

Freeman Health System

Fire Alarm Network Ties Together Hospital Facilities, New and Old



For Freeman Health System, expansion was just what the doctor ordered. This three-hospital system provides comprehensive healthcare and behavioral health services to more than 450,000 residents from Missouri, Arkansas, Oklahoma and Kansas. With more than 398,000 outpatient visits, 21,000 admissions, and 110,000 Emergency/Urgent Care visits, it is evident that Freeman would need to substantially enlarge its physical facilities to accommodate these impressive numbers, which increase by the day.

To that end, plans were made to expand Freeman West in Joplin, Mo., the largest of the three Freeman campuses. The result was the creation of a six-story tower attached to Freeman's two-story flagship hospital. The tower houses an impressive range of resources, including the hospital's emergency room, information technology department, conference rooms, and post-surgery recovery rooms. Four new patient floors have allowed Freeman to effectively double its bed capacity. The hospital also installed a cutting-edge shock/trauma bay, making it one of only two facilities in the world that offers it.

With the new building expansion came the need to extend Freeman's fire protection system. The prognosis in this area was not as favorable.

The main hospital had three different makes of fire protection systems, none of which had the capacity to handle the additional points needed for the proposed tower's fire protection. Moreover, the multiple systems created confusion during emergency events by requiring personnel to check different panels in multiple locations to determine the cause. This was not just inefficient, but in the event of a real emergency, could mean the loss of precious time.

Neil Spencer, life safety systems manager for Joplin Fire Protection, an Engineered Systems Distributor of Farenhyt systems from Silent Knight, understood Freeman's dilemma. His firm first connected with Freeman Health System to provide inspection services for their existing fire alarm systems. In doing so, Freeman was able to offer recommendations on how to best utilize the systems and soon went from being just another vendor to a trusted advisor.

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– Neil Spencer, Life Safety Systems manager for Joplin Fire Protection

Joplin began to take on additional responsibilities on behalf of Freeman. Based on the company's performance, Joplin eventually became the exclusive partner for all of Freeman's life-safety needs. Consequently, Freeman did not hesitate to turn to Joplin when a fire protection plan for the new building had to be developed. Spencer recognized immediately that none of the existing systems would fit the bill.

"Although the last system we installed performed fine, we knew it was not capable of taking Freeman into its next phase of growth," said Spencer, who oversees sales, service and installation of all fire alarm and life safety systems for Joplin. "And we didn't want to add yet another system that wouldn't be capable of expanding in the future."

Working with Daniel Caylor, Freeman's director of facilities management, Spencer recommended the Farenhyt IFP-1000 addressable fire alarm control panel from Silent Knight for the head-end of what was to become a fire protection network tying together all of Freeman West facilities' systems.



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The Farenhyt IFP-1000 is perfectly suited for mid-to-large-sized applications. The system's scalability enables it to support as many as 792 detector and 792 modules using devices comprising Intelligent Device Protocol (IDP). Sophisticated detection device features such as individual point identification, drift compensation, and maintenance alerts reduce the number of frustrating and costly false alarms and service calls.

An extensive portfolio of compatible Farenhyt equipment, including signaling line circuit expanders and intelligent power modules, all capable of running on most types of wire (shielded and twisted wire not required), provide the ability to accommodate a growing facility while avoiding the hassle and expense of installing a new system. This ensures that any plans for further expansion by Freeman can be appropriately met. The flexibility of the IFP-1000 is also evidenced by the fact that central station reporting can be performed either by point or by zone.

The IFP-1000 was clearly the right approach for the new tower, and work soon began on the installation. Shortly thereafter, the Freeman Health System team had an idea.

"We had purchased the panel, already gotten part of it live, and then Mr. Caylor asked why don't we also upgrade the main hospital to this system. They wanted us to give them something to cover everything under one umbrella," said Spencer.

"We knew that they would upgrade the main hospital eventually," he added. "I guess we didn't expect it would happen this quickly. The project became a kind of 'unintentional retrofit,'" Spencer exclaimed.

Joplin began by removing the three existing fire protection systems, then upgrading the main hospital before any work started on

the tower. The timing was impeccable; just as the construction schedule called for the fire alarm installation in the new tower, Joplin was finishing up the main facility's system.

Work on the tower began seamlessly, with the panel situated in the new tower's basement electrical room. Along with the IFP-1000, Joplin upgraded all of the hospital's ancillary devices to addressable modules and ensured that each performed up to state and local codes.

Currently, all common areas are equipped with smoke detection. In the pediatric wing, smoke detectors are located in every room. Heat detectors are located at regular intervals throughout the facility.

In place of the old horn strobes, Joplin added softer chime strobes, giving Freeman a way to alert hospital personnel and patients to an event while minimizing the fear that sometimes ensues when the alarms activate.

The system is programmed to perform a number of functions in case of a fire emergency, including shutting down air handling units, closing smoke and fire dampers, electronically locking fire doors, and recalling all elevators.

The hospital's sprinkler system is also connected to the IFP-1000. Because the system

automatically tests the connected addressable devices, Freeman personnel no longer have to canvass the facility with a smoke detector sensitivity tester every two years to test them; this capability is built directly into the panel.

According to Spencer, there are still minor adjustments to be made. But the hospital and the tower are open for business, a somewhat miraculous feat considering the finishing date of the work and the opening date of the facility were one in the same. More importantly, Freeman has a single network of systems that has significantly streamlined the hospital's fire-protection approach.

"Before, with the three separate systems, the hospital personnel were jumping back and forth, trying to find out where a problem had originated," Spencer said. "Now they can go to their remote annunciators anywhere in the hospital and find out what's going on instantly."

With some patients on life support, others non-ambulatory, and still others that can't be moved for one reason or another, evacuating people is often not an option. Freeman personnel are the initial responders to all fire alarm events; therefore, the speed at which they can receive information and determine an appropriate response is critical.



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