

CASE STUDY

UNIVERSITY OF ARIZONA, TUCSON, AZ
LIGHTING RETROFIT and UPGRADE

Located in Tucson, UA was the first University in the state of Arizona, founded in 1885. The university includes the University of Arizona College of Medicine which is one of three medical schools and the only MD granting medical school in Arizona.

With 38,767 total enrolled students, the mission of the University of Arizona is, "To discover, educate, serve, and inspire."



THE CLIENT CHALLENGE

A downturn in Arizona's economy in the 2000s led to less money being allocated by the state legislature to Arizona's universities. UA was hard-hit, and the university was forced to consider extensive changes, beginning in 2001. As a result, they needed to reduce their energy footprint.

RTS performed an audit of over 100 buildings on campus. RTS evaluated vast numbers of variables such as how the space will be used, amount of day-light, load potential, dimming, lamp color, initial cost, and cost to maintain moving forward.

THE LIGHTING SOLUTION

Retro-Tech performed a campus wide lighting upgrade encompassing over 6,000,000 sq.ft. The project included the replacement, conversion, or retrofit of over 55,000 fixtures. The majority of existing fixture types were slimline strip fixtures. In classrooms, labs and offices the fixtures were replaced with new surface mount wraparound

fixtures with standard power ballast and high lumen long life T8 lamps. In hallways, stairwells and maintenance areas the fixtures were converted to T8 lamps and low power electronic ballasts. For all existing lay in fixtures throughout the campus, reflectors were utilized with lamp and ballast retrofits. Most incandescent fixtures were retrofit with screw-in compact fluorescent lamps. All exit signs were replaced with new LED signs. In certain areas, existing 400w metal halide fixtures and 400w high pressure sodium fixtures were replaced with new T5HO fixtures.

THE RESULTS

The energy savings for a project of this magnitude were significant. The kW and kWh were reduced 50% and 55% respectively. The campus expects to realize over \$1,000,000 in annual savings. The maintenance savings were also significant. The existing lighting system was comprised mostly of slimline lamps that have an average life of 12,000 hours. The long life T8 lamps installed have an average life of 24,000 hours.

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