/her of this code interpretation.


**A-5-6.6 * Clearance to Storage (Standard Pendent and Upright Spray Sprinklers)**

The clearance between the deflector and the top of storage shall be 18 in. (457 mm) or greater. **Exceptions: Where other standards specify greater minimums, they shall be followed.**

Note the asterisk (*). This means that explanatory material on the paragraph can be found in Appendix A.

Here is where someone a long time ago forgot to look and created this common misinterpretation.

(continued on page 6)
LEGISLATIVE CORNER (continued)

Appendix A
A-5-6.6 The 18-in. (0.46-mm) dimension is not intended to limit the height of shelving on a wall or shelving against a wall in accordance with 5-6.6. Where shelving is installed on a wall and is not directly below sprinklers, the shelves, including storagethereon, can extend above the level of a plane located 18 in. (0.46 mm) below ceiling sprinkler deflectors. Shelving, and any storage thereon, directly below the sprinklers cannot extend above a plane located 18 in. (0.46 mm) below the ceiling sprinkler deflectors.

NFPA 13, 2007 Edition moved things around a little, but it is the same concept.


8.5.6.1 * Unless the requirements of 8.5.6.2, 8.5.6.3, 8.5.6.4 or 8.5.6.5 are met. The clearance between the deflector and the top of storage shall be 18 in. (457 mm) or greater.

Please note that NFPA 2007 modified the Annex A clarification. Currently, it does not state clearly that the intention is to avoid interferences with the spray pattern, but it states that the minimum required unobstructed space below sprinkles shall be maintained. Also, you need to comply with 8.5.6.2, 8.5.6.3, 8.5.6.4 or 8.5.6.5 requirements as indicated.

As a reference, I included a formal interpretation from NFPA 13, 2007 Edition. This interpretation is related to storage of Medical Records on fixed open shelves NFPA 13 2007, 8.15.9.

Please remember that you should always check your local codes and contact the authorities having jurisdiction. Note that some jurisdictions still use NFPA 13, 1999 Edition and others adopted NFPA 13, 2007. However, the AHJ and the Fire Department will always have final word (or at least a strong opinion) regarding code interpretations.

Do you agree with this 18” rule code interpretation?
Do you consider necessary we submit a formal request to NFPA 13 2007 regarding this 18” rule?

Here you can find more formal interpretations from NFPA:

Please send me your questions and comments.

Frank Sanchez, CPD
Vice President Legislative
c/o: Grumman/Butkus Associates
820 Davis St., Suite 300
Evanston, IL 60201
Phone: 847.328.3555 Ext: 251
Fax: 847.328.4550
fxs@grummanbutkus.com

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**LEGISLATIVE CORNER (continued)**

2009 International Building Code® will be released in March!!! [www.iccsafe.org](http://www.iccsafe.org)

The International Code Council is a membership association dedicated to building safety and fire prevention and develops the codes used to construct residential and commercial buildings, including homes and schools. Most U.S. cities, counties and states that adopt codes choose the International Codes developed by the International Code Council.

Note that the 2009 International Plumbing Code will be available in March. So mark your calendars and keep your eyes open for the upcoming changes. You can also go to the ICC website and preorder your copy.


2009 IPC

- Building occupant loads are required to be split into male and female numbers before plumbing fixture ratios are applied.
- Frost-proof yard hydrants with below grade waste valves are specifically prohibited unless upstream backflow protection is provided and the hydrant is permanently identified with “do not drink” signage.
- Sinks utilized for cleaning food utensils, dishes, pots, pans and serviceware must indirectly connect to the sanitary drainage system by an air gap or air break.
- Water heaters must have a level working space of 30 in. by 30 in. on the control side and equipment and piping/ductwork running to and from unrelated equipment cannot block removal of a water heater.
- Public toilet facilities must have directional signage for the route to the facilities.

2009 IFC

- Retroactively, all non-sprinklered Group 1-2 occupancies will now require automatic sprinkler protection.

Frank Sanchez, CPD; Vice President Legislative  
[fxs@grummanbutkus.com](mailto:fxs@grummanbutkus.com); 847 328.3555 x251

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**WORDS FROM THE TREASURER**

This is your friendly Treasurer again wishing everyone a prosperous year. Remember to include a copy of your invoice for the dinner meetings along with your payment.

Some plumbing fun facts:
- A low flush toilet can save you up to 18,000 gallons of water per year.
- If a drip from your faucet fills an eight ounce glass in 15 minutes, it will waste 180 gallons per month and 2,160 gallons per year (CHU CHING).

Not-so-fun plumbing facts:

The Earth has somewhere in the neighborhood of 326,000,000,000,000,000,000,000 gallons (326 million trillion gallons) of water on the planet. Roughly 98% of our water’s in the oceans of the world, and therefore is unusable for drinking because of the salt content. That means only around 2% of the planet’s water is fresh, but 1.6% of that water is locked up in ice caps and glaciers. Another 0.36% is found in very deep, underground sources - meaning only about 0.036% of the planet’s total water supply is found in lakes and rivers (our main supplies of drinking water)!

We need to start looking (as plumbing engineers) for alternative ways to start conserving this water for our children and their children.

Remember the 2009 ASPE Product Show is just around the corner.

Mark G. Mannarelli, Treasurer  
[mmannarelli@esdesign.com](mailto:mmannarelli@esdesign.com); 312 456.2354
**CORRESPONDING STUFF**

**IFPA/SFPE; www.chicagosfpe.org / www.ifpanet.org**

**Combined Fire Prevention Show**
Tuesday March 24, 2009, 4pm – 8pm
White Eagle Banquets and Restaurant; 6839 N. Milwaukee; Niles, IL; 847 647.0660

**ASHRAE, www.illinoisashrae.com**

**Advanced Energy Design Guides Series**
February 10, 2009
Parthenon Restaurant; 314 S. Halsted Street; Chicago
Afternoon Seminar 1:30pm - $30 – PDH hours: 3
Presenters: Dan Nall, Flack & Kurtz – Gordon Holness, President-Elect ASHRAE
Dinner: 5:00PM - $35 – PDH Hours 1 – Path Towards Net Zero Energy Buildings, Student Night and Scholarships Awards Presentation – Presenter – Gordon Holness

**Tour of Loyola’s New Digital Library** – Go to website for more information
March 3, 2009

**Chicago Bulls Outing** – Call 708 636.5819
March 4, 2009

**ILPHCC; www.ilphcc.org**

**Trade Show**
Sunday, February 8, 2009
Pheasant Run Resort, St Charles, IL – See web for more details.

**ILPHCC Expo (The State Plumbing Show)**
Friday March 20, 2009; noon-6pm
Drury Lane Conference Center, Oak Brook, IL

**WQA Aquatech USA – The Water Opportunity Show; www.wqa-aquatech.com**

**Conference** - March 17-21, 2009; **Exhibition** – March 18-20, 2009
Donald A. Stephens Convention Center; Rosemont, IL
This is a show for those interested in or involved in water treatment. There are seminars and around 200 exhibitors (as of 10/31/08). Register by 2/19/09 and save some money. You can register online at www.wqa-aquatech.com, fax WQA Aquatech USA at 630 505.9637 or mail WQA Aquatech USA, 4151 Naperville Road; Lisle, IL 60532.

Jerry Fields; Corresponding Secretary
jerry@luczak.com; 847 781.5100

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**NEWS FROM YOUR ADMINISTRATIVE SECRETARY**

Happy New year once again everybody! I hope all of you had a great holiday season. We are done with our first meeting of 2009. I would like to introduce our winners from the January meeting. First, Ed Kedzie of UIC (who will be retired by the time you read this newsletter) won a free dinner and Mike Imaoka, MGN was a 50/50 raffle winner. Mike got good karma when he donated his 50/50 winnings from the November meeting, that was ALSO at Rosewood to Toys for Tots. If we ask Mike, I’ll bet he will want to have MORE meetings there!

Good start for a new year! Congratulations guys!

Natalia Dankanich, Administrative Secretary
nkd@grummanbutkus.com; 847 328.3555 x208
HELP WANTED

Nope, this isn’t a company hiring. In fact, the pay is ZERO. The benefits? You get good parking AND you get to play an active role in the best ASPE Chapter in the world! ASPE Chicago is in search of a few good people. As you know, Chicago Chapter Board of Directors elections are in May. ALL positions are open. Sure, there are some people who have already expressed interest in running; but, if you ever wanted to get involved with the Chicago Chapter, here is your chance as big changes are ahead!

Between graduation and other unforeseen circumstances, there are a few more vacancies than usual. THIS is your time! Officer positions available are:

President
Vice President Technical
Vice President Legislative
Vice President Membership
Treasurer
Administrative Secretary
Corresponding Secretary

Also open right now for the 2009-2010 ASPE Chicago season, due to some of those unforeseen circumstances mentioned earlier, is Newsletter Editor. Are you creative? Do you like correcting other people’s spelling? Do you like trying to figure out just what someone is trying to say? Then this is the job for you. It IS a job you can have fun with if you let it be fun.

A new position might be presented for 2009-2010 - Chapter Social Coordinator. This person will be responsible for organizing and coordinating Chapter social events and activities like the Ride to the Rock. He/she will also be involved, perhaps in a liaison level, with events chaired by others like Booster Night, CPD Review class, Product Show, Chapter Anniversary parties and Symposia/Conventions. If you think this might be a position for you but you don’t want to be swamped, don’t fear as you will have PLENTY of help!

If you are interested in running for any Board of Directors position or would like to become the next Newsletter Editor or Social Coordinator, please contact David DeBord at ddebord@esdesign.com.

Jason McDonald, Newsletter Editor
jsm@grummanbutkus.com; 847 328.3555 x204

IN THE EARLY DAYS OF ASPE

The following appeared in the January 1968 issue of Air Conditioning, Heating and Ventilating (ACHV) magazine. Mr. Durazo was Administrative Director of our newly formed Society. A very insightful writing back then. “We’ve come a long way baby.”

How to Get Recognized

As our nation continues to grow in urban concentration and industrial complexity, the word “plumbing” takes on added significance. Today, every plumbing project must meet safety and health standards set forth by building codes and statutes – some of which have recently been put on the books to prevent or control water pollution. The person best qualified to interpret and fulfill all the local, state and federal requirements for piping water, steam, air or sewage is the plumbing engineer.

Yet, the plumbing engineer fails to enjoy the recognition he deserves. Too often, the general contractor by-passes the plumbing engineer and calls him in only when the job runs into trouble. Because emergency measures always cost more than properly planned work, the contractor may try to recoup his added costs by again cutting corners on the next plumbing job.

The cure for this lack of professional recognition, on the part of the plumbing engineer, lies in his own hands. He must help dispel the notion that plumbing is a do-it-yourself job by proposing ideas and layouts that are superior to what the contractor or architect has in mind. And he must support the ASPE in its public relations function of “beating the drums” and trying to raise the status of the plumbing engineer.

- RAY DURAZO

Don Johnson, Historian
This printing constitutes our record of who was in attendance. We apologize for any misspelling of names and ask that for future sign-ins, please print legibly. Thank You!

JANUARY 2009 MEETING ATTENDANCE

The following list of individuals attended the January 2009 meeting of the ASPE Chicago Chapter. In accordance with ASPE Society policy, these individuals are entitled to 0.75 RU's towards the required 24 RU's needed every two years to maintain CPD registration. Meeting attendance is also recognized by the Illinois Department of Professional Regulation to count as 1 PDH towards the required 30 PDH's needed every two years to renew Professional Engineering licenses.

Steven Adams  Ralph Danino  Steve Krock  Ben Rubach
Sean Allard  Dave DeBord  Phill Kroll  Frank Sanchez
Dave Anelli  Francisco DeHoyos  Terry LeBeau  Chris Sbarbaro
Tom Babcock  Jamie Diamond  Joe Leonard  Keith Schreiner
Judie Ballanco  Greg Farmer  Ed Licner  Craig Shannon
Julius Ballanco  Jim Feeney  Mark Loth  Tim Smith
Bill Bauer  Joe Ficek  Charlie Loth  Billy Smith
Brian Baxter  Jerry Fields  Gary Mahoney  George Sobyra
Mike Belczak  Otton Finiewicz  Jim Majerowicz  Jim Sommers
Matt Bell  Jasen Ginalska  Mark Mannarelli  Jeff St. Onge
Brian Berg  Reid Goodrich  Paul McLafferty  George Swietczak
Erik Bacher  Berit Herdman  Harold Miller  Robert Thompson
Tom Brown  Jamie Heinz  Bob Miodonski  Bob Turk
Rick Butler  Bill Hughes  Greg Nagrant  Bruce Weiss
Jeremy Cantor  Mike Imaoka  Jim O'Neil  Michael Whiteside
Brian Carlos  Jeff Ingertson  John Panek  Diane Wingard
Mitch Clemente  Bob Jackson  Frank Paulette  Chris Wisinski
Todd Cooper  Scott Jagodziński  Mark Petrosius  Dave Woliak
Mike Cusack  Mark Kaulas  Tracy Price  Peter Wu
Ken Cutler  E.J. Kendzie  Kerbie Reader  Kevin Zaleski
Natalia Dankanich  Richard Klaess  Steve Roche

AS I KNOW IT - THE BASIC PRINCIPLES OF PLUMBING

The following is from ANSI A40-1993. It outlines the "Basic Principle of Engineering", beyond the usual "To Protect the Health of the Nation".

- Principle 1: Consumer Protection
  The keystone of all good plumbing design is consumer protection. Protection of the consumer's health and safety, as well as the financial interests of the project. The primary objective of the Principle (taken from ANSI A40-1993), is that each component of the plumbing system shall be durable material free from defective workmanship and designed and constructed to give satisfactory service for its reasonable life. Under normal usage, non-accessible components of the plumbing system manufactured in compliance with required standards, when properly designed, installed, and maintained, should have a useful life of 20 years. I personally believe that this is a rather low expectation.

- Principle 2: Potable Water
  All premises intended for human habitation, occupancy or use shall be provided with a supply of potable water. Such water supply shall not be connected directly to unsafe water sources and shall be protected from the hazards of backflow and back siphonage.

- Principle 3: Hot Water
  Hot water shall be provided for every dwelling intended for human habitation.

- Principle 4: Plumbing Fixtures
  Each family dwelling unit shall have at least one water closet, one lavatory, one kitchen-type sink, and one bathtub or shower to meet the basic requirements of sanitation and personal hygiene. All other structures for human habitation shall be equipped with sanitary facilities in accordance with this Code. The plumbing fixtures provided shall be made of durable, smooth, non-absorbent, and corrosion-resisting material, and shall be free from concealed fouling surfaces.

- Principle 5: Structural Safety
  Plumbing shall be installed with due regard to preservation of the strength of structural members and prevention of damage to walls and other surfaces from fixture usage.

"I should've been a plumber."
- Albert Einstein

(continued on page 11)
AS I KNOW IT - THE BASIC PRINCIPLES OF PLUMBING (continued)

- **Principle 6: Safety Devices**
  Devices for heating and storing water shall be so designed and installed as to guard against dangers from explosion or overheating.

- **Principle 7: Ground and Surface Water Protection**
  Sewage or other waste shall not be discharged into surface or subsurface water unless it has been subjected to an approved form of treatment.

- **Principle 8: Water Conservation**
  Plumbing shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.

- **Principle 9: Public Sewer and Water**
  Sewage or other waste shall not be discharged into surface or subsurface water unless it has been subjected to an approved form of treatment.

- **Principle 10: Sewer Flooding Prevention**
  Where a plumbing drainage system is subject to backflow of sewage from the public sewer, suitable provision shall be made to prevent such backflow into the building.

- **Principle 11: Vent Terminal**
  Each vent terminal shall extend to the outside air and be so installed as to minimize the possibility of clogging and the return of foul air into the building.

- **Principle 12: Drainage System**
  The drainage system shall be designed and installed to prevent fouling, deposit of solids, and clogging and shall be provided with cleanouts so arranged that they be readily cleaned and maintained as required by code.

- **Principle 13: Pressure and Volume**
  Plumbing fixtures, devices, and appurtenances shall be supplied with water in sufficient volume and at adequate pressures to enable them to function properly under normal conditions of use.

- **Principle 14: Fixture Traps**
  Each plumbing fixture directly connected to the drainage system shall be equipped with a liquid seal trap.

- **Principle 15: Trap Seals Protection**
  The drainage system shall be provided with ventilation to guard against self-siphonage, induced siphonage, or forcing of trap seals under normal conditions of use as specified in this Code.

- **Principle 16: Light and Ventilation**
  No water closet or similar plumbing fixture shall be installed in a room or compartment which is not lighted or ventilated.

- **Principle 17: Fixture Accessibility**
  All plumbing fixtures shall be so installed with regard to spacing as to be accessible for their intended use, cleaning, and maintenance.

- **Principle 18: Private Sewage Disposal Systems**
  When plumbing fixtures are installed in a building having no public sanitary sewer available, provision shall be made for private sewage disposal by an approved method.

- **Principle 19: Tests**
  The plumbing systems shall be subjected to such tests as will disclose any leaks and defects in the work or the material. Tests on innovative systems shall be made to demonstrate adequacy or performance regarding sanitary function, health and safety.

- **Principle 20: Maintenance**
  Plumbing systems shall be designed and installed as to facilitate repair and maintenance and shall be maintained in a safe and serviceable condition from the standpoint of both operation and health.

*David DeBord, CPD LEED AP; President*

ddebord@esdesign.com; 312 456.2359
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<td>LaVilla 3638 N Pulaski Chicago</td>
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<td>October 16</td>
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<td>High Efficiency Water Heaters - When is the Proper Application?</td>
<td>The Parthenon 314 S Halsted Chicago</td>
</tr>
<tr>
<td>November 20</td>
<td>Medical Gas Inlets/Outlets; Ohio Medical</td>
<td>Booster Pumps - Variable Speed Drives and their Implications on Booster Pumps; Advanced Mechanical Technologies</td>
<td>Rosewood Restaurant 9421 Higgins Rosemont, IL</td>
</tr>
<tr>
<td>December 18</td>
<td>Booster Night; Special Entertainment</td>
<td></td>
<td>LaVilla 3638 N Pulaski Chicago</td>
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<tr>
<td>January 15</td>
<td>Acid Waste and High Purity Piping; Zurn Acid Waste Piping</td>
<td>Alternative Venting Methods; George Swietczak, Village of Villa Park Plumbing Inspector</td>
<td>Rosewood Restaurant 9421 Higgins Rosemont, IL</td>
</tr>
<tr>
<td>February 19</td>
<td>Sprinkler Heads and Cover Plates; Viking</td>
<td>Clean Agent Fire Systems and Proper Room Design; Reliable Fire Equipment</td>
<td>The Parthenon 314 S Halsted Chicago</td>
</tr>
<tr>
<td>March 19</td>
<td>Point-of-use Water Heaters; Chronometer &amp; Deery-Pardue</td>
<td>Solar Water Heating; Bornquist</td>
<td>LaVilla 3638 N Pulaski Chicago</td>
</tr>
<tr>
<td>April 16</td>
<td>Technical Seminars</td>
<td>38th Annual ASPE Chicago Product Show</td>
<td>White Eagle 6839 Milwaukee Ave Niles</td>
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<tr>
<td>May 21</td>
<td>Elections</td>
<td>Vacuum Plumbing Systems; Deery-Pardue</td>
<td>The Parthenon 314 S Halsted Chicago</td>
</tr>
<tr>
<td>June 19</td>
<td></td>
<td>Annual ASPE Chicago Golf Outing</td>
<td>Hilldale Golf Club 1625 Ardwick Drive Hoffman Estates</td>
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<tr>
<td>July 18</td>
<td></td>
<td>ASPE Ride to the Rock</td>
<td>Chicagoland to Starved Rock</td>
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