

Complying With the Campus Fire Safety Right-to-Know Act

(Part 1 of 2)

With the recently passed Higher Education Opportunity Act, campus fire safety programs are in the public spotlight. Now is the time for colleges and universities to improve their reporting procedures and upgrade their fire safety solutions.

BY JOE BERANEK

ACCORDING TO THE NATIONAL FIRE Protection Association (NFPA), colleges and universities across the United States average more than 3,300 fires per year, and more than 129 students have died in campus fires since 1999. For too many campuses, these hard statistics become a grave reality, as in the case of New Jersey's Seton Hall University — in 2000, three people died and more than 50 were injured in a student housing fire.

The Seton Hall fire and outside interest groups have ignited federal government action. President George W. Bush signed the Higher Education Opportunity Act in August 2008, including provisions from the Campus Fire Safety Right-to-Know Act, which will require higher education institutions to annually report fire safety information to the U.S. Department of Education (DOE).

Specifically, campuses will be required to publicly provide:

- Statistics for each on-campus student housing facility, including the number of fires and causes; number of injuries and deaths related to fires; and the value of property damage caused by fires
- Descriptions of each on-campus student housing facility's fire safety systems
- The number of mandatory, supervised fire drills
- Policies or rules on portable electronic appliances; smoking and open flames;

evacuation procedures; fire safety education and training programs provided to students, faculty and staff

- Plans for future fire safety improvements, if needed
- An annual report to the campus community

What's more, the law calls for the creation of a safety and security grant program for higher education campuses — up to 50 percent of the cost — to fund improved emergency communication systems, notification procedures, crisis response services and overall safety.

For many campuses, the new law means new internal procedures. As of press time, however, specific reporting procedures, processes and reporting dates are in the research and discussion phase. The DOE is gathering input from stakeholders, including potential regulated parties. Campuses will be informed of the new regulations once the policy is defined.

Still, while the specifics are being finalized, campus officials can be proactive and revisit their fire challenges, emergency plans and equipment, to safeguard property — and more importantly, lives.

Higher Ed Campuses Face Unusual Fire Challenges

To develop a campus-wide emergency preparedness plan, it's essential

to understand the challenges unique to college and university settings. The NFPA cites cooking, careless smoking, unattended candles, and overloaded extension cords and power outlets as the leading causes of fires in student housing. Also notable, the U.S. Fire Administration reports that in more than 50 percent of adult fire fatalities, the victims were under the influence of alcohol. Substance abuse increases the chance of falling asleep, while smoking reduces the ability to detect fire, impairs judgment and hampers evacuation efforts.

In dormitories specifically, 9-1-1 alarm systems are often misused. Fire alarms are pulled during non-emergencies and ignored during actual ones. Additionally, vandalized, disabled and improperly maintained smoke alarms inhibit early detection.

That's why some campuses have a large number of personnel dedicated to fire safety. Stanford University, for example, allocates 15 staff members for fire equipment inspection and maintenance alone. Additionally, technology has greatly aided the monitoring of dismantled or broken equipment. A location signal is sent to the central monitoring system on campus, as well as to the city fire department, when a piece of fire equipment becomes detached from its system. Although technical advances have greatly improved Stanford's fire safety, the frequency of maintenance- or monitoring-related occurrences still presents a substantial challenge.

Institutions Must Take a Balanced Approach

College and universities are much like cities, in that they contain a wide variety of retail, food service, single and multi-complex residential, public assembly, theater, academic and religious facilities. All require a range of fire equipment solutions appropriate to building function. These buildings are often tightly packed together with limited roadways and parking lots, which restrict emergency response vehicle access. Factor in that most student housing is overflowing with books, paper, bedding, curtains and clothes, and it's not hard to see why a single spark can result in substantial loss.

Student behavior, combined with campus structural nature, presents many

unique fire safety challenges. That's why the Fire Equipment Manufacturer's Association advocates a balanced fire protection design — one where safety does not depend solely on any single component. Rather, it involves a mix of appropriate actions and fire equipment that works together. A balanced design includes fire extinguishers, standpipe fire hose stations, smoke/fire alarms, exit signs and emergency lighting, and automated systems.

Fire protection equipment is legislated by city, state and federal laws. However, considering the history of fires, as well as the additional scrutiny that will now be placed on campuses to mitigate fire issues, campus leaders may want to evaluate their balanced fire protection design and exceed the requirements of local codes for additional protection.

For Stanford University, a strong fire protection plan starts with building design. "One of our major priorities is to provide fire safety insight for campus construction projects — interpreting code, identifying risks and recommending preventive measures, including fire equipment, from the very beginning," says Joseph Leung, university fire marshal. "Once the building is complete, we conduct ongoing inspection and maintenance of equipment and buildings in addition to training and consultation for student activities, housing and departments, campus-wide."

As each building on campus is unique, it's fitting to move beyond a "one-size-fits-all" approach to fire protection. First assess building uses and potential hazards, as well as consult your local and state building codes before assigning appropriate fire equipment solutions. The following are common solutions that will keep your campus safe should a fire occur.

Portable Fire Extinguishers are Cost Effective

NFPA statistics show that in education facilities, portable fire extinguishers successfully suppressed nearly 30 percent of reported fires from 1991 to 1995. They can suppress fires quickly or create a path to safety, and code mandates they be placed every 75 feet in a commercial building.

This manually operated tool is cost effective — less than 1 cent per square foot — and highly efficient, extinguishing 94 percent of small and contained fires

within two minutes. Stanford University emphasizes its many successes with portable fire extinguishers, and Leung stresses the importance of training faculty, staff and students to know how to use the tool. Cornell University also adopts this policy and places more than 9,600 extinguishers around its campus. However, it's important for school safety personnel to know which class of extinguisher to place — and where — on campus.

- Water extinguishers can be used in bookstores, offices and warehouses, helping to suppress fiber materials such as paper and cardboards.
- ABC multipurpose dry chemical extinguishers are designed for highly traveled areas, including hallways, stairways, classrooms, student unions and residence halls, as they can suppress a variety of fires.
- Sensitive materials and electronics found in computer rooms, laboratories, data storage and rare book rooms in libraries should be protected with clean agent-filled extinguishers. These devices are low in toxicity and leave no clean-up residue, with minimal damage to expensive equipment. "Green" agents are also available for a more eco-friendly option.

The Balanced Fire Protection Chain of Survival

When appropriate actions and fire equipment are linked together, this life-saving chain of survival provides balanced fire protection:

- Call the fire department; make sure everyone is safe
- Use a portable fire extinguisher/standpipe fire hose station if the fire is small and contained — or to secure a pathway to safety for those still in the building
- Smoke alarm sounds
- Automated sprinkler/suppression system activates
- Fire department responds

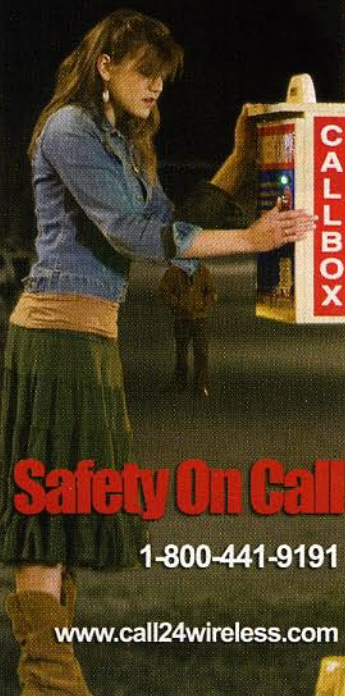
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Standpipe Fire Hoses Can Minimize Water Damage

Typically, fire departments are three to five minutes away, and 70 percent are volunteer-based. In these cases, there can be up to a 15 minute wait for fire response. Standpipe fire hose stations — which do not rely on heat, smoke or flame to spread before water can be applied to the fire — allow occupants to quickly defend in place once the fire department is called and everyone is safe.

The equipment's simple-to-use operation allows trained staff, such as resident advisors, to control or extinguish a fire while it is still small, before the fire develops sufficiently to activate the sprinkler system. This manually-activated equipment provides total reliability in the event of failure of automatic systems.

In some cases, fires spread too quickly before occupants have time to exit. Standpipe fire hose stations can clear a path of safety, otherwise blocked by flames. They also provide temporary protection for occupants attempting to escape the building.

Fire hoses installed within standpipe stations can actually minimize water damage, as water is released directly at the firebase versus blanket spray from automatic sprinkler stations. In addition, they can be shut off immediately after the fire is extinguished.

The University of California Merced uses standpipe rack hose systems in auditoriums and gymnasiums because these venues are used for a wide range of activities. "Whether for sports events, concerts or other general assembly activities that may require extra combustible materials like a stage, standpipe rack hose systems provide an added level of fire safety checks and balances, and a means of active fire protection," says Gini Krippner, fire marshal at Merced.

Standpipe fire hose stations are typically mounted on the wall for use in dormitories, academic buildings, student unions, and sports centers — anywhere on

Helpful Web Sites

www.femalifesafety.org
www.higheredcenter.org
www.campusfiresafety.org

campus with more than three stories. In addition, this equipment is often used in theatres or near stages where automated systems cannot be installed due to interference with lighting.

Kitchens, Labs Require Fire Suppression Systems

Fire suppression systems are mandated by NFPA standards in "special hazard situations" containing flammable and combustible materials, such as kitchens, cafeterias and science labs. Campus safety personnel should check with fire officials to ensure that their campuses' fire design meets these situations.

When hazardous conditions exist, suppression systems are the first line of defense against fire since they are pre-engineered to activate quickly, automatically and precisely. Suppression systems are designed and pre-tested to extinguish "special hazard" fires within known parameters by eliminating the fuel source.

For example, many campuses are evaluating suppression systems for high-traffic, single-use kitchens in dormitories and Greek houses, where distractions during cooking can easily occur. In the event of an appliance fire, suppression systems are interconnected to shut off the fuel source feeding the fire, while also suppressing flames.

But Wait, There's More to Fire Safety

These solutions are just the beginning of an effective campus fire safety strategy.

Part 2 of this article, which will appear in the March/April issue, will discuss call-to-action plans, training, fire safety awareness and K-12 fire facts. **CS**

Joe Beranek is president of the Fire Equipment Manufacturers' Association. For more information on fire safety, visit www.femalifesafety.org or call (216) 241-7333.

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