

Case Study

Ecorse Public Schools

Ecorse, Michigan



Ecorse Public Schools Leverages Savings to Fund Critical Capital Improvements



Ecorse Public Schools is small school district adjacent to the City of Detroit. Ecorse has a long and storied history but has fallen on difficult financial times in recent years. This has depleted the district of the resources required to maintain and renew infrastructure. Ecorse Schools faces that same challenges that many districts face, relatively flat revenues and mounting deferred maintenance. The top priorities from a deferred maintenance standpoint were outdated and unreliable control systems and mechanical equipment in a state of disrepair. Rather than simply accept uncomfortable classrooms as the “new normal”, district officials embraced the concept of Performance Based-Contracting to not only design and deliver the project, but to assist in funding the project through a comprehensive set of energy reduction solutions.

In addition to gaining control over the classroom environment, the district was able install new stadium lighting on their football field which made a dramatic difference in the player and fan experience. New flooring in the cafeteria/atrium area also provided a brighter, more durable environment for meals and studying.

Ecorse Public Schools solicited proposals from Energy Service Companies or ESCO's and selected Johnson Controls to be their partner to develop a comprehensive solution to solve many of the district's infrastructure issues and to provide assurances that the savings would be available to help cover the debt service. Construction was completed in 2019..



Challenges



- Rising energy costs
- Risk of equipment failure - building automation, mechanical equipment
- Uncomfortable learning conditions
- Need for permanent football stadium lighting
- 136,000 sq. ft. of aging Infrastructure
- Lack of capital funds for upgrades

Johnson Controls solutions

- Interior and exterior LED lighting upgrades
- A new LED stadium lighting solution
- Replaced cafeteria flooring
- District-wide air handler refurbishment
- Chiller rebuild
- New district wide energy management system
- Water conservation improvements
- Building Envelope - weatherproofing\
- Power factor correction
- Address miscellaneous infrastructure issues

Results

- Self Funded Solutions - *\$3,194,280 in Improvements without a budget increase*
- Energy & Operational Savings
 - *\$211,402 annually*
 - *32,948,840 kwh, 17,700 KW, 1,044,526 Therms of natural gas over term of contract*
 - *31% reduction in energy*
- Guaranteed Outcomes – *Cost, technical & fiscal performance*
- Operational Integrity - *Replaced aging equipment prior to failure*
- Turnkey Approach - *Single point of accountability*
- Greenhouse gas emissions - *Reduced 32,640 tons of CO2*

Project generates over \$5 million over life of project in energy and operational savings!

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