SQ

SEPT/OCT 2014 / No. 186

Journal of the
National Fire Sprinkler
Association

SEISMIC BRACING FOR FIRE SPRINKLER SYSTEMS

INSIDE THIS ISSUE:

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ON THE COVER

Bracing and clearance are two basic fundamentals when consideration is being given to seismic protection of fire sprinkler systems. With "*Seismic*" being the theme of this issue, many of the articles contained herein bring focus to fire sprinkler system seismic issues.

Photo courtesy of:
Brian J. Meacham, PhD, PE, FSFPE, Associate Professor
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IN THIS ISSUE

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SQ (ISSN 1050-4958) (USPS 524-010) is published six times a year (February - April - June - August - October - December) by the National Fire Sprinkler Association, Inc., 40 Jon Barrett Road, Patterson, NY 12563.

Telephone: (845) 878-4200. Subscription free to all NFSA members and member companies.

Second-Class postage paid at Mahopac, NY.

POSTMASTER: Send address changes to:
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LETTER FROM THE EDITOR

Lately, here in the northeast the air overnight has been cool and crisp, like the ripening apples so abundant throughout this part of the country this time of year. The morning dew with myriad microscopic prisms refracting a colorful display at first light and the bright amber and fiery red foliage reminds us that fall's first frost can't be too far in the offing.

For those of us in the business of promoting fire safety, the coming of fall means Fire Prevention Week. Recognized each year during the first week of October on the anniversary of the Great Chicago Fire of 1871, Fire Prevention Week is a time when fire prevention programs all across the country aim to raise public awareness about fire safety. It's also a great time to dispel myths, myths about Mrs. O'Leary, her cow and those about fire sprinklers.

Yes, it was rumored for years it was Mrs. O'Leary's cow that kicked over a lantern in the milking barn that started the fire that killed 300 people and left 100,000 homeless, but after extensive review of all the evidence and 1,100 pages of subsequent witness testimony, both Mrs. O'Leary and her cow were exonerated from any wrong doing. In fact, while the fire's cause is not officially known, it is believed to be of a more human, sinister nature.

That leaves then only myths about fire sprinklers to be dispelled. All of us in the fire sprinkler industry have heard them; they all go off at once; the water damage will be worse than the fire itself; they are too expensive. The list goes on. The facts are, as we all know, only the fire sprinklers closest to the fire actuate during a fire, putting water only where it's needed. If the fire department has to use hoses to put out a fire, they are going to spray ten to twenty times more water on a much larger fire compared to a fire sprinkler system. And the cost, well, latest figures from the construction industry show that fire sprinklers can be installed in new construction for about $1.63 per square foot, depending on local conditions.

During Fire Prevention Week, it isn't enough that we in the fire sprinkler industry simply know the answers to dispelling all the myths about fire sprinklers, but rather as agents of public fire safety we have an obligation to make the facts known to what in large part is a grossly uninformed or worse, misinformed public. Further, we have a responsibility to raise the public consciousness to the vulnerability of high risk populations such as the young, elderly and incapacitated who are unable to respond in the event of a fire. Until we have exercised every practical means at our disposable to educate the public about the benefits of fire sprinkler protection, let's vow not to rest too comfortably.

David J. Vandeyar, *Editor*

EVENTS OF INTEREST TO NFSA MEMBERS

calendar

October 21, 2014	Introduction to Fire Sprinklers, Standards & Codes	Concord, New Hampshire
October 21, 2014	High Ceilings, Step Ceilings and Ceiling Pockets	*ONLINE*
October 22, 2014	Understanding, Applying and Enforcing NFPA 25	Concord, New Hampshire
October 22, 2014	Understanding, Applying and Enforcing NFPA 25	Indianapolis, Indiana
October 23-24, 2014	Pumps for Fire Protection (Hands-On Training)	Norwood, Massachusetts
October 28, 2014	Understanding, Applying & Enforcing NFPA 25 (California Edition)	Merced, California
October 28-29, 2014	Sprinkler System Plan Review	Portland, Oregon
October 28, 2014	Inspection, Testing & Maintenance for the Building Owner/Manager	Oak Brook, Illinois
October 29-30, 2014	Sprinkler System Plan Review	Merced, California
October 30, 2014	Rough & Final Inspections of Fire Sprinkler Systems	Portland, Oregon
November 5-6, 2014	Sprinkler System Plan Review	Yarmouth, Massachusetts
November 5, 2014	Rough & Final Inspections of Fire Sprinkler Systems	Columbus, Ohio
November 6, 2014	Pumps for Fire Protection	Columbus, Ohio
November 7, 2014	Understanding, Applying & Enforcing NFPA 25	Columbus, Ohio
November 11, 2014	ITM Pulse: Working with the Owners	*ONLINE*
November 17-18, 2014	Sprinkler Protection of Storage	Rogers, Arkansas
November 18, 2014	Protection of Aerosol Storage	*ONLINE*
December 11, 2014	ITM Pulse: NFPA 25 2014 & 2017 Editions	*ONLINE*
December 16, 2014	Protection of Aircraft Hangars Part 2	*ONLINE*
January 6-7, 2015	Sprinkler System Plan Review	Windsor Locks, Connecticut
January 21-22, 2015	Sprinkler Protection of Storage	San Marcos, Texas
March 11, 2015	Rough & Final Inspections of Fire Sprinkler Systems	Pataskala, Ohio
March 12, 2015	Pumps for Fire Protection	Pataskala, Ohio
March 13, 2015	Understanding, Applying & Enforcing NFPA 25	Pataskala, Ohio

These seminars qualify for continuing education as required by NICET. Meet mandatory Continuing Education Requirements for Businesses and Authorities Having Jurisdiction. To register or for more information, contact: Michael Repko at (845) 878-4207, E-Mail: seminars@nfsa.org. Or register ONLINE at www.nfsa.org.

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NFSA Led the Way in System Earthquake Protection

Russell P. Fleming, P.E.

Of all the accomplishments of the NFSA over the past forty years, one in which we take much pride is the earthquake protection section of NFPA 13. The rules in this section make it possible for fire sprinkler engineering technicians to provide seismic protection of fire protection systems when such protection is specified for compliance with building codes or other requirements. There is little doubt that, if not for the leadership shown by NFSA in this area, earthquake protection features would be designed for sprinkler systems on a per-case basis through the intervention of structural engineers.

We first got heavily involved in the area with articles written for the Winter 1983 and Spring 1984 issues of what was then NFSA's *Sprinkler Quarterly* (now **SQ**) magazine, respectively entitled "*The Flexibility Factors in Earthquake Design*" and "*Bracing for Earthquakes.*" At the time NFPA 13 contained a poorly-organized Section 3-10.3 on the subject, but most information was advisory material in the appendix of the document. In California, at the demand of the Office of the State Architect (OSA), the plumbing and pipefitting industry had developed very specific rules for the protection of their mechanical systems, but sprinkler systems were specifically excluded, and those rules contained no concept of arrangements by which piping like branch lines could be protected through supports on mains. Custom design of bracing by professional engineers was threatening to become the standard solution for our industry.

The Spring 1984 issue was the first time we proposed the concept of tables of maximum loads for various types of braces and fasteners, and a corresponding table whereby system earthquake loads could be determined based on various ranges of angle from vertical and orientation of the fastener to the structural members. The values for the tables came from a variety of sources, from basic strength of materials texts to Factory Mutual data sheets. These tables became the basis of what is still contained in NFPA 13 to this day.

Along the way we were asked to chair an NFPA 13 task group on the subject, and over time we were able to obtain participation not only from the California OSA, but also OSHPOD, which governed the installation of sprinkler systems in hospitals in that state. They came to appreciate the economical approach to seismic protection that standardized approaches through NFPA 13 could offer.

NFSA also took the lead in assembling public hearings following the Loma Prieta earthquake in 1989 and the Northridge earthquake in 1994. With NFPA and the Society of Fire Protection Engineers as our co-sponsors, we used these earthquakes as our laboratory, inviting AHJs, contractors and fitters to share what was learned during those events, both what worked and what didn't. When NFPA 13 and the sprinkler rules of the storage standards were consolidated in the 1999 edition, it provided the opportunity to form a new Technical Committee on Hanging and Bracing, which has continued the effort to ensure that NFPA 13 provided the state of the art in its protection criteria.

NFSA has also been the voice of the fire sprinkler industry on the building code and regulatory side of earthquake protection, serving as a member of the National Institute of Building Sciences' committee developing the rules for the federally-funded NEHRP (National Earthquake Hazard Reduction Program), helping to shepherd these provisions into the model building codes, and more recently serving on the committee of the American Society of Civil Engineers (ASCE) that is charged with maintaining and updating these rules. All of these efforts were rewarded when, in 2007, NFPA 13 was recognized by the structural engineering community as the first industry document "deemed to comply" with the earthquake protection requirements of ASCE 7. Today the fire sprinkler industry is in good shape, with a set of reasonably simple provisions that have proven capability to protect fire sprinkler systems against earthquakes where needed.

Russell P. Fleming, *President*

NFSA Regional Chart – October 1, 2014

Area	States	Regional Manager	Area Director
New England	*Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont*	**Dave LaFond, NFSA** 2 Burns Way Holyoke, Massachusetts 01040 (413) 244-7653	**Donald A. DeLuca** SRI Fire Sprinkler Corporation 1060 Central Avenue Albany, New York 12205 (518) 459-2776 FAX (518) 459-0068
New York	*New York*	**Dominick G. Kasmauskas, NFSA** 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303 (518) 937-6589 FAX (518) 836-0210	
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Florida	*Florida, Puerto Rico*	**Lorrell Bush, NFSA** 2025 Droylsden Lane, Eustis, Florida 32726 (352) 589-8402 FAX (561) 327-6366 Cell: (954) 275-8487	**Alan Wiginton** Wiginton Fire Systems 699 Aero Lane Sanford, FL 32771 (407) 585-3205 FAX (407)585-3282
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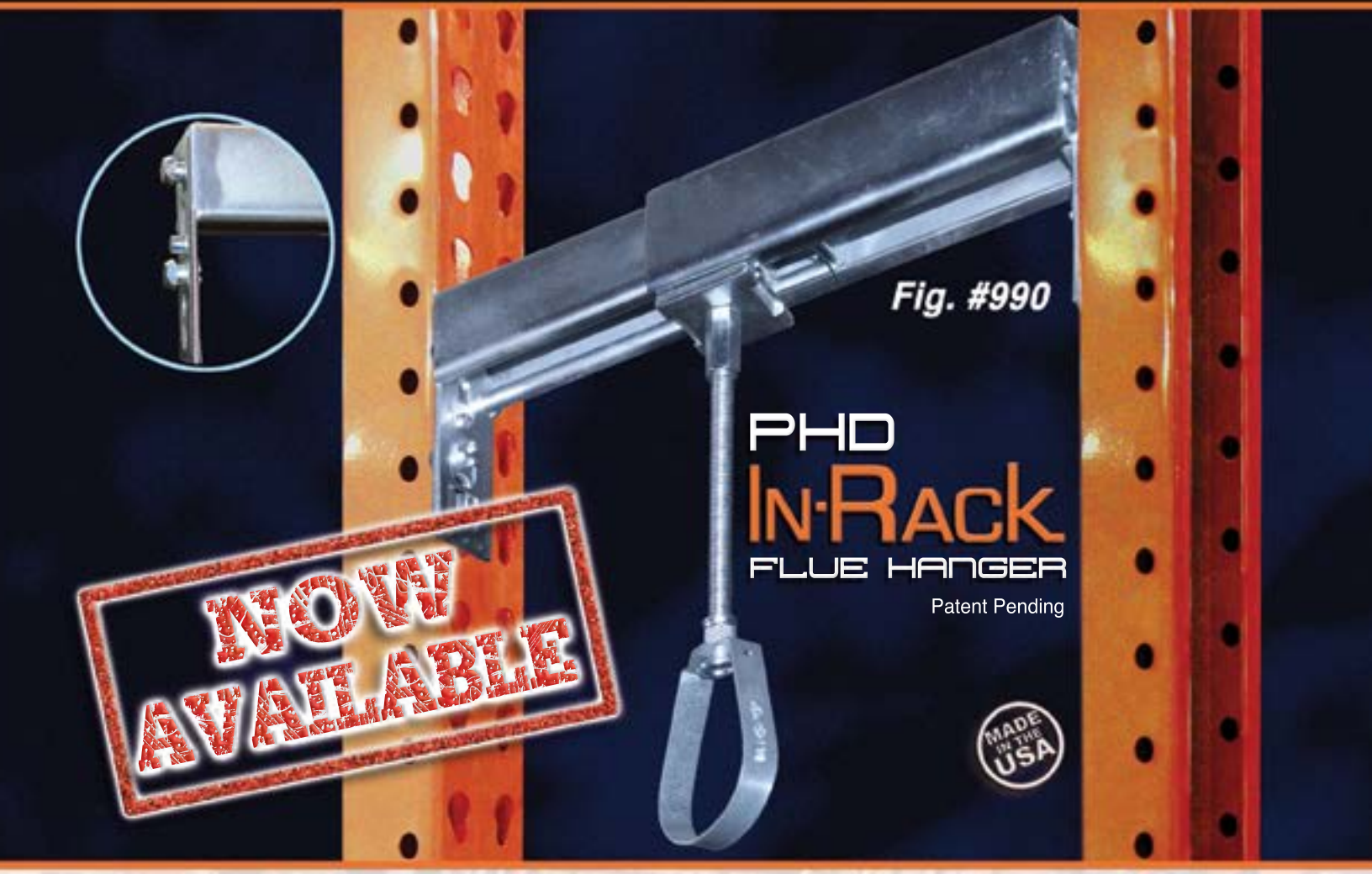

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NEVER LET YOUR LIEN TIME RUN OUT

by Stuart S. Zisholtz

We all know that there is a distinction between a public improvement and a private improvement lien. A public improvement lien can be filed within 30 days after completion and acceptance of the property, and a private improvement must be filed within eight months after the last item of labor and material was supplied by the lienor.

A private improvement project is a building that goes up for private use, and a public improvement is a road, a school, a firehouse, a police station, a bridge, etc.

Then we get the hybrid. That is when the Governmental Agency owns the land and a private improvement is built on the land. Mitchell Field is owned by the County of Nassau, and technically none of the structures on Mitchell Field are lienable.

A number of years ago, the Lien Law was amended to reflect this hybrid law to provide that where the Industrial Development Agency (IDA) becomes the owner of a piece of property and does the financing for a private developer, that development is treated as a private improvement subject to a mechanic's lien.

In Times Square, the loophole was clearly evident in a recent case. The underlying land was owned by the City of New York, which in turn brought in a public development corporation to clean up the area, which in turn leased some of the property to Loew's theater. A materialman filed a Mechanic's Lien and the Court ultimately vacated the lien because the City owned the property. There is no possible liability on the part of the City of New York. The loophole is that the job is not being financed by the IDA, and when Legislature amended the Lien Law they referred to the IDA and neglected to include all public benefit corporations. The Judge who struck the Mechanic's Lien was so incensed, that he wrote in his decision that it defies common sense and logic and called upon the legislature to plug this loophole.

The bottom line is that if anyone ever finds themselves in this type of situation, you must determine if there is a payment bond, and you must get direct contracts with the developer. You cannot rely upon a Mechanic's Lien under those circumstances.

Never let your lien time run out.

For a free copy of a pamphlet pertaining to mechanic's liens and payment bond claims, kindly contact me or the Association.

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NFSA Leads the Way in Seismic Protection Training

By James D. Lake

With seismic bracing requirements for fire sprinkler systems on the rise in what historically have not been considered traditional earthquake areas, so has demand for training on how fire sprinkler systems get protected from seismic activity. To meet the increase demand for quality training on the subject, NFSA developed its Seismic Protection for Sprinkler Systems seminar.

SEMINAR TITLE:

SEISMIC PROTECTION FOR SPRINKLER SYSTEMS

SEMINAR DESCRIPTION:

This half day seminar describes the responsibility of the contractor and authority having jurisdiction for the proper installation of earthquake protection of fire sprinkler systems. This seminar is geared toward those responsible for the layout and detailing of seismic protection features on water-based fire protection systems.

LEARNING OUTCOMES:

At the conclusion of this seminar participants will be able to:

- Discuss the requirements for Seismic design
- Apply the requirements of NFPA 13 to the seismic bracing of sprinkler systems
- Describe the differences and applicability of system bracing, flexibility, clearance
- Calculate seismic loads
- Discuss the requirements for restraint of branch lines.

SEMINAR SCHEDULE:

Module 1..... Seismic design
Module 2..... NFPA 13 criteria
Module 3..... Bracing, flexibility and clearance
Module 4..... Calculate loads
Module 5..... Restraint
Module 6..... Retrofit

SEMINAR TITLE:

ADVANCED SEISMIC PROTECTION FOR SPRINKLER SYSTEMS

SEMINAR NEED:

This is an updated program to address the need for further understanding of seismic requirements from the building and structural codes as related to the industry.

SEMINAR DESCRIPTION:

Seismic protection relies on components of the structural codes, such as Seismic Design Category (SDC). This program will discuss how to determine the SDC, along with alternative horizontal force calculations. Also, a brief review of the NFPA 13 requirements will be covered with focus on changes in pipe direction and load calculations for sway braces. This seminar is geared toward those responsible for the layout and detailing of seismic protection features on water-based fire protection systems. (Participants will need to have a working knowledge of the NFPA 13 seismic protection guidelines and/or complete the NFSA Seismic Protection for Sprinkler Systems course.)

DURATION: 4 hours

NUMBER OF MODULES: 5

TOTAL INSTRUCTIONAL CONTACT MINUTES: 220 minutes, 0.4 CEU

LEARNING OUTCOMES:

At the conclusion of the seminar, the participant will be able to:

- Identify the steps necessary for earthquake protection of fire sprinkler systems
- Select the Seismic Design Category (SDC) for a building
- Calculate the horizontal force used in earthquake protection
- Describe the requirements of NFPA 13 for seismic protection
- Describe computer details of seismic protection devices
- Apply the earthquake requirements to actual building plans

PARTICIPANT MATERIALS:

NFPA 13 (2007 or newer), calculator, participant workbook, exit handout

INSTRUCTOR SUPPORT MATERIALS:

NFPA 13 - 2010 Edition, Instructor's Guide *(including exercise prep sheets), ASCE/SEI 7-10 (optional)*

SEMINAR SCHEDULE:

Introduction
Module 1: Steps of Earthquake Protection
Module 2: Building Code Requirements
Module 3: NFPA 13 Requirements
Module 4: Seismic Drawing Details
Module 5: Workshops for Application

To find out more about this seminar or where it has been scheduled near you, visit NFSA's website at nfsa.org. If you or your company would be interested in hosting this or any of NFSA's many training seminars, feel free contact NFSA's Training Department. We would be happy to tailor a program to fit your specific requirements.

James D. Lake
Vice President of Training and Communications

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Do You Need Seismic Protection?

By Victoria B. Valentine, P.E.

Discussions about earthquakes and the damages caused to the built world from earthquakes are trending in the last decade. However, many people still view seismic activity as just a California problem. Yet, the largest earthquake recorded on the Richter Scale for the United States was a 9.2 that occurred in Prince William Sound, Alaska on March 27, 1964. There has also been recent ground motion activity in the northeastern United States as well as the New Madrid fault, which runs through Missouri, Tennessee, and Kentucky.

Although there is more awareness of earthquake activity in the United States than years ago, many people still struggle to determine if seismic protection is needed for the fire sprinkler system within a building. NFPA 13, 2013 Edition, Section 9.3.1.1 states, "Where water-based fire protection systems are required to be protected against damage from earthquakes, the requirements of Section 9.3 shall apply..." This means that the requirement to provide earthquake protection for the sprinkler system is determined outside of NFPA 13. The key piece of information that is needed for this determination is the Seismic Design Category (SDC).

Where do I find the SDC?

The layout and detail technicians need to know what the Seismic Design Category (SDC) is for the building. The SDC is determined by the engineer of record prior to design of the structural components of the building. By the time the details of the fire sprinkler system are planned the SDC should be well known on the project. Jurisdictional requirements should always be confirmed. There are specifications for buildings that could invoke the earthquake protection requirement. For example, an insurance carrier for the property may require seismic protection for the fire sprinkler system. Another example is a building following military specifications that require earthquake protection for most, if not all, buildings.

The International Building Code refers to ASCE 7 for the protection of buildings and nonstructural components from earthquake forces. Section 13.1.2 in ASCE 7-10 states "For the purposes of this chapter, nonstructural components shall be assigned to the same seismic design category as the structure that they occupy or to which they are attached." This means that the SDC that has been assigned to the building will apply to all of the components within that building. The classification will range from A through F. Section 11.7 exempts SDC A from seismic design requirements. Section 13.1.4 (4) exempts mechanical systems, which fire sprinkler systems are, in SDC B. Therefore, seismic protection is required for sprinkler systems that are in SDC C through F.

Some states and jurisdictions have modified their submittal process so that the SDC is called out on the cover page of the project since it is used by all involved with the building. Where this practice is followed, the SDC can be followed and seismic protection used where applicable. If this is not the case, the SDC will have to be determined.

How is the SDC determined?

Should the case be one where the SDC has not been communicated to those responsible for the fire sprinkler system, it can be determined with a few pieces of information. First, the risk category for the building needs to be determined. This is tied to the occupancy or use of the building. It is broken into 4 groups, where a risk category I is the lowest level of risk and IV is the highest including buildings used as emergency shelters and other essential facilities.

Second, the values for the expected ground acceleration from the design earthquake are needed. This begins with finding the site class for the soil where the building is/will be located. This is another characteristic that is used by the structural engineer as well as others designing other components that will be within the structure. Thus it could be taken from information provided within the specifications of the building. Where this is not the case, a geotechnical specialist will be needed to analyze the soil and classify it

>> CONTINUED ON PAGE 16

Victoria B. Valentine, P.E.

NFSA's Director of Engineering

TABLE 1: DETERMINING SEISMIC DESIGN CATEGORY		
	Risk Category	
S_{DS} Value	I, II, or III	IV
$S_{DS} \leq 0.167$	A	A
$0.167 \leq S_{DS} < 0.33$	B	C
$0.33 \leq S_{DS} < 0.50$	C	D
$0.50 \leq S_{DS}$	D	D
S_{D1} Value		
$S_{D1} < 0.067$	A	A
$0.067 \leq S_{D1} < 0.133$	B	C
$0.133 \leq S_{D1} < 0.20$	C	D
$0.20 \leq S_{D1}$	D	D

>> CONTINUED FROM PAGE 15

or generic information can be obtained through the website for the United States Geological Survey (USGS). Whenever site specific information is available it should be used.

Once classified, the site class will be noted A through F. Although the same letters are used, this is not the same designation as the SDC. Site class A represents hard rock, which would shift very little due to ground motions. Site class F represents liquefiable soils or those that have little strength to resist ground motions.

The third piece of information needed to determine the SDC for a building is the spectral response acceleration parameters. There are two values that are looked at when determining the SDC. S_S is the spectral response acceleration parameter for short periods (0.2s) and S_1 is the spectral response acceleration parameter for a 1-second period. These are values that have been mapped for the United States. These maps are updated over time to represent the best information available when the standard was revised. The maps can be found in ASCE 7-10 *(as well as other editions)*. A version is also available on the USGS website. It will allow the user to enter an address or the latitude and longitude for a site and return the S_S and S_1 data amongst other values.

The values in the maps are for the Maximum Considered Earthquake (MCE). Adjustments are used to arrive at the design values that determine the SDC. The first adjustment is for the type of soil. This is done as the mapped values are based on Site Class B, but not all buildings are built on this type of soil. Then two-thirds of that value is used as the design spectral acceleration parameter. The process is the same for S_S and S_1, but each parameter has its own table for soil coefficients, F_a and F_v respectively. The design value is noted with a "D" in the subscript as follows: S_{DS} and S_{D1}.

After the above pieces of information are gathered, two tables *(Tables 11.6-1 and 11.6-2 in ASCE 7-10)* are used to determine the SDC. Similar information can be found in Table 1. The higher SDC designation after comparing S_{DS} and S_{D1} to the risk categories is used. There is also a caveat when S_1 is equal to or greater than 0.75. Where this is the case and the risk category is I, II or III, SDC E is used. Where this is the case and the risk category is IV, SDC F is used.

Summary

The Seismic Design Category (SDC) for a building is one value applied to the structure and its components. Information on the use of the building, the soil under the building, and the acceleration parameters is needed if the SDC is not communicated from the structural engineer(s) for the project. Once the SDC is determined, buildings in A or B will not require seismic protection. Buildings with an SDC C through F will need earthquake protection for the fire sprinkler system. NFPA 13 provides the guidelines for the seismic protection when it is deemed necessary.

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3. "Historic Earthquakes." USGS Earthquake Hazards Program. U.S. Department of the Interior. 1993. Web. August 12, 2014.

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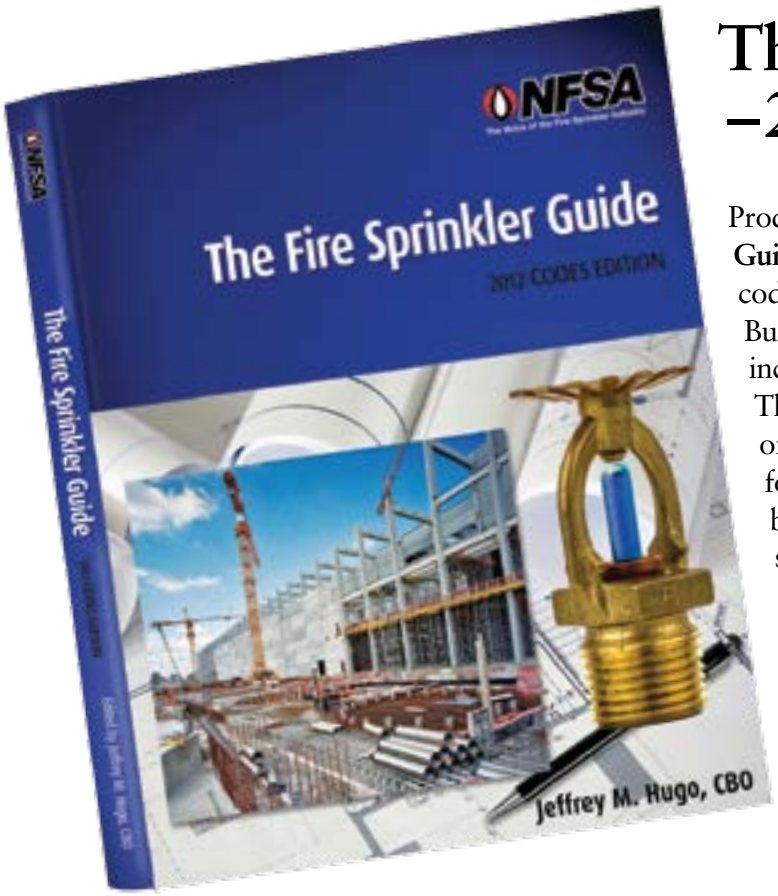

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Secondary Water Supply for High Rise Buildings in Seismic Areas

By Jeff Hugo, CBO

Sprinklered high rise buildings in certain seismic areas are required by the building code, specifically the IBC, to have an additional water supply. This water supply is needed to back up the primary water supply in case of a supply interruption.

Secondary water supply for high rises was first required by the 1975 BOCA building code in seismic zones 2 and 3 (comparable to our current day Seismic Design Categories C and D). It was in the 1975 BOCA edition that first addressed high rise construction (1973 UBC was also the first edition to address high rise construction but did not have secondary water supply requirements). The reason for the secondary water for high rises was and still is:

"To further enhance the reliability of the sprinkler system..." and *"...the system shall have even more reliability by having a redundant water supply on site. Thus, if the street main is broken during an earthquake, the building would be self-sufficient with its own water supply for a minimum of thirty minutes."*

(Frank A. McGurn (Sept. 1980) BOCA Basic Building Code – What's in it?, Sprinkling of News, 15)

Since 1975, the section has gone through several revisions. In the 2015 edition of the IBC, the secondary water supply is in Section 403.3.3. It is found in the high rise requirements because it only applies to buildings that meet the definition of a high rise. In previous editions it can be found in Section 903.3.5.2, however, it still only applied to high rises.

In the 2015 IBC, section 403.3.3, specifically states:

An automatic secondary on-site water supply having a capacity not less than the hydraulically calculated sprinkler demand, including the hose stream requirement, shall be provided for the high rise buildings assigned to Seismic Design Category C, D, E or F as determined by Section 1613. An additional fire pump shall not be required for the secondary water supply unless needed to provide the minimum design intake pressure at the suction side of the fire pump supplying the automatic sprinkler system. The secondary water supply shall have a duration of not less than 30 minutes.

Exception: Existing buildings

There is important discussion throughout this section of the IBC. The rest of this article will break down each portion of the section.

AN AUTOMATIC SECONDARY ON-SITE WATER SUPPLY...

This water supply is secondary to the primary water supply. Both water supplies shall be automatic (automatic was added to this section in the 2012 IBC). While Section 24.1.1 of NFPA 13 requires there to be at least one automatic water supply, the IBC is requiring the secondary to also be automatic. The term automatic water supply means that the activation of the water supply does not depend on human intervention.

The secondary water is also on-site. Typically, in a high rise, the secondary water is a tank or tanks that are installed on upper floors. This section would not permit the secondary supply to be supplied by a separate water main on a remote street. By stating "on-site" the code is requiring the water to be connected to a supply (automatically) that is established on the site. Remember, the purpose of this section is to have water available after a seismic event. In the study of the effects of the Northridge (1994) and Loma Prieta (1989) earthquakes, a number of the fire

>> CONTINUED ON PAGE 20

Jeff Hugo, CBO

NFSA's Manager of Codes

›› CONTINUED FROM PAGE 19

sprinkler "failures" were related to water main breaks under streets.

...HAVING A CAPACITY NOT LESS THAN THE HYDRAULICALLY CALCULATED SPRINKLER DEMAND, INCLUDING THE HOSE STREAM REQUIREMENT...

The available amount of secondary water is not to be less than what is required by the flow required by the most remote design area. The secondary water capacity is also required to include the hose stream requirements. It is important to note here that if the secondary supply is from a tank, then this requirement would override Section 11.5.2 of NFPA 13 which states when a tank only serves sprinklers, then it is sized only for sprinklers. This requirement by NFPA 13 would apply for the tanks supplying the primary supply, but the secondary supply is required by the IBC to have the hose stream included. For example, if the sprinkler demand is 300 gpm with a 100 gpm combined hose stream, then the secondary supply would be 12,000 gallons for a light hazard design (300gpm + 100 gpm x 30 minutes = 12,000 gallons). The duration requirement is at the end of the section, so the duration discussion is to come later in the article.

It is also important to note here that the secondary water supply is only sized for the sprinkler system and the hose stream requirement. The demand for the standpipe system is not required to be added in the secondary water supply. The 100 gpm hose stream for light hazard requirement does not come close to the demands of the standpipe system in a sprinklered building.

There are several different ways to supply the secondary water in a high rise. There is no requirement that the secondary water is to be in a separate tank. If money and the amount of non-leasable area were no object (at least when it came to fire protection) the secondary supply tank(s) would be separate and distinct. In reality, the secondary water is added to the tanks supplying water for the sprinkler, standpipe and sometimes even the domestic system.

..SHALL BE PROVIDED FOR THE HIGH RISE BUILDINGS ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F AS DETERMINED BY SECTION 1613...

As previously noted, the requirement for secondary water only applies to buildings that are considered high rises. Chapter 2 of the IBC (as well as NFPA 101 and NFPA 5000) defines a high rise as a building with an occupied floor located more than 75 feet above the lowest level of fire department access. Because this provision only applies to high rises, that is why this section was moved from Section 903.3.5.2 of the IBC to Section 403 of the IBC in the 2015 edition.

Secondary water is also only required in high rise buildings that are located in Seismic Design Categories of C, D, E, or F. These design categories are determined in Section 1613. Do not expect when you flip to IBC Section 1613 to find a map with these categories clearly stated. In the old days, a map was provided in either the building code or NFPA 13 and your area of the country was assigned a class. Those days are gone. The seismic design category is determined by its risk category and the design earthquake ground motion at that specific site. As a fire sprinkler contractor or a layout technician, this is already specified by the fire protection engineer or the authority having jurisdiction. These design categories (C, D, E, and F) are the same categories that are used to determine if seismic bracing is required. As a contractor, if you are including seismic bracing in the high rise because of the Seismic Design Categories, then this secondary water requirement applies.

For a more detailed description of the Seismic Design Categories, see Victoria B. Valentine's Technically Speaking article in this issue of **SQ**.

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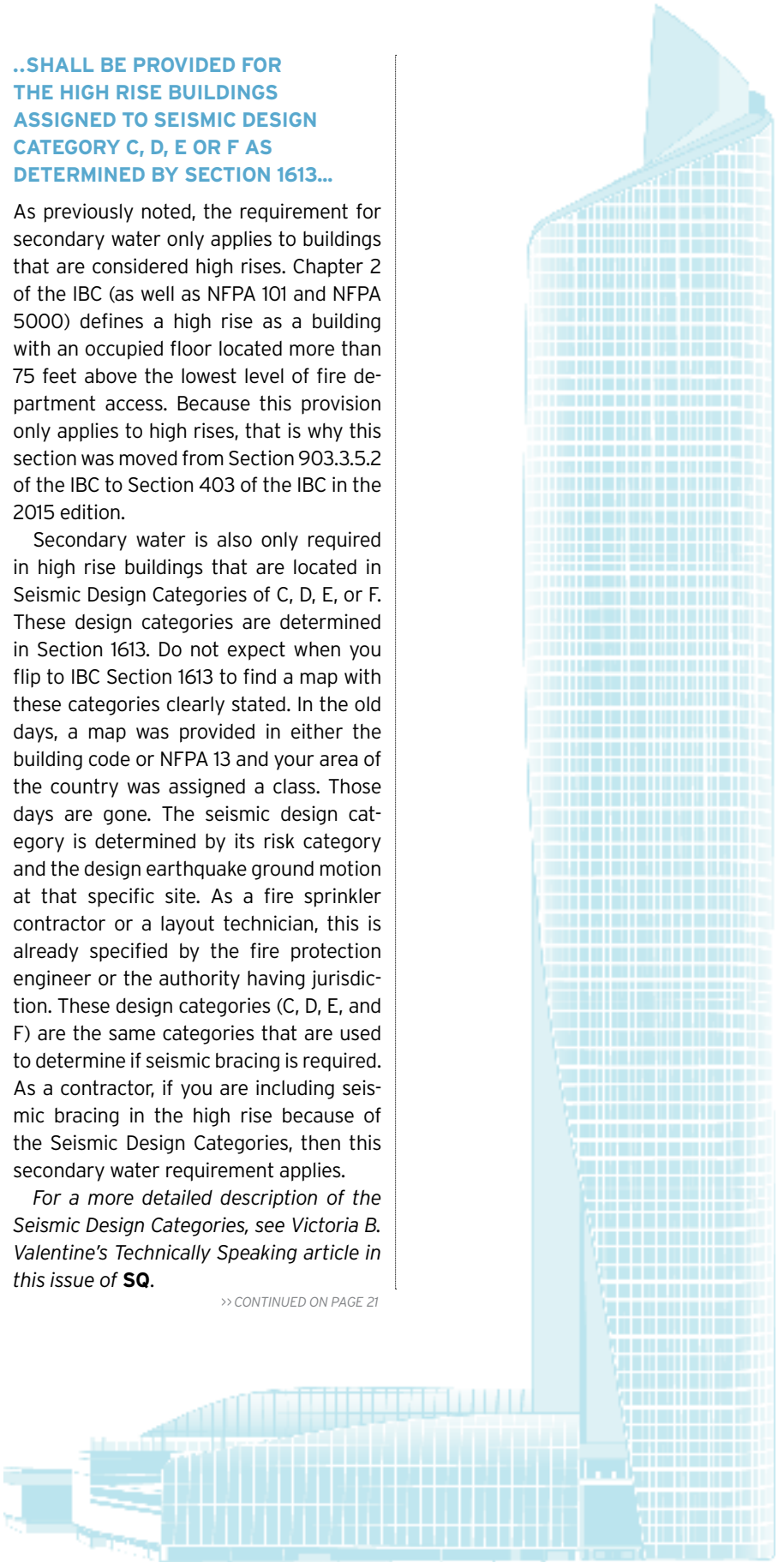

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...AN ADDITIONAL FIRE PUMP SHALL NOT BE REQUIRED FOR THE SECONDARY WATER SUPPLY UNLESS NEEDED TO PROVIDE THE MINIMUM DESIGN INTAKE PRESSURE AT THE SUCTION SIDE OF THE FIRE PUMP SUPPLYING THE AUTOMATIC SPRINKLER SYSTEM...

This is the newest technical change to this section. It occurred in the 2012 IBC. There is no need for the secondary water supply to specifically have a fire pump. The reason statement of this proposal states, "...There may be cases where the on-site water supply is located such that a pump is required in order for the necessary flow and pressure to be maintained to the suction side of the fire pump provided for the original design of the automatic sprinkler/standpipe system so that the fire pump can function properly in order to provide the required flows and pressures to adequately support the system. So the code text should be revised... to make it clear that, generally, an additional fire pump is not required but may be necessary for the automatic secondary on-site water supply to adequately supply the fire pump provided for the original system design."

An additional pump is not being required by this section unless the original fire pump is incapable of supplying the secondary water at the required pressure.However, as discussed above, there may be times when the secondary water supply is separate or added in other tanks. When one starts to use this section along with NFPA 20, (Chapter 5 is fire pumps for high rise buildings) especially for very tall buildings (Section 5.6) ,which requires redundancy of the water supply, the need for an additional fire pump beyond the redundant fire pumps becomes very costly.

...THE SECONDARY WATER SUPPLY SHALL HAVE A DURATION OF NOT LESS THAN 30 MINUTES.

NFPA 13, Table 11.2.3.1.2 provides not only the hose stream demand, but also requires how long the sprinklers must flow water, or duration in minutes. The secondary water supply must flow for a minimum of 30 minutes, which is equal to the duration for a light hazard occupancy. If the high rise is a higher hazard then it needs to comply with this table in NFPA 13. While this portion of the section is not specifically stating that the secondary water supply is required to follow Table 11.2.3.1.2, remember the sentence in the same section above is requiring the secondary water supply to be sized to the hydraulically calculated sprinkler demand.

Exception: Existing buildings

Buildings that are built prior to this edition of the IBC are not required to be retrofitted with a secondary supply. Furthermore, when existing buildings are retrofitted with fire sprinklers, the secondary water is no longer required. This is due to cost and feasibility of having the space and the structural capacity to store this amount of water. I would encourage anyone retrofitting older buildings to consider adding a secondary water supply. Retrofitting sprinklers in existing buildings is usually a community decision that underwent lots of scrutiny and debate. If the building is old, then surely the connection and underground are just as old and perhaps more susceptible to breakage. Having a sprinkler system not work after all the work of a retrofit ordinance is not good for the protection of occupants or for good press.

Summary

The IBC is clear that a secondary water supply is required for high rise buildings in specific seismic design categories. This additional water is available to supply the sprinklers in the case where the primary supply is not available in the event of an earthquake.

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Social Trends

By Joanne Genadio

Following are a selection of the latest comments from LinkedIn Groups I belong to. The comments are in response to various articles I post on the sites to increase awareness of fire sprinklers, fire safety, fire sprinkler saves and assorted laws and initiatives happening around the country. Since I can't exactly ask you whether you want the good news or the bad news first, I'll start with the "bad news," as I always like to end on a positive note.

The Bad News

Comments on a story about the death of an elderly couple in an unsprinklered apartment:

"What would be the difference if the elderly couple died because they didn't buy the latest medication available to them because the insurance company didn't cover it? All about exploiting deaths to sell a product." **—Building Official.**

"Your odds of winning the lottery are probably better than dying in a house fire." **—Building Official**

"I don't believe all buildings should be required to be sprinklered. Too many codes are passed and influenced by product manufacturers. We can't resolve everything with one answer and make this the perfect world we would like it to be."
—Building Inspector

The following comment from a former firefighter was in response to NFSA Regional Manager Dave LaFond's Letter to the Editor regarding the death of two Boston, Massachusetts firefighters:

"Having been a former firefighter, it is sad to read about another firefighter death. I do understand that sprinklers control fires and subsequently contribute to a much less hazardous environment for a firefighter. However, the absence of sprinklers does not cause firefighter deaths. Fire also does not cause firefighter deaths; there are many fires in unsprinklered buildings that occur that do not result in firefighter death."

The Good News

Regarding NFSA Regional Manager Dom Kasmauskas' Letter to the Editor regarding recent fatal fires in New York and Massachusetts:

"Too bad the builders associations across this country continue to throw thousands of dollars at politics to fight such a simple fire & life safety protection/prevention concept that's cheaper than high end counter tops or flooring for the home."
—Fire Marshal

"I am disappointed because it seems to be all about the money. What is a life worth? Can we put a price on it?"
—Deputy Fire Chief

Regarding the CPSE fire sprinkler installer accreditation program:

Great idea! There is a disconnect between the fire service and the private fire protection industry, yet both have critical and life saving roles in regard to fire safety. The fire service is what the public looks to for fire protection, so the role of educating the public about the importance of residential sprinklers lies with them."
—Fire Sprinkler Designer

The "Saving Grace" award goes to Gary Watlington, a LinkedIn NFSA Group member and Fire and Life Safety Specialist:

"I am tired of hearing about the cost of sprinkler systems, that codes don't require them, and all of the other BS excuses people use to vote against them. I understand that they cost money, but most people, builders included, want to add upgrades that will cost way more that adding a system and do absolutely nothing to protect the lives of the people living in the home. I don't care what a home is built of, how safe of material it's built with, it can still burn...PERIOD!

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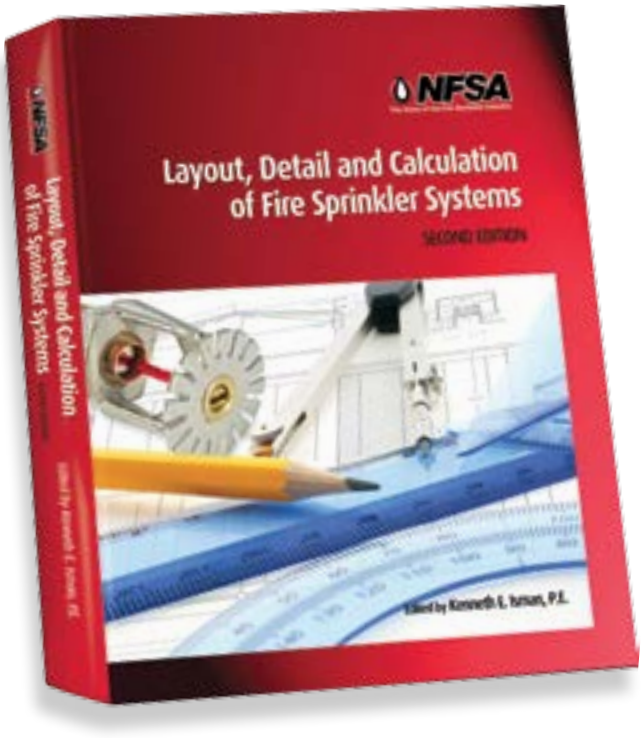
Joanne Genadio
NFSA's Marketing Manager

2nd Edition of Layout, Detail and Calculation of Fire Sprinkler Systems



The NFSA announces the publication of the 2nd Edition of its popular textbook, **Layout, Detail and Calculation of Fire Sprinkler Systems**. This newly revised hardcover textbook has been updated to reference the 2007 and 2010 editions of NFPA 13 with more examples and student exercises and new chapters on contract issues and stocklisting. This text remains the most complete book ever written for the fire sprinkler engineering technician and it's available now!

Written by the NFSA Engineering Department staff and edited by Kenneth E. Isman, P.E., Vice President of Engineering, this text covers every aspect of determining the necessary details for a fire sprinkler system including: hazard classifications, sprinkler spacing, hanger and brace requirements, hydraulic calculations, water supplies, pumps and tanks. The text also contains a review of basic math and physical science that is helpful in understanding the scientific principles behind the requirements that need to be followed.

This text makes an excellent self-study guide for the NICET Automatic Sprinkler Layout and Detail certification program and covers all of the work elements necessary to achieve Level 2 certification and many of the elements needed to achieve Level 3 and Level 4 certification. Even if you are not studying for a NICET exam, this text makes an excellent self-study guide for anyone wanting to know more about fire sprinkler systems.

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Contents in homes today burn hotter and faster than ever before, and the average time to escape a home fire once detected is as little as 1-2 minutes, according to NFPA 72, and flashover can occur in as little as 3 minutes. It's posted daily that, on average, 5-10 lives are lost daily; lives of newborns, toddlers, adolescents, adults, seniors, and the elderly, that could have been saved by a fire sprinkler. Until the ones that are against fire sprinklers in residences, regardless of size, have had to personally pull children, entire families, mothers, fathers, sisters, brothers, or someone's friend who have fallen victim to a home fire, or have had to hear the screams of burn victims or the families standing outside screaming when someone they care about is still inside, OR they have a simple smell of something that brings back flashbacks of a bad call, these people have no right, in my opinion, to try and block a life safety measure. IF you are one of the ones trying to block the life safety of children and families because of cost, knowing that statistics and demonstrations prove fire sprinklers save lives, then you, my friend, ARE playing with cost, the cost of someone's life. The public deserves to know the true benefits of fire sprinkler systems, not the myths most are being preached to about."

One final note, thank you, Gary!

Get involved! For easy access to NFSA social networks, go to the NFSA homepage and click on the social network links at the top left of the page. Remember, to change public opinion, you've got to be a part of it.

TWENTY-FIVE YEAR ANNIVERSARY

During a recent meeting of NFSA's North Texas Chapter, NFSA's South Central Regional Manager Cindy Giedraitis presented Northstar Fire Protection with a 25 year anniversary membership plaque. Northstar's President Mark Tate and Vice President Ricky Jackson were on hand to receive the award. Mark and Ricky have been more than members. They have been dedicated supporters of the association and truly committed to strengthening the fire sprinkler industry.

Mark served on NFSA's Board of Directors as Area Director for the South Central Region for over 8 years and Ricky has served on NFSA's Engineering and Standard Council for over 10 years and helped to create the NFSA North Texas Chapter in 2005 where he continues to serve as its Chair.•

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By Roland Asp, CET

Seismic Protection of Fire Sprinkler Systems: A Primer

Seismic protection of fire sprinkler systems has been part of NFPA 13 for a long time, in fact, seismic protection criteria first appeared in NFPA 13 in the 1947 edition. However, as much of the country is not traditionally thought of as seismically active, the layout of sprinkler systems in these regions do not include seismic protection. There are many very experienced sprinkler layout technicians who have never applied the earthquake provisions of NFPA 13 to their systems.

In New York, where I have primarily worked, earthquakes are thought of as a west coast issue and traditionally earthquake protection had not been included in the layout of sprinkler systems. Interestingly, as I was writing this article, the news reported that there was an earthquake in my area, although it was small one (2.5 on the Richter Scale). That such a small seismic event, which most people did not even feel, made the TV news indicates the rarity of these events in my area. I'm sure an event of this minor magnitude would not have made the evening news on the west coast.

Earthquake protection requirements are becoming more widespread and areas that historically have ignored them are now requiring fire sprinkler systems to be protected. This is forcing the contractors, layout technicians and AHJs to learn a brand new (at least to them) skill set and it can be a scary endeavor. For those who are planning to achieve NICET certification, knowledge of seismic protection is a required part of the certification criteria.

Although the criterion of earthquake protection is certainly not new, for those of us not versed in its application, it is a daunting task. Hearing terms like horizontal force, short period response parameter, and seismic coefficient are brand new concepts to some of us and at first look sounds like learning a whole new language. When first exposed to seismic protection, the ten or so pages that make up section 9.3, "Protection of Piping Against Damage Where Subject to Earthquakes" can seem more difficult than applying the other 440 pages that comprise of NFPA 13 in its entirety.

This article is intended as an introduction to seismic protection of fire sprinkler systems for those who do not have a background in this subject and may serve as a basis for further application of the concepts that will be introduced. Many of the available resources on this subject assume a familiarity with the requirements and for those who have no experience with earthquake protection; these technical explanations tend to further frustrate the new user. This article seeks to introduce the basic concepts, the specific terms, and requirements highlighted in section 9.3 of NFPA 13. While this article will not make anyone an expert on the subject, it will serve as a first step in understanding this sometimes complex topic. Once the basics are understood, the requirements are not as confusing. As a result of the limited scope of this article, I will not be able to discuss some of the vital aspect of chapter 9.3. As stated in the title, this article is primer to seismic protection. Additional study will be necessary in order to become competent in the layout of seismic protection. Some of the concepts that will not be discussed include determination of the Horizontal Seismic Loads and sizing the braces to accommodate these loads.

It must be understood that NFPA 13 does not state where seismic protection is required. This is based upon the regional location and the Building Code, the Authority Having Jurisdiction and the job specifications. NFPA 13 gives requirements for installing seismic protection when it is required, it does not specify where it is required.

The general philosophy of NFPA 13 for the protection of sprinkler systems is to provide both flexibility and bracing for the system. The two basic goals may be summarized as follows:

(1) Flexibility: Minimize stresses that may damage the piping by providing flexibility and clearances at points where the building is expected to move during an earthquake.

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NFSA's Manager of Technical Services

Roland Asp, CET

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(2) Bracing: Minimize damage by keeping the pipe fairly rigid to the supporting structure so that the piping system will move with the supporting structure. (such as a when supported from a floor ceiling assembly)

Where the building is expected to deflect or there are changes in angles between walls and floor/ceiling assemblies, the system piping must accommodate these deflections without losing integrity. This is accomplished with flexible couplings and clearances. Further, the sprinkler system mains and the branch lines (to a lesser extent) need to be supported securely to the floor/ceiling assembly to keep it in place during earthquake event so that the system does not tear apart. In other words, when the floor/ceiling assembly sways in an earthquake, the sprinkler piping must move with it. The overall goal is to keep the sprinkler system aligned with the building structure.

Although these two concepts (flexibility and bracing) at first glance appear to be contradictory; the combination of the two requirements have proven to be effective in keeping a sprinkler system operational in during and after an earthquake.

1. FLEXIBILITY

As already stated, there needs to be flexibility in some parts of the sprinkler system piping to allow it to move with the structure. This flexibility is intended to deal with story drift, which means that as a base of a building moves during a seismic event, this movement is amplified on the upper floors. The upper floors will displace from the base of the building and the sprinklers system must be able to displace with it. This is accomplished by the use of flexible couplings, seismic separation assemblies and by allowing clearance. See Figure 1.

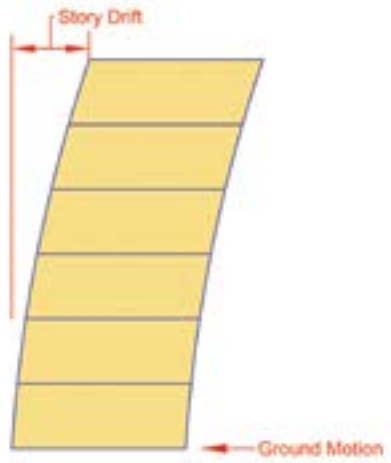

Figure 1 - Exaggerated View of Story Drift

Flexible couplings:

Flexible couplings are listed couplings or fittings that allow one- degree of movement of the pipe within the fitting. This degree of movement within the coupling allows the pipe to move with the building without damaging the pipe or the connection.

NFPA 13 in section 9.3.2 lists the requirements and required locations of flexible couplings. These required locations include:

- Within 24 inches of the top and bottoms of all risers except:
  - On risers less than 3 ft, flexible couplings may be omitted.
  - On risers more than 3 ft but less than 7 feet, one flexible coupling is adequate.
- In multistory buildings, a flexible coupling is required within 12 inches above, and 24 inches below the floor.
- On both sides of penetrations of concrete and masonry walls unless adequate clearance is provided at the pipe penetration.
- Within 24 inches of building expansion joints.
- Within 24 inches of the top of drops exceed 15 ft that supply more than one sprinkler.
- Within 24 inches above and below any intermediate point of support of vertical pipe.

It should be noted that the requirements for flexible couplings on risers are not applicable to riser nipples.

Additionally when the flexible connection located below the floor penetration is located above the tie-in to the main feeding the sprinkler system on that floor, an additional flexible coupling is required within 24 inches of the tie-in when the tie-in is on horizontal. When this tie-in includes a riser, the flexible coupling must be located on the vertical portion of the pipe.

Finally, section 9.3.2.4 lists required location of flexible couplings for drops to hose lines, rack sprinklers, mezzanines and free standing structures. Flexible couplings must be installed in the following locations:

- Within 24 inches of the top of the drop.
- Within 24 inches above the uppermost drop support attachment where supports are provided for the drop to the rack structure, mezzanine or structure.
- Within 24 inches above the bottom of the drop when no drop supports are provide.

As the above requirements do not always describe the situation adequately in words, thankfully the figures in the annex of NFPA 13 do a good job of illustrating these requirements.

Seismic Separation Assembly:

A seismic separation assembly is a device or piping arrangement that is intended to accommodate movement in any direction. They traditionally consist of 6 flexible elbows and several small lengths of piping as shown in NFPA 13, 2013 Figure A.9.3.3(a) and figure 2.

Figure 2 - Seismic Separation Assembly

There are also specially listed seismic separation assemblies that are made

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with flexible hose. These assemblies usually take up less room then the 6 flexible elbow method and reduce the amount of installation labor.

Both these methods allow movement in all three dimensions and are required when sprinkler piping crosses a seismic gap in the building. A seismic separation joint or gap is a separation between two structures that may move differentially during an earthquake event. These gaps allow multiple structures to move independently. These gaps are not common but may be included when large footprints of buildings are desired. These joints are also common when an addition is made to an existing building and the new portion is in essence a separate free-standing structure built adjacent to the original building.

The requirements for these seismic separation assemblies in NFPA 13 are straightforward.

Section 9.3.3.1 of the 2013 edition of NFPA 13 states:

An approved seismic separation assembly shall be installed where sprinkler piping, regardless of size, crosses building seismic separation joints at ground level and above.

Wherever piping crosses a seismic separation joint, above ground level, a seismic separation joint is required. For separation below ground level, a flexible coupling is sufficient.

It is important to note that this requirement applies to all piping including branch lines. In order to reduce the use of these assemblies, it is quite common, to install multiple risers so that fewer pipes cross a seismic separation.

A four-way brace (which we discuss later in this article) is required to be installed within six feet of this assembly on each side but may not be attached to the seismic separation assembly itself.

Clearances:

The final means of providing flexibility to a sprinkler system is to provide clearances from the piping to the structure. Clearance needs to be provided where piping penetrates walls, floors, platforms and foundations and is intended to prevent damage to the system when the piping moves in an earthquake event. This requirement applies to all piping including drains, fire department connections and other auxiliary piping.

For pipes smaller than 4-inch, the hole that the pipe passes through must be 2 inches larger than the pipe. For pipes 4-inch and larger the hole must be at least 4 inches larger than the nominal pipe size.

The pipe is not required to be located exactly in the middle of the hole. In other words, the requirement is for the hole to be 2 inches or 4 inches larger than the pipe, but it is not required to have an equal amount space around all sides of the pipe. This open space is typically required to be sealed by the building code if the wall or floor has a fire resistance rating. If this is the case, the hole is to be filled with a flexible material that has the appropriate fire rating and is compatible with the pipe material.

There are exceptions to these clearance requirements. When the pipe penetrates non-rated frangible construction that is not required to have a fire-resistance rating, no clearance is required. This is due to the fact that the pipe itself is stronger than the frangible construction (typically gypsum board). During an earthquake the pipe will move and may damage the wall, but the sprinkler system will not be damaged.

Clearance is also not required when a flexible connection is installed within 12 inches of both sides of the wall, floor, platform or foundation being penetrated. New to the 2013 edition of NFPA 13 is section 9.3.4.10 which states that no clearance is required where piping is supported by holes through structural members. In this case, the hole is thought of as a pipe hanger and not a penetration. Finally, the required clearance between the pipe and structural members that is not penetrated as listed above is 2 inches.

2. BRACING

The second aspect to NFPA 13's seismic protection is bracing. This bracing will keep the piping secured to structure that it is being supported from. When the structure moves during an earthquake, the bracing will allow the piping to move with that structure and prevent the system from being ripped apart.

The spacing and sizing of the bracing of the system will be based upon the horizontal force that an earthquake is expected to produce. This article will not go into how to establish this force but will outline the general bracing requirements on NFPA 13.

Earthquake bracing is known as sway bracing in NFPA 13. These braces need to be able to resist the horizontal force in both the lateral and longitudinal directions in relation to the pipe. Lateral direction refers to the direction perpendicular to the run of pipe and the longitudinal direction is parallel to the run of pipe. See Figure 3.

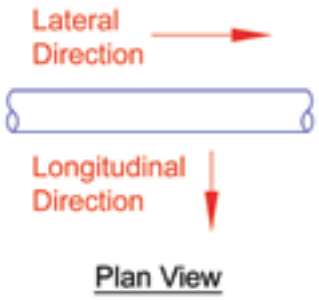

Figure 3 – Lateral vs. Longitudinal Direction

The requirements for bracing are separated into lateral sway bracing requirements and longitudinal bracing requirements. A four-way brace refers to a brace that resists both lateral and longitudinal forces.

A sway brace itself consists of three parts: The sway brace fitting connects the sprinkler pipe to the brace member; the attachment fitting connects the brace to the building structure and includes a fastener and the brace or brace member that carries the load between the sway brace fitting and the attachment fitting.

The attachment fitting and the sway brace fitting are required to be listed. The brace member and fastener are not required to be listed but must be capable of handling the expected loads. It is important to note that for all braces, the maximum allowable load is based on the weakest component that makes up the sway brace assembly.

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Lateral Sway Bracing:

All mains in a sprinkler system including cross mains, feed mains and bulk mains need to have both longitudinal and lateral braces regardless of the size of the pipe. Branch lines are required to have lateral braces if they are 2 1/2 inches or larger.

The spacing and load capacity of lateral sway bracing are tied to tables 9.3.5.5.2(a), 9.3.5.5.2(b), 9.3.5.5.2(c), 9.3.5.5.2(d), and 9.3.5.5.2(e) which are based upon the piping material that makes up the sprinkler system. The base spacing rules for lateral braces is that the maximum distance between lateral sway braces shall not exceed 40 feet. This is the maximum allowed by NFPA 13 but the spacing may be required to be less based upon the maximum loads and the strength of the sway brace assembly itself. As stated earlier, this article will not address the method of calculating these loads but will concentrate on the basic requirements.

Another of the base rules is that the distance between the last lateral brace and the end of the pipe shall not exceed 6 ft.

Other rules pertaining to lateral sway bracing that are of note are:

- 2½ inch starter pieces that do not exceed 12 ft are not required to have lateral sway bracing.
- The last length of pipe of a feed or cross main must have a lateral brace.
- Lateral braces at the end of a pipe run may also be used as the longitudinal sway brace if the lateral brace is within 24 inches of the pipe being braced longitudinally and the pipe is of equal or greater size.
- A brace must be installed within 24 inches of every other flexible coupling installed on a main. This requirement does not include the flexible couplings required by section 9.3.2 of the standard.

One notable exception to the above requirements for lateral sway bracing is the so called "six-inch rod rule". Lateral sway bracing may be omitted from piping that is individually supported by rods and the measurement from the top of the pipe to the point of the attachment is less than six inches. It is important that when utilizing this exception that the 6 inch dimension is measured correctly. See figure 4.

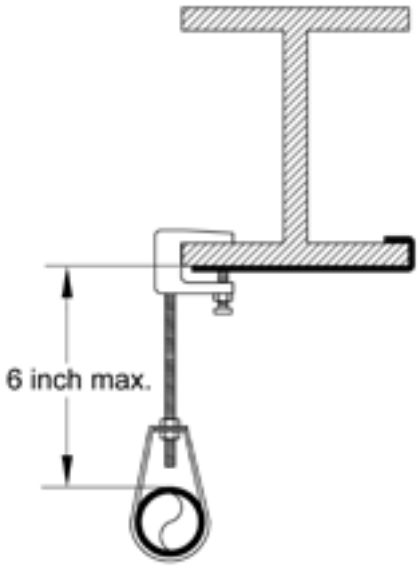

Figure 4 - Measuring 6-inch Rod Rule

Longitudinal Sway Bracing:

The requirements for longitudinal bracing which resists movement parallel to the run of pipe is quite simple in NFPA 13 and consists of three requirements:

- Longitudinal braces must be provided for all feed and cross mains and are spaced at a maximum distance of 80 feet on center.
- The distance from the last longitudinal brace and the end of the pipe (or change in direction) shall not be more than 40 feet.
- Longitudinal braces may act as lateral braces if they are within 24 inches of the pipe being braced laterally.

Change of Direction:

There are times when the sprinkler piping must change direction such as when running the pipe around an obstruction like a column. In this case, NFPA 13 - 2013 addresses the bracing requirements in section 9.3.5.7. This section states each pipe between changes in direction must be provided with both lateral and longitudinal bracing. However, if these individual pipe runs are less than 12 feet in length, the required bracing is permitted to be on adjacent runs of pipe.

Sway Bracing of Risers:

There needs to be a four-way brace at the top of all risers exceeding 3 feet. This requirement, however, does not apply to riser nipples. The required four-way brace may be attached to the horizontal run at the top of the riser as long as it is within 2 feet of the vertical riser. The four-way brace at the top of the riser should preferably be located above the upper flexible coupling on the riser and attached to the roof structure. Figure A.9.3.2(a) in the annex of NFPA 13, 2013 illustrates this concept.

The maximum distance between four-way braces on a riser is 25 feet. Four-way braces are not required where the riser penetrates an intermediate floor as long as the clearance between the pipe and the penetrating hole does not exceed the values discussed earlier. These clearance values are for pipe up to 3 ✣ inches is 2-inch larger than the pipe and 4-inch larger then pipes 4 inches and larger.

Other Sway Bracing Requirements:

The majority of the balance of the sway brace section of NFPA 13 concentrates on calculating the expected load on the braces; however a few additional general installation requirements should be mentioned. The sway bracing must be attached directly to the system piping and must be tight. Additionally, based upon the expected horizontal loads and the configuration of the brace itself, the braces may need to be configured to resist upward movement of the piping. This is usually accomplished by running the hanger rod tight to the pipe or with the use of surge clips.

Restraint of Branch lines:

As discussed in the sway brace section of this article, branch lines smaller than 2½ inches are not required to be equipped with sway bracing. This does not mean that these pipes are not affected by earthquake events but as these pipes are smaller and lighter, these effects are less pronounced. Branch lines are essential to the proper operation of the sprinkler system and must be provided with some level of protection from seismic movement.

This protection is achieved with branch

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line restraint instead of sway bracing. Restraint is simply a lesser degree of resisting loads then is bracing. NFPA 13 requires branch lines to be restrained. In general restraints are not required to be listed but must be approved by the AHJ. This required restraint may be achieved by a variety of methods which include:

- Listed sway brace assemblies
- Wraparound U-hooks
- No. 12, 440 lb wire installed at least 45 degrees from vertical on both sides of the pipe.
- CPVC hanger with 2 points of attachment
- A hanger installed no more than 45 degree from vertical and installed within 6 inches of a vertical hanger that is arranged to resist upward movement of the pipe.
- Other approved means

The branch line restraints must be installed at a spacing not to exceed those found in Tables 9.3.6.4(a) and 9.3.6.4(b) and the end sprinkler must be restrained.

No. 12 wire is a common method of restraints and if used must be installed within 2 feet of a hanger and the hanger nearest to the wire restraint must be one that resists upward movement of the branch line.

As with every good rule, there are exceptions and restraints are no different. Branch line restraints are not required if the branch lines are supported by rods and the measurement from the top of the pipe and point of attachment to the structure is less than 6 inches. See Figure 3. Armovers and drops also do not require restraint but sprigs that measure 4 feet or more must be restrained from lateral movement.

The final requirement that I would like to discuss is restraining straps. Where hangers and fasteners are used in areas subject to earthquakes, C-type clamps must be prevented from slipping off the attachment point. This accomplished with a restraining strap that wraps around the beam flange.

This article was an overview of the requirements for seismic protection of fire sprinkler systems that is required in areas subject to earthquakes. Although there are a lot of specific requirements, they are not difficult to understand or to apply. Once the basic principle and requirements are understood as highlighted in this article, the layout technician must learn to calculate the expected horizontal loads and to size the brace components based on these loads. This step may also seem difficult to master but like any other aspect of fire sprinkler system layout, once you understand the basics and begin applying these concepts; they are not as challenging as they may seem at first glance.

The NFSA has additional resources available to learn and understand all aspects of seismic protection including these seismic load calculations. One of the best for beginners is found in Chapter 26 of the NFSA publication "Layout, Detail and Calculation of Fire Sprinkler Systems, Second Edition.

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By Carol Weisman

Sneaky and Insightful Boardroom Questions

A number of years ago I was facilitating a retreat with the psycho board from hell. They made the Taliban look like wimps. There were only 13 board members and 15 factions. I was called in to make them play nicely I was clueless how to do it. I was sitting at my desk an hour before the retreat with my head in my hands. Our daughter came in and asked what was wrong. I told her I had no idea what I was going to do. She patted me on the head and said that I would figure it out. Great, a 15-year-old had faith in me. I grabbed my brief case and headed out the door.

Sure enough, she was right. Five blocks before I reached the retreat venue, I figured it out. We started with the question, *"If an abused woman came to your agency for help, how should she expect to be treated."* The board spoke eloquently as I filled 12 pages of flip chart paper with words like "with respect, decency, with an eye towards education and as a child of God." I then asked, *"If a person joined your board, how should your new member expect to be treated?"* An elderly gentleman with an accent that was a cross between Bugs Bunny and Henny Youngman exclaimed, *"We've been twicked."*

We then spent 5 hours talking about how the board could model in the board room the behavior they expected from the staff towards a client.

I am leaving today to work with another troubled board. We will start with note cards. I will be asking them, "List 3 adjectives describing your organization." I have a feeling the list won't be pretty. After many hours of interviews, words like, "shaky, suspicious, unprofessional, unkind, malicious" might top the list. I will then ask them to list three adjectives reflecting how they would like their nonprofit to be described. Our discussion will revolve around how to get from point A to point B.

Other questions to ask in your board room to get discussion going at your next retreat, generative discussion session or strategic planning meeting:

1. List 5 reasons to put our organization in your will.
2. List 5 reasons why someone wouldn't want to be a donor. As a group, brainstorm how to overcome these objections.
3. If a donor came to us today with $5 million (you pick the number) what would our first priority be? Our second? Our third?
4. If you had unlimited resources, what is the one thing you as a board member would like to do for the population we serve?
5. Ask the staff to present a wish list from under a dollar to over a million.
6. Ask the staff for a wish list of gifts of time from highly skilled labor ranging from "done in a day" tasks.
7. What do we do better than any one else in our field?
8. What program does another agency do better than we do?
9. What do we do that is the hardest to fund?
10. If our largest funder went away tomorrow, how would we make up the difference? (If you are getting more than 50% of your funds from one source, put this question at the top of the list).
11. Have our clients changed in the last 10 years. If so, how have our services changed to meet those changes?
12. If you can change one law to help our cause, what would it be?
13. How has the digital age affected the way we do business? What could we do better and how can we get there?
14. What 3 numbers best tell the story of what we do? i.e. one out of four girls is sexually abused by age 18, one out of 6 boys.
15. If you are an agency that works to find a cure for disease, how would you like to celebrate a cure?
16. Why did you join this board?
17. If Bill Gates were sitting next to you on a plane and you had a chance to explain what we did, how would you pitch our program?
18. How do you define "our community" when you talk about those we serve?
19. How do you define "our community" when you talk about those we go to for funding?

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20. If you could swap jobs with a staff member for a day, what would you want to try and why?
21. Is there anything you have always wanted to do on behalf of our organization and haven't been asked? (Understand that you might still not be asked. For instance, if you are an opera company and would like to be asked to stand in for the lead, this still might not happen or if you are a hospital and you have no medical background, you still won't be invited into the operating room to replace a surgeon.)
22. If the President of the United States called and invited you to Washington to seek your advice on our issue, what would you tell him we must change and why?
23. If money were no object, how would you spend the rest of your life?
24. Knowing that we all die someday and that our eulogy will be written, what would you like to be said about your accomplishments as a member of this board?
25. Is there a question you've always wanted to ask in a board meeting that you either thought you should already know the answer to, or was too complicated or too simple, please ask it now. It can pertain to our history, our future, our procedures or some odd combination of letters we use that everyone seems to understand.
26. Using only one word, how would you describe your first impression of the name of our organization?
27. Using only one word, how would you describe your first impression of the mission statement of our organization? Do you know the mission statement of our organization? Do you see it as only a legal description or as a marketing and fundraising tool?
28. Boy's Town was the subject of a movie many years ago with Bing Crosby. Who would you like to do a movie about your (change to our) organization and who would star it? Cast the board and the staff.
29. What keeps the board leadership up at night when thinking about this organization?
30. What keeps the staff up at night when thinking of this organization?
31. Given that famous people can quickly become infamous people (think Tiger Woods, Martha Stewart and Ken Lay from Enron), who would you have as our spokesperson if you could have anyone?
32. What's the first thing that comes to mind when you think of a great evening out? What would you pay for it?
33. Tell us about a work of art that has touched your life?
34. What is the most recent compliment you have received that you smile about in private?
35. What was the last time you wanted to let loose and go screaming into the night?
36. What childhood dream has come true for you? Who, if anyone, helped make that happen?
37. What lasting lesson have you learned from working with our organization or in relation to our mission?
38. What one new thing have you learned in the last week?
39. Nietzsche said, "That which will not kill you will make you strong." What have you done that has made you strong and what has made this organization strong? What is the most entrepreneurial thing you've ever done? Would you take a similar risk as a board member for this organization? If so, why? If not, why not?
40. If you were to start this organization all over again, what would you do differently?
41. You've got a call from the Rose Bowl Parade to design a float for the parade to represent the work you do at our nonprofit. What would be the theme and how would you represent it to the millions watching as you pass by? What music would be playing? Who would be on your float?
42. If there was one question that never really gets asked that you would like an honest answer to with no recriminations, what would it be?
43. What does "success" mean to you in terms of your work as a board member?
44. How can you determine if our organization as a whole is successful?
45. What is the best way to inspire board members? (see last month's ezine).
46. What is the best way to inspire staff?
47. What is one thing you know for sure about our mission?
48. When would it be appropriate for the staff to call you in the middle of the night?
49. What scares you most about the future of our organization?
50. Is there anything that makes you cry when you think of our organization?
51. Why are you here?
52. What would you like to accomplish in the next 12 months as a board member/staff members/volunteer of our organization?

Reprinted from the July 2010 issue of Carol Weisman's *"News from the Road"* e-zine. To subscribe (free) and for more information on her work at Board Builders, go to http://www.boardbuilders.com

FIELD OPS

NAME: **DAVE LAFOND**

TITLE: **NFSA REGIONAL MANAGER NEW ENGLAND REGION**

REGION: CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, VERMONT

BIOGRAPHY:

David A. LaFond began his fire service career with the City of Holyoke Fire Department, Massachusetts, in 1979. He progressed through the ranks of leadership culminating with being promoted to Chief of the Department in 1995. As Fire Chief, he delivered operational leadership to a Department of 140 personnel, supporting safety and security for an urban community of 40,000. He established and maintained a comprehensive emergency planning and preparedness program, including training drills and continuing education. Chief LaFond orchestrated city wide emergency response covering state and local agencies. He spearheaded strategic and financial planning, allocating an annual $9 million budget toward supplies, equipment, repairs, maintenance and upgrades. He handled media relations, follow-up reports, and court testimony and introduced safety and security standards throughout the City. Dave has served in various leadership positions throughout his profession including President of the Fire Chiefs Association of Massachusetts. He was appointed by four different Governors to work in the Massachusetts Fire Service Commission, resulting in serving as Chair.

SQ: Dave, you are still relatively new in your position as Regional Manager of New England. Can you tell the readers about your role and responsibilities?

Well now, that's a loaded question... My role and responsibility to the sprinkler industry encompasses quite a bit. The job description is comprehensive and dynamic. Along with providing NFSA membership assistance and support, I promote and participate in various meetings of local NFSA groups, assist members in improving relationships with local Authorities Having Jurisdiction, and visit periodically with existing members. Ron Brown, the regional manager from the State of Indiana, in his view, summed up the top four things that regional managers are charged with;

- Oversight of State Legislative activities that impact the sprinkler industry.
- Oversight and influence of the State Administrative Code and Rule making process.
- Building and maintaining industry friendly stakeholder networks.
- Building relationships with NFSA members and responding to their needs.

SQ: What seems to be the number one issue that has kept you the busiest?

There have been a couple of major issues that have my attention. Part of my responsibility is to "protect the industry." To that end, a frequent theme is the over simplification of the sprinkler fitter license. For instance, in Massachusetts, the Plumbers and Gas Fitters have issued guidelines for installation of NFPA 13D potable water (multipurpose) fire sprinkler systems. A Massachusetts registered professional engineer shall design the potable water piping system in compliance with 248 CMR. In Connecticut, there is a cyclic challenge with the State Plumbing Board attempting to get into residential sprinkler installations up to and including 13R systems. Proposals have been actively discussed to adopt either a regulatory change or legislation to create a new State-licensing requirement circumventing the existing four-year apprentice program and side stepping the sprinkler fitter insurance obligations. In the State of Maine, plumbers have been installing 13D systems for a while and I am told that residential sprinkler system "kits" are available in local hardware stores there.

The other major issue that has kept me busy is residential sprinkler legislation. This is a topic in and of itself. Quite frankly it is one of the main reasons that attracted me to the NFSA. Advocating for automatic fire sprinklers has been a career cause for me having served in the fire service for 32 years. Fire sprinklers, aka. "Fastest water," are the most effective methods of eliminating unnecessary loss of life, limiting property damage and reducing environmental harm from uncontrolled fire.

SQ: What have been some of your ways to highlight the importance of the fire sprinkler concept?

One of the ways that I have been able to keep the fire sprinkler concept in the spotlight is through fire sprinkler coalitions. Establishing statewide fire sprinkler coalitions that include public safety, and other industry related disciplines are an effective forum that ensures public educational outreach activities. So far, we have been successful in developing new relationships in the States of Connecticut and Maine with New Hampshire contemplating activity along with the existing functioning Massachusetts coalition.

The coalitions are resources for home fire sprinklers and actively work to educate stakeholder groups collaborating with key state fire service organizations to address and overcome barriers to residential sprinkler requirements.

SQ: Where do we go from here?

Involvement at the local level is critical. Tip O'Neill, the former Massachusetts Congressman who was the Speaker of the House, stated, "all politics are local." This famous made quote is ever so true today. It's not what you know; it's who you know. Grassroot efforts such as simply knowing who your State and Federal Representatives are and reaching out to them to voice your views on the life saving ability of fire sprinklers would go a long way in educating these publically elected officials. Letters, emails and phone calls from sprinkler fitters; project managers and even company presidents are an important part in cultivating strategic relationships.

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Getting it Done at the Chapter Level

By Jason Webb

If you were asked to identify the strengths and weaknesses of ITM programs and NFPA 25 enforcement in your area, could you do it? The answer is probably yes. What about the same question for another area of the country or in another state? There may likely be some similarities across the nation, but most often local stakeholders know best about what's happening in their area. That's the driving force behind NFSA's newest initiative aimed at increasing inspection, testing, and maintenance of sprinkler systems and enforcement of NFPA 25.

NFSA members have long recognized the benefits of state- or local-level chapters as a tool for the sharing of information and for strategic planning. More recently, there has been a dramatic increase in the number of new chapters. Likewise, the attention being paid to ITM in terms of its importance to the sprinkler industry and fire risk reduction efforts has never been greater. Combining the success of the chapter-based approach with the ITM advocacy effort is a natural fit.

Chapter-based ITM committees allow local and regional chapter members to identify what works best and develop solutions to support and expand on those ideas. On the other hand, recognizing what ITM barriers exist in a particular area is just as important. When that happens, your chapter can put to work the proven best-practices that other NFSA members from around the country have found successful.

"As a member of a chapter, you gain the collective experience and knowledge of your peers from across the association."

That's the benefit of the chapter-based initiative. As a member of a chapter, you gain the collective experience and knowledge of your peers from across the association. In addition, chapter members become engaged and other stakeholders (and potential new chapter members) see what is going on and begin to participate... the result is a win-win for those involved.

All that is needed to begin a chapter-based ITM committee is a group of interested people who are willing to commit some time to this worthwhile effort. Some chapters may decide that a smaller, more focused team is appropriate, while others may choose to include all the members of the chapter. Some local initiatives will focus on short-term programs that address specific needs. Hosting a training class or a series of classes, for example. Others projects may involve long-term solutions that require legislative changes or other lasting efforts. Most often, there will be a combination of these happening simultaneously.

Getting started couldn't be easier. NFSA has developed guides to help get the committee going. We also have the tools and resources to support the committee's on-going work. We can share what other groups have found to be successful and make recommendations on what pitfalls to avoid. After the initial meetings though, what the committee does and the direction it takes is limited only to the enthusiasm and imagination of its members. Whether it is simply arranging for training or beginning to build coalitions for much longer-term initiatives, we are here to help.

If you are a member of an NFSA chapter, or even a regional group that may someday want to become a chapter, and a chapter-based ITM committee sounds like a project you want to take on, contact your NFSA Regional Manager or email itm@nfsa.org today to get started.

Director of Inspection, Testing & Maintenance

Jason Webb

RESERVE YOUR SPACE NOW!

Check out what's new for 2015 on p. 3!

DO YOU BELIEVE IN MAGIC?

Don't Miss the 2015 North American Fire Sprinkler Expo™ in Orlando!
See Sponsorship Info on p. 10.

INSIDE:

NFSA
The Voice of the Fire Sprinkler Industry

2015 MEDIA KIT

NEW ENGLAND REGION

DAVE LAFOND
Regional Manager

CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, VERMONT

Seven Dead Including Three Children in Lowell, MA Blaze; Fire Sprinkler Would Have Prevented Tragedy

Following a fire on July 10, 2014 in Lowell, Massachusetts in which 7 people were killed, the Lowell Sun reported the following:

The Massachusetts Board of Building Regulations and Standards (BBRS) recently released a white paper report with their claims that the expense of installing a fire sprinkler system in 3-6 unit residential buildings is just too high and that not enough people are killed or injured in multi-unit residential fires to justify the requirement. On July 10, 2014 seven people, five from a single family, were fatally injured in a multi-home residential apartment building in Lowell, MA. The building was housing nearly 50 residents at the time the 4 a.m. fire spread and smoke alarms, though properly installed, failed to warn residents of danger. Many thousands of people across the Commonwealth live in multiunit residential homes including many in the dense Cambodian American population in Lowell who experienced the brunt of this horrific fire. The BBRS has staked its claim in the fight against the protection of the MA populace that lives in multi-unit residential structures by siding with homebuilder profit margins over the safety of these hardworking families.

An outpouring of support for the fire safety measures which the BBRS would look to eradicate came soon after the filing of the report. If you find yourself in agreement with recalling this so called White Paper, please consider contacting Chairman Brian Gale of the BBRS to express your concern for the members of our valued community that these fire codes have been created to protect.

Subsequently, NFSA's New England Regional Manager Dave LaFond was interviewed by Radio Boston in which he did a masterful job moving the discussion toward legislation needed to allow communities in the state a local option for residential sprinklers. During the same week, Dave was also interviewed by a local NBC affiliate in which he repeated the need for fire sprinkler legislation to prevent these types of tragic loses.

Dave LaFond is NFSA's New England Regional Manager. He can be reached at Lafond@nfsa.org or at 2 Burns Way, Holyoke, Massachusetts 01040, Phone: 413.244.7653.

NEW YORK REGION

DOMINICK KASMAUSKAS
Regional Manager

NEW YORK

New York Senate Bill 4610 is on the move

"PURPOSE: To require any builder who is contracting to construct a one- or two-family residence under three stories in height to provide the buyer with information prepared by the Office of Fire Prevention and Control regarding the installation of fire sprinklers."

This Bill is nearly identical to a fifteen-year-old piece of Connecticut legislation that does nothing to enhance the installation of fire sprinklers in one- & two-family homes. It annoys homebuilders and real estate agencies to comply due to these traditional opponents not using any marketing or sales skills to educate the homebuyers. That plus the large percentage of spec-homes that are built that will not have fire sprinklers installed before they are bought.

After what was thought a slow death in the Assembly last year, the Bill was sent back to the Senate and is being taken up again. The Senate Finance Committee voted to move SB4610 forward favorably. In New York State there is not any public testimony at Committee Meetings although Regional Manager Dominick Kasmauskas, NFPA, and the New York State Association of Fire Chiefs supplied written testimony to all 20 Senate Finance Committee members in opposition to the Bill as written. Dom has also met with several New York Senators' staff members to oppose this Bill.

In short, this Bill will haunt the fire sprinkler industry in the future. By having this requirement for builders, it is foreseen that after the next three, four, or five years, no homebuyers will have asked for fire sprinklers. This will be due to the minimal, questionable marketing, sales, and enforcement this Bill will have. It is certain, though, that opposition will address the Residential Code of New York State adoption process for 2017-18 with statistics of how many homebuyers did not request fire sprinklers and the costs.

Dominick Kasmauskas is NFSA's New York Regional Manager. He can be reached at Kasmauskas@nfsa.org or 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303, Phone 518.937.6589, Fax 518.836.0210.

MID-ATLANTIC REGION

RAYMOND W. LONABAUGH
Regional Manager

DELAWARE, MARYLAND, NEW JERSEY, PENNSYLVANIA, VIRGINIA, WASHINGTON D.C.

Assembly Bill A1698, & Senate Bill S2316, New Home Fire Safety

Assembly Bill A1698, having been successfully voted out of the New Jersey Assembly, has gone to the Senate Urban Affairs Committee for consideration and review. Senator Jim Whalen has introduced the Senate companion bill, Senate Bill S2316, New Home Fire Safety Act. The New Jersey Fire Sprinkler Advisory Board has scheduled a meeting with Senator Whalen in Trenton to discuss the bills.

Follow Ray's Regional Reports for updates on these and other legislative activities throughout the Mid Atlantic region.

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REGIONAL ROUNDUP

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Raymond W. Lonabaugh is the NFSA Regional Manager for the Mid Atlantic Region. He can be reached at: lonabaugh@nfsa.org or P.O. Box 126, Ridley Park, Pennsylvania, 19078. Phone: 610.521.4768.

SOUTHEAST REGION

WAYNE WAGGONER
Associate Director of Regional Operations - East

ALABAMA, GEORGIA, MISSISSIPPI, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE

Tennessee Fire Chief to Receive 2014 "Bringing Safety Home" Award

The Home Fire Sprinkler Coalition (HFSC) and the National Fire Protection Association's (NFPA) Fire Sprinkler Initiative have announced that Fire Chief Chuck Walker is the recipient of the 2014 Bringing Safety Home Award, jointly presented by the two organizations. Walker is the fire chief of the Ashland City (Tennessee) Fire Department. The Bringing Safety Home Award annually recognizes the efforts of fire chiefs who use HFSC's educational materials and the resources of the Fire Sprinkler Initiative to ensure that decision-makers have accurate information as new or updated residential fire sprinkler codes are considered.

Chief Walker was instrumental in passing a home fire sprinkler ordinance in Ashland City in 2001, educating all key stakeholders with HFSC education materials at "lunch and learn" meetings. The meetings included municipal officials, homebuilders, real estate and insurance agents, and water purveyors. He also conducted numerous side-by-side fire and sprinkler burn demonstrations. After his success in Ashland City, Chief Walker continued to educate the public about home fire sprinklers and assisted Cheatham County in becoming the first county in the state of Tennessee to pass fire sprinkler requirements in 2005. Every homebuilder who testified at the county adoption process voted in favor of home fire sprinklers.

Chief Walker was also successful at bringing media attention to successful fire sprinkler activations, highlighting each sprinkler save that occurred since the adoption. The media coverage helped the media and his community better understand the life- and property-saving benefits of home fire sprinklers.

Representatives of HFSC and NFPA will present the award to Chief Walker at Fire-Rescue International 2014 in Dallas.

Wayne Waggoner is the NFSA Associate Director of Regional Operations–South. He can be reached at Waggoner@nfsa.org or PO Box 9, Andersonville, Tennessee 27705, Phone 865.755.2956, Fax 865.381.0597.

FLORIDA & PUERTO RICO

LORELL BUSH
Regional Manager

FLORIDA, PUERTO RICO

Record Attendance at Florida Area Interest Meetings

The Area Interest Meetings held throughout the month of October set a new attendance record. Over 300 people attended the meetings throughout the state, the largest meeting being held in Plantation with more than 65 attendees. Every location filled the room and exceeded previous attendance records. Eight meetings were held across the state. Victaulic presented a two hour presentation that was well received by all who attended. Special thanks to Victaulic for presenting at all eight meetings and providing lunch for attendees.

WHAT THE ATTENDEES HAD TO SAY:

"A must for all Fitters and AHJ's."
- MIKE DILGER, DILGER, LLC

"At first I worried about the class the other day because of the simplicity of the way the information was presented, but it really turned out to be a good class with very pertinent information. Very beneficial. Thank you for arranging it for us and please thank Victaulic for the fine presentation."
- JACKIE DELAOSA, COLLIER COUNTY

"Learning about the different types of hose (Helical and Annular) that are used in the construction was very beneficial. It provided a better understanding of what product will be most beneficial for specific applications."
- JOEY HATFIELD, NAPLES FIRE PROTECTION

WHAT THE PRESENTERS HAD TO SAY:

"This was a great opportunity to network with AHJ's and contractors at one time. We have already been informed by those who attended both AHJs and Contractors that they were implementing in the field what they learned at the meeting. Great relationships were developed as a result of these meetings. Our team felt that it would have taken us three months to get this much face time with so many interested parties. We are extremely grateful to FFSA and Lorrell Bush for the opportunity to present at the Area Interest Meetings."
- CARLOS BRUNET, VICTAULIC

"It was a real honor to be a part of this year's Area Interest Meetings in Florida. The 8 meetings held across the state attracted not only the NFSA contractor members but also a great number from the fire official and engineering communities as well. These are groups that would have been very difficult for us to touch if not for these meetings. The turnout was fabulous and the hospitality extended to us by Lorrell and the membership at large was awesome. I want to thank Lorrell and the entire NFSA Florida Chapter for including Victaulic in this year's meetings."
- CHUCK OAKES, VICFLEX SALES MANAGER, VICTAULIC

Lorrell Bush is the NFSA Regional Manager for the Florida Region. She can be reached at bush@nfsa.org or 2025 Droylsden Lane, Eustis, FL 32726. Phone: 352.589.8402 Cell: 954.275.8487 Fax: 561.327.6366.

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GREAT LAKES REGION

RON BROWN
Regional Manager

INDIANA, MICHIGAN, OHIO,
WEST VIRGINIA, KENTUCKY

Thanks for your Help – A Letter from Ron Brown

I wanted to take a moment to Thank You all again and at the same time share with you my thoughts about the recent fire sprinkler educational events conducted in the Great Lakes State of Ohio.

As you all know we worked together on three residential fire sprinkler events for the months of June, July and August in Ohio. The first was the impressive and very well attended side by side fire demonstration conducted at the Ohio State Fire Marshals, June 28 Fire Muster. Chief Conway and his crew did an outstanding job of conducting the burn demonstration and they now have the burn cells and their furnishings as well as the data they collected on display at the Office of the State Fire Marshal so that anyone who visits the office can clearly see the very positive impact fire sprinklers have in protecting lives and property from fire. The pump and tank provided for display by Don Smith, CBI was a great addition to the Marshal's display as well as at the July 25th Fire Team event.

The second event was the July 25, 2014 Fire Team USA full one day seminar and side by side burn demonstration held at the Hilton Easton in Columbus Ohio. The class was made up of fifty plus Fire Marshals and Fire Inspectors from across the state of Ohio. Fire Team USA led by Wayne Waggoner and Vickie Pritchett delivered their consistently impressive and thought provoking residential fire sprinkler seminar material. The seminar was followed by a side by side fire sprinkler demonstration narrated by Tom Lia, NISFAB Executive Director and his impressive team of professionals in cooperation with the skilled Columbus Fire Department engine and ladder companies assigned to the event. Ohio State Fire Marshal Larry Flowers addressed the attendees prior to the burn demonstration, at which time he indicated the support of his office for the value and success of residential fire sprinklers. He indicated he and his staff were working very hard to provide and deliver fire sprinkler educational materials to citizens, building officials, fire fighters and elected officials across the state.

The final event the Ohio State Fair, which continues as I write this e-mail and I know Frank Conway, Chief Fire Prevention, Ohio Department of Commerce, Division State Fire Marshal and his crew are working hard to educate booth visitors on the value of residential fire sprinklers at the Office of the State Fire Marshals state fair booth.

I want to thank all of you who played a part either financially or through your actions or a combination of both in pulling this event together. The end result was the delivery of some very successful educational information and materials in the state of Ohio. The coordination and support of the NFSA was done mostly by phone and or e-mail which made things a bit more difficult for all of us but we worked together taking care of our piece of the puzzle to get it done and done well.

Thank you ALL very much for all that you did to make these events the success they were.

Ron Brown is the NFSA Regional Manager for the Great Lakes Region. He can be reached at Brown@nfsa.org or 1615 Cypress Spring Drive, Fort Wayne, Indiana 46814, Phone 845.661.6534; Fax 260.625.4478.

ILLINOIS REGION

BOB TINUCCI
Regional Manager

ILLINOIS

Chapter-based ITM Committees Coming Soon

Chapter-based ITM committees allow local and regional chapter members to identify what works best and develop solutions to support and expand on those ideas. On the other hand, recognizing what ITM barriers exist in a particular area is just as important. When that happens, your chapter can put to work the proven best-practices that other NFSA members from around the country have found successful. Illinois NFSA Chapter ITM Committee... is there an interest?

Bob Tinucci is the Regional Manager for the state of Illinois. Bob may be reached at 6401 Richmond Avenue, Willowbrook, Illinois 60527, phone/fax: 630.655.1875, cell: 630.514.1601, email: tinucci@nfsa.org.

WISCONSIN REGION

DAN GENGLER
Regional Manager

WISCONSIN

26th Annual Burn Center Golf Invitational Scores Another Winner

The organizing committee for the 26th Annual Burn Center Golf Invitational (BCGI) was extremely pleased with the outcome of the August 25, 2014 event. The outing was held for the 21st consecutive year at the award winning Grand Geneva Resort & Spa's "TheBrute" course in Lake Geneva, WI. One hundred thirty-five enthusiastic golfers were challenged with wet conditions in the scramble format. Golfers were only able to play 14 holes in the rain delayed event but feedback indicated they loved the conditions the course and weather offered. An additional 25 dinner guests joined for the evening program and auction. Just over $80,000 was generated to the treatment of burn victims at Columbia St. Mary's Hospital and fire/burn prevention and burn survivor programs for the Wisconsin Alliance for Fire Safety (WAFS). The twenty-six year total for the event has reached an astounding $2,135,000. Golf and sponsor

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awards were given to those who helped raise the beneficial funds. This event is the grandfather outing for these type of charities and the fire sprinkler industry leads the way in the support of the BCGI's success!

The invitational attendees discovered the causes benefited are quite varied yet representative of their personal charity commitments. The breakdown of disbursements are as follows:

- $10,000 off the top for the WAFS Newspapers in Education Fire Safety Program, an interactive state certified educational linkage program delivered to more than 250,000 fourth through seventh graders in the state of Wisconsin through the newspaper medium.

- 70% to Columbia St. Mary's for programming advanced medical care. Additionally, more is targeted to the Columbia St. Mary's Burn Prevention Education Fund providing Wisconsin with burn prevention programming brought directly to the workplace.

- The remaining 30% is earmarked for the Wisconsin Alliance for Fire Safety for its programs including the *Summer Camp for Burn Injured Youth*. Other projects have included; supporting burn survivors to the Phoenix Society's World Burn Congress, WAFS Winter Leadership Program, to name a few.

In addition to great golf, food, raffles and auction, camaraderie among attendees was evident with a social hour of altruistic means. Many old friends were seen making new acquaintances and friendships. All left knowing their day of fun and enjoyment will mean a lot more to those who for seconds will endure a lifetime of pain and scarring.

The generosity of the sponsors created the opportunity for the event to reach financial and meaningful proportions. Fire sprinkler suppliers, manufacturers, contractors, construction contractors, financiers, labor unions and other supporters contributed to the several categories of sponsorship equating to a formable equation of wonderful levels.

The evening program included a presentation by burn survivor Cedric Jones. Jones accentuated the cause of the BCGI by stating that had not the generosity of the earlier outings been there, he may not have lived through his pain and suffering at the St. Mary's Regional Burn Unit. He expressed his most sincere appreciation by telling his story of courage and commitment to survive with a strong emphasis on the incentive to live through last year's sponsorship he received to attend the World Burn Congress. This year's Fund-a-Cause was to support that cause and raised $5,300 to do so.

Chair Dan Gengler expressed his appreciation of a steering and event committee that met all year to make the event fun and beneficial to the charities. He also recognized all of the attendees for their exceptional support.

For those looking ahead, mark August 24, 2015 for the 27th Annual BCGI in Lake Geneva, Wisconsin.

Dan Gengler is NFSA's Regional Manager for the state of Wisconsin. He can be reached at Gengler@nfsa.org or P.O. Box 286, Waupaca, Wisconsin 54981, Phone: 262.325.1958.

MINNESOTA REGION

TOM BRACE
Regional Manager

MINNESOTA

18th BurnAid Golf Classic a Success

Generating $35,000 for the Regions Hospital Burn Center, the 18th Annual BurnAid Golf Classic held September 8th this year at North Oaks Country Club was a tremendous success.

The BurnAid Golf Classic was established to fund programs and services to benefit burn injured children and their family members. It is hosted by the NFSA Minnesota Chapter, Regions Hospital Foundation and the Minnesota State Fire Marshal Division. Gifts through this tournament enable the Burn Center to offer unique and far-reaching programs to benefit children and their families. In eighteen years the BurnAid Golf Classic has gifted $765,000 to the Burn Center.

Over the years proceeds have helped fund various Burn Center programs:

SITE RIGHT ULTRASOUND MACHINE
This ultrasound machine makes it much less painful for burn victims to be outfitted with IVs. It is especially valuable in treating small children.

BURN SURVIVOR SUPPORT REPRESENTATIVE
Chris Gilyard, 2001 BurnAid speaker, works with patients offering lifelong support in living with burn injuries.

INTERACTIVE FACE MASK DISPLAY
This display of molding techniques for the plastic facial orthosis also called the transparent face mask which is used to minimize burn scarring. This display is used by medical staff, fire departments and schools to help with burn injury education.

COOLTHEBURN.COM WEBSITE
People worldwide can ask questions and seek help with burn injuries on this site.

SCHOOL RE-ENTRY PROGRAM FUNDING
Burn Center occupational therapist staff visit the classrooms of children returning to school after a burn injury. The occupational therapist tells the children about burn treatment and passes around samples of what they may see their friend wearing to treat the burn.

BURN HYDROTHERAPY ROOMS AND BURN SHOWER CART
Rather than an immersion tank, the shower cart, which is more effective in cleaning bacteria off the wound, was purchased along with contributions for major hydrotherapy room renovations. The burn shower cart has controllable flows of spray allowing for very gently or more powerful spray.

FAMILY WAITING ROOMS
Allow patient and family visitors a comfortable place to visit - not just a hospital bed and two chairs. The family and pa-

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tients can watch movies or play games in the pediatric areas.

WINDOW BLINDS

Integral blinds are enclosed between two panes of window glass which eliminates the dust and bacteria that normal blinds might accumulate and these help minimize infection.

CHILDREN'S BURN CAMP

Camp Cheley in Colorado is a summer camp experience that helps children who are burn survivors with emotional and physical impairments or just an opportunity to be with other survivors. It can cost up to $2000 per child to fly them to Colorado and to register for this weeklong camp. Regions staff are also supported to attend in order to provide the highly specialized needs for these kids.

FAMILY BURN CAMP

This is the Minnesota Family Burn Camp in Ely, MN. This is a unique opportunity for the entire family of burn survivor to interact and work through the changes that can affect the entire family of the survivor at this weeklong camp.

Tom Brace is NFSA's Regional Manager for the state of Minnesota. He can be reached at Brace@nfsa.org or 1433 Idaho Ave West, St. Paul, Minnesota 55108, Phone: 651.644.7800.

CENTRAL REGION

CHRIS GAUT
Regional Manager

IOWA, KANSAS, MISSOURI

Residential Fire Sprinklers Can Save Lives and Property

A letter to Southeast Missourian by NFSA Central Regional Manager Chris Gaut

Recently Rick Davis, mayor of the Bootheel community of Caruthersville, died of apparent smoke inhalation in his second-story bedroom, after his house caught fire late Wednesday night, July 23. The mayor's passing came just days after a Southwest Missouri woman died in a house fire in Seymour. Mr. Davis became the 31st casualty on the growing list of reported civilian fire fatalities in Missouri in 2014. I can only hope that the silver lining in the tragic loss of such a prominent and well-respected community member like Mr. Davis is that his death will serve as a reminder that fire does not discriminate, and can strike at any time and in any type of home.

While no one is safe from fire, there are ways that people can protect themselves and their loved ones from its ravages. Every home should have working smoke alarms in all common areas and in each bedroom. Smoke alarms should be tested once a month and batteries should be replaced when the clocks are changed for Daylight Savings Time. Families should also practice emergency fire drills, especially if there are young children in the house.

In 2011, the latest year for which we have official data, property loss from residential structure fires alone in Missouri was an estimated $45 million. The recent fires in Caruthersville and Seymour, as well as the fire which destroyed a home in Carl Junction on July 29, only continue to add more dollars to the ever-increasing totals of fire damage in the state.

Despite all of this loss, Missouri is still resisting the concept of installing residential fire sprinkler systems in newly constructed one- and two-family homes. While working smoke alarms are an effective way to alert residents to a fire, fire sprinklers are the only form of proactive fire protection and can protect lives and property by immediately reacting, controlling and even extinguishing a fire.

I urge all citizens to check the batteries in their smoke alarms, educate themselves on the current fire protection requirements in their own cities and states, and learn how to protect themselves and their loved ones from the dangers of fire. My thoughts and prayers are with the victims' family and friends.

Chris Gaut is the NFSA Regional Manager for the Central Region. He can be reached at gaut@nfsa.org or NFSA Central Region Office, 207 Van Buren Rd. Branson, MO 65616, Phone 845.803.6426, Fax 636.410.7700.

SOUTH CENTRAL REGION

CYNTHIA GIEDRAITIS
Regional Manager

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

Update from Texas State Fire Marshal

As part of a rules review process over this past year, the Texas State Fire Marshal's Office updated the adopted NFPA standards in the industry rules (extinguisher, alarm & sprinkler), effective July 29, 2014. This does not mean that State adopted editions automatically override local building / fire codes and their adopted NFPA editions. Contractors are expected to communicate with the local jurisdiction and know what codes/ standards apply in that jurisdiction - and design / install to those local requirements.

Where a contractor perceives that conflicts exist between standard editions, they need to bring it to the attention of the local AHJ for discussion and resolution per the AHJ's direction and authority.

Cindy Giedraitis is the NFSA Regional Manager for the South Central Region. She can be contacted at giedraitis@nfsa.org or PO Box 10403, College Station, Texas 77842. Phone: 979.324.8934.

GREAT PLAINS REGION

ERIC GLEASON
Regional Manager

Colorado, Nebraska, North Dakota, South Dakota, Utah, Wyoming

Side by Side Burn Demonstrations

Leading up to National Fire Prevention Week, which is always the first full week

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REGIONAL ROUNDUP

FUTURE NFSA ANNUAL SEMINAR SCHEDULE

NFSA Annual Seminar
Laguna Cliffs Resort & Spa by Marriott
Dana Point, California
May 5 – 7, 2016

NFSA Annual Seminar and North American Fire Sprinkler Expo®
Las Vegas, Nevada
Spring 2017

NFSA
The Voice of the Fire Sprinkler Industry

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in October, several side by side burn demonstrations were scheduled throughout the state of Colorado. The demonstrations serve two purposes. On one hand, they are a graphic reminder how fast fire can grow when not controlled and just how violently and indiscriminately it can destroy property and worse, lives. On the other, fire sprinklers activate over the fire before it reaches catastrophic proportions, limiting property damage and, most importantly, preserving life. It's very impactful, leaving viewers with a true sense of automatic fire sprinkler system value. Here are several locations where people received the fire sprinkler message:

- Boulder Fire Rescue
- West Metro Family Fire Muster – Training Facility Kipling & Hampden
- WalMart Neighborhood Market, Northglenn – North Metro Fire Rescue
- Red, White & Blue Fire Rescue – Breckenridge

Eric Gleason is the NFSA Regional Manager for the Great Plains Region. He can be contacted at gleason@nfsa.org or P.O. Box 62157, Littleton, CO. 80162. Tel: 720.470.4894.

SOUTHWEST REGION

BRUCE LECAIR
Associate Director of Regional Operations - WEST

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA, ARIZONA

NFSA Arizona Chapter to Host Fleming and Ray

Back in April of this year, during an Area Interest Meeting (AIM) of NFSA members in the area, a petition was signed by the membership to be recognized by the Association's board of directors as an official NFSA chapter. At its June meeting in Long Beach, California, NFSA's board agreed to welcome the newly formed Arizona Chapter. Since that recognition was granted, the chapter has been very busy. A two-day Sprinkler System Plan Review seminar was held in Tucson and a chapter meeting was held in Phoenix at the Phoenix Fire Department Training Center at which long-time SAM member Zurn-Wilkens delivered a presentation on pressure reducing valves and backflow devices. In October, NFSA President Russell Fleming and newly appointed Executive Vice President Shane Ray will be visiting the chapter to report on the association's national initiatives.

Bruce Lecair is NFSA's Associate Director of Regional Operations – West. He can be reached at lecair@nfsa.org or Phone: 951.277.3517, Fax: 951.277.3199.

NORTHWEST REGION

SUZANNE MAYR
Regional Manager

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

NFSA Columbia-Willamette Chapter Sprinklers Veteran's New Home

Working with local home builder Jeff Fish and the national organization Home for Our Troops, NFSA members and Sprinkler Fitters Local 669 donated the design, all components, and the installation for a residential sprinkler system for a new home in Hillsboro, Oregon for retired U.S. Marine Sgt. Josh Sweeney.

Sgt. Sweeney was gravely injured in 2009 on his second deployment in Afghanistan. See details about this amazing hero, his long recovery and his remarkable post-injury accomplishments on the U.S. National Sled Hockey Team at Joshua Sweeney - Homes for Our Troops Inc. We are proud to help make this hero's new home safer!

In other Oregon news, Jim Walker, who has been serving as the interim state fire marshal since March, officially became Oregon's 10th state fire marshal effective August 1. Walker will direct the agency's fire programs, which includes fire investigation, data collection and analysis, safety education and the regulations on fireworks, explosives, propane and non-retail gasoline industries, among other responsibilities.

Walker has served as the chief deputy state fire marshal since 2009. Before joining the Office of State Fire Marshal, Walker was the fire operations director for the Oregon Department of Forestry.

Suzanne Mayr is the NFSA Regional Manager for the Northwest Region. She can be contacted at mayr@nfsa.org or P.O. Box 7328, Tacoma, WA 98417, phone: 253.208.8467.

NFSA's Hugo Elected Vice-Chair of ICC Industry Advisory Committee

The National Fire Sprinkler Association (NFSA) is pleased to announce that its Manager of Codes **Jeff Hugo** has been elected as Vice-Chair of the International Code Council's Industry Advisory Committee (IAC).

The officers and executive committee of the IAC have the responsibility of reporting to the International Code Council's Board of Directors on combined industries positions. One of the key responsibilities of the IAC is selecting committee members for the International Residential Code building and plumbing committees.

News from NFSA's Board of Directors

The National Fire Sprinkler Association's Board of Directors and Councils met in Long Beach, California in June on the historic Queen Mary, now in dry dock in Long Beach, California, where a few announcements were made.

James Golinveaux of Tyco Fire Protection Products/Star was appointed as Chair of the Sprinkler Manufacturers Council. South Central Area Director **John Kauffman** of Kauffman Company was appointed Chair of the Contractors Council, replacing **Kent Mezaros** of Quick Response Fire Protection who is now Vice Chair of the Board. **Terry Victor**, who has been the SimplexGrinnell representative on the Contractors Council, has replaced **Carmine Schiavone** as SimplexGrinnell's representative on the Board of Directors. **Bruce LaRue** of Potter Electric Signal Company was re-elected as SAM Council Chair and remains the Council's representative on the Board of Directors. As Chair of the association's newly formed Future Leadership Committee, **Conor Kauffman**, son of South Central Area Director John Kauffman, was appointed as a non-voting member of the Board of Directors.

Having been formally petitioned, the Board welcomed three new Chapters into the association; Connecticut, North Texas and Arizona. As NFSA President Russell Fleming was quoted as saying during NFSA's Annual Seminar held earlier this year at Atlantis, *"One of the benefits of a strong field program, and one of the best indicators of a healthy association, is a growth in chapters, and that is what we are seeing today."* An edited for print version of Russ' State of the Industry Address, from which he was quoted, can be found in his From the President's Desk column featured in the July/August issue of **SQ** magazine.

IN MEMORIAM

Frank Kinnier, Jr.

Frank was a former NFSA consulting instructor and a good friend of the industry and a personal friend to many at NFSA. He passed away July 18, 2014.

He was preceded in death by his parents, Francis Sr. and Elizabeth Kinnier. He is survived by his loving, devoted wife of 41 years, Andy Kinnier; three children, Francis J. Kinnier III (Bridget), Jeanne M. Kinnier and Colleen E. Schwartz (Austin); five grandchildren, Keira, Jake, Chase, Preston and Michael Francis; two brothers, John Kinnier (Beverly) and Thomas Kinnier (Michael); two sisters, Genevieve Wilsey (Michael) and Mary Nesbitt (Jeff); and numerous nieces and nephews. Frank retired from Chesterfield Fire and EMS, as a Deputy Fire Marshal after 28 years of service and a total of 47 years in the fire service. He served in the U.S. Navy during the Vietnam War.•

NFSA Announces Engineering Department Changes

Following an earlier announcement of Ken Isman's departure from National Fire Sprinkler Association (NFSA) to accept a position at the University of Maryland, NFSA has announced the following staffing changes.

Effective August 20, 2014, **Victoria Valentine, P.E.** has been promoted to the Director of Engineering. In this capacity she will be taking over the management of the engineering department and services. She will be responsible for ensuring that all aspects of NFSA engineering activities are handled, and she will begin delivering the Technical Report at all Board of Directors meetings, replacing Ken in that role. Making the announcement, NFSA President Russell Fleming noted, "Over the years that she has been on staff, Victoria has time and again demonstrated her ability to handle the challenges assigned to her. She is enthusiastic about her new responsibilities, and we are confident that NFSA engineering services will continue to be the gold standard for the industry under her leadership."

Effective July 21, 2014, **Louis Guerrazzi** has accepted the position of Manager of Product Standards. With new responsibilities assigned to Victoria Valentine, Louis will be assuming many of her duties related to the UL/FM/NFSA Standards Review Committee and the international standards work of USTAG/ISO/TC21/SC5. He will also be assuming some of the NFPA technical committee activities that will be redistributed among the engineering staff. "Louis has the right combination of technical, people, and communication skills to continue the tradition of excellence in NFSA engineering services," said Fleming. Adding, *"We are very pleased that he has decided to join our staff."*

Louis is a recent graduate of the Watson School of Engineering and Applied Science at Binghamton University where he received a Bachelor of Science in Electrical Engineering. He will be working out of NFSA headquarters in Patterson, New York where he can be reached by email at Guerrazzi@nfsa.org and by phone at 845.878.4200 ext. 131.

Globe Appoints Three Western US/Canada Regional Sales Managers

Globe Fire Sprinkler Corporation recently announced the appointment of three Regional Sales managers covering the Western United States and Canada. Each position is responsible for managing all aspects of sales, sales promotion, and distributor relations in the Western US and Canada.

Chris Bohon joins Globe with over 23 years of experience in the fire protection industry. His background includes extensive experience in Sales, Marketing, Customer Service, and Distribution Operations. Chris is also active in nonprofit work helping impoverished children through the building of schools, hospitals and basic services. Mr. Bohon is pursuing a Bachelor's degree in Theology from Calvary Chapel Bible College. Chris resides in Southern California with Cyndy, his wife of 25 years. The Bohons have 3 children: daughters Jordyn (U.S. Navy) and Taylor, and son Caden.

Michael Fragione has been active in Fire Protection Contracting since 2007. Michael's background includes experience in Field Management, Sales and Sales Management. In his role as Globe's Northwest Regional Manager, he will be serving clients in U.S. States of Washington, Oregon, Idaho, Alaska, and the Canadian Provinces of British Columbia, Alberta, and Saskatchewan. Mr. Fragione studied at Washington State University. In his spare time, he enjoys riding his Harley, hiking, golfing, and cooking.

Steven Cheroke joins Globe with nearly 20 years' experience in Sales, Sales Engineering, and Engineering Specification serving the Fire Protection and Mechanical construction industry. Mr. Cheroke will be supporting Globe customers in Nevada, Arizona, Utah, and Colorado. Chris holds a Master of Business Administration degree from Arizona State University, and a Bachelor of Arts from Eastern Washington University. Steven resides in Phoenix, Arizona with his wife Cynthia and sons Zachery and Brody.

Viking Corporation Adds Two National Technical Representatives

Viking Corporation announces the hiring of Robert Coonts and Craig Woodson to the role of National Technical Representative. Coonts and Woodson will be responsible for developing and enhancing Viking's relationships with Architects and Engineers, as well as other members of the fire protection industry.

Robert (Bob) Coonts comes to Viking with over 30 years of fire protection experience, including 12 years as owner and manager of a sprinkler contracting company in Denver, Colorado. In addition to his extensive sales, design, and project management experience, Coonts is a member of several industry organizations and has held leadership positions on numerous industry boards and committees. He is NICET III certified in Automatic Fire Sprinklers and is an ICC Certified Fire Inspector I. Coonts currently resides in Denver, Colorado and will be relocating to the Austin, Texas area.

Craig Woodson is transferring to Viking's Technical Services team from Viking SupplyNet, where he has worked since 1990. During his tenure at Viking SupplyNet, Woodson served in a variety of roles including Operations Analyst and National Customer Service Manager. In this capacity, Woodson has gained a broad and deep understanding of the Viking product line and the fire protection industry overall. Woodson is a graduate of Auburn University and lives in Atlanta, Georgia.

Woodson and Coonts join Viking's existing two National Technical Representatives – **Gregg Vlahakis** in the West Region and **Bryan Berkley** in the Northeast. To contact Viking's Technical Services team, please call (877) 384-5464 or email techsvcs@vikingcorp.com.

Globe Announces Organizational Changes

Globe Fire Sprinkler Corporation recently announced two key organizational changes at its Michigan Headquarters.


Ted Archibald

Ted Archibald is joining Globe as its Director of Engineering In this capacity, Ted will be responsible for the day-to-day management of all research engineering activities at Globe, ensuring all engineering projects, initiatives and processes are in line with company objectives.

Ted joins Globe with 21 years leadership experience in fire protection research and development with skills spanning design, modeling, and manufacturing methods. He has worked closely with global approving agencies and text laboratories including Factory Mutual (FM), Underwriters Laboratories (UL), Loss Prevention Council (LPC) and Verband Der Schadenversicherer (VdS).


Brian Hoenig

Brian Hoenig has been appointed Senior Engineering Fellow for Globe. In this research intensive role, Brian will contribute to the new product development process by lending his years of creativity, experience, and industry knowledge to guide and shape ongoing and future development projects. Brian will also continue his active participation in the development of Fire Protection Codes and Standards.

Announcements from Globe Fire Sprinkler Corporation

Globe Fire Sprinkler Corporation recently announced the addition of GL Series 11.2K Extended Coverage Ordinary Hazard (ECOH) sprinklers to its Extended Coverage product line.

Compared to maximum coverage area of 130 ft² (12,1m²) provided by standard coverage sprinklers, Globe GL ECOH sprinklers protect areas up to 400 ft² (37,2m²). Use of ECOH sprinklers can significantly lower the cost of a sprinkler system by reducing the number of branch lines, sprinklers, and installation hours.

Combining an aesthetically appealing compact design with its superior performance characteristics, the Globe GL ECOH is the ideal choice for Ordinary Hazard applications such as parking garages, retail spaces, restaurants, libraries, and light manufacturing in accordance with NFPA. The GL ECOH is available in Upright, Pendent, and ¾" adjustable Recessed Pendent configurations with standard finishes of Natural Bronze, Chrome, and White.

The GL ECOH features a nominal discharge coefficient of 11.2K (160 metric) and is cULus Listed for Quick Response with spacings of 12' x 12' (3,7m x 3,7m) and 14' x 14' (4,3m x 4,3m), and Standard Response for spacings of 16' x 16' (4,9m x 4,9m), 18' x 18' (5,5m x 5,5m), and 20' x 20' (6,1m x 6,1m). Quick Response activation temperatures are 155°F (68°C) and 200°F (93°C); Standard Response activation temperatures are 155°F (68°C), 175°F (79°C), 200°F (93°C), and 286°F (141°C).

Globe also recently published their new website, making it easier to navigate and explore the company's wide range of products. The site itself went live on June 9, 2014, and it is continuing to be modified to make the experience as user-friendly as possible.

The website features a vertical sidebar that allows the user to quickly narrow down their search to the model that they're looking for. Each model has a data sheet, which can be accessed without leaving the page. In addition, the website includes convenient links to major sprinkler industry websites, its Facebook page, and several design and engineering resources, including a full CAD library.

Metraflex Fireloop® Seismic Expansion Joint Achieves FM Approval

The Fireloop® quake-ready expansion loop from Metraflex is now FM Approved. Designed to compensate for pipe movements of ±4-inches, ±8-inches and ±24-inches, the Fireloop® quake-ready expansion joint meets all NFPA 13 guidelines for seismic expansion joints in fire sprinkler systems. It is also UL listed.

An extremely flexible joint, the Fireloop® quake-ready expansion joint is quick to install, requiring only one hanger and two connections. It has low pressure drop, significantly lower than any other seismic joints for fire sprinkler systems, and is extremely thin and compact, allowing it to fit snugly into tight pipe runs, minimizing impact on architectural and engineering designs.

The Fireloop® expansion joint is capable of movement in all directions and should be installed anywhere building or pipe movement is expected, including seismic, building movement and thermal growth.

Already installed in tens of thousands of fire sprinkler systems around the world, the Fireloop® quake-ready expansion joint is significantly more compact than grooved pipe loop arrangements and reduces installation costs, saving time and money.

More information on the Fireloop® quake-ready expansion joint, including CAD files, literature, pressure drop charts, case histories and more are available at Metrafire.com, or contact The Metraflex Company, 2323 W. Hubbard St., Chicago, IL 60612; Phone: 1-855-FIRELUP, 1-855-347-3587; Fax: 312/738-0415.

Viking SupplyNet Expands Distribution and Fabrication Network

Viking SupplyNet announces the opening of two new U.S. locations serving the New England and North Texas/Oklahoma markets. These two new facilities, which will open in early August, are strategically located in their respective metropolitan areas and will further enhance the company's overall service capabilities for fire sprinkler contractors. Viking SupplyNet now has 30 locations in North America and 58 worldwide.

Located near the DFW International Airport, the new Dallas/Fort Worth area location will include a full-service pipe fabrication center, providing threading, grooving, welding, and end of pipe preparation for black or galvanized material. The new facility will also stock a full complement of fire sprinkler system components, enabling contractors to conveniently package their complete material needs through a single point of contact. Viking SupplyNet now offers pipe fabrication in 12 of its 27 U.S. locations.

The new Boston distribution facility, located in Mansfield, Massachusetts near the intersection of I-95 and I-495, will enable Viking SupplyNet to offer fast, dependable, and convenient service to the fire sprinkler market in Boston, Providence, and New England overall. As with all Viking SupplyNet locations, these new facilities will provide contractors with the broadest selection of quality fire protection products and services, operational excellence, and outstanding customer support.

A complete list of Viking SupplyNet facilities can be found at www.vikinggroupinc.com/en/worldwide. Contact information for the new locations is as follows:

Viking SupplyNet – Dallas/Fort Worth
1011 N. 28th Avenue, Suite 200
DFW Airport, TX 75063
Phone: (972) 466-0933
Fax: (972) 466-0853

Viking SupplyNet – Boston
60 Maple Street
Mansfield, MA 02048
Phone: (508) 594-1800
Fax: (269) 818-1620

Tyco Expands Fire Protection Portfolio with Three New Valves

Tyco Fire Protection Products (Tyco) is introducing three valves for use in commercial and industrial fire protection systems. These valves, the latest addition to an extensive line of fire system valves from Tyco, are FM approved and UL Listed,

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providing contractors with the confidence they've come to expect from Tyco.

PRE-TRIMMED DV-5 DELUGE VALVE

Available in a pre-trimmed version for the first time, the Pre-trimmed DV-5 Deluge Valve provides numerous cost savings in shipping, assembly and testing. The fully-tested valve is designed for vertical and horizontal installations and external resetting. The valve can be used for deluge, pre-action and special types of systems, such as foam-water, and single- and double-interlock systems.

RESILIENT SEATED GATE VALVES

Available in the Americas for the first time, Tyco Resilient Seated Gate valves are designed for use in a fire protection system for on/off operation. The Tyco OS&Y and Non-Rising Stem Post Indicator Gate Valves offer several key benefits compared to other alternative approaches:

- Lightweight ductile iron body weighs less than conventional cast iron valves, allowing for easier handling on site and reduced shipping costs;
- Fully encapsulated EPDM ductile iron wedge achieves a no-leak fitting;
- Stem seals are designed with five separate O-rings to provide a lifetime seal; and
- Available end connections include flange-by-flange, flange-by-groove and groove-by-groove.

To learn more about the Pre-trimmed DV-5 Deluge Valve and OS&Y and Non-Rising Stem Post Indicator Gate Valves, go to www.Tyco-Fire.com.

New Recessed Flush Dry Sprinkler Protects Light and Ordinary Hazard Occupancies

Viking Corporation announces the availability of its new Model VK482 "recessed flush" dry sprinkler. This new quick response pendent sprinkler, which has a 5.6 (81) K factor, is cULus Listed for both Light and Ordinary Hazard occupancies. The VK482 provides an aesthetically pleasing alternative to a concealed dry sprinkler for protecting unheated areas in many types of structures including nursing homes, restaurants, schools, and freezers.

An innovative feature of the new VK482 is that the sprinkler's fusible element can be recessed up to ½ inch (12 mm) above the ceiling. This is an important advantage for many applications, including insulated freezers, where the possibility of a forklift damaging the sprinkler is a potential concern.

The new sprinkler is available with an optional insulating boot assembly, which can be used to satisfy NFPA 13 code requirements for sealing around the barrel of a sprinkler when protecting an insulated freezer with a wet pipe system. Viking has performed extensive testing to verify that the new VK482, when installed in this manner, still meets the requirements of a Quick Response sprinkler. The key to achieving the required response time is that the sprinkler's fusible element is exposed within the protected area, unlike with a flat plate concealed dry sprinkler.

The new VK482 recessed flush dry sprinkler is available in 165°F (74°C) and 205°F (96°C) temperature ratings. The 205°F (96°C) temperature is important for accommodating defrost cycles that are part of the regular maintenance schedule for freezers. The VK482 also includes an innovative escutcheon that hangs from extrusions on flush sprinkler's body helping to ensure the escutcheon does not fall off due to vibrations, such as from a forklift or from someone walking above the ceiling of the protected structure.

Tyco SimplexGrinnell Receives Innovator of the Year Award

Tyco SimplexGrinnell, a Tyco business, has received the Internet of Things (IoT) Innovator of the Year Award for 2014 from Axeda Corporation. The award recognizes the company for excellence in leveraging advanced Internet-connected technology to deliver smart eService fire alarm solutions that improve service delivery and provide significant value to customers.

The IoT Awards are the premier recognition program offered by Axeda, the leading cloud-based service and software for connecting, building and managing Internet of Things solutions. The Internet of Things is a cloud-based software platform that allows physical devices, such as fire alarm equipment in the case of Tyco SimplexGrinnell, to be accessed through the Internet. These connected products contain embedded technology that enables data to be turned into valuable information to optimize business processes and provide a higher level of customer service.

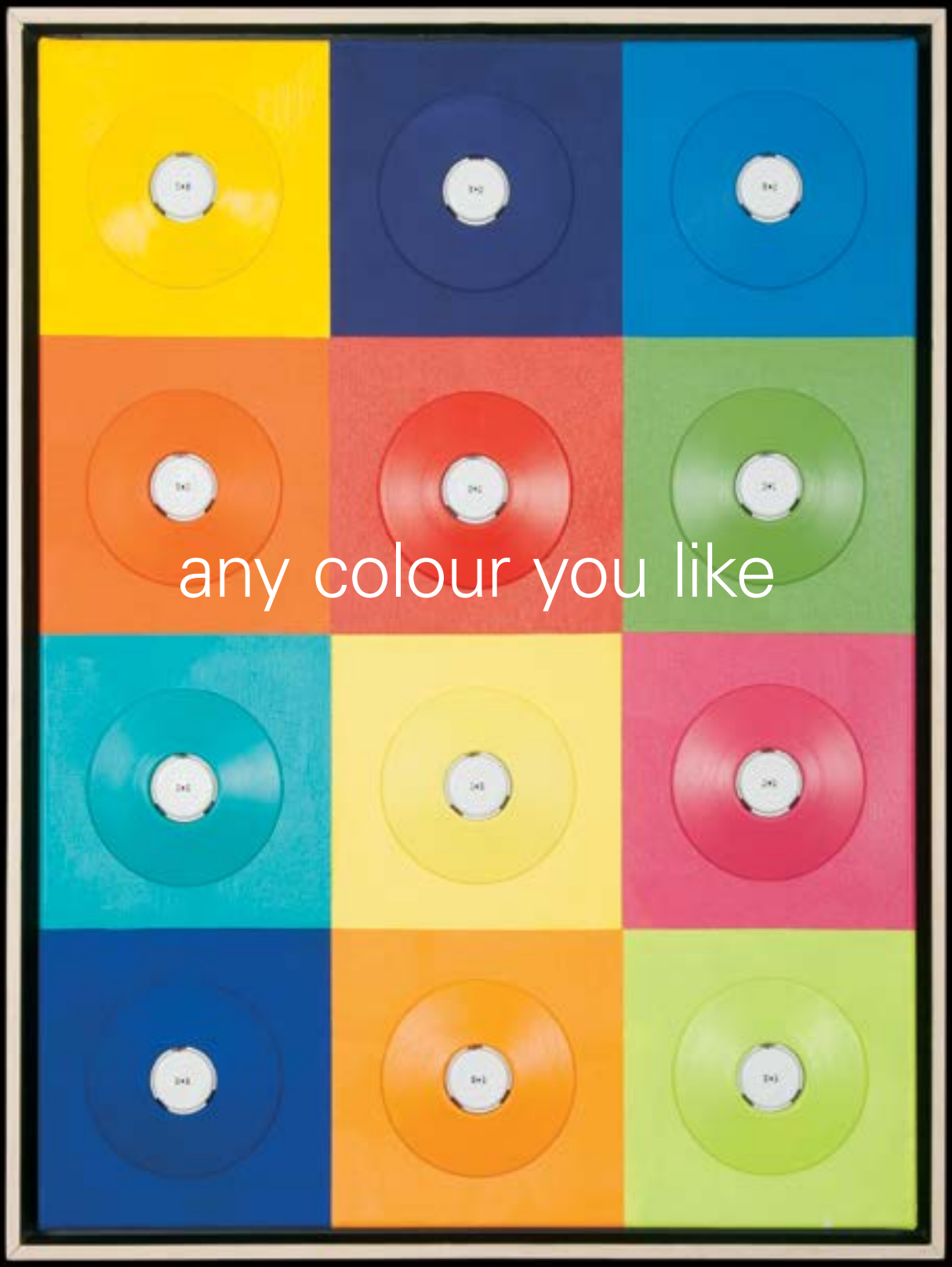
Tyco SimplexGrinnell was presented the award at the 2014 Connexion Conference – one of 12 Axeda customers and partners selected for excellence in innovative solution development, best practices in implementation and deployment, and ecosystem integration.

Potter Electric Sponsors Charity for Child Burn Survivors

Potter Electric Signal Company, LLC of St. Louis, Missouri, is once again participating in the Missouri Children's Burn Camp. The event takes place at Camp Sabra in Rocky Mount, Missouri. For over ten years, Potter has been a stout supporter and believer in the Missouri Children's Burn Camp, and looks forward to working with Burns Recovered Support Group, Incorporated, who has run the event every year dating back to its inauguration in 1997.

With the assistance of St. John's Mercy Medical Center, Burns Recovered Support Group, Inc. was formed in 1983 by a group of burn survivors. Their mission was and still is survivor support, along with aiding medical facilities and providing burn care education and burn prevention. The Burn Camps hosts between 75 and 85 children every year with that amount growing annually. Organizers of the 18th Annual Missouri Children's Burn Camp raised approximately $150,000 for the child burn survivor's community.

Due to the support of generous sponsors, all participants enjoy a week full of fun and support at no cost. The Burn Camp is intended for child burn survivors between the ages of 6-17 with severe burns. To donate to Missouri Children's Burn Camp, visit http://brsg.org/wordpress/donate/



Introducing the RAVEN Studio sprinkler; a uniquely discreet solution by Tyco Fire Protection Products. The revolutionary paint-in-place, removable escutcheon allows for superior fire protection without compromising building design aesthetics. The straight thread adapter allows for precise, final adjustment by hand for a perfect, flush fit. Available Fall 2014. Call 800-558-5236 to contact your local Tyco representative to request additional product information.

tyco Fire Protection Products

Safer. Smarter. Tyco.™

SOLID products installed by **SOLID** contractors

Fire sprinkler contractors and their fitters take pride in doing it right the first time, every time. That's why we make the most dependable flow, tamper, and pressure devices on the market. Potter values your commitment to protecting lives and property and we continue to match that commitment with products you can trust.

www.PotterSignal.com

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The Symbol of Protection