

Lincoln Hall #0027



Building Gross Sq.Ft.: 175,835

Retrocommissioned: Nov 2013—Jan 2014

Principal Building Use: Offices, Classrooms, Large Auditorium

Building & Occupant Overview

Lincoln Hall was originally built in 1911 and was expanded on in 1929. A major renovation project (including all HVAC systems) was conducted in 2012. There are twenty-two air handler units in the building, which are served fresh air by two DOA units. There are a mixture of typical VAV air handlers as well as displacement ventilation systems in the building.

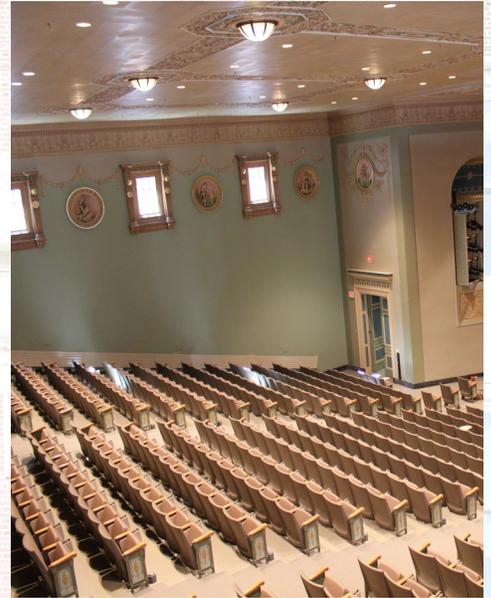
Building heat is provided by a hot water radiation system and also hot water to VAV reheats. Cooling is provided by the campus chilled water system. Both the heating and cooling systems are assisted by the total enthalpy energy recovery wheels in each of the DOA units. The building controls consist of a combination of Siemens compacts and modulars for the AHU's. Occupancy sensors were installed during the renovation project, but during the retrocommissioning visit, these were swapped out to meet current ASHRAE and UIUC standards as well as reprogrammed. To maintain its' historic look, double hung, operable windows were also installed. It was noticed several of these were being open all times of the year and remaining open overnight, so the building personnel agreed to make rounds in the morning and nights to make sure these are closed for energy savings purposes.

The facility's total metered energy during FY13 was 38,571 MMBTU.

Retrocommissioning Specifics & Results

The air handling units (AHUs) providing air conditioning were maintaining space conditions in offices and classrooms based on a guessed schedule prior to people re-occupying the spaces. The primary energy conservation method was scheduling the AHUs off during tighter non occupied hours. Single technology wall mounted occupancy sensors were removed from ~130 offices and dual technology low voltage sensors were installed to UIUC and ASHREA standards.

To maintain comfort conditions, all thermostats were calibrated and the heating valves were inspected for proper operation. There are approximately 235 VAV's in the building. Each VAV was inspected for proper operation and calibration. The airflows were also balanced allowing in many cases for a reduction in flow to the spaces, resulting in fan energy savings without compromising comfort.



Project Highlights

- Fixed Occupancy sensors and reprogrammed VAV operation in unoccupied mode
- Calibrated all sensors and transducers
- Visited each VAV and thermostat and calibrated them
- Major programming modifications on all units
- Relocated sensors in less than ideal locations
- Modified existing scheduling to better match building usage
- Relocated all airflow monitoring devices and fixed corroded boards on 3 AHU's