

LED  
Lighting

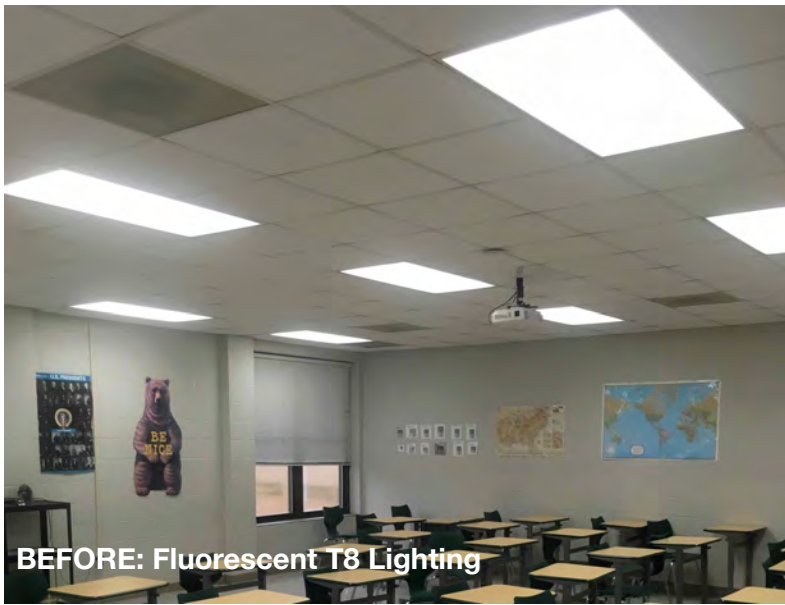


# John Carroll Catholic High School

## Birmingham, AL

A LED Lighting upgrade to reduce energy and maintenance costs and improve the learning environment.





BEFORE: Fluorescent T8 Lighting



AFTER: LED Lighting

336,116 kWh Reduction  
Generating an estimated  
**\$46,000** in Annual Savings

**60%** Reduction in  
Lighting Energy Costs

**Zero Upfront  
Costs**

## Opportunity

Like many schools throughout the country, John Carroll Catholic High School is always looking for cost-effective ways to reduce operating expenses and improve their students learning environment. So when SEMCO and Alabama Power identified a LED lighting opportunity that would allow the site's leadership to do both, the response was one of interest, but also one of budgetary caution. With T12/ T8 fluorescent and metal halide fixtures throughout the campus, the energy reduction opportunity was clear. However, considering the school already had several on-going capital projects, funding for the new lighting would be difficult to include in the annual budget. Luckily, Alabama Power's energy services group was able to offer the perfect solution.

## Solution

The main goals for this project were to reduce annual energy and maintenance costs, update the schools interior aesthetics and minimize the upfront capital needed to install the project. To do this, the first step was for Alabama Power and its contracting partner, SEMCO, to conduct a detailed audit of the facility's existing lighting system. From the audit, a lighting energy model was created that would allow the project development team to evaluate and compare multiple fixture manufacturers to determine the best fixtures and solutions with the lowest life cycle cost.

This means that the developed project not only took into account the initial cost of the LED solutions, but also the long-term operating costs of the installed technology. Once solutions were decided, new fixtures were installed in the high traffic areas of the building like the classrooms and hallways and cost-effective retrofit solutions were installed in less occupied areas like locker rooms, misc. offices and closets. Finally, to avoid any need of upfront capital, Alabama Power developed a custom finance solution that would allow John Carroll to pay for the upgrades on their electric bill over a number of years. This allowed the school to allocate their financial resources elsewhere but still experience substantial savings from the LED upgrade.

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***“SEMCO and Alabama Power did an excellent job of developing a project that would not only reduce our energy costs, but also update the aesthetic appeal of the building . Our campus is brighter than ever and we look forward to experiencing the many benefits of the LED lighting for years to come”***

*Dr. Anthony Montalto | Principal*





## About SEMCO

SEMCO is an energy management company. We help businesses save energy and reduce electricity costs by providing turnkey energy efficiency solutions, renewable energy systems and utility bill consultations.

Whether it's one facility, a region or the entire country, we help customers roll out systemized upgrades that enable them to take advantage of best practices and the latest technologies. We design and develop custom solutions that minimize risk and maximize value, and are optimized for each facility, its uses and users.

In addition, we make energy solutions feasible by helping customers take advantage of all potential financial incentives. On average, the incentives obtained cover 20% - 30% of our solution's costs.

## Additional Services

### Supply Side

- Energy Procurement
- Billing Audits
- Demand Management

### Demand Side

- LED Lighting
- HVAC Controls
- Compressed Air
- VFD's & Controls
- Capacitors

### Connect Your Systems (IOT)

- Sub-Meter Buildings
- Asset Tracking & Security
- Measure and Verify Savings (M&V)