

Alaskan Transportation

Local Technical Assistance Program

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Alaska DOT&PF Asphalt Summit 2001



DOT&PF management share problems and success from the summer construction season. L-R: Chuck Correa, Southeast Region Construction Chief; Gordon Keith, Director, Construction and Operations, Central Region; David Eberle, Regional Director, Central Region; Jim Weed, Northern Region Construction Chief; Ralph Swarhout, Regional Director, Northern Region; and Gary Hayden, Division Director, Construction and Operations, Southeast Region.

The Alaska Department of Transportation & Public Facilities (DOT&PF) held its annual asphalt summit November 19–20, 2001, at the Millennium Hotel Anchorage. Roughly 120 asphalt enthusiasts participated at the meeting, including contractors, suppliers, and DOT&PF management, an attendance increased from last year's number of 100 participants. The summit, originated by Commissioner Joe Perkins some years ago, proves to be a good forum to share problems and

successes, so much so that some participants have asked to have a similar meeting in the spring before construction season starts up. It is the only gathering where contractors, suppliers, and DOT&PF design, construction, and maintenance and operations staff are together in one room to talk about one topic: asphalt. Everyone brings a different and equally valuable piece of information to the table.

continued on page 2

Asphalt Summit 2001 *(continued from page 1)*

Perkins opened the Summit by noting that the travelling public notices one thing: the smoothness of the road. DOT&PF and contractor reputations rise and fall with the public's perception of whether their trip along a road is quiet and comfortable. He challenged the group to strive for the smoothest roads possible.

Part of the first day included reports back from the 12 task forces formed at the end of the 2000 Asphalt Summit. Those were:

- Asphalt Binder—implement SHRP's performance-graded asphalt cement performance grading binder system; develop specifications and a guide for when and where to use modified asphalts.
- Stone Mastic Asphalt—improve SMA pavement.
- Ride Specification—develop a specification and policy.
- Pavement Joints—evaluate the longitudinal pavement joint density and method specifications, core joints to determine density relative to 91% maximum specific gravity (RICE method).
- Asphalt Content Test Procedure—select an asphalt test method, considering the two AASHTO test



Left to right: DOT&PF Commissioner Joe Perkins and materials staff Newt Bingham of Anchorage, and Bruce Brunette of Juneau talk asphalt.



Mike Miller, M-B Contracting Co., Inc., left, concentrates on the speaker panel.

methods (ignition oven and the nuclear content gauge) and recommend which is best used for specific situations, based on sample size and achieving representative samples. These methods are used to calculate asphalt content for contractor payment on an entire project as well as to assess incentive or disincentive for conformance to the asphalt content specified in the mix design.

- Specification Consistency—develop consistent asphalt specifications to be used statewide.
- Two-Lift Asphalt Policy—develop a policy to address sequenced or temporary paving to perform and expedite the construction process while keeping the motoring public on pavement and retaining the ability to achieve pavement smoothness: when to use the process, whether based on average daily traffic, cyclic activities, or other considerations.
- Microsurfacing—evaluate microsurfacing as a form of pavement preservation on rutted pavements; primarily a literature search.

- Pavement Deadline Policy—develop a policy for specifying pavement deadlines and a process for granting waivers.
- Pavement Incentive/Disincentive—develop incentive/disincentive specifications for mix, asphalt cement content, density, smoothness, joint, and asphalt cement properties.
- Evaluate Base Course Specification—past performance of base courses and recommendations for specs or design changes in the base course (permeability, thaw weakening properties, and strength properties).
- Develop a design for manholes—primarily a literature search.

Three task force reports generated the most discussion. These were: Ride Specification, Asphalt Content Test Procedure (nuclear gauge vs. ignition oven), and Pavement Joint Density. There was no consistent agreement among contractors or among DOT&PF regions as to resolution of the topics.

The Asphalt Binder, Microsurfacing, Pavement Incentive/Disincentive, and Manhole Design Task Forces completed their tasks. The remaining eight task forces continue, with contractors joining DOT&PF staff on the task forces.

Contractors and suppliers shared their thoughts on nearly all task force topics and offered suggestions to streamline their work or make for better partnering situations.

DOT&PF's Research and Technology Transfer office unveiled the recently completed *Asphalt Surface Treatment Guide*, providing all conference participants with a copy.

Two key outcomes from the 2001 Asphalt Summit are the forming of a group called the Alaska Pavement Alliance (see accompanying article) and the addition of contractors to the DOT&PF task forces on asphalt topics. Contractors voiced a clear interest in participating and sharing their expertise to assist in the task force products and outcomes, and Commissioner Perkins took them up on their offer. Commissioner Perkins asked Phil Anderson, contractor and AGC representative, to develop a contractor response and evaluation of the task force recommendations relating to smoothness, joint density, and asphalt cement sampling and testing.

Finally, the conference took on an international flavor, as two people talked about their visits to other countries. Commissioner Perkins provided a presentation based on a European scanning trip he took as chair of the AASHTO Committee on Highways. Technology examples include China's emphasis on landscaping and beautification, Italy's focus on reducing noise and their belief in drainage, and South Africa's use of pre-coated chips—which may have an application in Alaska.

Chris Kepler, Central Region Maintenance chief, who was invited to Russia to help them learn about Perma-Zyme uses and application, did a presentation on his trip. He noted that language wasn't really a barrier—their common interest in the topic had them on the ground, drawing pictures in the dirt to communicate. And he suggested that grader operators in the United States should appreciate their equipment. One fellow had his grader for 15 years, and not only was he its only operator, he also slept in it with his dog. It was essentially his home.



Alaska Pavement Alliance

Commissioner Joe Perkins has been responsible for an annual event sponsored by Alaska Department of Transportation and Public Facilities known as the Asphalt Summit. A direct spin-off of this year’s Summit is a recently formed group called the Alaska Pavement Alliance.

The Alaska DOT&PF Asphalt Summit is a gathering of just about everyone in the state who deals with asphalt in some form or another, whether it’s a contractor constructing a new road, a state inspector monitoring the process, a private asphalt supplier, or someone who maintains the asphalt after it’s constructed.

The summit has proven fruitful enough that a group of its participants decided to join forces to create the Asphalt Pavement Alliance. The goal is to have a group that will continue to meet, perhaps more often than annually. Because the commissioner of DOT&PF is a political appointment and this is an election year, it’s not certain whether the asphalt community will continue to have at DOT&PF’s top level a strong advocate for a regular meeting.

The Alaska Pavement Alliance is working with an arm of the National Asphalt Paving Association (NAPA). NAPA’s Asphalt Alliance has offered their full support for the Alaska Pavement Alliance, including access to materials on life-cycle costs, perpetual pavements, etc. (most of which is available on CD) at no cost.

The group held its second meeting and has yet to determine what fee, if any, will be assessed for those who join the group. The group volunteered to help with a booth during the October 13–14 exhibit portion of October 11–15 national annual AASHTO convention hosted in Anchorage in 2002. Individuals were tasked with contacting others in their area to introduce the alliance, and will report back at the next meeting.

Its membership ranges statewide, including Anchorage, Fairbanks, Juneau, Kodiak, and the Kenai Peninsula. Government, contractor, and supplier are members at the same level in an effort to promote

partnering and to assure involvement from all parties. NAPA’s Asphalt Alliance vice president of technology and market development Roger Sandberg says Alaska is trying something that’s never been done—that is, formulate a new level of partnering in which all members enter at the same level.

To date, the Alaska Pavement Alliance is made up of the following:

- Wilder Construction
- Central Paving Products
- Dr. Ronald L. Terrel, Terrel Research, University of Washington
- Summit Alaska
- Quality Asphalt Paving
- Alaska Road Builders
- North Star Paving
- Alaska DOT&PF
- AAA Valley Gravel
- R&M Consultants
- CQC Company
- Knik Construction
- South Coast
- Brechen Enterprises
- Williams Petroleum
- Tesoro
- Chevron
- Exclusive Landscaping & Paving
- Goodfellows
- H&H Contracting
- Anchorage Sand & Gravel
- Hardrives Paving
- Great Northwest, Inc. (pending)
- Emulsion Products (pending)
- Municipality of Anchorage (pending)
- Mat-Su Borough (pending)

The group has agreed to meet the third Wednesday of every other month. The next meeting is scheduled for June 19 in Fairbanks. The group intends to schedule future meetings in other parts of the state. Contact John Lambert at Wilder Construction in Anchorage for more information: 907-267-5294.

Yukon / Alaska Maintenance Foremen Share Information

From February 26 through March 1, 2002, Canadians and Alaskans exchanged winter maintenance, grader training, worker safety and training, and administrative issues. Many also attended a Snow Fence Design and Installation course taught by Ronald Tabler of Colorado, an international expert in snow and wind technology.

The Yukon Transportation Maintenance Branch of the Yukon's Community and Transportation Services hosted a three-day maintenance foremen's meeting. Greg Belisle, maintenance and planning superintendent; Randy Jenson, inventory and equipment controller; and Connie Trecartin, administrative assistant, led the conference preparations. Other presenters included numerous staff from the Transportation Maintenance Branch; Transportation Engineering Branch; Government Services and Public Service Commission; Wildlife Canada and Fisheries and Oceans Canada; Environment Canada; City of Whitehorse; Northwest Territories; and Alaska Department of Transportation and Public Facilities. These folks presented a variety of topics that shared new ideas and technologies and gave maintenance foremen the administrative and technical information they need as they perform their winter, spring, summer, and fall maintenance work on the Yukon's roads.

Many of Transportation Maintenance's own personnel from far-reaching maintenance stations as

well as others from the City of Whitehorse, Northwest Territories, and Alaska attended. Held at the High Country Inn in Whitehorse and moderated by Belisle, the meeting was a popular draw, hosting about 100 people.

Entertainment at the Wednesday evening banquet was lively and enjoyable—several people were overheard the next day talking about feeling their smile muscles after laughing so much the evening before. During the banquet, the Transportation Maintenance Branch also honored Pamela J. Buckway, minister of Community and Transportation Services, who will move shortly to a different position as part of the Government Renewal process. Clearly, Buckway has been a strong advocate for the maintenance workers.

Meeting topics offered information needed by all maintenance workers and included presentations from Canadians and Alaskans. Alaskans were able to share their innovative snow removal technology, including equipment upgrades, magnetic snow plow guidance, robotic loader operations for avalanche cleanup, anti-icing and deicing, and other technologies.

Canadians shared a wealth of information about the Yukon's operations. Presenters came from Yukon

continued on next page

Below: Yukoners Gary (Duff) Felker, Walt Gutowski, and Greg Belisle get tips from George Levasseur, Alaska DOT&PF (2nd from right) on a mountain region snow shed that deflects blowing snow. DOT&PF installed the snow deflectors in Thompson Pass near Valdez.



Yukon winter maintenance truck; note the brine tanks mounted next to the sander box.

Ron Tabler (left), instructor of the snow fence design & installation class, and Bruce Fulcher, Yukon Geotechnical Engineer (right), interrupted in their snow fence discussion by the photographer.

Community and Transportation Services, City of Whitehorse, and Northwest Territories. Topics included:

- maintenance operations such as patching potholes, crack sealing, signage, sign post stands,
- mechanical operations (strobe lights, shop tools, hour meters, future equipment, water pumps and accessories),
- planning (rural road program, rest stops and outhouses, street lighting pollution),
- facilities maintenance,
- transportation engineering (future capital projects, facilities ventilation, materials source development, bridge inspection, bridge washing,
- environmental and wildlife habitat aspects of maintenance, including fish habitat and migratory birds,
- weather sheets, inspections, future of the Weather Office, and
- human resources, risk management, financial activities.

Grader operator training proved to be hot topic for both the Canadians and the Alaskans. The Yukon's Stu Purser, safety trainer, and Ken Geddes, bridge crew foreman, led a discussion on a grader operator training program that is under development. Providing training for their grader operators has become a strong focus for the Yukon. They want to standardize their training so a worker moving from one camp to the next will have the same knowledge base and be equally prepared to do the required work. Another factor is that many old hands are retiring, leaving behind a less-seasoned work force.

Following Purser and Geddes' overview, the entire conference split into three groups. The groups were tasked with offering suggestions and giving feedback

on the grader operator training program as it was thus far developed. All of the first afternoon and part of the next morning focused entirely on grader training, with reports at the end of the session. In total, nearly an entire day focused on the grader operator training program.

Maintenance and Operations participants from Alaska DOT&PF included:

- Jim Adams, Western District manager, Nome (co-presented the snow fence class);
- Mike Coffey, Southeast Region maintenance engineer, Juneau (presentation on chip seals);
- Jim Fehrenbacher, Tok area manager;
- Ira Grindle, Anchorage station manager, Central Region,
- Chris Kepler, Central Region Maintenance and Operations chief, Anchorage, (sodium chloride panel and presentation on his trip to Russia to share expertise on Perma-Zyme);
- George Levasseur, Southcentral District manager, Valdez (sodium chloride panel, presentation on snow control technologies, and co-presenter of the snow fence class); and
- Steve Potter and Ben Stewart, Northern Region Interior District foremen, Fairbanks.

Alaska DOT&PF Research and Technology Transfer representatives were:

- Steve Saboundjian, research engineer, who described the Alaska DOT&PF Research section and projects with application for maintenance and the Yukon, and
- Sharon McLeod-Everette, LTAP manager, who did a presentation on LTAP and BTEP.

Blowing snow causing closed roads due to drifts is as much a problem in areas of the Yukon as it is in Alaska. The Alaska/Yukon Border Technology Exchange Program, funded by the Federal Highway Administration, provided a training session on the topic. Ron Tabler of Boulder, Colorado, an international expert on wind and snow, presented a class on controlling drifting snow by designing and installing snow fences. Tabler was helped by Adams and Levasseur from Alaska DOT&PF, who shared their recent hands-on experience with snow fence installation, including installations over permafrost and in high mountain regions.



Canadians and Alaskans pack the Yukon Foremen's meeting, February 26-28.



European Study Provides Illumination

From *Transporter*, Jan. 2002

As vehicular travel increases in large urban areas throughout the world, nighttime journeys are also on the rise. Nighttime drivers experiencing reduced visibility. Road crashes at night are disproportionately high in number and severity, and the fatality rate for nighttime crashes in the United States is three times that of the daytime figure, when weighted for kilometers traveled. In their efforts to find possible lighting solutions, the transportation industry is extending their reach to include technologies and practices in the international transportation communities.

Representatives from the Federal Highway Administration (FHWA), State Departments of Transportation (DOTs), and the private sector performed a cooperative study of cutting-edge research and technologies in highway and roadway lighting systems of Europe. The FHWA Office of International Programs' report, *European Road Lighting Technologies*, features information about visibility design, luminance design, pavement reflection factors, tunnels, counter-beam versus pro-beam lighting, high-mast lights and signs, roundabouts, and safety. Based on findings from a European tour, the panel developed specific recommendations for the roadway lighting and safety for communities in the United States, now contained within *European Road Lighting Technologies*.

The team included representatives from FHWA, private industry, and DOT members from Wisconsin, Texas, Alabama, and Pennsylvania. The panel traveled to five European countries including Finland, Switzerland, France, Belgium, and the Netherlands, where they observed innovative lighting practices and identified applications that could be implemented in the United States. Of particular interest were small target visibility and luminance design techniques.



An underground tunnel and roundabout in Switzerland are lit with electronically ballasted dimmable fluorescents on the walls.

To obtain a copy of this report or for more information, please contact the FHWA Office of International Programs, at 202-366-9636 or via e-mail at international@fhwa.dot.gov.

You can also visit the Office of International Program's web site, at:



Road Safety Audits

Road safety audits is a process wherein a team of independent experts identifies unsafe roadway conditions during project design or on existing roads.

See the report of the International Scanning Team at:



Also see:



A training course will be available soon. contact Fred Small at 202-366-9212

Rumble Strip Technical Advisory

A new Technical Advisory (T5040.35) contains information on state-of-the-practice for the design and installation of shoulder rumble strips and provides guidelines for their use on appropriate rural segments of the National Highway System (NHS).

The Technical Advisory is posted at:



Cold Regions Engineering 2002

ASCE's Cold Regions Engineering conference series is the only known venue that brings together all aspects of cold regions engineering, from infrastructure construction and transportation problems to frozen ground and water resource issues, from both research and applied engineering points of view. The conference theme, "Cold Regions Impacts on Transportation and Infrastructure," encompasses cold regions engineering issues in the Lower 48 states as well as the northern regions of the world. The conference will address cold regions impacts on a wide spectrum of engineering practice centered around the general theme of transportation and infrastructure. The conference will provide an excellent opportunity for private and public sector engineers, scientists, educators, and managers to come together and discuss cold regions problems and solutions. The conference will include three days of concurrent technical sessions, technical field trips, luncheons, banquet, and technical short courses. Many possibilities exist for pre- and post-conference tours of natural wonders in the local and surrounding area of southcentral Alaska. A spouse/guest program is also planned.

The conference is located in Anchorage, situated at the base of the beautiful snow-capped Chugach Mountains on the shores of Cook Inlet. A most beautiful drive along Turnagain Arm is just 10 minutes south of town. One of the world's best wildlife viewing points for mountain sheep is also just 15 minutes south of Anchorage. May is the ideal time to hold the conference due to the nice weather and availability of meeting rooms and lodging. Conference participants can select accommodations in hotel rooms or in other cost-effective housing.



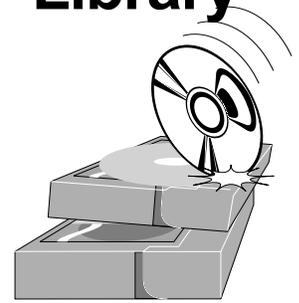
Sponsors: Technical Council on Cold Regions Engineering (TCCRE) of the American Society of Civil Engineers Alaskan Section of ASCE University of Alaska, Anchorage

Contact: Eric Johnson, e-mail: ejaktenor@cs.com



New Videos and CD-ROMs in the LTAP Library

"There are two types of knowledge. One is knowing a thing. The other is knowing where to find it." Samuel Johnson



Videos

- *It's About Time...Traffic Signal Management Cost Effective Street Capacity and Safety* (13 min.)
Discusses the benefits of traffic signal management.
- *Scheduled Lives, Stressful Drives* (22 min.)
How advanced traveler information systems are changing the way we think about urban mobility.
- *Plowing Subdivisions in Townships* (15 min.)
A public information tape about what affects snow removal operations in townships.

CD-ROMs

- *PA Blueprints: Best Land Use Principles and Results, Interactively Shown*. Just as blueprints for a building explain what goes where and how it will look, zoning regulations act as a blueprint for a community. *PA Blueprints* contains a series of exemplary regulatory approaches supplemented by dynamic illustrations from Pennsylvania.
- *Structural Systems Research Project Report "TILT: The Treasure Island Liquefaction Test"*
This report presents the results of the Treasure Island Liquefaction Test (TILT), a joint project carried out by University of California, San Diego, and Brigham Young University. To improve our understanding of the lateral load behavior of deep foundations in liquefied soil, a series of full-scale

lateral load tests were been performed at the National Geotechnical Experimentation Site (NGES) at Treasure Island in San Francisco, California. The ultimate goal of the TILT project was to develop lateral load-displacement relationships for a variety of individual piles and pile groups in liquefied sand under full-scale conditions. The tests were carried out using a high-speed hydraulic loading system after the sand surrounding the piles was liquefied using blasting techniques. This report presents back-calculated p-y curves for single pipe piles, pile groups, and cast-in-steel shell piles before and during liquefaction, as well as through dissipation of excess pore water pressures. Includes recommendations with regard to design of deep foundations in liquefied soil.

To borrow these or other items from the video and software library, call Simon Howell at 907-451-5482 or e-mail: simon_howell@dot.state.ak.us. Or search the LTAP Library on the Alaska DOT&PF web page. Web page instructions are on the back page of this newsletter.

Alaska Village Technical Assistance Program

The Northwest Tribal Local Technical Assistance program at Eastern Washington University has just received approval from the federal highway administration (FHWA) to operate the new technical assistance program in Alaska.

It has become the Northwest and Alaska Tribal Technical Assistance Program and will be seeking a program coordinator for the Alaska center as well as an office location. The program will also establish an advisory board for the Alaska Center to help guide program development and implementation.

The mission of the Northwest and Alaska Tribal Technical Assistance Program is to:

- help tribes become aware of the significance of tribal transportation issues through education and training,
- help tribes define transportation systems that enhance community and economic development,
- promote desired land uses,
- protect cultural resources,
- orient and coordinate federal, state, and local governments, and

Alaska Village Technical Assistance Program (continued)

- maximize efficient use of transportation resources. Services include classroom training; technical assistance; a lending library of books, journals, videos and CDs; newsletter; website; fax and e-mail news updates; and a database of tribal transportation resources. In the Northwest we also staff the Transportation Committee of the Affiliate Tribes of Northwest Indians and participate on the Tribal Transportation Issues Committee of the Transportation Research Board.

For additional information contact:
Richard A. Rolland, director, Northwest and Alaska TTAP, Anchorage–Cheney–Spokane.
Tribal Transportation Training & Technical Assistance Eastern Washington University, Department of Urban & Regional Planning, 216 Isle Hall, Cheney, WA 99004. Phone 1-800-583-3187 or 509-359-6828. Fax 509-359-7485, e-Mail: rrolland@ewu.edu, web www.cbpa.ewu.edu/~LTAP

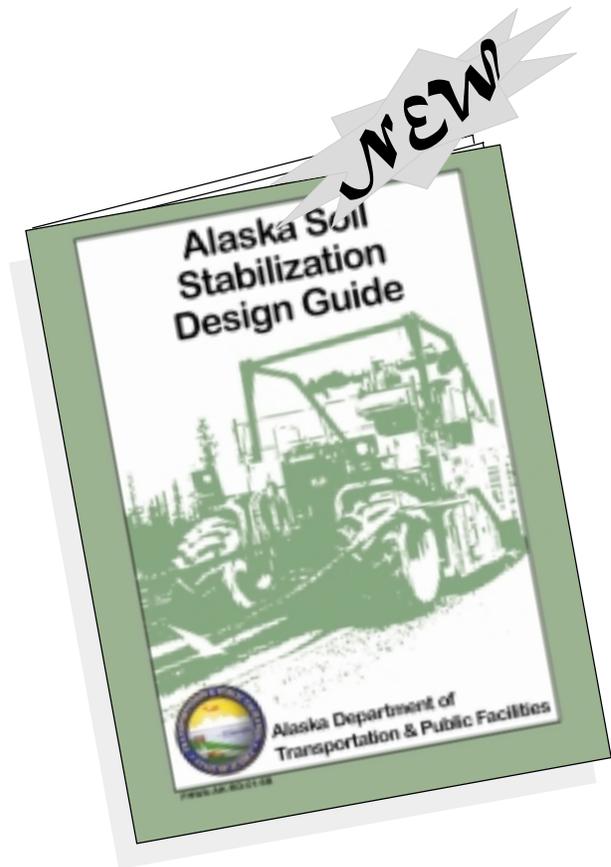


Alaska Soil Stabilization Guide

The Alaska DOT&PF Research Section just completed a research contract that produced a brand-new soil stabilization guide. The guide presents information on the types of soil stabilization techniques that have already been used, or that can be used, in Alaska. It covers techniques including asphalt, cement lime, mechanical, chemical, and other methods. For each method, there is a discussion on materials and design considerations, construction issues, and expected performance and costs. The appendices include:

- a glossary of terms,
- a reading list on prior stabilization used in Alaska,
- a discussion on the soils in Alaska, and
- a slide presentation summarizing the highlights of the guide.

DOT&PF provided seminars introducing the draft guide and invited final comments prior to completion of the guide. These were conducted in Anchorage, Fairbanks, and Juneau late in 2001. The guide may be found on the Research and Technology Transfer web site. See instructions on the last page of this newsletter. For assistance in finding a copy of the report, contact Simon Howell, simon_howell@dot.state.ak.us, phone 907-451-5482. For more information on report content, contact Steve Saboundjian at steve_saboundjian@dot.state.ak.us, phone 907-451-5322.



Intersection Safety Agenda

FHWA with its partners is in the process of finalizing a comprehensive national intersection safety agenda. The agenda was developed at the national intersection safety workshop held at Milwaukee, WI on November 14–16, 2001. Also, as a part of the overall effort to enhance intersection safety awareness, FHWA is developing a video, *Red Light Green Light*. The purpose of the video is to take a closer look at intersection safety and emphasize the importance of

individual responsibility when it comes to making intersections safer.

Contact Hari Kalla (202-366-5915) for more information or visit the **new** intersection safety web site at:



Office of Professional Development Launches Workforce Web Site

Transporter, October 2001

The Federal Highway Administration's (FHWA) Office of Professional Development (OPD) launched a web site focusing on transportation workforce development on Sept. 12.

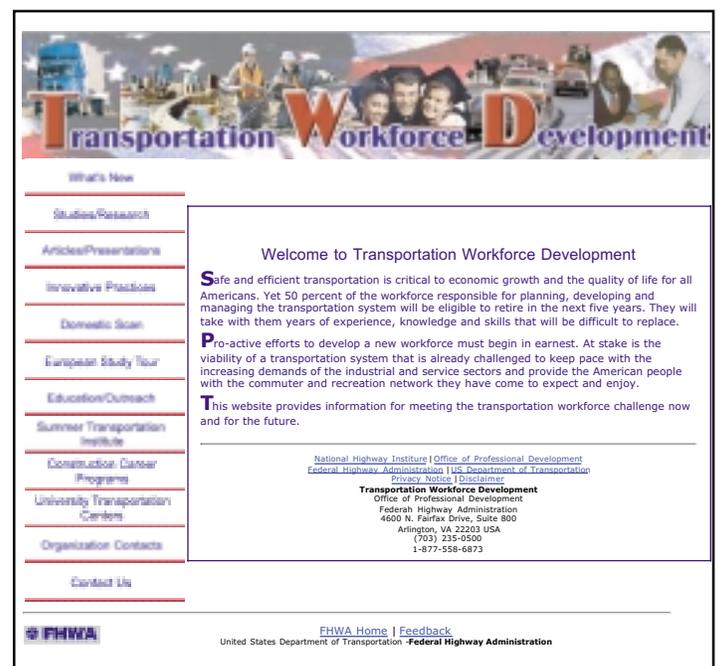
"The web site serves as a focal point for our partners in the transportation community to post and scan workforce information," said Joe Toole, director of professional development. "This way, all of us in transportation can efficiently exchange ideas and practices to advance our workforce efforts."

The web site (see right) is an essential communication and coordination tool, in light of seismic shifts anticipated in the nation's workforce. Forty to fifty percent of the national workforce is projected to retire in the next 5 to 15 years. In addition, a recent Rockefeller Institute of Government study shows that 42 percent of the 15.7 million state and local government employees are between ages 45 and 64, and 40 percent of these employees will be eligible for retirement in the next 15 years.

Inevitably, the transportation sector will compete with other industry sectors for qualified workers. Thus, workforce cooperation in the transportation community—across the private and public sector—will be crucial to the industry's success.

In that vein, the web site is intended to serve as a forum for dialogue and help coordinate solutions. The web site will include information on transportation workforce issues and will also suggest measures to im-

prove workforce planning, recruiting, retention, and professional development programs among private and public sector organizations.



For more information, visit:



Clark Martin, 703-235-0547
clarkmartin@fhwa.dot.gov

Ninth Annual Northwest Tribal Transportation Symposium May 7-9, 2002



Structuring Partnerships Through Reauthorization

This year's annual Tribal Transportation Symposium will give you an opportunity to learn about the latest developments in tribal transportation issues, such as:

- TEA-21 Reauthorization Efforts
- Proposed Rule for the Indian Reservation Roads Program
- Financing of Federal Aid Highways
- Federal Highways International Programs – Road Maintenance Model
- Safety Management Using GPS/GIS
- Census 2002 Data for Transportation Planning
- "638" Contracting—Program or Project?
- Context Sensitive Design

There will be many more topics to cover in the three days we have at the wonderful Quinault Beach Resort, located directly on the beach at Ocean Shores.

Contact the hotel:

Quinault Beach Resort
78 State Route 115, P.O. Box 2107
Ocean Shores, WA 98569

For reservations call 1 (888) 461-2213

www.quinaultbchresort.com

Room rate: \$110 + tax single or double occupancy. (Be sure to mention the Northwest Tribal Transportation Symposium.) Act fast, rooms are limited!



9th Annual Northwest Tribal Transportation Symposium
May 7, 8, 9, 2002

HOTEL RESERVATION CONTACT:
QUINAULT BEACH RESORT
78 State Route 115 P.O. Box 2107
Ocean Shores, WA 98569
888-461-2213
www.quinaultbchresort.com

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Fax: (509) 359-7485

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NW & Alaska Tribal TTAP
ATTN: Richard A. Rolland
216 Isle Hall
Cheney, WA 99004
Questions? 1-800-583-3187
E-mail: rrolland@ewu.edu

Name on Card: _____
Card Number: _____
Expiration Date: _____
Signature: _____

Cost: \$140.00 per person (includes: 3 continental breakfast, 3 Lunches, 2 dinners)

Participant Name _____
Tribe/Organization _____
Address _____
City/State/Zip _____
Phone: _____ Fax _____
E-Mail: _____

Office use only

Conf # _____
NTag _____
PayRec. _____
Receipt # _____
Comment: _____

Pre-registration is greatly appreciated and will help assure that adequate materials are prepared for all participants.

A limited number of exhibit spaces are available on a first come first serve basis at \$500.00 includes one registration. Contact Richard at 800-583-3187 or rrolland@ewu.edu

Lightweight Aggregate Feasibility Study for Alaska

Project Number: 01-49

Alaska has an abundance of raw material sources and a problem actually obtaining the right materials for a construction job. A potential solution is something called lightweight aggregates, a product routinely used in the Lower 48 and Scandinavian countries. It might prove to be optimal for Alaskan conditions, especially due to the ample numbers of raw material sources.

Argillic shale and mudstone are readily available in many locations in Alaska. These natural materials might be suitable for the manufacture of lightweight aggregate (LWA) products meeting Alaska materials specifications. LWA is produced by the rotary

kiln process where mined shale or mudstone is fired in excess of 2000° C. The material is then processed to precise gradations.

LWA products can be used in embankments, base courses, hot-mix asphalt and concrete.

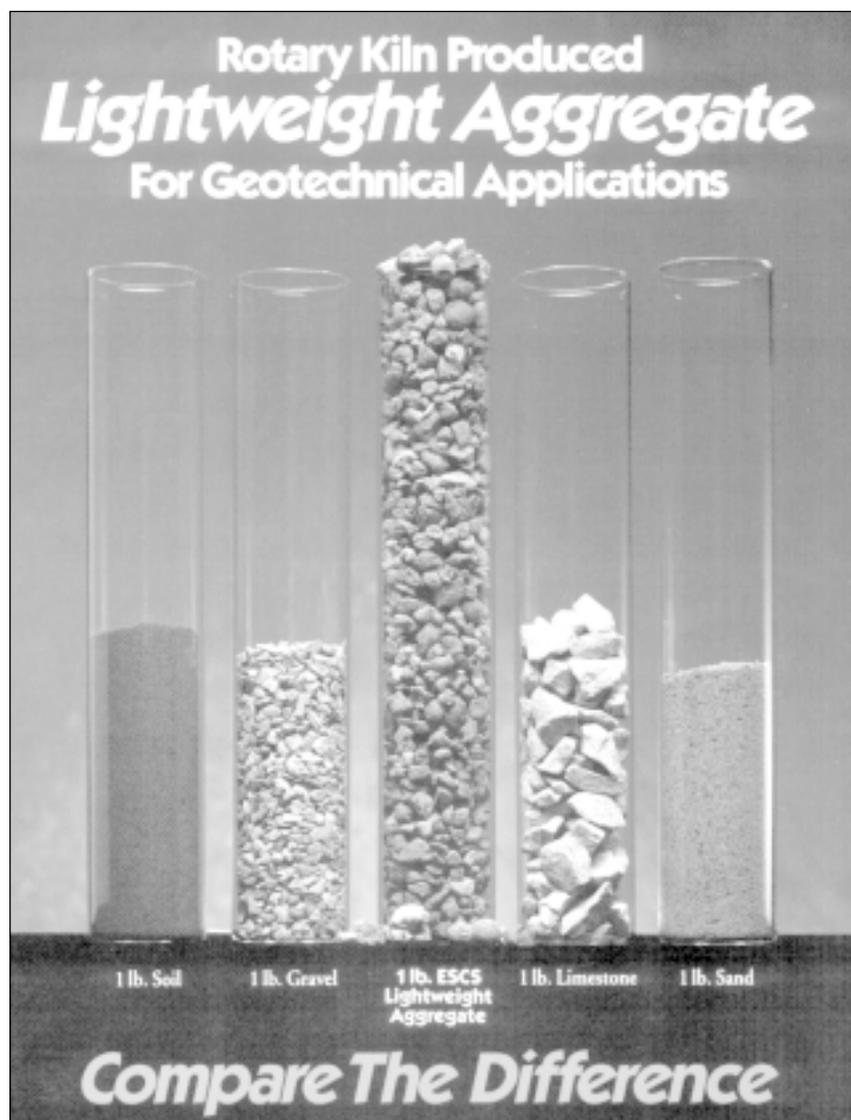
Compared to conventional aggregates, LWA products are lighter, have better insulating qualities, are more durable, have a higher abrasion resistance, and are less susceptible to freeze/thaw action. Finnish experience shows that the LWA should be buried about three feet down in the embankment, as traffic loads are negligible at that depth. We expect embankments constructed with LWA to undergo less thaw-related settlement, hence increasing their useful life and reducing maintenance costs.

Project Objectives

- review the literature
- determine the cost-effectiveness of manufacturing and using this material in Alaska.

Project Status

The project has just begun; DOT&PF anticipates completion in September 2003. Contact Steve Saboundjian, steve_saboundjian@dot.state.ak.us, 907-451-5322.



This promotional literature shows the relative volume of lightweight aggregate. Printed with permission from Expanded Shale Clay and Slate Institute (not an endorsement).

Evaluation of Bioengineered Bank Stabilization in Alaska

Project Number: 01-56

Natural resource agencies in Alaska frequently request "natural" channel and stream bank stabilization methods that provide or maintain fish habitat, such as bioengineering treatments. Bioengineering includes armoring stream banks and channels with toe rock, root wads, coir logs, willows, and other types of riparian vegetation to protect transportation facilities from erosion, scour, and lateral channel migration. However, little engineering guidance, criteria, or standards exist to help practitioners design environmentally sensitive channel and bank protection measures with confidence that their designs will reliably ensure public safety and protect transportation facilities.

Lacking industry-accepted engineering design standards and performance data for bioengineering in Alaska, the DOT&PF typically employs more traditional stream bank protection measures such as riprap and gabions. These measures may not adequately provide productive fish and wildlife habitat.

DOT&PF streambank protection designs often conflict with the desires and regulatory purview of Alaskan and Federal natural resource agencies. Current national research aims to develop (1) definitive selection criteria, design guidelines, and (2) techniques for the type, size, and placement of environmentally sensitive channel and bank protection measures. These protection measures would be based on both engineering and environmental considerations. However, Alaska's unique hydraulic conditions, climate, and vegetation may present undocumented challenges in implementing bioengineered channel and streambank protection.

Project Objectives

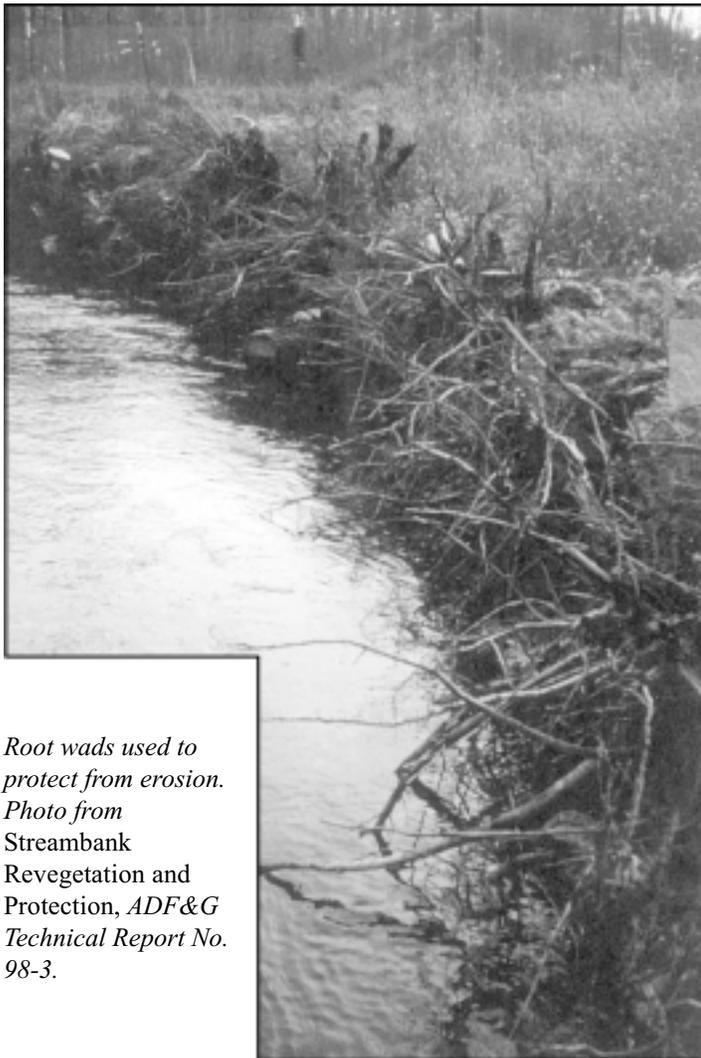
- Gather quantitative information necessary to supplement ongoing national research.
- Gain understanding of the factors and conditions that govern successful implementation of bioengineered structures in Alaska to satisfy both environmental and engineering goals.
- Increase understanding and confidence necessary to design and construct bioengineered structures.

Project Status

This project is funded by both Alaska DOT&PF and the U.S. Fish & Wildlife Service. The Multi-Agency Technical Advisory Committee members are: Mark Miles, Alaska DOT&PF Statewide hydraulic engineer; Bill Ballard, Alaska DOT&PF Statewide environmental coordinator, Mac McLean, Alaska Department of Fish and Game (ADF&G); Lance Trasky, ADF&G; Elaine Gross, USFWS; and Anita Goetz, USFWS.

The project's Technical Advisory Committee will select a contractor in April 2002. DOT&PF anticipates project completion in September 2002.

For more information, contact either of the project's co-managers: Billy Connor, billy_connor@dot.state.ak.us, 907-451-5479; or Clint Adler, clint_adler@dot.state.ak.us, 907-451-5321.



Root wads used to protect from erosion. Photo from Streambank Revegetation and Protection, ADF&G Technical Report No. 98-3.

Geographic Information Systems Web Sites

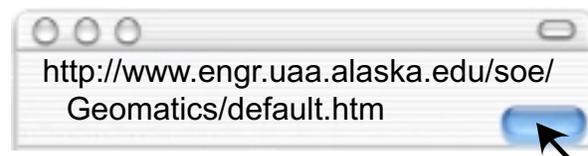
To follow up on the special focus in the last issue of this newsletter, here are some web sites that relate to geographic information systems. Some are great references; others are virtual campuses with on-line courses.



Urban Regional Information Systems Association, a professional society that includes GIS



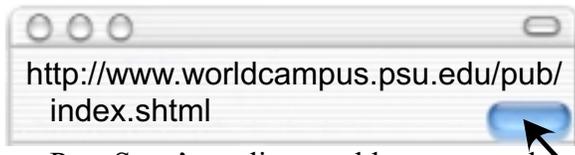
A GIS web site that emphasizes transportation applications.



UAA is going to be offering more and more web-based courses in GIS. They just got approval to offer a GIS certification option (in addition to two and four year degree programs) in Anchorage that should be in the catalog next fall.



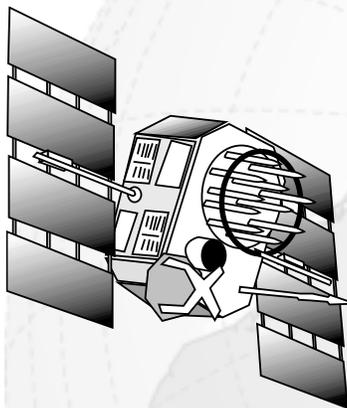
Environmental Systems Research Institute's web site for education—they also have a virtual campus, and they have resources for school teachers interested in introducing mapping and geographic systems in the classroom.



PennState's on-line world campus; select Course Catalog, and look under Geography for GIS courses.



An Internet guide to geographic information systems in clear, simple language.

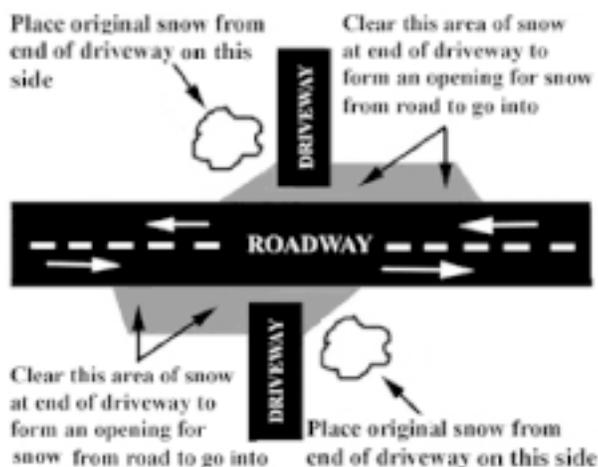


Public Snow Plow Advisories

Editor's note: Minnesota is working to educate the public and contracted snow plow operators about how to (a) keep their driveway entrances from filling with snow plowed from the road, and (b) that improper placement of snow is dangerous. These two releases contain information that any agency who clears snow might consider adopting as part of their winter road plowing advisories.

How to Keep Your Driveway Entrance From Filling in with Snow Plowed From the Road

BAXTER, Minn.—Throughout the winter months, Minnesota Department of Transportation (Mn/DOT) snowplow crews will be out clearing the highways during and after each snowfall. Homeowners and other property owners will be clearing their driveways at the same time. Many times while this is going on, a snowplow truck will go by and fill in the end of a freshly cleared private driveway with snow from the roadway. There is a way this wintertime inconvenience can be minimized. The diagram below shows how you can clear snow around the end of your driveway opening a certain way to reduce the possibility that you will have to do very much re-clearing after a snowplow truck goes by on the road next to your driveway. The idea is to place as much snow as possible when clearing your driveway in the direction of travel downstream on your side of the roadway. Next is to clear an area upstream from your driveway opening to form a "pocket" for the snow from the roadway to go into instead of at the end of your driveway. The result is more of the snow accumulation from clearing the roadway will go into this open pocket area and less will wind up at the end of your driveway. A note of caution is in order. Please be extremely careful when working next to the roadway—especially when snowplowing operations are in progress.



Improper Snow Placement Can be Dangerous

BAXTER, Minn.—With the winter season now upon us, the Minnesota Department of Transportation (Mn/DOT) would like to remind everyone, and especially commercial snow removal operators, of situations where excess snow is improperly placed along highway right of way. This can create hazardous or otherwise detrimental conditions. Highway right-of-way includes the driving surface, shoulders, ditch, and clear zone on the outside edge of the ditch backslope. The most common violations of improper snow placement on highway right-of-way include: (1) sight obstructions for motorists, (2) drainage problems in the ditch, (3) damage to trees and other vegetation, (4) damage to signs and fences, (5) lack of snow storage for snowplowing operations, (6) placement of obstructions to block access to state property (sides of driveway entrances), and (7) snow placed on the driving surface of the highway, which can create frozen bumps and slippery areas on the roadway. For safety reasons, special attention should be made to keep sidewalks, crosswalks, intersections, driveway openings, and other access areas clear and unobstructed. Minnesota Statute 160.27 and many local ordinances prohibit the plowing, blowing, shoveling, or otherwise placing of snow from sidewalks, driveways, and parking lots onto public roadways. The violations are considered a misdemeanor, punishable by a maximum \$700 fine and/or 90 days in jail. A Notice of Violation can be issued by MN/DOT, and in many cases with a specific time frame to correct the infraction at no cost to the state. Failure to do so will result in an issuance of a misdemeanor ticket. State highway maintenance forces will then make the correction and the responsible party will be billed for the work performed. In the case of hazardous situations in which a motor vehicle accident, property damage, or personal injuries occur, civil liability may also be extended to both the property or business owner and the person or company who placed the snow improperly. For assistance in determining the proper placement of snow for a specific location along the trunk highway/interstate system in central Minnesota, you can contact MN/DOT Maintenance Operations in Baxter at toll-free 1-800-657-3971 or in St. Cloud at toll-free 1-800-657-3961.



Twist Riser Manhole Covers in Utah

From Utah T2 Center; On The Move, Vol. 14, No. 4/Fall, 2001.

Providing and maintaining a smooth and safe riding surface on roads and streets is a major challenge for local and state highway agencies, especially when the road or street is the principal corridor for utilities. Particularly problematic are the utility manholes that are made in the road surface to provide access to the utilities.

Most of us can identify with hitting a dip in the road where a manhole cover has sunk and had our car bottomed out on its shocks. This is a problem in most cities in South Dakota and for that matter in the rest of the country. A new adjustable manhole cover developed by Precision Cover Systems, Inc. provides a handy solution to the problem. This new manhole cover has been installed in Orem, Pleasant Grove, Lehi and on the campus of Utah State University. It is currently being evaluated for ease of use, serviceability, and cost.

The "Twist Riser Man-hole" as it is called is designed in such a way that it can be rotated to match the exact grade and crown of the road. The manhole fits neatly onto the concrete manhole cone providing full support for the entire assembly. This new manhole can also allow for easy height adjustments up to 2.75 inches. The adjustment is made in 0.25 inch increments. This means that roadways can then be overlaid before any additional hardware is required.

The "Twist Riser Manhole" is estimated to save municipalities anywhere from \$150 to \$500 per installation when personnel, equipment and materials costs are considered.

As the photographs show, the assembly can be installed very easily in just a few minutes. Prior to paving, the grade is set by rotating the bottom assembly to match the grade and cross slope of the base layer of the street or road. Then the top riser assembly is set to match the height of the planned surface of the pavement. The paving crew can then pave directly over the manhole cover assembly, rake the excess asphalt off the cover, and then compact the asphalt to proper grade.

If minor adjustments are needed the manhole lid can be removed, and the riser repositioned to the correct height. The result is a manhole cover that provides a smooth riding surface.

Lawrence G. Burton, Water Reclamation Manager for the City of Orem, Utah, is impressed with the product, "This new system eliminates problems by giving the user unlimited variations in height and slope to the finished surface of the manhole without disturbing any surrounding road surface."



The initial manhole cover assembly base is installed.



Excess asphalt is removed; the surface around the cover is compacted.



Final result: a level driving surface!

The Search for "Microcrack Arresters"

From *Texas Transportation Researcher*



Texas Transportation's fracture-healing work continues to advance. Twenty years of continued basic research on asphalt microfracture and healing is finally coming to fruition with some definitive conclusions. Through funding from a contract with a Netherlands foundation and a later subcontract with the Western Research Institute in Wyoming, Texas Transportation Institute (TTI) researchers have now accumulated results that provide the fundamental scientific explanation for rutting and cracking in pavements.

It all started in the 1980s when Dr. Robert Lytton, TTI research engineer and F. J. Benson chair of the Department of Civil Engineering at Texas A&M University, discovered that lab fatigue tests underpredict actual field performance of asphalt by as much as 150 times. This presented an extremely exciting scientific question. Why do asphalt pavements perform better in the field? What elements of field performance are standard lab tests unable to duplicate?

Asphalt Healing

Throughout the '80s and '90s, Lytton and Dr. Dallas Little, Kelleher professor of civil engineering, verified that the major cause of this discrepancy is a phenomenon called fracture healing—simply put, the asphalt heals itself over time.

Without explanation, the statement may sound rather farfetched. How could damage in the pavement heal itself? "Over the last 10 years, we've attempted to find out what the basis for this healing is—the laws that determine the reasons and rates that asphalts heal

themselves or, ultimately, don't heal themselves," says Lytton. "And we've proven that it's all tied to the surface energy, the composition of the asphalt, and the mineral types of the stones in the asphalt."

The theory is that when subjected to the stresses and surface tensions created by cars, trucks, and the weather, the pavement actually indents slightly and tiny microscopic cracks (microfractures) form just below the surface. During the time the pavement is allowed to "rest" between traffic loads, it slowly returns to its original position, and the cracks meld back together—thus, the healing.

Now that Lytton and Little, after decades of experimentation and testing, have proven the basic scientific theory and isolated the equations that support microfracture and microhealing, they are looking at what exactly promotes and hinders healing.

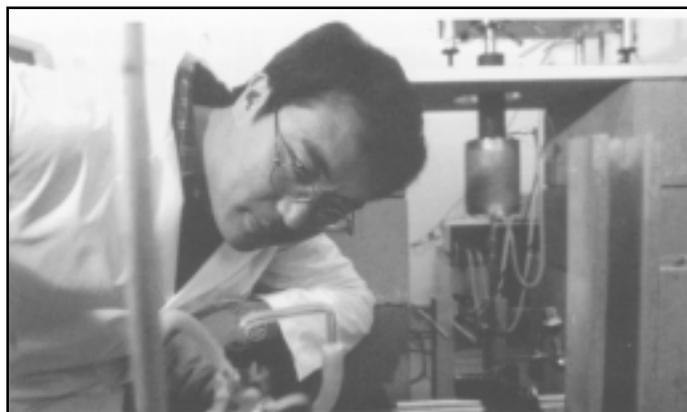
What kinds of asphalt compositions subjected to certain load frequencies will encourage good healing (work-hardening) of the pavement?

"In addition to asphalts that heal well by themselves, we're looking for microcrack arresters," says Lytton. "These are tiny well-dispersed particles within the mix composition." As the load-rest cycle continues, small particles within the asphalt help block the cracks, slowing down the rate that they grow and cause damage. So far, ground tire rubber, shredded carpet, and hydrated lime are proving to be effective micro-crack arresters.

Performance Prediction

According to Lytton, departments of transportation will benefit from these discoveries as construction

continued



Graduate assistant Ding Xian Cheng operates the universal sorption device used in current fracture-healing research.

Microcrack Arresters (continued)

contractors participating in warranty programs begin using better selections of asphalts and more crack arresters in their mixes. These contractors will have responsibility for building and maintaining a stretch of road for sometimes as much as 20 or 30 years. Since they have to guarantee their work, they are going to be looking for the strongest, most durable mix possible. And they'll alter a mix if it means not having to perform expensive rehabilitation work.

"We now know asphalts that heal fastest should be placed on roads with the most traffic, and asphalts that heal slower will work for low-volume roads," says Lytton. Current work is focused on developing simple tests that can be run quickly to predict the healing qualities and crack resistance of different asphalts.

The testing is supported by a German-made piece of equipment called a universal sorption device, pur-

chased by pooled funds from TTI, Texas A&M University Department of Chemical Engineering and the F. J. Benson chair in civil engineering. The device allows researchers to measure the polar and nonpolar surface energy components of solids and liquids and identify the asphalts that will have the kind of surface energy needed for quick healing.

"Knowing what's going to work is the key to everything. If we can accurately predict which mixtures will work best, then we know we're not wasting taxpayer money," says Lytton.

For more technical details on this research, see *Transportation Research Record 1723, Part I, 2000 TRB Distinguished Lecture: Characterizing Asphalt Pavements for Performance*. Or contact Robert Lytton at (979) 845-9964, r-lytton@tamu.edu.



New Standard on Pavement Cracking

The recent introduction of a new American Association of State Highway and Transportation Officials (AASHTO) provisional standard on pavement cracking

measurement has, for the first time, given states a shared system for measuring this type of pavement distress. "Twenty years ago, states started to routinely monitor pavement condition. However, as each state developed their own pavement management system, we wound up with 50 different ways to measure pavement distress," says Frank Botelho of the Federal Highway Administration (FHWA). Complicating matters further, as pavement measurements became automated, manufacturers and vendors had to design and retest equipment separately for each state. This adds time to the process and increases the cost of doing business.

Ten years ago, AASHTO and FHWA set out to develop standards for the four most common pavement distress measurements used by state highway agencies for network level pavement management. First on the list were standards for measuring ride, rutting, and faulting, which were voted on and accepted by states in 1999. The pavement cracking measurement standard was voted on and accepted in 2000 and now joins these standards. Still to come are needed procedures for test-

"Having these three standards ... in place will give highway agencies maximum assurance that they are collecting good quality data."

ing and certifying automated equipment and for providing quality control/quality assurance. "Having these three standards for measuring distresses, certifying equipment, and

performing quality control/quality assurance in place will give highway agencies maximum assurance that they are collecting good quality data," says Botelho.

"The new standard allows states to speak the same language," says Ken Fults of the Texas Department of Transportation (DOT) and chair of a special committee formed by the AASHTO Joint Task Force on Pavements to work on the standards. "I can now call up Georgia, for example, and easily exchange data with them. It will also help vendors in developing equipment, ultimately leading to lower prices for states."

The standard, entitled *Standard Practice for Quantifying Cracks in Asphalt Pavement Surface* (No. PP-44-01), was published in *AASHTO Provisional Standards, April 2001 Interim Edition* (Publication No. HM-20-COM). The publication can be ordered from AASHTO at 1-800-231-3475 (aashto@abcgroup.com; www.transportation.org). For more information, contact Frank Botelho at FHWA, 202-366-1336 (fax: 202-366-9981; frank.botelho@fhwa.dot.gov), or Ken Fults at Texas DOT, 512-465-7741, kfults@dot.state.tx.us.



Winter Road Maintenance System May Enhance Road Management

Transporter, January 2002

Managing roads and traffic during winter emergencies can be difficult. Weather conditions change so quickly that traffic and roadway managers sometimes find themselves reacting to situations that have already changed or that they were unable to anticipate. Currently, several road weather technologies exist at national laboratories that can aid state and local weather and traffic managers; however, these new technologies are neither integrated nor tailored to support weather-based road maintenance decisions.

To solve these problems and other problems affecting winter road maintenance decisions, the Federal Highway Administration (FHWA) is leading the development of the Winter Maintenance Decision Support System (MDSS)—a computer system that integrates existing road and weather data sources into one functional platform.

The MDSS will make existing winter weather and road information open, integrated, and understandable, allowing traffic and road managers to better maintain roads during winter emergencies. The system will also anticipate changes in winter conditions and provide a decision support tool that recommends the best course of action for road maintenance. Upon completion, the MDSS will enable traffic managers to effectively coordinate snow-removal, emergency response, and rescue vehicles. It will also enable managers to be proactive in clearing or closing roads for greater safety.

Slated for a multiyear study, the first phase of the MDSS project concluded in fiscal year 2001. It was dedicated to working with six national labs—the Cold Regions Research and Engineering Laboratory (CRREL), the National Center for Atmospheric Research (NCAR), the Massachusetts Institute of Technology Lincoln Laboratory (MIT/LL), the National Severe Storms Laboratory (NSSL), Environmental Technology Laboratory (ETL), and the Forecast Systems Laboratory (FSL)—in developing a prototype MDSS.

The focus of the work being conducted in Phase II is to develop and demonstrate a functional prototype MDSS. MDSS researchers also hope to evaluate the operation of selected components of the prototype. The MDSS researchers met recently in Boulder, Colorado, where they selected four states—Minnesota, Utah, New Hampshire, and Washington—to help evaluate the prototype graphical user interface (GUI); in 2002, they plan to continue monitoring the design of the GUI and system-user interactions with it. Over the course of the next few years, FHWA will build off this work, aiding in the implementation of the MDSS in an operating environment among state departments of transportation and the private sector.

An internal review of the MDSS project will be held in April to determine the progress and merits of continuing the project toward completion.

Rudy Persaud
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rudypersaud@fhwa.dot.gov

2002 Pacific Northwest Snowfighters Conference, Boise, June 3–5

The theme of the 2002 annual conference is knowledge exchange, with presentation sessions, panel discussions, and workshops delivered by leaders in winter maintenance. Technical programs are aimed at field-level operators and first-line supervisors as well as program managers. The trade show includes the best of the best in equipment, products, and services for the winter maintenance professional.

Some of the more challenging aspects of winter maintenance are sharing what you have learned, be-

coming aware of what you don't know, and finding sources of information to bridge the knowledge gap. Within an agency, this is no small undertaking. Spread across North America, the job becomes daunting. The Pacific Northwest Snowfighter's Conference on June 3–5, 2002, in Boise, Idaho, aims to smooth the learning and sharing process.

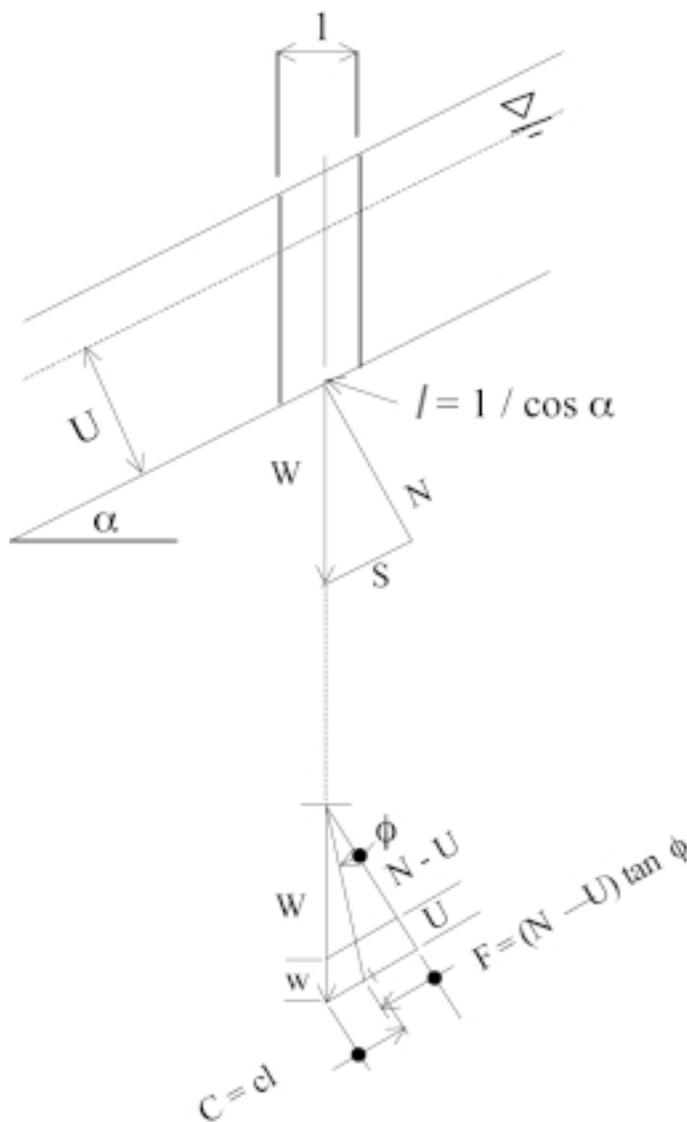


A Quick Slope Stability Analysis With Seepage (Part 3 of 3 parts)

From *Hawaiian Connections*, vol. 3, no. 4, winter 2001, newsletter of the Hawaii LTAP

Editor's Note: Walter Lum, consulting engineer, has developed quick and easy ways to solve complex problems through many years of experience. He has shared his rules of thumb with us.

A slope stability analysis can be performed very quickly by the following semigraphical procedure, if the slope and slip surfaces are known and drawn to scale.



Given: c = cohesion

ϕ = friction angle

γ = unit weight of soil

For F.S. = Factor of Safety of a Slice

α = inclination of slope

W = weight of slice of unit width

N = normal to slope

S = shear required for equilibrium

w = weight of seepage water

U = water force

$C = c \times l = c / \cos \alpha$ = cohesion available

$F = (N - U) \times \tan \phi$ = friction available

$F.S. = [c \times l + (N - U) \times \tan \phi] / S$

$F.S. = (C + F) / S$

Check it out with a known problem, it really works!

Portable Speed Bump Keeps a Safe Work Zone Around Flaggers

From FHWA's Research and Technology Reporter Feb. 2002

In most cases, motorists entering a work zone decrease the speed of their vehicles and drive more carefully; however, some drivers become frustrated or impatient with traffic delay, making flaggers susceptible to potential injury. In New York, alone, there were five flaggers struck in work zones last year.

Taking part in a program cosponsored by the Federal Highway Administration (FHWA) and the California Department of Transportation (CALTRANS), a Mexican engineer participating in the FHWA-funded CALTRANS-Baja California Personnel Exchange Program, created an imaginative new solution for making work, crash, and incident zones safer—portable speed bumps.

Called the Advance Traffic Warning System (ATWS), the speed bumps are actually an 11' x 3'6" (3.35 x 1.07 meter) mat made of a flexible, yet sturdy, rubber with a polyurethane backing, built around woven fiberglass. The mat thickness, reflective material, and reflective circular ceramic tiles act as rumble strips (like those often seen in crosswalks), and provide a compelling reason for drivers to decrease vehicle speed when approaching a flagger. Best of all, it's so portable, lightweight, and easy to handle that it can be quickly folded up and moved along work zones within minutes.

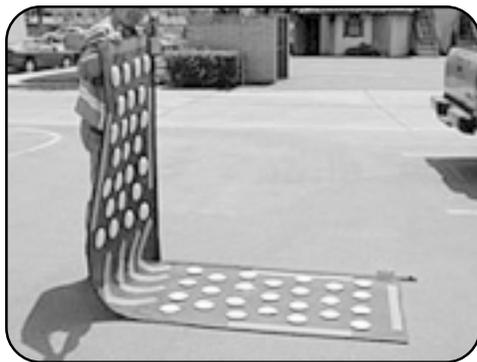
Other benefits of the portable speed bumps include resistance to water, grease, and oil. The composite material remains flexible, even in freezing temperatures,

and resists rips, tears, and cuts. The ATWS will sustain any direct pressure on it, and its highly reflective stripes and reflective coating enable workers to use the speed bumps at night.

Although not approved by CALTRANS, if proven effective, this ATWS speed bump invention could become one of many success stories from the U.S.-Mexico Border Technology Exchange Program (BTEP), created and funded by the FHWA Office of International Programs. The BTEP is a binational program headed by the FHWA and Mexico's counterpart, the Secretariat of Communications and Transportation (SCT), and it includes all 10 Departments of Transportation sharing the southwestern international border with Mexico.

Begun just before the North American Free Trade Agreement was passed, the BTEP program encourages a cross-cultural, multinational sharing of ideas and technology among Mexican municipal, State, and Federal transportation agencies. In the case of California, the BTEP includes Metropolitan planning organizations, and universities from California and Baja. The fundamental philosophy of the BTEP is to train individuals from both countries to develop safer roads and to facilitate better coordination of Mexican and U.S. transportation-related projects.

Contact: C. Tere Franceschi (202) 366-9775
c.tere.franceschi@fhwa.dot.gov



Construction worker shows how easily the portable speed bump can be folded for movement from location to location or storage.



Portable speed bump acts like a rumble strip to slow the speed of a car driving over it.



Static Electricity During Refueling at Gas Pumps

Recently, a spate of e-mails has gone around with an item on the Society of Petroleum Engineers web page. The item implicated cell phones and static electricity with explosions during refueling at gasoline stations. Be aware that research indicates no confirmed reports of any static electricity incidents related to cell phones while refueling.

Some cellular telephone manufacturers do include warnings with their products advising against the use of cell phones at gasoline retail outlets. Further information on this is available from the Cellular Telecommunications Industry Association in Washington, DC, at 202-785-0081.

Following is the American Petroleum Industry’s consumer guideline about static electricity.

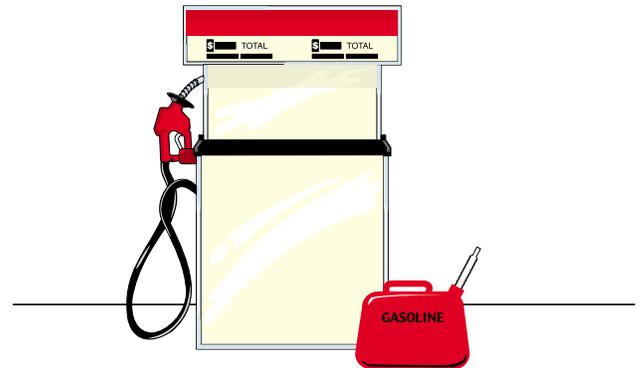
Staying Safe at the Pump

Static electricity-related incidents at retail gasoline outlets are extremely unusual, but the potential for them to happen appears to be highest during cool or cold and dry climate conditions. In rare circumstances, these static related incidents have resulted in a brief flash fire occurring at the fill point. Consumers can take steps to minimize these and other potential fueling hazards by following safe refueling procedures all year long.

Most important, they should not get back into their vehicles during refueling—even when using the nozzle’s hold-open latch. This will greatly reduce and minimize the likelihood of any build-up of static electricity.

A build-up of static electricity can be caused by re-entering a vehicle during fueling, particularly in cool or cold and dry climate conditions. If the motorist then returns to the vehicle fill pipe when refueling is complete, the static may discharge at the fill point, causing a brief flash fire with gasoline refueling vapors.

Motorists who cannot avoid getting back into the vehicle should always first touch a metal part of the vehicle, such as the door or some other metal surface, away from the fill point upon exiting the vehicle.



Here are additional consumer refueling safety guidelines that will help keep you and your family safe when refueling your vehicle or filling up gasoline storage containers:

- Keep gasoline away from ignition sources like heat, sparks, and flames.
- Don’t smoke around gasoline, either at the pump or at home.
- Shut off the vehicle’s engine when refueling.
- Disable or turn off any auxiliary sources of ignition such as a camper or trailer heater, cooking units, or pilot lights.
- Only store gasoline in containers with approved labels as required by federal or state authorities. Never store gasoline in glass or unapproved containers.
- Place portable containers on the ground during filling, and keep the nozzle in contact with the container to prevent buildup and discharge of static electricity.
- Never fill a container in or on a vehicle.
- Manually control the nozzle valve throughout the filling process. Fill a portable container slowly to decrease the chance of static electricity buildup and minimize spilling or splattering.
- Fill container no more than 95 percent full to allow for the expansion.

Federal Docket Comments Due on Work Zone Mobility and Safety

Published in the Federal Register, February 6, 2002

Docket No. FHWA-2001-111303

An Advanced Notice of Proposed Amendment (ANPRM) was issued in the *Federal Register* on February 6, 2002, requesting comments to consider revisions to Work Zone Mobility and Safety, 23 CFR Subpart J. Comments are due directly to the docket by June 6, 2002.

Background

- ISTEA required FHWA to establish a Work Zone Safety Program
- Completed per *Federal Register* Notice in 1995 (60 FR 54562)
- Part of that notice specified that Subpart J would be updated.

Today's Situation

Work zone issues have grown to include safety and mobility concerns

The public is telling us they are concerned.

Travel survey shows:

- 32% dissatisfied with work zones.
- Travelers rated highway improvements that would most help overcome delays. Of more than 20, the top three relate to work zones and how we build roads.

We are seeing:

- A growth in reconstruction
- Growth in congestion—more miles traveled, on fewer new roads
- Growth in crashes and resulting fatalities and injuries.
- That means a growth in the number of work zones and the disruption they create.

We are seeing concerns from contractors:

- Worker safety
- Compressed work schedules
- Quality of construction

Current Regulation

- Has broad purpose, and narrowly focused language
- Should it be broader to better address today's concerns?
- Consideration of revisions to Subpart J. FHWA wants to (a) identify the key issues, (b) determine if the regulation should be revised, and (c) if so, how.

FHWA issued an ANPRM to start a dialogue with the transportation community. A series of 20 questions are asked in the ANPRM to gather your input. The following topic areas are covered:

- General policy
- Planning
- Design and construction/maintenance
- Work zone management
- Performance measures
- Public outreach.

Share Your Thoughts and Ideas With Us

Mail or hand deliver comments to the U.S. Department of Transportation, Dockets Management Facility, Room PL-401, 400 Seventh St. SW., Washington, DC 20590, or submit electronically at <http://dmses.dot.gov/submit>. All comments should include the docket number that appears in the heading of this document. All comments received will be available for examination and copying at the above address from 9 a.m. to 5 p.m. Eastern Time, Monday through Friday, except federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard or print the acknowledgment page that appears after submitting comments electronically.

Contact: Shelley Row, Office of Transportation Operations, HOTO-1, (202) 366-1993; or Raymond Cuprill, Office of the Chief Counsel, HCC-30, phone 202-366-0791, Federal Highway Administration, 400 Seventh Street SW, Washington, DC 20590-0001.

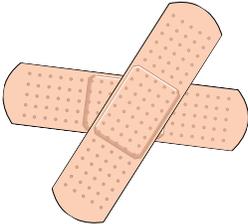
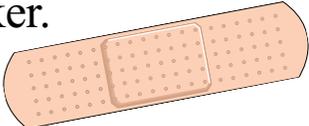
Electronic access or filing: Acceptable formats include: MS Word (versions 95 to 97), MS Word for Mac (versions 6 to 8), RTF, ASCII, TXT, PDF, and WordPerfect (versions 7 to 8). Submission guidelines are under the help section of the web site. An electronic copy of this document may also be downloaded from the Government Printing Office's Electronic Bulletin Board Service at 202-512-1661. Internet users may also reach the Office of the Federal Register's home page at: <http://www.nara.gov/fedreg> and the Government Printing Office's web page at: <http://www.access.gpo.gov/nara>.

Clip-n-Save Humor

Reprinted with permission from Rhode Island LTAP Center newsletter Links & Nodes



Ten Commandments for Shop Mechanics

1. Thou shalt keep thy shop neat and clean with tools in place and oil spills cleaned up lest thou slip and fall, banging thy head or slipping thy disk.
2. Thou shalt wear eye protection when welding, chipping, sanding, or grinding; otherwise, thou may become a lifelong companion to a seeing eye dog.

3. Thou shalt block up vehicles being serviced; do not trust jacks and hoists because their failure could crush thee.
4. Thou shalt not use thy legs as a sawhorse for power tools lest thou become a one-legged worker.

5. Thou shalt lay thy butane lighter far aside when welding. It is equivalent to a stick of dynamite and could blow thee to thy eternal reward.
6. Thou shalt not use thy file as a pry, thy pliers as a wrench, or thy knife as a punch, lest thou skin thy knuckles or cut thy hand and take the name of thy Lord in vain.
7. Thou shalt discard thy broken and badly worn tools because they will lead to disaster and bloodshed.
8. Thou shalt inflate tires in a cage, lest the ring fly off and behead thee.
9. Thou shalt keep fire extinguishers in operating condition and never use gasoline as a cleaning agent, lest thee exit through the roof.
10. Thou shalt match thy tool to the job and thou shalt watch out for fellow workers. Be thy brother's keeper in the shop.

Training Calendar

2002

May

Permit-Required Confined Space Training

Juneau: May 3. Contact Simon Howell 907-451-5482

IRWA training: Course 104, Standards of Practice for the Right of Way Professional. **Fairbanks:** May 10, DNR Conference Room. Contact Sharon McLeod-Everette, course coordinator, 907-451-5323

IRWA training: Course 100, Principles of Land Acquisition. **Anchorage:** May 14-17, Westcoast International Inn, Contact Chris Patterson, Course Coordinator, 907-269-8549.

Effective Roadway Illumination. **Anchorage:** May 15-17. Contact Sharon McLeod-Everette, 907-451-5323

Conflict Solving for the New Supervisor.

Accessible via phone line and computer: May 21
Contact Simon Howell, 907-451-5482, to set up the teleconference.

IRWA Chapter 49 Spring 2002 Education Seminar:

Proposed Knik Arm Highway Crossing: May 16, West Coast International Inn. Contact Marvin N. Swink 907-277-4611 or P.J. Sullivan 907-248-6740.
Not Sponsored by T2

June

NHI 130048: Seismic Design & Retrofit of Highway Bridges

Juneau: June 3-7
Contact Simon Howell 907-451-5482

Pacific Northwest Snow Conference

Boise, Idaho: June 3-5
<http://www.pnsconference.com/pns2002/home.html>
Not Sponsored by T2

NHI 142007: Fundamentals of Highway Traffic Noise and Abatement

Anchorage: June 25-28

July

Demonstration Project 116: Ground Improvement Methods.

Fairbanks: July 17-19
Contact Simon Howell 907-451-5482

NHI 151021A, Administration of FHWA Planning Grants.

Anchorage: anticipated July 11-12, 2002, fall-back date: May 23-24, 2002
Contact: Simon Howell, 907-451-5482

August

NHI 142005: NEPA and Transportation Decision Making

Anchorage: August 13-15
Contact Simon Howell, 907-451-5482

October

AASHTO Annual Meeting

Anchorage: October 11-15
<http://www.asce.org/conferences/coldregions2002/index.cfm>
Not Sponsored by T2

Pending

Alaska Traffic Safety Workshops:

Palmer, May 30-31: Road Safety Audit Reviews & Traffic Safety Improvements, 1 1/2 days
Juneau, June 3-4: 2-day Road Safety Audits & Road Safety Audit Reviews; combined with Topics in Safety Features
Fairbanks, June 6-7: Road Safety Features-Studies-Improvement Program, 1 day; **Safety Improvement Needs - A Practical Approach for Local Consideration,** evening, 1-2 hours; **Road Safety Audit Reviews for Local Roads,** 1/2 day.
Contact Sharon McLeod-Everette, 907-451-5323.

Postponed

Postponed to second half of the year:
Contact Simon Howell 907-451-5482
NHI 152068: ITS Deployment Analysis System, Anchorage
NHI 131026: Pavement Subsurface Drainage Design, Anchorage
NHI 151029: Application of GIS-T, Anchorage

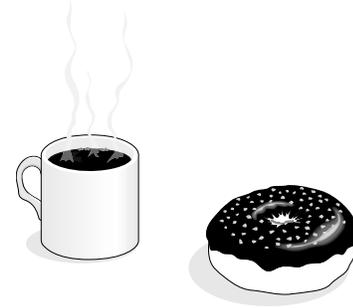
Canceled

NHI 152068: ITS Deployment Analysis System
NHI 380060: Work Zone Traffic Control for Maintenance Operations on Rural Highways, Anchorage
NHI 131054A: Pavement Preservation: The Preventive Maintenance Concept, Anchorage

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

Meetings & Events

2002



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
	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.
Asphalt Pavement Alliance	Alaska	3rd Wednesday of even months; Feb., April, June, Aug., Oct., Dec.	varies John Lambert 267-5294
PE in Government	Anchorage	Monthly, last Fri., 7 a.m.	Elmer’s Restaurant
Society of Women Engineers	Anchorage	Monthly, 1st Wed. 6:30 p.m. except July and August	varies Karen Helgeson, 522-6513

Ernie Mueller Retires

Ernie Mueller, LTAP Advisory Board member representing Juneau City and Borough in his position as public works director, announced he is retiring on April 30, 2002.

Ernie is a valued member of the advisory board and has always offered his common-sense, pragmatic view of training and information needed by cities and boroughs. He will be sorely missed by his colleagues on the board and by the LTAP staff.

We wish Ernie the best as he leaves the work place for the more relaxed pace of retirement. See you on the road, Ernie!



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Aaron Weston, U.S. Forest Service

<http://www.dot.state.ak.us>

- rest the cursor on "World of DOT&PF"
- rest the cursor on "Programs"
- double-click on "Research & Technology"



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