

# SPECWORK



Little Rock Chapter - Chartered November 1965

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# Back to Work



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If you have any questions about volunteering, please email [volunteer@csinet.org](mailto:volunteer@csinet.org).



## President's Thinking

By Billy J. Mathis, FCSI, CDT

April and May have passed and we now move into June 2020. For some, this means a return to the office, myself included. I know many of you as well are starting the journey to returning to work. Just how do we do this without increasing our risk for exposure? Well, As I posted to the CSI Covid-19 Response Team Community, our office has implemented the following procedures:

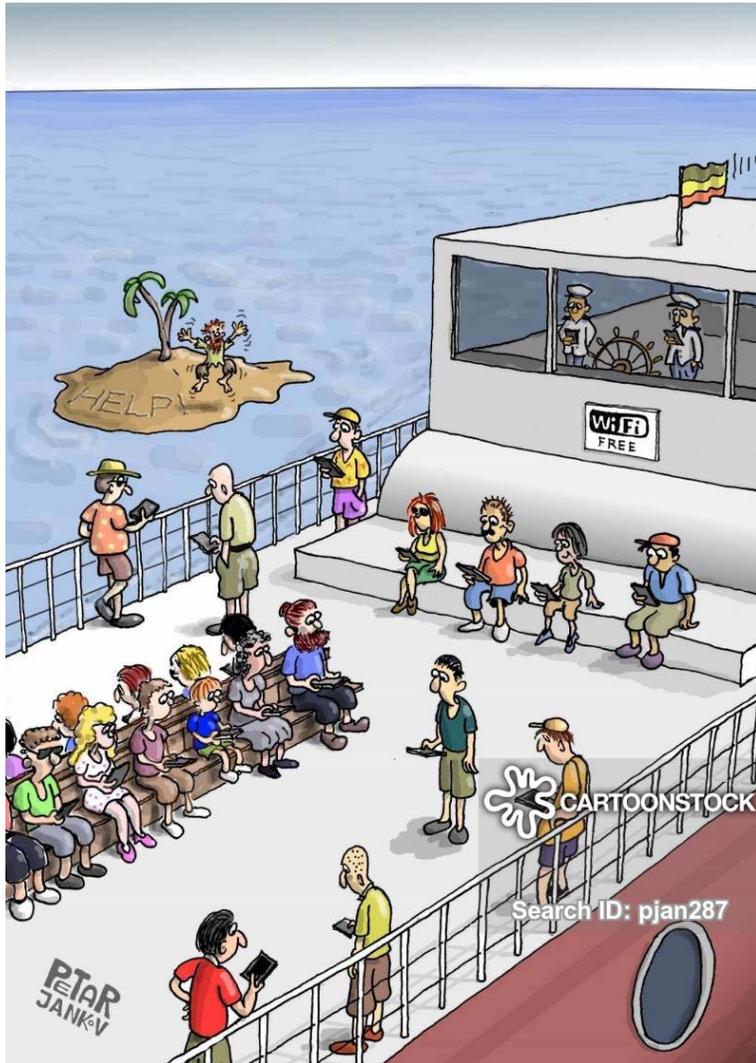
First of all the office has been broken into the Yellow Team and the Green Team. Each team will come to work on a different day. That week the Yellow Team will come in on Tuesday and Thursday and the Green Team on Wednesday and Friday (with Monday being a Holiday). This will reverse the following week with Yellow coming in on Monday, Wednesday, and Friday and Green coming in on Tuesday and Thursday. This will rotate like this for the foreseeable future. When you are not in the office you will be telecommuting as we have been since March.

Once in the office, each person will be well over the 6-ft distance requirement for social distancing. Each person will be required to wear a mask to and from work and while moving around the office. The only time a mask is not required is when you are sitting on your desk. The Office has provided each person with personal hand sanitizer (purchased from a local business) and have Lysol Wipes strategically placed around the building to wipe common surfaces. Additionally gloves are located in the Break Room and the Copy Room to reduce transfer. Finally there will be no outside visits to the office unless directly related to a project and the conference rooms have been configured for social distancing. The final element is the Office Manager will take everyone's temperature each day and record same for records.

This is the basics of our system. I am sure it will evolve as the situation changes. As you can see, we have thought long and hard on how this will work, looked at the various recommendations from the State and Federal Government and the CDC, and even consulted recommendations from AIA and other construction industry organizations. How is your office handling people returning to work?

I know realize that the "return to normal" will never be truly like the immediate past. Also, I think there will be many changes to our way of thinking about what is a good office space. Gone are the "stuff them in like sardines" mentality. Also, there will be a desire to separate people by a margin of around 6 feet just to be safe. In addition, touchless will be the new norm with faucets and dispensing being first followed by a redesign of the entry and exit doors to places such a restrooms and office break areas. How far will it go? Who knows for sure.

# Technology Cartoons



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The Little Rock Chapter, CSI, regrets that due to the COVID-19 situation, we are cancelling our May & June 2020 Lunch and Presentation. The Lunch and Presentations series will pick back up in July, Lord willing and the situation arrests.

If there was ever a question in your mind as to whether membership in CSI was worth the money paid, consider just one of the many membership perks that are out there. Recently in one of the online Communities maintained by CSI, these questions were asked:

Is project permitting and preliminary project description part of the Facility Life Cycle?

Is there a difference between Project Conception and Preliminary Project Description in the Facility Life Cycle?

Seems kinda heavy and I bet most of you couldn't answer without some research. Well, one of the many experts we have out there in CSI was quick to post an answer to the questions.

For this type of thing, you're best off consulting CSI's "Project Delivery Practice Guide" book (PDPG). My responses to your questions are below, but don't take my word for it--best bet is to look it up in the PDPG for yourself.

Is project permitting and preliminary project description part of the Facility Life Cycle?

No. These are necessary activities (permitting) and deliverables (preliminary project descriptions) that either take place or are produced during the stages of the facility lifecycle, as set forth by CSI in the PDPG, but they are not, themselves, specific parts of CSI's facility lifecycle.

When permitting is performed probably depends on the type of permit required. Certainly building permits cannot be obtained until after the design stage is completed, but there are lots of other permits than only building permits. In my line of work (water-wastewater), most of the most-important permits are applied for at what engineers call the preliminary design phase, which is roughly equivalent to AIA's and CSI's schematic design phase and design development phase.

Preliminary project descriptions are a deliverable produced by the A/E that are typically prepared during the AIA and CSI design development phase of the design stage. It's perhaps a bit confusing that the lifecycle shows "Design" stage but the design stage is subdivided into three phases, according to AIA and CSI: schematic design phase, design development phase, and construction documents phase. (Of course, to keep things interesting, we engineers who use EJCDC documents have different names for these phases of design.)

Is there a difference between Project Conception and Preliminary Project Description in the Facility Life Cycle?

Yes, very much so. The project's Conception Stage, on CSI's facility lifecycle, is a separate stage when things like the general scope and goals of the project are defined, the project budget is first established, and the project delivery method is determined, among other things. Often, the A/E has not yet been hired at the outset of the Conception Stage and may not be retained until near the end of the Conception Stage, so no design work is being done at this point.

In contrast, preliminary project descriptions are A/E deliverables generally produced during the project's Design Stage (design development phase). Preliminary project descriptions are deliverables produced by the A/E..

If you're preparing for the CDT exam, it's very important to have a good familiarity with the facility lifecycle and the various activities and documents produced during each stage of the facility lifecycle. It's not only worth a number of points on the CDT exam, it's also vital toward achieving a good understanding of the orderly implementation of a capital project.

As you can see, there is a wealth of knowledge out there just waiting to be found. And this is just one aspect that membership provides. There are so many others.

# CSI ANNOUNCES MEMBERSHIP DEFERRMENT PROGRAM

As the economic realities caused by COVID-19 are unfolding, CSI is creating ways to support members at your time and place of need. Beginning today, CSI is launching a Member Support Program to offer a three-month dues deferment to individual members who are experiencing financial hardship.

To apply for the Member Support Program, you must be:

- An active member of CSI with an expiration date on or after March 31st, 2020
- Undergoing financial hardship due to the economic crisis

A member who wishes to apply must contact CSI to begin the process. Email [memberservices@csinet.org](mailto:memberservices@csinet.org) or call 1-800-689-2900

Please note: Chapters can opt-out of participating in this program. If a Chapter does not participate, a member will be responsible for 3-months' worth of their Chapter(s) dues before the deferment begins.

Looking forward, CSI continues to evaluate how to support its members during this unprecedented time. If changes or extensions to the program are made, CSI will communicate with members as soon as possible.

For more information on the program, please visit the Member Support Program FAQs.

Want more information related to how this affects chapters? Check out our Member Support Program: What Chapters and Regions Need to Know guide.

Please don't hesitate to reach out with any questions you may have.

# Decoded: International Energy Conservation Code Requirements for Vestibule Doors

Re-Printed from "I Dig Hardware Blog—Lori Green



Conservation Code (IECC) is the model energy code used in the United States. State adoptions of an energy code are crucial because buildings consume about 40% of the energy used in the U.S. The IECC sets minimum standards for new construction that address the building's walls, floors, ceilings, lighting, windows, doors, and air leakage. According to the US Department of Energy's State Code Adoption Tracking Analysis, almost all states have adopted the IECC and/or ANSI/ASHRAE/IES Standard 90.1-2019 – Energy Standard for Buildings Except Low-Rise Residential Buildings.

In the International Building Code (IBC), the IECC is referenced in Chapter 13 – Energy Efficiency. This chapter requires all buildings and structures to be designed and constructed in accordance with the IECC and governs the design and construction of buildings for energy efficiency. Unless a state modification removes the requirements of Chapter 13, adoption of the IBC would mandate compliance with the IECC, as this is the only way to demonstrate that a building complies with Chapter 13 of the IBC. For both residential and commercial buildings, the IECC addresses the design of energy-efficient building envelopes, as well as energy-efficient utilities such as electrical distribution and illumination,

water heating, and mechanical systems.

Based on the IECC, most building entrances require vestibules, to reduce the loss of conditioned air – whether heated or cooled – when the exterior door is opened. All doors opening into and out of the vestibule are required to have self-closing devices, as doors standing open would defeat the purpose of the vestibule.

The IEBC does not specify the size of the vestibule – the code only requires the vestibule to be large enough that it is not necessary for the interior and exterior doors to be open at the same time while a building occupant travels through. However, the required size of the vestibule is addressed by ICC A117.1 – Accessible and Usable Buildings and Facilities. The requirements of this standard are consistent with those of the ADA Standards for Accessible Design.

ICC A117.1 ensures that there is adequate maneuvering space for a person using a wheelchair to move through the vestibule and operate the doors. The standard requires a minimum distance between doors or gates in a series of at least 48 inches plus the width of any door or gate swinging into a space, and the space between the doors or gates must provide a turning space. For most vestibule configurations – where both doors swing in the direction of egress – the minimum vestibule size is approximately 5 feet wide and 7 feet long (this can vary depending on the door width and other factors).

There are seven locations where the IECC does NOT require a vestibule:

1. Buildings in Climate Zones 1 and 2: Chapter 3 of the IECC includes a map of the U.S. climate zones. Climate Zone 1 includes the southern tip of Florida as well as Hawaii, Guam, Puerto Rico, and the Virgin Islands. Climate Zone 2 includes a portion of California, Arizona, Texas, Louisiana, Mississippi, Alabama, Georgia, and Florida. Buildings in the portions of these states which are classified as either Climate Zone 1 or 2 are not required to have vestibules.
2. Doors that are not intended for use by the public: This would include doors to mechanical or electrical equipment rooms, or doors that are intended to be used only by employees. The IBC does not establish a limit on the area of these rooms or spaces.
3. Doors which open to the exterior directly from a sleeping unit or dwelling unit: Doors leading from the exterior directly to an individual apartment, condominium, or motel room are not required to have vestibules. If the dwelling units or sleeping units are accessed from an interior corridor, the building entrances leading to the corridors and common areas would require vestibules in compliance with the IECC.
4. Doors that open directly to the exterior from a space less than 3,000 square feet (298 m<sup>2</sup>) in area: Although the air temperature in small rooms is affected when doors open directly to the exterior, the overall impact of this energy loss is low in the context of the entire building.
5. Revolving doors: A common question is whether vestibules are still required if an entrance includes a revolving door, because the revolving door provides a buffer between the interior and exterior air. The IECC specifically states that the installation of a revolving door, or several revolving doors, does not eliminate the requirement for a vestibule serving the adjacent swinging doors. The exception for revolving doors is meant to indicate that a vestibule with two sets of revolving doors – one exterior, one interior – would not be required.
6. Doors used primarily movement of vehicles or material handling, and adjacent personnel doors: For example, doors located in the loading dock area of a warehouse or manufacturing facility are not required to have vestibules, because the garage/dock areas are not typically heated or cooled at the same level found in other interior spaces.
7. Doors that have an air curtain meeting the requirements of the IECC: The IECC sets minimum standards for the air curtain, including the velocity (not less than 6.56 feet per second (2 m/s) at the floor). The air curtain must be tested in accordance with ANSI/AMCA 220 – Laboratory Methods of Testing Air Curtains for Aerodynamic Performance Rating and installed per the manufacturer's instructions. When the door is opened, the air curtain will operate to help prevent energy loss and saves space when it is used in lieu of a vestibule. Air curtains are also allowed as an alternative to vestibules by the 2019 edition of ASHRAE Standard 90.1.

When designing vestibules and specifying, scheduling, or installing doors and hardware for building entrances, it's important to be familiar with the requirements of the IECC, or the adopted energy code in the project's jurisdiction. A future Decoded article will address other energy code requirements related to doors, such as thermal transmission through the doors themselves. For more information about energy efficiency requirements in your project's jurisdiction, refer to the adopted energy code.

# Decoded: Touchless Solutions for Healthy Environments

Re-Printed from “I Dig Hardware Blog—Lori Green

With the increased focus on how to limit the spread of germs, many facility managers are considering their options for “hands-free” operation of doors. Although the model codes do not currently include requirements that specifically address touchless solutions, there are many sections of the codes and standards that impact the selection and installation of these products.

## Operable Hardware



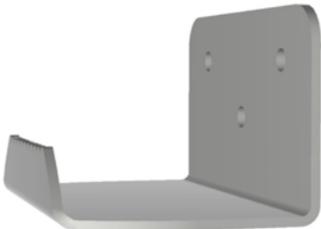
**Forearm or Elbow Pulls:** Several new styles of door pulls have recently been put into production, that may be operated using a forearm or elbow. Some of these pulls would typically be installed in addition to the existing door pull; others are replacement pulls similar to the hospital pulls that were popular when automatic doors were less common. When considering the code-compliance of these products, verify that the door can be operated without tight grasping, pinching, or twisting of the wrist. Another potential pitfall is the projection of the pull, which could impact the opening in two ways:

First, the accessibility standards include a section called “Protruding Objects”, which limits the projection of objects on circulation paths to 4 inches. This applies to objects with leading edges between 27 inches and 80 inches above the floor. Although the standards don’t specifically state whether this limit applies to door hardware, a code official may interpret the requirement as applicable to door pulls and other types of hardware.

Second, the model codes include a section on encroachment, which limits how far a door may project into an egress path. When a door is fully open, it must not project more than 7 inches into the required egress width. Most codes exempt hardware on the push side of the door from this measurement. However, hardware mounted on the pull side of the door would affect the location of the door in the open position and the overall measurement of the door’s encroachment into the means of egress.



**Foot Pulls:** For doors with traditional pull handles and no latching hardware, door pulls operated by the user’s foot may be added near the bottom of the door to facilitate hands-free operation. If the foot pull is the only means of opening the door from the pull side the door will not be code-compliant, as the codes and standards require operable hardware to be mounted between 34 inches and 48 inches above the floor. In addition, foot pulls could be viewed by code officials as hardware which requires “special knowledge or effort.” However, if the foot pull is installed along with a standard door pull, operation of the door would likely be considered acceptable.



Lever Modifications: Designs for retrofit products have been shared for small batch 3D printing, and several manufacturers have introduced attachments for existing levers to allow a building occupant to use their forearm to turn the lever handle. Care must be taken to ensure that the lever can still be operated without tight grasping, pinching, or twisting of the wrist, and that no special knowledge or effort is required. In addition to the potential for damaging the existing hardware, installation of these retrofit products could affect listings, certifications, or warranties, so it's best to check with the lock manufacturer prior to their installation.

Electric Strikes: A benefit of using an electric strike is that once the strike keeper is released using a sensor or access control reader, the lock is no longer latched, and the door can be opened without using the lever to retract the latch. The lever can still be used for egress if necessary, so the main code consideration is that if the door assembly is fire-rated, a fail secure strike must be used. Fail safe strikes are not listed for use on fire door assemblies. In addition, when an electric strike is installed on a fire door, the strike should receive a signal from the fire alarm so the keeper is in the secure position upon actuation of the system.



Coatings: Many manufacturers are exploring options for base materials and coatings that reduce the amount of time that viruses and bacteria can survive on surfaces. Changes to manufacturing processes and materials will be addressed by the manufacturer's listings – including those which ensure the proper performance of hardware used as part of a fire door assembly. As with the lever modifications, the use of coatings or wraps designed to cover existing hardware should be discussed with the hardware manufacturer before installation.

Access Control Readers: Proximity cards or fobs allow contactless access control, but there are more secure technologies available that are encrypted and less vulnerable to security breaches. Some facilities are considering a move to mobile credentials – which allow an authorized user's phone to be used as an access control credential. This reduces the opportunities for exposure by substituting the phone for a card or fob. Mobile credentials can also be deployed without face-to-face interaction between system administrators and users, and they are encrypted for added security. Because multi-technology readers can read various forms of credentials, these readers can help with the transition to mobile credentials. When implementing an access control system, always ensure that the application is compliant with the code requirements for egress.

#### Automatic Operators



For openings where automatic operators are feasible, automating the door allows optimal hands-free operation. While it may be tempting to actuate low-energy operators using sensors that detect the presence of a building occupant and open the door, the standard for these operators – BHMA A156.19 – Power Assist & Low Energy Power Operated Doors – mandates actuation by a “knowing act.”

A knowing act is defined by the standard as: *“Any conscious action with the expected result of opening a door. This includes but is not limited to: wall or jamb-mounted contact or non-contact switches such as push plates; the action of manual opening (pushing or pulling) a door; and controlled access devices such as keypads, card readers, wireless transmitters and keyswitches.”*

Stepping into the detection field of a sensor is not considered a knowing act. If a low-energy automatic operator is actuated by a sensor, the opening must comply with a different standard – BHMA A156.10 – Power Operated Pedestrian Doors. This standard requires guide rails and safety sensors, and the sensors must be monitored to ensure that they are working properly (this requirement is new to the 2017 edition of the standard).



There are several other considerations for doors with automatic operators:

Touchless Actuators and Wireless Transmitters: Touchless actuators that can be operated by the wave of a hand are considered a knowing act by A156.19, but the detection range (the distance from the waving hand to the switch) should be no more than 12 inches. In the 2019 edition of the standard, wireless transmitters were added to the definition of a knowing act. While there isn't a specific allowable range for wireless transmitters, the user should be within view of the door before actuating the automatic operator, to help ensure that other building occupants are not in the path of the moving door.

Timing: The BHMA standards include minimum times for the opening and closing cycles of an automatic door, as well as a minimum hold-open time. For low-energy operators there is a table in the A156.19 standard which states these minimums based on the door width, door weight, and actuator position.

Signage: Every automatic door is required to have signage installed, to warn building occupants that the doors may be operated automatically. The BHMA standards include requirements for signage which vary depending on the type of operator, the configuration of the door (swinging, sliding, or folding), and how the door is actuated.

Stand-By Power: Doors with automatic operators are not subject to the same maneuvering-clearance requirements as manually-operated doors. However, if a door does not have the required clearance on the egress side, and an automatic operator is added, the operator must have stand-by power so it will function in an emergency. Automatic operators on fire-rated doors are required to be deactivated upon fire alarm. Therefore, an automatic operator should not be installed on a fire door that doesn't have the proper clearance on the egress side, because the operator will not be functional when the fire alarm is sounding.

Power-Assist: Although some people call doors with low-energy operators "power-assist" doors, they are two different types of operators and the requirements of the codes and standards vary. A power-assist door has an operator that reduces the opening force but requires the door to be opened manually. A low-energy operator opens the door automatically and is the type of operator most commonly installed for the purpose of hands-free operation.

## Conclusion

When transitioning to touchless solutions for healthy environments, it's important to consider all of the requirements of the codes and standards that may impact product selection. Consult the codes that have been adopted in the project's jurisdiction, and verify that the proposed solutions don't conflict with mandates related to egress, fire protection, or accessibility. Discuss any questions about compliance with the Authority Having Jurisdiction (AHJ) to avoid problems in the field, and for information about cleaning and sanitizing door hardware, refer to the manufacturers' recommendations.

# Codes to Know: Automatic Doors

Re-Printed from “I Dig Hardware Blog—Lori Green



With the current focus on how to limit the spread of germs, many facility managers are considering the addition of automatic operators so doors can be operated “hands-free.” I’ve been receiving lots of questions about touchless switches, remote transmitters, and codes related to auto operators in general.

I’ve compiled the list below to help summarize the requirements, with links to longer articles and more information.

~\*~

**Referenced Codes and Standards:** The codes and standards listed here include requirements related to automatic operators and are referenced in some of the summaries and articles below. If you are an Allegion employee, these documents can be downloaded from our [Techstreet](#) subscription ([contact me if you need help](#)). The ADA standards can be downloaded from [ADA.gov](#).

- BHMA A156.19 – Power Assist & Low Energy Power Operated Doors
- BHMA A156.10 – Power Operated Pedestrian Doors
- ADA Standards for Accessible Design
- ICC A117.1 – Accessible and Usable Buildings and Facilities
- International Building Code (IBC)
- NFPA 101 – Life Safety Code

NFPA 80 – Standard for Fire Doors and Other Opening Protectives

**Summaries and Links:** The following summaries address requirements pertaining to automatic doors. Each heading title is a link to more information.

**Public Entrances:** Changes have been approved for the 2021 IBC that will require automatic operators at some public entrances. Currently, the codes and standards do not mandate auto operators, although they are sometimes installed to overcome a code issue such as limited maneuvering clearance, or opening force that exceeds the maximum allowed by code.

**Stand-By Power:** Doors with automatic operators are not subject to the same maneuvering-clearance requirements as manually-operated doors. However, if a door does not have the required clearance on the egress side, and an automatic operator is added to bring the door into compliance, the automatic operator must have stand-by power so it will function in an emergency. Automatic operators on fire-rated doors are required to be deactivated upon fire alarm. Therefore, an automatic operator with standby power should not be used on a fire door to overcome maneuvering clearance problems because the operator will not be functional when the fire alarm is sounding.

**Actuators:** In order to comply with BHMA A156.19, low-energy operators must be initiated by a “knowing act.” The knowing-act method may be a push plate actuator or non-contact switch mounted on the wall or jamb, the act of manually pushing or pulling a door, a wireless transmitter, or an access control device like a card reader, keypad, or keyswitch. The standard includes recommended locations for actuators.

**Touchless Switches:** Actuators that can be operated by the wave of a hand are considered a knowing act by A156.19, but the detection range (the distance from the waving hand to the switch) should be no more than 12 inches.

**Monitored Sensors:** A change was made to the 2017 edition of BHMA A156.10, which requires safety sensors to be monitored. If the safety sensor is not functioning, the door is not supposed to open. Although this standard does not usually apply to low-energy operators, it does apply to low-energy operators that are not initiated by a knowing act. A low-energy operator that is actuated by a motion sensor must comply with A156.10, including the use of guide rails and safety sensors, and these sensors must be monitored according to the 2017 change.

**Timing:** The BHMA standards include minimum times for the opening and closing cycles, as well as a minimum hold-open time. For low-energy operators there is a table in the standard which states these minimums based on the door width, door weight, and actuator position.

**Power-Assist:** Although some people call doors with low-energy operators “power-assist” doors, they are two different types of operators and the requirements of the codes and standards vary. A power-assist door has an operator that reduces the opening force but requires the door to be opened manually. A low-energy operator opens the door automatically.

**Signage:** The BHMA standards include requirements for signage, which vary for low-energy operators depending on how the door is actuated. Every automatic door is required to have the mandated signage installed.

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## PVC vs. CPVC: Understanding Which Pipe Is Best for Your Job

**TOPICS:** Cold Water Pipes / CPVC Fire Sprinklers / Hot Water Pipe / Non-Pressure System Piping / Plumbing Pressure System / PVC Water Supply

**POSTED BY:** MARK LIGON / *“This article first appeared on [www.retrofitmagazine.com](http://www.retrofitmagazine.com), and is reprinted with permission.”*

As contractors and managers, you’ve most likely utilized PVC and CPVC in various projects. There are a few differences between PVC and CPVC that are obvious just by seeing and holding them. However, there are even more differences between the two materials that will help you determine the correct applications for PVC and CPVC.

### How PVC and CPVC Differ

The first difference between PVC and CPVC that everyone notices is the extra letter. If you’ve used PVC or CPVC for retrofitting or on a construction site, you know you cannot use these materials interchangeably. Once you understand what that “extra C” actually means, it becomes clear what the main difference between PVC and CPVC is and why they have different uses.

## **The Main Difference Between PVC and CPVC**

PVC stands for polyvinyl chloride, which basically means that it is a combination of chlorine and carbon. This combination makes it a strong but flexible material that absorbs shock, never rusts or rots away, and is resistant to bacteria. For these reasons, it's a seemingly ideal material to transport water.

On the other hand, that extra C in CPVC stands for chlorinated. If you're paying attention, you realize that CPVC is actually chlorinated polyvinyl chloride. The increase of chlorine during manufacturing changes the material quite a bit, which is described more below. However, CPVC is still strong and particularly resistant to rust and bacteria, which means it continues to be a great choice for water transport.

### **Range of Temperature Tolerance**

There is one disadvantage to using PVC and CPVC as an application for water—and that is PVC can only handle temperatures up to 140 F. Anything hotter than 140 degrees will melt the material. To give you a point of reference, the maximum temperature of hot-water heaters is usually between 120-140 F. Therefore, PVC can't really be considered a safe material in indoor plumbing.

That's where CPVC comes in. CPVC can handle temperatures up to 200 F, which is an increase of 60 degrees. Although this is still not the highest water-temperature tolerance in plumbing, it's significantly better than PVC.

### **Differences in Pipe Strength**

While the added chlorine in CPVC increases its heat tolerance, it also changes the strength of the material. Both materials are very strong, but CPVC is harder than PVC, which makes it more prone to breaking. CPVC is more brittle than PVC and can be warped or cracked more easily, but it is also more flexible than PVC. If you're using long lengths of CPVC, you'll need to add support every 3 feet.

### **When to Use PVC Pipes**

When you're deciding on the necessary materials you'll need for your construction projects, consider the pros and cons of PVC pipes. There are many cases when PVC is the better and more affordable choice. The following are a few of the best instances when you can use PVC pipes:

#### **Indoor Plumbing**

Because PVC pipe is made to be resistant to virtually all corrosive chemicals and gases, it's a great choice for transporting drinking water. It has insulation properties, as well, so the temperature of the water it carries won't be affected by outside temperature.

Many people use PVC for drainage and cleanouts, but it can be used for plumbing in many cases. However, where there are temperature limitations, it will be better to use CPVC.

## **Cold-water Applications**

One of the best applications for PVC is transporting cold water. This is because it is a great insulator, so it will keep water cold and clean.

## **Limited Outdoor Applications**

PVC is commonly used for drainage and other underground applications. It can last indefinitely when it is installed correctly. However, this doesn't mean it's weather-resistant. Exposed PVC outdoor will be vulnerable to direct sunlight and freezing temperatures.

## **Pressure Systems and Non-pressure Systems**

A pressure system has to do with a change in sea-level distribution. You always need to check your local requirements to verify your PVC or CPVC is appropriate in your area. However, PVC is frequently the best choice for pressure systems and non-pressure systems. Common pressure-system applications for PVC include main water and service lines, drinking water lines, irrigation lines, and swimming pools and fountains. Non-pressure systems that can use PVC are sanitary drainage systems, sewer lines, and storm or roof drainage, among others.

## **When to Use CPVC Pipes**

In many cases when PVC is used, **CPVC can also be used**. But because of the differences in the materials, there are some applications in which only CPVC can be used. Consider the following:

### **Hot-water Applications**

Because CPVC can withstand water up to 200 F, it is a much better choice than PVC for hot-water applications.

### **Water-supply Applications**

Clearly, because of the chemical makeup and the low cost of PVC and CPVC, these are the best choice of material for water transport in most cases. A few common uses for CPVC are transporting drinking water and drainage.

### **Fire Sprinkler Systems**

You might think that CPVC would melt in a fire, but it has actually "achieved the best possible fire-protection classification" (per **Blazemaster**). It has low flammability, doesn't smoke and doesn't result in burning droplets. Therefore, CPVC is an ideal material for fire sprinkler systems.

### **Not for Applications in Freezing Conditions**

PVC and CPVC have maximum and minimum water temperatures that they can withstand. Although both types of pipes can keep water cold, they cannot withstand freezing temperatures. Therefore, you cannot install CPVC piping in a location that will potentially be exposed to temperatures under 32 F.

## **Final Verdict: When to Use PVC vs. CPVC**

There are very few instances when PVC and CPVC can be used interchangeably. When you're trying to decide when to use PVC or CPVC pipes, be sure to consider the abilities and limitations of both. PVC is best for cold-water applications and pressure and non-pressure systems while CPVC is better for hot-water applications, water supply and fire sprinklers.

## **How We Move Forward: A Message from CSI CEO Mark Dorsey, FASAE, CAE**

A few weeks into the COVID-19 shutdown, William Sundquist, a friend and CSI board member, found his dining room furniture in the backyard, not because he put it there, but because it had been sucked out the of window during a tornado —while he was in the house. I got an early text from him with the pictures. After he assured me he was OK, my next question was, “What next?”

He said, “Well, we move on.”

Another CSI member lives near him, and he spent the night at their house. The two of them went back, collected some things, and he settled in for what will be a months-long stay at a local Doubletree. Of course, all of this happened with the constant concern of catching the coronavirus in the foreground.

As I think about this world-changing pandemic, I am struck by the value of the friendships and community that form the core of CSI. At a time when we are trying to minimize human contact, friends came to support William. As all of us move forward together during this slow-rolling natural disaster, the question remains: What next? The simple answer is we do not know yet. There are significant hurdles ahead of us and our way of life will take some time to get back to what we consider normal, such as cheering for our local team with thousands of other fans or going to a party at a friend's home. What we do know is that our community remains intact. In fact, I would argue that it is stronger than ever because of the many ways you and others in the AEC community have rallied around each other in the face of this crisis. While we do not know how the economy will unfold, there will still be construction projects and related challenges in architecture, engineering, product sales, and practice. There's no doubt the landscape will shift, just as it has in other times in this nation's history. Yet we always rebound and rally to address what's next.

Your CSI board of directors and staff are doing what we can to keep you connected, engaged, and ready to adapt with the changing world. Here are a few ways we are answering the question, “What next?”

### **Keeping you connected**

CSI-Connect, the new COVID-19 Response Team hosted by CSI Fellows, and Discussion Forums are all designed to connect you to peers who can help you navigate personal and professional challenges.

### **Free professional development**

CSI stakeholders are contributing to free and low-cost content via the CSI Learning Library to enable your professional development and support earning your CSI learning units for certification renewal.

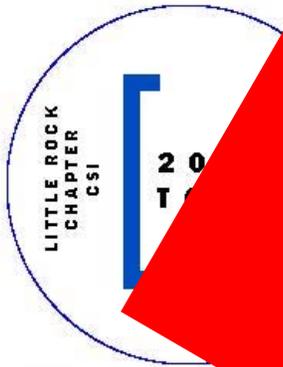
### **Certification flexibility**

Lowest cost pricing has been extended, and new options to take in-home exams or at “COVID-safe” testing centers are rolling out for the spring testing cycle.

### **Chapters, chapter, chapters**

Slowly, but surely, we will come together again face to face, and the best place to do that will be CSI chapters. Stay in touch with your chapter through CSI-Connect and their websites to see what is coming to you locally.

There is more on the way, but the most important part is that during coronavirus restrictions, these offerings are how we will stay in touch and in support of each other, as work changes, the virus runs its course, or even if we have to pitch in to help a friend after a tornado. We hope you realize CSI is here for you. No matter what is next.



# 2020 Annual Little Rock Chapter Golf Tournament

## SPONSORSHIP

### SPONSOR INFORMATION:

NAME: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SPONSORSHIP  
PACKAGES

**When:** Friday, April 24, 2020  
**Registration:** 07:00 a.m.  
**Shotgun Start:** 08:00 a.m.

**GOLF TOURNAMENT  
POSTPONED TILL  
JULY 17, 2020**

\$650.00

\$400.00

\$300.00

\$400.00

Mail form and fee to:

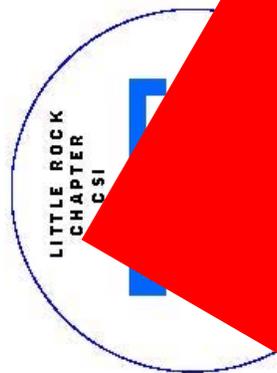
Billy J. Mathis, FCSI, CDT  
C/o Taggart Architects  
4500 Burrow Drive  
North Little Rock, AR 72116  
Phone: (501) 758-7443  
Email: [bjmathis@taggarch.com](mailto:bjmathis@taggarch.com)

### LOCATION INFORMATION

Country Club of Arkansas,  
Maumelle, Arkansas

2. ... A 4-...
3. HOLE-IN-ONE ...  
HOLE-IN-ONE ...  
HOLE-IN-ONE ...
4. FOOD AND BEVERAGE ...  
FOOD & BEVERAGE CART SPONSOR ...  
DRIVE THE BEVERAGE CART DURING ...  
AND GIVEN 1 COMPLIMENTARY LUNCH ...
5. HOLE SPONSOR (No LIMIT) ...  
HOLE SPONSORS INCLUDE RECOGNITION ON THE ...  
SPONSORED WITH LOGO IN-CART DISPLAY, 2 COMPLIMENTARY ...  
LUNCHES.

Note: If possible, all sponsorship Forms should be received no later than **April 1, 2020**. All sponsorship funds should be received no later than **April 10, 2020**.



# Little Rock Chapter Annual Golf Tournament



## TEAM REGISTRATION PACKAGE

### TEAM REGISTRATION

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**GOLF TOURNAMENT  
POSTPONED TILL  
JULY 17, 2020**

Mail form and fee to:

Billy J. Mathis, FCSI, CDT  
C/o Taggart Architects  
4500 Burrow Drive  
North Little Rock, AR 72116  
Phone: (501) 758-7443  
Email: bjmathis@taggartch.com



REGISTRATION FOR:  
2 MULLIGANS PER PLAYER

REGISTRATION FOR:  
TEAM (\$500.00)  
SINGLE PLAYER (\$150.00)

**TOURNAMENT INFORMATION:**

Location: Country Club of Arkansas  
3 Country Club Cir,  
Marmelle, Arkansas 72113

Date of Tournament: April 24, 2020  
Due Date for Payment: April 20, 2020

Registration Opens at 07:00 a.m. with the Tournament starting at 08:00 a.m.

If you are interested in following the Little Rock Chapter, our links are as follows (*for Facebook and LinkedIn look for the CSI Little Rock Chapter*):

**Website:** <https://csilittlerock.org>

**Facebook:** [www.facebook.com](http://www.facebook.com)

**LinkedIn:** [www.linkedin.com](http://www.linkedin.com)

If you are interested in Joining CSI or if you are just interested in keeping up with the information provided by CSI, follow this link to the Institute Website Membership Pages:

For Membership Information:

<https://www.csiresources.org/communities/membership/individual-membership>

To Join CSI:

[https://higherlogicdownload.s3.amazonaws.com/CSIRESOURCES/143a718d-6df6-484a-8a79-76d79635b741/UploadedImages/PDFs/CSI\\_MembershipFormFY18.pdf](https://higherlogicdownload.s3.amazonaws.com/CSIRESOURCES/143a718d-6df6-484a-8a79-76d79635b741/UploadedImages/PDFs/CSI_MembershipFormFY18.pdf)

To See what CSI is all about:

[https://higherlogicdownload.s3.amazonaws.com/CSIRESOURCES/143a718d-6df6-484a-8a79-76d79635b741/UploadedImages/CSI\\_ResourcesCatalogFinalLowRes.pdf](https://higherlogicdownload.s3.amazonaws.com/CSIRESOURCES/143a718d-6df6-484a-8a79-76d79635b741/UploadedImages/CSI_ResourcesCatalogFinalLowRes.pdf)

# LITTLE ROCK CHAPTER INFORMATION

## Chapter Officers

President:		Billy J. Mathis, FCSI, CDT
President-Elect:		Melissa Aguiar, CSI, CCS, CDT, SCIP
Immediate Past President:		Open
Secretary:	T	Melissa Aguiar, CSI, CCS, CDT, SCIP
Treasurer:		Billy J. Mathis, FCSI, CDT
Directors		
Operations		Rachal Belanger, CSI
Honors		Melissa Aguiar, CSI, CCS, CDT, SCIP
Membership		Carlie Massery, CSI
Education / Certification		Open

## Chapter Info

<b>Chapter Website:</b>	<b><a href="https://csilittlerock.org">https://csilittlerock.org</a></b>
<b>Chapter Newsletter:</b>	<b>SpecWork</b>
<b>Chapter Meeting Day and Time:</b>	<b>2<sup>nd</sup> Wednesday of Each Month unless otherwise specified by the Chapter President</b>
<b>Chapter Board Meeting Day and Time:</b>	<b>1<sup>st</sup> Friday of each Month unless otherwise specified by Chapter President</b>

If you are interested in Joining CSI or if you are just interested in keeping up with the information provided by CSI, See the slides shown from the "Why CSI" presentation