

CASE STUDY

WRIGHT PATTERSON AIR FORCE BASE LIGHTING RETROFIT and UPGRADE

Wright-Patterson Air Force Base, located in Dayton Ohio. The base's origins begin with the establishment of Wilbur Wright Field 1917 and Patterson Field. Today has a total of 27,406 military, civilian and contract employees that work for the base.

The host unit at the base is the 88th Air Base Wing. The 88 ABW operates the airfield, maintains all infrastructure and provides security, communications, medical, legal, personnel, contracting, finance, transportation, air traffic control, weather forecasting, public affairs, recreation and chaplain services for more than 60 associate units.

THE CLIENT CHALLENGE

Wright-Patterson Air Force Base, dealing with government budget cuts, needed to upgrade their lighting to lower their energy costs. With over 2 million sq. ft. of buildings had some interesting challenges in accomplishing their energy and lighting needs.

RTS performed an audit of thirty-three buildings on Base. 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

This lighting project was performed in all thirty-three buildings on the Base. In addition, all of the traffic signals were replaced with new LED's. Nearly 14,000 fixtures were retrofit with new energy efficient lamps and ballasts



with 4,500 specular reflectors installed where applicable. RTS installed over 1,500 new energy efficient fixtures throughout the District. A major portion of the project involved replacing 400 watt metal halides with new T5HO fixtures with occupancy controls. In warehouse applications, the controls reduce the operating hours by as much as 80%. New lay-in lenses and wrap lenses were installed to replace many of the existing broken or missing lenses.

THE RESULTS

The overall results are impressive. The lighting kW and kWh were reduced 37% and 39% respectively. The light levels, appearance, and function of the buildings were also improved. By standardizing lamp and ballast types, the Base will see additional maintenance savings on top of the \$300,000+ in annual utility savings.

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