

Project Profile Saint Peter's Hospital



HOSPITAL COMPLEX CULTIVATES HEALTHY FIRE PROTECTION

A decade ago, St. Peter's Hospital in Albany, N.Y., started a \$259 million campus-wide modernization project. The three-phase project included construction of a six-story Patient Care Pavilion with 24 operating rooms (OR) occupying two floors. One of the ORs is a new hybrid OR - one of only 29 in the world. Other add-ons included modern patient care units, a pharmacy, a new endoscopy suite and a food court. The Pavilion's addition was going to necessitate the entire complex bringing its fire protection up to meet current standards.

HEALTHY ADVANCEMENTS

St. Peter's began its fire alarm upgrade with the replacement of a long-standing NOTIFIER system in its main hospital facility. Two legacy NFS-2020 fire alarm control panels were swapped out with the latest ONYX Series NFS2-3030 systems, which tied in seamlessly with existing detection and notification devices. The fire protection network was then expanded to cover NFS2-3030 systems protecting the new Patient Care Pavilion and existing Professional Office Building.

The next phase involved the addition of a Digital Voice Command (DVC) system for voice evacuation in all three buildings. To provide authorized personnel a view of campus-wide fire alarm network conditions and give first responders control of the smoke purge system, network and smoke control annunciators were installed at the hospital's main lobby entryway.

"I thought we had it good with the 2020 system," claims St. Peter's Electrical Supervisor, Dan Machabee. "The features and the additional equipment that were installed since the time when Alarm & Suppression first arrived have greatly improved this facility's fire alarm layout, expandability and coverage to the point of near perfection."



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Most of phase three involved more interior renovations to all floors within the main facility, which necessitated the addition of another fire alarm control panel to the network.

For long-term projects such as this, a slow phase-in of newer technology could be potentially problematic, particularly when there are hundreds of field devices, such as detectors, pull stations and annunciators, installed throughout the older buildings. In today's fast-paced world of rapidly changing technology, older devices would typically not be supported, requiring they be replaced.

This was not a concern for Brad Nelson, Project Engineer/Senior Technician for Alarm & Suppression, Inc. who has overseen and engineered all phases of the hospital's fire alarm work, in addition to serving as its alarm service provider.

"We've worked on other long-term projects with NOTIFIER equipment, and upgrading to newer, more advanced technologies has not been a problem," says Nelson. "This line is engineered to handle a smooth transition from old to new, which ensures a long-life for the owner's investment."

PAINLESS TRANSPLANT

To switch over the main hospital's legacy fire alarm, Alarm & Suppression downloaded the original panels' data and, using NOTIFIER's ConvertiFire software, processed it to work with the new system. The converted data was loaded into the NFS2-3030 panels, allowing them to be switched over, programmed, and operational within minutes of applying power. ConvertiFire converts the database of most legacy NOTIFIER panels into the ONYX Series language.

As Nelson explains, "This is a huge time saver. The ConvertiFire software can display a report of device type codes that are no longer available or that have changed; that way you can seek those points out and re-program them accordingly."

Machabee was surprised at the ease of the systems' changeover. "Both Alarm & Suppression, and electrical contractor Schenectady Hardware and Electric had a game plan in place, all the material on site and ready to go on the day of the changeover," he explains. "We were up and running on the new system hours before anticipated each day."

Switching over the voice evacuation portion of the

legacy system was a little more involved. The existing 80 voice messages had to be re-recorded into the new Digital Voice Command (DVC) system from NOTIFIER and then expanded by nearly 100 additional customized messages for the new Patient Care Pavilion. The DVC system allows for more detailed audio messages to be delivered to the entire hospital complex. The goal was less confusion, better audio clarity and a quicker implementation of the emergency actions for which hospital personnel train.

As for any upgrades to existing detectors and other initiating devices, the hospital facilities staff were able to handle those. NOTIFIER systems perceive each new device as a data packet and accepts the information without having to take the system off-line for reprogramming. Such a seamless transition saved considerable labor, cost and business down-time.

Working closely with Machabee was key to this project's smooth transitions, stated Nelson. "Keeping the dialog open allowed the fire alarm system to be tailored to meet any needs related to maintenance and the electrical department's needs."

UNDERSTANDING A NEW LANGUAGE

The fire protection transplant came with a powerful, PC-based graphic interface to simplify fire alarm monitoring and maintenance. The ONYXWorks graphic workstation from NOTIFIER arms hospital personnel with more comprehensive information on the entire fire alarm network throughout the main hospital, outlying buildings and Patient Care Pavilion.

Stationed in the hospital's well-staffed security room, the graphic workstation is programmed to display written and visual information on five basic signals: fire alarm, supervisory alarms, trouble signals, maintenance alerts, and disabled devices. When an alarm signal is received, the workstation's monitor automatically zooms into a three-dimensional floor plan to show the affected area and the device in alarm.

Information specific to the alarm and location has been programmed to display immediately, which can include emergency contacts, the area's contents, and occupants with special needs. Information pertaining to system functions can also be shown, such as whether a specific detector is assigned to cause

elevator recall, release magnetic door holders, or activate other emergency safety functions.

Even text files, audio messages, images and videos can be linked to any fire alarm point capable of causing a signal. In most cases, this additional information is used to provide ONYXWorks users a better comprehension of the affected location, or even something more technical, such as how an exhaust air intake door should look once returned to its normal position.

The graphic workstation has also been programmed with special functions to help Machabee's team service various field devices. Machabee refers to the ONYXWorks PC as a 'spoiler'. "It is now extremely easy to locate devices to enable/disable for hot work permits and maintenance issues."

The new smoke detectors installed throughout St. Peter's can be pre-programmed to send a maintenance alert or go into alarm at any one of nine alarm threshold levels. When one of the detectors reaches a pre-determined level indicating an "alarm signal" is imminent, the workstation operator is given an audible signal while the individual device is automatically displayed on the screen. Simultaneously, ONYXWorks sends an email to eight individuals responsible for inspecting the device and area in question. This advance warning allows the trained staff to prevent unnecessary disruptions to the quality health care critical to St. Peter's mission.

"My favorite feature is the e-mail notification function, because no matter where I am in this large facility, if an alarm condition happens, I am able to respond to the exact location so much faster than without it," exclaims Machabee.

The hospital's maintenance and electrical staff knew they had taken a big step forward when they received their first email message, indicating a detector was nearing its alarm threshold, and were able to respond immediately.

"Both Alarm & Suppression, and Schenectady Hardware & Electric, have proven to be incredibly reliable and able to solve problems when they arise," says Machabee. "We've all worked early, late and through breaks to get the job done right. This is part of the reason I can sleep at night."

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