



Installation: **Jersey City Museum, Jersey City, New Jersey**

Circon Integrator: **Enertech Inc, Hawthorne, New Jersey**

Building Type: **Public Art Museum**

Physical Description: **3-story historic building**

Duration of Project: **June 2003 – July 2003**

THE CLIENT

Jersey City Museum is located in Jersey City, New Jersey. This new cultural center opened to the community on October 19, 2001. The cream-colored brick building, a former post office warehouse circa 1929, was completed for \$11 million. Designed by architect Charles Gifford of Meyer & Gifford of New York, the interior offers an attractive modern space enhanced by a skylight lobby. The museum holds a collection of 20,000 pieces. It has an art vault, eight new galleries, art classrooms, offices, a 152-seat theater, gift shop, and cafe. It now serves a broad and diverse urban community by maintaining, preserving and interpreting the region's cultural heritage.

THE CHALLENGE

- *Integrated control of HVAC systems – which previously operated on another control system*
- *Multiple systems to be managed through single central management system*
- *Implement Open Systems LonWorks® building automation system for future multi-vendor expansion*
- *Control of both space temperature and humidification within a specific and rigid limits*

The Jersey City Museum's (J.C.M) primary concern was to maintain constant temperature and constant humidity in the art vault and in all galleries. The existing building automation system was not delivering the desired control and valuable artwork was at risk of being damaged. The new Circon system not only had to provide this high level of control, it also had to be seamlessly integrated into the existing HVAC system's sensors and actuators, four individual air handlers, 28 VAV's with heating coils and parallel fans, one chiller, one hot water boiler and four electric steam humidifier.

J.C.M. contracted Enertech to implement an open, integrated LonWorks controls system that would not only effectively monitor and manage their energy consumption, but also allow for future expansion and remote alarm monitoring

THE SOLUTION

- *Detailed design and implementation of Circon System Corporation's Integrated Building Automation System to provide the high level of integrated HVAC control required by the J.C.M.*
- *Complete integration of the existing legacy network and sensors with the new Circon Open System based controllers*
- *Circon's Visual Integrator™ graphical user interface software allows individual scheduling of individual HVAC systems for each area of the complex resulting in increased comfort, a stable environment for the artefacts and an immediate and drastic improvement in energy efficiency*
- *Operator's workstation using Circon's Visual Integrator provides centralized management to monitor, control and override any area of the complex as needed*
- *LonWorks based technology provides a solid platform for future expansion of the existing system or the inclusion of other sub-systems such as card access, lighting, security system and energy management*
- *Custom alarm set-up and monitoring, both, remotely and locally*

Circon Systems HVAC controllers are installed in four air handling units, each with chilled water and hot water coils. In addition, other HVAC equipment including a hot water boiler, steam humidification systems, multi stage

chiller and multiple exhaust fans utilize the new complex-wide LonWorks network for operation. The system is configured with individual and unique zone schedules, each tailored to meet the needs of demanding departments within the facility. Circon's BASIC language is used to program the sequence of operations for many of the controllers, allowing HVAC systems to operate at peak efficiency and to optimize the load every hour of every day. Alarms are set up to be delivered to a chosen mechanical contractor who has 24-hour stand-by service and the capability to remote access through Visual Integrator for instantaneous problem solving.

"Monitoring HVAC functions across the site from a single location is a significant productivity benefit and provides a level of comfort for this department. Given the sensitivity of the museums collection, this gives us the ability to deal with any changes in climate at anytime." **Thomas Shannon**, Facilities Director of Planning & Exhibitions

THE DETAILS

HVAC CONTROLS

- *Extremely efficient energy consumption guaranteed by intelligent monitoring and controls*
- *Unsurpassed levels of tenant comfort*
- *Air quality monitored and controlled to highest standards*

Circon programmable HVAC controllers, VAV terminal unit controllers and site management controllers effectively operate and monitor all HVAC systems. Circon BASIC language is installed to program the sequence of operations to allow greatest efficiency and load handling capability.

SYSTEM MANAGEMENT

- *Total, real time monitoring and management via desktop PC running Circon's Visual Integrator software-site*
- *Custom designed user friendly GUI (graphical user interface) with point and click*
- *Site management controller intelligently handles all alarms*
- *Diagnostics, troubleshooting and repairs occur before building occupants are aware of a temperature change*
- *LonWorks based technology allows unlimited expansion options*

For more information about this case study, please call us at 1-800-338-1866.

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