

Project Details

Client: **Shawnee Local Schools**

Design Professional: **Smith-Boughan & SHP**

Services Provided: **Engineering & Construction
of Steam Plant & Chilled Water Plant**

Market: **Institutional**

Location: **3255 Zurmehly Road, Lima, Ohio 45806**



Project Summary

The district was faced with critical mechanical systems that were inefficient and have exceeded their useful life. They were also in a financial situation where they did not have the funds for capital replacement expenditures.

The (5) steam boilers that serve the heating systems for the Middle School and High School buildings had exceeded their useful life cycle by 12-15 years. This equipment was operating with an overall efficiency rating of 55% at best.

The (2) air cooled chillers and chilled water pumps serving this building were the original equipment to the building and had exceeded their useful life cycle by 15 – 18 years and were in failing condition. Due to the condition and capacity loss as well as the low Energy Efficiency Ratio, the repair and energy cost for this equipment was a significant budgetary factor for the district.

These factors put the district in a high risk situation of equipment failure, high repair and maintenance expense, as well as an excessive annual energy spending.

Solution

- Smith-Boughan and Energy Optimizers, USA partnered in the development and implementation of the boiler plant upgrade for the High School and Middle School, as well as the chiller system for Elmwood Elementary. There were also building automation system upgrades, lighting improvements and district wide computer upgrades completed. This was a turn key project entirely self-funded through energy and maintenance savings and sanctioned by the State of Ohio under house bill 264.

Benefits

- Reduced utility expense
- Reduced maintenance and repair expense
- Cost avoidance due to failing antiquated equipment
- Improved infrastructure
- Reduced environmental emissions
- Project is self-funded through energy and maintenance savings
- Reduced financial burden on the district

[Shawnee High School is a public, four-year comprehensive high school. The total enrollment of 804 includes a senior class of 190 for 2012-13. As a comprehensive high school, Shawnee High School has earned the reputation of meeting the educational needs of its students.]