

SHOWCASE PROJECT: J.D. ZELLERBACH ADMINISTRATION HEADQUARTERS

SOLUTION OVERVIEW

Camas School District selected the J.D. Zellerbach Administration Headquarters to undergo an energy efficiency renovation effort to the campus' four buildings. This campus was originally built in 1953 and operated as an elementary school until 2010 when the school was remodeled into the current administration center. Energy efficiency measures (EEMs) included in this project resulted in an energy savings of 20% and a cost savings of \$10,000.

The campus is comprised of four buildings, all of which were included in the efficiency efforts. Buildings 1 and 2 were constructed in 1953 and house the district administration and operations staff. These two buildings, connected by a lobby, are mirror images of each other. Building 4, added in 1966, includes a kitchen, cafeteria, gym, and two classrooms used for Head Start classes. Building 3 was completed in 1973 and remodeled in 2010 and consists of the district print shop, information technologies center, and classrooms used for preschool and daycare services.

SECTOR TYPE

Education

LOCATION

Camas, Washington

PROJECT SIZE

67,000 square feet

FINANCIAL OVERVIEW

Project Cost \$159,000

SOLUTIONS

The overall project consists of improvements to the main HVAC systems including: reprogramming and recommissioning of the direct digital controls (DDC) and graphical user interface, installing CO₂ sensing and demand control, and repair and replacement of broken mechanical and control components.

Construction for the project at Zellerbach began in July 2013 and was completed the following month. Through observations, trending and data logging, the District revealed that parts of the HVAC control system were broken and not functioning properly. They were able to address these repairs as part of the renovation which included the following energy efficiency measures implemented in each campus building:

- Additions, upgrades, reprogramming and commissioning to the existing Alerton DDC HVAC system controls
- Replacement/repair of equipment including dampers, actuators and valves
- HVAC system optimization including reduced hours of operation of air handling units to match actual occupancy and verification of override thermostats
- Installation of CO₂ sensors on each of the six air handlers to minimize outside air uptake
- Optimization of outside air damper controls and free-cooling airside economizer

OTHER BENEFITS

In addition to the energy savings benefits of the airside economizer implemented at Zellerbach, the system will also improve the indoor air quality of the facility as a greater amount of ventilation air is provided to the occupied spaces than during the minimum outside air mode.

Annual Energy Use

(Source EUI)

Baseline(2013)



Actual(2014)



Energy Savings

20%

Annual Energy Cost

Baseline(2013)



Actual(2014)



Cost Savings

\$10,000



J.D. Zellerbach Administration Headquarters