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**OUR GOAL IS TO
COMPLETE ALL PLAN
REVIEWS WITHIN
10 BUSINESS DAYS**

WINTER 2020 QUARTERLY REVIEW



BUILDING
PLAN REVIEW



FIRE SAFETY
PLAN REVIEW



CONSULTING
SERVICES

PRESIDENT'S MESSAGE

An FSCI update from Keith Frangiamore, FSCI President

There is a mantra "the one constant in business is change", and we have embraced this, with a bit of a twist "the one constant in business is improvement".

We would like to share a couple significant improvements completed in 2019.

Since it's installation in August, the new cloud-based telephone system has greatly improved customer service.

Some of the benefits are:

- Callers can directly dial any staff member instead of waiting to be transferred
- The administrative team has more time to address other customer inquiries
- The staff can follow-up with inquiries more efficiently with voicemail to email conversions
- Calls are easily transferred between offices
- The phone system is integrated with PSI adding more efficient communications

In October, we added another dedicated fire protection consultant to the Michigan office team. Mike Gross has been meeting and providing service to our many Michigan clients and customers alongside our other great Michigan team members (Angie, Lisa and John), providing much needed assistance for both plan review and field inspections.

As we reflect on 2019, we give thanks to our loyal and supportive clients and customers, and the support PSI has provided throughout the year.

On a personal note, I am especially thankful to our great staff who work hard every day to make FSCI the best 3rd party consulting company in the country.

Great job team!



FIRST LOOK AT THE 2019 EDITION OF NFPA 13

PART II OF III

- Matt Davis, Sr. Fire Protection Consultant

This feature article provides insights on the changes to Chapters 8 through 19 in the 2019 Edition of NFPA 13. If you would like to read Part I of this article, covering Chapters 1 through 7, it is available in our [fall 2019 newsletter](#).

Chapter 8 covers the specific rules and characteristics that are unique to each type of system including wet, dry, pre-action, deluge, etc. The majority of this chapter has been relocated from Chapter 7 of the 2016 edition. It is interesting to note that the language related to circulating closed-loop systems has been removed from NFPA 13. The reason has to do with fluid additives being introduced into system to prolong the life of the non-sprinkler system components (such as HVAC or boiler systems) might create a compatibility issue with automatic sprinkler components. This chapter also provides information and guidance on choosing the correct type of automatic sprinkler system for an area or hazard to be protected. One item that stands out pertains to dry system air compressors and is one that FSCI has seen in the field many times:

"The requirements in 8.2.6.6.5 and 8.2.6.6.5.1 are new for the 2019 edition. When an air compressor or nitrogen generator is a dedicated air supply for a dry system, the wiring must meet the requirements in NFPA 70, National Electrical Code, including the correct wire size and installation method. There is an additional restriction that the compressor must not be wired through a light switch or use a plug into a wall outlet.

Many false trips of a dry system are a result of the air compressor being inadvertently turned off or unplugged. These new requirements are meant to help reduce the frequency of false trips."

Chapter 9 addresses the requirements for the location and spacing of sprinklers. This content was previously found in Chapter 8 of the 2016 Edition. This Chapter consolidated information from many previous chapters which is easier to understand and navigate. Section 9.2 talks about specific locations that sprinklers may be omitted. Some changes and clarifications from the previous editions include:

"9.2.1.6 Concealed spaces formed by ceilings attached to composite wood joist construction either directly or onto metal channels not exceeding 1 in. in depth, provided the joist channels as measured from the top of the batt insulation are separated into volumes each not exceeding 160 ft³ (4.5 m³) using materials equivalent to the web construction and at least 3 1/2 in. of batt insulation is installed at the bottom of the joist channels when the ceiling is attached utilizing metal channels, shall not require sprinkler protection.

A.9.2.1.6 The 3 1/2 in. of insulation is only required when the ceiling is not directly attached to the joist. The 160 ft³ is the volume of the individual channel excluding the portion occupied by insulation."

Special Situations, Section 9.3 has been streamlined from previous editions. This section addresses topics such as

exterior overhangs and elevator pits. Section 9.4 covers the use of sprinklers and mainly addresses the temperature rating of sprinklers to be used in relation to a given heat source. Unit heaters and fireplaces are still the most common, but this chapter also covers proximity to steam piping and skylights. Section 9.5 talks about general location, spacing of sprinklers and lays out basic rules that apply to all types of sprinklers. This Section transitions into Chapters 10 through 15 that focus on requirements for specific types of sprinklers.

Chapter 10 covers the requirements that apply to standard spray upright, pendent and sidewall sprinklers. Again the 2019 edition has made information easier to access by combining previously scattered information into one location. There are not a lot of new requirements in this chapter; however, note that NFPA 13 now allows sidewall sprinklers to be used under obstructions such as HVAC units or ductwork similar to overhead roll back garage doors.

"10.3.2 Sidewall sprinklers shall only be installed as follows:

- (1) Light hazard occupancies with smooth, horizontal or sloped, flat ceilings*
- (2) Ordinary hazard occupancies with smooth, flat ceilings where specifically listed for such use*
- (3) To protect areas below overhead doors*
- (4) At the top and bottom of elevator hoistways*
- (5) For the protection of steel building columns*
- (6) Under obstructions that require sprinklers*

Item (6) of 10.3.2 clarifies that there are locations where the use of a sidewall sprinkler under obstructions can be beneficial. This is common in instances involving large overhead doors, but now similar obstructions can be evaluated in a similar manner."

Chapter 11 covers the requirements that apply to extended coverage upright, pendent and sidewall sprinklers. This Chapter also has minor changes but does contain one notable addition:

"11.2.7 Clearance to Storage.

The clearance between the deflector and top of storage shall be 18 in. or greater.

The 18 in. dimension shall not limit the height of shelving on a wall or shelving against a wall in accordance with 11.2.7.

Where shelving is installed on a wall and is not directly below sprinklers, the shelves, including storage thereon, shall be permitted to extend above the level of a plane located 18 in. below ceiling sprinkler deflectors."

This was clarified in previous editions for standard spray sprinklers. The above sections are new for 2019 edition and finally address this type of storage arrangement for ex-

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LITTLE KNOWN FACTS

Permitted Removal and Replacement of Sprinklers

When it came to the installation of sprinkler systems and where sprinklers were permitted to be removed and replaced, NFPA 13 used to go by the old saying, “out with the old, in with the new”. For all systems, only new sprinklers were allowed to be installed. It didn’t matter what kind of sprinkler it was, if it was removed from its fitting or outlet, it had to be discarded. All sprinklers were only permitted to be relocated and reinstalled so long as the sprinkler being removed from the system stayed attached to its original fitting or welded outlet. This requirement changed within the 2016 edition, and was retained in the 2019 edition, of NFPA 13. Reference 6.2 in the 2016 edition, and 16.2.1.1.1 in the 2019 edition, clearly state that dry sprinklers are permitted to be removed and reinstalled in accordance with the manufacturer’s installation instructions. NFPA 13 also clearly states that flexible hose connections are considered fittings, thus allowing for any kind of sprinkler to be relocated, as long as it stays attached to the flexible hose. For all removals though, care must be taken to make sure the sprinkler is not damaged.

-Kyle Harding, Fire Protection Consultant

NFPA-72 Document Accessibility

The who, what, when and where of plans, specifications, calculations and records retention can be found in Chapter 7 of NFPA 72 (2013, 2016, 2019 editions) which is titled Documentation. Long gone are the days of keeping required documentation inside of the fire alarm control unit or tucked away behind a run of conduit. All new fire alarm systems shall be provided with a document cabinet which is labeled, “SYSTEM RECORD DOCUMENTS”. The preferred location of the required document cabinet is adjacent to the Fire Alarm Control Unit. Where adjacent room or space is not available, an approved location shall be selected and its location shall be easily identified at the fire alarm control unit. Some of the basic records to be kept within the document are equipment data sheets, record drawings (“As-Builts”), system calculations, emergency response plans, inspection reports, and the system record of completion. The document cabinet is a vital part of a fire alarm system for all parties involved including technicians, authorities having jurisdiction, firefighters and building owners. You may be wondering, why can’t these documents be maintained in the fire alarm control unit as was a common practice in the past? It’s simple, control units are not typically approved for storage of combustible material such as paper. We need to remember a control unit cabinet is made up of live electrical components. Keeping combustible documents inside the cabinet could potentially cause a fire rather than providing the intended building protection.

-Ryan Case, Fire Protection Consultant

Exterior Projections & Open-Ended Corridors

Even though this is not a new topic, there always seems to be conflicts regarding necessary sprinkler protection of exterior projections and open-ended corridors, relating to NFPA 13R.

Since the 2013 code edition, NFPA 13R has indicated in Section 6.6.5, that sprinklers can be “omitted for porches, balconies, corridors, carports, porte cocheres and stairs that are open and attached”. The exception, in Section 6.6.5.1, does require protection when the “building is of Type V construction”. In accordance with this exception sprinklers are required “to protect decks, balconies and ground floor patios serving dwelling units/sleeping units”. The definition of decks and balconies are rather elementary, but there is no listed definition for what a “patio” is. Verbiage in NFPA 13R states that it is “serving dwelling units”. Most may interpret this to mean that only the egress directly from the dwelling unit itself is required to be protected, but that is not the case. The intent was to supply protection where there could be potential hazards from heat sources, such as outdoor grills, etc.

As an example, when you have an egress that serves multiple dwelling units, the building is of Type V construction, and has a roof, deck or balcony above it, sprinkler protection is required to protect the egress path.

When it comes to breezeways and open-ended corridors, the 2013 Edition of NFPA 13R and the 2015 IBC contain similar requirements. A condition which would be an exception to the permitted omission of sprinklers in the IBC is found in Section 903.3.1.2.2. This section directs the reader to Section 1027.6, Exception 3.1, where an unrated fire separation of the open-ended corridor and the building may be omitted only where an automatic sprinkler system is provided throughout.

-Scott McBride, Fire Protection Consultant



SEMINAR INFORMATION

Stay up to date on the latest Fire, Building and Life Safety code changes and equipment by attending one of our seminars. Fire Safety Consultants, Inc. is teaching seminars throughout the United States, led by our experienced staff of Matt Davis, Keith Frangiamore, Brent Gooden & Warren Olsen. Whether you are a Contractor, Architect, Technician, Engineer or an Authority Having Jurisdiction, each seminar is full of practical insight and first-hand experiences to help you comply with applicable codes and standards. FSCI can also provide custom seminars at your location. Be sure to check out our [website](#) to view our listing of available seminars or to check the schedule to see what we are teaching next! Contact us to learn more by emailing info@firesafetyfsci.com or by calling our corporate office at (847) 697-1300.



EMPLOYEE SPOTLIGHT

Carrie Huber

Carrie Huber is Fire Safety Consultant's HR and Officer Manager. Previous to her current position, Carrie was a lead Administrative Assistant for FSCI. Carrie is one of the longest tenured employees with FSCI, having started in February 2002.

Part of Carrie's current responsibilities are to oversee the daily operations of our corporate office, the other part is Carrie's Human Resources responsibilities, which include full coordination with our parent company, PSI on employee insurance and benefits, and assisting with payroll and the hiring of qualified staff. Carrie also works with FSCI's consulting division, speaking with clients, preparing reports and invoicing for FSCI's services.

Carrie is an active member of the Society for Human Resource Management and an Illinois Notary Public. She currently holds certificates as a



Compensation Administrator, Fair Labor Standards Act, MS office Programs and HR Management.

Outside of work, Carrie enjoys cooking nutritional gourmet meals, early morning nature walks with her family, date night with her husband Steve, and spending time with her two sons, which includes riding horses which has been Carrie's passion for over 18 years.



EMPLOYEE SPOTLIGHT NEWS

We would like to congratulate Michael Carnduff for successfully passing his NICET Level 2 exam for Water Based Systems on November 7th, 2019. Congratulations Mike!

WE'RE LISTENING!

Tell us what you are interested in learning about!
Email us at: info@firesafetyfsci.com