

POWER PROFILE

Customer: Leon County Government/City of Tallahassee

Location:

Tallahassee, Florida, USA

Customer Business Issue:

Backup power for state-of-the-art public safety complex

Solution:

- Three Cat® C32 diesel generator sets
- Cat paralleling switchgear
- Delivery, set-up, installation, operation and maintenance

Cat® Dealer:

Ring Power



The Leon County Government and the City of Tallahassee combined the 911 dispatch and emergency response functions from both locations at a new 90,000-square-foot Public Safety Complex to improve emergency response time.

POWER NEED

The Leon County Government and the City of Tallahassee joined forces in 2011 to break ground on a new 90,000-square-foot Public Safety Complex to combine the 911 dispatch and emergency response functions from both entities at a single location. Inaugurated in 2013, the \$44.8-million complex unified a number of operations including the City of Tallahassee Regional Transportation Management Center, an emergency operations center for Leon County, the Tallahassee Fire Department’s administration offices, Leon County Emergency Medical Services (EMS) and the Consolidated Dispatch Agency. In addition to the main building, the complex also includes an EMS fleet operations center and space for a future city fire station. The integrated complex provides a more coordinated emergency response effort from 150 employees, who receive nearly 500 emergency calls each day.

“One of the reasons for building the new complex was to consolidate the separate 911 dispatch centers for Leon County and the City of Tallahassee,” said Carl Morgan, facilities and construction manager for Leon County “In the past, these call centers often had to manually transfer calls to each other, which was a time-consuming process that impeded response time. Now that they’re working in the same building, utilizing the same protocols and equipment, we’ve eliminated the possibility for lost and dropped calls while increasing efficiency and decreasing emergency response time.”

The building was constructed to protect the many critical emergency response groups that reside there. To combat the forces of nature, the Public Safety Complex was built to withstand the extremes of Florida weather including strong winds, severe storms and hurricanes. In fact, the facility can withstand winds from a Category 5 hurricane or F4 tornado. Laminated glass windows can absorb the impact of a 15-foot, two-by-four piece of lumber traveling at 100 mph, and the structure meets the Federal Emergency Management Agency’s tornado shelter requirements.

Additionally, bullet-proof glass windows were installed to guard against threats, and the complex meets U.S. Department of Defense antiterrorism standards.

After finalizing the building’s architectural design requirements, project leaders decided a comprehensive standby power system would be essential for protecting internal operations and maintaining the mission critical function of the complex. All of the critical data applications, including the 911 dispatch center, are housed in a 2,600-square-foot data center inside the main building. To provide support for all emergency service functions, the complex requires an on-site backup system to continue operations in case of power loss.

“We knew it was absolutely essential to install a reliable, standby power system to maintain critical emergency response operations when facing a power outage situation,” Morgan said. “Public-funded projects are prohibited from favoring specific vendors, so we opened bidding hoping to find a power support partner that was local, committed and knowledgeable.”

SOLUTION

After considering several proposals, local Cat dealer, Ring Power, was selected to develop an on-site standby power system for the Public Safety Complex. Mike Acree, an industrial representative at Ring Power, worked closely with the building managers to install the backup system, which includes three Cat C32 diesel generator sets and paralleling switchgear. The N+1 design ensures the power system is always available and utilizes two generator sets for a total of 2,000 kW of backup power. The third generator set is kept as a spare in case of mechanical failure. The C32 engine used in these generator sets is designed for low fuel consumption and has the capability to accept a 100 percent rated block load, which ensures reliable performance in the event of an emergency power outage.

“Mike and the Ring Power team have gone above and beyond to meet not only our specific power needs, but also the regulatory and environmental requirements,” explained Morgan. “Given the nature of the Public Safety

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Complex, it requires 24-hour observation every single day to keep operations online at all times. Ring Power has provided comprehensive services to help us achieve our goals.”

In addition to a 10-year service agreement, Ring Power also provided a comprehensive support package that includes a 10-year extended warranty. “The Ring Power staff is extremely knowledgeable, and combining that with the engineering team helped maintain full regulatory performance,” Morgan said. “Without Ring Power’s understanding and commitment, the curtailment solution would not have been achievable.”

RESULTS

Fully operational since October 2013, the Leon County Government and City of Tallahassee Public Safety Complex has improved emergency service response time through enhanced dispatcher coordination. The complex has not experienced any major power outages, and continues to serve area residents on a daily basis. The standby power system is

tested for weekly duty cycles and monthly load capacity to ensure support for critical functions in case of a power outage.

Additionally, the Public Safety Complex has been recognized as a benchmark for emergency service facilities. The building has won awards from several industry-leading groups including Associated Builders and Contractors, the American Public Works Association and Building Operation Management, which recognized the complex with the FMXcellence award.

“The installation has functioned flawlessly, and we’re humbled to see so much recognition from the industry and community alike,” said Morgan. “We’re grateful to work with the best suppliers because it makes our job that much easier. Caterpillar has set the standard for reliability, commitment and professionalism, and we will always include them in the procurement process.”

For more information, please visit cat.com/powergeneration



The Public Safety Complex requires an emergency backup power system to support critical functions at all times. Ring Power developed an N+1 system design that includes three Cat® C32 diesel generator sets and paralleling switchgear.