"Improving Alaska's quality of transportation through technology application, training, and information exchange."

TECHNOLOGY FOR

Alaskan Transportation

Local Technical Assistance Program

Summer 2001
April-June
Volume 26, Number 2

In this issue . . .

Rumble Strips Wake You Up

And anytime, that's a good thing–but especially so in Alaska in the summer. Many people burn the candle at both ends, trying to maximize their daylight hours. We tend to work hard and play even harder.

Rumble strips exist to save lives. They keep dozing, distracted, or inattentive drivers on the road. You'll find them in the Anchorage area, on the Kenai Peninsula, in Northern Region, and other places along the road system. So far, Alaska DOT&PF is the only highway agency in the

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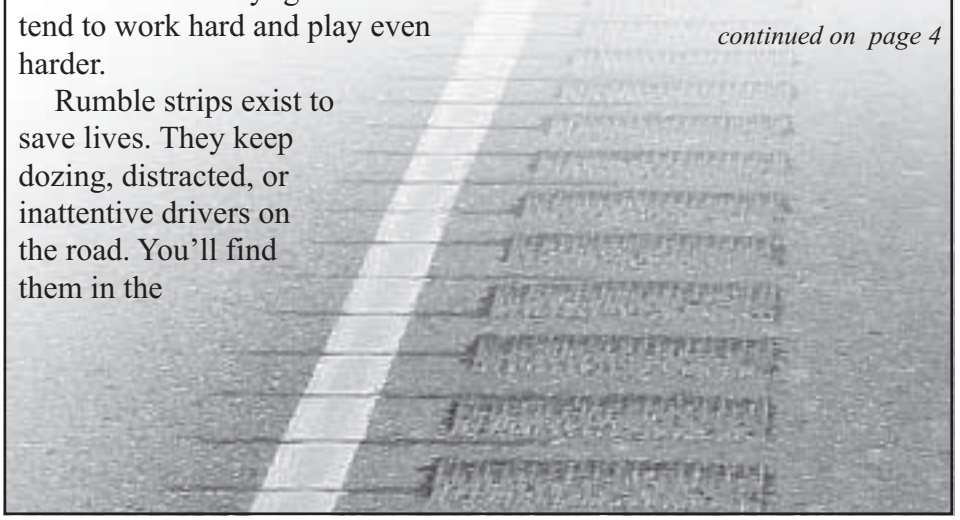

Whittier Access Project Receives ASCE Award

From the Anton Anderson Memorial Tunnel web site (http://www.dot.state.ak.us//external/whittiertunnel/

On May 11, 2001, Gov. Tony Knowles announced that the Whittier Access Project has been awarded the 2001 Outstanding Civil Engineering Achievement Award, one of the most prestigious awards in engineering.

The award is the highest honor given by the American Society of Civil Engineers (ASCE) and recognizes civil engineering projects that contribute to

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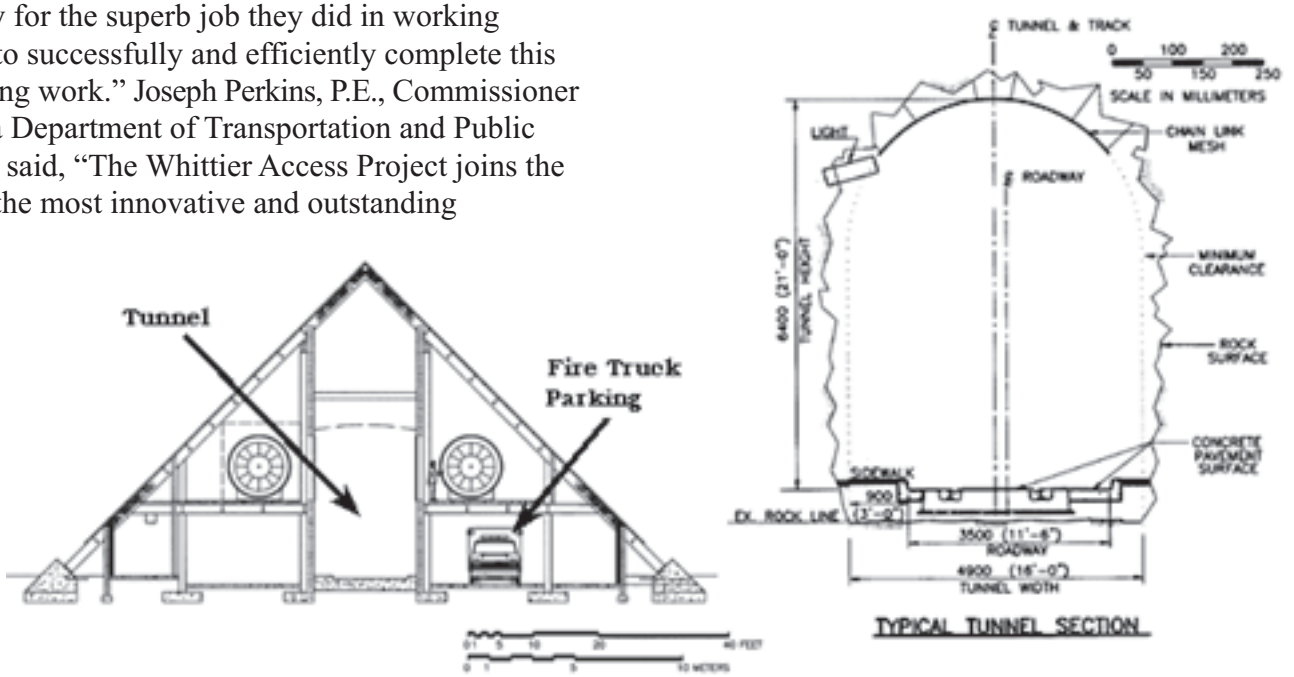
Portal buildings at both ends of the tunnel can withstand avalanche loads up to 1,000 pounds per square foot.

Whittier Access Project

continued from page 1

community well-being, demonstrate resourcefulness in planning, solve design challenges, and use innovative construction methods. "I am pleased and proud that the Whittier Access Project received this highest of national engineering awards," Knowles said. "It proves the outstanding professional ability of the Alaska Department of Transportation and Public Facilities and the resourcefulness and power of Alaskans working together to come up with a creative solution to the longstanding issue of providing better, cheaper, and more convenient access to Whittier and western Prince William Sound." The Whittier Access Project was selected from among 17 other outstanding projects throughout the United States. Past winners of the award include the Trans-Alaska Pipeline, relocation of the Cape Hatteras Light Station, Interstate Highway H-3 in Hawaii, Denver International Airport, Gateway Arch in St. Louis, Launch Complex 39 at Cape Canaveral, and the World Trade Center in New York. "The Whittier Access Project not only serves as a symbol of engineering ingenuity, but also represents a significant contribution to Alaska communities, providing the Whittier community with improved access to retail services, social and cultural activities, and recreational facilities," said Robert W. Bein, P.E., ASCE. "We commend all of those involved from the Alaska Department of Transportation to Kiewit Construction Company for the superb job they did in working together to successfully and efficiently complete this challenging work." Joseph Perkins, P.E., Commissioner of Alaska Department of Transportation and Public Facilities said, "The Whittier Access Project joins the ranks of the most innovative and outstanding engineering achievements in the United States of the past 50 years. We are all very proud of being a part of this project. I appreciate the massive effort on the part of my staff and our consultants who successfully completed Alaska's first major design/build transportation project. I also appreciate the involvement of the public, especially the residents of the City of Whittier. The Whittier Access Project is truly a legacy project for all of those involved and for all it serves."

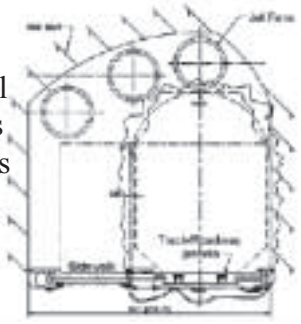
The Whittier Access Project provides highway access for the residents of Whittier, a vital cargo port, recreational area, and tourist destination located on Prince William Sound. Separated from the nearest highway by five miles of rugged mountains, lakes, and glaciers, residents previously had to load their automobiles onto shuttle trains and travel through a 2.5-mile-long railroad tunnel to connect with the highway system. The Whittier Access Project met the community's need for better access by converting the 2.5-mile-long Anton Anderson Memorial railroad tunnel into a multi-modal facility, the only combined highway/railroad tunnel in the world and the longest highway tunnel in North America. The tunnel uses an innovative design of precast concrete panels with embedded railroad tracks for the road surface. The project also included two bridges, a 500-foot-long



The new tunnel portal building and a typical section of the tunnel.

Workers laying rail in the tunnel.

highway tunnel, 2.6 miles of road, and support facilities. To comply with Federal Railroad Administration safety requirements, the project pioneered the use of an integrated tunnel control and train signal system to ensure that cars and trains are not in the tunnel at the same time. It is the first tunnel in the United States that features safe houses spaced at 1,600-foot intervals to provide emergency shelter for travelers and a ventilation system of jet fans mounted in the tunnel ceiling. Specially designed portal buildings at both ends of the tunnel can withstand avalanche loads up to 1,000 pounds per square foot. Construction was completed without impacting the freight trains running to Whittier and most of the work had to be done in brutal winter conditions with winds greater than 120 MPH, minus 40 degree temperatures, snow up to 43 feet deep, and avalanches that shut the project down for four days.



Placement of the Jet Fans.

The Whittier Access Project has received an unprecedented number of awards from industry associations. In addition to the ASCE award, the project has also won Outstanding Heavy/Highway Project and Outstanding Design Project honors from the F. W. Dodge Awards program; Total Program Excel Award for Public Involvement with a Consultant from the American Association of State Highway Transportation Officials; the 2000 Globe Award for Engineering Excellence from the American Road and Transportation Builders Association; the 2000 Excellence in Construction Award from the Associated General Contractors of America; 2000 Concrete Bridge Award from the Portland Cement Association; and the 2001 Grand Award from the American Council of Engineering Consultants. Tom Moses, the project manager, also received the president's award as the top highway engineer in the U.S. by the American Association of State Highway and Transportation Officials for his work on the project. Major contributors to the project include Alaska DOT/PF; Alaska Railroad Corporation; CH2M-Hill, designer of the Portage Lake segment; Hatch Mott MacDonald, designer of the tunnel segment; HDR-Alaska, EIS, RFP, and technical support during tunnel segment construction; Herndon and Thompson Inc., contractor of the Portage Lake segment; and Kiewit Construction Company, design-builder of tunnel segment. Other engineering firms who contributed to the project include: ABKJ; AGRA Earth & Environmental; Dryden & LaRue; Fergusson & Associates; Golder Associates; Lachel & Associates; Land Design North; Parsons Brinkerhoff Quade & Douglas; Peratrovich, Nottingham & Drage, Inc.; RIM, Inc.; RSA Engineering; SESCO Co. Inc.; Traffic Management Associates; and USKH. Numerous Alaska firms also helped in the construction of the project.

The Anton Anderson Memorial Tunnel is a landmark effort that boasts several "firsts":

- The longest highway tunnel in North America. (13,300 feet or 2.5 miles)
- The longest combined rail-highway use tunnel in North America
- The first tunnel in the United States that has a ventilation system that combines jet and portal fans
- The first tunnel with a unique computerized traffic-control system that regulates both rail and highway traffic
- The first tunnel designed to operate in temperatures down to minus 40 degrees F. and in winds up to 150 mph. The portal buildings are designed to withstand avalanches.

Rumble strips

(continued from page 1)

state to install rumble strips. Cities and boroughs are not yet using them. While other states have installed rumble strips, there is no current national policy for when and how to use them.

Rumble strips are used on the centerline to help prevent crossover accidents.

There are three spots on a roadway to install rumble strips: on the shoulder, on the lane line, and on the centerline (prevents crossover accidents). Nearly all states, though, have similar reasons for installing them. These include:

- Reduce run-off-the-road accidents by providing a tactile and audible warning.
- Enhance lane delineation during adverse weather conditions, resulting in increased road traffic capacity.
- Enhance lane delineation during periods when lane striping isn't visible.
- Potentially increase pavement striping life, if striping is installed within the milled rumbles.

Rumble strips are loud, and there's a clear reason for the noise. Drivers who depart the road do so at about a three degree angle, giving them around six tenths of a second of rumble noise. Not much time– probably faster than you can snap your fingers. Departures at a greater angle have even less rumble time. It takes a lot of noise and vibration to wake or alert drivers in that short a time. For the wide-awake driver who strays onto a rumble strip, the noise is

One benefit of rumble strips is enhanced lane delineation during periods when lane striping isn't visible.

deafening. But for a drowsed-off driver, the noise is just the wake-up call he or she needs.

Rumble strips are not problem-free. The downsides include:

- Noise outside the vehicle can be a nuisance, especially in residential areas.
- pavement may deteriorate more quickly if rumble strips are installed in marginal or distressed pavements.
- Rumble strips may fill with snow and ice in areas with low traffic speeds.
- Bicyclists find them very uncomfortable.

While DOT&PF has a current rumble strip policy (available at each regional office), ongoing research will ultimately result in a statewide manual and standard drawings for incorporating rumble strips as a cost-effective safety improvement. Topics being studied are:

- milling pattern;
- lateral width, including effectiveness, clear shoulder space, and offset;
- offset from the shoulder stripe; and
- gaps.

Although there are still questions to be addressed by research, Alaska DOT&PF's rumble strip policy is currently one of the most comprehensive in the nation.

For national rumble strip information, go to FHWA's web site:

http://safety.fhwa.dot.gov/
and select Rumble Strip Synthesis Study
and Draft FHWA Technical Advisory

(this web page also has other safety-related information).

For more information on Alaska's activities, call Clint Adler, DOT&PF research engineer, at 907-451-5321 or e-mail him at clint_adler@dot.state.ak.us.

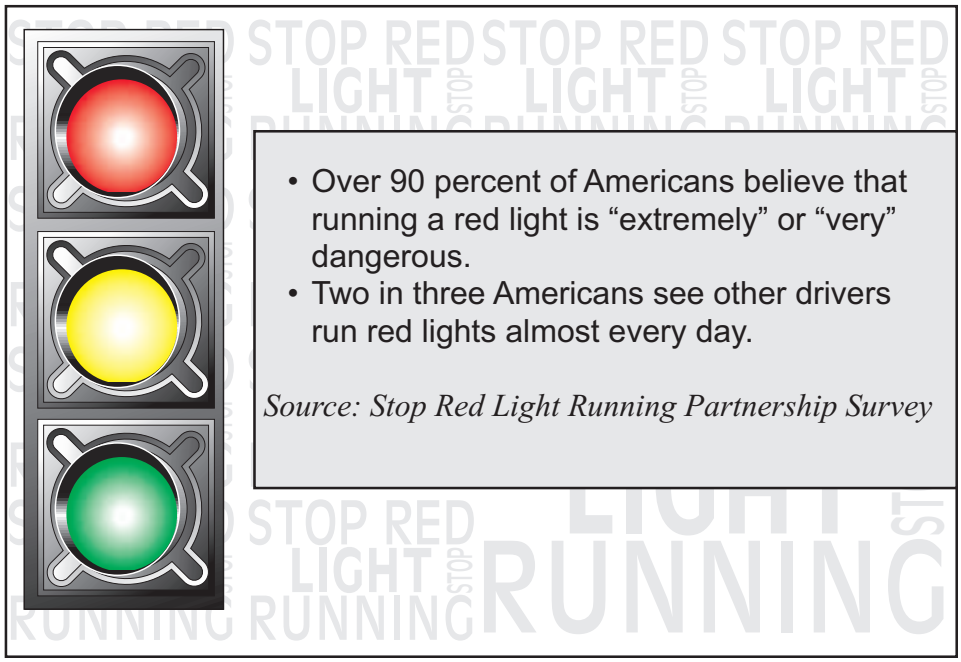
Rumble strips on the Seward highway, a popular road for long haul driving and a good place to stay awake.

Rumble strips are not problem-free. One problem is accelerated pavement deterioration if rumble strips are installed in marginal or distressed pavements.

September 1 – 7, 2001, is Stop On Red Week

Stop On Red Week takes place the first full week of September each year, from Saturday to Friday. This year it runs September 1–7, 2001. The goal is to capture the public's attention and mobilize resources to combat red light running.

According to FHWA, more than 1.8 million intersection crashes occur each year. In 1999, 92,000 crashes, 90,000 injuries, and about 950 deaths were attributed to red light running. FHWA has a report on red light running, *Synthesis and Evaluation of Red Light Running: Automated Enforcement Programs in the United States*. It's available on the web (see page 24) or by calling Pat Hasson at 708-283-3510.



- Over 90 percent of Americans believe that running a red light is "extremely" or "very" dangerous.
- Two in three Americans see other drivers run red lights almost every day.

Source: Stop Red Light Running Partnership Survey

To respond to alarming statistics on the number of crashes and injuries resulting from drivers running red lights, the FHWA developed the Stop Red Light Running (Stop RLR) Campaign, a comprehensive safety outreach program that combines public education with aggressive enforcement. In order for a campaign of this type to be successful, FHWA determined that it needed to partner with individual communities, providing these areas with public education materials, tools, and tips to implement the campaign, and grant funds for seed money. Following a successful pilot site test in Charleston, South Carolina, in the early '90s, the FHWA planned the national implementation of the Stop RLR Campaign, which kicked off in 1995. In Alaska, the Municipality of Anchorage received one of the first grants for the Stop RLR campaign.

FHWA found from focus meetings and other research:

- Drivers are in a hurry and under stress.
- Drivers have confidence in their own skills, not in other drivers' skills.
- Drivers believe there are too many cars on the road.
- Drivers believe that traffic signals are mistimed.
- Drivers are not sure about the intended meaning of the yellow light.
- Over half readily admit to occasionally running a red light; nearly two-thirds report seeing their fellow drivers do the same.
- Drivers do not perceive much risk associated with not complying with traffic control devices.
- Drivers are vitally concerned with not hurting others.

Here are some more intreresting facts about red light running found on FHWA's safety web site.

- In 1998, there were 89,000 red light running crashes that resulted in 80,000 injuries and 986 deaths.
- Overall, 55.8 percent of Americans admit to running lights. Yet ninety-six percent of drivers fear a red light runner will hit them when they enter an intersection.
- This campaign's safety message is clear to everyone: red light running is the leading cause of urban crashes today. Phase I of Red Light Running significantly decreased these crashes in 28 of 31 participating communities. During the most recent

(continued on page 24)

Consumer Advisory: Rollover Risk of 15-Passenger Vans

The National Highway Traffic Safety Administration (NHTSA) is issuing a cautionary warning to users of 15-passenger vans because of an increased rollover risk under certain conditions.

The results of a recent analysis by NHTSA revealed that 15-passenger vans have a rollover risk that is similar to other light trucks and vans when carrying a few passengers. However, the risk of rollover increases dramatically as the number of occupants increases from fewer than five occupants to over ten passengers.

In fact, 15-passenger vans with 10 or more occupants had a rollover rate in single vehicle crashes that is nearly three times the rate of those that were lightly loaded.

NHTSA's analysis revealed that loading the 15-passenger van causes the center of gravity to shift rearward and upward, increasing the likelihood of rollover. The shift in the center of gravity will also increase the potential for loss of control in panic maneuvers.

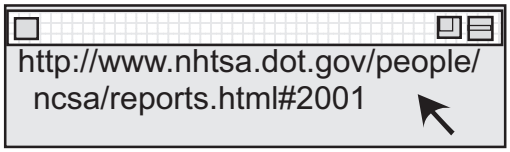
Because of these risks, it is important that these vans be operated by experienced drivers. A person transporting 16 or more people for commercial purposes is required to have a commercial driver's license, which requires certain specialized knowledge and driving skills. Although the drivers of these vehicles are not required to possess a commercial driver's license, they should still understand and be familiar with the handling characteristics of their vans, especially when the van is fully loaded.

NHTSA's analysis reinforces the value of seat belts. Eighty percent of those nationwide who died in single vehicle rollovers last year were not buckled up. Wearing seat belts dramatically increases the chances of survival during a rollover crash. NHTSA urges that institutions using 15-passenger vans require seat belt use at all times.

NHTSA is making this information available because of these findings and because of several highly publicized rollover accidents involving 15-passenger vans loaded with college students (often driven by a fellow student, not a professional driver).

While federal law prohibits the sale of 15-passenger vans for the school-related transport of high school age and younger students, no such prohibition exists for vehicles to transport college students or other passengers.

A copy of the NHTSA analysis can be found at:

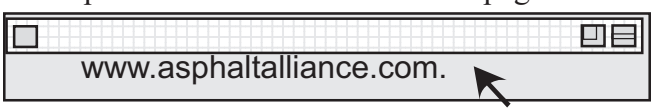


APA Announces First Annual Asphalt Pavement Conference

Lanham, MD—The Asphalt Pavement Alliance, an industry coalition of the National Asphalt Pavement Association, the Asphalt Institute, and the State Asphalt Pavement Associations, announces the first annual Asphalt Pavement Conference, to be held November 14—16, 2001 at the Doubletree Hotel in Austin, Texas.

The Asphalt Pavement Conference, whose theme is "A Lifetime of Smooth Performance," is a combination of two premier asphalt technical forums: the U.S. Hot Mix Asphalt Conference and the Superpave Forum. The Asphalt Pavement Conference will showcase new technology and best practices in the areas of safety and user satisfaction, durability, economy, and innovation and developments. Paving professionals, specification writers, project superintendents, and others will all benefit from attending this three-day event.

Program and registration information can be obtained from Carol Prouty, meetings assistant, Asphalt Pavement Alliance, 5100 Forbes Blvd., Lanham, MD 20706-4413, 301-731-4748. toll-free: 888-468-6499 (888-HOT MIXX) or fax: 301-731-4621. Information about the Asphalt Pavement Conference and online registration is also available on the Asphalt Pavement Alliance home page:



Institute of Transportation Engineers 2001 Annual Meeting and Exhibit

The Institute of Transportation Engineers or ITE 2001 Annual Meeting and Exhibit will be August 19-22, 2001, at the Hyatt Regency Chicago. This year's meeting will feature technical tours, professional development Seminars, and Social and Spouse/Guest Functions.

The professional program at the ITE Annual meeting program is comprised of six tracks:

- traffic engineering
- safety
- smart growth
- systems management and operations
- transportation planning
- managing people and organizations

Over 230 speakers who have been invited to participate will cover topics presented in 66 different scheduled sessions.

The keynote speaker at the opening session sponsored by the ITE Transportation consultants council, on Monday, August 20, will be David Zach. David is one of the few professionally trained futurists in the United States, with a master's degree in studies of the future from the University of Houston Clear Lake.

For more information, call Donna Ford at ITE Headquarters at 202-289-0222, x140. Details of these activities may be found on the ITE web site www.ite.org. Click Meetings and Conferences on the menu bar. To register by mail:

Institute of Transportation Engineers
1099 14th street NW, Suite 300 West
Washington, DC 20005-3438 USA

Or by fax. 1 202-898-4131. If you fax, please do not mail a duplicate.

Hotel Accomodations

Hyatt Regency Chicago Hotel
151 East Wacker Drive
Chicago, IL, USA.
Tel: 312-565-1234; fax: 312-565-2966
Single $130 • Double $155

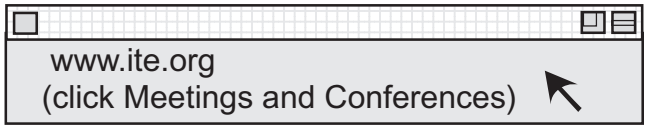
Government Employees—A limited number of sleeping rooms are available at the government per diem rate. These rooms will be offered on a first-come-first-served basis.

Special Airline Rates

United is offering a 10 percent discount off the unrestricted midweek coach fare, or five percent discount off the lowest applicable fares, including first class, to all attendees of the ITE 2001 Annual Meeting and Exhibit.

ITE 2001 Annual Meeting and Exhibit
Registration and Information
Telephone: 1 202-289-0222
Fax: 1 202-898-4131

ITE on the Web:



FHWA Releases Revised Guide for Clean Air Requirements

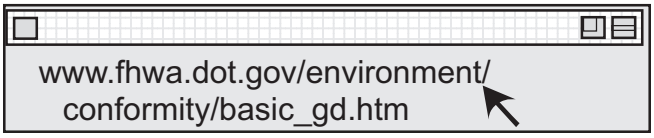
In early October, EHWA released the revised *Transportation Conformity: A Basic Guide for State and Local Officials.* The new version of this report is intended to facilitate compliance by State and local agencies with the transportation conformity requirements in the Clean Air Act amendments of 1990.

The updated guide, designed for state and local transportation officials, explains the basics of the transportation conformity process. It covers the definition and what actions are subject to transportation conformity, who makes conformity determinations and how often they are made, the key components of conformity determinations, and the consequences of failing to make a conformity determination. The guide also discusses the roles and responsibilities in the conformity process.

The guide was prepared by FHWA and the Federal Transit Administration (FTA), in cooperation with the Environmental Protection Agency (EPA).

Cecilia Ho
202-366-9862
cecilia.ho@fhwa.dot.gov

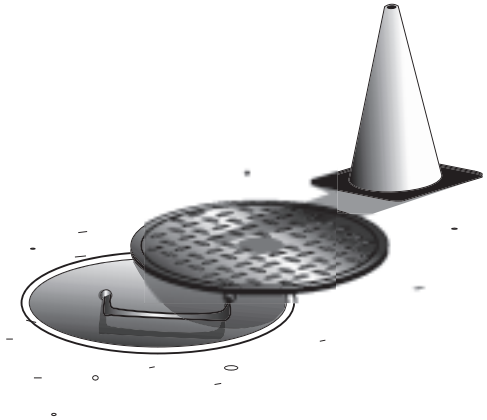
The guide can be viewed on the Internet at



NAPA Releases New *Confined Spaces Program Guidance Manual*

Lanham, MD—The National Asphalt Pavement Association (NAPA) announces the release of the publication *Confined Spaces Program Guidance Manual,* created by NAPA's Environmental, Safety, and Plant Operations (ESPOC) Subcommittee. This document was produced to assist hot mix asphalt facility owners and operators in developing and maintaining a written confined spaces program.

Confined Spaces Program Guidance Manual is a must for individuals responsible for creating, implementing, and maintaining a confined space program. With step-by-step instructions, the guidance manual walks the user through the process of developing and implementing a confined spaces program in a simple and efficient manner. The document also can be used to update an existing program to ensure it satisfies federal requirements.



The 40-page *Confined Space Program Guidance Manual* (order number HS-14) is available from NAPA at a list price of $10. To order, contact the Publications Coordinator at the NAPA office, toll-free 888-468-6499, fax 301-731-4621, e-mail publications@hotmix.org, or order on-line at www.hotmix.org

NAPA Releases New Training Video Series in English and Spanish Versions

Lanham, MD—The National Asphalt Pavement Association (NAPA) announces the release of a new training video series, the *Paving Practices for Quality* series, in English and Spanish language versions. The series includes three segments, *Roller Operations for Quality, It's Up to You* (in Spanish, *Operacion de Ia Compactadora o Rodillo para Calidad, Depende de Ustedes); Paver Operations for Quality, It's Up to You* (in Spanish, *Operaci6n de Ia Pavimentadora para Calidad, Depende de Ustedes);* and *Paving Site Work Practices for Quality, It's Up to You* (in Spanish, *Principios de Pavimentacion para Calidad en el Sitio de Trabajo, Depende de Ustedes).*

These new videos from NAPA demonstrate the proper techniques for HMA construction and illustrate the basic principles of the subjects without being overly specific or complicated. The segments, each about ten minutes long, can easily be incorporated into a planned training program.

Enclosed is a special-edition tape which has all the segments in both Spanish and English. Please note, however, that this tape will not be offered for sale; rather, the three English-language segments will be available on one tape, and the Spanish-language segments will be available as a separate tape.

The training series is available at the list price of $40, plus shipping and handling, for either the English (order number TAS-28) or Spanish (order number TAS-28[S]) version. The price to government agencies and not-for-profit organizations is $30, plus shipping and handling. NAPA's toll-free order line is 888-468-6499. Orders may also be placed via fax to the Publications Department at 301-731-4621, by e-mail to publications@hotmix.org, or through the NAPA home page at www.hotmix.org. NAPA is located at 5100 Forbes Blvd., Lanham, MD 20706-4413.

For more information, contact
Tracie Christie, 888-468-6499
E-mail: tchristie1@hotmix.org

New Edition of Popular *Hot Mix Asphalt Paving Handbook* is Now in Stock at NAPA

Lanham, MD—The National Asphalt Pavement Association (NAPA) announces the release of the second sdition of the popular *Hot Mix Asphalt Paving Handbook 2000.* One of the best-selling technical publications ever in the hot mix asphalt (HMA) industry, the new edition of the *Paving Handbook* addresses recent developments, including SHRP, new paving equipment, advances in recycling, new quality control practices, and the introduction of new techniques and technologies from Europe and elsewhere.

This comprehensive handbook describes the production and placement of asphalt mixtures from a practical viewpoint. It is written for government and contractor personnel, including engineers, superintendents, foremen, and paving inspectors. The handbook concentrates on field practices—at the asphalt plant during mixing production and at the paving site during pavement laydown and compaction.

The *Paving Handbook* was developed under the sponsorship of

- NAPA
- American Association of State Highway and Transportation Officials (AASHTO)
- Federal Aviation Administration (FAA)
- Federal Highway Administration (FHWA)
- Transportation Research Board (TRB)
- U.S. Army Corps of Engineers
- American Public Works Association (APWA)
- National Association of County Engineers (NACE).

The *Paving Handbook* is available at the list price of $25, plus shipping and handling. NAPA's toll-free order line is 888-468-6499. Orders may also be placed via fax to the Publications Department at 301-731-4621, by e-mail to publications@hotmix.org, or through the NAPA home page at www.hotmix.org. NAPA is located at 5100 Forbes Blvd., Lanham, MD 20706-4413.

Winter Tidbits

Observing Road Weather Systems?

Paul Pisano, road weather management coordinator for the Federal Highway Administration in Washington, D.C., keeps tabs on what's happening nationally on anything to do with winter snow activities. One listserve he participates in has been discussing sources of weather data besides DOT road weather information sensors. The National Weather Service developed a geographic information system (GIS) called GeoGuide that provides information about a host of weather observing systems. It doesn't contain the observational data itself, but it does have data about the observing systems, such as where it is, what it collects, etc. Go to http://obsystem.nws.noaa.gov/ and play around with it.

On-Line Road Salt Management Course

The Transportation Association of Canada offered a full one-day course on Road Salt Management at the Pacific Northwest Snowfighters Conference, held in Kelowna, B.C., in May 2001. The course is still available on line through TAC, along with their *Salt Management Guide* at http://www.tac-atc.ca/. Pick Events from the tool bar, and scroll down until you find Technical Seminars, then choose Road Salt Online. You'll find a sneak preview of the course, to help you decide whether you want to take the full course.

Standing International Road Weather Commission (SIRWEC) and World Road Association (PIARC) Announce 11th Annual Conferences

The 11th SIRWEC Conference will take place in Sapporo, Japan from January 26 to January 28, 2002, just before PIARC. The conference organizers have issued a call for papers, which can be found at http://www2.ceri.go.jp/sirwec2002/ and pre-registration can be found at http://www2.ceri.go.jp/sirwec2002/preregi_e.pdf. Information about the World Road Association (PIARC) 11th Annual International Winter Road Conference can be found at http://kohoweb.com/piarc/english/.

Web-based Winter Highway Maintenance at University of Iowa

Topics covered include:

- Physical Properties of Snow and Ice
- Safety and Economics for Winter Maintenance
- Chemical Usage, Phase Diagrams, and Anti-Icing
- Friction, Abrasives, and Snow Removal Equipment
- Blowing Snow and Winter Visibility
- RWIS, Thermal Mapping and Storm Forecasting
- Novel Technologies in Winter Maintenance

For more information and to register, see www.uiowa.edu/~ccp/courses/053164-index.htm or contact Wilfrid Nixon at the University of Iowa; phone 319-335-5166; fax 319-335-5660; e-mail: wanixon@blue.weeg.uiowa.edu

AISI Short Span Steel Bridge Design CD is Now Available

Washington, DC, April 18, 2001—The American Iron and Steel Institute (AISI) has released Version 3.0 of its acclaimed software for designing short span bridges. Now on CD, the software contains the design plans and program previously available in Version 2.0, but in a format that is easier for design engineers to use.

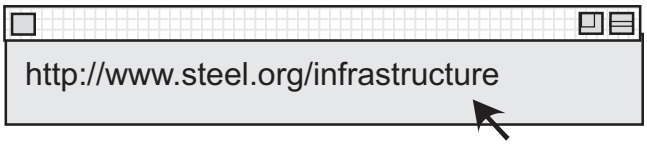
The short span steel bridge software incorporates the AASHTO 1998 LFD codes and is compatible with Windows 95/98/2000/NT. It is available free of charge for a 30-day trial. After the 30 days have expired, the user has the option to purchase the software through AISI's web site (see below).

"The updated steel bridge software is easy for design engineers to use, and will result in time and cost savings for them," said Camille Rubeiz, P.E., AISI's director of transportation and infrastructure. "The new CD format makes it easy to distribute this information at seminars and trade shows, and allows us to promote steel bridge design worldwide. Already, we have received several orders from engineers around the globe, who are using it to design cost-effective steel bridges in their own countries."

Rubeiz said that the steel bridge design CD is AISI's latest effort to convert its technology transfer materials into an easier-to-use format for design engineers. The institute now offers online courses on designing weathering steel bridges and on corrugated steel pipe design through www.pdhonline.org, which allows design engineers to access the materials 24 hours a day, seven days per week.

The American Iron and Steel Institute (AISI) is a nonprofit association of North American companies engaged in the iron and steel industry. The institute comprises 42 producer member companies, including integrated and electric furnace steelmakers, and 156 associate and affiliate members who are suppliers to or customers of the steel industry.

To obtain a free 30-day trial version of the AISI short span steel bridge software, you may download it from the AISI web site:



or call 1-800-277-3850 and ask for item #T-300.

QuickZone Software Prototype

A prototype version of QuickZone, a new work zone delay estimation software developed by FHWA in cooperation with Mitretek Systems, is now available on the web for use and assessment. The software can be downloaded at www.tfhrc.gov/its/quickzon.htm. A user need only have Microsoft Excel 97 or higher running on a Windows-based PC to use the QuickZone application. The software allows the user to compare the traffic impacts for work zone mitigation strategies and estimate the costs associated with these impacts. The costs can be estimated for both an average day of work and for the whole life cycle of construction. Version 0.99 of QuickZone was released in April 2001. For more information, contact Deborah Curtis at FHWA, 202-493-3267;

fax: 202-493-3419,

e-mail: deborahcurtis@fhwa.dot.gov.

International Scan on Workforce Development

from Moges Ayele, Transporter*, Feb. 2001*

The planning for a major international scan, co-sponsored by FHWA and AASHTO, is now underway. Joe Toole, director of the Office of Professional Development, and Pete Rahn, secretary of transportation for New Mexico, are co-chairs of the 10-person study panel. Composed of representatives from FHWA, AASHTO, academia, professional associations, and the private sector, the panel has scheduled site visits in Europe to study innovative and workable practices in the transportation field.

Topics to be addressed by the scan are workforce development and transportation training.

Discussion topics include European practices and experiences related to partnerships, education, and workforce development. Specifically, the panel will explore the methods used by other countries to recruit, train, and retain their transportation professionals at all levels (apprenticeship, undergraduate, graduate, management, and executive). U.S. participants will share their viewpoints and experiences with the hope of forging new partnerships between comparable American and European agencies and institutions.

According to panel co-chair Joe Toole, "The members of the scanning tour are excited about learning how public and private highway organizations in Europe have been able to build and maintain a dedicated, trained workforce of technical and nontechnical staff. We are eager to learn what has worked and apply these ideas in the United States."

The panel is scheduled to conduct their meetings and site visits between March 24 and April 8. Tentatively, plans are underway to meet in Sweden, Germany, France, and the United Kingdom. A preliminary summary of the scan findings should be available by June 2001.

Contact:
Moges Ayele 703-235-0530
mogesayele@fhwa.dot.gov

NAPA Releases Community Relations Video "Working it out Together"

Lanham, MD—The National Asphalt Pavement Association (NAPA) announces the release of a new video, "Working It Out Together." This video is designed to help hot mix asphalt (HMA) companies create and maintain positive relationships with their neighbors.

NAPA's new video visits HMA facilities from Washington state to Maryland and shows examples of how several companies reach out to their communities. The video makes a point that no chemical reactions, refining, or distilling take place at HMA facilities. This eight-minute video can be shown at community meetings, city or county council meetings, or as an introduction to a tour of an HMA facility.

The "Working It Out Together" video is available for $40 plus shipping and handling. To order, contact the Publications Coordinator at the NAPA office, toll-free 888-468-6499, fax 301-731-4621, e-mail publications@hotmix.org, or order on-line at www.hotmix.org.

Roadway Hardware Management Systems: Is There a Need for Assistance?

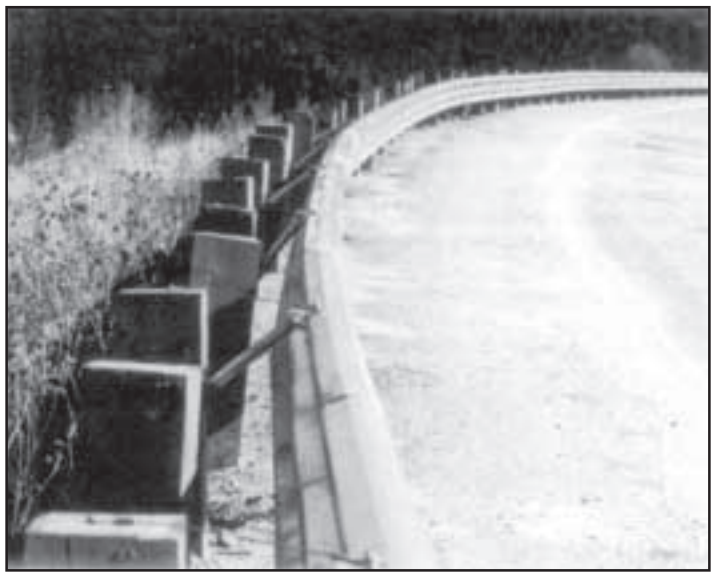
Thomas Van, Transporter*, Jan. 2001*

Guardrails, signs, pavement markings, and numerous kinds of safety devices are an important part of every modern highway. These devices are often referred to as roadway hardware. Every year, hundreds of millions of dollars are spent installing, repairing, upgrading, and replacing this hardware. In recognition of this demand on resources, AASHTO has created a special ad-hoc steering committee to determine if current roadway hardware management systems need to be enhanced. This ad-hoc committee consists of state maintenance and traffic experts and is chaired by Michael Crow from the Kansas Department of Transportation.

The steering committee is currently conducting a survey of state DOTs to establish a baseline of current practices and to determine needs and interest in enhancements. This survey will collect information on signs, traffic signals, lighting, supports and structures, guardrails, barriers and crash cushions, pavement markings, and traffic detectors. Based on the results of the survey, the steering committee will determine if assistance is needed by the states in any of these areas, such as the development of a synthesis of best practices or a set of guidelines for specific management systems.

There are many issues related to roadway hardware. Costs for installation and maintenance vary widely with the selection of equipment, locations, ambient conditions, and accessibility. Estimating the life of a guardrail, sign, or a crash cushion is difficult but essential for predicting future budget needs. Heavy traffic restricts available hours for repair work and increases liabilities on highways. State highway departments cannot risk using a "wait and see" approach to hardware maintenance. They need to know what to expect and how to deal strategically with problems before they arise.

With years of experience in pavements and bridges, States have found that management systems can help address these kinds of problems. By predicting operations and maintenance costs, states can more accurately establish work plans and budgets to replace hardware at the appropriate time and at the least cost.



Installing, repairing, upgrading, and replacing roadside hardware such as this guardrail requires hundreds of millions of dollars annually.

The AASHTO survey to determine needs and interests is the first step in a program to research and develop tools that assist states in managing their vast inventories of roadway hardware.

Burleigh County, North Dakota Salt Shed Helps to Mitigate Storage Problems

by Vernon Monger of the North Dakota Transportation Technology Transfer Center, North Dakota State University

Burleigh County (North Dakota) recently constructed a salt shed for storage of their salt and salt-sand mixtures. Previously the mixed salt/sand was stockpiled outside and considerable leaching occurred during the season. Rodney Ness, highway superintendent, states that while they attempted to keep the stockpiled material to a minimum during the summer months, it is always difficult to determine how much salt will be used during the winter months and sometimes the stockpile could be quite large in the spring.

They constructed a 65-foot by 100-foot long building, for a cost of $147,000. The concrete walls are 10 feet high, 14 inches thick, load bearing, giving them the ability to stockpile material to near the top of the wall. The dome above the concrete wall is metal "curvet", with a height of 21 feet at midpoint above the concrete wall. An overhead door 24 feet wide by 16 feet high was installed along with a walk-in door. The cement used was type II which is somewhat resistant to chemicals. Also fly ash was used in the mix equal to approximately 22% of the cement. The fly ash will reduce costs as well as improve durability with some resistance to chemicals. A special sealer (40% solids, silane/siloxane) was also placed on the floor and walls.

While the county only uses approximately 1,000 tons of salt/sand in a normal year, they do see the need for increased usage in the future. As new roads become paved, particularly around the urban area there is an increased demand for such services. Therefore the storage facility is of sufficient size for years to come.

Jon Mill, county engineer, states they mix their sand with bottom ash in equal quantities. The bottom ash is available from the power plants in the area. It is gritty and black, absorbing heat from the sun more readily, and reacts faster to the ice. Also the gritty material provides better traction. It is also very light, and therefore the sand seems to hold it in place on the roadway. Approximately 5 percent to 7 percent salt is used in the mix.

The county has recently purchased two new trucks with stainless steel slide in sanders to complement their existing three sanders. While the stainless steel sanders are more costly than the other sanders, they feel the cost may be justified with less maintenance and a longer life span. With the demand for more and better service from the public, they are ready for the demands of winter.

Burleigh County Salt Shed

European Work-Zone Practices Yield Ideas for U.S. Roads

from the Transporter*, Jan. 2001*

The FHWA Office of International Programs has just released a report titled *Methods and Procedures* to *Reduce Motorist Delays in European Work Zones.* Work-zone delays are an increasing irritant and danger for U.S. motorists. In 1997, more than 600 fatalities occurred in work-zone crashes, at a high personal and societal cost.

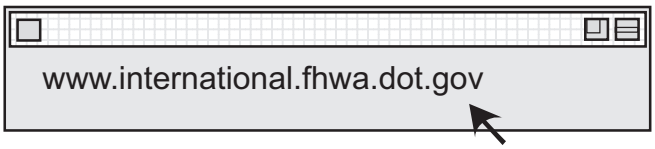
To observe how other countries manage traffic flow through temporary work zones, FHWA and the National Cooperative Highway Research Program sponsored a scanning tour to give U.S. highway agency and contractor representatives a first-hand look at operations. The tour took place in May 1999, and representatives of FHWA, state DOTs, and private contractors visited locations in Cologne, Germany; The Hague, the Netherlands; Antwerp, Belgium; Edinburgh, Scotland; and Paris, France.

The team noted that European agencies focus a great deal of attention and resources on evaluating how the project will affect their customers the highway users and then on developing and implementing strategies to minimize those effects. They also place a great deal of emphasis on developing and implementing a communications plan to inform the public about work zones and provide alternative routes well in advance of the project start date and on keeping the public informed about real-time traffic situations. Agencies and contractors extensively use ITS technologies to communicate with the public.

Based on their observations, the scanning team developed several recommendations for improving traffic flow and capacity so that traffic can be rerouted onto the shoulder during future construction and maintenance operations. safety in U.S. highway work zones. The first is that lane rental charges can provide significant incentives for shaving time from construction projects and ensuring that construction is done right the first time. The second is that by narrowing the lanes in work zones, agencies can maintain the same number of lanes and thus minimize delays. Narrower lanes have the added benefit of encouraging traffic to slow down. New construction should include shoulders with adequate structural capacity so that traffic can be rerouted onto the shoulder during future construction and maintenance operations.

Copies of the report are available by contacting:
Hana Majer
202-366-6003
e-mail, international@fhwa.dot.gov

The report is also available on the Internet at:



State of Georgia Uses Geotextile Filter Bags to Trap Silt

Triangular silt barriers, geotextile filter bags, and concrete blocks are just some of the products and ideas state highway agencies are using to better control soil erosion and sedimentation resulting from highway construction projects. The roadbuilding process often disturbs soil, which is then vulnerable to being washed downstream when it rains, causing a buildup of soil and other matter in waterways that is known as sedimentation. Excessive sedimentation can destroy fish habitat; clog streams, storm drains, and culverts; and pollute waterways, among other problems.

Since 1987, when an amendment to the Clean Water Act more broadly defined point source pollutants to include stormwater discharge from such industrial activities as construction, an increased number of environmental regulations have addressed the mitigation of highway runoff. In 1999, the U.S. Environmental Protection Agency (EPA) issued a final rule expanding its National Pollutant Discharge Elimination System stormwater program to include the regulation of construction sites that disturb one to five acres of land.

With the increased emphasis on erosion control resulting from the Clean Water Act and the 1991 Intermodal Surface Transportation Efficiency Act legislation, states are implementing a variety of new control methods. The Georgia Department of Transportation (DOT), for example, has started using geotextile filter bags to trap silt when pumping water from sediment basins and bridge footings. The bags are usually placed on a stone or gravel bed that has been sloped to ensure the filtered water will exit at the desired location. "We have used the filter bags on four bridge projects so far and they have worked out well," says David Graham of the Georgia DOT. For more information, contact Graham at 404-656-5306 (e-mail: david.graham@dot.state.ga.us).

Delaware DOT is using what is known as a skimmer dewatering device to better trap soil in sediment basins. The device is a floating riser that attaches to the outlet by way of a flexible pipe. Compared to the perforated riser used previously, the floating riser better traps sediment at the surface of the basin. "It works really well," says Vince Davis of the Delaware DOT. "It is a walk-away device and relatively maintenance free." For more information, contact Salvador Palalay at Delaware DOT, 302-760-2188 (e-mail: spalalay@mail.dot.state.de.us).

The Illinois DOT has found success using articulated block mats, which are concrete blocks held together with cables. The blocks can be used for a number of erosion control applications, such as stabilizing slopes or as channel or ditch liners. Illinois has used them to control high velocity runoff in river bottom wetlands and as work pads at bridge construction sites. The block mats are laid on the river bed, so machines can run across them without kicking up too much silt. Richard Nowack of the Illinois DOT also reports success in using triangular silt barriers, which are employed to remove suspended particles from drainage water. The barrier consists of a permeable urethane foam core surrounded by a woven geotextile fabric and fixed to the ground with wire staples. For more information, contact Nowack at 217-785-2943 (e-mail: nowackrj@nt.dot.state.il.us) or John L. Rowley at 217-785-2834 (email:rowleyjl@nt.dot.state.il.us).

continued

The Georgia DOT has started using geotextile filter bags to trap silt when pumping water from sediment basins and bridge footings.

Several states, including Georgia and North Carolina, are also experimenting with using the substance polyacrylamide (PAM) to accelerate the settlement of sediments. PAM, which comes in powder, emulsion, and gel-block form, binds small soil particles together to accelerate the settlement of suspended particles in sediment traps and ponds. For more information on PAM test projects in Georgia, contact James Magnus at the Georgia DOT, 404-656-5306 (e-mail: james.magnus@dot.state.ga.us). For more information on North Carolina's PAM study, contact Byron Moore at North Carolina DOT, 919-733-2920 (e-mail: bjmoore@dot.state.nc.us).

Through using the range of new erosion control methods outlined above, States are minimizing the impact of construction and maintenance operations and mitigating sediment and erosion concerns resulting not only in better roads but a better environment.

To help state highway agencies implement erosion and sediment control measures and clarify FHWA and EPA requirements in this area, FHWA and EPA are jointly developing a National Highway Institute course "Design and Implementation of Erosion and Sediment Control." Intended for designers, contractors, and inspectors, the course will address such topics as current regulatory requirements, erosion and sediment control principles, and management techniques for controlling erosion and sedimentation on highway construction and maintenance operations. The pilot for the course is tentatively scheduled to be held in late summer or early fall of this year. For more information, contact John Perry at FHWA, 202-366-2023 (fax: 202-366-9981; e-mail: johna.perry@fhwa.dot.gov).

Pooled-Fund Study to Validate Geotech Device

Mike Adams, the Transporter*, Feb. 2001*

On November 29 and 30, FHWA sponsored a meeting to kick off the validation of a new device that measures the stiffness of compacted granular materials called the Soil Stiffness Gauge (SSG). Preliminary studies indicate the SSG can be used to control the compaction of soil for roadway construction, particularly in trenches, embankments, and behind abutment walls. The validation is being conducted as part of the pooled-fund study, "Non-Nuclear Testing of Soils and Granular Bases Using the Geogauge."

Successful validation of the SSG should improve the method for controlling the compaction of soils for highway construction and make it possible for the soil stiffness or modulus measurement to be directly applied into the design of pavements or in the forensic failure analysis of soil structures.

Currently, the most popular method of controlling soil compaction is to measure the density of the soil with a nuclear density gauge. The use of the nuclear density gauge is very inconvenient because it contains radioactive materials. The nuclear density gauge is also strictly regulated and use requires special training, transportation documents, and provision for storage. The SSG does not require any special permits or license for use, and collects data quicker than the nuclear density gauge.

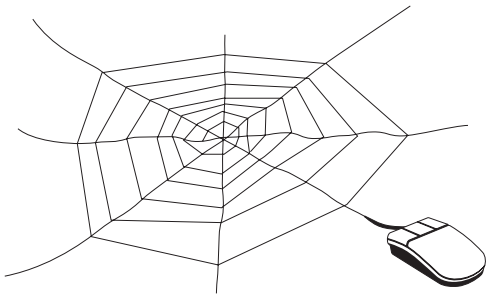
Twenty-two states are contributing to the pooled-fund validation study and representatives from each state were invited to participate in the November meeting. Developers of the SSG and its manufacturer, along with several university professors, attended the November meeting. The meeting was organized under the direction of FHWA geotechnical engineer Albert DiMillio, who has also collaborated with other government agencies and industries during the development of the device.

Melvin Main, who helped develop the device on the right known as the SSG, prepares the ground with a thin layer of sand to perform a soil stiffness test.

Mike Adams, phone 202-493-3025
mike.adams@fhwa.dot.gov

Spinning Your Own Web Site: Part Five, Creating the Look and Feel

From a series of articles about web site development, reprinted here with permission from Technology News *of the Iowa State University and the Center for Transportation Research and Education*



This is the fifth article in a series about web site development for local transportation agencies. The first four articles covered planning a web site, acquiring the tools for creating it, choosing and organizing content, and helping users navigate your site.

Design isn't just about making your web site look nice. In fact, by planning content, labels, and navigation systems, you've already begun the design process. Creating the look and feel of your web site is the next logical step in this process. Even if you decide to outsource some or all of your web site development, generating some ideas about what your site should look like will help the designer realize your vision of the site.

Following are some basic tips to help you get started.

Finding Ideas

Examine your organization's existing print materials for design ideas. Does your agency have a consistent image in its print materials that you'd like to use on your web site? The print materials may suggest a color scheme. Your agency may have a logo you could incorporate as well.

If you haven't been surfing the internet and looking at other agencies' web sites, now is the time to start. Think about the elements of other sites that you like and dislike. Borrowing design ideas and applying them to your own web site is perfectly acceptable, but of course downloading other sites' images and text and using them as your own is not.

Color

You don't need to use any images at all to make your web site colorful. Color can be used as background for a whole page while other colors can be used as backgrounds for small sections of pages to set them apart. Text and links can also be assigned different colors. The key to using color well is to have a high contrast between the background color and the text color. A plain white or other light colored background with black or other dark text will be easily readable. But light text on a dark background is hard to read.

Link Colors

While it is possible to change the colors of links, it's not advisable. The web browser default colors for text links are blue for an unvisited link and purple for a visited link. Web users understand this, and new users learn this idea quickly. So it's a useful navigation and orientation tool for all users. These colors have almost become a standard, but many web designers don't use the default colors because they don't "go" with the rest of their design. Consequently web users can run into navigation problems on sites with nonstandard link colors.

Backgrounds

Background images should be subtle or they'll overwhelm the text and users won't be able to read information. One popular use of a logo is to fade it to a pale version of itself, similar to a watermark on fine paper, and then use it as a tiled background. Tiling means that one small image is repeated across and down the page. Another popular background is to create a two-color image that looks like two columns, one narrow left-hand column and a wider right-hand column. The narrow column usually contains information that is repeated from page to page such as navigation bars and contact information.

Images

Logos, illustrations, and photos can enhance your site, but it's easy to go overboard and significantly increase the download time of a page. A very basic web page would incorporate an organization's logo, often in the top left corner of the page, and the rest would be well organized text. It's a good idea to use your logo (or your name if you have no logo) on every page because it lets web users know whose site they're visiting, especially if they enter the site from somewhere besides your home page.

Evaluate each image you'd like to use on your web site. Does it add something to the site's content, such as a map showing where your agency is located? Does it help users navigate your site? Graphical navigation bars are a common way to incorporate colorful yet simple images. Think hard before using images that are simply there to look pretty, especially if the images are large and take a long time to download. Try to make your images do double duty.

Animation

Animation is a fun gimmick for a few seconds. After that the continuous movement is distracting for web users who are simply looking for information. Considering that the main purpose of a local transportation agency's web site is to inform rather than entertain, animations may be inappropriate. Even the tiny and innocuous spinning "new" signs and letters stuffing themselves into envelopes to be e-mailed can be visually distracting. There are probably better, more professional ways to draw attention to specific parts of your site.

Final Tips

In addition to using your logo or name on every page, include a way to contact your agency. You'd be surprised how hard it is to find this simple information on many web sites. When deciding where to put your navigation bar, be consistent. The top and left side of the page are probably the most common places, and thus the places users frequently look. The bottom is a useful place for redundant text links for a graphic navigation bar.

A very basic web page would incorporate an organization's logo, often in the top left corner of the page, and the rest would be well organized text.

The previous four articles on this subject can be found in the preceeding newsletters, downloadable in Adobe PDF files from the web at:

www.dot.state.ak.us/external/state_wide/t2/news.html

Training Calendar 2001

Training (www.dot.state.ak.us, go to "World of DOT & PF", then click on "Training Opportunities")

August

Title I ADA Training "The ADA Still Applies"
For managers and supervisors, ADA coordinators, and human resource personnel
Anchorage: DOA Division of Personnel Training Facility, 619 East Ship Creek Avenue, Entrance "B" 3rd Floor Suite 309. August 22, 9:00 AM to 4:30 PM
Juneau: State Office Building, 10th Floor Large Training Room. August 28, 9:00 AM to 4:30 PM
Trainer: Don Brandon, State of Alaska ADA Coordinator call 279-0299.
(Workshop not sponsored by T2)

September

Title I ADA Training "The ADA Still Applies"
Fairbanks,: Farthest North Girl Scout Council, 431 Old Steese Highway, Corner of Steese Highway and College Rd. Sep. 6, 9:00 AM to 4:30 PM
Trainer: Don Brandon, 279-0299.
(Workshop not sponsored by T2)

State Bicycle & Pedestrian Coordinator's Annual National & Alaska Summit Meetings
Anchorage: Sep. 11-14. Obtain a registration form from: robert_laurie@dot.state.ak.us

Highway Traffic Noise Analysis and Abatement
Anchorage: Sep. 18-20

October

Preservation of Asphalt Pavements one day Seminar
Juneau: Oct. 1 Centennial Hall
Fairbanks: Oct. 3 Chena River Convention Center
Anchorage: Oct. 5 TBA

Environmental Justice/Title VI/Air Quality Conformity 1 1/2 day workshop
Fairbanks: Oct. 8/9 Chena River Convention Center
Anchorage: Oct. 9/10 Sheraton Hotel
Juneau: Oct. 11/12 Centennial Hall

Writing Skills Training two day workshop, *for DOT&PF employees only*
Juneau: Oct. 9-12
Fairbanks: Oct. 15-18
Agenda at: www.dot.state.ak.us/external/state_wide/t2/agenda/writing.htm

Advanced HEC-RAS three day workshop
Anchorage: Oct. 15-17
Agenda at: www.dot.state.ak.us/external/state_wide/t2/agenda/hecras.pdf
Register with JRETC at: www.jretc.org/
(Workshop not sponsored by T2)

Trans Tech Alaska 2001
Alaska Public Transportation & Intelligent Transportation System (ITS) Conference
Anchorage: Oct. 22-24
See the TransTech Homepage at: www.dot.state.ak.us/external/state_wide/planning/transtech/transtechhmpage.html

November

Pending:
FHWA Contract Administration Core Curriculum Course
Fairbanks
Anchorage
Juneau

December

IECA Phase II: How to Select, Install & Inspect Site Erosion & Sediment Control. Best Management Practices for NPDES Storm Water Permit Compliance
Juneau: Dec. 11
Anchorage: Dec. 12,
Fairbanks: Dec. 13
Agenda and registration is at: www.ieca.org/education/courses/NPDESusa.html
(Workshop not sponsored by T2)

For information about T2 sponsored training, contact:
Sharon McLeod-Everette at 907-451-5323; sharon_mcleod-everette@dot.state.ak.us or
Simon Howell at 907-451-5482; simon_howell@dot.state.ak.us.

Meetings Around Alaska

Society	Chapter	Meeting Days	Location & Contact	
ASCE	Anchorage	Monthly, 3rd Tues., noon	Northern Lights Inn	
	Fairbanks	Monthly, 3rd Wed., noon	Captain Bartlett Inn	
	Juneau	Monthly, 2nd Wed., noon*	Westmark Hotel	* except June–Aug.
ASPE	Anchorage	Monthly, 2nd Thurs., noon	West Coast International Inn	
	Fairbanks	Monthly, 1st Fri., noon	Captain Bartlett Inn	
	Juneau	Monthly, 2nd Wed., noon*	Westmark Hotel	* except June–Aug.
ASPLS	Anchorage	Monthly, 3rd Tues., noon	Executive Cafeteria, Federal Building	Alex Prosak, 562-3252
	Fairbanks	Monthly, 4th Tues., noon	Ah Sa Wan Restaurant	
	Mat-Su Valley	Monthly, last Wed., noon	Windbreak Cafe	George Strother, 745-9810
AWRA	Northern Region	Monthly, 3rd Wed., noon	Rm 531 Duckering Bldg., University of Alaska Fairbanks	Larry Hinzman, 474-7331
ICBO	Northern Chapter	Monthly, 1st Wed., noon	Zach's Sophie Station	Jeff Russell, 451-5495
ITE	Anchorage	Monthly, 4th Tues., noon**	Sourdough Mining Co.	Alex Prosak, 562-3252 ** except July & Dec.
IRWA	Sourdough Ch. 49	Monthly, 3rd Thurs., noon**	West Coast International Inn	
	Arctic Trails Ch. 71	Monthly, 2nd Thurs., noon**	Oriental House	
	Totem Ch. 59	Monthly, 1st Wed., noon	Mike's Place, Douglas	** except July & Dec.
PE in Government	Anchorage	Monthly, last Fri., 7 a.m.	Elmer's Restaurant	
Society of Women Engineers	Anchorage	varies	Karen Helgeson, 522-6513	

2001 STOP ON RED WEEK

continued from page 6

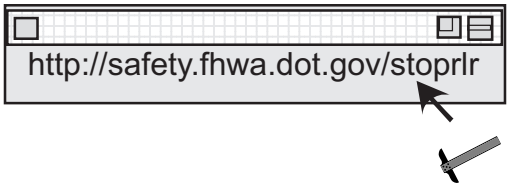
years of the campaign, we have seen nearly a 10% decline in red light running crashes and fatalities.

- One in three people claim they personally know someone who has been injured or killed in a red-light-running crash–similar to the percentage of people who know someone who was killed or injured by a drunk driver.
- About 21 percent said they felt that drunk driving incidents are decreasing, but only six percent felt that red light running incidents were decreasing.
- Although social scientists might hypothesize that "frustration" and "road rage" would represent what most people perceived as the cause of red light running, the results proved otherwise. Only 15.8 percent of respondents cited those reasons, while nearly half (47.8) admitted to being prompted by nothing more

complicated than being in a hurry.

- Red light runners do not conform to a set demographic– the dangerous practice reaches across drivers of all ages, economic groups, and gender. The perpetrators are everyday people: professionals, blue-collar workers, unemployed, homemakers, parents, and young adults.

For more information on Stop on Red Week, go to:



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T² Center Advisory Board

Web page: http://www.dot.state.ak.us/external/state_wide/t2/index.html

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ALASKA TRANSPORTATION TECHNOLOGY TRANSFER

Local Technical Assistance Program
Department of Transportation and Public Facilities
2301 Peger Road M/S 2550
Fairbanks, AK 99709-5399

Return Service Requested

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