

Case Study: Texas Capitol

Photoelectric Smoke Detectors, Heat Detectors and Duct Smoke Detectors



Built in 1888, the Texas Capitol in Austin is the largest in gross square footage of all state capitols and is second in total size only to the National Capitol in Washington D.C., yet nearly 15 feet taller. The Texas Capitol needed to update its fire and life safety protection by replacing its discontinued legacy systems that had reached the end of their lifecycle.

Koetter Fire Protection of Austin was responsible for retrofitting the fire and life safety system throughout the main capitol building, as well as the four-level, 667,000-square-foot underground extension that effectively doubled the floor space of the entire capitol complex upon its completion in 1993.



Besides being sensitive to preserving this historically significant building, the Koetter team understood that the Texas Capitol is also a high-profile, state facility that has to maintain strict security procedures. As an installer, that meant being accompanied by a security escort at all times and working at a busy facility with hundreds of daily occupants. "You work by their schedule with the goal of 'No impact to any of the operations of the state processes in the capitol,'" says Jason Ferguson, vice president of Koetter. "Also, the capitol systems have to stay online, so maintaining coverage is critical."

The ease of detector replacement aided Koetter in maintaining proper fire and life safety protection at all times during the installation process. Compatibility between the old and new detection systems was the key to continuously maintaining appropriate coverage. The replacement included the fire alarm control panel and smoke, heat and duct detectors. Managing the replacement in phases met the capitol's operations requirements and scheduling requests.

"The great thing about System Sensor and NOTIFIER® is that the two companies have continued to design for the future of our existing customers," says Ferguson. "A practice of remembering the ones who brought you to your level of business and giving them their due consideration allows for decades of a continued business relationship. Their business mind set assisted Koetter with moving this customer from their legacy equipment to today's current equipment standards."

Koetter replaced the legacy detectors while the capitol's legacy NOTIFIER FACP equipment was still in place, and then swapped the NOTIFIER Model 2020 fire panel with a new Model 3030 panel. In all, Koetter installed about 1,300 System Sensor photoelectric smoke detectors (NOTIFIER Model FSP-851), 50 FST-851R heat detectors and 170 InnovairFlex™ duct smoke detectors, which work in conjunction with one another throughout the main building and the extension.

Although the installation was simplified by the technology compatibility and use of existing detection locations, Ferguson says that the unique nature of the building, which includes various atria, arches and other architecturally imposing building features, made maneuverability difficult at times. Some devices had been strategically located to blend into the look and feel of the building, which challenged installer access. But Ferguson maintains: "The process was as much a challenge as the location. This type of retrofit requires long-term planning and studying of the customer's requirements."

On April 30, 2010, the new fire and life safety system confirmed that it could deliver as promised. At 9:16 p.m. that Friday evening, a System Sensor smoke detector went into pre-alarm mode in the reference library on the second floor of the north wing, immediately alerting the central monitoring office at the capitol. The supervisor in the office radio dispatched a trooper to investigate. Upon entering the library, the trooper smelled a strong, electrical burning odor and discovered soot around a ceiling-mounted light fixture that had malfunctioned.

John Nichols, fire marshal at the Texas Capitol, credits the System Sensor detector and the capitol's quick-acting security team from keeping the smoke event from escalating into a full-blown fire. "We are really glad we have these smoke detectors," he says. "It's nice knowing that we can depend on the detectors."

Pinpoint alarm locations with intelligent photoelectric smoke detectors

System Sensor intelligent smoke detectors provide the ability to pinpoint detector locations to enable quick identification of detectors that are in alarm, have been tampered with, or require routine maintenance. In addition, their sleek, low-profile design fits in with just about any environment.

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