

## **SHOWCASE PROJECT: BULLITT COUNTY PUBLIC SCHOOLS: MT. WASHINGTON ELEMENTARY SCHOOL**

### **SOLUTION OVERVIEW**

Mt. Washington Elementary is a K-12 school building located in Kentucky, and serves over 600 students in grades K-5. Bullitt County Public School District (BCPS) selected this facility to undergo a major renovation of the HVAC system, lighting, and indoor air quality to reduce energy consumption and improve the learning environment for students. The 1.5-year project resulted in an annual energy savings of 32 percent and annual cost savings of \$28,000.

Mt. Washington Elementary was originally built in 1974, with 51,991 square feet of building space. During the renovation, the building size was increased to 64,797 square feet. The additional square footage will be used to increase classroom space, create a larger media center, and install a new gymnasium. The building also houses a pre-K program and a morning and afternoon YMCA childcare center. The district implemented a number of earlier projects in the building, including HVAC controls and upgrades to lighting from T-12 to T-8 in 2009.

### **SECTOR TYPE**

Education

### **LOCATION**

Mt. Washington, Kentucky

### **PROJECT SIZE**

64,700 Square Feet

### **FINANCIAL OVERVIEW**

\$4.5 million

### **SOLUTIONS**

To improve the energy efficiency and indoor air quality for students, BCPS chose to replace the rooftop HVAC system with a geothermal system. In addition, improvements were made to the interior and exterior lighting of the facility.

The new geothermal system included dedicated outdoor air units and wireless controls, which are tied into the district's centralized building automation system. The lighting renovation included

upgrades from T-8 fixtures to LED lighting for the building interior and exterior.

### **OTHER BENEFITS**

In addition to the energy and cost savings of the project, the district expects to improve the indoor air quality and lighting levels of the building. These added benefits will have a positive impact on the learning environment for the employees, students, and staff. Both the geothermal HVAC and the LED lighting systems are expected to reduce labor and maintenance costs.

## Annual Energy Use

(Source EUI)

Baseline(2015)



Actual(2018)



**Energy Savings**

**32%**

## Annual Energy Cost

Baseline(2015)



Actual(2018)



**Cost Savings**

**\$28,000**



Mt. Washington Elementary School