

Music Building #39



Building Gross Sq.Ft.: 105,343

Simple Payback: 1.4 YRS

Retrocommissioned: Jul-Aug 2008

Annual Energy Avoidance: 26%
(Based on one year's non-normalized data)

Principal Building Use: Media Collections, Offices and Practice

Facility Contacts: Paul Redman & Jim Anderson



Building & Occupant Overview

The Music Building is home to music professionals and understudies of the School of Music, which has gained a reputation as one of the Top 10 in the United States. The building was originally constructed in 1972 with various remodels taking place in later years. Building occupancy varies depending upon location, from 24/7 to normal office hours. There are constant volume nine air handling units that condition the building. The building's cooling needs are met by the campus chilled water loop, while the heat in the building is provided by a combination campus steam and hydronic system. AHUs and heating systems have Barber Coleman Network 8000 with GCMs, GCSs and LCMs for DDC control, while the terminal VAV and radiation devices are dominantly pneumatically controlled.

The facility's total metered energy during the previous year was 30,616 MMBTU.

Post RCx Energy Use Intensity (EUI) & Cost Index (ECI)

E.U.I.	E.C.I. #1	E.C.I. #2*
215.5 kBtu / Sq.Ft.	\$3.27 / Sq.Ft.	N/A

Retrocommissioning Specifics & Results

Most of the air handling units (AHUs) providing air conditioning were maintaining space conditions 24/7/365. The primary energy conservation method was scheduling the AHUs serving the office areas to shut down for 8 hours a day and weekends. Web graphics were provided to the facility manager for HVAC system analysis from his desktop. Associated exhaust fans in the building were shut down during unoccupied hours.

A Universal Network Controller (UNC) was installed to allow for web graphics and remote energy monitoring and troubleshooting. Various control upgrades were performed, improving the control sequences to avoid energy waste.

Project Highlights

- Shut down AHUs and exhaust systems during unoccupied hours
- Provided DDC controls and web graphics for remote troubleshooting
- Repaired chilled water and re-heat valves
- Replaced an overlooked 3-way chilled water valve with the correct 2-way valve
- Calibrated temp. and humidity sensors throughout the building
- Added CO2 sensors to a 100% OA unit to reduce the amount of fresh air to save energy
- Restored occupant confidence in temperature controls in the building