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Campus Fire Safety e-NewZone Monthly Newsletter ... Holiday 2014, Volume 4, Issue 11

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**Happy Holidays and Best Wishes for a Safe and Healthy New Year**  
*From the Board of Directors and Staff of The Center for Campus Fire Safety*



WE'RE GETTING READY FOR FORUM 2015 ...Join us in Niagara Falls, NY, October 26 - 29. More information on the 2015 Forum and our some of our speakers will be published in our January 2015 newsletter and on our website. Stay Tuned!

## Campus Fire Forum 2014 Orlando was a big success.

**A special thank you to all that attended and our Forum event sponsors for their help with this event.** TYCO/SIMPLEXGRINNELL, KIDDE, SIEMENS, HUGHES ASSOCIATES INC., AFAA, NFSA, ICC, NFPA, FIRE MARSHAL'S SERVICES, CVS HEALTH, NEMA, PREVENT.ZONE by Alive Tek, KELTRON, CSHEMA, & THE UNIVERSITY OF NEW HAVEN FIRE SCIENCE CLUB.

## THE CENTER WELCOMES TWO NEW SPONSORS IN 2015 .... CVS Health and Prevent-Zone by AliveTek.

More info on our new sponsors to follow in 2015.



**CVS Health:** "CVS Health gives back to the communities where we do business as part of our purpose of helping people on their path to better health. Health and safety go hand in hand so we are very pleased to support Campus for Fire Safety"



**Prevent-Zone by AliveTek:** AliveTek consists of eLearning specialists who are dedicated to building and supporting online education that engages today's multi-dimensional learners. Through personalized consulting and strategic planning, AliveTek will help you to design, build and grow your eLearning program.

## FROM THE PRESIDENT

**For it is together that we remain steadfast in our commitment to assure a fire safe campus community in so that "Everyone Graduates."**

It seems like only yesterday we were at Campus Fire Forum 2014, sharing knowledge, experience, wisdom and laughs, all while enjoying the sunshine and warmth of Florida. Now seemingly overnight, we find ourselves thrust squarely into the middle of the Holiday Season. And with the holidays upon us and the year drawing to a close, I want to take a moment to say how deeply appreciative I am of everyone connected with *The Center* and all that they have done to support our mission - globally as one organization and locally at their own workplace... **MORE**



## OFF-CAMPUS, by Tim Knisely

PREPARING FOR A NEW YEAR

In November I had the opportunity to attend The Center's annual Campus Fire Forum, held this year in Orlando, FL. This conference is always a great time to network with my peers and colleagues from across the country, see old friends and meet new ones. Personally, this conference gives me a chance to refocus my efforts of the task at hand that I've spent all year working on. Each year I head home rejuvenated with new ideas and encouraged that all of our efforts really do make a difference.

This past year, as in many years all of the campus related fire deaths are occurring in the off-campus housing market. This does not mean that we can relax our efforts in the on-campus setting. Instead, we may need to find more reasons to provide safety outreach to these students living on-campus because once they leave the chances of having a pre-incident contact is minimal... **MORE**



## THE INSPECTOR, by Phil Chandler

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December 7<sup>th</sup>, 1941—a dark and somber day in our history—a day that must not pass unnoticed. As I pound out my final thoughts for the year, I too cannot be but moved by the obvious lessons this infamous event offers us all, the campus fire community no exception. Bad things come our way without warning and often as not, when we are least prepared. As I never tire of repeating, fire does not discriminate! ... **MORE**

Call for Speakers!

LOOKING FOR 2015 SPEAKERS!

If you are interested in speaking at our Niagara Falls Forum, and/or a webinar, simply let us know.

**Webinar Presenters ... Please click and complete your info.**

**Forum Speakers ... Please click and complete your info.**

(If approved, Forum speakers will receive free registration to the Forum)

If you have questions, please contact [SupportTeam@campusfiresafety.org](mailto:SupportTeam@campusfiresafety.org)



## TRAINING OPPS



**Fire Smart Campus Training Opportunities ...** The Center instructor(s) will come to your campus or town. Price varies depending upon location. **Contact us** for info.



**Crowd Manager Training ...** 2 hour online course @ \$19.95. Presented by ICC, NAFSM & CCFS, this course provides valid, credible training to those charged with crowd management at facilities including higher education. This meshes with The Center's mission of providing resources to our community. **MORE**



FREE EGRESS BY OCCUPANTS IS A MUST

By Ron Coté, P.E., Principal Life Safety Engineer

The need to provide occupant and property security often competes with the need for assuring free egress by occupants of all types of buildings found on campus. Door openings in exterior walls allow for ingress and egress but introduce security challenges. Building operators work to provide the systems and procedures necessary for limiting admission to those who legitimately belong, and to do so without unreasonably inconveniencing those persons. Those who do not belong need to be denied entrance, but the task is complicated by the inability to recognize such persons without imposing time-consuming screening on all persons attempting entry. Systems that control ingress must not adversely affect the safe egress of building occupants as required by NFPA 101®, Life Safety Code®. ... MORE



SECTION 913, FIRE PUMPS

913.1 General. Where provided, fire pumps shall be installed in accordance with this section and NFPA 20.

This section contains specific installation requirements for fire pumps supplying water to fire protection systems. Inspection, testing and maintenance requirements comply with NFPA 20 unless noted otherwise. ... MORE



MEMBER NEWS, MAJOR FIRE LOSS, FIRE INCIDENT NEWS & MASS

NOTIFICATION INFO

NEWS

- Fire Causes \$300000 Damage To SDSU Maintenance Building - 12/10/2014
- UPDATE:40 students displaced by fire in Athens, Ohio are getting assistance - 12/3/14
- Rave Guardian Selected by The University of North Carolina to Protect Students

Several more for this month ++ hundreds of related stories ++ ability to search through years of our news archives.

FIRE NEWS | BREAKING NEWS | MASS NOTIFICATION SYSTEMS IN THE NEWS | ARCHIVES

BREAKING NEWS - Click here to Sign up!

The Center for Campus Fire Safety provides initial notification about fire fatalities that occur on a university or college campus, or that occurred within the town where the campus is located. This data is collected from news sources from around the country, and many times - around the world, and then emailed to you.

MEMBER NEWS AND JOB OPPS

Job Opps:

Fire Protection Specialist, University of Memphis ... MORE

Submit Member News or Job Opps

Member News:

Interesting Stories this month .... Provided by The Center's Member, Tim O'Dowd, FEMA

- Today (12/17) in fire history: an early morning fire in a dormitory resulted in the deaths of ten female students @ Providence College
- Matthew Heisler, 21, a student at the University of North Dakota died 16th March 2014 - his heart was transplanted into Tom Meeks



Group A Code Change Cycle Has Begun ... Work is well underway on ICC's 2015/2016/2017 Code Development Cycle that begins with the Group A International Codes. This will be the first full cycle that utilizes cdpACCESS, ICC's new cloud-based system that allows for online collaboration, code change and public comment submittals, submission of floor modifications, and online voting. A change to section 3.3.5.6 of Code Council Policy 28 also is new to this cycle that addresses cost impacts of code change proposals. Click here for details on the 2015/2016/2017 cycle: <http://www.iccsafe.org/cs/codes/Pages/2015-17cycle.aspx>

New - Website Snippet: Each month we'll point you to a special section of our new website and explain it!

HINTS TO LOGIN INTO THE MEMBER WEBSITE:

Email Address:   
Password:   
  Remember Login

Our website was updated in August of 2014. Therefore if you have not logged into the members only section everything is different - including your login info.

User Name: By default, your user name is your email address, unless you established a different user name. Your email should still work if you forget your user name.

Password: If you forget your password click the "reset password link" to reset your password, and look to receive an email to reset. The Center is not able to see passwords.

## Tips and Troubleshooting.

If you reset your password you MUST login within a specified time of less than 24 hours. If not (for security purposes) your reset password will not work.

If you are a member and your membership expired you may not be able to login to pay dues. Typically you will receive a notice 4 times before your dues expire (90-60-30 and 5 days prior to expiration). If you wish to continue membership and cannot login, call us.

**If for some other reason you are not able to log in or you tried several times and are "locked out", simply call us for help.**

## Why Visit the Members Only area?

- You'll be able to network with other members, follow and friend them. Similar to a professional version of FaceBook.
- You'll be able to post discussion topics in our online Town Hall Forum.
- You'll also be able to post updates for other members to see, including job opportunities and more.

If you are not a member, consider joining. Regular membership (for fire safety professionals at universities and fire departments) is \$40. annually and it provides additional access to free webinars, discounted training, free job postings and much more. Membership for industry affiliates is \$300. annually. Well worth the investment!



## FIRE FATALITY STATISTICS

The Center for Campus Fire Safety provides basic information about fire fatalities that occurred on a university or college campus, or that occurred within the town where the campus is located.  
**Statistics**

## ABOUT THE CENTER FOR CAMPUS FIRE SAFETY



The Center is the Voice of over 4000 colleges and universities. As a nationwide non-profit, membership based, organization devoted to reducing the loss of life from fire at our nation's campuses, we offer an abundance of free resources to help fire and life safety officials working on college campuses and fire departments with responsibility for a college campus/university.

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- Emergency Response Plan Development
- Mass Notification Systems Design
- Code Compliance & Fire Alarm System Audits
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Our newsletter is distributed to 17,000 on our mailing list, and then re-distributed through several of our non-profit partners.

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## FROM THE PRESIDENT

By Paul D. Martin

December 2014

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It seems like only yesterday we were at Campus Fire Forum 2014, sharing knowledge, experience, wisdom and laughs, all while enjoying the sunshine and warmth of Florida. Now seemingly overnight, we find ourselves thrust squarely into the middle of the Holiday Season. And with the holidays upon us and the year drawing to a close, I want to take a moment to say how deeply appreciative I am of everyone connected with *The Center* and all that they have done to support our mission - globally as one organization and locally at their own workplace.

Of course *The Center* would never be able to accomplish all that we do without the generous assistance of our friends in the corporate world. Through their continued sponsorship throughout multiple years, these great companies not only provide our organization the necessary financial foundation upon which to operate - but more importantly they express a belief in our core mission, while simultaneously demonstrating a sincere commitment to advance campus fire safety throughout the country. For it is together that we remain steadfast in our commitment to

assure a fire safe campus community in so that “Everyone Graduates.”

Accordingly, please join me in thanking our annual sponsors: *Tyco/SimplexGrinnell; Siemens; Kidde; National Fire Protection Association; Underwriters Laboratory; Lexington Insurance; National Electrical Manufacturers Association; Fire Equipment Manufacturers’ Association; Honeywell Fire Systems; BullEx; International Code Council; Keltron; Chubb Insurance; CVS Health; and AliveTek.*



## FROM THE PRESIDENT

By Paul D. Martin

December 2014

We have experienced a very busy and successful year here at *The Center* and are poised to do even more in 2015 - my final year as president. And although it may be my last year at the helm, I can assure you it won't be a retirement cruise (just yet). I will continue to aggressively champion for our organization so that it remains an organization of opportunity and excellence. Additionally, I will vigorously pursue additional means for us to support our members through education and information sharing. I make these commitments because I am immensely proud of

what our organization has become, the work we are doing and what we stand for. Similarly, I am honored to be associated with the hundreds of talented and dedicated people that comprise *The Center for Campus Fire Safety*. But most importantly, I hope you never forget that it is you, the members, which make this organization so great. Remember, you are part of an enterprise that furthers and betters the lives of many.

So as we immerse ourselves in the holiday season, I urge you to not forget to take time to pause and reflect

upon what matters to you most. It's not about decorating the house, getting an awesome gift, eating a tasty meal or going to a great party. What matters most is the love you receive from those you care about. It can be the kiss of a loved one, a hug from a little one or a call you receive from a long distance friend. Cherish these priceless gifts and make the effort to extend their reach by showing someone that you care. Therefore, during this time of hustle and bustle don't forget to ask yourself what matters most to you - the answer will likely bring you great joy.



## FROM THE PRESIDENT

By Paul D. Martin

December 2014

*Happy Holidays.*

*Paul*

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### Paul Martin, President

Paul D. Martin is Deputy State Fire Administrator for the New York State Office of Fire Prevention and Control where he served as a principle architect of New York State's nationally acclaimed Campus Fire Safety Program.

Under Paul's leadership, the staff of the Inspections and Investigations Branch is responsible for: fire and life safety inspections in a very diverse collection of facilities throughout New York State, including all colleges and universities; performing fire investigations statewide of fatal, large loss or other significant fires; providing fire safety education and information dissemination intended to elevate the public's understanding of the danger of fire; and enforcement of the laws and regulations of the state regarding fire safety, including the world's first standard for reduce ignition propensity cigarettes.

Paul is active in the National Association of State Fire Marshals, where he serves as Vice-Chair of their Model Codes Committee and works on issues associated with fire and life safety for special needs occupancies.

Additionally, he serves as co-chair of Prevention, Advocacy, Resource and Data Exchange (PARADE), a program of the United States Fire Administration designed to foster the exchange of fire-related prevention/ protection information and resources among Federal, State, and local levels of government.

He serves on the International Building Code - Means of Egress Committee for the International Code Council, where he is active in the development of the Codes promulgated under the auspices of the ICC. Additionally he is a principle member of the NFPA technical committee currently drafting a new standard on Fire Prevention Unit Organization and Deployment.

Paul holds an associate degree in fire science, a bachelor of science in public administration and has an extensive portfolio of professional development education. During his fire

service career spanning more than thirty years, Paul has served in multiple line and administration positions and has received several awards of valor, including the 2000 Firehouse Magazine® national grand prize for heroism.



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## OFF-CAMPUS

By Tim Knisely

December 2014

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### Preparing for a New Year:

In November I had the opportunity to attend The Center's annual Campus Fire Forum, held this year in Orlando, FL. This conference is always a great time to network with my peers and colleagues from across the country, see old friends and meet new ones. Personally, this conference gives me a chance to refocus my efforts of the task at hand that I've spent all year working on. Each year I head home rejuvenated with new ideas and encouraged that all of our efforts really do make a difference.

This past year, as in many years all of the campus related fire deaths are occurring in the off-campus housing market. This does not mean that we can relax our efforts in the on-campus setting. Instead, we may need to find more reasons to provide safety outreach to these students living on-campus because once they leave the chances of

having a pre-incident contact is minimal.

The off-campus environment is very and eerily similar from town to town and city to city. This environment or culture we are now seeing was brought to the forefront most recently in Boston following two significant fires. One of these fires in 2012 significantly injured a sophomore student, while a second fire in 2013 occurred across the street and claimed the life of a 22-year old senior. The Boston Globe recognized this as an emerging issue and conducted a 9-month investigation into the off-campus problem, where thousands of students from Boston's many campuses are living.

Jenn Abelson, an Investigative Reporter for the Boston Globe's Spotlight Team opened this year's Forum as our Keynote Speaker sharing her first-hand account of the housing issues that face the students, their families and the

community in Boston.

The [video](#) produced in this investigation brings the story to life with real-life conditions that the reporters observed as they met with students and accompanied the city's inspection staff. Many in attendance at The Fire Forum already knew, while others quickly realized that the story is quite similar to theirs - just the name of the city changes.

Following the Keynote Presentation, many of the attendees participated in the Off-Campus Panel Discussion where the audience had a chance to ask questions of the panel and participate in the answer sessions. The panel consisted of educators, inspectors, representatives from both the alarm and sprinkler industry and the keynote speaker. Very quickly, another hour had gone by and after much discussion it was clear that the issues in the Off-Campus neighborhoods are not going to be easily solved. It will take much more



## OFF-CAMPUS

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December 2014

discussion, grass roots efforts and a lot of luck to improve the safety in this type of housing.

Throughout the rest of the week in Orlando, I had a chance to speak to many of The Center's new members that were in attendance as well as spend some time with the many industry members and vendors that were participating in the educational sessions or the vendor exhibit. Two of particular interest to the Off-Campus readers are JUSTICE and Every Bear Goes Home, both non-profit organizations dedicated to saving students. [JUSTICE](#) was formed in memory of four students that were killed in a fire in Paris in 2011, while studying abroad and provides educational information and safety resources to students in these programs. [Every Bear Goes Home](#) is an educational program at UC Berkeley in California and provides all-hazards educational programs to students. The Center's webpage also highlights a

number of non-profit partners that participate with CCFS throughout the year, please click [HERE](#) for more information.

To keep the Off-Campus issues fresh in our minds as well as keeping the discussions going, I encourage each of you to join The Center's Off-Campus Fire and Life Safety Alliance. The Alliance was started last year following a suggestion from one of our valued members. In the past year, The Alliance has been a member's only site and featured discussion from breaking news and inspection discoveries or trends. Now, the site is public and open to anyone with an interest in campus fire safety, especially interests in the Off-Campus arena.

To join, click [HERE](#) to send a request.

Have a Great and Safe Holiday Season and I'll see you all next year!

*Tim*

### Tim Knisely

Tim Knisely is on the Board of Directors for The Center and the Senior Fire Inspector for the Centre Region Code Administration in State College, PA.

In this position he manages the Existing Structures Division that administers the fire and property maintenance code in all existing commercial and residential rental properties, and coordinates the life safety education for the community including off-campus and Greek housing.

Tim has been active with The Center for Campus Fire Safety since its inception and served as treasurer from 2007 to 2010.

He is a frequent presenter at Campus Fire Forum, an instructor for the Fire-Wise Campus program and served as project manager for Campus Fire Data.



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## THE INSPECTOR

By Phil Chandler

December 2014

December 7<sup>th</sup>, 1941—a dark and somber day in our history—a day that must not pass unnoticed. As I pound out my final thoughts for the year, I too cannot be but moved by the obvious lessons this infamous event offers us all, the campus fire community no exception. Bad things come our way without warning and often as not, when we are least prepared. As I never tire of repeating, fire does not discriminate!

Just as the dastardly and unprovoked attack on Pearl Harbor demonstrated, there are those out there that do not play by the rules we all venerate. There are groups and individuals willing to inflict pain and suffering on the unsuspecting at any time and place. It really doesn't matter if the harm is perpetrated in service of some

wayward ideology or a result of mental depravity; the destructive outcome is the same.

The treacherous work of an arsonist on the campus can be our Pearl Harbor. We too can be caught off guard and unprepared. Yes, all fires come with a level of unpredictability, but in general we recognize certain general cause and effect relationships. We understand that commercial kitchens present an above average risk of fire during cooking operations and we protect ourselves accordingly. Likewise, the storage and handling of flammable liquids and gasses present understandable risks that can be routinely mitigated. And of course, hopefully, we recognize that student housing

represents a perpetual accident waiting to happen and appropriately attend to this hazard. But how do we protect ourselves from a sick mind?



One might argue that close adherence to our building and fires codes will assure that we are ready for all contingencies. That means all fire resistive construction is uncompromised, all life safety systems are reliably inspected, tested and maintained and fire safety and evacuation plans are in place and routinely practiced. Of course, this is always the goal of the fire inspector, but unfortunately in the



## THE INSPECTOR

By Phil Chandler

December 2014

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real world, difficult to achieve.

Absent unlimited resources, most property managers try to protect their assets based on the most likely perceived threats, not all possible perils. Unfortunately, few algorithms include the possibility of an itinerant wandering in from the street, stuffing a latrine with student newspapers, dousing it with charcoal lighter fluid and igniting it with a cherry bomb. You can't make this stuff up! What a world we live in! Yet every year or so, on a campus near me, such events, or crazier ones occur.

As I see it, the job of the fire inspector is to paint a picture of every building on a really bad day, the day after a fire. Yet despite our heartfelt efforts and our dire warnings and pronouncements, we

are often dismissed as prophets of doom and gloom. Especially so when we talk of madmen on the loose with matches in hand. Fire safety professionals, however, know the reality. We review the statistics and know that arson is far more prevalent on the campus than many in academia care to acknowledge. Yet until such time as an incendiary fire occurs in a campus building, our opinions remain—academic.

After a campus fire, attitudes change, for a while. When the administration has to cancel and reschedule classes because of a small “nuisance fire,” new thinking emerges. When carpet needs to be replaced, walls repainted, and mold abated, questions are asked: “What could we have done differently? How could we have

avoided this expense and disruption?”

The fire inspector, resisting the urge to shout out “I told you so,” will again reiterate the call for close adherence to the codes before us. We will patiently remind everyone that our codes were “written with a quill dipped in blood.” That means if it's in there, it has already happened, many times, and will likely happen again.

We also should take the opportunity to reintroduce the common wisdom of the street: “Pay me now or pay me later.” Spending the time and money needed to keep all of our opening protectives working properly will most certainly reduce the cleanup expense of a fire, to say nothing of possibly saving a life. It's amazing how much damage even a fire in a



## THE INSPECTOR

By Phil Chandler

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waste basket can produce. Of course these recommendations apply to all fire scenarios, not just those intentionally set. Yet it's these malicious occurrences that seem to get the most attention.



As random as acts of arson are, we can still protect ourselves to a large degree. For starters, we need to stop calling small unexplained fires “nuisance fires,” as that expression serves to convince us that small fires are inevitable, unavoidable and of little consequence. Nothing

can be farther from the truth. We must treat every suspicious fire in a structure as a serious crime—in New York State a felony. No more is “boys being boys” an acceptable explanation for a variety of offenses, arson among them. Let's not forget the lesson of Seton Hall!

A burnt roll of bathroom tissue here, a singed poster there, are often precursors to a larger event yet to happen. Let us be ever vigilant for the telltale signs of an unstable individual looking for an even bigger thrill. In the aftermath of the most recent incendiary fires I have been involved with, interviews of other building occupants, especially cleaners and maintenance staff, have yielded just such a pattern of small fires leading up the big event. These events

were reported to the campus police with no follow-up on their part. Our police and public safety officers need arson awareness training as do all staff members regularly assigned to our buildings.

And last, but not least, a pet peeve of mine: unsecured portions of buildings that are unoccupied along with unsecured areas in buildings that most occupants have no legitimate reason for entering. While arson is not usually labeled a crime of opportunity in the same way as larceny, I believe that we should reduce the opportunities available to a would-be arsonist. Why provide ready targets off the beat and path? Why put temptation before those lacking in rational thought and self-control?



# THE INSPECTOR

By Phil Chandler

December 2014

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Bottom line: Expect the unexpected. Be prepared. These are the lessons of December 7<sup>th</sup>.

To all dear readers, best wishes for the upcoming holidays and may we all enjoy a new year of health, prosperity and success in our noble life-affirming profession.

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Philip Chandler is a long time firefighter and a fulltime government fire marshal working extensively in the college environment - from large public university centers to small private colleges.

His primary responsibilities include code enforcement and education. Phil welcomes your comments, thoughts and opinions (whether in agreement or opposition) to his viewpoints. He may be reached at:  
<mailto:theinspector@campusfiresafety.org>

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Note: The viewpoints expressed in The Inspector are those of the author alone. They are offered to initiate thought and debate, however, they do not necessarily represent the views or opinions of The Center for Campus Fire Safety, its officers, directors or its editorial staff.



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## CAMPUS FIRE SAFETY CODE TALK

Campus Fire Safety e-NewZone

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### FREE EGRESS BY OCCUPANTS IS A MUST

By Ron Coté, P.E., Principal Life Safety Engineer

The need to provide occupant and property security often competes with the need for assuring free egress by occupants of all types of buildings found on campus.

Door openings in exterior walls allow for ingress and egress but introduce security challenges. Building operators work to provide the systems and procedures necessary for limiting admission to those who legitimately belong, and to do so without unreasonably inconveniencing those persons. Those who do not belong need to be denied entrance, but the task is complicated by the inability to recognize such persons without imposing time-consuming screening on all persons attempting entry. Systems that control ingress must not adversely affect the safe egress of building occupants as required by NFPA 101®, *Life Safety Code*®.

The 2015 edition of NFPA 101 ([www.nfpa.org/101](http://www.nfpa.org/101)), released just prior to the publication of this column, includes new provisions to help assure safe occupant egress where security access turnstiles are used. The turnstiles are positioned in a building lobby, for example, to prevent unauthorized access to the occupied areas of the floor. Persons with proper credentials, typically in the form of electronic cards, signal the turnstile panels to retract, allowing passage. Additional required features work together to assure that the turnstile openings can be reliably used for egress travel without occupants having to provide credentials.

Exhibit 1 depicts security access turnstiles installed across ingress and egress paths. Note the small green lights on the stanchions for the two right lanes indicating that the lanes will permit egress under normal day-to-day use as an occupant from within the secure area of the floor approaches. In such mode, the glass barrier is permitted to close off the opening as soon as any occupant has moved to the non-secure building area (i.e., lobby) outside the turnstile barricade. Similarly, the red light associated with the left lane indicates that the lane is in operation for ingress as is further emphasized by the presence of the floor mat for cleaning shoe soles as occupants enter the building. In such mode, the glass barrier is permitted to close off the opening as soon as any occupant has moved to the secure building area inside the turnstile barricade. Under each of numerous specified conditions, the glass barriers



## CAMPUS FIRE SAFETY CODE TALK

### Campus Fire Safety e-NewZone

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must automatically swing to the unobstructed open position. None of the conditions requiring actuation of the barrier permits the barrier to remain in the open position for less than 30 seconds; actuation by automatic sprinkler system water flow or fire detection requires the barrier to remain in the open position until the fire protective signaling system is reset.



NFPA 101 regulates egress in significant ways but does not require ingress. All building doors could be locked from the outside and the building could be made code-compliant. Yet, traditional locks that are locked from the outside are also locked from the inside. NFPA 101 permits the use of three forms of door locking hardware that allow for safe egress while denying access to unauthorized persons:

*Exhibit 1 Security access turnstiles viewed from side providing egress.  
(Photo courtesy of U.S. General Services Administration)*

**Electrically controlled egress door assemblies.** The provisions for electrically controlled egress door assemblies are positioned in NFPA 101 along with the material on traditional door locks and latches, and not within the material applicable to the special locking arrangements for access-control or delayed-egress systems. The electrically controlled door assemblies typically take the form of a door leaf that is held locked to its frame via an electromagnet. Authorities having jurisdiction, in enforcing the provisions of earlier editions of the *Code*, often required any door assembly with an electromagnetic lock to comply with one of the sets of provisions



## CAMPUS FIRE SAFETY CODE TALK

### Campus Fire Safety e-NewZone

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for special locking arrangements, regardless of how the lock was operated. The text applicable to electrically controlled egress door assemblies has the effect of equating the electrically controlled lock to a traditional, mechanically latched or locked door.



Exhibit 2 depicts an electrically controlled egress door assembly installed across an egress path, as viewed from the side providing egress. The door is held in its locked position by an electromagnet. Entry from the opposite side is gained by a card reader. The door can be opened from the egress side via a lock/latch release, installed on the door leaf, that directly removes power from the electromagnet. The occupant sees the unlocking process as being no different than that performed for a mechanically released latch, but the locking and unlocking mechanisms are electronic.

*Exhibit 2 An electrically controlled egress door assembly viewed from side providing egress.*



## CAMPUS FIRE SAFETY CODE TALK

### Campus Fire Safety e-NewZone

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**Access-controlled egress door assemblies.** The door is held in its locked position by an electromagnet. Entry from the exterior, if it is to be permitted, is typically gained by a card reader. The door can be opened from the interior by pushing on the door



leaf as a motion detector senses an approaching occupant and electrically unlocks the door. Should the unlocking mechanism fail, a PUSH TO EXIT button, located to the side of the door opening, overrides the lock so as to provide a redundant unlocking means. Additional required building system and hardware features work together to assure that the access-controlled egress door assembly does not compromise life safety.

Exhibit 3 shows a glass door located across a hotel guest floor corridor. The door is held locked by an electromagnet and requires either a magnetic card to be read or a code to be punched into the key pad to unlock the door. The door is not required for egress for the occupants of the guest rooms in that portion of the corridor.

*Exhibit 3 Non-egress side of access-controlled door assembly.*



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Exhibit 4 shows the same door depicted in Exhibit 3 but from the other side. The door serves as egress for the occupants of the guest rooms in that portion of the corridor. The door is equipped with access-controlled hardware. The motion sensor mounted at the ceiling unlocks the door upon occupant proximity. The PUSH TO EXIT button mounted on the wall serves as a backup should the motion sensor fail.



*Exhibit 4 Egress side of access -controlled door assembly.*



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**Delayed-egress locking systems.** The door is locked from the exterior and interior, typically by an electric strike. An interior push pad initiates the unlocking process. As the hardware name implies, there is a delay before the door can be opened. After 15 seconds, the push pad is again depressed so as to open the door. Additional required building system and hardware features work together to assure that the delayed-egress locking system does not compromise life safety.

Exhibit 5 shows delayed-egress locking hardware and the sign required for doors that swing in the direction of egress travel.

*Exhibit 5 Delayed-egress locking hardware.*

The above examples show that security can be provided in concert with NFPA 101 compliance.



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#### SECTION 913 - FIRE PUMPS

913.1 General. Where provided, fire pumps shall be installed in accordance with this section and NFPA 20.

❖ This section contains specific installation requirements for fire pumps supplying water to fire protection systems. Inspection, testing and maintenance requirements comply with NFPA 20 unless noted otherwise.

Applicable maintenance standards are also identified. Fire pumps are installed in sprinkler and standpipe systems to pressurize the water supply for the minimum required sprinkler and standpipe operation.

They are considered a design feature or component of the system. Fire pumps can improve only the pressure of the incoming water supply, not the volume of water available. When the volume from a water supply is not adequate to supply sprinkler or standpipe demand, water tanks for private fire protection, improvements in the size and capacity of fire mains or water distribution systems or all of these for the installation of a fire pump are needed. When fire pumps are required to meet the pressure requirements of sprinkler and

standpipe systems, they must be installed and tested in accordance with NFPA 20.

**913.2 Protection against interruption of service.** The fire pump, driver, and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

❖ This section lists hazards that must be taken into account when determining the extent of protection required for the fire pump and its auxiliary equipment.

A pump room in a building that is protected against the listed hazards in compliance with the IBC would be considered in compliance. Because fire pumps are also typically located in separate detached structures, geographical and security issues must also be considered.

913.2.1 Protection of fire pump rooms. Rooms where fire pumps are located shall be separated from all other areas of the building in accordance with Section 913.2.1 of the International Building Code.

❖ The purpose of this section is to require indoor fire pump room separation by fire



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barriers and horizontal assemblies in accordance with the requirements in the IBC. See the commentary to Section 913.2.1 of the IBC for a complete discussion of the requirements.

913.3 Temperature of pump room. Suitable means shall be provided for maintaining the temperature of a pump room or pump house, where required, above 40°F (5°C).

❖As previously noted for sprinkler systems, standpipe systems and other water-based fire protection systems, pump rooms or pump houses must be maintained at a temperature of 40°F (4°C) or above to prevent the system from freezing.

913.3.1 Engine manufacturer's recommendation. Temperature of the pump room, pump house or area where engines are installed shall never be less than the minimum recommended by the engine manufacturer. The engine manufacturer's recommendations for oil heaters shall be followed.

❖If the engine manufacturer's recommended minimum temperature is higher than the minimum established in Section 913.3, that recommendation must be complied with. Maintaining the

desired engine temperature enhances the startability of the engine.

Maintaining water heaters and oil heaters as required for diesel engines, for example, will improve the starting capabilities of the fire pump and reduce engine wear and the drain on batteries.

913.4 Valve supervision. Where provided, the fire pump suction, discharge and bypass valves, and the isolation valves on the backflow prevention device or assembly shall be supervised open by one of the following methods.

1. Central-station, proprietary or remote-station signaling service.
2. Local signaling service that will cause the sounding of an audible signal at a constantly attended location.
3. Locking valves open.
4. Sealing of valves and approved weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

❖As was the case with sprinkler systems, water control valves that are a part of the fire pump installation must be supervised in the open position so that the system is operational when needed and also to reduce the chance of a system failure (see commentary, Section 903.4). In most cases the required water-based extinguishing system, which the fire pump is an integral



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component of, will be electrically supervised. Locking or sealing valves open as the only means of supervision may not be permitted, depending on the type of valve. Section 903.4, for example, specifically exempts jockey pump control valves from being electrically supervised if they are sealed or locked in the open position.

913.4.1 Test outlet valve supervision. Fire pump test outlet valves shall be supervised in the closed position.

❖ Fire pump test outlet valves are for performance testing of the fire pump and do not control the available water supply to either a sprinkler system or a standpipe system. These valves are normally in a closed position and are supervised accordingly.

913.5 Testing and maintenance. Fire pumps shall be inspected, tested and maintained in accordance with the requirements of this section and NFPA 25.

❖ Fire pumps require periodic maintenance so that they will perform as required. Monthly maintenance includes running the pump at churn to exercise the pump and driver. Pump packings and relief valve settings must be adjusted as needed. Annually, the pump must be retested to

verify its proper performance. Pressure, flow, revolutions per minute, voltage and, for electric motor-driven pumps, voltage and amperage readings must be recorded, plotted and compared with original design criteria.

Upon completion of testing and maintenance, the pump must be left in the automatic-start condition, ready for service. Because a fire pump is a component of a water-based extinguishing system, NFPA 25 is applicable. If the fire pump is powered by a liquid fuel, such as diesel, it is important that the fuel supply be replenished as soon as possible after the test.

913.5.1 Acceptance test. Acceptance testing shall be done in accordance with the requirements of NFPA 20.

❖ Chapter 14 of NFPA 20 details the procedure for conducting a fire pump acceptance test. This test is run to determine that the installation matches the sprinkler or standpipe system design criteria, the approved shop drawings and the pump manufacturer's performance specifications. The test is to be conducted in the presence of the building official in accordance with Section 901.5 by the installing contractor and representatives of the pump manufacturer and the controller



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manufacturer. Where the pump engine and/or transfer switch are separately supplied components, their manufacturer representative must also be present

913.5.2 Generator sets. Engine generator sets supplying emergency or standby power to fire pump assemblies shall be periodically tested in accordance with NFPA 110.

❖ This section does not require emergency or standby power for all fire pump installations, but rather requires the testing of on-site generator sets that are used for emergency or standby power to fire pump assemblies. The need for emergency or standby power is typically based on occupancy conditions as indicated in the IBC. Section 403.10 of the IBC, for example, requires standby power for all electrically powered fire pumps in high-rise buildings. A generator set is recognized as a permissible standby power source. NFPA 110 prescribes the operational testing requirements, including load tests, as well as the periodic inspection and maintenance for generator sets.

913.5.3 Transfer switches. Automatic transfer switches shall be periodically tested in accordance with NFPA 110.

❖ Automatic transfer switches are self-

acting equipment that is used to transfer power from a normal source of electrical supply to an alternative supply, such as an engine generator set. NFPA 110 requires a test on each automatic transfer switch that simulates failure of the normal power source. Upon failure, the automatic transfer switch must then automatically transfer the load to the emergency power supply.

Manual transfer switches are not permitted as the only means to transfer power between the normal supply and the alternative supply to the fire pump controller.

913.5.4 Pump room environmental conditions. Tests of pump room environmental conditions, including heating, ventilation and illumination shall be made to ensure proper manual or automatic operation of the associated equipment.

❖ Maintaining suitable environmental conditions is essential to the proper starting capability, performance and safe operation of fire pumps and associated emergency power supplies, where required. Adequate ventilation, for example, is needed to maintain the ambient temperature in the pump room within the range recommended by the



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manufacturer for the emergency power supply equipment.

Next Month:  
SECTION 914  
FIRE PROTECTION BASED ON SPECIAL  
DETAILED  
REQUIREMENTS OF USE AND OCCUPANCY  
(Page 443)



The International Code Council, a membership association dedicated to building safety and fire prevention, develops the codes used to construct residential and commercial buildings, including homes and schools. Most U.S. cities, counties and states that adopt codes choose the International Codes developed by the International Code Council.

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The Center for Campus Fire Safety

978.961.0410

SupportTeam@campusfiresafety.org

<b>Advertised Title</b>	Fire Protection Specialist, University of Memphis
<b>Campus Location</b>	Main Campus (Memphis, TN)
<b>Category</b>	Staff (Hourly/Monthly)
<b>Minimum Position Qualifications</b>	<p>Bachelor’s degree in Occupational Safety, Safety engineering or other related physical science or engineering field and three years of appropriate professional experience in a University, research or healthcare environment. Relevant experience may substitute for required education. Must have a valid driver’s license.</p>
<b>Special Conditions</b>	<p>The department is especially interested in candidates with the following: A broad knowledge of NFPA standards, International Fire Code, applicable OSHA regulations and related Tennessee laws and regulations. Knowledge of the accurate interpretation and application of applicable laws, regulations, and consensus standards.</p> <p>Ability to use firefighting and analytical equipment, including portable fire extinguishers, oxygen analyzers, gas and toxic materials detectors, respirators and personal protective equipment.</p> <p>Ability to rapidly assess high-risk situations and immediately implement or recommend implementation of remedial actions to preserve lives, facilities and the environment.</p> <p>Ability to develop and present focused, effective training programs to a wide range of personnel and prepare effective written reports. Excellent verbal and written communications skills.</p> <p>Proficiency in using a Windows Operating System as well as Microsoft Office applications (Word, Outlook, Excel, etc.)</p> <p>Strong interpersonal skills and demonstrate the ability to interact with employees at all levels campus wide and with outside regulatory agencies. Ability to work with a diverse group of people.</p> <p>Ability to be flexible to address after hours emergencies when necessary.</p>

<b>Work Schedule</b>	Monday – Friday 8:00 a.m. – 4:30 p.m. Must be able to work after normal business hours to address emergency situations when necessary.
<b>Posting Date</b>	12/11/2014
<b>Closing Date</b>	01/08/2015
<b>Open Until Filled</b>	No
<b>Hiring Range</b>	\$40,000 - \$50,000 per year
<b>Full-Time/Part-Time</b>	Full-Time: Benefits Eligible
<b>For More Information and to Apply, Go to Website</b>	<a href="https://workforum.memphis.edu/postings/8630">https://workforum.memphis.edu/postings/8630</a>