

M A S S I N T E R C H A N G E

Volume 19, Number 3

Summer 2005

STATE UNVEILS REVAMPED WEBSITE

Ever wondered how to get from here to there and what obstacles might be in your way? The Executive Office of Transportation (EOT) has come to your assistance.

In March former Transportation Secretary Daniel A. Grabauskas unveiled a completely re-tooled website and new Internet service for the EOT and Massachusetts Highway Department. As part of the improvements, web surfers can now access the latest information on MassHighway road and bridge projects across the Commonwealth. "For the first time ever, anyone with access to the web can get information on a bridge or roadway construction project in their neighborhood or along their commute," said Grabauskas. "This is all about transparency in government and making important information as accessible as possible to the taxpayers."

The updated project information and the new transportation web services, based at www.mass.gov/eot, draw informational resources from a number of different internet sites together in one shared webpage. To check out delays, choose "MassHighway" - "Projects" - "Projects under Design and Construction" at the site.

"Governor Romney has advocated improved efficiency by streamlining transportation services, and these web-based improvements build on that theme," said



Grabauskas. "This is one-stop shopping for information on anything having to do with transportation in the state. Be it a flight out of Logan or Lawrence, a bus trip in Boston or the Berkshires, a boat out of Hingham or Hyannis, or information on a road or bridge project in any corner of the Commonwealth - you'll find it all here."

In 2000, the state and MassHighway entered into a Memorandum of Understanding with the Massachusetts Association of Regional Planning Agencies (MARPA) where they were to make project information more readily available to the public. The original deadline for accomplishing that goal had been scheduled for 2002.

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LTAP Local Technical Assistance Program

(413) 545-2604 http://www.ecs.umass.edu/baystate_roads

WORK ZONE SAFETY



National Work Zone Awareness Week

was held April 3-9, 2005

Co-sponsored by the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the American Traffic Safety Services Association (ATSSA), this annual week was designed to bring national attention to motorist and worker safety and mobility issues in work zones. Local community activities helped educate the motoring public and media on work-zone related injuries and fatalities and the hazards and dangers that can be encountered and avoided when driving through a roadway construction zone. Approximately 900 men, women and children are killed senselessly in work zones each year.

The motto for this year's theme of "enforcement" was "**Do Your Part Or We'll Do Ours**" suggested by North Carolina's DOT. State law enforcement organizations were invited to bring various devices they use to combat "Work Zone Violators" such as "drones," specially outfitted cruisers, speed cameras/devices, etc. These served as visuals primarily to provide education and awareness for attendees and the media.

The nation's top highway official urged drivers to follow safe driving habits as more highway work zones pose greater challenges during the upcoming road construction season. "No one should sit on the sidelines of safety," said FHWA Administrator Mary E. Peters. "Orange and white safety barrels are springing up as temperatures climb. Taking a few simple steps will keep drivers, passengers and our highway crews safe in construction areas and avoid the traffic tie-ups that work zone accidents cause."

National Work Zone Memorial

Respect and Remembrance: Reflections of Life on the Road

Memorials have become an icon of the American culture -- a touchstone that helps individuals deal with the inexpressible and to hopefully stir gratitude for the good that often results from the supreme sacrifice according to the American Traffic Safety Services Foundation (ATSSF). The majority of people who lose their lives each year in roadway work zone accidents are drivers. However, the tragic loss of roadway workers, police, fire and rescue personnel who also lose their lives is too often overlooked. Although several states have created tributes to acknowledge their sacrifice, the National Work Zone Memorial stands as the only monument to the loss of highway workers, drivers, and public safety personnel in all states.

Submitting Names for Inclusion

Names are placed on the Memorial in the order received, not chronologically or alphabetically. No definitive national record exists of casualties so Memorial organizers must rely on the annual submissions of state departments of transportation and other verifiable sources for new names.

To submit a name for inclusion on the Memorial, visit www.atssa.com, click on "Public Relations," and follow prompts to the Memorial Name Submission Form. Fax the form to ATSSF @ 540-368-1717; ATTN: Elizabeth. Names of anyone killed at any time in a roadway work zone will be accepted.

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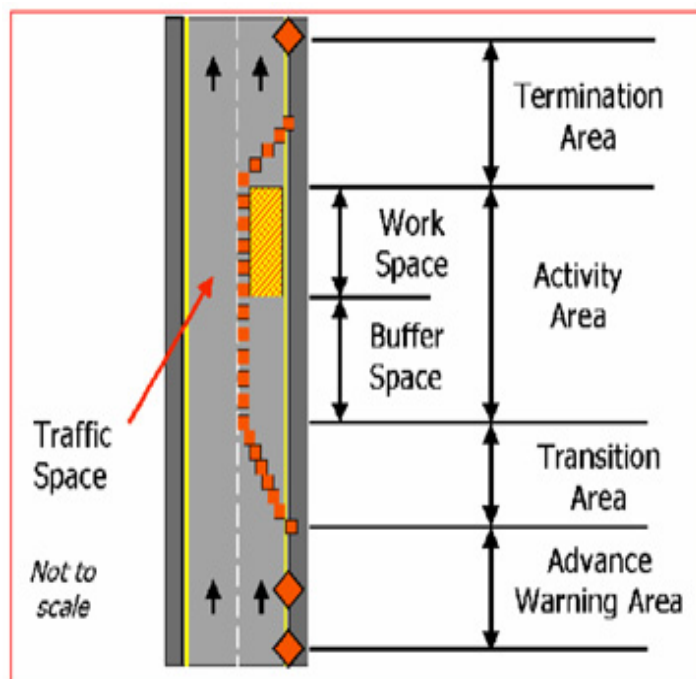
FHWA Offers Tips for Effective Communications in Work Zones

In 2002, more than 117,000 crashes occurred in work zones.

These crashes resulted in an average of three deaths per day and one injury every 15 minutes. To protect workers and ensure the safe and efficient movement of road users--including drivers, bicyclists, and pedestrians--construction crews often use temporary traffic controls around work zones. However, protecting workers and road users also requires all parties to communicate effectively in an environment that often is noisy and full of activity.

The Federal Highway Administration (FHWA) has developed several tips for how clearer communications in work zones extend from the first warning sign to the first traffic control device, where traffic returns to its normal path. Most work zones can be divided into four areas for drivers--advance warning, transition, activity, and termination. In the advance warning area, for example, communication can vary from a single sign or flashing lights to a series of signs. The sign(s) should attract the attention of road users, tell them what lies ahead--a lane chosen, for example--and advise them to take certain actions, such as merging into another lane.

Pedestrian and bicycle work zones can be divided into similar areas. Information also should be posted in these areas to allow for safe passage around the work zone, especially if sidewalks are closed. In the advance warning area, for example, FHWA recommends that crews post information to minimize the need for pedestrians and bicyclists to retrace a blocked route. In the transition area, crews should provide information that helps pedestrians and bicyclists find a safe path around the work area. The activity area should include information to help them bypass the work space. In the termination area, crews or signs should direct bicyclists and pedestrians back to the original route. To accommodate the needs of disabled pedestrians, temporary pedestrian facilities, such as wheelchair ramps, should be accessible, and audible information devices should be considered where needed.



Work zones can be divided into four areas: advance warning, transition, activity, and termination. Communications in each of the areas can increase the safety of both workers and road users.

Construction in work zones is a high-risk activity for workers because they may be less visible, particularly at night. FHWA recommends that workers wear high-visibility safety apparel. In addition, agencies should train their workers to decrease their vulnerability while working alongside traffic. Workers need to learn how to move construction vehicles within the work zone safely, particularly when backing up. Effective preparation includes providing workers on foot with a means of communicating with vehicle operators, either orally or with hand signals.

For more information on FHWA's work zone safety program, visit: <http://ops.fhwa.dot.gov/wz/index.asp>

Article by Mike Robinson reprinted from *Research & Technology Transporter*, FHWA, July 2004

WORK ZONES THAT WORK

Much of the Dwight D. Eisenhower National System of Interstate and Defense Highways is more than 30 years old, and new roads continue to be built, making it a challenge to maintain this constantly expanding infrastructure. Add to the mix limited budgets, more road usage during nonpeak times, road materials lasting only about 30-40 years, and the explosion of growth, and it is easy to understand the tremendous undertaking that faces the transportation community in maintaining the highway network.

Understandably, instead of concentrating on new construction, transportation agencies increasingly focus and spend funds on preserving, rehabilitating, and maintaining existing roads. About 13 percent of the National Highway System was under construction during the summer of 2001 with approximately 3,110 work zones reducing capacity by 20,876 miles of roadway.

However, vehicle travel continues to increase significantly faster than the addition of new miles of roadway. Over the last 20 years, route miles of highway increased 5 percent, while vehicle miles of travel grew by about 79 percent. Work zones further exacerbate the situation because they add to the growing congestion. Transportation agencies must perform more roadwork under heavier traffic conditions, often in less time.

"It is important to develop comprehensive mitigation measures that minimize the impacts of work zones and ultimately improve transportation mobility and safety," says FHWA Associate Administrator for Operations Jeff Paniati.



Cause for Concern

FHWA research shows that the traveling public is demanding increased mobility, while showing less tolerance for delays, increased travel times, and inconveniences resulting from construction-related congestion. Work zones accounted for about 10 percent of all delays annually. As congestion builds approaching work zones and within them, safety degrades, and the crash rate increases especially for rear-end crashes due to unexpected queuing.

Real-Time Communications

The traveling public has shown substantial capacity for planning around work zones--*IF they know about them* far enough in advance to make reasonable travel decisions. Current strategies include providing general construction information on Web sites, using innovative construction and contracting solutions, and applying intelligent transportation system (ITS) technologies to improve performance of work zones.

"Real-time traffic management and travel information should be an integral part of highway construction," says Paniati. *"It should be unacceptable to operate work zones without regard to the customer's need for information and guidance."*

As the 511 traveler information telephone service is implemented and becomes more available across the country, detailed information will be accessible for anyone with a phone, enabling motorists to plan for the

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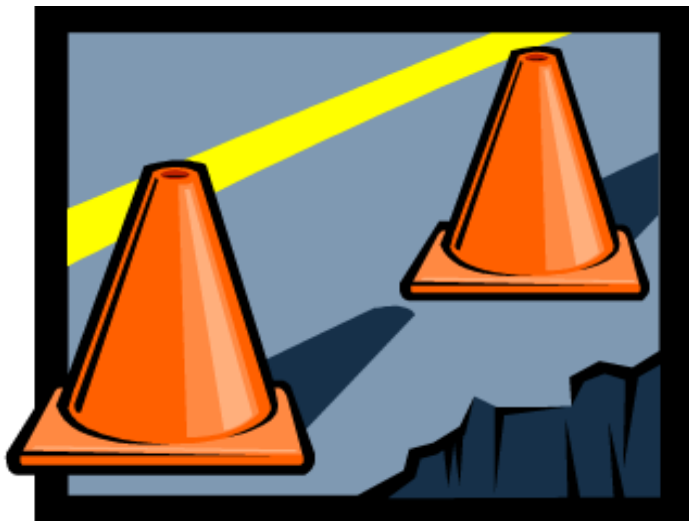
How to Host the Traveling Memorial

The Memorial is available to anyone in the roadway industry or interested communities nationwide. It can be used in schools, community centers, government buildings, airports, rest stops, or as part of roadway construction projects. There is a \$2,000 fee per site to cover the shipping costs of this 900 pound Memorial. Many sites request sponsorships from local businesses to help cover this expense. For help in bringing the Memorial to your community, e-mail an inquiry to Elizabeth Berger at: elizabeth@atssa.com

Sponsorships

ATSSF with its many supporters is responsible for the National Work Zone Memorial tour. The Foundation is the education arm of ATSSA, a trade group representing the roadway safety construction industry.

There are four levels of sponsors whose names will appear on a panel of the Memorial. Visit www.atssa.com, click on Public Information, and follow the prompts to download a Sponsorship form. Additional information can be obtained by contacting Elizabeth Berger at 800-272-8772.



Bring Work Zone Training to Your Town

Baystate Roads Program offers mini-workshops on work zone safety. Contact Program Manager Chris Ahmadjian at 413-545-2604 to arrange for classes at your facility.

SAFETY FIRST

CHECK OUT THESE NEW TRAINING VIDEOS

ST-206 HEARING LOSS PREVENTION

American Training Resources 14 minutes

Video covers how noise damages hearing over time, OSHA's conservation/loss prevention program, medical surveillance, symptoms of hearing loss, and benefits of protection devices. Training handout available.

ST-207 ACCIDENTS AREN'T JUST ONE OF THOSE THINGS

American Training Resources 20 minutes

The ripple effects of an accident are delineated. Accidents can be prevented by consistently wearing personal protective equipment, sizing up a dangerous situation and fixing it immediately, considering an accident's impact on others, and assessing the repercussions of your actions. Training handout available.

ST-201 WORK ZONE AHEAD: HIGHWAY WORK ZONE SAFETY

AGC of America 12 minutes

Some 7,000 workers have died in work zone accidents in the past 10 years. These basic safety reminders are designed to protect road construction workers:

- * Basic safety precautions you can take
- * The importance of pre-planning
- * Proper configuration of traffic control devices
- * Proper use of flagging personnel

inconvenience of delays and remain in control of their own schedules. Increasingly, the 511 service is providing the real-time information necessary to choose alternate routes, times of day for travel, or the option to telecommute. On July 21, 2000 the Federal Communications Commission designated "511" as the single traffic information telephone number available to states and local jurisdictions.

Another method for communicating information is web sites, which also can provide traffic flow maps with congestion locations in real time. A review of state road closure and construction web sites reveals that project location, purpose, and overall duration are likely to be posted early in the planning process, but the posting is unlikely to be updated often. A current shortcoming: information of greatest interest to the traveling public, such as number of lanes closed, times of closure, and estimated delay, is reported only about 6 percent of the time.

States are employing ITS technologies such as variable message signs (VMS) and/or web sites. Automated information systems acquired data on traffic conditions approaching work zones and informed travelers of any length of queues using dynamic message signs strategically placed before key alternate routes and updated these automatically as conditions changed.

Highway advisory radio is another tool, which broadcasts current traffic conditions. Not only does this enhance relationships with residents by keeping them informed, but it helps improve relationships with neighboring communities and states.

Road Closure Strategies

Increasingly high traffic volumes on many highways make it difficult to perform work operations in or near travel lanes during much of the day because of the risk for workers and the traveling public. In response, scheduling necessary highway work for offpeak periods has become commonplace.

Another option, full road closure, alleviates the potential for long-term traffic congestion and improves safety by



reducing crashes and other incidents. Full road closure has the potential to:

- Expedite project completion
- Reduce impact of construction on travelers
- Maximize workspace available to contractor
- Reduce overall congestion resulting from construction
- Improve safety for workers/travelers
- Reduce crashes in some cases
- Result in a smoother roadway
- Improve public sentiment

Worker Protection Strategies

It is important to balance the need for traveler mobility and the need for adequate space, lighting, and the work environment required to get the job done safely for the public and construction workers. Positive protection--the use of devices such as barrier separations that contain and redirect vehicles--can reduce the risk to workers and travelers from vehicle intrusions. Use of truck mounted intrusion alarms can help as well.

Other mitigation strategies can also provide dramatic benefits. The continually changing nature of work zones make variable speed limits (VSL) in work zones particularly useful. The VSL technology determines appropriate speeds for work zones and changes speed limits when conditions change, such as traffic flow, traffic speed, weather, and the nature of the roadwork.

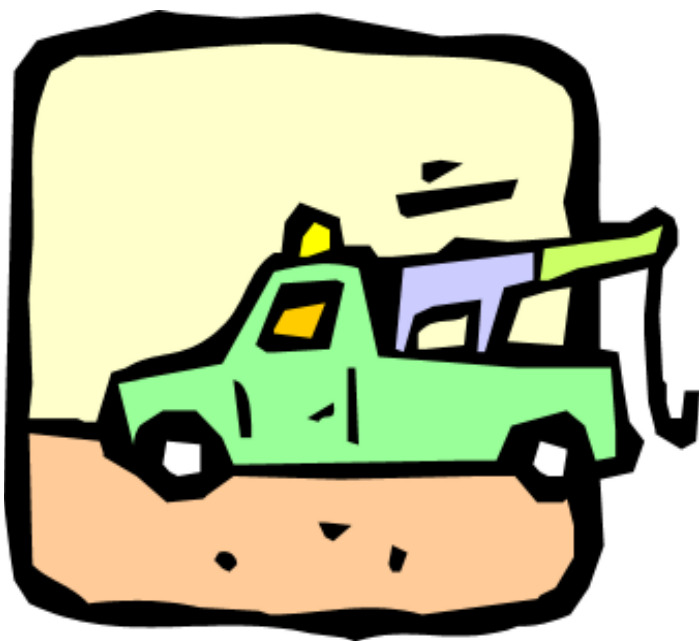
Adapted from "Work Zones that Work" by Carol Keenan, FHWA Transportation Specialist, published in *Public Roads*, November/December 2004 by Federal Highway Administration.

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"The Romney Administration believed that this was an important promise to fulfill," said former MassHighway Commissioner John Cogliano. "The website will let people know the status of projects that are most important to them. A little information goes a long way, and these new web sites are great news for the motoring public."

The web services based out of the updated site also include comprehensive information on MBTA service, including a trip-planning feature and schedule information for all transit modes that the T offers.

Web surfers will be able to access information from the Massachusetts Aeronautics Commission, the 15 Regional Transit Authorities across the state, MassPort and Logan Airport services, various commuter and recreational boating opportunities, and other transportation sites. A new online trucking permit application function will also be available to truckers who want to move large loads across Massachusetts roadways.



Reference: March 1, 2005 Executive Office of Transportation press release found at www.mass.gov/eot. Contact Jon Carlisle at 617-973-8093 for more information.



EYES on the ROAD

Massachusetts screens accidents from passing drivers

Motorists who slow down to check out car accidents create additional problems. To eliminate the traffic jams and possibly further accidents, MassHighway purchased 27 sets of large, portable, vinyl screens for use throughout the Commonwealth at a total cost of \$38,000.

These 7-foot tall, 10-foot wide tarps attach to piping and are stored in emergency response vehicles for easy access. Officials explain that the screens have been used mostly in eastern Massachusetts where they have been utilized in over 15 accidents since December 2004.

EXTRA COPIES

Available

Access Management, Location and Design - NHI Course 133078
Hot Mix Asphalt Pavement Evaluation and Rehabilitation - NHI Course 131063

Call 413-545-2604 to request free copy of a recent workshop handout

MASSACHUSETTS HIGHWAY ASSN.

EQUIPMENT & TRADE SHOW WEDNESDAY, JUNE 22, 2005

(Raindate June 23, 2005)

Wachusett Mountain Ski Resort

Snow Plow Rodeo 8 - 9:30

Exhibits Open 9 - 3

Sky Ride 12 - 3

Seminars 10-12:30

Luncheon 1:30 - 2:30

Awards Presentation 2:15 p.m.

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Congratulations to the newest Baystate Roads Scholars on their fine achievement. Keep saving those certificates and you, too, could be listed here



Scott Saulnier
Middleton DPW

John Woodsmall
Concord DPW

Baystate Roads Scholar!

The Baystate Roads Program, which publishes *Mass Interchange* each quarter, is a Technology Transfer (T2) Center created under the Federal Highway Administration's (FHWA) Local Technical Assistance Program (LTAP). This newsletter is prepared in cooperation with MassHighway and the United States Department of Transportation Federal Highway Administration. FHWA is joined by Mass Highway, College of Engineering at the University of Massachusetts/Amherst, and local public works departments in an effort to share and apply the best in transportation technologies.

In addition to publishing *Mass Interchange*, the Baystate Roads Program facilitates information exchange by conducting workshops, providing reports and publications and videotapes on request, and offering one-to-one technical assistance on specific roadway issues. Because the program relies on input from many sources, inquiries, articles, and ideas are encouraged.

LTAP Local Technical Assistance Program

To contact the Baystate Roads Program call (413) 545-2604 or FAX 413-545-6471.

BAYSTATE ROADS PROGRAM

College of Engineering
University of Massachusetts
214 Marston Hall
130 Natural Resources Road
Amherst, MA 01003

ST118295

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