



High-Security Compound Gets Fire Protection Makeover

The value of high security is evident at the Jewish Federation of South Palm Beach County complex in Boca Raton, Florida.

Visitors enter the 110-acre gated campus through two entrances staffed by armed guards. Inside lies a vast network of schools, elderly and special needs housing, auditoriums and more.

“Our biggest concern is life safety here, without a doubt. With all these children, we don’t want to have any problems,” says George Cadugan, chief engineer at the Florida campus. “It’s extremely important that everyone is safe.”

The latest technology in access control and video monitoring augments the gates and guards, taking on-campus security to a new level.

Until recently, the area of fire protection was sorely lacking as the campus contended with a failing fire alarm network. The legacy system had been installed in the late 1980s and linked the fire alarm systems in seven buildings together through underground conduits, all controlled by one panel in a main headquarters building.

Rick Gustafson, owner of American Security & Fire Alarm Systems Inc., a local fire and security integrator, noted a major flaw in the design of the old system, “You had pipes and wires in the ground in Florida – when you’re at 15 feet above sea level, you dig down and you get water. Nothing works for an extended period of time and it all becomes an antenna for lightning,” says Gustafson.

With each lightning strike, water leaking into the underground conduits lead to numerous system ground faults.

“South Florida is notorious for lightning – they would get a hit and it’d blow everything up from one end to the other,” says Gustafson. “The people running it today inherited that mess.”

Requirements & Results

Aside from eliminating the chronic issues presented by the old system, Cadugan needed the new fire alarm to demonstrate a history of being technologically sound, reliable, flexible and non-proprietary. To engineer and install such a system, Cadugan turned to Gustafson’s team at American Security & Fire Alarm Systems, one of the area’s Engineered Systems Distributors (ESD) of Silent Knight’s Farenhyt equipment.

American Security & Fire separated the system by installing individual Farenhyt fire alarm control panels with integrated voice evacuation systems in a number of buildings throughout the complex. Buildings include a preschool, elementary, middle and high school, a gym, an arts/culture center, an administration building, an adult residential care system and a care facility for Alzheimer’s patients.

The Farenhyt voice evacuation system within each building can broadcast pre-recorded messages, as well as live messages via a microphone located on each fire alarm control panel. American Security and Fire used speaker strobes to provide a combination of high-impact lights with high-fidelity sound, ensuring clear, intelligible voice communications.

The speed and reliability of the new systems’ detection was another huge leap forward for the complex’s fire protection. In the past, three false alarms would lead to a \$1,000 fine for the Federation. Features of the new systems’ detectors, such as adjustable sensitivity levels with day and night thresholds, drift



**SILENT
KNIGHT**

by Honeywell

compensation and pre-trouble maintenance alerts have gone a long way to help the complex eradicate false alarms, while providing a heads-up on any detectors needing maintenance.

Running wire between control panels, detectors, pull stations, speaker strobes, modules and annunciators (to name a few), can sometimes add up to as much as 25% of a job's labor and material costs. The Farenhyt system's ability to run on most wire-types makes it a very cost-effective solution for retrofit applications. This "wire-recycling" capability ultimately saved the Federation a good amount of money.

"...it was an open access system that anybody could work on, that we weren't stuck with a company that won't share technology and parts."

– George Cadugan, Chief Engineer
Jewish Federation of South Palm Beach County

"We were able to utilize 90 percent of the existing wire structure," says Gustafson.

In addition, the bases for the legacy system detectors were compatible with the new, addressable detectors – so it was a snap to install them, he says.

The upgrade from an antiquated conventional system to a new addressable system, reporting alarms via IP (Internet Protocol) means the fire department has more specific information at their hands when they respond to a call. Instead of merely knowing there is some type of fire alarm event in the auditorium, they now know the event was caused by a pull station, activated in the main auditorium hallway, at the north end.

Any lines running out of the buildings have been bolstered with added surge suppression to further guard against transient voltage surges from lightning strikes. Since the lightning strike and ground fault issues have been addressed, adds Cadugan, "the false alarms have pretty much gone away."

Non-Proprietary Nature

As important as system reliability was for the federation, the ability to work with a non-proprietary, open-source technology platform was just as critical.

"The most important thing I was after is that it was an open access system that anybody could work on, that we weren't stuck with a company that won't share technology and parts," explains Cadugan. "I've run several facilities – some very large ones – and it was very important to us, that the parts were available from many different vendors."

The Federation officials were not happy with the service and limited source of parts that were inherent in the old system, says Gustafson.

"Where we were stuck with a proprietary system, the cost of maintenance was outrageous. I didn't want to be stuck with that again," exclaims Cadugan.

With a number of authorized, factory-trained Farenhyt ESDs in the area, capable of working on the new system, Cadugan was comfortable with having a choice of companies for parts and service. He offers advice for other facility managers looking to either replace a legacy system or install in new construction.

"Open access is a very important thing. You should be looking at the latest technology, and you should be looking at what fits your facility the best," Cadugan suggests. "Some of the cheaper systems are proprietary and they more than make up for the initial cost with the high cost of repairs, parts and contracts."

Future Federation Endeavors

A newly-signed contract to replace the fire protection in an eighth building on the complex has American Security & Fire planning the installation of a larger fire alarm voice evacuation system from Silent Knight to cover this four-story facility.

"We were completely tapped out on the old system. Now we can expand and cover all new code requirements with room to spare," says Cadugan. "With the new systems, the Federation is better prepared for the future."



**SILENT
KNIGHT**

by Honeywell

Silent Knight • 12 Clintonville Road • Northford, CT 06472
203-484-7161 • www.farenhyt.com