

IOWA DEPARTMENT OF TRANSPORTATION SMART TRUCK PARKING



DESIGN, BUILD,
MAINTAIN &
MONITORING



INTELLIGENT
TRANSPORTATION



COST-EFFECTIVE
STRATEGIES



ENERGY EFFICIENT
SOLUTION



MAASTO GRANT
PROJECT

The Iowa Department of Transportation (DOT) awarded eX² a \$3.9M contract to implement a Truck Parking Information Management System (TPIMS). The TPIMS was implemented to provide truckers with the location of available truck parking spaces along its interstate corridors to help address illegal and unsafe parking on highway shoulders, exit ramps or in empty lots.

eX² provided design and implementation services and remains under contract with the Iowa DOT to monitor and maintain the TPIMS. We designed and utilize a remote monitoring and maintenance system to diagnose and troubleshoot problems and outages and remedy situations remotely rather than dispatching a technician. This has reduced the anticipated callouts by over 90%.

Iowa's TPIMS includes a robust communications network for 43 public rest areas and private truck stops along Iowa's I-80, I-29, I-35 and I-380 corridors and uses in-pavement occupancy sensing and screen line video analytics-based technology. Truck parking availability information is shared through Iowa's 511 Traveler Information System as well as existing in-cab routing systems and a hands-free, Federal Motor Carrier

Safety Administration-compliant mobile app. Part of a larger Mid America Association of State Transportation Officials' (MAASTO) effort, Iowa's TPIMS will eventually interconnect to a regional TPIMS network that will include seven other participating states.

eX² worked closely with the Iowa DOT to implement effective budgeting and cost-saving strategies by leveraging existing infrastructure to the maximum practical extent and using lower power consumption and solar power solutions. eX² also worked independently to secure non-traditional parking facilities to increase the number of parking spaces within the TPIMS network. The wireless communications network was designed to support the parking system but can also be scaled to support public safety activities when needed.

Upon the successful completion of its initial 43-site implementation, Iowa DOT wanted some enhancements made to its TPIMS at select sites and chose eX² to deploy these additional technologies. eX² added solar power capacity, infrared illumination at sites that did not previously have lighting, radar as a detection method and screenline and video enhancements.



TRANSFORMING
AMERICA'S INFRASTRUCTURE
ONE PARTNERSHIP AT A TIME™

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