# SPECWORK

**CSI** Little Rock Chapter

HAPPY THANKSGIVING

OUTSTANDING CHAPTER COMMENDATION

**CSI** Building Knowledge Improving Project Delivery

SILVER LEVEL

## In This Issue

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# President's Thinking

By Billy J. Mathis, FCSI, CDT

I try to bring thought provoking information each month so this time instead of me rambling about things, I thought I would bring you something called "The Leader's Ripple" from the Mike Harbour Resources Email 10/28/19.

Everything a leader does creates a ripple effect. It can be positive or yes; unfortunately, too many times we create the negative ripple. The dictionary defines a ripple as something that moves in a way that is not obvious but is noticeable. A sound or a feeling that is slight but is noticed.

"*I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.*" -Maya Angelou

My life's mission is to "drive excellence in leadership and personal growth." I am working hard to create a positive ripple across the world in which I serve. I have had to overcome a significant number of negative ripples in my life. Some from poor leaders in my life and many I have created myself. My grandmother was a positive ripple in my life and her influence still pushes me to this day. She passed in November of 1998 just a few weeks after I returned home from my active Army service for 6 plus years.

As a child and young man, I grew up in a ton of dysfunction. My parents were not healthy for one another and certainly not for the kids they were raising. Abuse of all kinds was a daily battle in my home. So, certainly a negative ripple occurred from my childhood. However, by the grace of God, my grandmother was a positive encourager. She saw more in me than I saw in myself and she pushed me to keep climbing for a better life. I have and still do, and I am grateful for her ripple.

The Question

My question for you as a leader yourself; what ripple are you creating? Is it positive? Will people be made better by your ripple? Will they be lifted higher and challenged to be better? As a coach for leaders I seek to help leaders overcome the blind spots creating negative ripple with those they lead. We all have blind spots, I unfortunately was to hardheaded to see them early in my life and leadership roles. Here is what we all need to understand. Everything we do creates a ripple that will be passed along through history. Through the example we set, others are watching and repeating.

Your Ripple

"*Make sure your ripple is what you want to leave behind!!  "Don't judge each day by the harvest you reap but by the seeds that you plant.*" -Robert Louis Stevenson

Great leaders share many common traits. Though criteria for leadership in the workplace can vary from company to company, the majority of effective leaders exemplify certain skills. By focusing on developing these same skills, you can take your leadership abilities to the next level.

I'm not sure if you picked up this resource yet, but if not, it is still available to help you prepare for the future and create a growth plan so that your ripple is positive.

# Question of the Month:  Do all fire exits have fire exit hardware?

This fire exit door has fire exit hardware, but not all fire exit doors are required to have fire exit hardware.  Yes, I'm sure.

Sometimes I feel like I've written about a topic from every possible viewpoint, but then someone asks a question that inspires me to look at the issue from another angle.  Today's Quick Question is:

Do all fire exit doors have fire exit hardware?

Although this might come as a surprise to some of you, the answer is…NO!

The term "fire exit" is not defined in the model codes, so let's assume that we are talking about a door that is part of a means of egress and would be used by building occupants to exit if there was a fire.  In many cases, these are the same doors that would also be used on a regular basis for access and egress.  Some have exit signs, some don't, but they are all part of the means of egress that extends from any point in a building to the public way (there's more about the means of egress here).

It would seem logical that fire exit hardware belongs on fire exit doors, but what IS fire exit hardware?  Here's how it is defined by the International Building Code (IBC), with some supplemental information from the IBC Commentary:

FIRE EXIT HARDWARE. Panic hardware that is listed for use on fire door assemblies.

Commentary:  Where a door that is required to be of fire-resistance-rated construction also has panic hardware, the hardware is required to be listed for use on the fire door.  Thus, fire door hardware has been tested to function properly where exposed to the effects of a fire (see the definition for "Panic hardware" and Section 1010.1.10).

So, fire exit hardware is a type of panic hardware that is used on fire doors.  Two things to note:

1.      Not all doors in a means of egress (AKA "fire exit" doors) are fire doors.  The purpose of a fire door assembly is to compartmentalize a building and deter the spread of smoke, flames, and toxic gases.  In most cases, these doors also function as part of the means of egress, but fire doors would typically be found on stairwells, residential unit entries, and incidental use areas.  A fire door assembly might have fire exit hardware, but not always (read on).

2.   Remember that fire exit hardware is a type of panic hardware, which is listed for both panic and fire.  Panic hardware is required for doors serving specific areas – not for all egress doors.  For example, the IBC requires panic hardware for doors serving assembly and educational occupancies with an occupant load of 50 people or more, as well as high hazard occupancies.  If a door is serving another type of occupancy – even one with a large occupant load – panic hardware is not required by the IBC (although it is acceptable to use even when not required).

Doors that are part of a means of egress are typically required to have hardware that allows building occupants to unlatch the door with one releasing operation, but there are other types of hardware (such as lever handles) that meet this requirement.  If the door is serving an occupancy type and occupant load that requires panic hardware, and if the door is a fire door, that's when the "fire exit" door would require fire exit hardware.

**JOIN US ON A HAPPY HOUR TOUR**
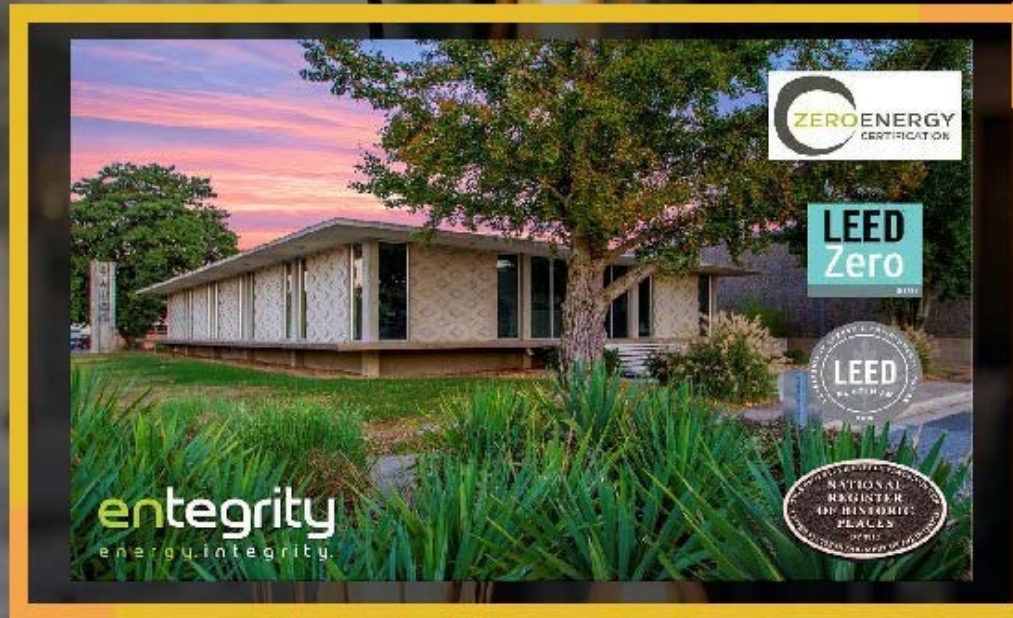
**DATE:**
**Wednesday December 4th**

**TIME:**
**4:30-5:30 p.m.**

**Join CSI in touring the office headquarters of Entegrity, the United States FIRST building to get LEED Zero Certification!**

**Enjoy complimentary beer, wine and snacks provided by the CSI Little Rock Chapter.**

Please RSVP by Monday December 2nd to:
carlie@jeallenco.com or bjmathis@taggarch.com

MAP OF THANKSGIVING DINNER

"A leader takes people where they want to go. A great leader takes people where they don't necessarily want to go, but ought to be."

Rosalynn Carter

"If you don't like something, change it.  If you can't change it, change your attitude"

Maya Angelou

# Word of the Day

**Crenellations** – (kre-nə-ˈlā-shən) / Part of speech: noun / Origin: Latin, mid-19th century

1 - Architectural features at the top of a wall of a castle

2 - A specific type of castle defense featuring multiple rectangular spaces through which arrows may be shot

Examples of Crenellations in a sentence

Even though the forces were waning, the crenellations at the top of the castle's towers helped them defend their land."

"The crenellations were crumbling, showing the years of neglect after the castle was abandoned."

# THREE GOALS IN CONTINUING EDUCATION

Let's Fix Construction Blog - Contributed by Michael Chambers

Continuing education for design professionals is arguably the most effective and powerful marketing opportunity available to construction product manufacturers in North America. However, there appears to be some confusion as to what continuing education is supposed to accomplish. In my opinion and experience, continuing education can bring three things to the bottom line. First is brand recognition, second is getting specified, and third is holding specifications against non-competitive substitutions.

There is a bizarre notion that manufacturers provide continuing education out of the goodness of their hearts for the benefit of design professionals. Or worse, manufacturers think that continuing education is a perfect tool to sell product to design professionals. Is there any wonder why local AIA components and a growing number of large design firms no longer allow manufacturers to present programs?

Unless manufacturers can begin to bring excellent programs to the design professionals, the opportunity inherent in continuing education is going to be lost.

**Brand Recognition**

One of the most powerful and least understood aspects of continuing education is brand recognition. The biggest issue I see here is that manufacturers do not understand how to brand with education. Successful branding is never about logos or products; it is about high quality education that speaks directly to the audience and provides solutions to design and construction issues. It is never about product, never, never, never.

A high quality program designed for adult learners, presented by qualified, knowledgeable product representatives is the best possible branding opportunity. At the level of design professionals, people brand manufacturers far more effectively than product advertising and the like. Product representatives must be knowledgeable not only about their products but about the industry and most importantly about the competition.

In this same regard, presentation skills are even more critical than product knowledge. A poor presentation will trash a brand faster than anything. Product representatives must be good presenters and have the ability to make effective presentations.

**Getting Specified**

One of the things that I can not understand about 95% of the continuing education programs I have endured is that no one ever talks about specifications. In the final result, where do products get listed? In the specifications! If a manufacturer wants to be specified competitively they must educate the design professionals about how (generically) products are specified, identify critical competitive issues, and demonstrate how an appropriate specification should be written.

All the product information, literature, and samples in the world are useless unless the design professionals understand how to integrate them into their documents. Design integration is handled by details. I can count on one hand the number of times I have encountered design and installation details in a continuing education program.

Product integration is handled in the specifications. While having a guide specification is a good thing, most design professionals still do not know how to adequately or appropriately use a guide specification to modify or revise their documents. Specification issues and examples must be a part of every continuing education program.

Getting specified is the acknowledged bottom line with design professionals. Therefore a successful continuing education program must educate design professional in how to appropriately and competitively specify and detail products and assemblies for their projects. Getting specified is the bottom line, period.

**Eliminating Substitutions**

In my experience, the number one reason for "successful" substitutions is lack of education on the design professional's part. Design professionals must deal with hundreds of products and assemblies on each project and when the contractor comes along with a "less expensive but better" product it can be next to impossible for the design professional to rebut. Poor substitution approvals almost always are made because of lack of education and knowledge on the part of the design professionals.

If you want to eliminate or at least minimize substitutions make certain that critical industry and competitive issues are covered in the continuing education programs. This does not mean that you trash the competition or talk specifically about products. This means that you educate the design professionals about critical industry issues that affect your products and explain the types of competitive issues and problems that may occur.

Preventing non-competitive substitutions is critical to everyone's bottom line. Educated and knowledgeable design professionals working with industry professional product representatives can eliminate the majority of poor substitutions by being knowledgeable about issues and being confident enough in the information to stand up to the contractor.

**Bottom Line**

Educate design professionals how to solve problems in an industry acceptable and standard way that is recognized and used by the majority of the competition. Educate design professionals how to specify products appropriately. It has to be drawn and specified correctly or you have completely wasted your educational efforts.

Harness the branding power of education and you will get specified, sideline substitutions, and have great competitive advantage.

# Doors Provided for Egress Purposes

I Dig Hardware Article - Provided by Lori Greene

Last week, I spent a few days in Phoenix for a meeting of the Builders Hardware Manufacturers Association (BHMA). BHMA is an organization made up of – you guessed it – door hardware manufacturers, including Allegion and many others. You may be familiar with the BHMA standards for hardware, or the code-development work of the BHMA Codes & Government Affairs Committee (if not, click here).

The doors serving our meeting room are a good example to illustrate the answer to a question that I'm asked all the time:

*Do ALL doors have to be code-compliant? For example, in a bank of 8 doors serving a school, could 4 of them have the panic hardware required by code and the others be equipped with deadlocks?*

The answer can be found in the International Building Code (IBC), and it is clarified in the IBC Commentary:

*1010.1 Doors. Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1022.2. **Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section.***

*IBC Commentary: …A door that is intended to be used for egress purposes, even though that door may not be required by the code, is also required to meet the requirements of this section. An example may be an assembly occupancy where four doors would be required to meet the required capacity of the occupant load. But assume the designer elects to provide six doors for aesthetic reasons or occupant convenience. All six doors must comply with the requirements of this section…*

The key here is that the IBC requirements apply to all doors that are required for egress, but also all doors that are intended to be used for egress. Let's go back to the school exit example for a minute. If there is a bank of 8 doors, it's safe to assume that all are intended to be used for egress – that all of the doors are provided for egress purposes. In that case, all 8 doors would have to comply with the requirements of the adopted code, including the required panic hardware, opening width, opening force, etc.

In a situation where some doors are provided for egress and others are not intended to be used for egress, it would be up to the code official to decide whether there is a clear difference between the egress doors and the doors that are not provided for egress purposes. For example, I once worked on a project with an assembly space that had at least 20 pairs of doors all around the perimeter. A few were required/intended/provided for egress. The others were to be opened for events – weather permitting – to allow circulation between the indoor and outdoor space. In order to avoid having panic hardware on all 20 pairs of doors, the architect had to change the design of the non-egress doors, so the egress doors were obvious and the non-egress doors looked more like windows.

Here's what our room looked like at the BHMA meeting:

The room has 6 pairs of egress doors that look like the photo below.  Based on the occupant load of 600 people, not all of these doors are required, but they are all provided for egress purposes and are compliant with the egress requirements.



The door openings on the left-hand side of the room (and one near the black table) are not provided for egress, are not intended to be used for egress, and are not required to be code-compliant for egress from the meeting room – although it's possible that they could be providing egress in the other direction:

*The bottom line is…if a door looks like an egress door it will probably be used as an egress door, and it must comply with the adopted codes. And if a door is not code-compliant, it had better not be a door that is required for egress, or a door that looks like it could be used for egress.*

# Decoded: Two Releasing Operations for Egress (December 2019)

In the last 5 years, the code requirements that apply to classroom security have been discussed and debated at length.  An important part of the code development process is to gather information from all stakeholders, to ensure that the codes are based on the experience of many and that the issue is examined from all sides.  Once a consensus is reached, a code change proposal is either approved and published in the next edition of the code, or it is disapproved and may be raised again during the next code development cycle.

In 2016, a proposal was made to change the 2018 edition of NFPA 101 – Life Safety Code regarding the allowable number of releasing operations for existing classroom doors in schools.  The change would have allowed classroom doors in existing educational occupancies to have hardware that required two releasing operations instead of one.  At NFPA's annual meeting in June of 2017, voting members opted for a single operation to unlatch the door, and disapproved the two-operation proposal.  Appeals were filed by a manufacturer of classroom barricade devices, but the appeals were denied by the NFPA Standards Council.  The language allowing two releasing operations was not included in the 2018 edition of NFPA 101.

**One operation, or two?**

NFPA 101 requires locksets and security devices installed on classroom doors to meet all of the applicable criteria, and they must be acceptable to the AHJ.

For more than 30 years, the Life Safety Code has included a prescriptive requirement for hardware on most egress doors to unlatch with one operation.  The exception is that residential dwelling units and sleeping units can have hardware that requires two releasing operations.  Prior to the 1988 edition of NFPA 101, the code required a simple type of releasing device such as a knob, handle, or panic bar, with a method of operation that is obvious – even in the dark.  As far back as the 1927 edition of the Building Exits Code, doors were required to be "so arranged as to be readily opened," although the number of releasing operations was not specifically addressed.

It seems obvious that a door that requires one releasing operation would be more readily openable than a door that requires two or more releasing operations.  A door with two locking devices could require "special knowledge or effort," which is not compliant with the model codes.  It's likely that the two locks would need to be released or removed in a specific order, or there could be confusion about whether a lock is in the locked or unlocked position.  The hardware on an egress door must be intuitive, or evacuation may be delayed.

During the 2018 code development cycle, there was strong support for code language that would continue to require one releasing operation to unlatch classroom doors.  When the proposal for two releasing operations was discussed in 2016, the NFPA 101 Technical Committee on Means of Egress stated: *"It is the position of the TC on Means of Egress that increasing the number of latch/lock releasing operations is dangerous and could create a hazard to occupants. Technology exists that will meet the current code requirement for not more than one latch/lock releasing operation. The need for multiple operations is contrary to decades of experience resulting in fatalities in schools and other buildings. Single-action egress is an important aspect of life safety for all emergencies."*

**TIA 1436**



TIA 1436 allows two operations to unlatch an existing classroom door, but the operations can not be simultaneous. The two latching devices shown in this photo are not compliant.

Given the committee's position in 2016, the vote in 2017, the rejection of the appeals, and the fact that the 2018 edition of NFPA 101 requires no more than 1 releasing operation for egress, it seemed that the Life Safety Code would continue as it had for the previous 11 editions of the code.  However, in 2019, a school district in Maryland submitted a TIA to revise the 2018 edition of NFPA 101.  A TIA is a Tentative Interim Amendment – a change that may be proposed as a revision to an existing standard, to address a problem that is of an emergency nature.  TIA 1436 proposed the addition of a line of text in the section addressing classroom doors in existing schools: "(3) Two non-simultaneous releasing operations shall be permitted."

Despite opposition to the change and an appeal from the Builders Hardware Manufacturers Association (BHMA), as well as testimony from stakeholders including the Massachusetts State Fire Marshal on behalf of the National Association of State Fire Marshals (NASFM), the TIA was approved.  Language allowing two non-simultaneous releasing operations on classroom doors in existing schools has been retroactively added to the 2018 edition of NFPA 101.

It might seem like this change was proposed in order to allow classroom barricade devices, but that was not the intent; the school district in Maryland wanted the ability to add deadbolts to their existing classroom doors. The substantiation for the proposed TIA specifically states, *"Lacking the provision for two releasing operations on existing classroom doors, some schools are opting to purchase aftermarket barricade devices or utilize other 'homemade' solutions (e.g., sliding sections of fire hose over the door closer arm, rope, wedges, etc.), which restrict entry by a would-be assailant, but also restrict emergency egress and entry by school staff and emergency responders. Barricade devices can also be utilized by an assailant to contain occupants in a classroom and prevent assistance from entering."*

**NFPA 101-2018 – Revised**

The revised section in Chapter 15 – Existing Educational Occupancies allows classroom doors to be locked to prevent unwanted entry, if the locking means is acceptable to the authority having jurisdiction (AHJ), and meets the following conditions:

• The lock must be able to be engaged without opening the door, and must be able to be unlocked and unlatched from the classroom side without the use of a key, tool, special knowledge or effort. This also applies to locks that are remotely engaged.

• Two releasing operations shall be permitted to unlatch the door, but the two operations must not be required to be performed simultaneously. Two self-latching devices with latchbolts that must be retracted at the same time would not comply.

• The hardware releasing mechanism must be located between 34 inches and 48 inches above the finished floor. Security devices which mount at the bottom of the door or wrap the closer arm would not typically have their releasing hardware within the allowable range and would not be compliant with this section.

• The door must be able to be unlocked and opened from outside of the room with a key or other credential – like an access control card, code, or fob. Devices which barricade the door from the inside and cannot be removed by an authorized person from the outside do not meet this requirement.

• The door closer, panic hardware, or fire exit hardware shall not be modified by the security device. Retrofit security devices that attach to the existing door hardware could negatively impact the performance of the hardware and may void the product warranty.

• If the classroom door is a fire door assembly, all hardware must be listed to UL 10C and preparations for retrofit security devices must be acceptable per NFPA 80. Job-site preparations for hardware on fire door assemblies are typically limited to 1-inch-diameter holes unless the preparation is allowed by the listings of the door, frame, and hardware manufacturers, or approval for a field modification is obtained in advance from the listing laboratory.

The means of engaging and releasing the lock from inside and outside of the room must be addressed in the facility's emergency action plan and included in the emergency egress drills. This helps to ensure that staff is familiar with how to lock and unlock the classroom door when necessary.

**Take Note**

Applicability: The International Building Code (IBC) and International Fire Code (IFC) limit releasing operations for most egress doors to one operation to unlatch the door (all latches simultaneously). The extra releasing operation allowed by the TIA applies only to jurisdictions that have adopted the 2018 edition of NFPA 101 or have modified the applicable codes to allow a second releasing operation. Because the change was made in Chapter 15 of NFPA 101, the second operation is allowed only in existing K-12 schools. Classroom doors in new buildings are limited to one operation to unlatch the door by Chapter 14, and the chapters related to day care centers and college classrooms were not modified by the TIA.

Accessibility: The ADA Standards for Accessible Design require door hardware to be operable without tight grasping, pinching, or twisting of the wrist, so security devices on classroom doors must be operable in this manner in order to comply with federal law. Security devices that require two hands or a high level of dexterity to operate would not typically be considered compliant. The mounting height requirements of the ADA standards are consistent with the NFPA 101 requirements; devices should not be mounted above or below the allowable range of 34-48 inches above the floor.

Panic Hardware: Doors required to be equipped with panic hardware must unlatch with one releasing operation and shall not have any additional locking devices, per this section of NFPA 101: *"7.2.1.5.12\* Devices shall not be installed in connection with any door assembly on which panic hardware or fire exit hardware is required where such devices prevent or are intended to prevent the free use of the leaf for purposes of egress, unless otherwise provided in 7.2.1.6."*

Final Thoughts

There are many concerns associated with the use of retrofit security products, including delayed evacuation, unauthorized deployment, lack of access by emergency responders, and non-compliance with federal accessibility requirements. Although the TIA allows a second releasing operation to unlatch an existing classroom door, there are strict limitations in the Life Safety Code that must be met when choosing security devices.

Many deadbolts are compliant with the revised requirements of NFPA 101, but adding deadbolts to existing classroom doors may not be the optimal solution. School districts should carefully consider their options, as there may already be sufficient security in place, or the existing locks may be changed using code-compliant conversion kits. Links to the full TIA 1436 proposal, substantiation, and testimony, and other resources on school security can be found by visiting iDigHardware.com/schools.

*This blog post will be published in the December 2019 issue of*



DHI'S PUBLICATION FOR DOOR SECURITY + SAFETY PROFESSIONALS

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

LinkedIn:  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:

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

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# LITTLE ROCK CHAPTER INFORMATION

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**Chapter Info**

**Chapter Website:** https://csilittlerock.org

**Chapter Newsletter:** SpecWork

**Chapter Meeting Day and Time:** 2nd Wednesday of Each Month unless otherwise specified by the Chapter President

**Chapter Board Meeting Day and Time:** 1st Friday of each Month unless otherwise specified by Chapter President

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