



# LARGE MULTI-TENANT OFFICE



## EXISTING CONDITION

This 2 million sq. ft. facility was a converted Allis Chambers plant in West Allis, Milwaukee. While rather modern, the mostly T8 technology was a candidate for an upgrade to LED.

The T8 system was an aging and becoming a full time job just changing bulbs and ballasts. The ballast system was difficult to access due to the up-light design and height of the fixtures. Two parking structures and the exterior was also requiring constant maintenance and was inefficient.

## INTERIOR LIGHTING COMMON AREAS CONVERTED TO LED

The halls and common were done first by de-lamping the 6 lamp fixtures to 2 or 4 LED's in the same fixture. Existing ballasts were disconnected. This resulted in a 65% reduction in energy consumption. Other areas that needed improvement were converted on a one for one basis and the lighting levels increased.

## UNDERGROUND PARKING CHANGED FROM HID TO LED

The underground lot was using a 150W metal halide system that was consuming 175w. This was also inefficient since the old fixtures were tucked up in the ceiling between the concrete rails. This was trapping the lighting between the ceiling beams and not distributing the light effectively. Tower engineered a system that lowered the light to the bottom of the beam and then used a 30w LED strip fixture. The result was better light distribution and a 75% reduction in energy consumption. These lights were also on 24/7 so the savings was maximized.

## GROSS LEASE TENANTS ALSO TARGETED

Many of the lease agreements had a gross lease thee included electrical costs. Upgrading these tenants was to the advantage of the owner. Since the tenants had different usage Tower customized the projects to meet the specific desires of the tenants. Some types of clients included heath care, child care, retail and beauty. Different colors and lumen requirements were customized.

## PARKING LOT TECHNICAL DATA- KW/H SAVED PER YEAR

DATE	2014	2015-16	SAVINGS
Year	410,403	92,235	\$ 20,681

MAINTENANCE SAVINGS: \$ 8,877

**TOTAL YEAR SAVINGS: \$ 35,406**

**PAYBACK AFTER GRANTS: 21 MONTHS**      **ROI: 60%**

**WE ENERGY GRANT: \$35,000**

### TOWER ENERGY CAN CHANGE YOUR ENERGY BILL

Using new and innovative technologies, Tower Energy can reduce your gas, electric and water bills. Looking for practical and less expensive alternatives using existing equipment is always a viable option. In addition, making employees aware of simple fixes will add operational efficiency at little or no cost.

### UTILITY SUBSIDY AND GRANT PROCUREMENT

Tower Energy secured a We-Energy grant of over \$35,000 to subsidize the projects.

### FREE ENERGY ASSESSMENT AND TAX ANALYSIS

Tower Energy will conduct a free energy assesment to evaluate opportunities that may exist. We also analyze your utility bills for exemptions from The EPA Energy Act of 2006. This frequently results in a tax refund or exemption on energy used in your facility.