SPECWORK

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LITTLE ROCK CHAPTER

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In This Issue

LITTLE ROCK CHAPTER
CONSTRUCTION SPECIFICATIONS INSTITUTE

President's Message

March 2024

I recently read an article in ChatGPT concerning "The Importance of Artificial Intelligence in the Commercial Construction Industry" and thought it was important enough to share here.

"The integration of artificial intelligence (AI) in the commercial construction industry is increasingly recognized as a transformative force that brings about significant benefits. One key advantage lies in the optimization of project management and scheduling. AI algorithms can analyze vast amounts of data, identify patterns, and make predictions, enabling more accurate project timelines and resource allocation. This not only enhances efficiency but also helps in avoiding delays and cost overruns, crucial factors in the construction sector.

Moreover, AI contributes to improved safety on construction sites. Advanced AI systems can monitor and analyze real-time data from various sensors and cameras, detecting potential hazards and unsafe conditions. This proactive approach enables quicker response times to potential dangers, reducing accidents and ensuring a safer working environment for construction workers. Furthermore, AI-powered automation in construction processes, such as bricklaying, concrete pouring, and equipment operation, can enhance precision and speed, leading to increased productivity and cost-effectiveness.

In addition to operational improvements, AI aids in sustainable construction practices. By analyzing data related to energy usage, material efficiency, and environmental impact, AI can provide insights to optimize building designs and construction methods for greater sustainability. This aligns with the growing emphasis on eco-friendly and energy -efficient structures in the commercial construction industry. In summary, the adoption of AI in commercial construction not only streamlines operations but also promotes safety, sustainability, and innovation in an industry that is vital to economic development."

-ChatGPT

"Diversity is a fact. Equity is a choice.

Inclusion is an action.

Belonging is an outcome."

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CALENDAR OF EVENTS

Wednesday, February 14, 2024	Ryan Baker, Wallace Perimeter Security	8 Ways a Gate Installation Goes Sideways and What You Need to Know to Prevent Them
Wednesday, March 28, 2024	Carl Nicholls, Polyglass USA, Inc.	Modern Roofing Technology: Self-Adhered Modified Bitumen
Wednesday, April 10, 2024		
Wednesday, May 8, 2024		

If you have a Program that you feel would be interesting to the Membership and Guests, please contact Melissa at mjaguiar@garverusa.com or me at bjmathis@taggarch.com

Modern Roofing Technology: Self-Adhered Modified Bitumen (1 AIA LU/HSW CE Hour)

Presenter: Carl Nicholls / Polyglass USA, Inc.

Description

This course explores modified bitumen membranes with an emphasis on self-adhered products for low-slope roofing applications. Gain knowledge on the trends in the marketplace and advancements in the products which have made self -adhered an attractive option for specifiers, building owners and contractors alike.

Learning Objectives

By completing this course the design professional will be able to:
1.Describe the available variations of self-adhered membranes.
2.Explain the evolution and advancements in self-adhered modified bitumen roofing products.
3.Review the application methods and recommended technical details.
4.Understand trends in the low-slope roofing market which have led the industry to self-adhered applications.

Thursday - March 28, 2024 / 12:00 – 1:00 pm
Location - Garver Engineering Office, Third Floor Academy Room
4701 Northshore Drive, North Little Rock, Arkansas 72118

PLEASE JOIN US AT THE GARVER OFFICE FOR A PRESENTATION. THIS PRESENTATION WILL BE VIRTUALLY PRESENTED THIS MONTH, HOWEVER...THOSE THAT WISH TO MEET AND GREET AT LUNCH IN PERSON CAN DO SO AT THE NLR GARVER LOCATION, CSI WILL PROVIDE YOU WITH A GREAT MEAL!

PLEASE RSVP WITH YOUR NAME / FIRM / ADDRESS / AIA # (IF APPLICABLE) / AND YOUR PHONE NUMBER AS SOON AS POSSIBLE! LET US KNOW WHICH VERSION YOU WILL BE ATTENDING SO WE CAN GET A PROPER MEAL HEAD COUNT BEFORE THE PRESENTATION.

What I Learned From CSI - A Five Year (and counting) Collaboration Story

By: Gary Bergeron, CSI, CCS, GSR Technical Chair

About five years ago, John Ewart with the Associated General Contractors (AGC) in Knoxville, called our office and asked about coordinating a blueprint reading class for new construction industry employees. I explained drawings were now black line copies, no longer the old-fashioned ammonia developed blueprints, but that our CSI Knoxville chapter had several members who could teach most disciplines. There were some areas, however, in which I knew we did not have members - structural and civil.

Beth Crisco-Kestner is the National Association of Women In Construction (NAWIC) chapter president, a good teacher and a structural engineer. She suggested Robert Johnson with her company (CEC) to teach the civil engineering portion of the class.

We also enlisted a local electrical contractor who has taught electrical apprentices. David Rouse is a very good teacher with several years' experience in an electrical classroom environment.

Next, we contacted Suzan Jordan CSI, CDT, CCPR who was able to provide and coordinate access to the classroom. Our 2024 teaching team consists of Kathy Proctor FCSI, AIA, CDT for architectural, Robert Johnson PE for civil, Beth Crisco-Kestner PE for structural, David Rouse for electrical, Aaron Miller CSI, AIA, CDT and Ben Brewer AIA, LEED AP, CSI, CCCA for specifications, and Gary Bergeron FCSI for HVAC, plumbing, and fire sprinklers.

We have taught this class for several years and have become partners with AGC and NAIWIC. CSI Knoxville has been given complimentary access to the AGC classroom for our CSI meetings.

We are pleased to have several women involved as teachers and role models in this traditionally male dominated profession.
CSI Knoxville chapter received a complimentary copy of the Procore software and several lessons on running the system, tracking the drawings, specifications, addendums, RFI, ASI's and other related items. We can now provide an introduction to Procore tablet-based construction document management software.

The Nashville AGC also contacted us to teach a similar class to their Nashville members. We have enlisted several CSI Nashville members and will begin to teach that class soon.

Working with other professional groups allows everyone to benefit. We have been using the CSI tagline "Building Knowledge, Improving Project Delivery" for several years here in Knoxville and believe we are doing exactly that!

AI - Another Opinion

By George R. Wadding, CSI, Member Emeritus

Late last year I decided to write something about Artificial Intelligence (AI) as it might apply to the construction Industry. immediately it occurred to me that I actually knew very little about AI. I was prompted to increase my knowledge of the topic in part by two facts:

I was awarded status as a Member Emeritus by the Construction Specifications Institute (which I first joined in November 1964) and CSI announced that it had established a committee to look into AI. I now have stored on my hard drive over 50 folders. Recently I spoke with two RA members of the Phoenix Chapter at our monthly meeting who have looked at AI applications intended for architects. Their lack of enthusiasm only served to confirm my apprehension.

I was an early adopter of the use of computers, other than mainframes, for various tasks in the operations of commercial roofing companies. For a couple years in the late 80s, I spent considerable time and money trying to market estimating tools: digitizers for quantity takeoffs, desktop PC units, and specialized custom templates, as E-Zest Products. As a good friend in the business later put it to me after this effort turned out to be very challenging 'you were a bit too early for the acceptance of the whole concept'.

With that as my background you can understand that AI seemed to be the cutting edge and since I am no longer working full-time, I had the time available to 'look into' AI. I soon found that it is far more advanced and complicated than I realized. One of the first surprises was realizing that the translation of oral speech-to-text on my cell phone is an AI application. Since my profound hearing loss led me to use closed captioning on my land-line phone and TV set, that soon established that AI has some limitations that can be off-putting, confusing, and nonsensical. This are referred to as "hallucinations".

Two obvious challenges for AI is that it cannot recognize ethics (it has no understanding of morals) nor can it comprehend aesthetics (art and physical appearances). A great deal of architecture is rooted in art which may make AI challenging in some parts of construction. In fact, both of those shortcomings are quite routine functions for the human brain, which also is proficient in logic and grammar. Try this for a rough illustration. Turn on the 'cc' (closed captioning) on your TV and you will see incorrect words and phrases that make no sense without your human brain's ability to use surrounding context to provide a correction.

One of my earliest impressions was that any AI software vendor needs an experienced construction attorney or construction manager on staff. Depending on an AI-based program to provide construction documents and to provide truly useful and accurate management information, is likely to lead to some difficult issues. I was pleasantly surprised by some of the first articles I read to see my thoughts confirmed. To quote Jerry Levine, general counsel at of ContractPodAi, whose AI-powered legal assistant known as "Leah", cautions "100% you're going to get sued". AI will almost surely open a Pandora's box relating to confidentiality, plagiarism, intellectual property, code complexities, and other issues.

Without on-going oversight and corrective action by a construction professional with considerable experience in both field and office protocols, there will be serious and costly errors. Neither coders\programmers, nor IT personnel really understand the true complexity of the built environment. Integration of information from the Architects\Engineers, Prime contractors, Subcontractors, Product suppliers, and Inspectors are not likely to be resolved in advance by an AI narrative.

While AI can automate processes and provide insights, it will be crucial to have human experts make decisions, validate and interpret AI generated outputs. In fact, a construction magazine 'interviewed' ChatGPT and 'it' noted that human oversight, perpetuation of biases, ethical factors are potential pitfalls of using AI in construction. Think of that as a machine psychoanalyzing itself.

Chat GPT, Bing and Bard are awesomely powerful, but the scary fact is that even the computer scientists who built them know startlingly little about how they work. Many are based on LLMs (large language models) which have been fed nearly unimaginable volumes of text from the internet and 'learned' how to interact (talk) with humans. It is probable that conclusions from AI will be heavily influenced by what in mathematics would be median or average. Best practice or most suitable application may be adversely affected.

A writer for Forbes stated flatly that ChatGPT "is not yet sophisticated enough to replace the intellectual work of human beings nor can it add context, detect nuance, display originality or flair, and produce content of a sophisticated nature."

It is likely that we will be presented with glowing pitches of apps using AI that will improve any aspect of construction. AI will doubtless assist in routine repetitive cost control work, equipment or machinery with autonomous functionality, analyzing safety hazards, potential 'choke points' for materials or fixtures, alternative design subsystems and cost impacts.

Realize that among the definitions of artificial are: fake, false, mock, simulated, humanly contrived, arbitrary. Simply remember that above all else, you should rely on your best tool: the human brain.

George R. Wadding
Construction Specifications Institute Member Emeritus
Arizona Roofing Contractors Assn. Life Member Award
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Comparing Design Assist and Delegated Design in Construction Projects

By: AIA Contract Documents

In the realm of construction projects, the collaboration between architects, engineers, and contractors is paramount to ensure successful outcomes. Two prevalent approaches that facilitate this collaboration are Design Assist and Delegated Design. While both methods aim to streamline the construction process and optimize project delivery, they differ in their scope, responsibilities, and implications. Let's delve into a comparison of Design Assist and Delegated Design.

Design Assist:

Design Assist is a collaborative process where the contractor joins the design team early in the project to provide input, expertise, and cost-related insights. In this approach, contractors' perspectives are considered during the design phase, allowing them to offer valuable feedback on constructability, materials, and methods. The goal is to enhance the design's feasibility, cost-efficiency, and functionality, while still maintaining the architect's creative vision.

Key Features of Design Assist:

Early Contractor Involvement: Contractors are brought on board during the design phase, fostering a multidisciplinary collaboration that integrates construction expertise from the outset.

Constructability: Contractors contribute insights on how design decisions may impact the construction process, highlighting potential challenges and proposing solutions.

Cost Control: By involving contractors in design discussions, cost implications of design choices can be addressed in real time, preventing costly changes during construction.

Optimized Project Delivery: Design Assist can lead to a smoother construction phase, as design-related conflicts and inefficiencies are mitigated early on.

Delegated Design:

Delegated Design, on the other hand, involves the allocation of specific design responsibilities from the design team to the contractor. This method allows the contractor to take ownership of certain design elements, such as structural components or specialized systems, and develop them further. The contractor becomes responsible for meeting design criteria and ensuring compliance with relevant codes and standards.

Key Features of Delegated Design:

Specialized Expertise: Contractors with specialized knowledge can optimize design elements related to their area of expertise, potentially resulting in more efficient and innovative solutions.

Risk and Responsibility: Contractors assume greater responsibility for the design elements they're delegated, including adherence to regulations and performance expectations.

Reduced Design Team Workload: By offloading specific design tasks to contractors, the design team can focus on broader design aspects, potentially improving overall project quality.

Clarity in Responsibilities: Clearly defined roles between the design team and contractors can help reduce conflicts and ensure smoother project execution.

Comparative Analysis:

While both Design Assist and Delegated Design enhance collaboration between designers and contractors, they differ primarily in their timing and degree of contractor involvement. Design Assist is about early collaboration, while Delegated Design involves assigning discrete design tasks to contractors. Design Assist is more focused on constructability, cost control, and collaboration, whereas Delegated Design emphasizes specialized expertise and risk allocation.

The choice between these methods depends on project goals, complexity, and the level of collaboration desired. In some cases, a hybrid approach may be used, blending the benefits of both methods to achieve an optimal balance between design innovation, cost control, and project efficiency. Ultimately, successful implementation of either approach relies on effective communication, collaboration, and alignment of project stakeholders' interests.

Additional Resources:

C403™–2021 Client and Consultant Agreement for Design Assist Services

C404–2021 Contractor and Consultant for Delegated Design Services

White Paper: Design Collaboration on Construction Projects (https://acdpages.aia.org/2021-collaborative-concepts.html?__hstc=40756093.7ce20ca80bbf7bb0d0d51ec87ae01e6c.1705671044659.1705671044659.1705671044659.1&__hssc=40756093.1.1705671044659&__hsfp=1654019965&_gl=1*1uywfzo*_ga*MTc3MjM5NzYyMi4xNzA1NjcxMDQ0*_ga_E3VWY9JRK3*MTcwNTY3MTA0My4xLjEuMTcwNTY3MTA0My42MC4wLjA.*_gcl_au*MzA5NTIxMzMxLjE3MDU2NzEwNDQ

Responsible Charge an Essential Concept for Design Professionals

By: Kevin O'Beirne, PE, FCSI, CCS, CCCA, CDT

Laws and regulations governing the practice of architecture, engineering, geology, and other design professions require that professional services be performed under the “responsible charge” of an appropriately licensed, registered design professional. What that means in practice varies by applicable laws and regulations and may be subject to varying interpretations. This article examines the applicability and meaning of “responsible charge” and presents related key concepts for practitioners.

Terms such as, “’[architect] [engineer] of record” and “’[architect] [engineer] -in-responsible-control” are typically construed as having the same meaning as, “’[architect] [engineer] -in-responsible-charge”. In many organizations, the terms are used interchangeably for a given design discipline. For convenience and uniformity, the term “responsible charge” is used in this article.

Applicability

Laws and regulations governing the practice of the design professions require that a licensed, registered design professional serve in responsible charge, including sealing and signing instruments of service such as technical reports, calculations, drawings, specifications, and other documents, when such services constitute the practice of architecture, engineering, or other design profession. Typically, one of the first provisions of such laws and regulations defines what constitutes the practice of architecture, professional engineering, or other design profession.

Although statutes concerning the practice of architecture, engineering, or other design professions typically require that only certain instruments of service be sealed and signed for certain, specific purposes, they require an appropriately licensed, registered design professional to serve in responsible charge for all activities constituting the statutory definition of the practice of the subject design profession, regardless of project stage.

The National Council of Architectural Registration Boards (NCARB) publishes model statutory language governing the practice of architecture in the United States. NCARB Model Laws and Regulations includes the following definition in Section 103.15:

“15) Practice of Architecture – “The art and science of designing, in whole or in part, the exterior and interior of Buildings and the site around them, in a manner that protects the public health, safety, and welfare. The Practice of Architecture includes providing or offering to provide planning services; developing concepts; preparing documents that define form and function; coordinating consultants; and construction administration.

“a. Planning services include, but are not limited to, programming and planning.

“b. Developing concepts includes, but is not limited to, preliminary studies, pre-design, investigations, and evaluations.

“c. Preparing documents that define form and function includes, but is not limited to, drawings and Technical Submissions, including incorporation of the requirements of the authorities having jurisdiction.

“d. Coordinating consultants includes, but is not limited to, the coordination of any elements of Technical Submissions prepared by others.

“e. Construction administration includes, but is not limited to, evaluation of construction to determine that the work is proceeding in accordance with the contract documents.”

Similarly, the National Council of Examiners for Engineering and Surveying (NCEES) publishes suggested language for state and territorial laws and regulations governing the practice of professional engineering and land surveying in the United States. NCEES’s Model Law (revised September 2021) (chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ncees.org/wp-content/uploads/Model_Law_2021_web-2.pdf) Section 110.20.A.5 defines the following in part:

“5. Practice of Engineering—The term “Practice of Engineering,” as used in this Act, shall mean any service or creative work requiring engineering education, training, and experience in the application of engineering principles and the interpretation of engineering data to engineering activities that potentially impact the health, safety, and welfare of the public.

“The services may include, but not be limited to, providing planning, studies, designs, design coordination, drawings, specifications, and other technical submissions; teaching engineering design courses; performing surveying that is incidental to the practice of engineering; and reviewing construction or other design products for the purposes of monitoring compliance with drawings and specifications related to engineered works.

“Surveying incidental to the practice of engineering excludes the surveying of real property for the establishment of land boundaries, rights of way, easements, and the dependent or independent surveys or resurveys of the public land survey system…”

Of course, engineers should not practice architecture and architects should not practice engineering. Because no state or territory has adopted NCARB’s and NCCES’s model laws and regulations in their entirety, and each has its own, unique statutory language, practitioners must verify the definition of what constitutes the practice of architecture, engineering, or other design profession in the jurisdiction where their project is located. Thus, activities that fall under the applicable statutory definition of the practice of architecture must be performed under the responsible charge of a suitably licensed, registered architect, and services falling under the applicable statutory definition of the practice of engineering must be performed under the responsible charge of an appropriately qualified, registered, licensed professional engineer.

Certain activities commonly undertaken by architects and engineers do not fall under applicable statutory definitions of the practice of architecture, engineering, or other design profession, including: performing services that are purely computer-aided design (CAD) or building information modeling (BIM); obtaining samples and performing testing, whether in-situ or in a laboratory; and others falling under exemptions expressly indicated in the applicable law or regulation. Such services need not be performed under the responsible charge of a licensed design professional. Also see: Sealing and Signing Divisions 00 and 01: Is it Architecture or Engineering?, previously published on this writer’s blog.

No design professional should ever practice outside their area of competence or when they and their employer are not properly licensed to do so. Thus, design professionals should never offer or perform services that may be construed as legal advice, insurance or risk management advice, accounting, financial advisory, or other services for which they are not qualified and licensed to offer or provide, and for which they are not properly insured.

Some Common Practices

While seemingly everyone in the design professions has some awareness of the concept of responsible charge, how responsible charge is viewed and exerted varies considerably from one design firm to the next and, in some cases, from one licensed design professional to another.

In many design firms, especially those with fewer staff, it is reasonably common for only one or a small number of senior staff to be authorized by the firm to serve in “responsible charge”. Whether such senior staff properly exercise responsible charge may, perhaps, be another matter. For example, this writer recalls a post in the online community of a non-profit organization representing design professionals in which a principal of an architecture firm indicated he was in responsible charge of all his firm’s projects and sealed and signed deliverables for five to ten projects per week. Given the often-significant time commitment of serving in responsible charge, as recommended in this article, it may be difficult to conceive how an individual could properly serve in responsible charge of five to ten projects every week.

Where a senior staff member at a design firm seals and signs instruments of service for a significant number of projects, it may not be possible for that person to be appropriately involved in day-to-day decisions on technical matters on their projects. In such cases, when the instruments of service are drafted, and a deliverable is due, the architect- or engineer-in-responsible-charge reviews and marks up the draft deliverables before sealing and signing them for subsequent delivery. Such post-preparation reviews may fall short of the requirements for exercising responsible charge under applicable laws and regulations. It is arguable whether such practice truly constitutes properly serving in responsible charge. Individuals and firms who engage in such practices should consider their potential response and action in the event they must justify their actions concerning responsible charge to the applicable state or territorial licensing board. Design firms’ personnel time sheets documenting the extent of such reviews may become evidence in such circumstances.

Other, more significant deviations from what constitutes a proper exercise of responsible charge may happen from time to time. Examples shared orally with this writer over the years by professional colleagues (not with the writer’s current employer) include instances of: (1) a professional engineer directing unlicensed staff to use and apply the PE’s seal and an electronic facsimile of their signature to deliverables when the PE was out of the office for an extended period; and (2) a licensed design professional who allowed their license to lapse but continued to seal and sign instruments of service for their employer for 18 months.

Practices such as these may be contrasted with the recommendations presented below regarding what this writer believes constitutes appropriate conduct for licensed design professionals serving in responsible charge.

The meaning of “Responsible Charge”

Below are recommended practices for design professionals serving in “responsible charge”. This list was developed in part by adapting recommendations set forth in an article by David Peeler, PE, in The North Carolina Bulletin, (newsletter of the North Carolina Board Of Examiners For Engineers And Surveyors), December 2004/Fall Issue. A licensee serving in responsible charge should:

1. Possess current, valid license and registration for the design discipline(s) involved.
2. Be competent by training and experience in the discipline(s) required.
3. Actively supervise, for the project or assignment, the individual(s) performing the services.

4. Obtain or establish project parameters and criteria relative to performing technical aspects of the required design discipline(s).
5. Actively require changes to the work (and instruments of service) and direct the manner and method of how the technical services are performed.
6. Be actively involved, from start to finish, as the services are performed.
7. Ensure procedures and quality programs are in place supporting the licensee's control of the technical aspects of the services.
8. Spend sufficient time with personnel performing the services to be familiar with details of such technical services.
9. Train, or be otherwise personally familiar with capabilities of, the personnel performing the services.
10. Have close proximity or regular access to, or communication with, individuals performing the services.
11. Be duly authorized by their employer to serve in responsible charge of the associated design discipline(s).

Applicable requirements concerning responsible charge vary by jurisdiction and, thus, licensees should review laws and regulations governing the practice of the design professions where their projects are located.

The National Society of Professional Engineers' (NSPE) Position Statement on Responsible Charge (https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/responsible-charge) includes the following key text:

"The professional engineer in Responsible Charge is actively engaged in the engineering process, from conception to completion. Engineering decisions must be personally made by the professional engineer or by others over which the professional engineer provides supervisory direction and control authority. Reviewing drawings or documents after preparation without involvement in the design and development process does not satisfy the definition of Responsible Charge."

For engineers, Section 240.20.E of NCEES's Model Rules (revised August 2022) defines responsible charge in a manner that is different from this article's recommendations set forth above, and uses the following language:

"E. Plans, plats, specifications, drawings, reports, and other documents will be deemed to have been prepared under the responsible charge of a licensee only when all the following conditions have been met and documented:

"1. The client requesting preparation of such… documents makes the request directly to the licensee, or a member or employee of the licensee's firm;
"2. The licensee supervises the preparation of the… documents and has input into their preparation prior to their completion;
"3. The licensee reviews the final… documents; and
"4. The licensee has the authority to, and does, make any necessary and appropriate changes to the final… documents.

"The licensee is responsible for meeting all of the preceding requirements whether the work is being performed remotely or locally."

For architects, NCARB Model Laws and Regulations includes the following definition at Section 103.16:

Section 4.01.2 of NCARB's Model Laws and Regulations also states, in part, "*…By sealing a technical Submission, the Architect represents that the Architect was in Responsible Control over the content of such Technical Submissions during its preparation and has applied the required professional standard of care.*" A footnote to Section 401 also includes the following, "*…The seal also represents that the Architect is in Responsible Control of the design, is familiar with all aspects of the document preparation, and the submission is complete for construction….*" Section R401.1 also includes language clarifying the meaning of the architect's application of their seal to instruments of service. As demonstrated here, NCARB's Model Laws and Regulations requirements on "responsible control" may perhaps be considered less detailed than this article's recommendations concerning responsible charge, above.

Some states have adopted language in their laws and regulations governing the design professions that differs from, and may be more clear to licensees, the NCARB and NCEES model language, discussed above, and appears to be closer in meaning and intent to this article's recommendations. For example, revisions in November 2015 (effective on January 1, 2016) to the Commonwealth of Virginia's Laws and Regulations governing the practice of Architecture, Engineering and other design professions clarified appropriate conduct for personnel in responsible charge. These revisions included important clarifications in 18 Va. Admin. Code § 10-20-740 concerning what is meant by "direct control and personal supervision", stating in part:

"18VAC10-20-740. Professional responsibility.

"A. Unless exempt by statute, all architectural, engineering, land surveying, landscape architectural, and interior design work must be completed by a professional or a person performing the work who is under the direct control and personal supervision of a professional.

"B. A professional shall be able to clearly define his scope and degree of direct control and personal supervision, clearly define how it was exercised, and demonstrate that he was responsible within that capacity for the work that he has sealed, signed, and dated. For the work prepared under his supervision, a professional shall:

"1. Have detailed professional knowledge of the work;

"2. Exercise the degree of direct control over work that includes:

"a. Having control over decisions on technical matters of policy and design;

"b. Personally making professional decisions or the review and approval of proposed decisions prior to implementation, including the consideration of alternatives to be investigated and compared for designed work, whenever professional decisions are made that could affect the health, safety, and welfare of the public involving permanent or temporary work;

"c. The selection or development of design standards and materials to be used; and

"d. Determining the validity and applicability of recommendations prior to incorporation into the work, including the qualifications of those making the recommendations;

"3. Have exercised his professional judgment in professional matters that are embodied in the work and the drawings, specifications, or other documents involved in the work; and

"4. Have exercised critical examination and evaluation of an employee's, consultant's, subcontractor's, or project team member's work product, during and after preparation, for purposes of compliance with applicable laws, codes, ordinances, regulations, and usual and customary standards of care pertaining to professional practice."

The foregoing language appears to preclude a Virginia architect or professional engineer from being able to rely on subordinates to perform their technical services without the active, direct, personal supervision of the licensee, followed by the licensee's subsequent review of the professional work product and sealing and signing thereof. The detail and clarity in Virginia's statute is striking and appears to establish an appropriate example for professional engineers, architects, and other licensed design professionals, whether practicing in Virginia or elsewhere. Laws and regulations governing the design professions in states other than Virginia include language clearly establishing the intent of "responsible charge".

In contrast to Virginia's requirements, as discussed above, some jurisdictions' laws and regulations governing the design professions appear to establish a lower standard concerning responsible charge. One example is the decision for the case of The State Board Of Architects v. James Clark (Court of Special Appeals of Maryland), No. 633, Sept. Term, 1996, February 27, 1997), which included the following:

"Under section 3-501(a) of the Maryland Architects Act, a licensed architect is permitted to affix his or her seal to drawings when the architect has either prepared or approved the document. Md. Code Ann., Bus. Occ. & Prof. § 3-501(a) ("the licensed architect who prepared or approved the document shall sign, seal and date the document"). Thus, the Legislature has unambiguously acknowledged that an architect need not supervise every aspect of a drawing prior to certifying it. If an architect, after review, "approves" a document, he or she is permitted to stamp that document."

The 1997 decision in the Maryland case contrasts with the 2015 revisions to the Virginia statute discussed above. Because, at the time of this writing, nearly 27 years have elapsed since the decision in State Board of Architects v. James Clark, practitioners in Maryland should be aware of current, applicable laws and regulations and decisions by licensing boards and appeals courts and exercise the appropriate standard of care.

As highlighted by the Virginia statutory language and Maryland court decision, discussed above, practitioners should verify and understand the laws and regulations governing the practice of the design professions where their projects are located.

Key Concepts for Practitioners

While a design firm retains the contractual liability associated with its business, it is the individual licensed, registered design professional who seals and signs the instruments of service who possesses the individual professional liability associated with those instruments of service. Thus, a person serving in responsible charge, who seals and signs the design firm's work product, may potentially be liable to the design firm's client or other entity, including members of the general public. This entails significant risk for the individual, while the design professional's employer (the design firm) receives the benefit (profit) and the potential liability (loss) obtained from the associated professional services.

A design firm's bylaws should expressly address how the firm handles risks associated with its employees serving in responsible charge. In most cases, a design firm's bylaws provide for the firm to indemnify and defend, at the firm's expense, employees who have acted in good faith, in accordance with applicable laws and regulations and the scope of the responsibilities assigned to them by the firm. An employer's assumption of responsibility for defending an employee does not, however, shield the employee from the jurisdiction of a professional licensing board, although the firm will typically provide the employee's legal defense. Employers should never request or attempt to require that their employees act contrary to applicable laws and regulations.

The licensee who will serve in responsible charge should be selected during the opportunity phase, prior to the design firm developing and submitting its proposal to its client. Because potential exists for personnel serving in responsible charge to become unavailable or separate from their employer before their professional services are completed, it is advisable to have a successor designated in advance, to reduce disruptions and delays during project implementation.

Individuals serving in responsible charge should be properly authorized to do so by their employer. Rules for how this should be done vary by jurisdiction and employer. Regardless of statutory and employer requirements, it is often advisable for an individual who will serve in responsible charge to be expressly designated for such responsibility for each assignment. Typically, such individual should be designated only by an officer of their employer's organization authorized to perform such designations. Delegation of the responsibility to serve in responsible charge should typically be in writing, clearly indicate the assignment and specific design discipline(s) to which the authorization applies, and be saved in the design firm's project file and in the licensee's personal file. An example for requesting such authorization is:

This is to request designation of [indicate full name] to serve as the "[architect] [engineer]-in-responsible-[charge] [control]" (also known as "[architect] [engineer]-of-record") for the [indicate project; also consider indicating design firm's project number] [if the designation is for only a part of the project, such as only for civil/site work while another design professional serves in a similar capacity for, say, electrical work, clearly indicate the applicable part of the project].

The general nature of the project is [indicate information]. The general nature of our firm's services for the project is [indicate information; for example, "performing preliminary and final design, and serving in responsible charge for the construction phase, of a new hotel", or other appropriate language]. The responsibilities of the [architect] [engineer]-in-responsible-[charge] [control] are expected to commence on [indicate date] and conclude by approximately [indicate date). Our firm's project manager is [indicate name} and the principal-in-charge is [indicate name].

The reason I am requesting designation as the "[architect] [engineer]-in-responsible-[charge] [control]" is [indicate reason(s)]; [I] [or indicate name of candidate for responsible charge] am currently a licensed, registered [professional engineer] [architect] in [indicate state or territory]. The experience [I] [or indicate name of candidate] possess to serve in responsible [charge] [control] for this project includes [indicate information].

This request is presented to you because you are an officer of [indicate design firm's name]. Please respond to this request in writing, such as via e-mail. To avoid adversely affecting the schedule for [preparing and submitting our proposal] [performing our services] for the project, your response is requested by [indicate date]."

An example for authorizing a person to serve in responsible charge is:

You are hereby designated as the licensed professional in responsible [charge] [control] for the Project indicated above for the following elements of the Project, in accordance with [indicate design firm's name] scope of professional services. [Indicate; example: "Structural engineering for all elements of our firm's Project scope."]."

When a licensed design professional is assuming responsible charge as a "successor engineer", "successor architect", or successor in another design profession, additional requirements may apply before that person may serve in responsible charge of an ongoing project. For advice on this topic, see the article by David L. Pond, PE, in The North Carolina Bulletin, April 2012/Spring Issue. Laws or regulations governing the subject design profession in the jurisdiction where a given project is located may have specific requirements governing the proper designation of a successor design professional.

Many architects, especially on architect-led vertical construction projects, do not prepare their own construction specifications. Rather, many architects retain the services of an independent specifications consultant who assists the architect-in-responsible-charge by providing consulting services relative to selection of certain building products, developing the project's construction specifications, and providing selected consulting services to the architect, relative to the specifications, during construction. Some specifications consultants are registered architects, but many are not. Specifications consultants typically do ***not*** seal or sign the construction specifications they produce for their clients; rather, the architect-in-responsible-charge typically seals and signs both the drawings and specifications. When an architect retains the services of a specifications consultant, the architect-in-responsible-charge should exert appropriate supervision and control over the specifications consultant. In contrast, it is most common for engineers, whether on architect-led vertical construction or engineer-led infrastructure and industrial process projects, to develop, seal, and sign their own construction specifications, typically without retaining a separate specifications consultant.

Because construction drawings and specifications are intended to be coordinated with each other to communicate the contractual requirements and design intent of the design professional-in-responsible-charge, one design professional should typically seal and sign the drawings and specs for a given design discipline for a given element of the completed project. Indeed, it may be difficult to apportion liability when separate design professionals seal and sign the drawings and specifications for a given design discipline for a given element of a project.

Some design firms in the United States employ overseas personnel to assist in preparing instruments of service. When personnel performing such services are located many time zones away from the design professional in responsible charge, regardless of whether both fluently communicate in the same language, appropriately exercising responsible charge may be more challenging. In such circumstances, additional time and effort by the licensee may be necessary to comply with requirements of laws and regulations concerning responsible charge. As just one example, on November 21, 2014, the Texas Board of Professional Engineers issued a policy advisory regarding exercising responsible charge over individuals working remotely at overseas locations. The advisory responded to the following questions, among others: "Is there any part of the engineering work… that is acceptable to work-share overseas when the EoR [engineer of record] is in Texas and not available or in the overseas work-share office?... Can the EoR do a review and seal the final engineering documents after they have been completed by an overseas work-share office when the work wasn't present or directly supervised by the EoR?"

In response, the Texas board advised that its regulations are, "broad enough to allow flexibility in a variety of today's work environments while ensuring that the responsible licensed professional engineer (P.E.) has sufficient input into and oversight [of the instruments of service and professional services performed]." The Texas board responded in part, "an engineering company can [emphasis in the original] share any engineering work with overseas/remote offices as long as the responsible Texas licensed P.E. has sufficient oversight no matter his or her location." The advisory reiterated Texas professional engineering statutory language that a professional engineer must exercise "direct supervision" of professional engineering services, "through physical presence or the use of communications devices." The board further advised "the Board Statute and Rules are silent on the kind or type of communication devices that are acceptable… The Board expects periodic review by either physical presence or through the use of communication devices." The Texas Board's advisory is, however, applicable only to professional engineering for projects in the State of Texas.

Conclusions

Serving in responsible charge is among the most significant aspects of performing a licensed design professional's obligations. While statutory requirements concerning responsible charge vary by jurisdiction, complying with the practices recommended in this article will likely constitute acceptable conduct regardless of the project's location in the United States. Licensed design professionals who practice

a lower standard should verify that their practices are consistent with applicable laws and regulations. In many cases, serving in responsible charge while taking a hands-off approach rather than actively supervising and controlling the personnel performing technical aspects of the assignment may entail considerable risk for both the licensee and the firm.

Acknowledgments: The author gratefully acknowledges the assistance of the following, who kindly reviewed and commented on drafts of this article: David Metzger FAIA, FCSI; retired Vice President of Heller & Metzger, architectural specifications consultants in Washington DC; James K. Lowe, Jr., Esq., P.E. (VA, emeritus), who has more than 45 years' experience in the A/E industry; and Jerry Cavaluzzi, Esq, of Westchester County, NY, who is Chief Risk Officer and General Counsel for Kennedy/Jenks Consultants, Inc.. In addition, Mr. Lowe also furnished information on the Maryland case and Texas policy advisory discussed in this article. The author is solely responsible for the final content of this article.

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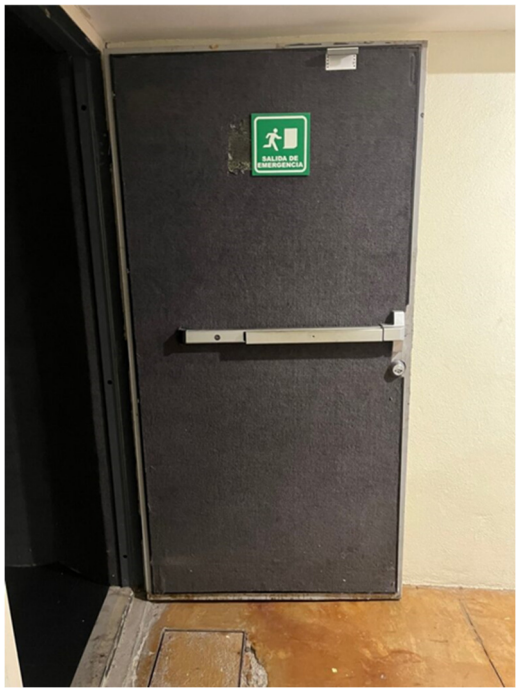
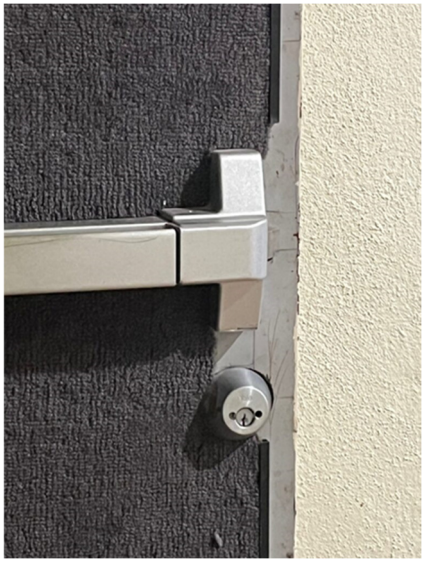
Wordless Wednesday: Movie Theater Exit.

By: Lori Greene, I Dig Hardware Blog

Last weekend I took my daughters and their friends to the movies, and that's where I saw today's Wordless Wednesday application. The door in question is the one to the right of the screen at the front of the theater. Although it has the required panic hardware, the double-cylinder deadbolt is a red flag!





Sealing and Signing Divisions 00 and 01: Is it Architecture or Engineering?

By: Kevin O'Beirne, PE, FCSI, CCS, CCCA, CDT

Should design professionals seal and sign Division 00 documents and Division 01 specifications? In the past, when the architect or engineer prepared all the construction documents and administered the project's construction alone, it probably did not matter much. In modern times, however, where an owner's procurement department, a construction manager, or the owner's program manager may prepare part or all of Divisions 00 and 01, the answers are less clear and more important.

Most design practitioners recognize that all US states' and Canadian provinces' laws and regulations governing the design professions require architects, professional engineers, professional geologists, and other design professionals to seal and sign "specifications." What is meant by this may be debatable.

Sealing and Signing Division 00

Some people believe construction "specifications" are everything between the project manual's covers. Others more pragmatically recognize CSI MasterFormat indicates that "specifications" are the documents in Divisions 01-49, whereas MasterFormat's "Division 00 – Procurement and Contracting Requirements," is comprised of a solicitation, instructions to bidders, bid form, agreement, general conditions, supplementary conditions, and related documents, and is not "specifications".

Relevant to what truly needs to be sealed and signed are: (1) what contractually comprises "specifications;" and, (2) statutorily, what constitutes the practice of architecture or engineering.

Section 1.1.4 of AIA A201—2017, *Standard General Conditions of the Contract for Construction, says, "The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services." More precisely, the "Specifications" are to be enumerated in Article 9 of AIA A101—2017, Agreement between Owner and Contractor (Stipulated Sum).*

EJCDC's parallel language is quite similar to AIA's. Paragraph 1.01.A.39 of EJCDC C-700—2018, Standard General Conditions of the Construction Contract, defines: "Specifications—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work." Paragraph 7.01.A.5 of EJCDC C-520—2018, Agreement between Owner and Contractor (Stipulated Price), indicates the contract documents include, "Specifications as listed in the table of contents of the project manual (copy of list attached)."

From EJCDC's and AIA's contractual definitions, it appears Division 00 documents are not "specifications," because Division 00 solicits bids or proposals, establishes the parties to the contract and the basic contractual terms such as compensation and time of performance, and basic responsibilities and risk allocations. Division 00 does not establish standards of workmanship for the specific project. To reinforce that Division 00 is not "specifications," when referring to Division 00 components, both AIA and EJCDC employ document titles (e.g., "Agreement," "General Conditions," "Supplementary Conditions") rather than the term, "Specifications."

Next, consider the definition of "architecture" or "engineering" where you practice. New York and Pennsylvania's definitions are typical examples. New York State Education Law, Title VIII, Article 145, §7201, states:

"§7201. Definition of practice of engineering… is … performing professional service such as consultation, investigation, evaluation, planning, design or supervision of construction or operation in connection with any utilities, structures, buildings, machines, equipment, processes, works, or projects wherein the safeguarding of life, health and property is concerned, when such service or work requires the application of engineering principles and data."

Similar language defines the “practice of architecture” in New York State Education Law, Title VIII, Article 147, §7301.

Pennsylvania’s Act 367 of 1945 (PL 913) governing engineering and establishes:

“(a) (1) ‘Practice of Engineering’ shall mean the application of the mathematical and physical sciences for the design of public or private buildings, structures, machines, equipment, processes, works or engineering systems, and the consultation, investigation, evaluation, engineering surveys, construction management, planning and inspection in connection therewith….

“(2) The term ‘Practice of Engineering’ shall also mean and include related acts and services that may be performed by other qualified persons, including but not limited to, municipal planning, incidental landscape architecture, teaching, construction, maintenance and research but licensure under this act to engage in or perform any such related acts and services shall not be required.”

Similar language defines the “practice of architecture” in Pennsylvania’s Act 281 of 1982 (PL 1227).

All such definitions read by this writer for various US states indicate practicing the design professions entails applying architectural, engineering, and scientific principles to solve technical and aesthetic problems related to buildings, equipment, and systems affecting public health, safety, and welfare.

Although engineers practice engineering and architects practice architecture, both also render associated, “non-professional” services for which professional licensure is not required. For example, an environmental engineering consultant may have an employ obtain groundwater samples for laboratory analysis which is, itself, not the practice of engineering—after all, laboratory employees perform the same function. Preparing BIM and CAD digital models is not the practice of architecture or engineering, because interior decorators and employees at your local paint retailer do it every day, so selecting colors and textures is not the practice of architecture. Many unlicensed “non-professionals” independently perform such tasks without violating laws or regulations governing the practice of the design professions. Thus, preparing a written contract (e.g., Division 00) is certainly not the practice of architecture or engineering, nor is it exclusive to such professions.

Division 00 is often prepared by non-architects or non-engineers, such as an owner’s procurement department, construction manager, or owner’s program manager. Indeed, some consider Division 00 the purview of attorneys. While architects and engineers often assist their clients with drafting Division 00 documents (and are perhaps in the best position to do so for matters such as identifying appropriate bid/pay items and better ensuring fully coordinated and integrated construction documents), Division 00 does not constitute the practice of either engineering or architecture as defined by statutes on the design professions. Accordingly, Division 00 documents usually do not require the design professional’s seal and signature.

However, it is highly advisable for architects and engineers who draft Division 00 for their client to submit the draft documents to their client via a written transmittal explicitly recommending the client’s own legal counsel thoroughly review and comment on the drafts. Design professionals should avoid practicing law, insurance, risk management advice, or financial advisory services, unless duly licensed and insured to practice such professions.

Sealing and Signing Division 01

Requirements for the project’s permanent work are addressed in Divisions 02-49, which unquestionably are “specifications” and require sealing and signing by the design professional-in-responsible-charge.

“Division 01--General Requirements” presents: (1) more-detailed, although still general, administrative and procedural requirements beyond those of Division 00, (2) requirements for temporary facilities and temporary construction, and (3) project-level performance requirements. The full scope of Division 01 is established in CSI MasterFormat.

Division 01 is clearly “specifications,” so, at the very least, parts or perhaps all of Division 01 must be sealed and signed. When the design professional prepares all of Division 01, it is probably appropriate for them to seal and sign all the Division 01 specifications. However, when a third-party not under the design professional’s direct, supervisory control—such as a construction manager or owner’s program manager—drafts all or part of Division 01, should the design professional seal and sign it?

Every US state’s architecture and engineering laws and regulations prohibit architects and engineers from sealing or signing work product prepared by individuals not under the design professional’s direct, supervisory control, unless regulations on “successor architect” or “successor engineer” are complied with. Third-party construction managers and owner’s program managers, no matter how collaborative, are obviously not subject to the design professional’s direct, supervisory control. Thus, if a third-party prepared certain specifications, the design professional-in-responsible-charge should either not seal and sign them or, at the very least, carefully consider the consequences of sealing and signing something over which they were not in control. When the design professional has the opportunity to review and make appropriate, final revisions to a document prepared by others, they may be in a better position to rightfully seal and sign it. Whether they should seal and sign it likely depends on the wording of the applicable statutes and the circumstances of the project.

Because many Division 01 specifications are purely administrative or procedural, the potential exists that they may not, in some jurisdictions, require sealing and signing. For example, a Section 01 31 26 – Electronic Communication Protocols, governing construction stage communications via electronic or digital means, is not regarding the completed project as a functioning whole and does not affect public health, safety and welfare and, therefore, likely does not constitute the practice of architecture or engineering.

All Division 01 specifications that constitute the practice of architecture or engineering must be sealed and signed by the design professional-in-responsible-charge. Which sections qualify as the practice of the subject design profession depends on their content, the project, and the applicable laws and regulations, but in general, this writer believes the following probably generally need to be sealed and signed:

1. Certain sections under “01 14 00 – Work Restrictions”, especially, sections on maintaining facility operations during construction, such as MasterFormat’s “01 14 16 – Coordination with Occupants.” For industrial-type projects, this may be titled, “Coordination with Owner’s Operations” and may include requirements for system tie-ins and shutdowns and construction sequencing. On projects such as rehabilitation of a drinking water treatment plant, such a section will affect the facility’s ability to comply with health codes during construction and has strong potential to affect public health, safety, and welfare, and environmental quality.
2. Whether the design professional must seal and sign “01 25 00 – Substitution Procedures,” and “01 62 00 – Product Options” (the latter governing “or-equals”) is debatable, but there is substantial professional liability associated with the design professional approving substitutes and “or-equals” so, optimally, the design professional, rather than a third-party, should draft these sections and have control of their final content.
3. Section “01 33 00 – Submittal Procedures” should be prepared, and perhaps sealed and signed by, the design professional because the design professional performs the bulk of submittal reviews, even when a construction-manager-as-advisor (CMa) is involved. This section commits the design professional to certain actions with respect to submittal reviews, which is fraught with professional liability (and perhaps contractual liability) for the design professional, even though “submittal procedures” is, itself, administrative and procedural requirements.

4. Certain sections under “01 35 00 – Special Procedures” which directly affect performance of the construction and related services, should be sealed and signed when they affect the public or environment or have strong potential to increase the design professional’s liability.

5. Sections under both “01 41 00 – Regulatory Requirements” and “01 42 00 – References” should be sealed and signed. Among other things, such sections may address permitting (including permits obtained by the owner), regulatory compliance, and compliance with reference standards.

6. Sections under both “01 43 00 – Quality Assurance” and “01 45 00 – Quality Control”, should be sealed and signed, especially “01 45 33 – Code-Required Special Inspections and Procedures,” because these sections address the acceptability of the work and compliance with building codes and, perhaps, other laws and regulations.

7. Many sections under “01 50 00 – Temporary Facilities” may need to be sealed and signed, especially those regarding compliance with laws, rules, regulations, codes, ordinances, and lawful orders of authorities having jurisdiction. Not all these sections require a design professional seal and signature, such as sections on vehicular access and parking, security during construction, and perhaps others. Whether a design professional should prepare, seal, and sign sections on temporary utilities likely depends on project requirements. Both “01 55 26 – Traffic Control” and “01 57 00 – Temporary Controls” will often require sealing and signing because they may affect public health, safety, and welfare, and environmental quality during construction. Temporary erosion and sediment control requirements under “01 57 00” often have associated permit requirements necessitating a design professional’s seal and signature.

8. Sections under “01 73 00 – Execution,” which typically directly affect construction of the completed project, may need to be sealed and signed.

9. Sections under “01 75 00 – Starting and Adjusting,” which include procedures for checkout, startup, initial operation, and initial adjusting of the new construction, may require sealing and signing. Results of such processes has a direct effect on the design professional’s decision to certify the work as substantially complete, with associated professional liability.

10. Section “01 79 13 – Demonstration Testing,” when used, may require sealing and signing because it affects the facility’s operation and the design professional’s decision to certify the project as substantially complete or ready for final payment.

11. Sections under “01 80 00 – Performance Requirements” obviously require the design professional’s seal and signature.

12 Although commissioning agents often draft the “01 90 00 – Lifecycle Activities” sections, mostly concerning commissioning, the design professional needs either substantial input into such sections or, on occasion, to seal and sign them, depending on content.

Conclusions

When part or all the Division 01 specifications are prepared by other than the design professional, perhaps not all of Division 01 should be, or needs to be, sealed and signed, depending on circumstances and applicable laws and regulations.

Because Division 00 documents are not specifications and are often prepared or controlled by others not under the direct, supervisory control of the architect or engineer, Division 00 documents typically do not need to be sealed or signed.

This blog post is general and the reader must read, understand, and comply with its own contract with its client and the laws and regulations governing the practice of the associated design professions in the jurisdiction where their projects are located. Such statutes can and do vary, sometimes, considerably, between jurisdictions.

This blog post does not constitute professional advice. Readers must review applicable laws and regulations and contracts and draw their own conclusions. The content of this blog post is by the author alone and should not be attributed to any other individual or entity.

Kevin O'Beirne, PE, FCSI, CCS, CCCA is a professional engineer licensed in NY and PA with over 30 years of experience designing and constructing water and wastewater infrastructure for public and private clients.

"If you want happiness for an hour - take a nap. If you want happiness for a day—go fishing. If you want happiness for a year - inherit a fortune. If you want happiness for a lifetime - help someone else."

Chinese Proverb

"If someone bases his/her happiness on major events like a great job, huge amounts of money, a flawlessly happy marriage or a trip to Paris, that person isn't going to be happy much of the time. If, on the other hand, happiness depends on a good breakfast, flowers in the yard, a drink or a nap, then we are more likely to live with quite a bit of happiness."

Andy Rooney

Quick Question: Modifying UL Listed Products.

By: Lori Greene, I Dig Hardware Blog

A few weeks ago, I answered a Quick Question about what to do when a continuous hinge covers the labels on a fire rated door and frame. My advice was to document the presence of the labels before installing the continuous hinge, but some installers have been advised to notch the hinge around the label. While this may seem like it wouldn't affect the performance of the hinge, it's a slippery slope.

Today's Quick Question: If a UL Listed product is modified in the field, does this void the listing?

For the answer, I visited the Code Authority FAQs page, on Underwriters Laboratories (UL) website. From UL:

An authorized use of the UL Mark is the manufacturer's declaration that the product was manufactured in accordance with all applicable requirements, and was in compliance with those requirements when it was shipped from the factory. If that product is modified after it leaves the factory, only a UL Field Evaluation can determine if the modified product complies with UL's requirements. It is the responsibility of the Authority Having Jurisdiction to assess the acceptability of the modifications or to determine if the modifications are significant enough to require a UL staff member to evaluate the modified product. UL can assist the AHJ in making this determination. For information on UL field evaluations click here.

Although there are a few modifications that have been approved for some manufacturers' continuous hinges (for example, a cutout for an electric power transfer (EPT)), these preps are typically required to be made during the manufacturing process – not in the field. Notching a continuous hinge in the field could result in the need for a UL field evaluation, and the associated costs. Before altering any fire rated component in the field, I would highly recommend checking with the manufacturer to verify that their listings specifically allow the field modification.

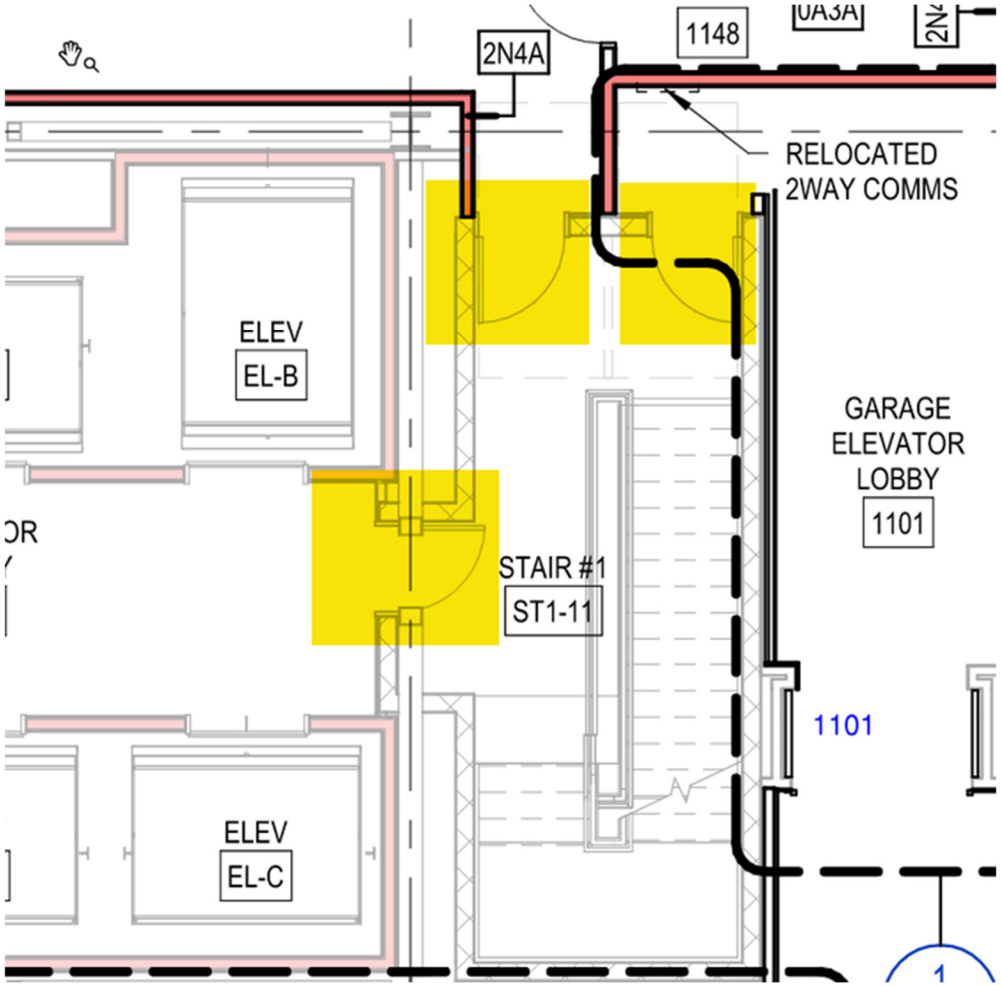
What Would You Do? Stairwell Reentry

By: Lori Greene, I Dig Hardware Blog

I received a question from an architect last week, and this is not the first time it has come up. I'm wondering if any of you have run into this situation, or if you have any thoughts on the intent of the model codes.

Stairwells typically have one door per floor, and for reentry purposes these doors (if locked) are required by the I-Codes to be able to be unlocked remotely. If you're not familiar with the stairwell reentry requirements, there is more information in this recent Decoded article.

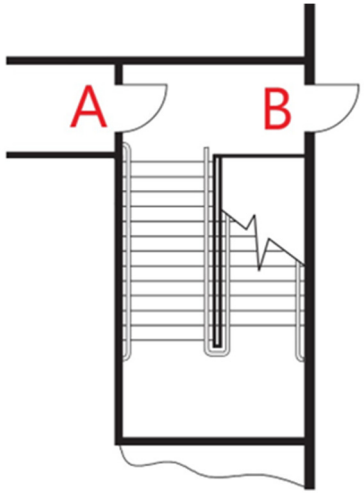
In some buildings, a stairwell may have more than one door serving a floor. In that case, are **all** of the stair doors required to unlock remotely during a fire, or could one door be designated as the reentry door? Refer to the plan below for an example of this application.



What Would You Do? Stairwell Reentry, Part 2

By: Lori Greene, I Dig Hardware Blog

Yesterday I posted a question about the remote unlocking of stairwell doors (please weigh in!), and today I have a follow-up question. Neither of these questions is specifically addressed in the model codes, so I am looking for any insight or experience from the field.



As I mentioned yesterday, the code requirements related to stairwell reentry are intended to allow building occupants to leave a stairwell if the egress route becomes compromised during a fire. For example, if someone is evacuating from the 12th floor and reaches the 8th floor but finds it blocked by firefighters or filled with smoke, they can enter the 8th floor through a door that has been automatically unlocked. Once on the 8th floor, they can continue evacuating via another stairwell, or wait for assistance. The I-Codes require the remote unlocking of locked interior stairwell doors regardless of the number of floors served by the stairwell. And just to clarify – these doors are typically locked on the stairwell side – not on the egress side of the door leading into the stairwell.

Today's question is this: On the ground floor of many stairwells, there is a stair discharge door as well as a door leading from the ground floor into the stair. The stair discharge door (Door B) allows free egress to the exterior of the building. In this situation, is the interior door that leads to the ground floor (Door A) required to be unlocked remotely on the stair side to allow reentry to the ground floor? If this door remained locked during a fire, building occupants would continue out the discharge door, but this question is not specifically addressed in the codes.

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

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