

# Education Building #160

**Building Gross Sq.Ft.:** 94,059 sq.ft

**Re-commissioning Team Visit Period:** Spring 2017



**Principal Building Use:** Offices and Classrooms

## Building & Occupant Overview

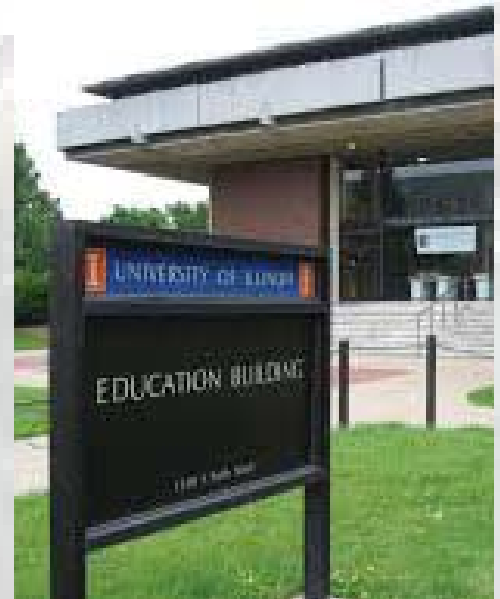
The Education Building is home to the School of Education. 14 different academic units interact within the facility. The building was originally built in 1964; the building had several workshops in the original building that required high amounts of exhausts. Currently, there is only one laboratory with one fume hood in the building. The building is served by 10 air handling units. There is one multi-zone unit in room 52A serving a classroom and some offices. There are 9 constant volume air handling units in Room 70 with a common return system, of which 8 of these were replaced in 2011. VFDs were added to those units so that the air handling units can be run at different speeds at different times of the year. The building did not have economizer capability.

## Retrocommissioning Specifics & Results

The air handling units (AHUs) schedules were adjusted to match the building occupant use. The return system ductwork was modified and sequences were revised to enable economizing in the building. The overall exhaust from the building was reduced as we identified spaces that do not need exhaust and the exhausts were capped off. The amount of outside air brought into the building in summer was also reduced.

A complete test and balance was performed in all air handling units and some of the spaces that have comfort issues. Occupancy sensors were installed in spaces served by VAV boxes to shut off boxes when unoccupied. Programming changes were made to VAVs to utilize the CO2 sensors to do Demand Controlled Ventilation.

The restroom ductwork was rerouted, so that it passes through the wheel to enable energy recovery from the exhaust.



## Project Highlights

- Economizer functioning through ductwork and sequencing revisions
- Installed occupancy sensors in all classrooms and conference rooms to shut off VAV boxes
- Rebalanced entire building
- Adjusted occupancy schedules
- Rerouted exhausts through the energy recovery wheel
- Insulate bare steam and condensate pipes in the building
- Installed steam isolation valves in the building to cut off steam at night during summer.