SUMMER 2015 QUARTERLY REVIEW

BUILDING PLAN REVIEW | FIRE SAFETY PLAN REVIEW | CONSULTING SERVICES

IN THIS ISSUE

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

PRESIDENT'S MESSAGE

I would like to thank our clients who designate FSCI as their third-party plan reviewer and inspection firm.

Our team of professional employees in both the Illinois and Michigan offices dedicate themselves to carefully and professionally reviewing plans for clients around the country.

Since last summer, FSCI has added 23 new clients and taken on expanded roles for 5 existing clients such as conducting all building and fire protection field inspections and reviewing all building and fire protection plans. Due to the increase in client needs, FSCI has performed more client field inspections than ever before!

To meet our expanding needs, FSCI also filled several new staff positions including:

In the Illinois Corporate Office

- Abby Walsh –Administrative Assistant for Field Services
- Augusto "Totie" Leonardo – Sr. Building & Life Safety Consultant
- Scott Olsen – Field Services
- John Rutkowski – Field Services

In the Michigan Regional Office

- Ted Bailey – Fire Protection Consultant

Additionally, several staff changes took place this past year. Rosie Simarano was promoted to fire protection consultant and Brent Gooden returned to the Illinois office after two years in our Michigan Regional Office. At our Michigan Regional Office, Trisha Kulesza expanded her hours and is now a full-time administrative assistant.

Congratulations to the FSCI team members that achieved new certifications including Angie Dayfield in Michigan Regional Office – sprinkler NICET Level II, and Paul Sullivan and Fred Hoegler in the Illinois Office – sprinkler NICET Level II.

As our business changes, so do the lives of our staff. Carrie Huber welcomed a baby boy named Mason and Rosie Simarano welcomed a baby girl named Jordyn. Please join me in wishing them much happiness with their growing families.

As FSCI continues to grow, we are constantly striving to improve both the quality and efficiency of our services for our clients.

WHAT MAKES A QUALITY FIRE PROTECTION PLAN SUBMITTAL?

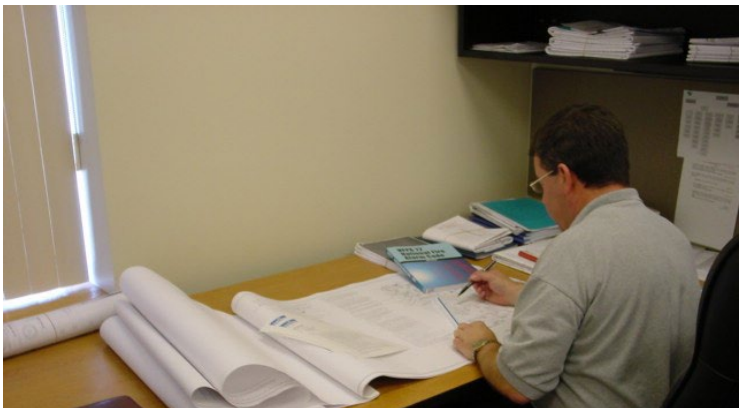
As one of the largest, national, third party provider of plan review services, FSCI would like to take this opportunity to offer some assistance to those who submit fire protection plans and specifications for review and approval. We will focus on sprinkler and fire alarm system submittals, but be assured there are also additional requirements for other types of systems as well. Let's start with some of the basics that often get overlooked.

First, it is important to know what editions of the codes and standards have been adopted by the authority having jurisdiction (AHJ). The AHJ could be the state or the local jurisdiction, or a combination of the two where local code adoptions and amendments are permitted. Remember that the scoping requirements on when a sprinkler and/or fire alarm system is required in the first place come from the adopted building and fire codes, or possibly from local amendments. Also, it should not be assumed that the NFPA standards edition referenced by the building or fire code are the editions that have been adopted by the jurisdiction. Some jurisdictions will adopt newer versions as they are published. The bottom line is that it is important for system designers to research and reference all of the relevant adopted codes, standards, and local amendments before proceeding with the system design.

Before submitting plans, find out how many sets of documents the jurisdiction requires. Complete sets include the drawings, equipment data sheets, required calculations, and any other pertinent information regarding the specific project. A reviewer having to chase down additional documents only adds time to the process – and nobody wants that!

Codes require that the designers of systems be qualified to do so. Some states require sprinkler and alarm contractors to be licensed. Other states and local jurisdictions have adopted specific qualification requirements, such as PE, FPE, or a particular level of NICET certification. For example, in Illinois, a PE or FPE is required to prepare a technical submittal for new sprinkler systems in which they identify the hazards to be protected, design density requirements and general design specifications. The detailed shop drawings and hydraulic calculations can be prepared by a designer with NICET Level III or IV certification. In any jurisdiction, evidence of the designer's qualifications, such as a PE or FPE stamp, or NICET certification information are to be included on the drawings.

Here are some additional items to be included in a list format, starting with requirements that are common to both sprinkler and alarm submittals and followed by some specifics for each type:



General Requirements

- Plans with multiple sheets are to be numbered, dated, collated, and stapled or bound.
- Plans must be drawn to a standard architectural scale (minimum 3/32" = 1').
- A scope of work statement outlining details of the project.
- Plans must show job name and complete address.
- The square foot area of the building must be noted on the plans.
- All ceiling information including soffits, heights, construction type, slope, etc. must be shown and noted with cross section or elevation details.
- Where modifications are to be made to a system, enough information about the existing system shall be provided to make all conditions clear.
- Catalog data sheets must be provided for all components to be installed. Where more than one item is included on the data sheet, the specific item(s) to be installed should be highlighted or otherwise indicated.
- All plans must have the contractors name, address, and phone number.
- All plans must have the designer's name and evidence of qualifications.

Fire Alarm Systems

- A summary sheet or symbol list showing all device types and count shall be provided.
- An input/output matrix or narrative describing system operation.
- Floor plan showing the location of all fire alarm equipment.
- Specific details must be provided regarding the offsite monitoring of the system including type of transmission means and name and location of receiving station.
- All wiring information must be shown on the plans including size, type, and point-to-point wire runs.
- Complete, detailed fire alarm control unit and remote power supply battery calculations must be provided. Clearly note the battery sizes to be installed.

• Notifications circuit voltage drop calculations using the "UL MAX" values for notification appliances must be provided. If the NAC output is FWR, the correct FWR amperage values for the notification appliances shall be used.

Sprinkler System

See the International Building Code and NFPA 13 for a complete submittal requirement lists.

• Provide a scaled site plan clearly showing the building, fire department connection, and fire hydrant locations.

• Plans shall include a sprinkler legend listing the specific sprinkler manufacturer, model, sprinkler identification number (SIN), K-factor, temperature rating, and quantity of each type. Legends must be provided on every sheet.

• Catalog cut sheets for all equipment including sprinklers, valves, etc. must be included and highlighted.

• Complete flow test information, including date of test. (Many jurisdictions require less than one year old.)

• Detailed hydraulic calculations that include a graph curve sheet. The friction loss for the specified backflow preventer shall be clearly shown in the calculations.

• All hydraulic node points must be clearly shown on the drawings.

• All ceiling information including soffits, heights, construction type, slope, etc. must be shown and noted with cross section detailed on the plans. Sprinkler locations are to be shown in the details where appropriate.

• Specific code sections and storage information must be provided for all design densities greater than required for Ordinary Hazard Group II.

Remember that a complete submittal alone will not guarantee approval. Making sure the plans are technically correct and in accordance with the adopted codes is the primary basis on which plans are approved or not approved. As always, please feel free to contact our office if you have any questions!

Fred Hoegler, Vice President Fire Protection Plan Review and Field Services

SEMINAR INFORMATION

Stay up to date on the latest Fire, Building and Life Safety code changes and equipment by attending one of our seminars. FSCI is teaching seminars throughout the United States, led by our experienced staff of Matt Davis, Keith Frangiamore, Brent Gooden, George Michehl & Warren Olsen.

Whether you are a Contractor, Architect, Technician, Engineer or an Authority Having Jurisdiction, each seminar is full of practical insights 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 schedule of upcoming seminars on our website. Contact us to learn more by emailing info@firesafetyfsci.com or by calling our office at (847) 697-1300.

Upcoming Seminars:

August 11-12, 2015 – City of Milwaukee – IBC/IFC 2015 Fire Alarm System Requirements & NFPA 72, 2013 Ed. ITM Requirements – Warren Olsen

August 26-27, 2015 – City of Milwaukee – IBC/IFC 2015 Fire Alarm System Requirements & NFPA 72, 2013 Ed. ITM Requirements – Warren Olsen

September 14-16, 2015 – NFPA in Oakbrook, IL – NFPA 72, 2016 Ed. National Fire Alarm & Signaling Code

http://catalog.nfpa.org/2013-NFPA-72-National-Fire-Alarm-and-Signaling-Code-3-day-Seminar-with-Optional-Certificate-of-Educational-Achievement-P458.aspx

EMPLOYEE SPOTLIGHT

Who is Keith Frangiamore?

Name: Keith Frangiamore

Position at FSCI: President/Partner

Previous positions at FSCI: Vice President

Years with FSCI: 11 years

Keith Frangiamore came to FSCI with nearly three decades of fire protection experience. Keith had a long career with the Palatine Fire Department where he worked in fire suppression and code enforcement including heading the department responsible for building and fire code plan review and inspections. He has had a long paralleling career in fire protection consulting which includes working on his own as KSF Consultants, as a partner in Britt-Moore Associates with current FSCI partner Warren Olsen, and in his current role with FSCI. Keith holds several certifications including being a Certified Fire Protection Specialist.

Keith's current position with FSCI includes the overall management of the company, management of all fire code and consulting projects, providing instruction at the many seminars offered by FSCI, and developing instructional seminars.

Keith has been married to Gail for 39 years and has three children and six grandchildren with a 7th on the way. He enjoys fitness training, motorcycling, traveling and sports.

LITTLE KNOWN FACTS

NFPA 72 – 2013 Pathway Failures Affecting More than 50 Devices
The requirements for Section 23.6.1 have been expanded in the 2013 edition of the code. The change effects pathways with more than 50 addressable devices attached. The intent was to clarify that no more than 50 devices on a Signaling Line Circuit (S.L.C.) may be lost due to a single short, or fault on the circuit. This is beneficial when a system pathway is compromised. SLCs supporting large numbers of initiating devices must now be designed so that the entire pathway will not be compromised due to a single short or fault. Several methods can be used to accommodate this. For systems larger than 50 devices and smaller than 100 devices using a Class A pathways would be acceptable. With systems spanning several floors or in excess of 100 devices isolator modules are typically used in conjunction with a portion of the pathways being Class A.
Harrison Bradstreet – Fire Protection Consultant

NFPA 13 – 2013 Edition Sprinkler Protection in Bathrooms
An interesting change has been made to the sprinkler requirements for bathrooms in the current edition of NFPA 13. Sprinklers were formerly permitted to be omitted from all dwelling unit bathrooms that did not exceed 55 square feet. The 2013 edition was amended to only allow the removal of sprinklers in hotel and motel use groups. Sprinklers would be required in all bathrooms, regardless of size, in all other residential use buildings that fall under the requirements of NFPA 13D & 13R. This requirement has not changed for residential buildings that fall under the requirements for NFPA 13R. Also for clarification, the size of a bathroom is measured from the interior surface of the walls and includes the tub and shower areas if not separated with a full height, enclosed, solid barrier. Shower curtains are not solid and most shower doors do not go all the way tight to the ceiling so, in most cases, the tub and shower areas are included in the 55 square feet limitation.
Matt Davis – Senior Fire Protection Consultant

NFPA 13D – 2013 Edition Shadow Areas:
The 2013 edition of NFPA 13D includes a new code section which provides direction regarding shadow areas. Shadow areas are now defined in section 3.3.9 as, "The dry floor area within the protection area of a sprinkler created by the portion of sprinkler discharge that is blocked by a wall or partition." In addition, section 8.2.5.7 states, "Shadow areas shall be permitted in the protection area of a sprinkler as long as the cumulative dry areas do not exceed 15 sq. ft. per sprinkler." This is a code section providing lenience for those small areas 15 sq. ft. or less, in which adding an additional sprinkler would be unnecessary. Prior the 2013 edition, shadow areas were not defined, and no protection guidelines were provided.
Paul Sullivan, Fire Protection Consultant

WE'RE LISTENING!

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