

HIGHLAND SCHOOL DISTRICT



CASE STUDY

The Highland School District is located in central Illinois and is comprised of two primary schools, two elementary schools, a middle school and high school. The District serves 2,900 students in the surrounding communities. The middle school has 675 students.



The Challenge:

Built in 1999, Highland Middle School is the newest building within the Highland School District. With an annual cost of utilities at \$1.12/ft², this building had the highest utility costs within the District.

Process & Solution:

In 2017, the District was looking to replace the original HVAC systems within the Middle School, as they had exceeded their useful life. Initially, the District went through the Illinois RFP process and received proposals from three companies. Of the three companies, GRP was selected as the District's performance contracting partner. The Board of Education entered into a contract with GRP for \$2.9 million.

GRP suggested the District take a holistic approach to their Middle School project by combining several Facility Improvement Measures all at once. The District moved forward with GRP's suggestions for the building, and reduced the overall cooling tonnage by over 100 tons required by the original design.



Facility Improvement Measures:

- Replaced RTUs with custom, high-efficiency systems
- The VAV System Design was made more efficient
- Installed 96% high efficiency boiler systems
- Installed New Wind Vented Roof with R-30 Insulation
- Interior/Exterior LED Lighting Systems
- Building Envelope Improvements
- Expanded/Upgraded DDC Control System



Reduced Carbon Footprint:



GAS

Reduced gas usage by 55% (23,870 Therm reduction)



ELECTRIC

The electric usage was reduced by 41% (a 364,800 KWH reduction).



ENERGY

The total energy reduction achieved an annual utility savings of \$62,690 for the District. Additionally, in 2017-2018 the fully air conditioned facility was now operating at \$0.58/ft², resulting in a 49% reduction in annual utility costs.



GREENHOUSE GAS EMISSIONS

The amount of harmful greenhouse gas emissions was reduced by 279,014 pounds (annually). This equates to saving 149 acres of forest (annually) and reducing 14,241 gallons of gasoline (annually).

The project was completed in the fall of 2017.

In partnership with the District, GRP was able to reduce their overall carbon footprint.

Energy Usage Comparisons

