



Christian Health Care Center

CARRIER CONTROLS AND I-VU® BUILDING AUTOMATION SYSTEM ENHANCE SAFETY, EFFICIENCY AT CHRISTIAN HEALTH CARE CENTER

CARRIER'S I-VU® BUILDING AUTOMATION SYSTEM CONTINUALLY MONITORS HVAC EQUIPMENT STATUS CAMPUS-WIDE



Carrier heating, ventilating and air conditioning (HVAC) controls and the i-Vu® building automation system allow facilities personnel to monitor and fine-tune numerous pieces of equipment in multiple buildings across the entire main Christian Health Care Center campus

Project Objectives

Christian Health Care Center (CHCC) is a senior living and health care facility with 12 buildings of varying ages, sizes and purposes, served by heating, ventilating and air conditioning equipment which include boilers, RTUs and WSHPs from several manufacturers. To ensure a safe, comfortable environment for residents, staff and daily visitors, it was determined that an equipment and controls upgrade was required. Their goals included integration of disparate equipment into a network with comprehensive visibility and accessibility, reduction of energy consumption and meet the facility's green mandate by maintaining an energy efficient HVAC system.

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– Robert Pry,
Senior Sales Representative,
Carrier Controls Division

The Solution

The digital controls that monitor and adjust any HVAC system contribute significantly to the energy efficiency, ease of use and reliability of the system. In the case of a complex campus such as CHCC, controls provide the integration and remote access to equipment that enables the facilities staff to monitor the performance of systems from a central location and to receive timely alerts when system adjustments are needed. In addition, controls can increase the energy efficiency of individual components by enabling staff to fine-tune operations according to the needs of each conditioned space. The facilities staff at CHCC has undertaken several controls upgrades in recent years, incorporating Carrier controls and the i-Vu® building automation system to integrate disparate equipment into a single network with comprehensive visibility and accessibility, even from a distance.



Synopsis

For more than a century, Christian Health Care Center (CHCC) has served the northern New Jersey community with a range of mental health and senior health care services. CHCC currently provides a range of senior living residences and programs, from independent living facilities through supported living to special care for people with memory impairment. In addition, the Center offers short-term rehabilitation services and both inpatient and outpatient mental health care. CHCC operates a 78-acre main campus with 12 buildings of different ages, sizes and purposes, including residential, administrative and hospital buildings. The main campus is served by heating, ventilating and air conditioning (HVAC) equipment that includes boilers, rooftop units and water source heat pumps, all from a variety of manufacturers.

The facilities staff at CHCC is tasked with providing a safe, comfortable environment for staff and daily visitors to live, work and heal. In addition, the facilities staff provides good stewardship of natural resources in accordance with the Center's green mandate by maintaining an energy efficient HVAC system.

The digital controls that monitor and adjust any HVAC system contribute significantly to the energy efficiency, ease of use and reliability of that system. In the case of a complex campus such as CHCC, controls provide the integration and remote access to equipment that enables the facilities staff to monitor the performance of systems from a central location such as the physical plant offices. This means staff do not have to travel across campus to check equipment, saving time and freeing staff for other work. Controls also enable facilities staff to check the system remotely, in case adjustments are required during off hours, such as overnight or on weekends and holidays.

Robert Pry, Senior Sales Representative, Carrier Controls Division, said, "The controls network at CHCC enables facilities personnel to receive timely alerts, an essential feature when the health of fragile

patients is at stake and any disruption in climate conditions could adversely affect the residents. Controls also enable staff to maximize the energy efficiency capabilities of individual pieces of equipment by fine-tuning operations according to the needs of the individual conditioned space."

Working with Mark Rosenblatt, Project Manager, Carrier Controls Division, the facilities staff at CHCC has undertaken several controls upgrades in recent years, incorporating Carrier controls and the i-Vu® building automation system (BAS) to integrate their disparate equipment into a network with comprehensive visibility and accessibility.

Dave Cilona, Senior Field Engineer for Concord Engineering, which conducted functional testing on an upgrade of heat pumps and their controls in several buildings at CHCC, said, "The upgrade was built around energy savings. After an energy audit, CHCC chose the most effective steps to reduce energy consumption, including replacement of inefficient equipment and outdated controls with new equipment and controls that deliver better energy performance."

The Carrier i-Vu BAS is a web-based operator interface that supports BACnet® and Carrier Comfort Network® (CCN) communication protocols. From any web-enabled computer, phone or tablet, the i-Vu BAS enables facilities staff to graphically configure and view schedules, setpoints, trends, alarms and reports. The system can integrate and control building systems beyond HVAC, such as lighting, security, shading and more, using all major automation protocols.

In fact, the Carrier controls and i-Vu BAS at CHCC have proven so effective that the facilities staff is currently planning an additional upgrade that will take advantage of the i-Vu's building automation capabilities to add lighting, domestic water pumps, booster pumps and other items to the control network for even greater visibility and accessibility of all property systems.

Project Summary

LOCATION: Wyckoff, NJ

PROJECT TYPE: Controls

BUILDINGS: 12

BUILT: Range from 1911 to recent construction

BUILDING USAGE: Healthcare

OBJECTIVES: Enhance the comfort of residents, patients and staff; and improve energy efficiency

EQUIPMENT: Variety of rooftop units, boilers, cooling tower, water source heat pumps from several manufacturers

CONTROLS: i-Vu® building automation system: i-Vu BAS user interface, Carrier Open (BACnet) controllers, and Carrier Comfort Network (CCN) controllers

MAJOR DECISION DRIVERS: Ease of use of Carrier controls and i-Vu BAS interface; energy efficiency capabilities; remote access capabilities

UNIQUE FEATURES: Integration of buildings of disparate ages and uses — including care of elderly, memory impaired and psychiatric patients — into one energy efficient, remotely accessible network

INSTALLATION DATE: 2008-2015

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