



RETRO-COMMISSIONING CALVERT HIGH SCHOOL Prince Frederick, MD



This project highlights the importance of the commissioning process; mechanical contractor quality control and BAS contractor checkouts are typically not sufficient to fully review and verify installation and operation of mechanical systems.

CLIENT FEEDBACK

The primary reasons for retro-commissioning Calvert High School were issues due to thermal comfort and equipment operation. Lutz Engineering staff moved expeditiously in identifying key operational discrepancies, created easy to follow exception record reports and worked effectively with CCPS staff, the mechanical contractor and BAS contractor in bringing resolution to issues. Lutz Engineering staff possesses not only exceptional knowledge of mechanical system design and equipment, they are very strongly versed in controls and BAS programming. We would not hesitate to utilize the services of Lutz Engineering for our future needs. – *Suchita Warner, Supervisor of Construction, CCPS*

PROJECT BACKGROUND

Lutz Engineering provided retro-commissioning services for Calvert High School, located in Prince Frederick, Maryland. Third party commissioning was not required for this building and numerous operational issues and high energy consumption resulted. Retro-commissioning took place between April and September of 2014.

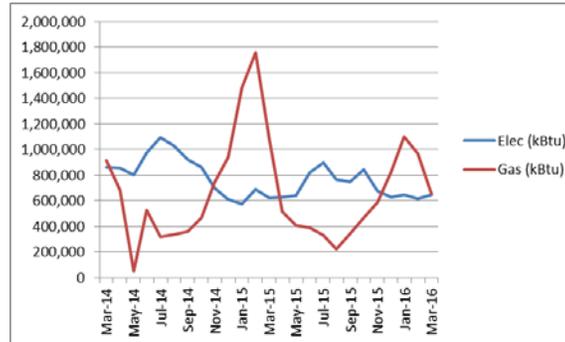
SCOPE OF WORK

Lutz Engineering developed installation checklists and functional tests based on the construction documents. Working closely with the school district's building operations personnel, the construction manager, mechanical contractor and controls contractor, Lutz Engineering worked through all mechanical equipment and systems to verify correct installation and operation. Issues were detailed on an electronic Exception Record on the Lutz Engineering commissioning website.

Over the course of the retro-commissioning Lutz Engineering found equipment that was not correctly programmed, incomplete integration of mechanical equipment with the building automation system (BAS), lack of operational fine-tuning, incorrect setpoints and schedules.

ENERGY CONSUMPTION/COST SAVINGS

Year (Apr-Mar)	Electric Consumption (kWh)	Total Electric Cost
2014/2015	2,853,269	\$402,068
2015/2016	2,508,755	\$329,945
% Incr/Decr	-12%	-18%
Year (Apr-Mar)	Natural Gas Consumption (Ccf)	Total Natural Gas Cost
2014/2015	85,353	\$72,806
2015/2016	66,320	\$47,639
% Incr/Decr	-22%	-35%



The decrease in energy consumption and cost on the preceding tables illustrate the cost of not commissioning. Commissioning fees were recouped in less than sixth months.

Total 12-Month Cost Savings: \$97,290