## Intelligent Transportation Systems

**IMPROVING MOBILITY THROUGH SMARTER ROADWAYS** 

Saving lives, reducing congestion and making our communities more livable are some of the key benefits to deploying and developing ITS technologies.

Transportation infrastructure and vehicles with the right information and communication technology can process and share information to prevent potential crashes, keep traffic moving and decrease negative environmental impacts. ITS solutions range from transportation systems management and operations to congestion pricing and tolling systems, as well as planning communications systems, sensor systems and traveler information systems.

## **Meeting Your ITS Challenges and Timelines**

HDR provides a full suite of intelligent transportation systems, traffic and related services. With more than 200 traffic, ITS and emerging technology engineers dedicated to improving the effectiveness and safety of your transportation networks, we'll put together the right team with the relevant skills, expertise and experience to meet your transportation goals.

## **KEY SERVICES**

- System Engineering Analysis and Concept of Operations
- Detailed Design, Plans and Specifications for Highways and Roads
- Program Management and Owner's Representative
- ITS Testing, Commissioning and Integration Planning



## Key Intelligent Transportation Systems Projects



I-29/80 Council Bluffs Interstate System Iowa Department of Transportation, Council Bluffs, IA

Providing program management and general engineering consultant services for the interstate system program. Activities include development of an ITS communications master plan, network architectures, concept of operations and system requirements; evaluation, systems engineering and procurement of the emerging technologies, including adaptive traffic systems technology and full-color, full-matrix dynamic messaging signs; and deployment of intelligent work zone systems.



**SR 520 Bridge Replacement and High-Occupancy Vehicle Program** *Washington Department of Transportation, Seattle, WA* 

GEC leading multiple design-build and design-bid-build projects within the \$4.5 billion program. Designed and are overseeing implementation of ICM strategies, including overhead lane control gantries with dynamic message signs, variable speed limits, queue warning and other ATDM strategies. Designed ITS equipment as well as corresponding communications systems. Established operational parameters and procedures for implementation with the TMC control center software and staff.



I-24 SMART Corridor

Tennessee Department of Transportation, Nashville/Davidson County, TN

Delivering a large ITS project, implementing the SMART corridor from start-to-finish — providing transportation planning, engineering design services and supporting TDOT during construction. Includes development of a conceptof-operations, benefit/cost and safety analysis as well as being the lead ITS designer for the integrated corridor strategies that include safety pull-off, dynamic message signs, Bluetooth and connected vehicle technologies, traffic signal upgrades and fiber connectivity.



West Des Moines Digital Enterprise City of West Des Moines, Des Moines, IA

To improve quality of life for residents and attract and retain business, the city of West Des Moines is implementing a \$50 million fiber infrastructure program to deliver fast, reliable and ubiquitous internet service. HDR is providing a turnkey suite of services, supporting fiber-tothe-home for over 37,000 residences. As the program management team, we developed the basis of design, and are managing consultant teams and delivering design and construction observation for one-third of the residences on an accelerated two-year schedule.



Hampton Roads Bridge Tunnel Expansion Hampton Connector Partners, Hampton, VA

Partnered with VDOT to develop the landside ITS and Electronic Toll Collection System design and specifications. This includes 10 miles of I-64 landside and bridge roadway adjacent to the HRBT island tunnel entrances. The design includes field infrastructure, cabinets, central control, toll gantry, communication, security and electrical infrastructure related to the operation of approximately 85 existing, and 125 permanent, ITS Toll Collection and traffic control devices.



**Truck Intrusion Warning System** New York State Department of Transportation, Regions 8, 10 and 11, NY

Provided final design for the installation of truck intrusion warning systems at various locations in Regions 8, 10 and 11 in the counties of the Bronx, Manhattan, Nassau, Queens, Suffolk and Westchester, NY. Installed systems include a radar detector, camera and dynamic message sign. Connected vehicle technologies are included at select locations. Systems are integrated into their respective Transportation Management Centers.