WINTER 2021 QUARTERLY REVIEW

BUILDING PLAN REVIEW | FIRE SAFETY PLAN REVIEW | CONSULTING SERVICES

FSCI

IN THIS ISSUE

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

PRESIDENT'S MESSAGE

An FSCI update from Keith Frangiamore, FSCI President

Farewell 2020

2020 was a difficult year at Fire Safety Consultants, Inc., both for our staff and clients. The lack of personal contact with clients and customers was especially difficult as well as maintaining a separated, safe office environment. However, our team came together and rose to meet these challenges.

FSCI's business is built on providing the best customer service in the industry, and close and lasting relationships with our clients. This has been the most demanding year for many reasons, but most difficult of all has been maintaining consistent communication with our clients and customers.

FSCI has had to reduce daily staffing in our offices to conform with CDC guidelines, and many of our clients have had to close their offices for extended lengths of time. Add to this, many customers including contractors, architects, engineers, etc. have been working short staffed, or remotely, affecting normal communication channels. Our ability to speak with our clients and customers was even more difficult because of the lack of in person association meetings, vendor shows and other in person events.

While we are still facing challenges, we are proud of our staff and clients who have pulled together to make this a most memorable year.

What Does 2021 Look Like?

I think the most relevant question to ask at this time "what is next for us all going forward". How will our world "normalize", and when will we be able to resume group activities both in our offices and more importantly with our clients and customers. You can count on FSCI to strengthen our communications with clients and customers and continue to focus on providing the highest quality third party code consulting services.

Please stay safe, protect each other, and help us all move toward a healthful future!

SIGNIFICANT CHANGES TO THE 2022 EDITION OF NFPA 72 – PART 1

Warren E. Olsen, Vice President of Building and Life Safety
Principal Member, Chapter 26, Supervising Station Alarm Systems
Alternative Voting Member, Chapter 18, Notification Appliances

Following the completion of technical and correlating committee meetings in 2019 and 2020, the 2022 edition of NFPA 72 (code), The National Fire Alarm and Signaling Code, is nearly a finished product. Committee members have reviewed and acted on more than 700 public inputs and comments submitted by interested parties looking to change the requirements found in the 2019 edition of the code.

Actions by the ten committees responsible for reviewing inputs and comments have led to more than 200 changes to the code. While this may seem like a large number of changes, it is far fewer than the number of changes that were incorporated into the 2019 edition of the code. The 2019 edition incorporated most of the requirements for carbon monoxide detection which previously were found in NFPA 720 which has now been retired by the NFPA.

This two-part article looks at many of the changes that, pending member voting at the June 2021 NFPA Annual Meeting which will be held virtually and resulting necessary committee action, will become a part of the next edition of the code. Part 1 of this article will cover Global changes made throughout the code and Chapters 1 through 14. Part 2 of this article, which will be found in the Fire Safety Consultants, Inc. Spring Newsletter, will cover the changes made in Chapters 17 through 29.

Please note that the section numbers included in this article are based on information available as of the writing of this article and may change slightly when the final version of NFPA 72 is published.

Global Changes
Throughout the chapters of the code, users will see many references to cybersecurity and related requirements. Cybersecurity became one of the most discussed topics by each of the technical committees. Each committee was asked to determine how cybersecurity might affect the existing code requirements and the signaling system equipment covered by their chapter(s). Most chapters now make reference to Chapter 11, new for the 2022 code edition, which addresses Cybersecurity. We will discuss the requirements of Chapter 11 later in this article.

Chapter 1 – Administration
There were no significant changes to the requirements found in this chapter.

Chapter 2 – Referenced Publications
The responsible committees for material found in this chapter updated the applicable edition years of previously listed publications and have added new publications as necessary based on code requirements found in the 2022 edition of NFPA 72.

Chapter 3 – Definitions
Several new definitions have been added to the code for 2022. Technical committees are charged with providing meaning to words used in their chapters. Sometimes the meaning can be found in a definition already existing in NFPA's glossary of terms. If not, committees must craft a definition on their own. As a reminder, when a user of the code is unable to locate a defined word or phrase in Chapter 3 of NFPA 72, the code refers the user to the Merriam Webster's Collegiate Dictionary.

Here is a look at several of significant definitions which have been added.

- Accessible – Updated language extracted from NFPA 70, accessible is defined as "Capable of being reached for operation, renewal, and inspection."
- Authorized Personnel – The term, where used in NFPA 72, is to mean "The property owner, designated representative appointed or selected by the property owner, who performs certain duties."
- Backbone – A term used in describing Class N circuits and pathways, the backbone is "A part of a network that acts as a common infrastructure to which the branch parts are connected."
- Certified – The new term which is being used by nationally recognized testing labs will be replacing the term "listed".
- Constantly Attended – As used in NFPA 72, the definition of the term used in several locations is intended to mean "Attended 24 hours a day and 365 days a year."
- Control Equipment – The term, which is used in Chapter 7, is meant to include "Equipment listed as either a control unit or control unit accessory."
- Cybersecurity – The increased attention by NFPA 72 to cybersecurity issues has resulted in the new definition "The protection of systems from theft or

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LITTLE KNOWN FACTS

Visual Appliances in Sleeping Areas

When designing fire alarm systems for I-1 and R-1 occupancies, one of the top priorities is the need for visual notification within dwelling and sleeping units. The International Building and Fire Codes (IBC/IFC) have a great, easy-to-follow guide that breaks down the number of sleeping units required to have visual notification appliances. The number of sleeping accommodations that require visual notification is based on the total number of sleeping units within a building. For the 2018 Edition of the IBC/IFC, this table can be found in 907.5.2.3.2. The requirements for visual notification installation are found in Chapter 18 of NFPA 72. In the 2016 edition, Section 18.5 begins the Public Mode requirements for visual appliances. Section 18.5.5.7 specifically covers the requirements for sleeping areas. When installing wall mounted visual notification appliances, the most important aspect to take into consideration is the ceiling height of the sleeping unit relative to the location of the appliance lens. This will determine the necessary candela setting for the appliance. All portions of the lens of a wall-mounted appliance must be located within a range of 80-96 inches above the finished floor. If the distance from the top of the lens to the ceiling is less than 24 inches, a minimum 177 cd setting is required. If the distance between the top of the lens and ceiling is equal to or greater than 24 inches, a minimum 110 cd setting is required. If the visual appliance is ceiling mounted, a 177 cd setting is automatically required. A good rule of thumb to follow is an 8 foot ceiling height will always require a 177 cd setting and a 10 foot ceiling height can use a 110 cd setting so long as the mounting height requirements are followed. In all cases, visual appliances shall be installed within 16 feet of the pillow.

-Amanda Herrera, Fire Protection Consultant

Commercial Kitchen Exhaust Ductwork Systems

Since acquiring the responsibilities of performing the plan reviews, as well as the inspections, of the kitchen exhaust hood and duct systems, I have found that this particular area of mechanical installation is sorely lacking in knowledgeable design and installation personnel.

The ductwork portion of these systems has been problematic as far as the needed necessary space for the code required separation space to combustible and/or noncombustible construction. Currently, to limit the separation space to combustible materials, the exhaust ductwork is required to be in a shaft or have ductwork wrapped with fire-resistant insulation. Unfortunately, architects that design the spaces rarely allow for adequate room for the installers to install the insulation wrap.

On a bright note, the manufacturers of these systems are designing and constructing systems to assist the designers and installers. Section 506.3.6 of the International Mechanical Code requires a minimum of 18-inches of clearance to combustible construction and a minimum of 3-inches of clearance to noncombustible construction. Exception #1 allows for factory-built commercial kitchen grease ducts listed, and labeled, in accordance with UL-1978. There is at least one manufacturer which provides such ductwork. The ductwork is a double wall duct system which is listed by ETL for conformance with UL-1978. This allows for the clearance to combustible construction to be from 0- to 1-inch depending on the type and size of this ductwork. It also allows for 0-inch clearance to noncombustible construction.

The use of factory-built, double-wall construction requires less space for the ductwork installation with no space needed for the installation of insulation wrap. This will allow for a quicker installation and make the inspection process to confirm code compliance quicker as well.

-Raoul Johnston, Senior Building/Life Safety Plan Reviewer

Understanding SLC Zones and Isolation Module Use

There was a change to the 2016 addition of NFPA 72 addressing a single fault condition on a pathway connected to addressable devices. The 2013 addition stated a single fault on a pathway connected to the addressable devices shall not cause the loss of more than 50 devices. The 2016 revision (and in the 2019 edition) states that a single fault on this same SLC circuit shall not cause the loss of more than one zone. Zones are typically a single floor of up to 22,500 square feet, or floor areas separated by a smoke or fire barrier. The most common mistake seen in Class “B” SLC wiring, in an attempt to meet the requirements of 23.6.1, is to install an isolation module on each floor in multi-level buildings using a single continuous SLC run. A single short or open on the circuit will render the addressable devices located beyond the fault inoperable, resulting in the loss of more than one zone as the circuit does not include a redundant path. Figure A.23.6.1(a) in the 2016 edition illustrates the proper use of isolation modules in the same multi-level building using Class “B” circuits. An individual SLC for each floor is connected to a dedicated isolation module per floor and are all located at the fire alarm control unit. The code allows the un-isolated circuit from the control unit to be run to the isolation modules in metallic raceway for a distance not to exceed 3-feet (The code would also permit the isolation modules to be integral to the FACU). In this configuration, each of the circuits are isolated per floor. A short, or an open, on any single circuit would only effect one zone. The above explanation in the use of the isolation modules is for a Class “B” circuit. Please refer to 23.6.1 for examples of the use of these modules on Class “A” or Class “A/B” (Hybrid) isolation methods.

-Scott Kunzie, Fire Protection Consultant

SEMINAR INFORMATION

Keep you and your staff 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. teaches seminars all over 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. Fire Safety Consultants, Inc. 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 x206.

EMPLOYEE SPOTLIGHT

Bobbi Sharp

Whenever you receive a completed plan review packet back from our Corporate Office in Elgin, it is because Bobbi Sharp has already formatted the plan review letter, verified the distribution list on the municipality's Information Sheet and compiled the plan review packet. As our Plan Review Administrative Assistant, Bobbi oversees the plan review process once the plan reviewer has completed the plan review letter and it has been peer reviewed. You may have also spoken to Bobbi when calling the Corporate Office, as she also answers many of the calls when callers select option 2 for plan review status. Bobbi started with us in March of last year, right as the Pandemic began, but she hit the ground running regardless, and has been doing a great job for us with her great attention to detail.

Prior to joining our admin team, Bobbi worked for a medical device manufacturer, Northgate Technologies, for 20 years. She started there as a Documentation

Specialist processing engineering documentation and for the last 7 years, she was a Regulatory Affairs Manager. As the RA Manager, Bobbi was responsible for medical device compliance for the US, Europe and Canada as well as being responsible for FDA, notified body, and customer audits.

Bobbi lives with her fiancé Darin and two dogs, Sadie and Maddie. In the summer, they like to camp as much as possible with their 40ft 5th wheel camper. They also enjoy taking trips where they go off road trail riding in their UTV.

EMPLOYEE SPOTLIGHT NEWS

We would like to congratulate Angie Dayfield for passing her NICET Level 3 exam for Fire Alarm Systems on November 24th, 2020!

WE'RE LISTENING!

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