

Smarter Work Zones

Using Strategies to Minimize Delays, Maximize Safety and Mobility

Smarter work zone strategies can reduce congestion and improve safety. Implementing these strategies is essential, because work zones trigger 24 percent of nonrecurring traffic delays, an injury every 14 minutes and a fatality every 15 hours.

To reduce traffic delays and increase safety, the Federal Highway Administration (FHWA) is promoting two smarter work zone strategies—project coordination and technology applications—through Every Day Counts (EDC), its initiative to rapidly deploy proven transportation innovations in partnership with the American Association of State Highway and Transportation Officials and industry stakeholders. Smarter work zones are among the 11 EDC innovations transportation agencies and their partners are implementing in 2015 and 2016.



Transportation departments are using smarter work zone strategies, such as variable message signs, to enhance safety and reduce traffic delays.

Photo by: Federal Highway Administration

Project coordination involves smarter construction planning to reduce work zone impacts and generate time and cost savings. Cities and regions are combining multiple projects in a corridor, correlating right-of-way acquisition and utility work and coordinating construction work among agencies.

Technology applications, including queue and speed management, use intelligent transportation systems to manage work zone traffic. Queue management systems alert drivers to work zone backups so they can slow down safely. Speed management solutions, such as variable speed limit signs, manage work zone traffic in real time.

“It’s always easier for drivers to understand the impacts of a work zone if they know what to expect,” said Todd Peterson, FHWA transportation specialist. “Conveying information that reflects current conditions gives them a better perception of how work zones are being managed.”

Many transportation agencies are applying smarter work zone approaches to optimize motorist and worker safety and enhance mobility. The Vermont Agency of Transportation, for example, is using queue warning systems on I-91 bridge replacement projects in Brattleboro and Hartford and on an I-89 bridge rehabilitation job in Waterbury.

The New Jersey Department of Transportation will assess the effectiveness of a variable speed limit system on a 10-mile stretch of I-295 as it approaches the I-295/I-76/Route 42 Direct Connection project, which is under construction in Camden County. Radar detectors will report traffic speeds and vehicle volume by lane in real time. Based on reported data, the control system will automatically trigger messages on portable signs.

The Pennsylvania Department of Transportation developed guidance for using sequential lighting, traveler information and advanced queue warning systems on multilane roads. The agency’s first dynamic advanced queue warning system was deployed in 2015 on a preventive maintenance project on I-80 in Clarion County.

The Michigan Department of Transportation set up the I-94 Corridor Operation Partnership to coordinate projects and minimize travel delays on the 275-mile interstate corridor across southern Michigan. As a result of the partnership’s efforts, project scheduling improved, construction and design staff worked together to accelerate construction and the agency scheduled more work during off-peak travel times.

The Washington State Department of Transportation facilitates a collaborative project planning process that includes short, mid and long-term information-sharing with local and regional agencies. Short-term coordination efforts, which focus on construction over the next three months, provide a convenient way for maintenance staff to schedule work during already planned lane closures to expedite work, reduce traffic impacts and save money. ●

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