



In Work Zones: Nearly 1,100 Die and 50,000 Are Injured Each Year

The Problem

Much of the nation's highway infrastructure is aging and work zones are expected to remain a familiar sight, given the emphasis on the reconstruction of existing roadways. About 20 percent of the National Highway System is under construction each year during the peak summer work season.

With a steady increase in vehicle miles traveled and growing congestion on the nation's roads, there has been a trend of increasing deaths and injuries in highway work zones. In 2004, work zone crashes killed 1,028 people and injured another 50,000. The preponderance of crashes occur in longer term construction zones, with more than half of them during the day and most (60%) on non-interstate roads posted for 55 mph or higher. Alcohol is involved in 40 percent of work zone crashes. More than half involve a single vehicle, and one in five involves a heavy truck. Data show that roadway construction workers are killed at a rate nearly three times higher than construction workers in other areas and eight times higher than general industry workers.

The main goal of this Guide is the reduction of fatal work zone traffic crashes and the overall improvement of work zone traffic safety for workers, motorists and other highway users. Most of the recommended strategies are relatively low-cost, short-term treatments.

Objectives and Representative Strategies

✓ Reduce the number, duration and impact of work zones.

- Improve maintenance and construction practices.
- Utilize full-time roadway closure, time-related contracts, and/or nighttime road work.



✓ Improve work zone traffic control devices.

- Improve visibility of work zone signs and markings, and work zone personnel and vehicles.
- Reduce flaggers' exposure to traffic.

✓ Improve work zone design practices.

- Implement measures to reduce work zone intrusions and limit consequences.
- Improve work zone safety for pedestrians, bicyclists, motorcyclists, and heavy trucks.

✓ Improve driver compliance with work zone traffic controls.

- Enhance enforcement of traffic safety laws in work zones.
- Improve credibility of signs.

✓ Increase knowledge and awareness of work zones.

- Disseminate work zone safety information to road users.

- Provide work zone training programs and field manuals for designers and staff.
- ✓ **Develop procedures to effectively manage work zones.**
 - Develop or enhance agency level work zone crash data systems.
 - Improve coordination, planning and scheduling of work activities.
- ✓ **Related strategies:** Public information programs, better enforcement of traffic laws, improving safety management systems, and strategies detailed in other emphasis area guides.

How the Implementation Guide Helps You

The guide lists practical countermeasure strategies categorized by relative cost to implement. Many of these strategies have been formally evaluated to demonstrate effectiveness. Others lack formal evaluation, but have been implemented with promising results.

The guide lays out the technical attributes of each countermeasure strategy in detail: target audience, expected effectiveness, keys to success, potential difficulties, appropriate measures and data, and associated need for support services.

The guide discusses organizational, institutional, and policy issues; issues affecting implementation time; costs involved; training and other personnel needs; and legislative needs (if any).



Web-Based Support for More Information

Backing up the guide is a series of appendixes and exhibits that provide in-depth information useful to anyone implementing this part of the Strategic Highway Safety Plan, together with a collection of documents providing background, data, and information of significant value to state and local implementers.

This guide is one in a series developed to assist states in their efforts to improve highway safety. Copies of the plan, the guides, the Integrated Safety Management System, the Self-Assessment Tool, and related documents, may be obtained on the Internet at safety.transportation.org.

Printed copies of the guides and the Integrated Safety Management Process can be obtained from:

Transportation Research Board

National Cooperative Highway Research Program
500 Fifth St., NW
Washington, DC 20001-2721

Telephone: 202-334-3213

Implementing the AASHTO Strategic Highway Safety Plan

