

retrocommissioning project three

Newmark Civil Engineering Building

Quick Facts...

Total Building Square Feet:	184,395
Expected Utility Savings per Year:	\$150,000
RCx Spent to Retrocommission:	\$241,000
Estimated Payback:	1.6 years
RCx Team in Building:	Jan. to Feb. 2008



Green House Emissions Reduction:

The 141 Tons of CO2 saved is equivalent to the emissions from 16,061 gallons of gasoline!

*based on <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>)

Background

Newmark Civil Engineering Building is a 1960s building with original systems and controls.

How savings were achieved:

- Restored the air handling units to their original design, while increasing or decreasing their respective airflows due to new demands
- Achieved chilled water, fan, and steam savings in office space during off hours
- Replaced old pneumatic controls with programmable controls

Project Highlights

- ▶ Programmed occupancy schedules to reduce fan systems at night & close outdoor air dampers
- ▶ Repaired faulty/non-functioning controls for 28 air handling units
- ▶ Provided DDC Controls and web graphics for nine (9) dominant air handling units
- ▶ Enhanced humidity control thereby saving chilled water costs; even for lab units!
- ▶ Reduced number of exhaust fans and/or air quantities
- ▶ Replaced thermostats from aspirating to wall mount throughout building for better temperature control
- ▶ Many maintenance items were addressed
- ▶ Suggestions for planned future addition were given
- ▶ Advised depts. to consolidate servers to one room

Current Calculated Energy Savings*:

Electrical energy saved: **13%**

Chilled water energy saved: **53%**

Steam energy saved: **9%**

* based on comparison of monthly utility data from Feb. 2007 to June 2007 vs. Feb. 2008 to June 2008. Condensate meter includes condensate from adjacent Hydro-Systems Lab.