



Is your roadway lighting system at end of life? Do you know if you are meeting the recommended light levels on your roadways and intersections? Are you looking to add new technology such as wireless networks and security cameras?

## Our Outdoor Lighting Service

Metro Engineering Solutions is uniquely qualified to offer municipalities and residential communities a full range of engineering and construction service to install or retrofit and upgrade roadway lighting systems. We can:

- Complete engineering studies to:
  - Inspect and test the complete lighting system
  - Model your existing lighting design performance
  - Create new optimize lighting design to standards
  - Measure the remaining life of the luminaires, poles, foundations, and underground cable and wire
- Replace or refurbish end-of-life and old equipment:
  - Replace old lighting with new vibrant LED fixtures
  - Replace old poles, foundations, circuit conductors
  - Sand, prime and paint poles
  - Upgrade electric service meter services equipment
- Design, engineer, & install new roadway infrastructure
  - Decorative and infrastructure luminaires
  - Street sign and traffic control signs
  - Pole and luminaire mounted security cameras
  - Wireless network controls for:
    - Adaptive lighting
    - System monitoring and outage reporting
    - Intelligent streetlighting sensors



## Why We Light Our Roads at Night

The principal purpose of roadway lighting is to produce quick, accurate, and comfortable visibility at night. These qualities of visibility safeguard, facilitate, and encourage vehicular and pedestrian traffic and can reduce:

- Vehicle to vehicle accidents
- Vehicle to pedestrian accidents
- Vehicle to bicyclist accidents

A proper roadway lighting design can control and direct the illumination to the roads without creating off target spill light, glare, and sky glow.

What studies have shown regarding the value proposition of roadway lighting:

- Motor vehicle accidents are the leading cause of deaths in the United States.
- Nighttime vehicle accidents are 3-4 times higher than daytime accidents.
- Illumination has the highest benefit cost ratio of all road improvement projects.
- Street lighting can reduce nighttime crashes by approximately 30% and pedestrian vehicle crashes at night by approximately 50%.

## There Is More to a Roadway Lighting System Then the Luminaire

Every component of a roadway lighting system has a known and measurable design life. A good, planned maintenance program should include routine equipment inspections to replace end of life equipment prior to catastrophic equipment failures. Fail-in-use pole failures can place the public at risk and increase vehicle accidents. Older first-generation LED luminaires are now ready for new more efficient LED replacements.



## How Much Does it Cost to Have Quality Roadway Lighting?



Single Roadway Light Fixture

\*Customer Owned Annual Energy Cost

\*\*Municipal Owned Annual Energy Cost

Average Annual Maintenance Cost

Total 25-Year Ownership Cost

14' decorative post top with 30-watt LED light fixture

\$28.33

\$19.33

\$30.00

\$1,233 to \$1,458

30' infrastructure pole with 150-watt LED light fixture

\$141.65

\$96.64

\$30.00

\$3,166 to \$4,291

\*Based on Metro Detroit - General Service Rate. \*\*Based on Metro Detroit - Municipal Street Lighting Rate

Call us to get a custom quote to add attractive efficient LED lighting to your roads today!



## What Does a Crash Cost?

U.S. DOT estimates for different crash severity:

- Fatal: \$5.8 million
- Incapacitating injury: \$401,538
- Evident injury: \$80,308
- Possible injury: \$42,385
- Property damage only: \$4,462
- Urban signalized intersections: \$122,056
- Rural unsignalized intersections: \$232,142

Which car would you rather be facing at night?



## Metro Engineering Solutions

MES has been servicing industries in the Midwest since 2006 with combined expert roadway lighting and electrical engineering capabilities with full-service construction services. They:

- Are the principal contractor used by Michigan electric, gas and telecom utilities.
- Able to offer competitive construction labor and material procurement pricing.
- Have an exemplary safety record.
- Provide a one-stop-shop which includes design, engineering, planning, permitting and construction.
- Have a combined engineering, construction, and project management history of over 100,000 overhead and underground fed streetlights.



To improve the safety, security & style of your roadway lighting contact us for a FREE estimate! Our engineering lighting experts are ready to help you take the first step to optimize your roadway lighting system. Please call one of our Lighting Professionals today at [734.597.1020](tel:734.597.1020) or email us at [info@metroes.net](mailto:info@metroes.net). Serving all of Michigan with offices in Detroit, Livonia, Grand Rapids.