

# Door Security Safety

DHI'S PUBLICATION FOR DOOR SECURITY + SAFETY PROFESSIONALS

NOVEMBER/DECEMBER 2021



## Fire Door Inspections, Maintenance and More

### INSIDE:

- + REMEDIATING FIRE DOORS
- + HANDLING CODE-COMPLIANT FIELD MODIFICATIONS OF FIRE DOORS
- + A STANDARDS APPROACH TO LIFE SAFETY
- + SPONSORED CONTENT: INVESTING IN THE COMMITMENT OF CONTINUING EDUCATION



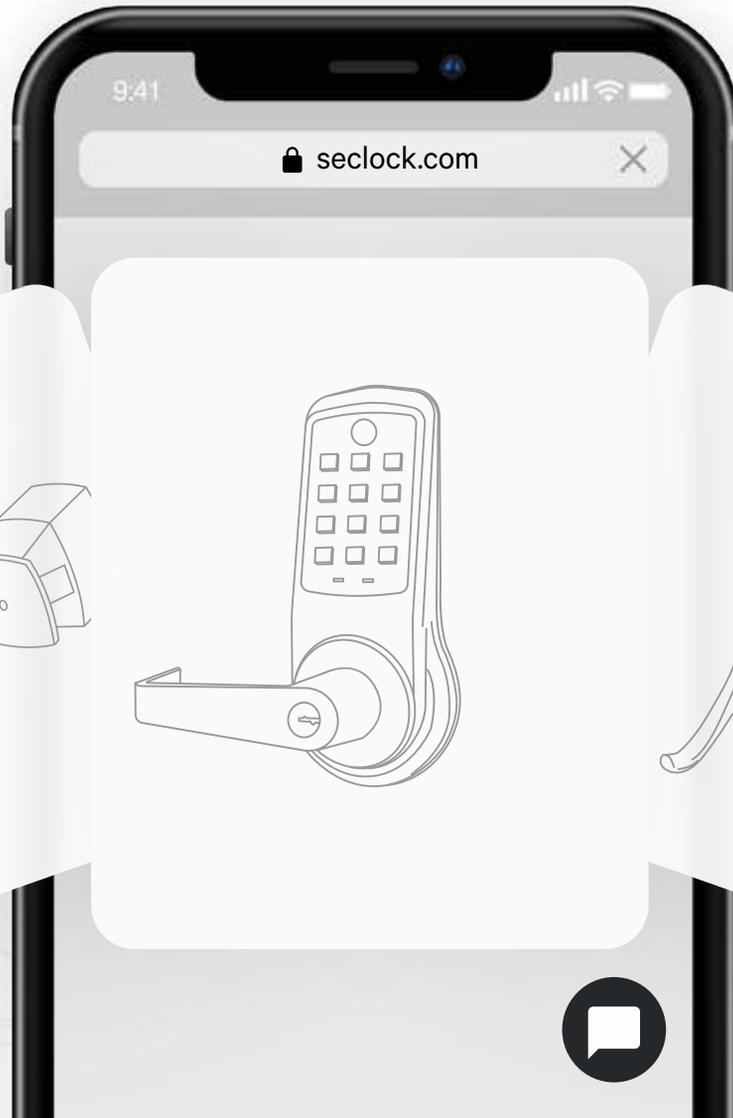
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# A VISION FOR SUCCESS



**CEDRIC CALHOUN**, FASAE, CAE, is Chief Executive Officer of DHI. Email: [ccalhoun@dhi.org](mailto:ccalhoun@dhi.org).

**THE RECENT DHI CONNEXTIONS EVENT IN NEW ORLEANS WAS REMARKABLE FOR JUST WHAT THE NAME SUGGESTS—CONNECTING PEOPLE IN OUR INDUSTRY IN PERSON FOR THE FIRST TIME IN TWO YEARS. WHAT A DIFFERENCE IT MAKES! FOR ME, IT WAS THE FIRST TIME I MET MANY DHI VOLUNTEER LEADERS AND MEMBERS. THEIR IDEAS AND ENERGY WERE INVIGORATING AND WILL HELP US MAP A BRIGHT FUTURE FOR DHI.**

The dominant theme: education. Developing professionals and the credentialing and certification programs that DHI offers are critical to building and maintaining the technical expertise and credibility that are so important in working with customers across a range of end-user industries. The pandemic taught us that we can offer training and certification online, but it is not a complete substitute for in-person learning. Instead, it simply opens up more options as we move forward.

I envision a future where we bring more education to more people in a more cost-effective manner. DHI chapters, which are critical to reaching members at the grassroots local level, can reemerge in the post-pandemic world and participate in regional education programs to bring people back out for more traditional learning and networking. conNextions could once again host DHI-sponsored education. At the same time, online instructor led and online self-paced instruction will play a continuing role.

But reimagining and building education and training is only half of what lies ahead. The other half is gaining more recognition for our credentialing and certification programs, strengthening them through external standards to enhance their value in continuing education, and marketing the expertise of DHI-certified professionals to other end users who need the skills set we offer.

I also believe—as many DHI members have told me—that the door and hardware industry needs to reach and inspire a new generation of professionals who can lead us into the future. I have never seen an industry filled with so many people

who are incredibly passionate about what they do. Every person I met along the way, including those at conNextions, had an inspiring story they told me about how they started in the industry and how much they enjoy their careers and helping to protect lives while creating safe and secure spaces.

Let's harness that enthusiasm together and find ways to deliver this message to young people at colleges, technical schools and even high schools. Again, DHI chapters can play a vital role in making these connections. Students don't go to school to become door and hardware professionals; it is a "hidden" profession in that regard. But it is a gem they will discover—with our help.

The seeds of our success are all out there. I saw them firsthand at the convention. Each one of you is the catalyst for our future growth and achievements. I was inspired by DHI achievement award winners, Door Security & Safety Foundation (DSSF) scholarship recipients and countless others. Our annual "Friendraiser" to raise funds for DSSF generated \$165,000 in just one evening during conNextions. By the time our many other supporters weigh in, we will have tremendous resources for education and scholarships plus the advocacy work that is so important to advance our mission to promote life safety and security.

Let's continue the powerful momentum and "buzz" that conNextions generated and translate that into an exciting and productive year ahead. I invite all of you to connect with me personally with your ideas and ways you may want to help us reach our goals. Together, we can make this happen. +

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# ANGELA PLUM, DHT, DHC, CDC

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DHI MEMBER SINCE 2006

## BE A FACE OF DHI WE'D LIKE TO GET TO KNOW YOU!

Volunteering to be a "Face" of DHI is a great way to expand your professional network. It allows *Door Security + Safety* readers to get to know you better and also gives you a chance to share your accomplishments and career highlights in our industry. Not ready to be a "Face" but know someone who is? Email Alexandra Walsh at [awalsh@dhi.org](mailto:awalsh@dhi.org) with your nominee. We'll take care of the rest!

### WHAT WERE YOUR CHILDHOOD AMBITIONS?

Like most little girls, I wanted to be a ballerina, a teacher, a veterinarian and, at some point, all at the same time. I finally settled on being an architect, and then life happened.

### WHAT WAS YOUR FIRST JOB?

When I was 14, I was a Librarian Assistant at the Enoch Pratt Free Library, a Blue Chip Summer Program sponsored by Baltimore, Maryland, to keep inner city kids off the streets for the summer and allow them to earn some money. It was a great experience.

### WHAT LED YOU TO OUR INDUSTRY?

By chance, I had two job offers. One company was located 15 minutes from home, and the other company was 40 minutes away. With young kids, it made sense to be closer, so I accepted a project management position with Bunting Door.

### WHAT IS YOUR PROUDEST PROFESSIONAL MOMENT?

Earning my first credentials was definitely my proudest professional moment.

### WHAT HAS BEEN YOUR BIGGEST CHALLENGE?

My biggest challenge has been staying current with codes and practices. The industry continues to evolve, and what was true 17 years ago is not necessarily true today.

### WHAT'S YOUR GUILTY PLEASURE?

Etsy: 24/7 access to vintage treasures with no dust, no lines and no masks. I'm hooked.

### WHAT IS YOUR FAVORITE BOOK/MOVIE?

My favorite book is "A Giraffe and a Half" by Shel Silverstein because it reminds me of my granddaughters. We laughed so hard reading that book together. It makes me smile every time.

### WHO DO YOU CONSIDER A MENTOR OR HERO?

My mom is my hero. She's strong and resilient and taught me to be independent.

### WHAT IS THE BEST ADVICE YOU EVER RECEIVED?

A colleague once told me that the work will still be here if you take a lunch, and that's so true. I have shared that advice many times.

### WHAT IS THE BEST ADVICE YOU NEVER RECEIVED?

Work hard, do your best, but don't take life so seriously.

### HOW HAS YOUR INVOLVEMENT WITH DHI SUPPORTED YOUR CAREER?

From the beginning of my career, taking part in DHI classes has been invaluable. It took a lot of time when you had to take all the prerequisite classes to achieve diplomas and, ultimately, sit for your credential exams, but you got a lot of knowledge and made some friends along the way. It's a little different now, but DHI continues to meet today's needs and is as much a resource for new industry professionals as it is for veterans like me.



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# Remediating Fire Doors

FROM OLD SCHOOL TO NEW, TOOLS TO FIX THE MOST COMMON NONCOMPLIANT OPENINGS.

BY HAL KELTON, AHC, CDC, CFDAI, CDT, RCI

This fire door has good code-compliant clearances. However, many doors do not comply due to excessive gaps and other issues.

Industry professionals know the varying levels of noncompliance with new and existing fire doors, and not many of us can walk through an opening without picking out a few.

Looking at the top 10 noncompliant conditions of fire doors, more than half of them are related to door and frame clearances. These top 10 infractions are determined by demographics compiled from inspection companies and end users using DOORDATA Solutions inspection software throughout North America. These general statistics are based on more than 200,000 openings. Here are five of the top 10 noncompliant clearance issues:

- Door top: 21%
- Door lock edge: 17%
- Hinge jamb: 9%
- Between pairs of doors: 4%
- Door bottom: 3%

In NFPA 80, 2019 4.8.4 & 6.3.1.7, clearances cover more than half of the top 10 noncompliant conditions found in the field today. There are many traditional ways to adjust these openings within compliance, some more well-known than others, and several new “fire door accessories” exist on the market to make this process a lot simpler. We will look at the top of the opening and work our way down from there.

### Top of Door

Top of door clearance is the single biggest issue facing building owners today. It is usually the first sign of an improperly installed opening or one that is cycled and/or abused more than accounted for in the original design considerations.

Realizing that the gaps allowed for all fire ratings at hollow metal x hollow metal (HMxHM) openings are  $1/8"$  +/-  $1/16"$ , the same tolerances are allowed for high pressure decorative laminate (HPDL) and stile and rail wood doors up to 20 minutes.

Fire ratings above 20 minutes on HPDL, stile and rail, and all other door materials are allowed up to  $1/8"$  clearance. Since the door sag is usually limited to  $1/8"$  +/-  $1/16"$ , most old and new solutions focus on that first  $5/16"$  tolerance. When top clearances start to exceed  $5/16"$ , there are usually excessive tolerances or incorrect machining at the frame and/or door hinge preps, or non-square openings creating much larger gaps across the top of the door and frame.



This door hinge edge gap is too wide and needs to be remediated.



An excessive gap between a pair of doors is a problem that needs to be fixed.



The bottom of one side of this pair of doors shows an excessive gap that needs remediation.



This gap gauge shows that the gap at the top of the door is more than 1/4", which is too wide.

A common practice to remediate excessive top of door clearances is to shim the hinge with steel shims, adjusting the plumbness and level of the door as it sits in the frame.

Adjusting the swage of a hinge can also help with the top clearance. It is one of the most common practices for hinge jamb clearance adjusting and should be done with trepidation as it can cause more harm than good.

Another solution is a custom offset butt hinge. Hager Companies has various specialty hinge configurations to help increase or decrease the top of door clearance such as drop leaf, unequal leaf centered and short leaf.

A continuous hinge is another option for a top-of-door fix. In this solution, you'll swap out all the existing butt hinges, fill with steel filler plates and add a retrofit geared or pin-and-barrel hinge in any number of configurations based on their fire listings. This solution also gives you an opportunity to eliminate excessive clearances at the hinge and lock edges in one step.

### Product Solutions

Luckily, there is a plethora of new and innovative products to help with the top-of-door clearance.

For 20-minute opening applications, NGP and Lorient offer adhesive-applied intumescent products 9200DKB and Technofire 2000. These are easily applied to the door or frame and can be field painted. Outside of shimming, using these fire door accessories are the fastest and least expensive way to regain compliance on a 20-minute opening, top-of-door clearance.

These are excellent options for the hospitality and housing markets where 20-minute ratings make up most labeled openings. But when the ratings increase from 45 to 90 minutes, the top of door clearance solutions are more complex. The following manufacturers have "Fire Door Accessory" listings for their top of door excessive clearance solutions:

- National Guard Products GapGuard™
- Active Fire Door Products gap filler
- Crown Fire Door Products "Top Door Systems" gap filler or stop extension
- PEMKO "Excessive Gap Solutions"

The method, maximum fillable gap and cost will differ from one manufacturer to another. In some instances, a soffit-applied solution will conflict with a fire exit hardware device latching, door coordinator, parallel arm brackets or applied gasketing. You will need to ensure the solution you choose can be implemented in your specific

application without creating compatibility issues with other builders' hardware.

Active Fire Door Products offers a gap filler product in steel or aluminum that can fill up to a quarter inch. For gaps more than a quarter inch, a matching thickness soffit plate will need to be added. Crown Fire Door Products had one of the first accessories in the market for top of door. Its top-of-steel door solution is a stop extender with integrated bulb gasketing and intumescent seal for use up to 180 minutes. For wood doors, the company has a door extension/cap for use up to 90 minutes. NGP and Pemko both offer systems focused on soffit and gasketing as well as door extension/caps for both wood and metal doors, all up to 90 minutes.

### Lock and Hinge Edge

Lock and hinge edge clearances are usually handled by shimming the hinge with steel shims or adjusting the hinge swage. Hinge Tweaker and Hinge Doctor both make a tool that easily adjusts the hinge swage. Take note to never adjust the hinge swage on a power transfer hinge. Like trying to bend thick copper tubing, at a point bending becomes pinching, and you never want to pinch wires running through a hinge raceway.

The same geared or pin and barrel hinge used to help with the top-of-door clearance could also alleviate an excess gap on the lock and/or hinge edge. The decision to use a full-surface, half-surface or concealed mount hinge is based on the gap clearances that need remediating.

The new rabbit and soffit mounted Fire Door Accessory products described for top-of-door clearances have similar applications and tolerances for the vertical perimeter of a door and frame 20 to 180 minutes depending on the manufacturer. Remember, when a filler is used on the latch side of the door, you will likely need to shim the strike to ensure the proper latch engagement to comply with the fire door and hardware listings.

### Between Pairs of Doors

The clearance between pairs of doors is still a moving target as innovators test and market new fire door accessory products. A couple of these products have already been tested and marketed, and the rest are getting final approval for meeting edge gap filler utilizing their current perimeter products and some have a completely new product specifically for meeting edges. The balance should have their listings for meeting edges very soon. This is another great reason to keep your product libraries up to date.

### Door Bottom

In regard to bottom of door excessive clearance, NFPA 80, 2019 4.8.4.1/4.8.4.2 clearly indicates up to 3/4" is allowed between the bottom of the door and the top of the finished floor or threshold. One of the simplest ways to correct excessive bottom clearance is to add a threshold, as long as Americans With Disabilities Act (ADA) height requirements are not exceeded. The threshold must also be equal to the jamb depth when less than 4 inches, mounted from face frame to face frame. When the jamb depth is more than 4 inches, the minimum width of the threshold should be 4 inches and mounted under the door to the face frame and extended into the soffit area.

Not all applications are ideal for a threshold. NFPA 80, 2019 4.8.4.3 now allows the use of products evaluated with bottom clearance more than 3/4". There are two things to be gained from this section of NFPA 80. First, just any listed door bottom is not an acceptable solution when the clearance under the door exceeds 3/4". Like adding a threshold to fill the excessive bottom gap, you cannot add a listed door bottom to solve a clearance issue more than 3/4" unless that door bottom has been tested to fill a gap more than 3/4". Active Door Products, Crown Fire Door Products, Pemko and NGP all have tested and listed door bottom gap solutions for filling in greater than 3/4" clearances. These range from 1" to 2" gap fillers.

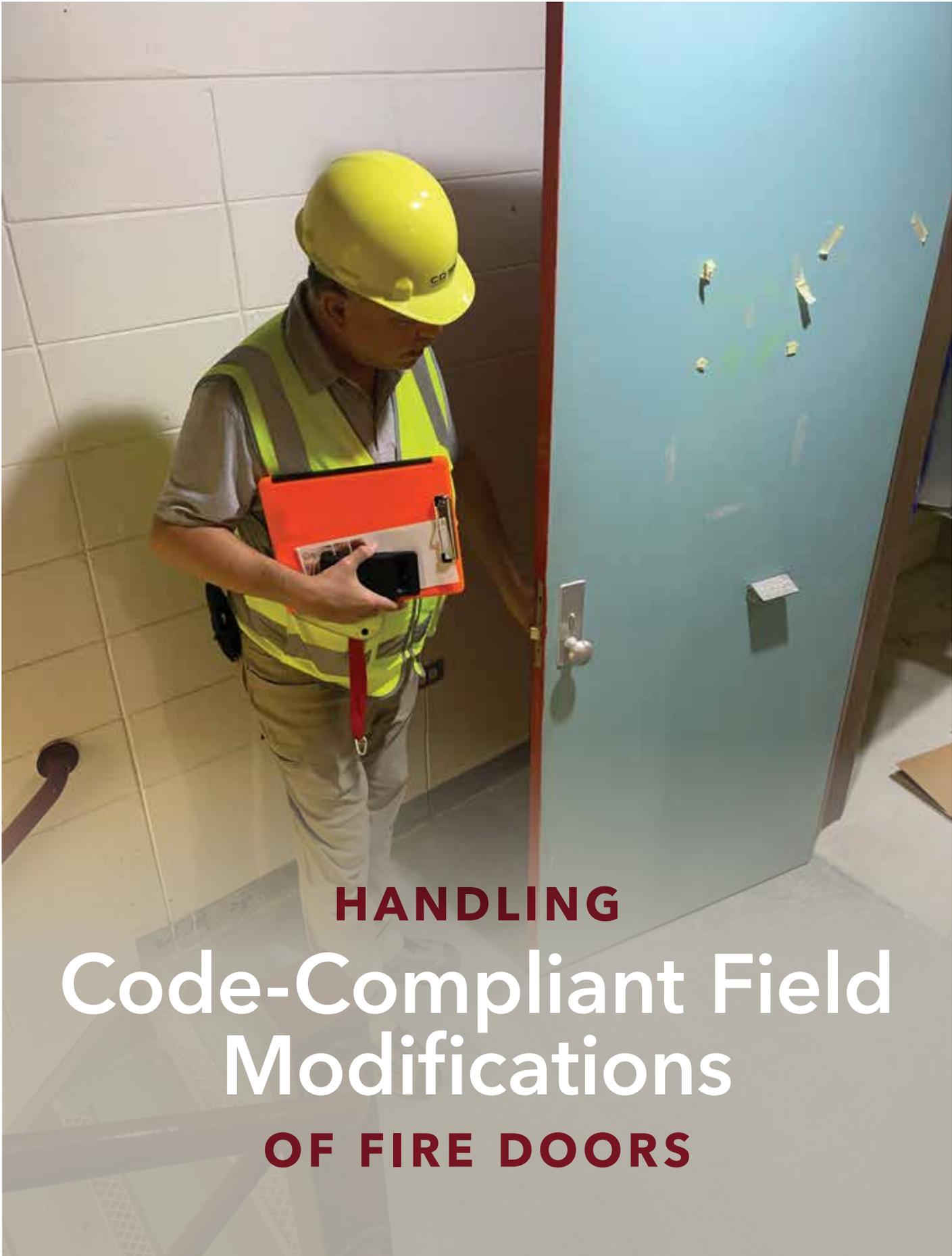
"Unused hole fillers" offered by both NGP and Active Fire Door Products are also useful. Multiple products from these companies can fill not only fastener holes but previous hardware holes that are a quarter inch up to 2 inches. Innovation and testing will often precede standards and building code allowance. While today these may require an authority having jurisdiction or testing lab approval, their use could very well be adopted by NFPA 80 in future versions.

There are any number of ways, from old school to new, to remediate noncompliant clearances. In just 14 years since annual inspections of fire doors were mandated in NFPA 80, numerous products have been developed and codes revised to allow their use to solve the most common reasons for openings being noncompliant. These solutions have come from both big manufacturers and individuals creating small businesses to market and sell their innovations. +



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PHOTO: EIRAM KELTON



**HANDLING**  
**Code-Compliant Field**  
**Modifications**  
**OF FIRE DOORS**

BY JUSTIN HENDRICKS

# Following standards and working with listing agencies keeps occupants and facilities safe.

Over the lifetime of a door and frame assembly, certain changes may become necessary. These can range from the relatively straightforward, such as the installation of a protection plate, to more complex modifications that require certain types of cuts or preparations to the door or frame.

Renovation work and advances in technology, such as access control applications, seem to be some of the primary drivers for these changes to door and frame assemblies.

There are published guidelines for job site preparations and field modifications of fire doors and frames that can be found in the 2022 revision of NFPA 80: Standard for Fire Doors and Other Opening Protectives. This document serves as the governing standard for the installation and maintenance of fire doors, frames and hardware and is referenced in the International Building Code (IBC).

Section 5.1.5.2.2 of NFPA 80 specifies what job site preparations are permitted, which include holes for surface-applied hardware, functional holes for mortise locks, holes for labeled viewers, a maximum three-quarter inch (19mm) wood and composite door undercutting and the installation of protection plates (discussed further in Section 6.4.5).

## Holes

The holes described above are further defined in subsequent sections of NFPA 80, specifically section 5.1.5.2.2.1, which states, “Surface-applied

hardware shall be applied to the door or frame without removing material other than drilling round holes to accommodate cylinders, spindles, similar operational elements, electrified hardware, and through-bolts in doors.” The holes are also defined in section 5.1.5.2.2.2, which states, “The holes described in 5.1.5.2.2.1 shall not exceed a diameter of 1 inch (25.4mm), with the exception of holes for cylinders, unless otherwise permitted by 5.1.5.2.2.3.”

Section 5.1.5.2.2.3 (previously section 4.1.3.2.3) was first incorporated into the 2016 edition of NFPA 80, and the language contained within it is present in subsequent editions of the standard. It allows for drilling round holes exceeding 1 inch (25.4mm) in diameter for surface-applied hardware installed in accordance with the door manufacturer’s and hardware manufacturer’s listings.

It is important to remember that preparations with other shapes, sizes, intended functions and locations on the door or frame beyond what is noted here are outside of the scope of what is allowed to be done at the job site per NFPA 80 and are considered field modifications. These are addressed in Chapter 5 of the standard.

## Undercutting

Additional guidance is given in annex section A.5.1.5.2.2 of the standard for wood and composite door undercutting performed at the job site, which includes a recommendation to verify the internal construction of the doors before proceeding with any undercutting.

This should be done by contacting the supplier or manufacturer directly. Depending on the size of the bottom rail and how much material has been trimmed at the manufacturing or machining facility, additional undercutting at the job site may lead to the structural integrity of the door being compromised in the event of a fire.

Hardware preps within the bottom of the door, such as latch preps (i.e., flush bolt or CVR) or mortised or semi-mortised door bottom preps, will also affect the ability of the door to be undercut. For these instances, the door manufacturer and the listing agency should be contacted as early as possible to discuss potential field modification options to prevent the fire door label from becoming void.

## Wire Raceways

Sections 5.1.5.2.2.4 and 5.1.5.2.2.5 of NFPA 80 provide guidance on drilling raceways for wires at the job site. This work is required to be done in accordance with the door manufacturer’s listing and when permitted by the laboratory with which the door is listed (listing agency).

Certain listing agencies may also have their own qualified personnel program



It is important to not only follow the guidelines set forth in NFPA 80, but to be aware of door and frame assemblies that may have been modified at your facility in the past.

that addresses this type of field-based work on their listed doors (such as Intertek Raceway Installer Program). If the door manufacturer's listing does not contain approval for wire raceways, then the raceway is considered a field modification, and the requirements set forth in Chapter 5 of NFPA 80 must be followed.

### Listing Agency

For field modifications beyond the job site preparations allowed by NFPA 80, the laboratory that lists (listing agency) the modified product must be contacted and provided a written or graphic description of the modification.

Upon review, the listing agency will determine the proper course of action, which may include an engineering evaluation, additional testing or replacement of the affected door or frame. A field inspection visit from the listing agency may also be required depending on the complexity and type of modification.

Certain door or frame manufacturer's published listings may also include additional guidance, allowances or limitations for field preparations. In this case, the door or frame manufacturer should also be contacted

and consulted prior to making any modifications in the field.

The fire door and fire door frame certification labels will provide information pertaining to what agency certifies the product. This is identifiable by the certification mark on the label (such as Intertek/Warnock Hersey, UL) as well as the name of either the manufacturer or supplier, logo or a numerical code that can be used by the listing agency to identify the manufacturer or supplier.

If the door or frame manufacturer or supplier is known, as well as the original listing agency, the listing agency's online public directory can be consulted. This may offer some details of the door or frame products in question, such as the type of hardware that is eligible to be installed on the door.

When in doubt, the listing agency should be contacted, and it can assist with any questions you may have regarding listed products in the field. Keeping an open dialogue with the listing agency as early as possible in the process will help reduce the possibility of issues as you plan any preparations or modifications to a fire door or frame assembly.

It is important to not only follow the guidelines set forth in NFPA 80, but to be aware of door and frame assemblies that may have been modified at your facility in the past. Modifications made to a fire door or frame outside of the job site preparations referenced in NFPA 80 and without notifying the listing agency that certifies the door or frame places the building occupants' safety in jeopardy.

It also risks unnecessary damage to the building in the event of a fire. Even small modifications made to door and frame assemblies may lead to fire and/or smoke spreading more rapidly through a building.

Remember, many disasters are preventable. Ensuring that a facility follows the requirements of NFPA 80 will help protect the integrity of the building and the safety of the building occupants in the event of a fire. +



**JUSTIN HENDRICKS** is Technical Manager - Openings, Building & Construction at Intertek. Email: [justin.hendricks@intertek.com](mailto:justin.hendricks@intertek.com).

# Five innovative locks for sliding door hardware.

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# A Standards Approach to Life Safety

## A comparison of British, European and American standards.

BY DOUGLAS MASTERSON, B.A. (HONS), DIPGAI, MGAI, REGAI

The Irish writer George Bernard Shaw was quoted as saying, “England and America are two countries separated by a common language.”

We certainly know that the United Kingdom and the United States have much in common, but it is not just our language that we share. In both countries, our industries provide high-quality specification and supply of critical life safety products in ironmongery (hardware is known as ironmongery in the United Kingdom), and we both have sets of standards that we faithfully create, use and promote.

This article describes the key standards and the process of how they are developed.

### Standards Developing Organizations

A standard is defined in the Oxford English Dictionary as, “A required or agreed level of quality or attainment.” Standards are a stakeholder-led solution to respond to defined needs and their legitimacy is based on both consensus and consultation.

A Standards Developing Organization (SDO) is defined as an entity with the primary function of developing, coordinating, promulgating, revising, amending, reissuing, interpreting or otherwise producing technical standards to address the needs of a group of affected adopters.

In the United States, organizations such as ANSI (American National Standards Institute), BHMA (Builders Hardware Manufacturers Association), UL (Underwriters Laboratory) and NFPA (National Fire Prevention Association) are SDOs relevant to the door and hardware industry.

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#### EDITOR'S NOTE

The Guild of Architectural Ironmongers (GAI) held an online Members Day in May 2021, during which Laura Frye Weaver, DHT, DAHC, CDC, DHC, CSI, CDT, CCS, CFDAI, Vice-President of Education, Certification and Technical Activities at DHI, and Douglas Masterson, Technical Manager at GAI in the United Kingdom, delivered a presentation that compared standards in the United Kingdom with equivalent standards in the United States.

The presentation can be viewed on the GAI YouTube channel at [www.youtube.com/user/GuildAI/videos](http://www.youtube.com/user/GuildAI/videos). This article clarifies some of the differences and provides further detail for DHI members on how British and European Standards compare to those used in the United States.



In the United Kingdom and Europe, some of the equivalent SDOs include BSI (British Standards Institution) and CEN (Comité Européen de Normalisation/European Committee for Standardisation).

Similar to UL and BHMA, the British Standards Institution (BSI) has a long history. It was established in London in 1901 as the Engineering Standards Committee and received a Royal Charter in 1929, at which point it changed its name. BSI produces British Standards, and as the United Kingdom's National Standards Body, it is also responsible for the U.K. publication of international (ISO) and European (EN) standards (in English). It has more than 40,000 standards in its portfolio, and BSI now operates in 195 countries.

Founded in 1961, CEN is a European public standards organization that provides an efficient infrastructure to interested parties for the development, maintenance and distribution of coherent sets of European standards and specifications.

More than 60,000 technical experts, businesses, consumer and other special interest organizations are involved in the CEN network that reaches over 460 million people.

It incorporates national standardization bodies representing 27 member states of the European Union, three countries of the European Free

Trade Association (EFTA), the United Kingdom and other countries that are highly integrated into the European economy.

The Guild of Architectural Ironmongers (GAI) is DHI's counterpart in the United Kingdom and at the heart of the standards-making process for the ironmongery (hardware) industry in both the United Kingdom and in Europe.

In the United Kingdom, GAI currently participates in 24 BSI committees and drafting panels across several key areas, including doors, hardware, accessibility, security, fire precautions and Building Information Management (BIM). GAI has been involved in the creation of many European Standards for hardware from its earliest inception and represents the European industry in relation to hardware, environmental product declarations and powered pedestrian doors.

### **Product Standards and Life Safety Codes**

ANSI/BHMA standards define different product grades for hardware items. ANSI/BHMA grades products as 1, 2 or 3 with 1 the highest, and the product grades are defined by progressive levels of performance benchmarks in each applicable standard. These standards establish requirements for cycle tests, strength tests, operational tests, material evaluation tests, finish tests and dimensional criteria for the products in the standard.

**TABLE 1**

Product	European Standard	ANSI/BHMA Standard	UL Standard
Locks/latches	EN 12209		UL 437
Bored & Preassembled Locks & Latches		A156.2	
Auxiliary Locks		A156.5	
Interconnected Locks & Latches		A156.12	
Mortice Locks		A156.13	
Single Axis Hinges	EN 1935	A156.1, A156.17	
Controlled Door Closing Devices (closers)	EN 1154	A156.4	UL 228
Emergency Exit Devices	EN 179	A156.3	UL 305
Panic Exit Devices	EN 1125		

Similarly, almost all European architectural hardware standards have a form of grading. They follow a common format to help users understand them. Each product is classified under several performance headings that are generally the same for all products. Classification codes of six digits or more on all products indicate in detail the product performance level for the item.

The classification system, when applied to all items of architectural hardware, enables complementary items to be specified, for example, to a common level of corrosion resistance or category of use or door mass. For instance, BS EN 1935 classifies single-axis hinges using an eight-digit coding system.

Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6	Digit 7	Digit 8
2	7	3	1	1	3	1	10

This marking denotes a single-axis hinge for use in medium-duty situations, tested to 200,000 cycles, for use on doors with a mass up to 60kg, with stated fire door suitability, high corrosion resistance and is suitable for burglar-resistant doors. It has a hinge grading of 10.

In a similar manner to the United States, door professionals in the United Kingdom and Europe are all extremely familiar with our own sets of standards, and these can be prefaced as British (BS) or European (EN) Standards.

BS standards are written purely for the U.K. market, whereas EN standards are written for the wider European market and are then adopted by the member country of CEN and prefaced by that country. For example, in the United Kingdom, the standard becomes a “BS EN,” and in Germany it is a “DIN EN.”

Table 1 compares standards for various items of hardware, but it is important to note the requirements within each standard are not necessarily the same and, in fact, may conflict in some ways.

In the United Kingdom and Europe, as in the United States, manufacturers submit their products for independent testing to these performance standards to testing laboratories that certify them to the corresponding standard if they pass the tests. In the United Kingdom and Europe, this testing and certification process is mandatory for certain products that fall within the scope of what is known as “harmonized” standards in Europe or “designated” standards in Great Britain. These are European standards specifically created to support European and U.K. directives. Compliance with these standards creates a legal presumption of conformity with some, or all, of the technical requirements of a directive.

Products tested to these standards should have a conformity mark such as CE/UKCA/UKNI placed on the product depending on the jurisdiction to which the product is being sold. These marks, when applied to ironmongery products, can help customers be certain that the item will perform well, and help to ensure a safe environment for the building users for many years. These should be conformity marked before entering the market for use in the situations specified in Table 2.

NFPA 101, NFPA 80, NFPA 105 and NFPA 252 are all highly influential life safety codes in the United States that can be used in conjunction with a building code or alone in jurisdictions that do not have a building code in place.

In the United Kingdom, there are equivalents that include the British Standards BS 9999 and BS 9991—codes of practice for fire safety in design,

**TABLE 2**

Product Type	Standard	Usage Locations
Single axis hinges	BS EN 1935	Doors on escape routes and fire/smoke control doors
Door closing devices	BS EN 1154	Fire/smoke control doors
Electrically powered hold open devices	BS EN 1155	Fire/smoke control doors
Door coordinating devices	BS EN 1158	Fire/smoke control doors
Locks and latches	BS EN 12209	Fire/smoke control doors
Electromechanical locks	BS EN 14846	Fire/smoke control doors
Emergency exit devices	BS EN 179	Locked doors on escape routes
Panic exit devices	BS EN 1125	Locked doors on escape routes

management and use in both commercial and residential buildings. Among aspects relating to safe building design, they feature specific wording on the requirements for ironmongery for fire and escape doors. GAI is actively involved in the current revision of both these standards that have extensive implications throughout the United Kingdom.

### Fire Testing Standards

The United States has its own set of standards related to testing fire rated doors such as UL 10C, Positive Fire Pressure Tests of Door Assemblies, UL 10B Fire Tests of Door Assemblies (neutral or negative pressure) and NFPA 252—Standard Methods of Fire Tests of Door Assemblies.



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**TABLE 3**

British Standard: BS 476:22 Minimum fire resistance (integrity) rating	European Standard: EN 1634:1 Minimum fire resistance (integrity) rating	Number of minutes that the doors can resist fire
FD30	E30	30 minutes
FD60	E60	60 minutes
FD90	E90	90 minutes
FD120	E120	120 minutes



In the United Kingdom and Europe, the following equivalent standards—BS 476 22 and EN 1634 1 & 2—vary from each other and vary even more widely from their U.S. counterparts. Fire door ratings (how long the door will be able to resist fire) are indicated in each standard as shown in Table 3.

For a hardware product to carry the relevant conformity marking CE/UKCA/UKNI, it must have been successfully fire tested on a door set to the EN 1634 1 standard, rather than the BS 746 22 standard used only for the market in the United Kingdom and Ireland.

### Accessibility

A U.K. government website has an excellent definition of accessibility:

“Accessibility means that people can do what they need to do in a similar amount of time

and effort as someone that does not have a disability. It means that people are empowered, can be independent, and will not be frustrated by something that is poorly designed or implemented.”

Accessibility is a subject of great importance both in the United Kingdom and in the United States as evident in the standards and legislation of both countries.

In Great Britain, the equivalent of the Americans with Disabilities Act (ADA) is the Equality Act (EA) for England, Wales, Scotland, which was implemented in October 2010. Under this act, all civil rights legislation covering discrimination of various kinds (including the Disability Discrimination Act, Sex Discrimination Act and Race Discrimination Act) was covered.

Northern Ireland has retained the Disability Discrimination Act (DDA), which was the first U.K. legislation protecting disabled people against various forms of discrimination and was implemented in 1995.

In the United States, standards are used to meet the requirements of the ADA. The two commonly used accessibility standards in the United States for new and existing buildings are ICC A117.1 – Accessible and Usable Buildings and Facilities and ADA Standards for Accessible Design.

Similarly, in the United Kingdom there are two highly influential British Standards: the BS 8300-1:2018 External environment code of practice and BS 8300-2 2018 Buildings code of practice. These are wide-ranging standards that relate to many aspects of construction but make specific mention of various types of ironmongery and signage and its application.

GAI is a longstanding member of the BSI drafting panels and committees for these standards, thus ensuring representation on key

issues such as the opening force of doors, and the fixing heights and operation of door handles and clear opening widths.

### Brexit Implications

Many have been concerned by the potential impact of Brexit on standards, but the reality is so long as BSI remains a part of CEN (now agreed to in a post-Brexit landscape), and the U.K. government shows no signs of looking for a divergence in product standards, then European standards will continue to be used in the United Kingdom alongside BS standards.

While terminology such as “harmonized” standards may change to “designated” standards, and “Notified Bodies” to “Approved Bodies,” the standards remain common and should remain so for the foreseeable future.

Northern Ireland will remain a part of the European Single Market under the “Northern Ireland Protocol,” which will align Northern Ireland more closely with Europe than the

remainder of the United Kingdom in relation to product standards and conformity marking. GAI published a GAI Specifiers Guide on this topic that can be accessed, along with 10 others, at [www.gai.org.uk/GAISpecGuides](http://www.gai.org.uk/GAISpecGuides).

Although our two countries may be divided by a common standards language, both are united in the promotion of high-quality hardware and ironmongery specifications that provide effective solutions for fire and life safety. +



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# 2021

## DHI Achievement Award Recipients

BY SARAH MULLEN, DHI EDUCATION AND MEMBER SERVICES COORDINATOR

DHI offers congratulations and thanks to the many people who give so much to the architectural openings industry. We are proud to highlight the award winners who demonstrate exemplary effort and dedication. This year's award recipients are highlighted on the following pages.

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# FOUNDER'S AWARD

DHI's highest and most prestigious award recognizes significant and outstanding service to DHI and the door security + safety industry over an extended period of time.



**REX NEWCOMER,**  
**AHC, CDC, FDHI, CDT**  
**CEO, D.H. PACE COMPANY**  
**42 YEARS IN THE INDUSTRY**

*“Rex encourages all within the Pace family to give back. Whether it is philanthropic ventures or volunteering, whether on personal time or business time, Rex is a role model and leads the way.”*

### How did you get started?

I started in the industry as an entry-level estimator under the supervision of two AHCs. DHI played a key role in my early years by providing me the information that convinced me I could build a successful career in this industry. DHI also provided the formal educational programs that became my roadmap for certification. Thanks to the dedicated work of countless DHI staff and industry volunteers who developed the curriculum, taught the classes and graded the tests, I was able to successfully complete the certification requirements and, as a result, receive recognition as a skilled professional in the industry.

### What contribution does DHI make today to you and your organization?

DHI plays a critical role in the health of our industry, which also benefits my company and me as a member. These include but are not limited to:

1. **Educational Programs** delivered in a flexible format to meet the needs of a diverse student population.
2. **Credential and Certification Programs** to recognize expertise at various levels of achievement and focused on specific areas of expertise.
3. **Advocacy Initiatives** with building code organizations and government officials at the local, state and federal level to promote legislation that promotes safe building codes, standards and building regulations.
4. **Networking Opportunities** to build long-term relationships with suppliers, fellow distributors, architects and code officials, just to name a few.

### What would you tell young professional today entering the industry?

This is a great industry to build your career. What we deliver to our customers is much more than just door systems that fill an opening. We make sure openings comply with fire codes, life safety egress codes and handicapped accessibility codes. We are also responsible for making sure these door systems comply with industry-specific standards that involve food safety, infectious disease control and physical security such as storm, ballistic and blast ratings. If anyone doubts the importance of compliance, all they need do is read about past building emergencies where these standards were not followed. They are all too often tragic stories of necessary injuries and loss of life. What we do as professionals in this industry enhances and saves lives. As an industry, we are also playing a growing role in building security through the integration of access control, surveillance camera and intrusion alarm systems into our door system offering. In the future, building safety, security and accessibility will become even more critical, which will secure the important role served by door professionals.

### What does it mean to you to be recognized by your peers for this award?

I feel blessed to be included on the same list as the past honorees, many of whom have made significant contributions to the progress of our industry.

### Where do you see our industry headed in five to 10 years?

DHI serves an important mission. It creates an environment where highly motivated individuals can build a career and receive professional recognition in many ways equivalent to a college degree for a fraction of the cost. DHI creates skilled industry professionals in a wide range of roles who are strong advocates improving safety, security and accessibility in the buildings where we all live, work and play. The world is becoming a less secure place. DHI trained and certified industry professionals will play a key role in making the future safer. Today, it is up to us to recruit that next generation to our industry and set them on course to be the experts we will surely need in the future.

## FELLOW AWARDS

The Fellow Award is DHI's second highest award, based on service, and is conferred on any DHI member who is deemed to have contributed significant and outstanding service to DHI and the door security + safety industry.



**JEFFREY S. BATICK,**  
**EHC, CFDAI, DHT, DHC, FDHI**  
ARCHITECTURAL ACCOUNT MANAGER,  
ALLEGION  
27 YEARS IN THE INDUSTRY

### What drives you to stay involved with DHI, and how can you share that enthusiasm with members new to DHI and the industry?

Our industry is so specialized, so the best way to learn is by getting involved. It is more than a job; it is a career. DHI reinforces that, not only through education, but from working with and learning from your peers and volunteer instructors. I think the earlier you get involved with DHI, the better. The enthusiasm will follow the more you learn and are involved. It's important to learn all aspects of the business and blaze your own path to what interests you.

### How did you get started?

I got started in the industry as a machinist. I was machining exit device parts for a manufacturer. I was curious and wanted to know what I was building and how it was used. I worked from the factory floor to the tech services department and started my DHI education in 2000 to further my knowledge. Twenty-seven years later, and I am still learning.

### What do you consider your greatest accomplishment?

I cannot think of one single accomplishment that shines above any others. My greatest accomplishment is that I have been able to stay in the industry for as long as I have, continue to grow and remain relevant in the ever-changing climate.

### Where do you see our industry headed in five to 10 years?

The increased focus on shorter construction times, new building methods and advancement in technology will lead to challenges that we need to overcome by becoming more efficient and concise in our respective roles. The time to sharpen your tools is now. Don't delay.

*"Jeff's selfless dedication to his students put their education before his own, allowing many to achieve their DHI credentials before he pursued his own. He has supported his local chapter in many capacities, primarily supporting education within the New England Chapter of DHI."*



**DON D. SHARP,**  
**AHC, FDHI**  
PROJECT MANAGER,  
WESCHE COMPANY OF ARKANSAS  
40 YEARS IN THE INDUSTRY

**What drives you to stay involved with DHI, and how can you share that enthusiasm with members new to DHI and the industry?**

The complexity and diversification of the industry itself. What we do is always changing, and balancing the latest codes and newest products with customer needs has always been a welcome challenge. Meeting new people—actually talking with people and discussing the end user, not sitting behind a computer screen—is what drives me the most. Not every project needs the most expensive hardware or latest technology, so understanding what the owner really needs and providing the control and access to their facility is what drives me.

**How did you get started?**

Just by chance I walked into a door and hardware company in Fort Smith, Arkansas, and asked if they were hiring. I started working in the warehouse and 30 days later was moved inside to train as an estimator.

**What do you consider your greatest accomplishment?**

After all these years, passing my AHC examination the first time!

**Where do you see our industry headed in five to 10 years?**

We need to get younger as a group. We're competing with a generation of computer and keyboard users, and we need to connect what our industry has to offer to what job seekers are looking for; the door and hardware industry offers careers that last a lifetime! What we do matters. We save lives and make the workplace more efficient and safer, and connecting our work and technological improvements to the interests of young people will build a healthy pipeline of talent that we sincerely need.

*"His ability to take technical and complicated items and make them accessible while also building personal relationships is his strength."*



**JAY MANZO,**  
**CPA, FDHI**  
GROUP PRESIDENT,  
APTURA GROUP INC.  
24 YEARS IN THE INDUSTRY

**What drives you to stay involved with DHI, and how can you share that enthusiasm with members new to DHI and the industry?**

I personally believe that increasing the knowledge base of our industry's professionals and also increasing the awareness of the important role our industry plays in daily life safety and security will raise the bar for all of our businesses. These areas are where the DHI and DSSF are primarily focused, and that is why I continue to remain involved with these organizations in terms of support, direction and staff participation.

**How did you get started?**

My participation in DHI began with attending local chapter meetings and events. Later on, I supported my staff's attendance and participation in educational opportunities. Beginning in 2011, I had opportunities to serve on the DHI Strategic Advisory Council, DHI Audit Committee and the DHI Awards Committee. My involvement in the DSSF began in 2012 as a board member, holding various positions through the years including president for three years. It is truly a privilege for me to serve the DHI and DSSF in these volunteer roles.

**What do you consider your greatest accomplishment?**

I cannot put my finger on any single accomplishment, but I am very proud of the results of my collaboration efforts with staff and colleagues. I believe this is one of my strong areas that leads to group buy-in, staff development and success. I also enjoy the thrill of winning.

**Where do you see our industry headed in five to 10 years?**

Our industry will continue to consolidate, but I believe there will always be a need for local market presence, personal relationships and a service-based business model for sustained success. I also believe that companies with similar cultures and business philosophies will continue to gravitate to each other for mutually beneficial relationships, with increased innovation on how these relationships are structured.

*"Jay promotes and encourages our employees to get educated through taking DHI classes and to get involved within our industry."*

## DISTINGUISHED CONSULTANT AWARD

This award is based on technical expertise and may be conferred on any DHI consultant member (AOC, AHC, EHC or CDC) with a minimum of 10 years as a contributing member of DHI.



**RUSSELL HOOKER, JR.,**  
**DHT, DAOC, DHC, CFDAI**  
OWNER, ARCHITECTURAL OPENING  
CONSULTING LLC  
31 YEARS IN THE INDUSTRY

### How has earning DHI certification and taking education courses helped your career?

Working with DHI educated and credentialed professionals had the most profound impact on my career. One of the first things I noticed while attending DHI schools was how much I didn't know and how much I had been taught incorrectly by co-workers who were not DHI educated. I can say without hesitation my DHI education, credentials and the connections of trained professionals I met at the schools propelled my job into my career.

### What does the Distinguished designation mean to you?

This is the pinnacle thus far in my career. Based on the criteria and being nominated by your peers (many of which are fellow DHI instructors, some of the best and brightest in our industry), this is an honor that is heartfelt.

### What advice would you have for someone just starting in the industry?

Get involved and make an impact at the chapter level and attend as many education sessions as possible. The more involved you become, the more you will get in return. Lastly, have a supportive and understanding spouse. I can't thank my wife Tina enough for her support throughout my career. You will find the camaraderie of the DHI family and a career in this industry is well worth it.

### Where do you see our industry headed in five to 10 years?

Electronic access control will remain at the forefront of our industry. The need for highly trained individuals to estimate, build and troubleshoot complex systems will continue to grow. With DHI's updated curricula, certifications and career opportunities, the future is bright for the door and hardware industry.

*"Russ is the first person to hold every certification that is offered by DHI and is very humble about that accomplishment. He has inspired me more than anyone else in the industry."*

# AWARDS OF MERIT

This award is reserved for presentation to any individual (member or nonmember) who has rendered outstanding contributions to the advancement of the aims and objectives of DHI and the door security + safety industry in any capacity.



**KEN COOK**  
DIRECTOR, NATIONAL SCHOOL  
SAFETY AND ADVOCACY, ALLEGION  
21 YEARS IN THE INDUSTRY

## What does it mean to you to be recognized by your peers for this award?

I deeply respect the men and women I work with in the door safety and security industry, so it's a true honor to be recognized. It's also a great opportunity for me to reflect and thank the people who have helped me on my journey in the industry.

## What advice would you have for someone just starting in the industry, and how should they get involved with DHI?

This a dynamic industry with a lot of room for learning and growth. There are complexities in the details of the safety and security business that can be intimidating, but the people are great, and the safety aspect of what we do makes a difference in everyday lives. There are many ways to get involved with DHI through professional growth programs and participating in your local chapter. Networking, building relationships and serving others is a journey I would recommend for anyone wanting to get involved and give back.

## Where do you see our industry headed in five to 10 years?

That's a challenging question since we are currently learning and evolving based on the impacts of a global pandemic. We will need to remain flexible, adapting to changes if we want to grow. At our core, we help protect the health, safety and welfare of building occupants. Hospitals understand how touchless solutions help with preventing the spread of germs and viruses. The benefits of touchless solutions are just now being recognized by building managers outside of the health care industry. As safety professionals, we can help spur the future of our industry and help those working to protect building occupants realize new or greater benefits from innovation and evolution.

*"Ken has contributed immeasurably to not just the institute and industry, but to providing safer environments for our schools across the nation through his efforts on multiple fronts ... he does these things not for recognition but because it is the right thing to do, and that is the person he is."*

# AWARDS OF MERIT (CONTINUED)



**BERT SULLIVAN**  
SALES CONSULTANT, DOOR SECURITY  
SOLUTIONS OF NEW ENGLAND  
32 YEARS IN THE INDUSTRY

**What does it mean to you to be recognized by your peers for this award?**

I'll start by saying I was never looking for recognition. When I saw local chapters folding around the country, I decided to step up and become more active in our local chapter. I took over the local DHI Presidency when the President at that time had to step down. I then stayed on for an additional term to help make sure our chapter stayed on the right path. During those years, we won many Mary Roth Awards, and even held our own trade show when the National Baltimore Show had to be canceled. I must admit I did appreciate the recognition during those years for doing my part in keeping New England a vibrant chapter.

**What advice would you have for someone just starting in the industry and how should they get involved with DHI?**

When an individual joins our industry, they should believe they are starting a career, and not just a job. DHI offers a path for these individuals to become professionals in our

industry. Whether they are looking for recognition or not, the path through DHI will get them recognized, and can lead to more lucrative compensation.

**Where do you see our industry going in five to 10 years?**

We are an aging group of professionals. In five to 10 years, many of the leaders that I am surrounded by will be close to retirement. I do see a fair number of talented young people scattered throughout our territory, but not nearly enough to sustain the level of work that is currently being handled. There are various new programs designed to enhance and simplify the daily grind, but you still need solid staff to manage the load. Serious effort needs to be directed toward delivering our industry message to recruit career-minded young people.

*"Bert has a decade of outstanding service to and participation in the New England Chapter. He has been an integral part of the chapter workings ever since then."*



**NICHOLAS BOTTINI**  
PRESIDENT, COMDOR LLC  
37 YEARS IN THE INDUSTRY

### What does it mean to you to be recognized by your peers for this award?

It has been 37 years and, wow, how quickly it passes. I can truly say I now understand the phrase "If you love what you do, you will never work a day in your life." The knowledge, experience, guidance, respect and friendship that I have shared with everyone in our industry, including those in manufacturing, supply, general contracting, installation and clients, continues to be a privilege and driving force. Our industry is unique in many ways and maybe the most important is that it is hidden from the general public. Let's face it, the only time the average person cares about a door is when it doesn't work. My belief is it takes special people to excel in this industry, and I am humbled by the number of door and hardware professionals who have influenced me, and I am thankful they took time to help me. Like everyone in the industry, I accidentally fell into it and, fortunately, I was accepted with open arms. I would like to share this award with all the people who have helped me along the way. Achievements are not accomplished alone, and the small door and hardware community is great.

### What advice would you have for someone just starting in the industry, and how should they get involved with DHI?

- Pay close attention to those around you who are successful. They are successful for a reason; pick their brain and observe their actions.
- Remember, it is your responsibility to learn as much as it is the responsibility of the employer to teach.

Be interested. Not everyone has an aptitude for this industry, and it is OK if you don't.

- Don't be afraid to have enthusiasm for the trade. It will help everyone who comes in contact with you to also be excited.
- Have confidence. When you are talking about the industry with someone outside the industry, you are the smartest one in the room.
- Most importantly, treat everyone you come in contact with as you would like to be treated. Be honest, professional, helpful, courteous, friendly and humble.

DHI is your industry partner. Whether it is education, guidance or networking, the organization will be invaluable to your overall experience.

### Where do you see our industry headed in the next five to 10 years?

The trend is toward consolidation for manufacturers and distribution, and I assume this will go on for a while longer. When I entered the industry in 1985, most distributors as well as manufacturers were independent. What I believe is that no matter the format or model, our industry has to provide a true professional and complete service to the customer, because the fact is, the door and hardware industry is a mystery for our customers as well as the general public. The company that understands that "customer service" isn't just one part of a business and that it's every part of the business will be a successful and profitable company.

*"Nick finds significant value in sharing his trade knowledge with others in the construction industry. In his decades of experience, Nick has personally trained over 100 people to become industry professionals."*

# MARY ROTH AWARD

This award is conferred to a DHI chapter for presenting an outstanding chapter education program or series of programs.

## NEW ENGLAND CHAPTER



### CHAPTER LEADERS

**President**  
Kim Salvo-Conlon, DHT, FDAI

**Treasurer**  
William R. Hillman, DHT

**Secretary**  
Cheryl Orsi

### Sample Class Topic

"Generational Change of Door Distributors – 5 Keys to Success with Millennials"

### How do you create engaging education and events for your chapter?

Prior to COVID-19, our chapter would hold quarterly in-person meetings, allowing our members to meet in a social setting and also offering a guest speaker with a defined topic as part of the event.

While this past year has been a challenge for everyone due to COVID-19, we as a chapter were determined to still plan a quarterly event for our members.

Our intent was to offer first, second and third quarter meetings remotely and tentatively plan a fourth quarter in-person event.

With COVID-19 numbers on the rise again, we will unfortunately have to postpone the in-person event until early 2022.

Our topics have included: Five Keys to Integrate Millennials into the Workforce; How to Develop and Retain Employees; Experience, Relationship and Education; and IB/NFPA 101 Changes.

We are also developing a program we can present at vocational schools to spotlight our industry as a viable career, to be completed sometime early 2022.

### What advice do you have for other chapters to increase participation and engagement?

Advice on engagement is tricky. We strive to offer something of value to our members, and we champion education, as is evidenced by the number of Mary Roth Awards our chapter has received.

The chapter was significantly impacted several years ago when DHI national stopped collecting chapter dues as part of national dues. That revenue was what provided the local chapters an infusion into their annual operating budget. The loss of revenue significantly impacted our budget, but we strive to offer value in all that we do.

### Are your chapter leaders willing to be a resource for other chapter leaders who may want to reach out and learn from your experiences and success?

Yes. The leaders of our chapter are always willing to help others in our industry.

# ROBERT G. RYAN EDITORIAL AWARDS

This award is presented to the best volunteer authors of an article in *Door Security + Safety* magazine written during the previous calendar year. Awards are presented for business and technical topics.

## BUSINESS ARTICLES



**1ST PLACE**  
**DAVID R. BECKHAM,**  
**AHC, FDAI, SECURITY**  
**BUILDERS SUPPLY**  
*THE IMPORTANCE OF MENTORSHIP*  
**FEBRUARY 2020**



**2ND PLACE**  
**TAYLOR FISCHER,**  
**NEGWER DOOR SYSTEMS**  
*IN DEFENSE OF DOORS*  
**NOVEMBER-DECEMBER 2020**

## TECHNICAL ARTICLES



**1ST PLACE**  
**HAL KELTON, AHC/**  
**CDC, CFDAI, DCT, RCI,**  
**DOORDATA SOLUTIONS**  
*OUR SCHOOL'S JOURNEY TO A LOCKDOWN*  
*SOLUTION*  
**MAY 2020**



**2ND PLACE**  
**KEVIN TISH, AOC,**  
**CFDAI, DHT, DHC, CDT,**  
**HAGER COMPANIES**  
*AVOIDING COMMON CODE VIOLATIONS*  
*WITH SLIDING DOORS*  
**AUGUST-SEPTEMBER 2020**

# *Meet the 2021 Door Security & Safety Foundation Scholarship Recipients*

Door  
Security & Safety  
FOUNDATION

BY SARAH MULLEN, DHI EDUCATION AND MEMBER SERVICES COORDINATOR

The Door Security & Safety Foundation (DSSF) Scholarship Program awards funds to deserving individuals to attend courses offered by DHI.

Since 1997, DSSF has provided more than 230 scholarships. This scholarship program is designed for those seeking technical education from DHI or who plan to earn a DHI certification.

The 12 recipients of the 2021 scholarships are profiled on the following pages, and the named scholarship that each received is noted in their profile. DSSF and DHI offer their heartiest congratulations to this distinguished group.



## ALI AMATO

Assistant Project Manager, Oregon Door Consultants, Portland, Oregon

### HAGER COMPANIES SCHOLARSHIP

**Number of years in the industry:** 1 year

### What does work-life balance mean to you?

I think finding a balance is extremely important when it comes to anything in life. Having too much or too little of any one thing can be harmful in many ways. This also applies when it comes to having a good work-life balance. You can't put all your energy into just one, otherwise you are setting yourself up to be unsuccessful. To me, having a balance between work and my personal life is crucial. I used to put all my energy solely into working and didn't give myself much of a personal life, and while that worked for me for a little bit, I eventually burnt myself out.

### Who is your mentor/hero?

My biggest mentor/hero in my life would be my dad. No matter what I have going on, he is always who I go to whether I need his input on a situation or just someone to listen. He always knows how to help, and for that I am incredibly grateful.

### How do you de-stress?

I usually will take half an hour directly after working to decompress and let go of the stress I was holding onto throughout the day. I normally do this by sitting or lying down somewhere comfortable and meditating. Meditation is something that has helped me a lot throughout my life, so I try to always turn to it when I'm feeling stressed.

### What is the best advice you've ever received?

A good piece of advice I was given early on was "No amount of regretting can change the past, and no amount of worrying can change the future." I tend to worry a lot about what I could have done better in the past or worry about what the future holds, but I've come to realize you lose focus on what truly matters, which is the present.

### Guilty pleasure?

I am ashamed to say but I love reality TV a lot! Some of my favorite shows are "Keeping Up with the Kardashians," "The Bachelor" and "The Real Housewives" series. There is nothing I enjoy more than curling up with my boyfriend and our cats and binging these after a stressful day of work.



## RENE BARRERA JR.

Senior Estimator/ Project Manager, BREX Commercial Door, McAllen, Texas

### CORBIN RUSSWIN/ASSA ABLOY SCHOLARSHIP IN MEMORY OF SHIRLEY HENRY, AHC

**Number of Years in the Industry:** 7 years

### How did you get started in the door and hardware industry?

I got started in the industry about seven years ago installing in the field. My dad had just started his own one-man shop door company and would do small replacement jobs and service calls on which he would take me with him. I started to learn the basics right away, which involved replacing locks, door closers and weather seals. After several months, I learned how to replace entire door units. As my dad started getting more jobs, I then transitioned to doing estimates. I started by doing small service call estimates and, as the years went on, I now work on project estimates that sometimes involve over 50 door units.

### What is the most rewarding aspect of your job?

The most rewarding part of my job is getting quotes approved. I just love the feeling of knowing that our customers are putting their trust in us to provide them with their door needs.

### If you weren't a door security and safety professional, what would you be?

If it wasn't doors, I would probably be a baseball coach. I played baseball all my life, and it has always been my passion.

### Who is your mentor/hero?

My hero is my dad. He is a God-fearing man that has helped me throughout my life and has always believed in me. It is amazing working with him side by side every day in this door industry. He is the person who introduced me to the most amazing industry ever.

### What is the best advice you've ever received?

The best advice I have ever received is to treat others the way you would like to be treated.



## DEVIN BETTORF

Estimator, H&G Sales/Shultz Door (Aptura Group)

### BHMA SCHOLARSHIP IN MEMORY OF ADON BROWNELL, DAHC

**Number of years in the industry:** 4 years

### How do you de-stress?

I spend time with my family outside or read a good book.

### What is your biggest pet peeve?

Oh, man! The gap people leave between cars at a traffic light or a drive-thru line.

### Guilty pleasure?

My biggest guilty pleasure is computers and technology. I really enjoy tinkering with the latest and greatest technology available.

### Who is your mentor/hero?

My mentor within my company, H&G Sales, would have to be my supervisor, Brian Crowley. He really exhibits many positive qualities. These are qualities that I want to further improve on within myself as I move forward in my company and the door and frame industry in general.

### What is the best advice you've ever received?

"Find your passion. If you enjoy what you do, you never work a day in your life."



## ANDREW BUYALOS

*Project Manager, Architectural Products of Virginia, Ashland, Virginia*

**CDT TRIBUTE FUND FOR EDUCATION (OLD DOMINION CHAPTER SCHOLARSHIP)**

**Number of years in the industry:** 4 years

### How did you get started in the door and hardware industry?

I came from the insurance industry after being invited in by my brother-in-law, who is another project manager here. He acted as a mentor to get me up and running in this position.

### What is the most rewarding aspect of your job?

Even though we are a small percentage of each building, it is rewarding to see projects come to a close and knowing that we have a hand in a major project such as a school—not to mention we play a role in safety for the buildings.

### How do you de-stress?

I like to take walks during the workday, and in my spare time, I love to vacation with my family at the beach and am an avid outdoorsman.

### What is your advice to someone considering taking DHI technical education?

Go and attend the schools in person in Lansdowne. It is a fantastic experience, and you are learning from peers and other members of the industry who are mostly volunteering their time. It is nice to get to meet face to face with people from other sides of the industry.

### What does work-life balance mean to you?

Working as a commissioned salesman, it is tempting to commit more time to the work, but I will say maybe the only thing I have enjoyed about the pandemic is working from home more.



## CHRISTOPHER EATON

*Installation Technician, Allmar Inc., Ottawa, Ontario, Canada*

**TCH SCHOLARSHIP IN MEMORY OF GEORGE H. BOOMER, SR.**

**Number of years in the industry:** 4 years

### How did you get started in the door and hardware industry?

My father is an AHC and has had an excellent career. I started as a shipper/receiver in 2011 before following my ambitions in aviation. When the pandemic hit, I lost my career as an aircraft maintenance engineer. Along the way, my dad had encouraged me to look at the door and hardware industry once again. When my family moved back to Ottawa, I was able to utilize my technical skills and experience to re-enter the industry.

### What is the most rewarding aspect of your job?

When installing automatic operators, it is rewarding knowing you have helped improve the accessibility of your city and local businesses.

### How do you de-stress?

I like to be active. I play soccer, golf and hockey. My fiancée and I also really enjoy hiking.

### What is the best advice you've ever received?

During my college graduation, the guest speaker spoke to the importance of perseverance. Sometimes you must deal with the tough days, but if you can persevere, your potential is limitless. I always try to think back on that when I am having a tough day, in all aspects of my life.

### What does work-life balance mean to you?

To me, work-life balance means that you can be satisfied with your time away from work so you can be your most productive and engaged while you are at work. In my previous career, I was used to working nights for long stretches of shift work. I missed Christmases, New Years, birthdays and weddings. I never really thought about the toll that takes until I began to work "normal" 9-5 hours again. Getting back that time to spend with family or see friends—there's nothing better.



## RYAN E. GRAW

*Project Engineer/Estimator, McBride Door and Hardware, Poway, California (San Diego, California)*

**CECO DOOR/ASSA ABLOY SCHOLARSHIP IN HONOR OF JA BURBIDGE, AHC**

**Number of years in the industry:** 12 years

### If you weren't a door security and safety professional, what would you be?

A full-time comedian, an architect or a police officer. I always wanted to be a police officer that made people happy, specifically by letting people go when getting pulled over for a ticket!

### Who is your mentor/hero?

My first door and hardware foreman. One day on a lunch break, he took me to McDonald's just so I could have my first cup of coffee. I guess he needed a little bit more out of me that day. Today, he's still my hero!

### What is your advice to someone considering taking DHI technical education?

I once heard "If you're green you're growing, and if you're ripe you're rotting." I would suggest to anyone interested in learning more to go for it! Don't think you know everything and keep evolving constantly. Especially in this industry. Keeping an open mind is such a secret sauce across all sorts of disciplines. That primarily includes continuing education. You got this!

### What is the best advice you've ever received?

I had a tough time in my early youth where I truly learned the valuable lesson that you cannot love others unless you love yourself first. If you don't love and care for yourself and your health daily, then it can be difficult to be the best of whatever else it is you want to be. Health is number one.

### What does work-life balance mean to you?

Ultimately, it means that who I am and what I give to my work should be just as driven and focused as how I am and want to be for my family. That balance is important because I want to give that same effort at home as I do while I am at work. Sometimes I can't always give it all away to the industry. That's true integrity and authenticity. That's why I love doors and hardware!



## STEPHEN KLEPPINGER, DHT

Senior Project Manager/Estimator, Kinship Group LLC, Auburn, Washington

**PUGET SOUND SCHOLARSHIP IN HONOR OF H. STEPHEN BETTGE, DAHC, FDAI**

**Number of years in the industry:** 24 years

### How did you get started in the door and hardware industry?

By accident. I needed a job with better health insurance. A friend at the time was a general manger at the Essex NE Service Center in Bethlehem, Pennsylvania. That was before ASSA ABLOY bought Curries, Yale, Rockwood, Mckinney, etc. Now it's called ASSA ABLOY NE Service Center in Easton, Pennsylvania. Once I started, I've been in it ever since.

### How do you de-stress?

Run, hunt and fish, and lift.

### Who is your mentor/hero?

Not so much a mentor but my hero. Josh Wingard, my closest friend, saved the lives of everyone in his training class on the 40th floor in Tower 1 on 9/11. His quick thinking got them all out! Despite the horrors he witnessed and the trauma he suffered, he stills maintains his joy, love and loyalty for God, family and friends.

### What is your advice to someone considering taking DHI technical education?

It's a great tool to build confidence on the work you are embarking in.

### What is the best advice you've ever received?

A line from a TV show actually. "Doing the right thing begins at the beginning of the day, not after you've been caught." –John Crichton, "Farscape." To me it means we need to question our motivation for doing good for/to others, not looking to gain the advantage of someone else in a dishonest or selfish way.



## TIM MEYERKORD

Project Manager, H&G Sales/Schultz Door, St. Louis, Missouri

**JOSEPH G. LESNIAK, DAHC, MEMORIAL FUND**

**Number of years in the industry:** 7 years

### How did you get started in the door and hardware industry?

Prior to my employment with H&G Sales, I had over 10 years of construction experience as a general contractor. So, I knew some install knowledge. Since hired with H&G, each year I have learned more and more about this exciting industry

### How do you de-stress?

At work, I will take a walk away from my desk or go outside and enjoy some fresh air. At home, spending time with my wife and our two pit bulls.

### If you weren't a door security and safety professional, what would you be?

If I had the opportunity to change my schooling and career choices, without a doubt I would have become a veterinarian.

### Who is your mentor/hero?

My dad, hands down. I always go to him for advice, and he has always pushed me to become the man I am today.

### What does work-life balance mean to you?

To me the most important thing is to not bring work home, plain and simple. When I am at work I will focus and give everything my best effort. Once I hit my scheduled time off, I don't take work with me and just focus on what is important in my life.



## TIFFANY PEREZ

Hardware Supplier, American Building Specialties, North Little Rock, Arkansas

**THE CHARLES W. MULLINS, DAHC, MEMORIAL SCHOLARSHIP**

**Number of years in the industry:** 4 years

### What is the most rewarding aspect of your job?

I enjoy being able to solve problems and build good working relationships with different contractors. It's a good feeling when they ask for you by name because they trust you will get the job done.

### How do you de-stress?

I have five flowerbeds that I take my aggression out on. It's a good way to take out some frustration, and you also get a good-looking end result.

### If you weren't a door security and safety professional, what would you be?

A marine biologist. That's what I always thought I would be when I grew up.

### Who is your mentor/hero?

Don Godwin. He is my boss and also one of my closest friends. He has taught me not only about this industry, but about life. When I need advice about anything, I go to him. He has shown me what true strength and work ethic is, and I wouldn't be where I am today without him.

### What does work-life balance mean to you?

It means making sure your family is happy and healthy as well as taking care of your responsibilities at work. I am lucky enough to work at a place where they understand that family comes first. I have brought my kids to work with me several times. Sometimes it's OK to take that day off to spend with your family because they require a little extra attention. At the end of the day, they are what matters. But you also have to make sure you aren't neglecting your responsibilities at work either.



## ANDREW SMITH

Door Technician, ICI Door Control,  
Candler, North Carolina

DANNY L. CAMPBELL MEMORIAL FUND

**Number of years in the industry:** 5 years

### How did you get started in the door and hardware industry?

I decided after high school that I wanted to follow my father's footsteps and join the family company, ICI Door Control. The company was started by my grandfather and had been passed down to my dad. My initial reasoning for getting involved was solely due to the fact that I enjoyed learning and spending time with my family. However, it has evolved into a genuine interest in mastering the subject matter that is doors and hardware. But it is still pretty great getting to work with my family every day.

### How do you de-stress?

I am a simple man so, for me, de-stressing looks like alone time with my wife, Kyleah, and my dog, Winston. I would definitely describe myself as introverted, so coming home and relaxing alone with them is all I need to de-stress.

### If you weren't a door security and safety professional, what would you be?

I have always loved the idea of working as a park ranger in a national park. My favorite place I've visited (so far) has been Yosemite National Park. So, to have the opportunity to work in that kind of environment every day would be awesome.

### Who is your mentor/hero?

My hero and mentor are both my dad. When it comes to general knowledge about anything doors and hardware related, there is no one more knowledgeable. Professionally, he is who I strive to be like. However, more importantly, it is the content of his character that I most strive to emulate. He is a kind, generous, God-fearing leader, and I hope to be half the man he is. If you read this, I love you Dad!

### What is the best advice you've ever received?

The best advice I have received has been that life is not about what happens to you, but about how you respond to what happens to you.



## AUSTIN WATSON, DHT

Access Control Specialist and Project Manager,  
Warren Doors and Access Control,  
Pensacola, Florida

THE RICHARD M. LOCKMAN, AHC,  
MEMORIAL SCHOLARSHIP

**Number of years in the industry:** 6.5 years

### What is the most rewarding aspect of your job?

Knowing that I helped someone make their space more secure and safe.

### How do you de-stress?

I like to pull out my guitar and get lost in the music.

### Who is your mentor/hero?

That would have been my grandfather who passed away a few years ago. He was a jack of all trades and a master of them all as well. I learned my work ethic from him. Also, that is where I got my passion for music.

### What is your advice to someone considering taking DHI technical education?

First of all, "Do it!" But also, this is something that can only help you grow. We should all be striving to grow and get better at what we are doing.

### What is the best advice you've ever received?

Don't stop learning. You will never know everything, so don't act like it.



## GREGORY WINICKI, DHT

Hardware Coordinator, Upper Canada Specialty  
Hardware, Markham, Ontario, Canada

COLORADO DOORWAYS SCHOLARSHIP  
IN MEMORY OF C.H. JOHNSON, DAHC

**Number of years in the industry:** 7 years

### What is the most rewarding aspect of your job?

The most rewarding aspect of my job is knowing that door hardware and how it's applied has great importance on life safety and can be a deciding factor in emergency situations. Door hardware can often be overlooked, but it always has a role to play in many situations throughout its lifetime. It's for that reason I feel responsible to be knowledgeable about industry standards and practices and be as educated as possible.

### How do you de-stress?

I de-stress by keeping my mind and body active on my off time. I try to read as much as I can, learn about new things, barbecue, hang out with friends and family, go for nature walks, ride my bicycle and motorbike, exercise, play basketball, as well as relax at my family cottage by the water. Days spent indoors playing video games and watching movies are always a great time, too.

### Who is your mentor/hero?

My mentor/hero is my late Uncle Paul, who was an AHC that owned his own reputable company. He was liked by many. He introduced me into the door and hardware industry by getting me a job working at a distributor's warehouse and guided me in my door hardware career until getting ill and passing away in May 2020. He was a people person with many stories to tell and would make me laugh quite easily. He also taught me a lot about life, work and happiness.

### What is the best advice you've ever received?

The best piece of advice I've ever received is don't sweat the small stuff.

### What does work-life balance mean to you?

Work-life balance means having the right mentality to cater to both work and play. It means having the right mix between the two halves as well as being disciplined. I try not to dwell on some of the things that come up at work, good or bad, and I also try not to mentally bring anything home with me from my workday. +

# VISION VISION VISION



OBSOLETE

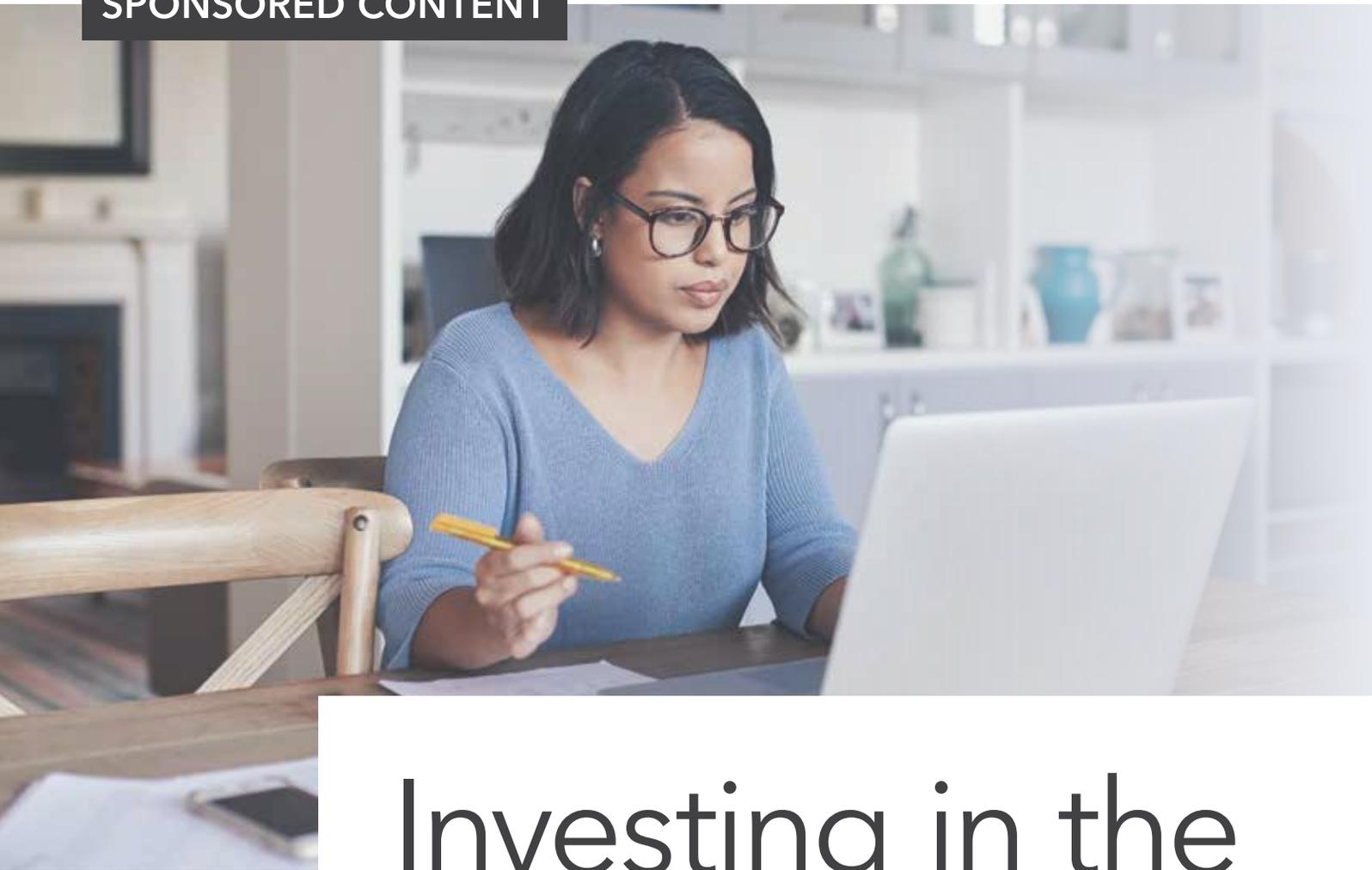
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10 FT.



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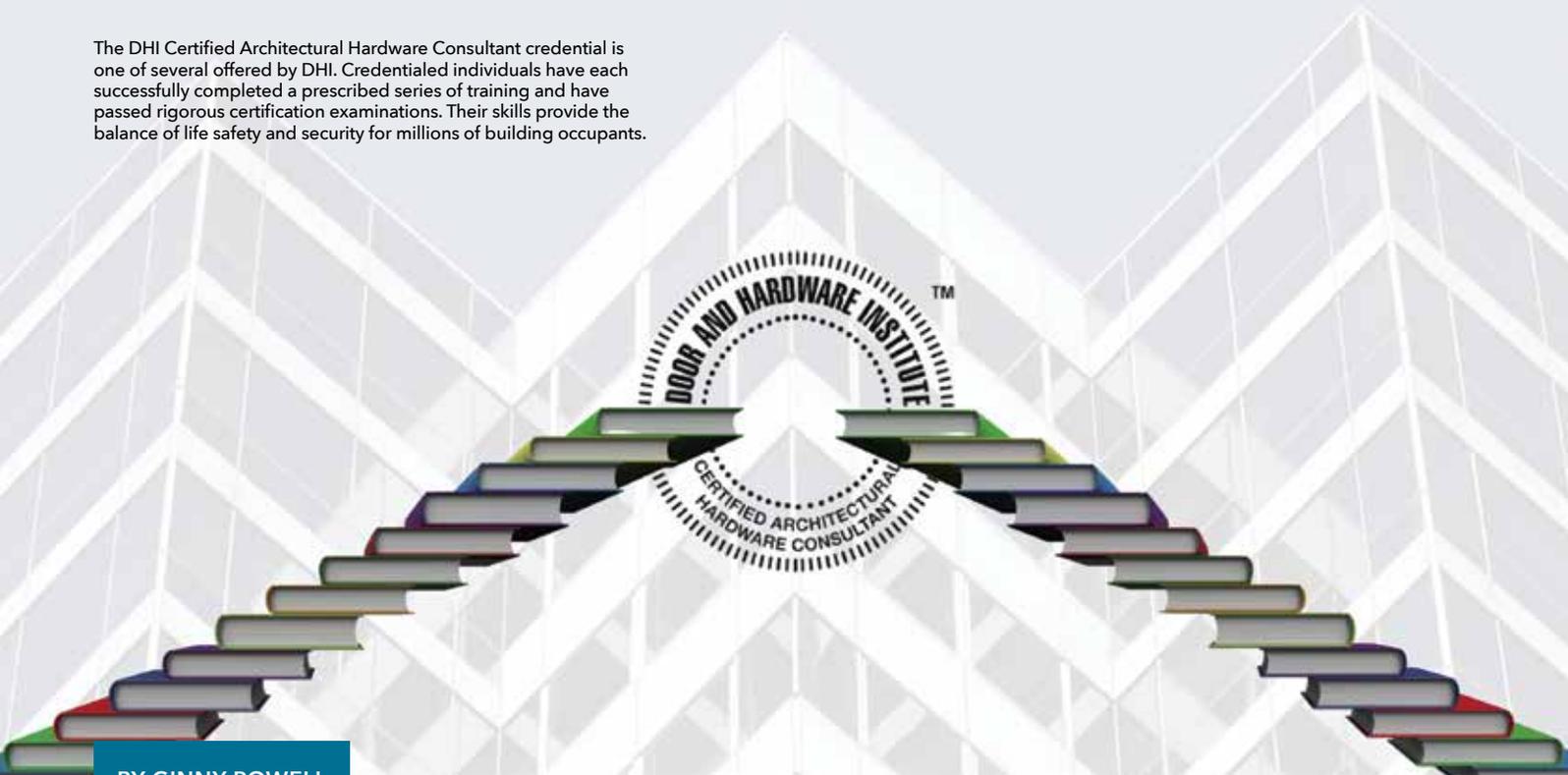
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# Investing in the Commitment of Continuing Education

Every person in the door and hardware industry aims to develop the knowledge and skills needed to provide safe, secure and code-approved door openings while satisfying the demands of end users and architects.

The DHI Certified Architectural Hardware Consultant credential is one of several offered by DHI. Credentialed individuals have each successfully completed a prescribed series of training and have passed rigorous certification examinations. Their skills provide the balance of life safety and security for millions of building occupants.



BY GINNY POWELL

It is estimated that there will be a demand for 1 million skilled craft professionals in the construction industry by 2023, and 29% of the current workforce will retire in just five years.<sup>1</sup> Education in the building industry has always been important, but the next few years will leave a tremendous gap in knowledge and skills. Education is key to bridging that disparity.

Formed in 1975 with the merger between the National Builders Hardware Association and the American Society of Architectural Hardware Consultants, DHI has encouraged continuing education to its members since 1976. Throughout the years, educational opportunities could be found through its annual school and DHI's *Door Security + Safety* magazine.

As DHI states on its website in the "Who We Are" section, "Through education, advocacy, accreditation and facilitated networking, we provide members with the collective intelligence to meet the security and safety needs of their customers."

Regardless of a person's role in the door and hardware industry, staying

relevant with current education and training to counter adaptable building codes, new technology and product evolution is vital to meet and furnish those security and safety obligations.

DHI began online education in 2010 and pivoted to a sizable selection of online courses 10 years later. DHI now offers various formats for learning about this complex industry from a diverse assortment of in-person and online classes and technical schools to the soon-to-be re-released Tech Tips.

Many door and hardware manufacturers support the efforts of DHI and offer some type of education opportunities. For example, as far back as 1956, Hager Companies supported continuing education through the Hager Scholarship with

the Architectural Hardware Institute program. Conducted by the American Society of Architectural Hardware Consultants, one of the precursors to DHI, the scholarship was available to a deserving student. It included the registration fee for course material and one night's dinner.

As August "Rusty" W. Hager III, Chairman of Hager Companies, said to Alexandria Amato, the 2021 Hager Companies 2021 Door Security & Safety Foundation Scholarship winner, "We are very happy to give back to the hardware industry, which has given Hager so much in terms of success and friendship over our 172-year history."

Today, the Hager family remains committed to the long-term support of continuing education. Besides

partnering with DHI as a Summa Cum Laude Education Partner and the ongoing educational scholarship each year, Hager launched Hager University in 2020. This online program with a substantial course curriculum offers short training modules that work well for either an industry beginner or experienced user. “Recognizing the value our contract hardware distributors and wholesale partners bring to the channel, Hager continues to invest in our collective future in the door and hardware industry,” says Josh Hager, President and COO of Hager Companies.

Hager also supports team members who volunteer as DHI educational instructors. Our own Brian Clarke, Director of Specifications, and Kevin Tish, Manager of Architectural Specification Writers, have received the DHI Recognition of Outstanding Service to the Industry (ROSI) award for their time teaching. “This is a very complicated industry, and there are so many things that can go wrong,” explains Kevin Tish, who is also currently the Chairman of the DHI Certification Council. “We need the education to reduce omissions and errors, as well as lead to the new

generation products and methods that can increase security while maintaining and improving life safety.”

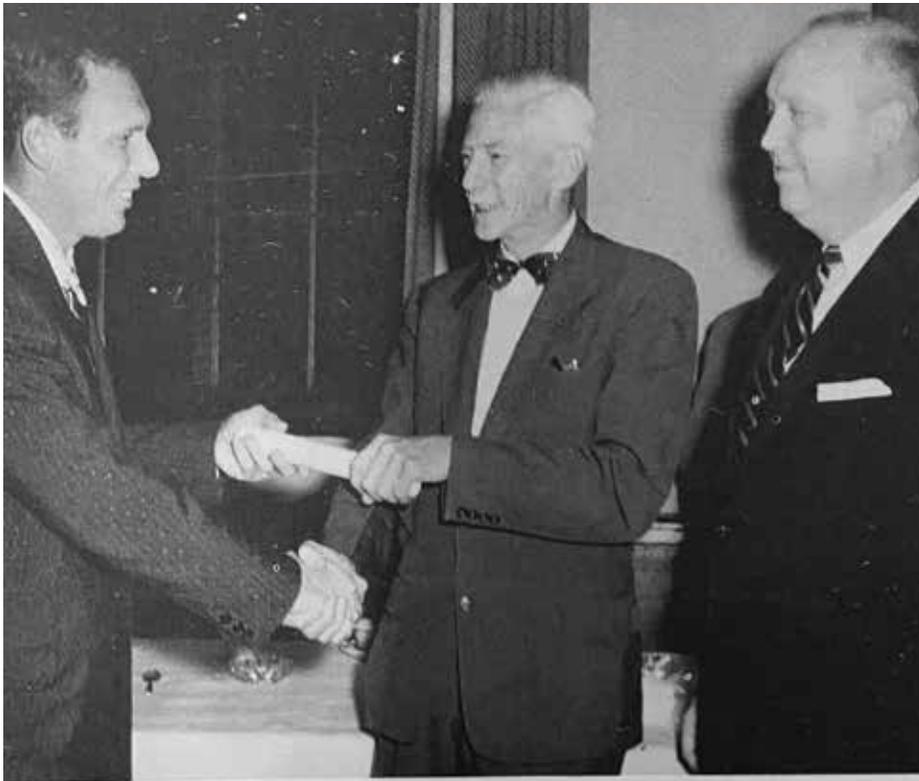
With an eye on the future, contract hardware distributors are moving further into the Division 28 arena as the demand for electronic access control continues to grow. This shift makes sense for effective coordination and collaboration on the job site and generating recurring revenue with SaaS (software as a service). Additionally, hiring people with a propensity toward software and related IT infrastructure and then utilizing the available education and training offered in the industry will benefit employers in the long term.

Coupled with an updated educational path launched in 2017, DHI began offering new credentials and certifications training, including a comprehensive offering of electrified and electronic education modules. “DHI education provides a platform for all manufacturers and can provide a single unbiased source of truth for the industry,” Clarke says.

Conceivably, every person in this industry aims to develop the knowledge and skills needed to provide safe, secure and code-approved door openings while satisfying the demands of end users and architects. I have confidence that manufacturers and DHI, with its team of volunteers, will continue to diligently keep its curriculum updated to meet the industry’s developing needs. With five generations, from Traditionalists to Gen Z, present in the industry, now is an opportune time to take advantage of the various perspectives and depth of knowledge available. +



**With five generations, from Traditionalists to Gen Z, present in the industry, now is an opportune time to take advantage of the various perspectives and depth of knowledge available.**



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**GINNY POWELL** is Product Marketing Specialist at Hager Companies and Chair of the DHI Media + Editorial Board. Email: [gipowell@hagerco.com](mailto:gipowell@hagerco.com).

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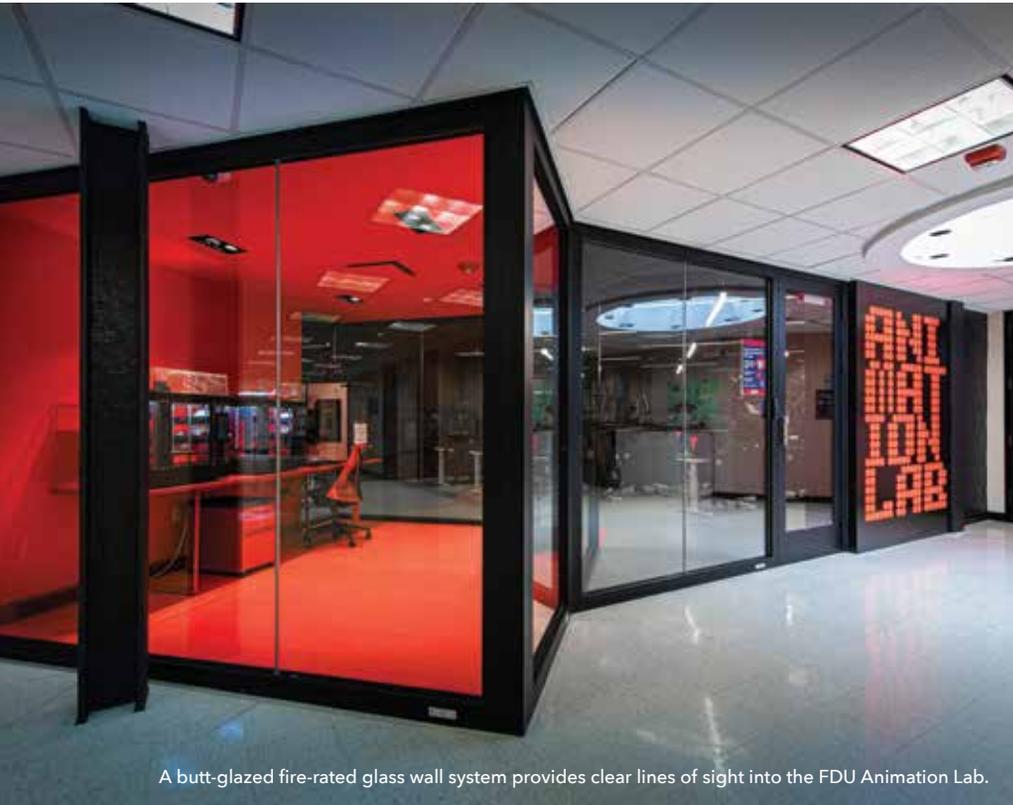
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A butt-glazed fire-rated glass wall system provides clear lines of sight into the FDU Animation Lab.

## A Clear View of Graphics in Motion

*Continuous fire-rated glass wall system transforms animation lab.*

BY DEVIN BOWMAN

Located in Florham Park and Madison, New Jersey, Fairleigh Dickinson University (FDU) offers students the opportunity to pursue animation degrees with a focus on blending graphics in motion with revolutionary technology.

When the time came to renovate and refresh the university's 1,300-square-foot animation lab, campus leaders and project architects agreed that designing a multifunctional, open space to inspire creativity and foster collaboration was a top priority.

### ROOM WITH A VIEW

Formerly a separate classroom and computer lab divided by a cinderblock wall, the new animation lab designed by NK Architects is a dramatic graphic space that manifests a virtual world inside the real one. Equipped with a state-of-the-art 3D printing booth, drawing tablets mounted on sit/stand desks and flexible space for collaborative work, a defining feature of the interactive learning area is a smooth, uninterrupted glass wall system that provides passersby eye-catching views of the inside.

### CODE CHALLENGES

Introducing views through a continuous glass wall proved challenging at first. The animation lab was among the university's first major updates to transform its 1960s-era building to a home for the School of the Arts. To successfully rehabilitate the existing space and combine the two rooms into one, it needed to be brought up to current code.

"The cinderblock wall that we wanted to demo and replace with storefront glass needed to be fire-rated for one hour," says Elizabeth Burke, Lead Designer at NK Architects. "Our vision for clear views and glass with minimal mullions started to diminish as we encountered more design challenges."

### CLEARVIEW SOLUTION

To open up the space and bring the new Animation Lab up to current code,

NK Architects turned to Technical Glass Products' Fireframes ClearView® System. The 60-minute fire-rated and impact safety-rated butt-glazed system features nearly colorless transitions between adjoining pieces of low-iron fire-resistive-rated glass. This makeup eliminates the need for colored internal glass unit spacers or vertical frame mullions, allowing for virtually uninterrupted views inside the animation lab.

"The Fireframes ClearView System fit really well in our design," Burke says. "The result is a butt-glazed wall uniquely angled to protrude outwards; we knew it would give the animation lab the 'wow' factor it deserves."

As an added benefit, the selected system helped NK Architects create a close visual match between rated and non-rated areas. "The glass on the hall side of the animation lab is fire-rated, but the glass on the inside is non-rated," Burke says. "TGP was excellent at working with us to make the rated glass and non-rated glass look like one continuous piece."

Further supporting the design aesthetic, the perimeter of each butt-glazed elevation is held in place by a heat-resistant L-angle steel perimeter frame. A full-lite fire-rated glass door grants access into the animation lab, completing the design-forward system. In application, the entire code-compliant fire-rated butt-glazed system and door block radiant and conductive heat transfer while promoting clear lines of sight.

### CREATIVE OPENINGS

"There are so many eye-catching functions happening behind the walls of the animation lab—3D modeling and making, motion capture, virtual reality and more," Burke says. "The fire-rated butt-glazed wall system and its complementary fire-rated glass door were purposefully designed to make the space feel more open while also intriguing people walking by and attracting new students."

The animation lab's high-contrast colors and optimized room layout creates a learning environment that embodies the digital spaces in which students work. Thanks to the new, virtually uninterrupted fire-rated glass system, prospective students and faculty members walking by now enjoy unobstructed views of animations and graphics designed by FDU students. +



**DEVIN BOWMAN** is General Manager of Technical Glass Products (TGP) and AD Systems. With nearly 20 years of industry experience, Bowman is actively involved in advancing

fire- and life-safety codes and sits on the Glazing Industry Code Committee (GICC). Email: [Devin.Bowman@allegion.com](mailto:Devin.Bowman@allegion.com).



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# Making an Entrance at the Nation's Police Museum

*Security, aesthetics and energy efficiency characterize unique revolving glass doors designed for a constant stream of people headed below ground.*

BY GREG SCHREIBER



As many as 3,000 people a day pass through one of two glass revolving doors housed in glass pavilions, the only part of the National Police Museum visible above ground.

**The National Law Enforcement Museum in Washington, D.C., is dedicated to an immersive guest experience that strives to expand and enrich the relationship shared by law enforcement and the community through educational journeys, interactive exhibits and unique learning programs.**

The museum, which opened in October 2018, is located across from the National Law Enforcement Officers Memorial and just blocks from the National Mall and numerous Washington landmarks.

Buckley & Associates Inc. designed the building, and Clark Construction served as the general contractor.

## **MODERN LOOK**

The design and construction of the museum is uniquely modern. First, the 55,000-square-foot museum is primarily located underground. The museum is only visible via two, all-glass pavilions that mark its presence on the street.

While the museum's exterior is contemporary with a glass facade that allows for ample light, the exterior fits

in with the architecture of the other buildings in the area. "We had to go through a very strict design process with the architects and with the District of Columbia, the Commission of Fine Arts and the Washington, D.C., Historic Preservation Office," says Paul Larson, Senior Director of Security and Museum Operations for the facility.

The museum's top floor houses two pavilions for entering and exiting the museum and is the only portion above ground. The cafe and the museum store are one floor below, while the exhibits are on the lowest level.

### GO WITH THE FLOW

According to data from the American Alliance of Museums, there are approximately 850 million visits each year to American museums, which is more than the attendance for all major league sporting events and theme parks combined. Prior to COVID-19 shutdowns, the National Law Enforcement Museum was a popular visitor attraction, averaging 300 to 500 visitor tours each day.

The museum strives to provide enlightening, educational experiences that allow people to reconnect with what they perceive as their own view of American policing. To do that, the facility must be inviting and capable of protecting staff, guests and assets.

The two pavilions are the primary entrance and exit for visitors to the museum. Controlling and monitoring visitors entering and leaving the museum is a priority for the security staff, and it is expected to become even more important as pandemic protocols persist. The East Pavilion welcomes visitors and directs them to a security screening area and then downstairs to Visitor Services where they enter the exhibits. Visitors exit from the West Pavilion. There are separate entrances for individuals with disabilities.

"During National Police Week and the period leading up to it, we average about 3,000 people a day," Larson says. "We typically have a candlelight vigil on the National Mall on one of the nights,

which is attended by tens of thousands of people, in addition to multiple celebrations during the week. During this peak time, we have seen 150 visitors enter the museum's doors every 15 minutes."

### TRANSPARENT SOLUTION

As daily, high-traffic throughput into the museum became an issue, the museum decided it needed a two-door solution, one that would fit into the design elements and would be energy efficient in both hot and cold weather. The museum's architect chose two Boon Edam BoonAssist TQ manual revolving doors with all-glass doorwings to achieve those goals. The doors are constructed primarily from glass with only a few stainless steel components to ensure structural strength.

The seamless design works well with modern glass facades such as the museum's pavilions, or in more traditional or classic building designs. The BoonAssist revolving door's low-energy drive assists users as they push the door wings; it has speed control for safety and automatic positioning back to "home" position when the door is not in use. The positioning feature maximizes the air seal around all the door wings to prevent unwanted air infiltration from the outdoors.

### PEAK PERFORMANCE

Larson says he could not be more pleased with the performance of the doors.

"During our peak season, the doors performed at a very high level, even when we had more than 3,000 people going through those doors. At one point, someone did push hard on the door, and it popped one of the revolving panels out of place, but we called our maintenance people and the design is set up to fix it quickly and easily," Larson says. "We had some initial issues with locks and adjustments and doors scraping. This type of thing is normal in the initial installation of doors in any building. However, the maintenance crew was quick to respond to adjustments and, as far as the revolving doors, we

haven't had any mechanical issues or any other significant issues since they were installed."

Larson has not only been impressed with the Boon Edam doors' performance, but with the aesthetics as well. "The doors are performing at a very high level, standing up to the high visitor traffic, and they look great," Larson says. "The custom lighting inside of the doors makes the two glass pavilions really pop, especially at night."

Larson also notes that the doors are highly energy efficient. "They keep the cold air out and the warm air in, as the doors have good insulation. When people come inside through the doors on a hot day, they get a wonderful breeze of cold air," Larson says. "We want our guests to go through the revolving doors. They're energy efficient, and the museum is a LEED-certified building, which is another reason why we chose the Boon Edam doors."

The museum received LEED Silver certification in February of 2019 and was the first LEED Silver certified museum in Washington, D.C.

Larson acknowledges he receives many positive comments from building engineers about the doors' construction, design and aesthetics.

"Our engineer and those from the surrounding buildings took a very close look at the doors' construction. They were extremely impressed by how easily they rotate, yet at the same time, stop in a precise place, just like they are designed to do," Larson says. +



**GREG SCHREIBER** is Senior Vice President of Sales with Boon Edam. Email: [greg.schreiber@boonedam.com](mailto:greg.schreiber@boonedam.com).



Butt-glazed fire-rated glass wall systems provide uninterrupted assembly and openness for interior partitions.

# Emerald Bright in Seattle

*Fire-rated glazing preserves daylight in luxury residential tower.*

BY DEVIN BOWMAN

**Rising 40 stories above one of Seattle's most sought-after locations, The Emerald brings a new level of luxury living to the Pike Place Market and adjoining waterfront neighborhood.**

Designed by Hewitt Seattle, the soaring condominium engages the Pacific Northwest's powerful landscape and vibrant city life through natural materials and an elaborate use of daylighting. It embraces biophilic design from the ground floor to the penthouse, blurring the lines between the interior and picturesque outdoors.

One area where this is observed is the channel glass form on the tower's second and third floors. Spanning the outside of the fitness center and community meeting spaces, the inherent slight green hue of the channel glass pays homage to its surroundings while transmitting light without the loss of privacy.

The linear channels spread out the sun's rays as they pass through the translucent surface. This, in turn, creates soft, even and glare-free light for those using the tower's residential amenities.

To enhance daylight transferred through the channel glass system, a transparent fire-rated solution was needed in areas of egress. This included approximately 600 square feet of rated glass in the form of a butt-glazed fire-rated glazing system and compatible fire-rated doors.

### FIRE-RATED GLAZING CARRIES LIGHT

While fire-rated materials such as gypsum and concrete obstruct the flow of sunlight, butt-glazed fire-rated glass wall systems provide uninterrupted assembly and openness for interior partitions. They blend in with a building's surrounding design aesthetic the same way a contemporary, elegant butt-glazed wall would, only they provide fire ratings and have been tested to stringent code criteria.

In the case of The Emerald, the design team specified the Fireframes ClearView® System from Technical Glass Products (TGP) along the internal corridor that forms the entrance to the fitness center. The system consists of low-iron Pilkington Pyrostop® fire-rated and impact safety-rated glass with a narrow (5 mm) butt joint and a heat-resistive perimeter frame.

Pilkington Pyrostop is a solid multilaminate that is comprised of layers of nearly colorless Pilkington Optiwhite™ low-iron float glass and clear intumescent interlayers. This makeup eliminates the need for colored internal spacers or vertical mullions between adjoining pieces of glass, resulting in nearly imperceptible transitions between the panels.

In application, the code-compliant butt-glazed fire-rated glass wall system defends against the transfer of radiant and conductive heat for 60 minutes while providing a "frameless" glass look for the fitness center entrance. This is accomplished by the predominant presence of the glass, the narrow butt-glazed joints and the slender perimeter frame.



Top: A butt-glazed fire-rated glazing system and compatible fire-rated doors enhance daylight transfer while standing guard against fire at The Emerald residential tower.

Bottom: The design team for The Emerald specified the Fireframes ClearView® System from Technical Glass Products (TGP) along the internal corridor that forms the entrance to the fitness center.

Design forward and transparent, the virtually uninterrupted glass wall maintains a sense of openness for those using the gym while carrying light further into the building's interior. Doubling as the corridor leading to community meeting areas, the seamless glass wall complements the tower's sleek and understated image.

### DOORS TO FITNESS

Further preserving daylight and rounding out The Emerald's state-of-the-art fitness center, the design team integrated two full-lite Fireframes® Heat Barrier Series doors with a transom into the butt-glazed fire-rated glass wall system. The door assembly provides the necessary fire resistance, while

maintaining the same slender aesthetic as the surrounding perimeter frame. Its large lites of fire-rated glass also ensure guests have clear views into and out of the gym—promoting ease of wayfinding for condo residents. +



**DEVIN BOWMAN** is General Manager of Technical Glass Products (TGP) and AD Systems. With nearly 20 years of industry experience, Bowman is actively involved in advancing

fire- and life-safety codes and sits on the Glazing Industry Code Committee (GICC). Email: [Devin.Bowman@allegion.com](mailto:Devin.Bowman@allegion.com).



# AUTOMATIC OPERATORS ON ACCESSIBLE PUBLIC ENTRANCES



**LORI GREENE, DAHC/CDC, FDAI, FDHI, CCPR,** is Manager of Codes and Resources at Allegion. She can be reached at [Lori.Greene@allegion.com](mailto:Lori.Greene@allegion.com) or [iDigHardware.com](http://iDigHardware.com).

**UNTIL NOW, AUTOMATIC DOORS HAVE NOT BEEN REQUIRED BY THE MODEL CODES OR REFERENCED STANDARDS IN SPECIFIC LOCATIONS WITHIN A BUILDING, ALTHOUGH AUTO OPERATORS ARE OFTEN INSTALLED WHEN A DOOR CANNOT MEET THE ACCESSIBILITY REQUIREMENTS FOR A MANUAL DOOR.**

For example, if a door does not have the mandated maneuvering clearance necessary for someone to open a door manually while using a wheelchair, adding an automatic operator could solve the problem because automatic doors do not require the same maneuvering clearance as manual doors.

The intent of this change is for buildings in certain use groups to have automatic operators on at least one door, or one set of doors (exterior and vestibule), at each public entrance that is required to be accessible. The operators can be either full power operated or low-energy power operated. A power-assist operator would not meet the requirements because it only reduces the opening force; it does not open the door automatically.

This will change with adoption of the 2021 edition of the International Building Code (IBC). The 2021 IBC states:

Here are a few FAQs about this code change.

1105.1.1 Automatic doors. In facilities with the occupancies and building occupant loads indicated in Table 1105.1.1, public entrances that are required to be accessible shall have one door be either a full power-operated door or a low-energy power-operated door. Where the public entrance includes a vestibule, at least one door into and one door out of the vestibule shall meet the requirements of this section.

### WHAT IS CONSIDERED A PUBLIC ENTRANCE?

In the 2021 edition of the IBC, a public entrance is defined as, "An entrance that is not a service entrance or a restricted entrance." The requirements for these entrances are included in Section 1105-Accessible Entrances.

**TABLE 1105.1.1  
PUBLIC ENTRANCE WITH POWER-OPERATED DOOR<sup>a</sup>**

OCCUPANCY	BUILDING OCCUPANT LOAD GREATER THAN
A-1, A-2, A-3, A-4	300
B, M, R-1	500

a. In mixed-use facilities where the total sum of the building occupant load is greater than those listed, the most restrictive building occupant load shall apply.

*(Note that the solid black vertical line indicates a change from the previous edition of the code.)*

IMAGE SOURCE: 2021 INTERNATIONAL BUILDING CODE



*When an automatic operator is required because of a project specification, owner preference, code or other mandate, an automatic operator (full powered or low energy) must be used rather than a power-assist operator that requires manual operation.*

**WHICH PUBLIC ENTRANCES ARE REQUIRED TO BE ACCESSIBLE?**

IBC Section 1105 requires at least 60% of all public entrances to be accessible. In addition, this section requires the following types of entrances to be accessible:

- Parking Structures - Where direct pedestrian access is provided from a parking garage to a building or facility, the entrances must be accessible.
- Tunnels and Elevated Walkways - Where direct pedestrian access is provided from a pedestrian tunnel or elevated walkway to a building or facility, at least one entrance from each tunnel or walkway must be accessible.
- Restricted Entrances - Where restricted entrances are provided to a building or facility, at least one restricted entrance must be accessible.
- Entrances for Inmates or Detainees - At judicial facilities, detention facilities and correctional facilities where entrances are used only by inmates or detainees and security personnel, at least one such entrance must be accessible.
- Service Entrances - When a service entrance is the only entrance to a building or tenant space, that entrance must be accessible. When a service entrance is not the only entrance to a tenant space, the service entrance is not required to be accessible.
- Tenant Spaces - At least one accessible entrance must be provided to each tenant space except for self-storage facilities that are not required to be accessible.
- Dwelling Units and Sleeping Units - Each dwelling unit and sleeping unit in a facility must have at least one

accessible entrance, except that an accessible entrance is not required for units that are not required to be accessible units, Type A units or Type B units.

If an area is not required to be accessible, an accessible entrance is not typically required. This means that areas that are exempt from the accessibility requirements are usually also exempt from the requirements for an accessible entrance. Refer to the applicable building code or accessibility standard to learn more about these exceptions.

**IN WHICH TYPES OF BUILDINGS ARE ACCESSIBLE PUBLIC ENTRANCES REQUIRED TO HAVE AT LEAST ONE AUTOMATIC DOOR OR ONE SET OF AUTOMATIC DOORS (EXTERIOR AND VESTIBULE)?**

The change applies to almost all types of assembly occupancies with an occupant load of 300 people or more, and for business, mercantile and R-1 residential occupancies with an occupant load of 500 people or more. The examples listed with each use group below are not intended to be inclusive of every type of facility.

Occupant Load 300+

- A-1- assembly occupancies, usually with fixed seating, used for production and viewing of the performing arts or movies including movie theaters and other types of theaters, symphony, and concert halls and TV and radio studios that admit an audience.
- A-2 - assembly occupancies used for food/drink consumption, including banquet halls, gaming areas of casinos, nightclubs, taverns and

bars, restaurants, cafeterias and similar dining facilities (including associated commercial kitchens).

- A-3 - assembly occupancies used for worship, recreation or amusement and other assembly uses not classified as another Group A use group, including arcades, art galleries, bowling alleys, community halls, courtrooms, dance halls (without food or drink consumption), funeral parlors, lecture halls, libraries, museums, places of religious worship, waiting areas in transportation terminals, and gymnasiums, indoor swimming pools, and indoor tennis courts without spectator seating.
- A-4 - assembly occupancies used for viewing of indoor sporting events and activities with spectator seating, including arenas, skating rinks, swimming pools and tennis courts.
- Note: Group A-5 is not included in the table that requires automatic operators at the accessible public entrances. This use group applies to assembly occupancies used for participation in or viewing outdoor activities, including amusement park structures, bleachers, grandstands and stadiums (the auto operator requirement does not apply here).

Occupant Load 500+

- B - business occupancies used for office, professional or service-type transactions, including ambulatory care facilities, doctors, dentists and veterinarian offices, banks, beauty salons, outpatient clinics and ambulatory care facilities, labs, post offices, and educational occupancies for students above the 12th grade (colleges and universities).



- M - mercantile occupancies used for the display and sale of merchandise, including merchandise stock, where the public has access including retail stores and markets, greenhouses providing public access for the display and sale of plants and motor-fuel dispensing facilities.
- R-1 - residential occupancies containing sleeping units where the residents are primarily transient in nature including hotels and motels, and congregate living facilities and boarding houses with more than 10 occupants (all transient).

### DO THE ACCESSIBILITY STANDARDS REQUIRE AUTOMATIC OPERATORS ON SPECIFIC DOORS?

The accessibility standard referenced by the IBC is ICC A117.1-Accessible and Usable Buildings and Facilities. The 2017 edition of ICC A117.1 included new paragraphs that addressed public entrances and vestibules:

- 404.3.1 Public entrances: Where an automatic door or gate is required at a building or facility public entrance,

it shall be a full powered automatic or a low-energy automatic door or gate.

- 404.3.2 Vestibules: Where an entrance includes a vestibule, at least one exterior door or gate and one interior door or gate in the vestibule shall have the same type of automatic door or gate opener.

These paragraphs are explained in the commentary version of the standard. When an automatic operator is required because of a project specification, owner preference, code or other mandate, an automatic operator (full powered or low energy) must be used rather than a power-assist operator that requires manual operation. The intent of the paragraph addressing vestibules is not to require automatic doors but to clarify that when automatic doors are installed and the exceptions for maneuvering clearance are applied to a vestibule, the doors must be full powered or low-energy automatic doors, not power-assist doors.

Does this change require automatic operators to be added to accessible public entrances in existing buildings?

This change applies if:

- A. The project is required to comply with the 2021 IBC
- B. The entrance is a public entrance that is required to be accessible
- C. The use group is one of the types listed above, and
- D. Calculated occupant load is greater than 300 or greater than 500, depending on the use group.

This requirement will become enforceable when a jurisdiction adopts the 2021 edition of the IBC. It is likely the requirement would only apply to new buildings and renovations, and existing buildings would not have to be modified. However, given the preference toward automating doors at public entrances, facility managers and architects may want to consider providing this accessibility improvement sooner rather than later. Remember, state and local codes may vary from the model codes, so it is important to know what is required in each project's jurisdiction. +

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**Aaron T. Owens, DHT, DHC**  
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**Rodney W. Weaver, DHT,AHC,DHC,EHC,CFDAI**  
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For more information on DHI education, certifications, credentials and certificates, contact [education@dhi.org](mailto:education@dhi.org).



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# STOP STRUGGLING AND START PRIORITIZING MENTAL HEALTH



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**I CAN SUM UP MY COLLECTIVE EMOTION OVER THE PAST SEVERAL MONTHS IN ONE WORD—MEH. POPULARIZED IN "THE EMOJI MOVIE," MEH IS AN APATHETIC CHARACTER WHOSE PURPOSE IN LIFE IS TO CONVEY THE SENTIMENT "WHATEVER."**

When people greet me I switch back to my default positive response, but if I was really willing to be honest, or in the slightest bit vulnerable, I would say something like, "I really don't know. I am struggling to find enjoyment in the world around me and I feel like I am treading water. I can't focus on tasks, and I am seriously considering a call to a therapist. How are you?" Not something most people are ready to hear—at least that is what the voices in my head have been telling me.

All this came to a head about a month ago. As I was struggling to figure out why I was behaving this way, I ran across an article in *The New York Times*, "There's a Name for the Blah You're Feeling: It's Called Languishing." Bam! This was my "2x4 across the back of the skull" moment. There was a name for the funk I had been in for most of this year—languishing. It was time to do battle.

## STATE OF LANGUISH

It turns out that I am not alone. As I began to research and educate myself about this mental health challenge, I started recognizing the signs of languishing in my friends, family and clients. As I began to share my experience with people, several of them began to open as well.

We need to rethink the stigma around mental health in both our personal and professional lives. Not depressed doesn't mean that you are not struggling. Not burned out doesn't mean that you are fired up. According to the experts, the mental health spectrum generally runs from depression to flourishing. Languishing

is the misunderstood midpoint between these two ends of the spectrum.

As team leaders, we need to start recognizing these signs in ourselves and those who work with us and for us. Some of the descriptions of this middle state are inability to feel joy, stuck in limbo, apathy, uncertainty, anxiety, confusion, hopelessness, stagnation and emptiness. Languishing is the absence of mental health.

## PANDEMIC RIPPLES

How did I get here? In my naivety, I thought that I had dodged the COVID-19 bullet. I thought my life was largely unaffected. My family was healthy, I was still gainfully employed, I still had the opportunity to go out and pursue leisure activities. I was so focused on feeling sorry for those who had been stricken by the pandemic, that I felt guilty for "having it so good."

What I came to discover was that I was not unaffected. I thought the vaccine would give me my life back, but then the rug is pulled out from under us again. The pandemic is a sneaky foe. It took its time and ground me down mentally.

After opening myself up to anyone willing to listen, I started to get an understanding of how this collective funk got its claws into my distribution clients. Early in the pandemic, we were scrambling with remote work environments, social distancing and mask protocols. Distributors were resilient, but shifting sands take their toll. Salespeople struggled to work with their customers and now had to learn how

to use video conferencing technology. Adaptation at its highest order.

As the pandemic wore on, we had to take on the ever-changing mandates regarding public health and safety. Then, the business climate went completely crazy. In many verticals, customer demand went through the roof. Product scarcity became the new normal. Rampant inflation has led to distributors being inundated with constant price increases and challenging customer interactions. Distribution salespeople have had to have more difficult conversations with customers than ever before.

There's more. Job vacancies have skyrocketed, and our team members are being asked to work longer and harder than ever before. All these business stressors layered on top of the personal challenges of living in a pandemic-regulated world are bringing our people to the breaking point. The last straw is coming, and the camel's back is getting weak.

### GO WITH THE FLOW

Now that I have outlined the problems as I see them, I want to share some solutions.

As a leader, either of a team or simply your own life, you must find ways to break this collective malaise. Most mental health experts suggest finding "flow" is a way to break out of this state. Flow is that state of mind where you can focus on a task and take it to a logical conclusion. Disruption is the killer of flow.

Many of us found that trying to work out of the home, with children and TV remotes present, made it extremely difficult to concentrate on meaningful work. To get into a flow, many experts suggest that doing something mentally challenging in the morning, for a sustained period, will set you up for success later in the day. One expert starts his day off with crossword puzzles to get his mind engaged in a positive way. Others suggest that exercise and meditation are ways to reframe your mental state. The key is to be intentional with this practice.

I recently discussed this topic with a group of clients. Many of them admitted

they were also struggling and were glad to have a word that described their current mental state. Where my group really shined was in the sharing of solutions. Here are some of the ideas they offered:

- Get some fresh air. Go for a walk around the building.
- Make sure to prioritize exercise.
- Stay in the present. Don't spend too much time on the future.
- Focus on small goals. Acknowledge small wins daily.
- Step back and don't react. Let the answers come to you.
- Limit consumption of toxic broadcast and social media.

### THE ROLE OF LEADERSHIP

From a corporate perspective, I have heard group participants speak about employee engagement programs and professional mental health benefits for team members. One spoke about a program their company sponsors that gives team members the opportunity to speak with a counselor at no cost. Participation in the program is totally anonymous and utilization is on the rise.

One of the best things senior leadership can do right now is address the mental health of the employee base. They are struggling. Stand up in front of them and show empathy. Get vulnerable with your people. They need to know that they are not alone and you are there to support them. Don't let distance or schedule prevent you from getting face-to-face with the rank and file. Get vulnerable, share about the company direction but, more important, listen to their comments and concerns. This is a great way to start the conversation about mental health.

Let's face it, we have all been affected by the pandemic. Our batteries have been depleted. Now that you know that languishing is a real concern, I am challenging you to help your people break out of the rut. I know it is possible because I am close to getting there. +

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# PUT YOURSELF IN A BETTER PLACE TO AVOID LITIGATION



**BILL TRIMBLE, AHC**, is the Immediate Past President of DHI and President of Wm. S. Trimble Co. Inc. Email: [btrimble@wmstrimble.com](mailto:btrimble@wmstrimble.com).

**BACK IN THE 1980S, THERE WAS A SCIENCE FICTION MOVIE, "WARGAMES," STARRING MATTHEW BRODERICK. IN THE MOVIE, THE U.S. MILITARY TURNS TO A SUPERCOMPUTER CALLED "WOPR" TO MANAGE THE NATION'S NUCLEAR ARSENAL. BY THE END OF THE MOVIE, BY PLAYING THE GAME TIC-TAC-TOE AND THEN THE GAME "THERMONUCLEAR WAR" (WHICH CONSISTED OF ENDLESS NUCLEAR SIMULATIONS), WOPR LEARNS THAT "THE ONLY WINNING MOVE IS NOT TO PLAY."**

Well, the same thing could be said about litigation. Due to court costs, lost time, damage to customer relations and uncertainty, it could also be said that the only way to win in court is not to play.

On a recent project, my company had a contractor that was not paying any of their suppliers or subcontractors. The reason given was that they had not been paid by the owner. Fortunately, we had a purchase order, and it did not include a conditional payment. The contractor didn't have the right to withhold our money even if they were not paid by the owner.

We consulted our attorney on how we should proceed, and he told me that the absolute minimum you could expect to pay for a lawsuit that went to trial was between \$40,000 and \$50,000, and this amount only includes your attorney fees. This could more than double when the opposition's fees are considered.

These fees can become a prohibitive factor in filing a lawsuit even if you are confident you can win. If the amount of the suit isn't significantly more than the expected fees, it doesn't make sense to even consider litigation. This is where your contract terms can play a huge factor.

I have received several contracts that make the supplier/subcontractor responsible for all attorney fees no matter who wins the case. This means

that the supplier could be responsible for the contractor's attorney fees even if the contractor wins the case.

These terms look like this: "Subcontractor shall pay any and all costs and expenses incurred in relation to the performance of Subcontractor's scope of work or enforcement of this Subcontract by the Contractor."

In this situation, you could have a slam dunk case that the contractor owes your \$75,000, but with the above contract language, it wouldn't be worth filing a claim, as you may pay \$100,000 in attorney fees in order to win \$75,000 (via judgement). The contractor would know this and may not be very willing to negotiate the claim.

While it would be great to flip the tables and modify a contract to say that the contractor is responsible for all attorney fees, they would never agree to that.

However, there is another palatable alternative that is commonly accepted. The concept is the party that does not prevail in the case pays for the fees of both parties. It may read something like this: "The prevailing party shall be entitled to recover attorney fees and all attendant costs ..." or "The non-prevailing party will be responsible for all attorney fees."

Adding this language is powerful. Under the scenario where each party pays their own attorney fees or if the subcontractor pays all of them,

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proceeding with a claim may be cost prohibitive even with a very strong case.

If you have agreed that the non-prevailing party pays all fees, it provides you a reasonable opportunity to proceed if you feel good about your case. If the contractor knows that you have a strong claim and are willing to proceed with the case, it puts you in a much better position to negotiate a mutually beneficial resolution and avoid court.

Litigation should always be a final resort. It is expensive, it can ruin relationships and everyone loses something. However, making sure that you have negotiated a reasonable attorney fee and court cost terms puts you in much better position to succeed. It can provide you the leverage that you need to better negotiate and ultimately avoid litigation. +



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# SURVIVING THE PAYROLL CHALLENGE

**The economy has grown at a rate that, at least temporarily, has outstripped the availability of employees needed to support that growth. As a result, payroll costs have demonstrated the potential to grow faster than sales. Virtually every firm has experienced this reality.**

The payroll challenge has also impacted many firms in a second, more subtle, way. The inability to fill key positions has created challenges in generating the level of sales growth that might otherwise have been reached. In short, there are not enough employees to service customer needs.

In either case, payroll costs represent a real profit threat to firms in almost every industry. This report examines the payroll challenge from two perspectives:

1. Payroll versus sales—an analysis of the relative impact of rising payroll costs versus the sales requirement to offset that increase.
2. Minimizing the payroll cost impact—an examination of specific actions that firms must take to moderate the profit impact of rising payroll costs.

## PAYROLL VERSUS SALES

Exhibit 1 demonstrates the interrelationship between payroll cost and sales and their impact on profit for the typical DHI distributor. The figures are derived from the latest DHI Industry Financial Benchmarking Report.

As can be seen in the first column, the typical firm generates \$20 million in sales, operates on a gross margin of 32% of sales and produces a bottom-line profit of 5% of sales or \$1,000,000.

The important item worth noting at this point is that payroll (fully loaded to include all fringe benefits) is by far the most important expense component. Specifically, payroll represents 20% of sales, which is 74.1% of total expenses. Any change in payroll expense will cause some dramatic changes in overall profitability.

Two different scenarios are presented in the exhibit. Both reflect a 5% increase in payroll costs. The first represents a 5% increase in payroll costs without any mitigating action on the part of the firm. The second demonstrates the increase in sales required to offset the payroll increase.

The two columns of numbers reflect a good news/bad news perspective. Doing nothing with regard to payroll cost is extremely damaging. At the same time, recovery to past profit levels should be within the realm of possibility.

The *Initial Profit Challenge* column demonstrates the impact of a 5% increase in payroll costs. At this point, the assumption is that all other factors in the business—sales, gross margin and all other expenses—remain constant.

The result is that payroll costs increase by \$200,000. With the increase, profit falls by the exact same amount. This is a sharp decrease in profit of 20%. Profit before taxes has fallen from 5% of sales to only

4%. Clearly, it is an untenable situation. The bad news portion of the good news/bad news perspective is clear.

The *Offsetting Sales Increase* column delivers the good news in the exhibit. Specifically, sales only have to increase to \$20,625,000 to return profit to its original dollar level. It should be noted that the profit margin falls slightly.

This is only a 3.1% increase, which should be attainable for the typical firm. Most DHI members should face a similar-sized sales offset.

However, the good news needs to be tempered with at least three caveats. First, the gross margin must be maintained at 24.5% of sales. There is no price cutting to generate the sales increase. Second, all other expenses (everything except payroll) cannot increase as sales grow. Third, there is no real increase in payroll other than the original wage increases first shown in the middle column. The same employee base must drive higher sales.

Overcoming these challenges is difficult, but not impossible. It requires thinking through the ways that can most effectively drive sales without causing negative changes in other aspects of the business.

## MINIMIZING THE PAYROLL COST IMPACT

There is a long list of actions that will increase sales volume. However, the most obvious actions involve increasing expenses and probably before sales increase. Such actions include adding new customers, expanding the product line and increasing the firm's service profile. All are actions that might be taken at some point. However, the increase in workload associated with these actions severely negates their desirability for driving sales without increasing payroll.

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**DR. ALBERT D. BATES** is Founder and Principal of the Distribution Performance Project, a distribution research firm headquartered in Boulder, Colorado.

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**TABLE 1** THE IMPACT FROM PAYROLL CHALLENGES FOR THE TYPICAL DHI MEMBER

Financial Profile - \$	Current Results	5.0% Payroll Cost Increase	
		Initial Profit Challenge	Offsetting Sales Increase
Net Sales	\$20,000,000	\$20,000,000	\$20,625,000
Cost of Goods Sold	13,600,000	13,600,000	14,025,000
Gross Margin	6,400,000	6,400,000	6,600,000
Payroll and Fringe Benefits	4,000,000	4,200,000	4,200,000
All Other Expenses	1,400,000	1,400,000	1,400,000
Total Expenses	5,400,000	5,600,000	5,600,000
Profit Before Taxes	\$1,000,000	\$800,000	\$1,000,000
Financial Profile - % of Sales			
Net Sales	100.0	100.0	100.0
Cost of Goods Sold	68.0	68.0	68.0
Gross Margin	32.0	32.0	32.0
Payroll and Fringe Benefits	20.0	21.0	20.4
All Other Expenses	7.0	7.0	6.8
Total Expenses	27.0	28.0	27.2
Profit Before Taxes	5.0	4.0	4.8

The bag of tricks available for driving sales without increasing payroll costs appreciably is limited. Three specific actions are most important in this endeavor.

**1. Lines per order**—putting more lines on every order allows for a sales increase with only a modest payroll cost increase. Increasing the lines per order revolves around two actions. The first action is to have the sales force do more add-on selling. It is an age-old issue of monitoring, evaluating and compensating.

The second action in driving more lines per order is to ensure that customers are aware of everything in the firm’s assortment. Nothing wrong with constantly telling them about one-stop shopping.

**2. Fill rate**—if you don’t have it, you can’t sell it. If you don’t have it often enough, all your customers go away. However, improving the fill rate inevitably leads to the requirement to carry more inventory.

From a profit trade-off perspective, adding inventory to increase sales is always a good idea. Of course, adding inventory without increasing sales is a terrible idea. The truth is, way too many firms have cut inventory to the point that sales are impacted negatively.

**3. Average line value**—increasing the average line value (line extension) is largely a pricing issue. No customer wants to pay too much. However, every distributor has a large array of slower-selling items for which availability is much more critical

than price. It is an opportunity that needs to be exploited to produce more sales dollars from the same unit sales.

With the effort to increase the fill rate mentioned above, the opportunity to be the “always in stock at a fair price” distributor increases substantially. However, the increased fill rate must be supported by fair-value pricing. Firms must get paid for the services they provide.

### MOVING FORWARD

The payroll challenge is not likely to abate any time soon. Controlling payroll costs versus sales requires a concerted effort on the activities that can drive sales without increasing payroll costs. This should be a planning focus. +



## PUTTING ACTION PLANS INTO ACTION



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### ESTABLISHING ANNUAL COMPANY GOALS IS ONLY THE FIRST STEP IN THE PROCESS OF ENHANCING THE SUCCESS OF YOUR COMPANY.

The annual company goals need to be supported by employee objectives or action plans.

- Company goals say “what” the company wants to accomplish.
- Employee action plans say “how” the employees will make it happen.

Everyone in the company needs to be held accountable for the success of your company, not just the owner. From the warehouse personnel to estimators, goals are critical. Establishing effective action plans is the secret to how it’s done.

Everyone from the top to the bottom of the organization has a role in supporting the company annual goals with their individual action plans. That means management and staff members.

More specifically, if your employees have their own specific and personalized action plans supporting the company annual goals, then everyone is working toward common goals. For instance, if you are trying to launch a new market for end users in health care, then you want everyone pointed in the same direction. It complements employee empowerment, and it makes sure everyone is on the same page. What gets measured gets accomplished.

The process of establishing employee action plans supporting the company goals is relatively easy, but it doesn’t always happen that way and, in some cases, action plans are not as effective as they need to be. In fact, establishing action plans that are effective, results oriented and motivational takes some doing.

### FOCUS ON YOUR CUSTOMERS

- External customers
- Internal customers (fellow employees)

Hopefully, everyone at your company recognizes the need to serve external customers like general contractors. If not, you’ve got some basic educating to do.

What may not seem so obvious is serving internal customers, the other employees and the various departments within the company. Serving the internal customers is just as important as serving the external customers. In fact, by serving internal customers, it’s easier to serve external customers. That message needs to be conveyed to all employees.

There are many ways to enhance serving internal customers. Try listening to the voice of the internal customer by conducting a customer satisfaction survey.

If we asked your employees if the company had happy customers, most people would have a definite opinion. They’d say either yes or no.

However, if your company does not conduct customer satisfaction surveys, the answers are based upon personal feelings that may or may not represent how the customers really feel.

Conducting formal surveys of your customers is essential, and they should be conducted on a consistent and continuing basis.

A “voice of the customer” satisfaction survey can be conducted via the telephone by a knowledgeable representative from the company. Phone surveys and as many in-person surveys as possible are the best way to get input and to ensure input is received. Mailed surveys will result in less than a 10% return rate, whereas phone or in-person surveys have a much higher response rate.

Conducting surveys after completing a job is a good time to learn about your performance in the eyes of your customer. +

# MIXING CODES AND REGULATIONS IS THE NORM



**GEORGE FAHEEM ZAKI (SOROUR), EHC,** is with France Metal, based in Cairo, Egypt. Email: [george.faheem@francemetal.net](mailto:george.faheem@francemetal.net).

This column in *Door Security + Safety* magazine features interesting insights from door and hardware professionals from around the world. Their unique perspectives on how construction practices, access control systems, hardware and certifications differ from the United States and Canada, where most DHI members operate, will offer a deeper understanding of the industry.

**I STARTED WORKING IN THE DOOR AND HARDWARE INDUSTRY IN 2008. I WORK FOR FRANCE METAL, WHICH IS BASED IN EGYPT, BUT IT ALSO EXPORTS TO MANY COUNTRIES IN THE MIDDLE EAST AND AFRICA, AS WELL AS A FEW COUNTRIES IN EUROPE.**

The company provides a complete service package from door/hardware consultation and installation to workshop drawing generation and hollow metal door manufacturing.

For most of the projects in the Middle East, I usually see a mix of codes used. Most of the projects adopt North American codes, and the European Norms and British standards as a mix. To overcome this, we try to certify our products to multiple standards to conform with as many requirements as possible.

In my opinion, the most difficult thing about working in the Middle East is the variety of requirements and codes and that the market is still developing in many countries in the region.

## UNDER ONE ROOF

The business model in the Middle East is very different than North America. For example, France Metal is a distributor, manufacturer and installer of hollow metal steel doors. In North America, these would be three separate businesses.

While I meet many experienced end users, the biggest knowledge gap I see is related to how end users communicate their needs or expectations of the door and hardware industry.

## DHI EDUCATION

I usually travel to the United States to attend the DHI technical schools. Attending the classes is very useful because DHI provides some of the best courses for the door and hardware industries. It is also helpful to meet many experts from around the world, and the discussions we have during the classes really do expand my knowledge and experience.

I would like to see DHI invest in more education opportunities for the Middle East. +



*...We try to certify our products to multiple standards to conform with as many requirements as possible.*



## PHOTOS OF THE YEAR

BY MARK J. BERGER, FDHI

I wish I could tell you we've culled through all the photos we've included in our columns this year and selected the ones we thought were best for inclusion in our end-of-year "Photos of the Year" extravaganza. Alas, all these are new shots taken during the past few months and making their Real Openings debut. Each one points out a bit of confusion or, worse, a real-life safety hazard.

Which is your favorite? One from this column? One from earlier this year? A photo you've taken but haven't submitted?

Please let us know at [real.openings.dhi@gmail.com](mailto:real.openings.dhi@gmail.com). We'd love to hear from you. Also, don't forget to send us your photos for inclusion in future "Readers Photos" columns.



### A EXIT DOOR BLOCKED BY DOORS

It was bound to happen, and it took a trip to a home center to finally find an exit door blocked by doors. And possibly plywood, too. I couldn't get close enough to see.

### B ARE THERE REALLY PUSH HANDLES?

Where to begin?

Clearly designed as an exit, and there is evidence (lots of holes) to indicate vertical rod devices were once part of the picture. But I don't see any holes for a strike in the header or floor.

Not quite sure why only one door in this pair has a door closer or why the cover is missing in action.

But the pièce de résistance is the pair of pull handles with the engraved "Push" signs covering the word "Pull."





**MARK J. BERGER, FDHI**, is the President and Chief Product Officer of Securitech Group, and a Past President of DHI and Chair of the Builders Hardware Manufacturers Association Codes & Government Affairs Committee. All "Real Openings" photos were taken in public spaces with the goal of highlighting the prevalence of code violations and the need for vigilance to save lives. **If you see something, say something.** To submit a photo for this column, email [real.openings.dhi@gmail.com](mailto:real.openings.dhi@gmail.com).

*The images shown here are not intended to reflect upon any specific manufacturer or products but are intended to help build awareness around the everyday code violations that occur in buildings over time, despite our members' best efforts to provide solutions to secure the life safety and security of the building occupants.*

### C ROLL-DOWN GRILLE OVER AN EXIT?

Here's a typical retail location that has taken over multiple storefronts. There is a main entrance, and the unused ones are typically turned into auxiliary exits, with nice signage above them. The door seen here is a classic example. A roll-down grille may serve as the only door in a mall or mounted on the interior side of the door. In urban areas, it is not uncommon for the roll-down grille to be on the exterior, as seen through the door here.

But a locked-in-place roll-down grille really puts an end to the usability as an exit, as does the deadbolt. And judging by the tape used to prevent the wind from blowing cold air into the store in winter, I'd say this doorway has not been used in quite some time. Especially since I took the photo in August.



### D WORLD'S MOST CONFUSING EXIT

Elevators have warning signs alerting us not to use them in an emergency. This certainly makes sense, as they must be available to firefighters, but they also could be a hazard.

This is the first time I have ever seen a clearly marked door to a stairwell telling the user not to enter during an emergency. If anyone has a good explanation, I'm all ears.

### E IS THERE REALLY AN EXIT?

Yes, I can't help poking my head into doorways in the path of egress to see where they lead, especially in retail locations. This one took the cake, as I could clearly see an exit sign, but not only was the path blocked, I could not determine if there was even an exit door.



# CONTRACTORS REMAIN OPTIMISTIC DESPITE SUPPLY CHAIN CHALLENGES

Dodge Data & Analytics recently reported in its Civil Quarterly publication a dramatic increase in supply chain challenges faced by civil contractors. However, Dodge says contractors remain optimistic about the state of the industry in the near future despite this adversity.

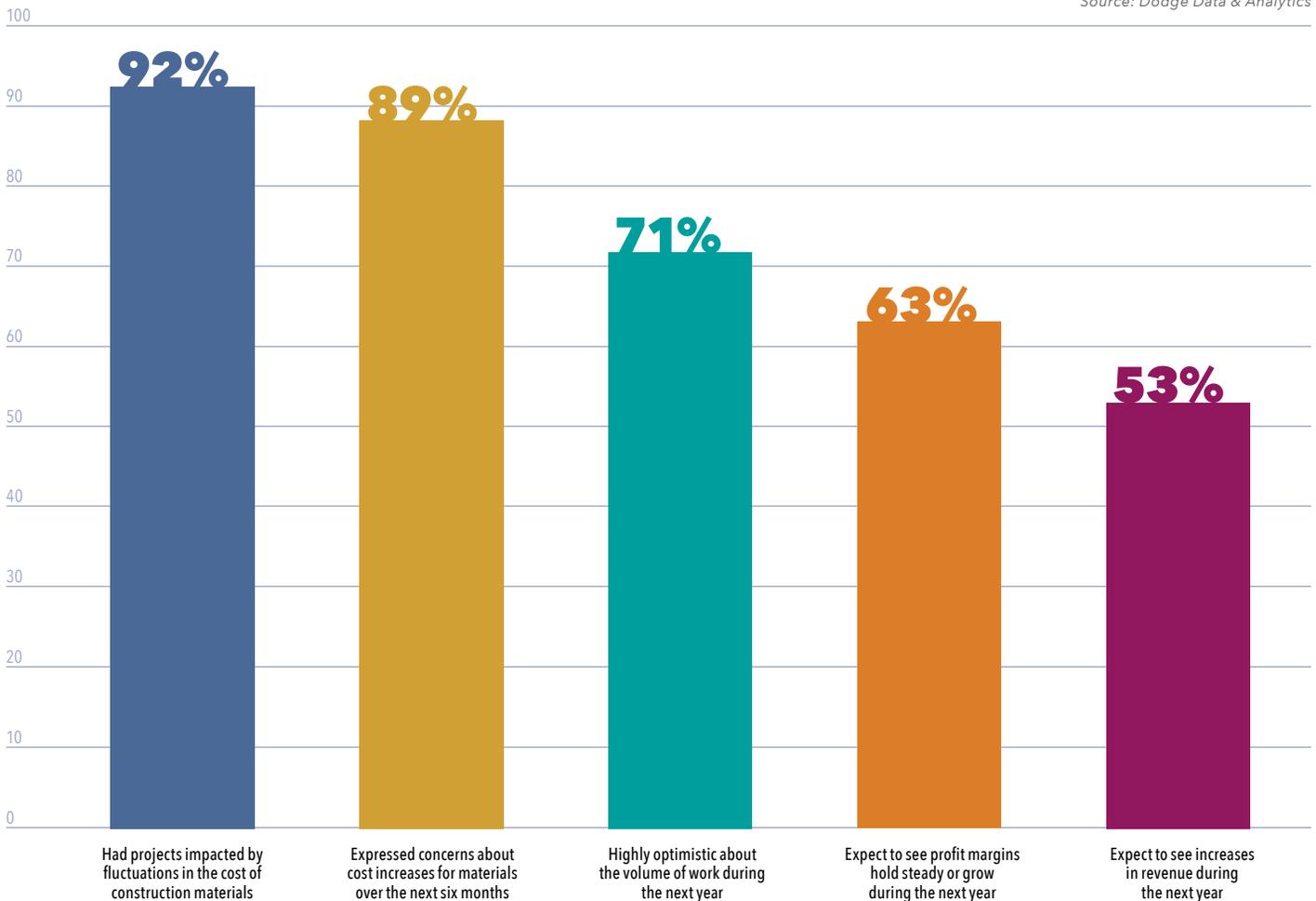
The report, based on a quarterly survey of civil contractors, engineers and owners, shows that the vast majority of civil contractors have had projects impacted by fluctuations in the cost of construction materials in 2021. The latest report also

found that most expressed concerns about cost increases for materials over the next six months, including prices for steel, piping, paving materials, lumber and aggregates.

Despite these concerns, over half expect to see increases in revenue and nearly two thirds expect to see their profit margins hold steady or grow during the next year. This is likely due to the fact that nearly three quarters are highly optimistic about the volume of work they expect during the next year.

## CONTRACTORS AFFECTED BY SUPPLY CHAIN CHALLENGES

Source: Dodge Data & Analytics



# U.S. POSTAL SERVICE STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

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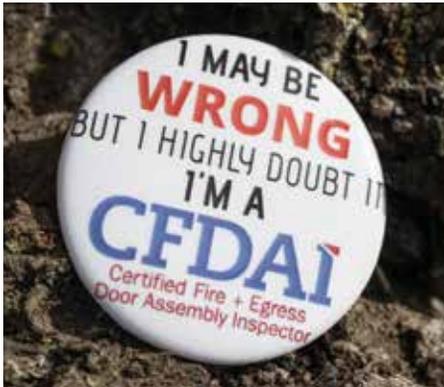
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# CREDENTIALING OPENS MORE DOORS FOR FULL-SERVICE DISTRIBUTORS



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## A TESTIMONIAL FROM A RECENTLY CERTIFIED CFDAI

**IT'S NOT EASY. BECOMING A CERTIFIED FIRE + EGRESS DOOR ASSEMBLY INSPECTOR (CFDAI) REQUIRES RIGOROUS STUDY AND IN-DEPTH CLASSWORK, CONCLUDING WITH A GRUELING FOUR-HOUR TEST OF CODES, COMPLIANCE RULES AND OTHER DETAILS PROMULGATED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).**

So when my colleague, Jeremy Whitehurst, CFDAI, saw the word "PASS" on his results screen, he welcomed it with excitement and opportunity. As the first CFDAI at Comdor LLC, Jeremy looks forward to all the doors (pun intended) this credentialing will open.

"Being a CFDAI creates new opportunities for our company to change and grow," he says. "This credentialing helps distributors by increasing our knowledge in this area of the trade. Catching problematic specifications ahead of time allows me to better help our customers and I can assess and repair products accurately in the field. Adding this service is just another element of our business philosophy of being a true full-service door and hardware supplier."

Jeremy recalls the DAI600 class experience and the networking he was able to participate in with fellow distributors, vendor representatives, and other professionals in the door and hardware industry.

"It was great that the contact information for instructors and class attendees was provided to everyone," he says. "Now I have contacts in different sectors of the industry. The variety of professionals in class was also great because we could discuss issues from different perspectives within the trade. There were distributors, manufacturers, technicians and specification writers taking the class, which really shows how important the credential is to the entire trade. I found the hands-on learning to be really valuable, as well. We conducted a few fire door inspections using openings

at the resort where the class was held, which helped us apply the knowledge we gained in class in real time."

With the news of Jeremy's certification, Comdor, LLC is exploring options for developing and implementing fire door inspection services as the inclusion of inspection services coincides within its full-service distribution model.

"Offering inspection services will help grow our company by being a one-stop shop for information, inspection and repair of fire doors," Jeremy says. "The planned trajectory is that our company will begin offering the services to our customers to assess the need for this type of inspection. We know this is a needed service and we hope to reach a point where each member of our sales and service team will become a CFDAI. This credential allows us to provide our customers with accurate and certified inspections and repairs, which is what is most important."

DHI offers trade professionals a variety of classes and training opportunities that allow the industry to stay current via continuing education. Having taken multiple classes with DHI, Jeremy can speak from experience about the value of the institution: "DHI is extremely valuable. The instructors are knowledgeable and genuinely care about the information they give out and the industry itself as they are volunteering their time and knowledge to advance the trade. DHI members are approachable and take the time to really dive into the information. DHI helps us keep up with our ever-changing industry." +



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