SPECWORK

CSI® LITTLE ROCK CHAPTER

Little Rock Chapter - Chartered November 1965 January 2026

In This Issue

President's Thoughts

By: Billy J. Mathis, FCSI, CDT, Little Rock Chapter President

Welcome back from the Holidays. As part of our ongoing attempts to aid those wishing to take one of the Certification Courses, we have been notified of two Chapters who are making available their Training Courses.

(1) The Northeast Region is offering a virtual CDT Prep Course for the Spring 2026 Exam and would like to send this notice to as many people as possible. Classes will begin on Tues, February 17, at 6 pm and run through April 28, concluding just ahead of the exam window (May 5-June 10). For more details, go to CDT Preparation Class - CSI Northeast Region (https://nercsi.com/cdt-preparation-class/)
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(2) The Phoenix Chapter CSI will also be holding a 3 day CDT Exam Prep course on Fridays, January 23rd, January 30th and February 6th at The Reference Library, 99 E. Virginia Ave., Suite 140, Phoenix AZ 85004.
Costs are as follows: Members - $175.00 / Non Members - $200.00.
Register Here - https://phxchaptercsi.starchapter.com/meetinginfo.php?id=29&ts=1765389650

One of the best benefits of CSI membership is the opportunity to lead — and our Little Rock Chapter is looking for a few members ready to bring fresh ideas and energy to our Board of Directors. These roles are very manageable (often handled over lunch hours) and are great for emerging professionals and seasoned members looking to give back.

We're currently looking to fill the following positions:

Treasurer - Much simpler than it sounds. With only a few recurring expenses and a streamlined credit card system in place, this role focuses on maintaining clear records and providing a brief monthly financial update. Low time commitment, high impact.

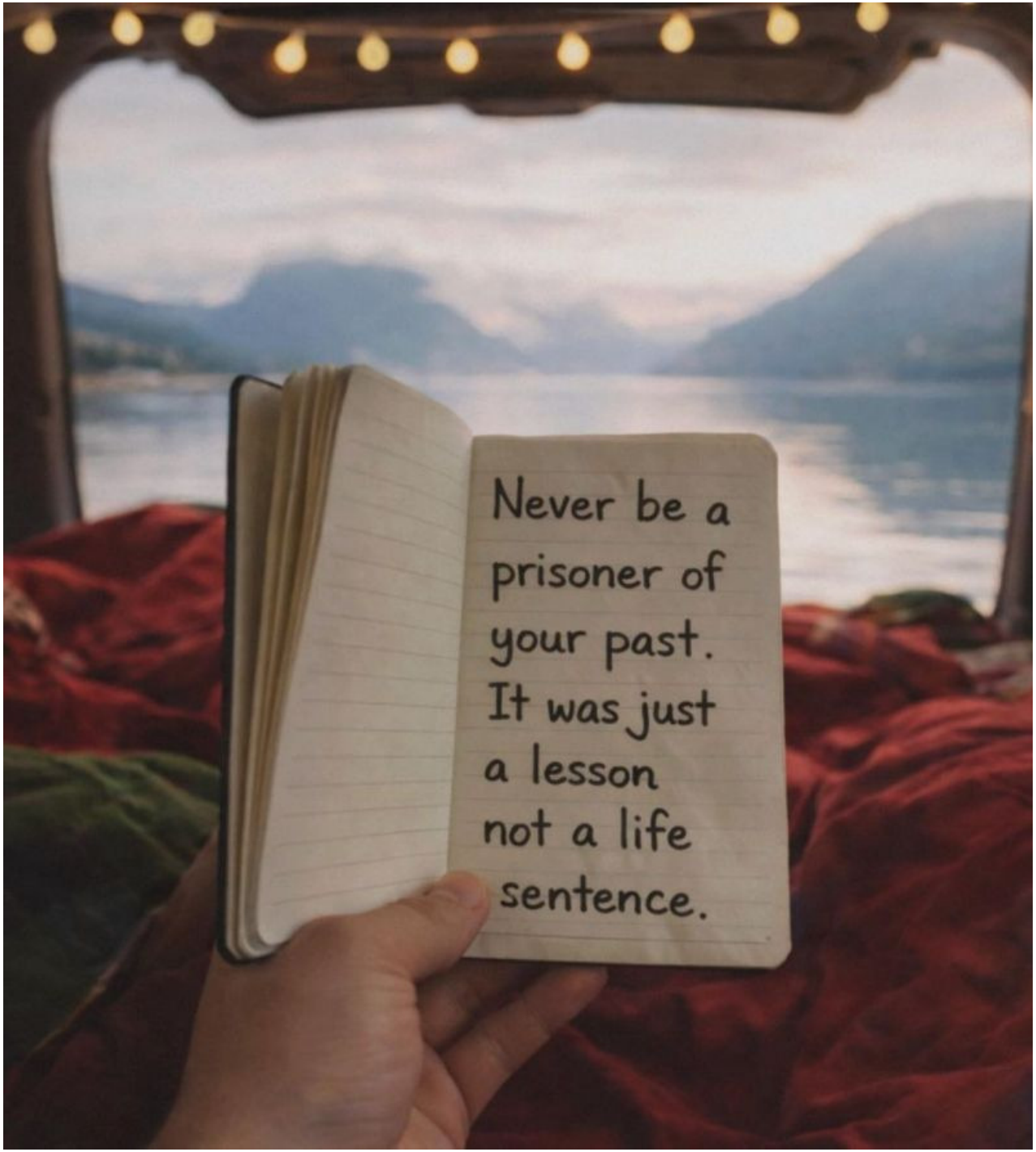
Director of Programs - Help bring CSI to life by coordinating monthly programs. This includes reaching out to speakers, organizations, or product reps to host lunch-and-learns, tours, or occasional evening events. Perfect for someone outgoing who enjoys networking and planning ahead.

Director of Communications - This behind-the-scenes role keeps our chapter connected and informed and includes:

Website Manager – Help maintain and grow our chapter website into a go-to resource for the local construction community.
Newsletter Editor – Pull together a monthly newsletter highlighting chapter news, upcoming events, member spotlights, and industry content.

If you've ever thought about getting more involved but weren't sure how — this is your sign. A small time commitment can make a big difference for our chapter.

Interested? Let us know — we'd love to talk with you! We're hoping to have these roles filled by March 1, 2026.


Never be a
prisoner of
your past.
It was just
a lesson
not a life
sentence.

Certification

The CSI Certifications are designed to educate, inform and validate those in all areas of design and construction. The Nashville CSI Chapter aggressively promotes the Construction Documents Technology (CDT) certification program which is the basis for the other three certifications: CCS, CCCA and CCPR. Starting in February each year the Nashville Chapter provides 10 weeks of two hour classes focused on the CDT criteria. The CDT Certification is a comprehensive overview for anyone who writes, interprets, enforces, or manages construction documents. Classes are open to anyone (within the Gulf States Region) interested. CSI membership is not required and there is no cost to attend the classes. The CDT classes cover MasterFormat, UniFormat, AIA A201 – 2017 General Conditions and various other documents commonly used in construction. To find out more about CSI and the CDT and other Certification programs visit csiresources.org/home and click on Certification. In addition to the CDT classes, the chapter may provide assistance for candidates who intend to take the CCS, CCCA or CCPR exams. For more information contact: Carl Manka CManka@comcast.net or Lynn Jolley LJolley@comcast.net Class information is shown below.

CSI CDT Classes will be live online using Zoom – Thursdays from 5:00 pm until 7:00 pm CST starting February 12, 2026 and running for 10 weeks. Invitation is open to anyone in the CSI Gulf States Region. Membership in CSI is not required to attend these classes. A 2025 CDT Registration form is available on the CSI Nashville website: https://csinashville.org/ Click on Certification.

We will use the CSI Project Delivery Practice Guide (PDPG) – Third Edition as our class text. Students should have access to a digital or hard copy of the PDPG-3. It is available from https://www.csiresources.org/home or check around to borrow a copy. We will also use AIA A201-2017 General Conditions and related documents. Each class is eligible for 2 CEU's. Upon request we will issue an attendance certificate for each class.

Agenda and Class Schedule

Week 1 – February 12 Fundamentals – Domain 1, Chapter 1 plus Introduction & Formats (CM)
Week 2 – February 19 Project Conception & Delivery – Domain 2, Chapter 2&3 (CM)
Week 3 – February 26 Design Process – Domain 3, Chapter 4 (LJ)
Week 4 – March 5 AIA A-201 General Conditions (JWP)
Week 5 – March 12 AIA A-201 General Conditions (JWP)
Week 6 – March 19 Construction Documents – Domain 4, Chapter 5 (LJ)
Week 7 – March 26 Procurement & Preconstruction – Domain 5&6, Chapters 6&7 (SP)
Week 8 – April 2 Construction – Domain 7, Chapter 8 (CC)
Week 9 – April 9 Life Cycle Activities – Domain 8, Chapter 9 & General Review (CM – LJ)
Week 10 – April 16 Mock Exam

Catching up…what has changed in the I-Codes?

By: Lori Greene, I Dig Hardware Blog

With the new year comes the adoption of new codes in many states, with most adopting one or more of the I-Codes – the International Building Code (IBC) and/or the International Fire Code (IFC). These codes are revised every three years, and given the length of time between state adoptions, it can be difficult to keep up with what's new.

When a new state code is adopted, it's important to review the state modifications to see what differs from the model codes. This should be relatively simple as states typically either publish the modifications separately or note them in the state code with a change in font. Studying only the model codes without taking the state-specific requirements into account can result in non-code-compliant projects, so this review is critical.

This article is intended to serve as a summary of some of the more impactful changes to the code requirements related to door openings. A quick read through the list will help determine whether you are up to date, or whether you should take a deeper dive and read a past Decoded article to learn more about the code change. Some of the changes may be clarifications that can be implemented immediately. Some may not apply until the edition of the code is adopted in the project's jurisdiction but could be used to request approval from the Authority Having Jurisdiction (AHJ) before adoption of the complete code.

School Security

Currently, the I-odes permit classroom doors to be locked if certain criteria are met. A change has been approved for the 2027 edition which will require these doors to be lockable from within the room.

The increased focus on school security and safety has led to changes in the I-Codes. Beginning with the 2018 edition, a section was added addressing locking arrangements in educational occupancies. This section permits doors to classrooms, offices, and other occupied rooms to be lockable, as long as certain criteria are met. The section reiterates that the locking method must be compliant with the Means of Egress chapter and that no modifications may be made to listed hardware. The 2018 edition added a requirement for the doors to be able to be unlocked from the outside with a key or other approved means, which allows authorized access for school staff and emergency responders. The 2027 edition of the I-Codes will require these doors, as well as exterior doors, to be lockable from the inside, which means that traditional classroom function locksets will not be compliant. This edition will also require key access from the exterior via at least one door on each building face.

A couple of other changes affecting school security and safety have been added in recent editions of the I-Codes. Although much of the school-security focus is on classroom doors, there are other areas in schools that could be used as safe areas during a lockdown. Prior to the 2024 edition, the IBC did not permit doors serving multiple occupant restrooms to be locked from the inside, to help prevent mischief within the restroom. In order to allow an authorized person using a key or other approved means to secure the restroom from the inside, the International Plumbing Code (IPC) had to be modified. This change was then incorporated into the IBC. When locked, the door must allow free egress as required by the code; this is typically accomplished with a special deadbolt function that has a key cylinder on the outside and inside to project and retract the bolt, and a thumbturn on the inside that only retracts the bolt for egress.

Moving into the next section of this article about electrified hardware, many schools are seeking a solution for “elopement”, which occurs when small children or those with special needs attempt to leave the school unaccompanied. One option for deterring egress is a delayed egress lock, which delays egress for 15 seconds, or 30 seconds when approved by the AHJ. Until the 2018 edition, the I-Codes did not permit the use of delayed egress locks in educational or assembly occupancies, so these locks were not an option for schools. The 2018 edition was changed to allow the delayed egress application on classroom doors serving a calculated occupant load of less than 50 people. This edition and subsequent editions also permit the use of delayed egress locks on secondary exits serving courtrooms – typically assembly occupancies – if certain criteria are met.

More On Electrified Hardware

When a door is equipped with an access control system, the 2024 I-Codes clarify that it must be readily openable from the egress side or must comply with the requirements for special locking arrangements.

In addition to the delayed egress locks mentioned above, there have been many other changes to the code requirements addressing electrified hardware. Just to summarize a handful:

- Normal Locking Arrangements: A very important clarification was made in the 2024 I-Codes, addressing the most common electrified hardware application. Although the codes included sections which applied to “special locking arrangements” (delayed egress, controlled egress, sensor release, etc.) there was no code section for “normal locking arrangements” (doors with access control hardware that allows free egress at all times). The codes now state that if a door is equipped with an access control system, it must be “readily openable from the egress side without the use of a key or special knowledge or effort.” If not, it must comply with one of the sections applicable to special locking arrangements.
- Electrified Hardware Listings: For years, there has been confusion about the listings required for electrified hardware used in special locking arrangements. The 2024 codes were clarified to state that the electromechanical or electromagnetic locking devices are the components of these systems that must be listed. In addition, a second listing option was added, so electrified locks used in special locking arrangements may be listed to either UL 294 – Standard for Access Control System Units or UL 1034 – Standard for Burglary-Resistant Electric Locking Mechanisms. Note that these listings are not required by the model codes for normal locking arrangements.
- Electromagnetic Locks: The mandates for electromagnetic locks have been clarified and categorized into two groups – sensor release and door hardware release. In the 2024 I-Codes, a change was made which prohibits the use of sensor release locks on doors with panic hardware.
- Controlled Egress Locks: Requirements addressing electrified controlled egress locks in health care facilities were first added to the 2009 I-Codes, and the section was clarified over several editions. These locks are permitted to prevent egress until evacuation is needed, for health care units where patients require containment for their safety or security.
- Stairwell Reentry: In the 2024 editions, the requirements for releasing stairway doors for reentry were changed. If stair doors are locked on the stairwell side, they must be released for reentry upon activation of a switch at the fire command center or other approved location, by activation of the fire alarm or sprinkler system, and also upon power failure.
- Elevator Lobby Egress: A new section was added to the 2024 I-Codes addressing electrified hardware on doors serving elevator lobbies that do not have direct access to an exit. Prior editions required elevator lobbies to have a code-compliant means of egress, which could allow free access to the tenant space, jeopardizing security. The added section permits fail safe electrified locks on these doors if all of the requirements of the code are met.

- Interlocks/Control Vestibules: To date, the model codes have not included requirements for interlocks, which are vestibules with one or more doors where electrified hardware prevents more than one door from being opened at any time. A section has been approved for the 2027 model codes that will address this application, which will be defined as a control vestibule.

Panic Hardware

The general requirements for panic hardware have not changed for many editions of the I-Codes. Since 2006, panic hardware has been required for doors equipped with a latch or lock, serving assembly and educational occupancies with a calculated occupant load of 100 people or more, and high hazard occupancies of any occupant load. For these doors, the actuating portion of the hardware (the pushpad or crossbar) must measure at least half the width of the door, and the I-Codes require the latch to retract with no more than 15 pounds of force (read on for more about operable force).

The changes related to panic hardware that have occurred in the model codes are related to other doors where panic hardware is required. The National Electrical Code requires panic hardware on doors serving rooms housing certain electrical equipment; each edition of the code varies slightly, so it's best to consult the adopted code for details. Beginning with the 2021 edition of the I-Codes, panic hardware is also required for refrigeration machinery rooms with an area of more than 1,000 square feet.

Exterior Spaces

The I-Codes now address the locking of exterior spaces when the egress path passes through the interior of the building. One of the requirements is that the lock is key-operated and readily distinguishable as locked, like a double-cylinder deadbolt with an indicator.

Exterior spaces with an egress route passing through the interior of the building have always been a challenge from a security standpoint. Whether it's an enclosed courtyard, a roof terrace or balcony, or even an unoccupied roof used only for mechanical equipment, the door providing egress for these areas could also serve as an entry point for unauthorized access.

Prior to the 2018 editions of the IBC and IFC, these codes did not include requirements specific to unoccupied roofs, such as those intended to be accessed only by technicians servicing mechanical equipment. A reference was added to the 2018 editions in the section called "Locks and Latches" which lists some locations where locks and latches are allowed to prevent the operation of doors. This section states: "Doors serving roofs not intended to be occupied shall be permitted to be locked preventing entry to the building from the roof."

In past editions of the I-Codes, occupied roofs and other exterior spaces had to have the required number of code-compliant means of egress; prior to the 2021 IBC/IFC, this would typically include doors that allow free egress from the courtyard, balcony, or roof terrace into the building. A change was made to the 2021 editions, which allows these doors to be locked if certain criteria are met, preventing access from the exterior space to the building when the exterior space is not occupied. Some of the requirements for these doors include a weatherproof telephone on the exterior side of the door, a key-operated lock that is readily distinguishable as locked, and a window on or adjacent to the exit for viewing of the exterior area. This change also addresses private balconies in residences and offices, allowing them to be locked without requiring the extra safety measures.

Accessibility

A change to the 2021 I-Codes requires the accessible public entrances to buildings of certain types and occupant loads to be equipped with automatic operators.

It has been many years since we have seen a new accessibility standard. The most recent edition of the ADA Standards for Accessible Design were published in 2010 and went into effect in 2012. A new edition of ICC A117.1 – Accessible and Usable Buildings and Facilities is expected to be released soon, but currently the 2017 edition of this standard is the most recent.
Regardless, a few changes have been made to the I-Codes that affect accessibility. One is related to the limitations on the operable force for door hardware. An editorial change was made to the 2010 ADA standards requiring door hardware to comply with the section on operable parts, including a limit of 5 pounds of operable force. This requirement is still in effect, however, the I-Codes and A117.1 have been updated to include limits of 15 pounds of pushing or pulling motion (ex. panic hardware) and 28 inch-pounds of rotational motion (ex. lever handle).

Another change to the I-Codes affects the clear opening height of openings, where door hardware projecting down into the opening could create a point of impact for someone with a visual impairment. Prior editions of the codes and standards allowed door closers and door stops to project down to 78 inches above the floor but did not address other types of hardware mounted in this area. Beginning with the 2021 edition, the IBC now states, “Door closers, overhead door stops, power door operators, and electromagnetic door locks shall be permitted to be 78 inches (1980 mm) minimum above the floor.” The accessibility standards have not yet been updated to address projections beyond those related to door closers and door stops.

Finally, a change was made to the 2021 IBC requiring accessible public entrances in certain buildings to be equipped with automatic operators. The requirement applies to all assembly use groups except A-5 (used for participation in or viewing outdoor activities) with a calculated occupant load of 300 people or more, and for business, mercantile, and R-1 transient residential occupancies (including hotels) with an occupant load of 500 people or more. These facilities require automatic operators on at least one door or one set of doors, for example, the exterior door and the corresponding vestibule door.

Conclusion

Many of these recent changes are due to the efforts of the Builders Hardware Manufacturers Association (BHMA) Codes, Government, and Industry Affairs Committee (CGIA). This committee proposes dozens of door-related changes to the codes and standards during each code development cycle, aimed at making the codes more consistent, and easier to understand and apply. Changes may also be proposed to address emerging threats and new technologies.
Staying up to date on the current codes is crucial for anyone working in the design and construction industry, or in any field that affects door openings. Compliance with the codes and standards helps to ensure that building occupants have free egress, fire protection, and accessibility regardless of physical ability. Lack of awareness can lead to project delays, increased costs, and negative impacts on the safety of the built environment. Reference the adopted codes for detailed requirements, and consult with the AHJ for additional assistance.

Wordless Wednesday: 4-Inch Head (or Jamb?)

By: Lori Greene, I Dig Hardware Blog

My heart sank I saw today's Wordless Wednesday photo posted by Margaret Blake on the Big Door "There's no crying in Hollow Metal" Facebook page. If you're not sure what's wrong here, the borrowed lite has been installed sideways, so the 4-inch head is now a 4-inch jamb. Needless to say, it would be VERY hard to fix if it was installed with masonry anchors (as opposed to existing wall anchors).

But it got me thinking…we've all made mistakes – and hopefully learned from them. What do you think about a new series on iDigHardware talking about the lessons we've learned? If you have one to share, leave a comment or email me at lori.greene@allegion.com.

Wordless Wednesday - Just Eyeball It

By: Lori Greene, I Dig Hardware Blog

Just last week I mentioned the difficulties associated with custom work…I saw these doors in Mexico City and I'm wordless over the lack of coordination between these amazing vintage locks and the trim on the doors – not to mention the location of the pink door vs. the roof above.

FDAI: Inspection Criteria 5

By: Tim Murfin, Allegion

Today's post is the fifth post exploring the inspection criteria for fire door assemblies. The fifth criterion listed in NFPA 80 for the inspection of swinging doors is:

(5) No parts are missing or broken.

In today's guest blog post, Tim Murfin, Manager, Commercial Product Support for Allegion, discusses how our tech support team can help keep fire doors code-compliant.

It could be years (or decades!) before the missing strike for this fire exit hardware is noticed, and in the meantime this fire door is not positive-latching and will not perform as designed and tested during a fire.

Why Fire Doors Must Have No Missing or Broken Parts—and How Expert Tech Support Can Help

Fire doors are a critical line of defense in protecting lives and property during a fire emergency. One fundamental inspection criterion is that fire doors must have no missing or broken parts. This simple requirement is vital because even small hardware components—hinges, latches, spacers, gasketing, or closers—play a crucial role in ensuring the door functions as designed. Missing or damaged parts can cause the door to fail to close or latch properly, compromising its ability to contain fire and smoke.

Installation: The Root of Many Issues

Interestingly, many problems with missing or broken parts actually originate from improper installation. For example, a small shim or spacer that's omitted during installation can cause binding or misalignment, making the door difficult to operate or preventing it from latching securely. Installers sometimes discard parts they don't recognize or misunderstand instructions, leading to "missing" components that are actually included in the hardware kit. This is why following manufacturer installation instructions carefully and using all supplied hardware is essential.

Maintenance and Troubleshooting: Keeping Doors in Top Shape

Over time, wear and tear or environmental factors like humidity can affect door operation. Regular maintenance and inspections help identify broken or missing parts before they become safety hazards. Signs such as sagging doors, sticky latches, or hardware that feels loose or damaged should prompt immediate attention.

This is where Allegion's expert technical support shines. Our experienced team is ready to assist with troubleshooting and maintenance questions, guiding customers through diagnosing issues step-by-step. Whether you're unsure if a part is missing, need help identifying a broken component, or want advice on correcting installation errors, our tech support specialists provide knowledgeable, friendly assistance.

How Technical Support Helps

- Installation Guidance: Our team can walk you through proper installation procedures, verify measurements, and ensure all necessary parts are used correctly. If you suspect improper installation, tech support can help pinpoint the problem and recommend corrective actions.
- Troubleshooting Assistance: If a door isn't closing or latching properly, tech support can help you systematically check for common issues like debris in tracks, hinge bind, or incorrect closer settings. They can also help interpret symptoms and determine if a part needs replacement.
- Parts Identification and Replacement: We maintain detailed parts guides and can help you identify the exact components needed for repairs. While some parts are only available as assemblies for safety reasons, tech support can advise on warranty coverage and how to obtain replacements through distributors.

The Power of Experienced Support

Our technical support team brings over 100 years of combined industry experience. Many have hands-on backgrounds in manufacturing, installation, and repair, giving them deep product knowledge. They handle tens of thousands of calls and emails annually, assisting customers with a wide range of fire door and hardware challenges. Whether you're a seasoned professional or a first-time installer, you can rely on our team's expertise and collaborative approach to get you the answers and solutions you need.

Conclusion

Missing or broken parts on fire doors are more than just inconveniences—they are potential safety risks. Proper installation and regular maintenance are key to preventing these issues, and when challenges arise, Allegion's expert technical support is ready to help. Don't hesitate to reach out for guidance, troubleshooting, or parts assistance to keep your fire doors functioning reliably and compliant with safety standards. Your safety—and peace of mind—depend on it.

FDAI: Inspection Criteria 6

By: Loro Greene, I Dig Hardware Blog

Today's post is the sixth post exploring the inspection criteria for fire door assemblies. The sixth criterion listed in NFPA 80 for the inspection of swinging doors is:

(6) Door clearances do not exceed clearances listed in 4.8.4 and 6.3.1.8.

Are you aware of the current clearance requirements of NFPA 80, which allow up to 3/16-inch clearances on 20-minute fire doors in hollow metal frames?

The clearance under this existing pair of fire doors varies from the jambs to the meeting stiles. Photo: Hal Kelton

Non-compliant clearances around fire doors are among the most common deficiencies found during fire door assembly inspections. The balance between the limitations on fire door clearance and the ability of the door to function during daily use is a constant challenge. Facility managers in health care occupancies and other buildings where fire door inspections are being conducted regularly struggle with the time and resources needed to try to keep doors opening, closing, and latching properly while staying within the clearance limitations of NFPA 80.

The most recent edition of the NFPA 80 standard (2025) addresses clearance under fire doors in Section 4.8.4, and clearance at the head, jambs, and meeting stiles in Section 6.3.1.8. The standard mandates the following clearance limitations for fire door assemblies (measured on the pull side of the door):

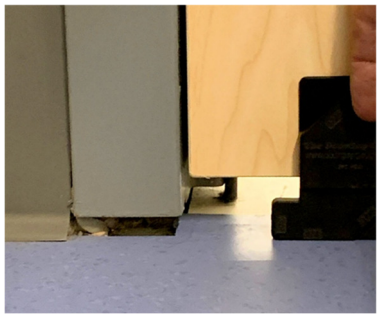
- Clearance at the head, jambs, and meeting stiles of pairs:

◊ Hollow metal doors: 1⁄8 inch +/- 1⁄16 inch, maximum
◊ High-pressure decorative laminate (HPDL)-faced doors, 1⁄3-hour-rated flush wood doors, and stile and rail wood doors installed in hollow metal door frames: 3/16 inch, maximum
◊ HPDL-faced doors, flush wood doors, and stile and rail wood doors with fire ratings greater than 1⁄3 hour: 1⁄8 inch, maximum

◊ Door leaves constructed of other materials: 1⁄8 inch, maximum, unless otherwise permitted in the door, frame, and latching hardware manufacturers' published listings

- Clearance at the bottom of the door:

◊ 3/4 inch, maximum, measured from the bottom of the door to the top of the finished floor or threshold
◊ 3/8 inch, maximum, or as specified by the manufacturer's label service procedure, if the bottom of the door is located more than 38 inches above the finished floor (ex. access door or counter shutter)
◊ Where latches of the hardware project from the bottom of the door, clearance must be in accordance with the hardware manufacturer's installation instructions – not to exceed 3⁄4 inch.
◊ Where a threshold is installed, clearance shall be in accordance with the hardware manufacturer's installation instructions and listings.



When measuring the clearances on fire door assemblies, it's important to use a gauge or tool that can accurately measure the gaps. Photo: Hal Kelton

Fire door clearance problems can be tough to resolve in the field. Shimming hinges with steel shims or replacing hinges may help. There are edge guards, continuous hinges, and other products that are listed for use on fire doors where the clearance at the vertical edges exceeds what is allowed by NFPA 80. With such narrow tolerances of 1/8 inch or 3/16 inch at the head, jambs, and meeting stiles, complying with the clearance requirements while still allowing the door to operate properly can be a difficult balance.

At the bottom of the door, adding a threshold may help to reduce the gap, but care must be taken to comply with the accessibility standards where applicable. There are door shoes and sweeps that have been specifically tested and listed for use at the bottom of the door where the clearance is greater than 3/4 inch, but be sure to check the limitations on door material, rating, and gap size. Standard door shoes and sweeps do not solve the clearance problem; the products must be listed for use on doors with excess clearance.

Door shoes, seals, and other products used to mitigate clearances greater than those permitted by NFPA 80 are addressed in the standard. The 2025 edition of NFPA 80 states:

4.8.4.3 Listed fire door accessories for mitigating bottom clearance more than 3/4 inch (19 mm) shall be permitted.*

6.3.1.8.3 Listed fire door accessories for mitigating excessive clearances between the top and vertical edges of doors and frames, and the meeting stiles of doors swinging in pairs shall be permitted.*

The clearance under this fire door looks like it is in excess of 3/4 inch at the hinge jamb. Photo: Hal Kelton

.Annex A of the 2025 edition further explains:

A.*4.8.4.3 Where clearance under the bottom of a fire door exceeds 3/4 inch (19 mm), door sweeps, door bottoms, or other devices specifically listed for use on fire doors and addressing the excess clearance could be a viable option. Utilization of such devices cannot prohibit the full engagement of the bottom latchbolt.*

A.6.3.1.8.3 Where clearances between the top and vertical edges and the meeting stiles of doors swinging in pairs are greater than the prescribed limit, application of products evaluated for mitigation of excessive clearance are an option if installed in accordance with their listings.

One other way to avoid fire door issues is to help ensure that they are code-compliant from the beginning, by conducting the initial fire door inspection after installation as required by NFPA 80 (2013 edition and subsequent editions). This inspection should be included in the project specifications and will likely reduce future problems for the end user. Without the post-installation inspection, a facility manager may be faced with the responsibility for bring new assemblies into compliance with NFPA 80.

Decoded: Fusible Links and Smoke-Activated Hold-Opens

By: Lori Greene, I Dig Hardware Blog

In the days before hold-open devices on fire doors and smoke doors were actuated by smoke detectors, fusible link closer arms were often used to hold open doors that were required to close if a fire occurred. Fusible link closer arms incorporate a link made from pieces of metal held together by solder that is designed to melt when it reaches a certain temperature, releasing the hold-open and allowing the door closer to close the door. The problem with using a fusible link for this purpose is that during a fire, smoke and toxic gases can pass through the door opening before the fusible link becomes hot enough to release the door. This defeats the purpose of the fire door or smoke door, which is meant to compartmentalize the building, help to contain the fire, and protect the means of egress to provide an escape route for building occupants.

I'm asked quite often if fusible link arms are still allowed to be used on fire doors. The logical place to start is NFPA 80 – Standard for Fire Doors and Other Opening Protectives. Fusible links are addressed by NFPA 80, especially with regard to sliding fire doors, and the standard does not prohibit their use for swinging doors. Door operation is divided into three categories within the standard – self-closing, automatic-closing, and power-operated doors.

- Self-closing fire doors are equipped with a closing device to close and latch the door each time it is opened. A door with a door closer and no hold-open device is self-closing. A door with spring hinges would also be considered self-closing, although spring hinges may not reliably close and latch the door and will not provide the control that a door closer does. Listed spring hinges are allowed by the model codes and referenced standards.
- Automatic-closing fire doors have a closing device and a means of holding the door open that will release and allow the door to close if there is a fire. Some automatic-closing devices allow the door the swing freely as if the door is not equipped with a closer, but during a fire the door becomes self-closing. The means of holding open the door may be part of a closer/holder mechanism, or may be separate from the closing device. While NFPA 80 allows automatic-closing devices to be activated by a fusible link or fire/smoke detector, the model codes require automatic-closing fire doors in most locations to be activated by smoke detection (see below).
- Power-operated fire doors are equipped with automatic operators to open the door automatically. NFPA 80 requires the automatic operators on fire doors to be disconnected automatically if there is a fire, allowing the door to close. The door must close and latch regardless of whether it is opened manually or if there is a power failure. When considering automating a fire door because the door does not meet the accessibility requirements for a manually-operated door, it's important to note that the door will not operate automatically during a fire or fire alarm, as the operator must be deactivated. This likely means that an automatic operator is not a solution to the lack of maneuvering clearance on the egress side of a fire door.

Back to the original question about fusible links…a fire door with a hold-open mechanism that allows the door to close during a fire would be an automatic-closing door. In the section on door operations NFPA 80 isn't very specific about whether a fusible link would be acceptable. Let's check Chapter 3 – Definitions (2025 edition):

3.3.7 Automatic-Closing Device. A device that causes the door or window to close when activated by a fusible link or detector.

3.3.8 Automatic-Closing Door. A door that normally is open but that closes when the automatic-closing device is activated.* (Annex A advises that automatic-closing doors should be kept in the closed position when the building is not occupied, for the highest level of protection against the spread of fire and smoke.)

Because an automatic-closing door is defined as a door with an automatic-closing device, and the definition of an automatic-closing device includes a fusible link as an option, my interpretation is that NFPA 80 would permit a fusible link closer arm. But before you stock up on fusible link closers or specify them for your next project, we need to consider the International Building Code (IBC) and NFPA 101 – The Life Safety Code.

The IBC requires fire doors and smoke doors in certain locations to be smoke-activated; automatic-closing by the actuation of smoke detectors or loss of power to the detector or hold-open. The code also requires smoke-activated doors to begin closing within 10 seconds after the smoke detector is actuated. According to recent editions of the IBC (2024, 2021, 2018 – 716.2.6.6), this applies to automatic-closing swinging fire doors and smoke doors in the following locations:
walls separating incidental use areas (see Section 509)

- fire walls
- fire barriers
- fire partitions
- smoke barriers
- smoke partitions
- shaft enclosures
- waste and linen chutes – discharge openings and access and discharge rooms

Note that this list has changed from the older editions of the IBC (2015, 2012 – 716.5.9.3, 2009 – 715.4.8.3), which require the following automatic-closing swinging fire doors and smoke doors to be smoke-activated:

- doors installed across a corridor
- doors that protect openings in exits or corridors required to be of fire-resistance-rated construction or in walls that are capable of resisting the passage of smoke
- doors in smoke barriers, fire partitions, fire walls, shaft enclosures
- doors in refuse and laundry chutes and access and termination rooms
- certain doors in underground buildings including walls for compartmentation and elevator lobby walls, and
- doors in smoke partitions

NFPA 101 – The Life Safety Code permits automatic-closing doors in buildings of low or ordinary hazard contents or where approved by the Authority Having Jurisdiction (AHJ). The NFPA 101 requirements (Section 7.2.1.8) for automatic-closing doors are:

- the door becomes self-closing upon release of the hold-open mechanism,
- the device instantly releases the door and can also be manually released and the door will then become self-closing,
- the automatic releasing mechanism is activated by smoke detectors in accordance with NFPA 72 – National Fire Alarm and Signaling Code,
- the hold-open mechanism is released upon loss of power to the device, and
- when one stair door is released by smoke detection, all of the door leaves serving that stair will close.

More information about detectors, including the locations where they must be installed, can be found in NFPA 72, as well as NFPA 80. One of the common questions with regard to NFPA 72 is whether smoke detectors used for door release must be monitored, as some hold-open devices include an integral smoke detector that is not typically monitored by the building's smoke detection system.

I had to get some assistance from NFPA on this question, but I was assured that these smoke detectors are not required to be monitored by the system. This is spelled out clearly in paragraph 21.9.2 of the 2025 edition of NFPA 72 (21.8.2 in older editions):

21.9.2 Other than smoke detectors used only for door and shutter release and not for open area protection, all detection devices used for door and shutter hold-open release service shall be monitored for integrity in accordance with Section 12.6.

NFPA 72 Handbook: Monitoring for integrity is not required for detectors integral to the door assembly, or stand-alone detectors not connected to the fire alarm system.

If you've read NFPA 72, you may have noticed the next paragraph, which seems to contradict the exception above, but because Class D circuits are used, the referenced sections do not require the detectors to be monitored, as explained in the NFPA 72 Handbook:

21.9.3 Unless installed as Class D circuits in accordance with 12.3.4, all door and shutter hold-open release and integral door and shutter release and closure devices used for release service shall be monitored for integrity in accordance with Section 12.6.

NFPA 72 Handbook: Generally, magnetic door release appliances are installed so that they release on loss of power. Where Class D circuits or pathways are used in accordance with 21.2.6, fail-safe operation is provided and monitoring for integrity is not required.

The codes in your jurisdiction may vary so check the local requirements, but the bottom line is that there are very few locations (almost none) where fusible link closer arms are currently acceptable for use on fire doors or smoke doors. This is to protect the means of egress from becoming compromised by smoke prior to the release of the fusible link.

Quick Question: Automatic Operators on School Entrances

Lori Greene, I Dig Hardware Blog

This is a great Quick Question, and it has come up several times lately:

According to the 2024 IBC, would an accessible public entrance serving a school auditorium with an occupant load of 400 people require doors with automatic operators?

In a past Decoded article, I covered the requirement that was added in the 2021 edition of the International Building Code (IBC), requiring the accessible public entrances in some buildings to have doors with automatic operators. You can review that article for detailed information on the change, which was carried forward into the 2024 edition of the code.

One of the use groups that this requirement applies to is Group A – Assembly, with the exception of A-5, which applies to assembly occupancies for outdoor activities, like stadiums, grandstands, bleachers, and amusement park structures. For Groups A-1, A-2, A-3, and A-4 with a calculated occupant load of more than 300 people, the accessible public entrances must now have at least one door/one set of doors (ex. exterior and vestibule) with automatic operators.

Would this requirement apply to schools, which are typically considered Group E – Educational occupancies? How does the code address the assembly spaces within a school – the gym, auditorium, library, cafeteria, etc.? In Chapter 3 of the IBC it states, “A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy.” This means that if there’s a space used for assembly purposes in a group E occupancy, it can be considered part of Group E. BUT – there are some limitations.

If we dig a little deeper in the IBC Commentary (a version that includes explanatory information about the code), it explains that there are many types of assembly spaces within a typical educational facility, which can be considered an extension of the Group E classification. BUT, the Commentary states: “The assembly functions are to be used solely by the students and staff of the school. If the spaces are to be used for functions where more than the students and staff are in attendance. they would be classified into the appropriate Group A occupancy based on their specific function.”

The Commentary goes on to give examples of other uses of these assembly areas, such as a meeting of a community service organization or a community crafts fair. Using the spaces within the school for purposes like these would require the assembly spaces to be classified as Group A. With this in mind, and seeing no exceptions in the section for auto operators on accessible public entrances, my opinion is that the requirement would apply to the accessible public entrances serving the assembly areas of the school, if those areas are sometimes used for events where people other than students and school staff are present.

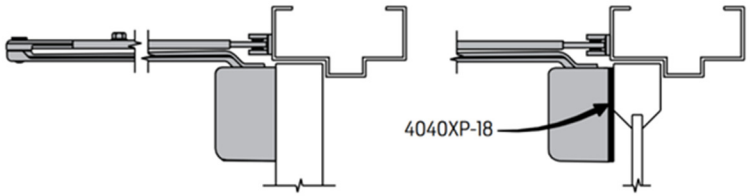
What's That? Drop Plates

Lori Greene, I Dig Hardware Blog

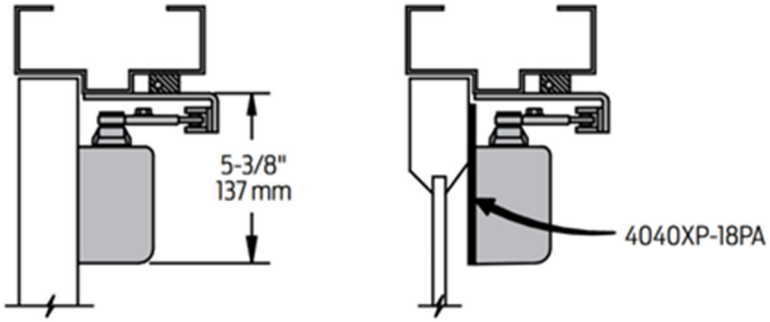
For several decades, the trend was to have storefront doors with the narrowest stiles and rails possible. I was never a fan, due to the durability issues sometimes seen in these doors along with the complicated hardware applications. Fortunately, the accessibility standards requiring a flush, smooth surface measured 10 inches up on the push side of the bottom of the door led to wider stiles and rails as a standard.

I remember learning about drop plates for door closers because of my failure to detail them on a project back in the late 80's. I loved being a detailer, but WOW – there are a lot of details to keep track of! In today's "What's that?" post I want to take a quick look at drop plates.

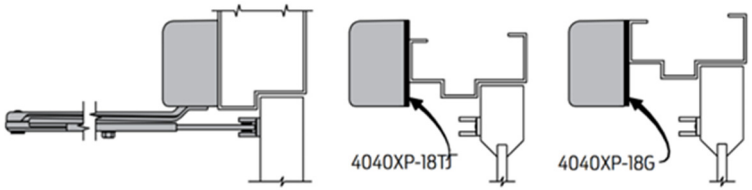
The tricky thing about drop plates is that they are specific to the closer model and also the mounting type. For example, the LCN 4040XP closer mounted regular arm requires a minimum top rail on the door of 3 3/4 inches. For a narrow top rail, the 4040XP-18 drop plate is required, and the minimum top rail is 2 inches.



The 4040XP mounted parallel arm requires a minimum of 5 3/8 inches + the stop height to be mounted without a plate. If a top rail of that size is not provided, the 4040XP-18PA plate is required, which needs a minimum of 2 inches + the stop height.



There are drop plates for frames too…when the 4040XP is mounted top jamb, a frame head of less than 3 1/2 inches in height will require a plate. The 4040XP-18TJ plate requires a minimum frame head of 1 3/4 inches. To move the closer down further on the head (for example, to install an overhead stop or to accommodate a flush ceiling condition), the 4040XP-18G plate is used and also requires a minimum of 1 3/4 inches of frame face. Using these plates will also affect the minimum top rail of the door.



The other thing about drop plates is that they are almost always visible from the opposite side of the door. Without the plate you'd be looking at the backside of the closer, so I guess the plate is an improvement; it also provides something to mount the closer to. But I do remember architects being surprised to see the plate, so it's worth mentioning. Here are a couple of examples that I saw recently:

than fossil fuels. Natural ventilation shafts transform into vertical atriums that organize circulation and create dramatic spatial sequences. Light wells and clerestories shape building volumes while eliminating artificial lighting requirements.

notice how GPS never says,
“made a mistake.”
it simply says,
“recalculating route.”

in 2026, embrace the detours,
adjust the course,
and keep moving forward.

heather hurt

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