



March 21, 2017

Ron Turner,
Facilities Superintendent,
The Ohio State University at Marion

Marion Campus ROAM System

Within the past several years the Marion Campus, consisting of OSU at Marion and co-located partner Marion Technical College, have worked together to complete projects for sustainability and energy savings in accordance with HB251.

Within the past year the Marion campus installed the ROAM system, by Acuity Brands. This is a wireless outdoor management system to control flexible scheduling of exterior campus lighting. The system minimizes maintenance costs, optimizes energy use and provides a safe nighttime environment on the Marion campus. It is expandable to control 2,000 fixtures, but only 200 campus fixtures are, or will be, under the control of the system. By use of a wireless node installed on each LED fixture the ROAM system controls the "on/off" or "dusk-to-dawn" function per fixture. The nodes install in a 3 or 5 pin adaptor in each fixture. So far the campus reduces parking lot lighting to keep only a few light fixtures on for the night, weekends and holidays when the campus is vacant. The parking lots are not used after 10 p.m. since the Marion campus is a commuter campus and not residential.

Other features of the ROAM system is the ability of the system to report any individual light fixture non-functioning and submit work orders which saves time by maintenance to visually check the fixtures daily. The computer shows the exact location and performance of each light fixture with colored icons indicating operational performance over 24 hours. The calendar control lets the campus set up operational schedules for fixture groups or full system operation. The system tracks burn-hours and energy use per fixture too. For the fixtures controlled by the ROAM system the savings is approximately 91,651 KWH per year on the average.

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LED, a bright idea on campus

Ohio State Marion and Marion Technical College students are now benefiting from commercially available light emitting diode (LED) technology that more evenly and efficiently lights parking lots and walkways on campus.

According to Marion Campus Superintendent of Facility Maintenance and Security Ron Turner, this initiative is being incorporated across campus because the lighting not only is brighter, but much more energy and cost efficient to run. LED lights were recently installed on walkways leading past the new University Drive extension, newly developed campus parking areas, and a walkway heavily traveled by student pedestrians commuting between The Annex of Marion student housing project and campus. Ohio State Marion's new Science and Engineering Building, set to begin construction in April 2016 and open in summer 2017, will utilize mostly LED lighting both inside and out.

LED fixtures produce better light quality, using less wattage per fixture than the old metal halide fixtures in the other campus parking lots. For example, 12 new parking lot LED light fixtures cost \$59 each to operate nightly for an entire year, or a total of \$708 annually. By comparison, if the campus used metal halide fixtures, each fixture would cost \$180 per fixture to operate each year, or a total of \$2,160 annually. The other benefit with LED lighting is lower maintenance cost because the lights can last up to 10 years.

Marion Campus Public Safety Supervisor, Sergeant Ron Kuzmaul, shared that improving on the continued safety of our students is paramount, and improved lighting on campus contributes directly to student safety.

"Lighting is the most important factor when it comes to safety at night," said Kuzmaul. "The more we can see potential threats, the more we can take action. It also acts as a great deterrent to those who might have criminal intentions."

"All of Ohio State's campuses and public safety strive to get as much lighting on campus as possible," he added.

The goal for the campus in the next three years is to change all exterior light fixtures to LED through a request to the State for capital funding in 2017, submitted by Ohio State Marion and Marion Technical College. When the project is complete the campus will save \$16,000 to \$20,000 per year in energy costs.