

Library Info. Sciences Building #0331

Building Gross Sq.Ft.: 51,376

Retrocommissioning Team Visit Period: Oct 2014—Nov 2014

Principal Building Use: Offices and Conference Rooms

Building & Occupant Overview

The building was originally built as ACACIA Fraternity house. The University purchased the property and did the first renovation for occupation in 1992. The renovation converted some of the recreation rooms into the library and dorm rooms into offices.

The air handling unit controls have gone through major modifications over the years, including the most recent DDC controls upgrade completed in 2014 immediately prior to Retro. There were 7 AHU's upgraded on the project. And chilled water was added to take the place of the old chiller. Since it was a fraternity, several of the rooms are conditioned by fan coil units, both cooling only 2-pipe systems and heating and cooling 4-pipe systems.

The facility's total metered energy during FY14 was 5,152 MMBTU.

Retrocommissioning Specifics & Results

Immediately prior to the Retrocommissioning visit, a DDC controls upgrade and chilled water entrance were installed. This allowed more opportunity to take advantage of the technology and increased the energy savings opportunities. Both AHU-1 and AHU-4 were both decommissioned (AIP) during the Retro visit. AHU-4 was taken completely out of service with ductwork modifications, while AHU-1 can easily be turned back on if there is a need this summer. AHU-3 had a pneumatic control revamp by the TC mechanic, since the AP main was controlling the NO CHW and STM valves, so when the AHU was scheduled off, both valves went wide open.

A complete ASHRAE 62.1 calculation was done and all OA numbers were reset according to actual occupancy. AHU-6 and AHU-7 are both 100%OA fans meant to deliver fresh air to spaces while fan coils temper these same spaces. The controls were modified to make this happen, while over 50% airflow reduction happened on both fans by utilizing a VFD on AHU-6 and re-sheaving AHU-7.



Project Highlights

- Decommissioned 2 AHU's (AHU-1 and AHU-4)
- Major control modifications
- Cut OA by ~ 50% to building as a whole
- Increased control of STM vlvs on HTX-1 and HTX-2
- Patched OA intake for AHU-4 and other "vents" through basement walls
- Calibrated all sensors and transducers
- Visited each Fan Coil and thermostat and calibrated accordingly
- Modified existing scheduling to better match building usage
- CHW meter set up FWD and REV flow instead of FWD only, fixed Feb 2015