

Fire Safety in Your Facility

Protecting your school from fire can be complex. In addition to fire, smoke and water damage, there may be other expenses such as salaries, demolition, added construction costs to meet new building codes or the Americans with Disabilities Act (ADA), and temporary kitchen or building rental costs. Talk to your insurance agent to ensure your insurance adequately reflects the value of your buildings and their contents, business interruption expenses, and extra expenses to meet building codes and ordinances. If a child or staff member is hurt or killed during a fire, the financial costs can be high, and the emotional costs devastating. There are a number of actions you can take to reduce the chances of a fire at your school.

Sprinkler Systems

A properly installed and maintained sprinkler system can make all the difference in controlling fires at your school. The U.S. Department of Energy statistics show that sprinkler systems control 99.4% of fires, and that in 90% of the fires, fewer than three sprinkler heads activated to control the fire. Water damage from sprinkler systems generally costs about 10% of the structural damage that would have resulted without the sprinkler system.

Some states now require all new buildings to install sprinkler systems, and some schools are retrofitting their buildings with sprinkler systems (estimate around \$2.00 per square foot for systems hooked to city water supplies). Use a certified and insured contractor to do the work. Keep in mind that many fires are started by contractors doing hot work (welding and pipe cutting), so make sure they use a fire watch.

Dry Pipe Sprinkler Systems

One frequently overlooked but serious problem is buildings that have a dry pipe sprinkler system. Dry pipe systems use pipes filled with pressurized air or nitrogen instead of water. These systems have water supply connections on exterior walls to which the fire department can hook a fire hose. Up to 60 seconds may pass from the time a sprinkler opens until water is released onto the fire.

The National Fire Protection Association has conducted tests on a variety of structural fires, and found that if the fire cannot be addressed within the first 10 minutes, it is likely to burn out of control and result in significant structural damage. It often takes longer than 10 minutes to identify the fire, sound the alarm, get the fire department to the scene, hook up to a water source (if there is one), and move the water through the sprinkler system to the fire. The bottom line is that some schools may have spent a lot of money on a sprinkler system that has no hope of functioning in a fire.

The following are some of the most frequently encountered problems with sprinkler systems:

- System impaired at time of fire.
- Incomplete coverage.
- Improper system design.
- Change in hazards over time outstrips protection.

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Blocked sprinkler heads can occur when people paint over sprinklers, or when debris accumulates in the piping. Hanging banners from the ceiling can also reduce the sprinkler's coverage.

Most system failures are the result of improper system maintenance. Make sure to get your sprinkler system tested (not just inspected) at least every three years. Some things to look for:

- Do warning and alarm indicators light up on the master panel?
- Is there adequate water flow from the sprinklers?
- Has any system equipment been recalled? (The U.S. Consumer Product Safety Commission has recalled over 35 million Central brand fire sprinklers.)

If you have a safety or risk management question or a suggestion for a topic, please contact Markel's Risk Management Department at safety1st@markelcorp.com.