

TSM&O Category: [Regional Traffic Management](#)

Problem: The highway system in the Kansas City metropolitan area operates at capacity during the peak periods. Recurrent and non-recurrent congestion creates unnecessary delay. Inadequate funding, environmental concerns, and construction costs make increasing capacity expensive and challenging.

Solution: Design, implement, and manage an integrated traffic management system using ITS technologies to make regional transportation safer and quicker.

Project Description: KDOT and MoDOT partnered to create a traffic management system, KC Scout, which covers more than 125 miles of freeway in greater Kansas City.

- About 300 cameras monitor highway conditions
- Imbedded sensors measure and gauge traffic flow
- Electronic message boards update travelers along the freeways and suggest re-route guidance
- Motorists can access a Highway Advisory Radio system or monitor traffic on the KC Scout website
- Ramp meters regulate the rate vehicles enter the freeways from on-ramps
- Comprehensive Bi-State Incident Management Program

Results:

- The public experiences less delays and smoother travel
- The public supports DOT for effectively using tax dollars and improving traffic conditions
- Travel time savings, reduced crashes, fuel consumption, and emissions provide benefits to system users and the general public

Cost: The project's initial cost was \$43 million, with the majority of the funding (80-90 percent) coming from FHWA and the remainder paid for by KDOT and MoDOT.

What's in it for me?

- Ramp metering has decreased freeway merging crashes on I-435 by 64%
- KC Scout produced a benefit-cost ratio of 8:1 to system users and management agencies
- There was a decrease in the travel time index, which indicates an increase in system reliability
- Incidents affecting traffic for more than 90 minutes have been reduced

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Keywords: ramp metering, incident management, freeways, delay, ITS, capacity, traveler information

Project Team: KDOT and MoDOT

Quote: "Utilizing Intelligent Transportation Systems like Scout are paramount to increasing safety, relieving congestion and adding capacity in times where adding additional lanes and building high cost highway construction projects are just unfeasible."

- E. Jason Sims, Manager, Kansas City Scout

Multimedia:

[KCScout.net website](http://KCScout.net)

[@KansasCityScout Twitter Timeline](#)

[2011 Ramp Metering Evaluation Report](#)

[Kansas City Scout Commercial](#)

Real-time Camera Snapshots available on KCScout Website



Source: Kansas and Missouri Departments of Transportation

Segment Travel Time Reductions on I-435



Morning



Afternoon

Source: Kansas and Missouri Departments of Transportation

→ Travel time decrease
→ Travel time increase