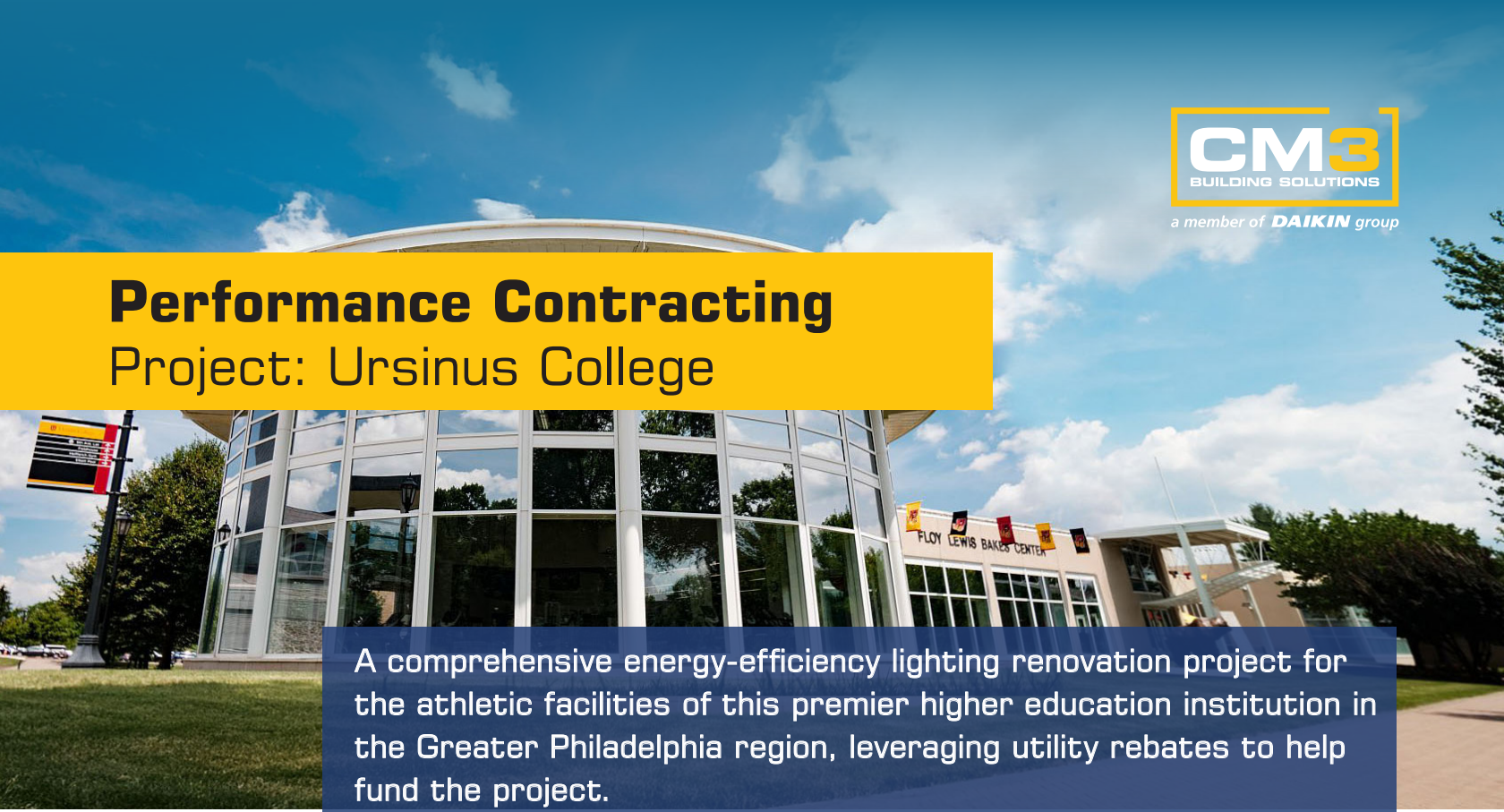


Performance Contracting

Project: Ursinus College



A comprehensive energy-efficiency lighting renovation project for the athletic facilities of this premier higher education institution in the Greater Philadelphia region, leveraging utility rebates to help fund the project.

Background

Serving approximately 1500 students, Ursinus College is a private liberal arts college located just outside Philadelphia.

The College was struggling with several areas within its athletic facilities which were using inefficient, inconsistent lighting. Maintenance was also problematic as some of the fixtures had to be taken apart for bulbs to be replaced.

Ursinus College reached out to CM3 for assistance in assessing the lighting needs throughout the facility and identifying energy savings and potential utility rebates.

Results

CM3's assessment uncovered that foot-candle levels in all areas – pool, field house, basketball court and gymnastics center – were lower than would be appropriate for their specific use case. Further, CM3 identified that by converting from metal halide bulbs to fluorescent ones, Ursinus College would not only save energy but also qualify for an Act 129 rebate from local utility company, PECO.

In addition to the energy efficiency of the bulbs themselves, each of the new fixtures has an occupancy sensor that registers both heat and motion. This enables the lights to be turned on only in areas being used and to turn off when no activity is detected.

CM3 provided turnkey demolition, design, installation and project management services for the project, including coordinating Act 129 rebate documentation with PECO.

Project Overview

Cost: \$168K

Savings: \$24.8K/Year

Rebate: \$25K PECO utility rebate

Notes: Occupancy sensor savings calculated at 25%

About PA Act 129

Pennsylvania's Act 129 offers rebates to help reduce energy consumption and peak demand.

The Pennsylvania Public Utility Commission oversees the program.

Electric distribution companies that serve more than 100,000 customers are required to develop programs that offer incentives to customers who implement energy efficiency projects.

The programs are funded through a surcharge on consumer's utility bills.

Rebates are provided for various energy efficiency initiatives including high-efficiency appliances, lighting, building retrofits, and smart meter installation.



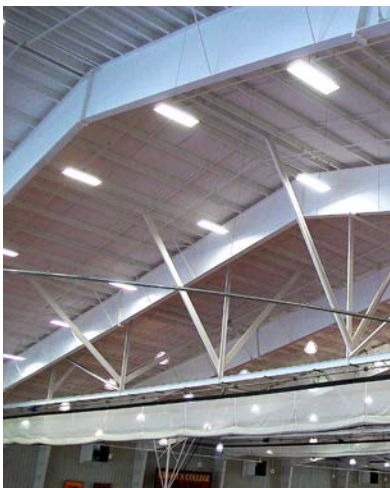
Basketball Court

- » Enhance light levels from 20 foot-candles to an average foot-candle reading of 62, based on a minimum of 40 and a maximum of 74.
- » Replace 36 400-watt metal halide high bay fixtures with 36 new 6-lamp T8 fluorescent high bay fixtures including lamps and wire guards.



Pool

- » Enhance light levels from 18 to 30 foot-candles to an average foot-candle reading of 44, based on a minimum of 33 and a maximum of 54.
- » Replace 35 400-watt metal halide fixtures with 35 new 6-lamp vapor tight T8 fluorescent high bay fixtures including lamps and occupancy sensors. All linear T8 fluorescent lamps are coated.
- » Retrofit 16 two-lamp four-foot linear fluorescent fixtures with new T8 lamps and T8 electronic ballasts.



Field House

For the Field House, CM3 presented Ursinus with two options. The College could replace the metal halide high bay fixtures with either a T8 or a T5 system. A comparison of costs, energy savings per year and Act 129 rebates was provided for each option. The T5 option was selected.

- » Replace 152 400-watt metal halide high bay fixtures with new fluorescent high bay fixtures including lamps and occupancy sensors.
- » Energy savings calculations were based on an estimated 3,780 hours of operation (9am to 12am x 7 days x 9 months) for 129 fixtures operating on normal lighting circuits.
- » Energy savings calculations were based on an estimated 5,040 hours of operation (9am to 12am x 7 days x 12 months) for 23 fixtures operating on night light circuits.



Gymnastic Area

- » Enhance light levels from 25 foot-candles to an average foot-candle reading of 56, based on a minimum of 38 and a maximum of 68.
- » Replace 18 400-watt metal halide high bay fixtures with 18 new 6-lamp T8 fluorescent high bay fixtures including lamps and wire guards.
- » Energy savings estimated at 2000 hours of operation.

