

Our Lady of Mercy High School

Fayetteville, GA

Situation

Our Lady of Mercy Catholic High School is a co-educational, college-preparatory high school of the Archdiocese of Atlanta. Its 54 acre campus, located six miles south of Atlanta's Hartsfield-Jackson International Airport, serves a nine-county area of metro Atlanta.

In late 2012, officials at the school contacted their Georgia Power key account manager seeking suggestions for lowering their monthly energy bill. One of the suggestions offered to the school was an evaluation of their current outdoor lighting system to determine if energy-saving Light-Emitting Diode (LED) lighting could help reduce their energy bills.

Action Plan

Georgia Power's outdoor lighting experts visited the school campus and conducted a lighting analysis. Based on the analysis, a proposal was made to replace the 34 existing 400-watt high-pressure sodium (HPS) cobrahead fixtures in the campus parking lots and driveways with 34 new 155-watt LED fixtures. The proposed LED fixtures would provide the energy savings that the school was seeking, along with improved site lighting and a bright white light in place of the current orange color HPS lighting.

The school administration accepted the LED lighting proposal and signed a contract for the new LED lighting in late 2012. Removal of the old HPS lighting and installation of the new LED lighting was completed in February 2013.

The new lighting installed utilized 34 Cooper Lighting 155-watt Navion LED lights in the three LED Light Square configuration. All fixtures have a Correlated Color Temperature (CCT) of 4000K and a Color Rendering Index (CRI) of 70. All existing poles and pole locations were used.



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Results/Benefits

- **Old HPS System:** 34 400-watt (465 system watt) HPS cobrahead fixtures = 15,810 watts
- **New LED system:** 34 155-watt LED area fixtures = 5,270 watts
- 67 percent reduction in energy usage related to outdoor lighting
- Enhanced the safety and security of students, faculty, and property
- LED lighting is directional – all light is directed toward the area to be illuminated
- Minimized/eliminated light trespass
- Greatly improved lighting uniformity (eliminated dark spots and hot spots)
- Long fixture life and reduced maintenance requirements
- Environmentally friendly (no hazardous materials to recycle, reduced energy usage lowers greenhouse gas emissions)
- Instant on/no warm-up time

