

SHOWCASE PROJECT: CAMAS SCHOOL DISTRICT: LACAMAS HEIGHTS ELEMENTARY MODERNIZATION

SOLUTION OVERVIEW

Camas School District planned a renovation of Lacamas Heights Elementary, one of six primary schools in the District. The project, which began in March 2013 and includes a number of energy efficiency initiatives, resulted in an energy savings of 19% and cost savings of \$11,000 annually.

The primary school was built in the mid 1960's and is composed of five stand-alone masonry buildings, an administration building, and two portable buildings at the school.

SECTOR TYPE

Education

LOCATION

Camas, Washington

PROJECT SIZE

47,000 square feet

FINANCIAL OVERVIEW

Project Cost \$312,500

SOLUTIONS

The overall project consists of a number of efficiency upgrades including the refurbishment and improvement of the HVAC systems serving the POD areas (modular classrooms) and replacement or upgrade of most of the HVAC systems serving the main school building and offices. In addition, the control systems will be modified to improve comfort and reduce energy usage throughout the school.

The following is a list of planned energy efficiency measures by building for Lacamas Heights Elementary:

Pods:

- Refurbish existing Pace AHU's including new bearings, belts, etc.
- Clean and repair cabinet and motorized dampers
- Add demand control ventilation with CO2 control

- Clean, test and repair all electric duct heaters
- Reprogram controls to optimize economizer, schedule and usage of heat pump on pod 1

New and old gym:

- Integrate new AHU into Delta controls system and reprogram operation and schedule
- Add demand control ventilation with CO2 control to both gym units

Main Building:

- Replace U6 and U7 electric resistance heating with heat pumps
- Install new packaged units or split system & refurbish existing fans, cabinets and dampers
- Reprogram and replace DDC controls to optimize usage of the new heat pump systems

Library:

- Demo and patch ventilator UV-1 and replace with new roof top packages heat pump
- Includes new ductwork and DDC controls

Computer Lab:

- Replace existing roof top packages heat pump with new
- New unit to be high efficiency and have low ambient controls to allow proper heat pump operation in winter

Office area:

- Replace 7 packaged roof top units with 5 units to combine zones, reduce over-aired condition, improve comfort and reduce energy use; 2 Ton units to be high efficiency

OTHER BENEFITS

Camas School District is working with their energy service provider to apply for funding through the Energy Grants Program with the Washington State Office of Superintendent of Public Instruction which provides grants of up to \$1,000,000 for qualifying school districts.

Annual Energy Use

(Source EUI)

Baseline(2013)



Actual(2014)



Energy Savings

19%

Annual Energy Cost

Baseline(2013)



Actual(2014)



Cost Savings

\$11,000



Lacamas Heights Elementary School