Alaska DOT&PF Asphalt Summit Charts Future Activities

Alaska Department of Transportation and Public Facilities (DOT&PF) hosted a two-day Asphalt Summit in Anchorage on November 1 and 2, 2000, the second such event in the last three years. Tom Moses, DOT&PF’s head of Statewide Materials, welcomed the group, which included designers, construction workers and contractors, materials inspectors, asphalt suppliers, hot plant operators, and those who maintain pavements. The summit dealt with the future of Alaska’s road system, keying on various commission activities.

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BST Management Systems in the Yukon Territory

by Dr. D.R. Macleod of Public Works and Government Services Canada

Most of Canada’s northern roads are low volume highways covering long distances between isolated communities. They present complicated problems for highway managers—they are costly to maintain due to isolated maintenance centres, most trips are long distance trips where users require a higher level of service, and heavy truck traffic associated with resource development constitutes a disproportionate percentage of the total traffic.

Bituminous Surface Treatments (BSTs), also known as chip seals, provide an interesting alternative for northern highways. Their dust-free surfaces provide an improvement over gravel surfaces but without the costly capital outlays required for hot-mix pavements. In permafrost areas, BSTs have the

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“Improving Alaska’s quality of transportation through technology application, training, and information exchange.”
Asphalt Summit

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types of asphalt applications. Of the roughly 100 people who attended the event, most had the opportunity to share their asphalt experience and ask questions. Topics ranged from hot mix asphalt to emulsions and Superpave to high float applications and chip seal operations.

DOT&PF’s Perkins Addresses Asphalt Issues

Commissioner Joe Perkins then delivered a keynote address, setting the tone for the conference by noting that the world of asphalt in Alaska is rapidly changing. “The future for DOT&PF and contractors is asphalt,” Perkins said, and emphasized that DOT&PF and contractors are obligated to share information with each other (the summit is one example of sharing knowledge). Both groups have a large stake in the quality of smoothness for Alaska’s roads. Perkins noted that that’s what DOT&PF gets credit for—not the subbase, not the backfill, not roadside beautification—smoothness. The traveling public pays more attention to that than anything.

Perkins continued, reminding the group that good laydown is key to assuring smoothness. Contractors also need to have good equipment, an asphalt plant with the volume needed to keep up with the paving process, and good quality control. And, he said, those charged with maintaining Alaska’s road system face a challenge in maintaining the smoothness. Maintenance forces are using new processes like coated chips and reclaiming asphalts, and applying surface treatments, such as chip seals, high floats, and armor coats.

Perkins quickly highlighted the status of coming projects on numerous roads around the state. Some of these included paving the Dalton Highway and a corridor study for the Parks Highway to address strip development along a road that possibly should be a limited access highway. He also talked about upgrades on the Glenn Highway, Haines Highway, Tok Cutoff, Richardson Highway, Alaska Highway, Parks Highway, and the Sterling Highway, as well as urban area projects. While DOT&PF Maintenance and Opera-
tions forces are now doing patching work, some of that work has gone to contractors, and more will be going that direction. The department is obligated to share their patching and resurfacing techniques and practices with contractors, again working to achieve ride smoothness.

Session Topics

Sessions covered pavement failures and other problems (rutting, segregation, density, tender mixes, seasonal cutoff dates for paving operations, specifications, Superpave, the asphalt binder grading system and modified asphalt, and thermal segregation. Contractors commented on mix designs, joints, the need for certified technicians and quality control, performance of B and E chips, the need for good material sources, and consistent specifications.

The DOT&PF working session on the second day focused on DOT&PF’s gravel-to-pavement program, including a status overview from each Region. Commissioner Perkins reminded the group that the program does not include rebuilding the road; the goal is to pave, then to fix problems as they show up. Good subbases exist in many areas, and it doesn’t make sense to fix things that aren’t broken. Presentations covered pavement preservation—chip seals, crack sealing, thin lift asphalts, milling and paving with SMA, microsurfacing, and high float applications. Conference attendees also discussed jacking manholes and associated safety issues for operators and equipment, particularly in urban areas; pavement management and asset management; structural pavement design procedures (including the Alaska Guide for Flexible Pavement, mechanistic design, and the new 2002 AASHTO pavement design procedure); and selecting pavement types. Open discussion focused on many topics covered the previous day: asphalt treated base courses and interim pavements, harder stud-resistant aggregates, prime coats, sample location for density, consistency of specs, weather limitations, approach slabs, and rumble strips.

Task Forces

At the end of the day, Commissioner Perkins summarized the two days’ worth of information, and set up 12 task forces to address issues discussed during the meeting. All task forces have a target date of February 15, 2001. These are:

- Asphalt Binder—implement SHRP’s 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 joint density and method specifications
- Asphalt Content Test Procedure—select an asphalt test method, considering the two AASHTO test 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 specifications
- 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

National Asphalt Activities
What are others doing in the asphalt world? Well, they’re talking about many of the same things discussed at Alaska’s Asphalt Summit. A review of several national periodicals and journals revealed a focus on the same issues facing Alaska’s asphalt workers. The magazines will be in DOT&PF’s Local Technical Assistance Library at the Mather Library at University of Alaska Fairbanks’ Geophysical Institute; call 474-7503. To find most of the magazines listed below on the web, go to the fall 2000 issue of this newsletter for a listing of web sites.
• The fall 2000 issue of Asphalt, the Magazine of the Asphalt Institute (Vol. 15, No. 3) introduces the Asphalt Pavement Alliance, which is an industry coalition made up of the Asphalt Institute, National Asphalt Pavement Association, and State Asphalt Pavement Associations. APA’s major focus areas are perpetual pavements, life cycle cost, smoothness, HMA – the versatile pavement, rubblization, speed of construction, noise, and recycling. The APA can be found on the web at www.asphaltalliance.com.
• The September 2000 issue of Asphalt Contractor is full of asphalt and paving information, including pavement management, production pointers, a chip seal that Texas DOT did on top of Portland Cement Concrete, Superpave innovation, and safety in paving operations.
• October 2000’s Asphalt Contractor includes more information on Superpave, this time on performing asphalt mix, aggregate, correct core sample testing, and compaction. It also covers notched wedge joint construction, dealing with rain and lightning, and mentions the training schedule for the Asphalt Conference and Expo scheduled for March, 2001 in Atlanta. Call Wendy Cantwell or Chris Harrison at 888-343-6462 for information.
• The October 2000 issue of Better Roads talks about asphalt recycling and about equipment training programs.
• The September/October issue of Public Roads has an article on enhancing pavement smoothness.
• The September 2000 issue of Roads and Bridges shares more information on Superpave activities and outlines how a Rocky Mountain asphalt plant increased its output dramatically.

added advantage that they can be repurposed much more easily than conventional pavements, and since the capital costs involved are considerably less, they can be rehabilitated more often and still be cost efficient.

While BST management systems are similar to pavement management systems, they require changes in rehabilitation philosophy. Pavement management systems for hot-mix pavements emphasize the need for timely interventions to protect the investment in the pavement while it still has a considerable salvage value. In contrast, a BST does not have any structural value, and when it reaches an unacceptable ride score, its useful life is finished.

Yukon Community and Transportation Services and Public Works and Government Services Canada developed a BST management system in 1988 and have made extensive use of this system to manage their BSTs at both project and network levels.

BST sections (less than 10 kilometres in length) are visually rated using individual distress ratings. Each distress is evaluated on a scale of 1 to 10, based on the extent and severity of distress.

A panel of senior Public Works Canada and Yukon Transportation Government staff rated the BST sections in early fall. They did these ratings during this period to allow an assessment of following year’s program after the current year BST patching has been completed and the surfaces have stabilized after the spring thaw. This time frame also permits a rating of the current year’s (new) BSTs.

At the project level, sections needing rehabilitation are identified for the following year’s program. At this level, ride score is the predominant distress prompting rehabilitation projects, but severe bleeding, rutting, ravelling, potholes, and subgrade failures can also prompt projects.

The management system has allowed managers to identify the need to rip up deteriorated BST surfaces, reshape the roadway, and resurface with a new BST, rather than simply overlay a BST without improving ride or rutting, as was the case before implementing the management system. This change is one of the most tangible products of the BST management system.

At the network level, a composite index (BCI) gives a suitable indication of overall performance. Since prediction models were not available for BSTs, we had to develop performance models for these unique materials and conditions. We identified distinctive performance models for sections on permafrost subgrades and for sections with significantly less truck traffic than other reconstructed sections.

Statistical models based on regression analyses and Markov Chain Theory permitted us to prioritize and optimize strategies for long-term budgeting and planning. The Markov models allowed for the determination of life cycle costs of each of the surfacing alternatives, based on capital, rehabilitation, maintenance, and user costs.

Factors other than life cycle costs can also influence the final decision to pave or use BST. For example, in sections requiring trucks to chain up for winter conditions, pavement is a better value, while for sections showing permafrost degradation, BST is a better investment since shimming and rehabilitation can be carried out at a far less cost than repaving. In areas where climatic conditions (rainfall) are such that it is difficult to obtain a suitable curing period for the BST, pavement would be the favored option regardless of traffic volumes.

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Bituminous Surface Treatment (BST) train at km 1842 of the Alaska Highway. The train is composed of, from left to right, emulsion distributor truck and an aggregate spreader with gravel truck unloading into spreader.
ATSSA Announces Nationwide Broadcast to Discuss New Roadway Safety Manual

Fredericksburg, VA—Roger Wentz, executive director of the American Traffic Safety Services Association (ATSSA), has announced plans to hold a nationwide broadcast on March 20, 2001, that discusses changes and updates to the Manual on Uniform Traffic Control Devices (MUTCD). The manual, scheduled for completion in December, contains standards for traffic control devices that regulate, warn, and guide motorists in all 50 states. Uniformity of traffic control devices is critical to optimize traffic performance and to help improve safety by reducing the number and severity of traffic crashes.

“Everyone in the roadway safety industry has worked hard over the last couple of years to provide input and ideas into this new manual,” Wentz said. “Many of the new changes and updates are significant, and by releasing this information to communities around the country simultaneously, countless lives will be saved on nation’s roadways beginning immediately.”

The current MUTCD, published in 1988, had several changes added in 1995 but essentially, the 1988 version has remained the industry standard for over 12 years.

“Times have changed,” said Shelley Row, director of the Federal Highway Administration’s (FHWA) Office of Transportation Operations. “Congestion is a national issue, technology is pushing us in new directions. There are more work zones than ever before, and transportation professionals must respond to increasing demands. It’s time for a new Manual,” she said. Row handpicked a FHWA panel who will present the manual during the nationwide broadcast.

The panel, the actual drafters of the new manual, will present the manual’s changes and updates from a television set at Northern Virginia Community College, in Annandale, Virginia, on March 20. The two-and-a-half-hour broadcast begins at 11:00 a.m. EST. ATSSA, the host of the broadcast, is preregistering downlink sites now across the country, via their website at www.atssa.com. Program viewers will also have the ability to immediately interact with the panel via toll free telephone numbers on March 20, in place specifically for the broadcast.

Currently, ATSSA chapters across the country, as well as other agencies and organizations associated with roadway safety, are becoming actively involved and registering as downlink site sponsors for the broadcast. ATSSA has established a link at its website that explains the broadcast in greater detail. The link also features a nationwide map detailing the locations of preregistered downlink sites, including driving directions to those locations.

“Anyone with an interest in roadway safety must get involved in this broadcast,” said ATSSA President Dennis Sterndahl. “Communication tools exist right now to make this new information available to virtually anyone, anywhere, with immediacy and accuracy. Lives on our nation’s roadways will be saved right away as a result of this broadcast.”

Shortly after the broadcast, videotape copies of the program will be available through ATSSA, as well as both print and CD-ROM versions of the complete MUTCD.

Since 1969, ATSSA has represented companies and individuals in the traffic control and roadway safety industry. ATSSA’s 1,700 members provide the majority of traffic safety services and materials used on our nation’s roadways, such as guardrails, stripes, signs, lighting, drums, cones, and barricades. ATSSA, headquartered in Fredericksburg, Virginia, also has a heavy emphasis on work zone safety and training.

To register as a downlink site in your community, visit www.atssa.com, or contact Chris Kovacs-Sbitan at 800-272-8772, ext. 150, or by e-mail at chriss@atssa.com.

Contact: James S. Baron (540) 368-1701, ext. 113.

If there is enough interest in this topic, Alaska LTAP Technology Transfer would consider hosting downlinks in Anchorage, Fairbanks, and Juneau. If you would attend a downlink presentation, please call Sharon McLeod-Everette at 907-451-5323 or e-mail her at sharon_mcleod-everette@dot.state.ak.us
11\textsuperscript{th} International Conference on Cold Regions Engineering: May 22, 2002, Anchorage, Alaska

Call for Abstracts

Authors should submit an abstract of their paper written in English, not exceeding 500 words. Abstracts must include the major points to be covered in the paper. No format is specified for the abstracts, and they may be submitted to the chair by mail, fax, or e-mail. In the case of multiple authors, one person must be specified as the contact author. The abstract must include the names, affiliations, and city/state for each author. The mailing address, daytime telephone number, fax number, and e-mail address must be provided for the contact author. Confirmation of abstract receipt will be provided by the technical committee.

Invitation to submit a paper will be based on the content of the abstract. Papers will be peer reviewed and published in a conference proceedings. In order to provide authors with sufficient time to respond to reviewers’ comments, strict adherence to the timetable is required.

Send Abstracts to:
Kelly Merrill, CH2M HILL, Suite 601, 301 West Northern Lights Boulevard, Anchorage, AK 99503
Phone: 907-276-6833, ext. 202
Fax: 907-257-2000
Email: kmerrill@ch2m.com

Timetable

- Abstract Submittal: March 2, 2001
- Notification of Acceptance: May 4, 2001
- Draft Paper Submittal: October 1, 2001
- Final Paper Submittal: February 1, 2002

It’s Here! Millennium Edition Manual on Uniform Traffic Control Devices


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http://www.ltapt2.org

Correction: the address for the training book aimed at elementary-school-age youngsters, \textit{Metric FUNdamentals} written by Paul Ross Wallach and featured in the spring 2000 issue of this newsletter is:
Ross Publishers
1524 Balboa Way
Burlingame, CA 94010
Unified Policy on Watershed Management Adopted

From NACE News, Volume 00 Number 10, November 2000

The Departments of Agriculture, Commerce, Defense, Energy, and the Interior; the Environmental Protection Agency, TVA, and Army Corps of Engineers adopted a unified federal policy on watershed management. It provides a framework for a watershed approach to federal land and resource management activities and is one of the action items in the President’s Clean Water Action Plan: Restoring and Protecting America’s Waters. The policy became effective October 18, 2000, and can be accessed at www.cleanwater.gov/ufp (October 18, 2000), Federal Register, page 62566.

Senate Acts on Proposed Rulemaking for Statewide Planning and Environmental Streamlining Rules

From NACE News, Volume 00 Number 10, November 2000

On October 5, a bipartisan group from the Senate Environment and Public Works Committee introduced S. 3173 that would direct the USDOT to publish a revised notice of proposed rulemaking for the statewide planning and the environmental streamlining rules, and provide a 120-day comment period. It also states that DOT cannot promulgate final rules (or interim final rules) until or after May 1, 2001. Finally, it requires DOT to provide the House and Senate committees with a summary of the revised rulemaking and a detailed comparison of the revised rule V’s original rule. NACEW has urged FHWA and congressional representatives to treat the two proposed rulemakings separately. The proposed environmental streamlining rule has received considerable criticism and probably does warrant additional review time.

NACE, NACo, and many local government organizations supported the proposed statewide planning regulation implementation. If the bill survives, it will delay their promulgation.

FHWA completed a two-year Priority Technology Program study in Ohio, and the results are in on the Remote Controlled Flagman™. For a free copy of the Ohio evaluation report and video on CD-ROM, call toll free 1-877-352-4626, email flagman@home.com, or go to the web site at www.rcflagman.com
AISES Chapter at UAF Continues Award-Winning Ways

Four delegates from the University of Alaska Fairbanks chapter of the American Indian Science and Engineering Society participated in the 2000 AISES National Conference held in Portland, Oregon. The theme for this year’s November 9–11 conference was “Celebrating Native American Culture and Tradition in Science, Engineering, and Technology.” During the traditional honors banquet, National AISES honored UAF AISES with the coveted Stelvio J. Zanin Distinguished Chapter of the Year Award, recognizing their demonstrated excellence of the previous year. This award is based on chapter activities, including membership recruiting, community service, chapter participation in campus activities, personal development and social programs, adherence to National AISES principles and goals, and scholarship activities. UAF AISES won the award in 1996 and 1994, and was runner-up in 1998 and 1995. For more information about the award, go to the AISES web site at http://www.aises.org/college/Chap_of_Yr.htm.

Engineering and science education are key applications in the road building and maintenance industry. Both the UAF student chapter and National AISES organization, through their principles and goals, strive to produce students who excel in their chosen careers.

This year’s travel delegates came from both rural and urban areas. Delores Huffman, Koyukon Athabascan from Huslia, is a senior majoring in anthropology. “It is an amazing experience seeing such a large group of people coming together in one place, sharing strengths and knowledge. The opportunities for Native Americans are increasing at a rapid pace, because of professionals and people such as those at AISES—people willing to work towards creating a future that will allow first nations people to have a place in the world of science, engineering and technology,” Huffman noted.

Alice Kangas, Koyukon Athabascan from Ruby, a sophomore majoring in biochemistry, said, “It was very motivating to see a large group of Native Americans showing an interest in pursuing higher education in science and engineering. I was much more motivated to finish my degree after hearing all the speakers, especially Air Force Captain D.J. Vanas and the

continued on next page

UAF AISES delegates Alice Kanagas (center, holding plaque), Pamela Lestenof, Delores Huffman, and Jessica Warrior (in back) flanked by members of the National AISES organization, after receiving the Stelvio J. Zanin Chapter of the Year Award.

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elders.” Pamela Lestenkof, Aleut from St. Paul, a senior majoring in fisheries, agreed that seeing Native Americans from across the United States striving for similar goals at the National AISES conference was a motivating experience. Jessica Warrior, Gros Ventres from Anchorage and a senior majoring in math, said, “As a senior, I have been trying to learn what options are available to me after I graduate. The career fair really opened my eyes about what possibilities are out there. It was also very encouraging to be exposed to so many successful Native American people.”

Students and professionals attended a series of seminars covering numerous fields of interest. These included graduate school; personal growth and values and their importance in the road to success; biomedical research training; youth awareness of HIV, AIDS and STD’s; and career opportunities in science and engineering industries and different agencies of the federal government. Other activities included national and regional caucuses, a career fair, and a powwow on the final night.

The American Indian Science & Engineering Society (AISES) is a national, nonprofit organization that nurtures building of community by bridging science and technology with traditional Native values. Through its educational programs, AISES provides opportunities for American Indians and Native Alaskans to pursue studies in science, engineering, business and other academic arenas. The trained professionals then become technologically informed leaders within the Indian community. AISES’ ultimate goal is to be a catalyst for the advancement of American Indians and Native Alaskans as they seek to become self-reliant and self-determined members of society.

Find AISES at:

www.aises.org

You can find the University of Alaska Fairbanks AISES student chapter at:

www.uaf.edu/aises/
Jim Swing Named Alaska Rep to FHWA’s Local Road Coordinator Program

FHWA appointed Jim Swing, public works director for the Matanuska-Susitna Borough and LTAP Advisory Board member, to their new Local Road Coordinator (LRC) Program. FHWA wants to establish a direct communications link between them and local governments, and recently created regional LRC groups to do so. The LRC is also an effective consortium to resolve diverse local issues and promote new technologies at local levels. This program replaces the County Road Advisors program, which had been terminated. Under the County Road Advisory Group, there were 10 County Road Advisors in the nation. With the LRC Program, each state has an advisor. LTAP Centers, an integral part of the program, were invited to attend.

The newly appointed 14 Western States LRC met in Reno, Nevada, for the first time on August 9 and 10. The group spent the first day in an interactive roundtable, identifying issues that were specific to the counties, boroughs, and other local governments in their states. Many common issues arose, and those will become focus points for future activities and meetings. The second day, the group appointed a chairman, Bobby Meister, South Dakota, a former County Road Advisory Group member. They also selected Jiro Sumada, Hawaii, as vice chairman. They formed subcommittees to create bylaws for the group and to plan the next LRC meeting. Besides the LRC members from each state, Hawaii, California, and South Dakota LTAP Center staff attended, as did members from FHWA Headquarters, the Western Resource Center, and some division offices. The California FHWA Division hosted the meeting.

The next meeting is in April 2001 at a National Association of County Engineers meeting in Minneapolis.
A major interchange was built last year under what
the DOT&PF said was “the most intense schedule they
had seen.” The job was the International Airport Road/
Minnesota Drive Interchange project in Anchorage.

This multiple-phase project included paving a 4.8
km stretch of a multilane roadway, constructing two
new bridges, and widening a third.

All work had to be completed while accommodat-
ing a traffic flow of over 65,000 vehicles per day. The
major work started in May 1999 and by October was
substantially complete and open to the public in its
final designed configuration. The interchange was one
of the state’s five biggest volumes of work ever com-
pleted in a single construction season.

Earlier this year, the contractor, Wilder Construc-
tion, returned to the project for rehabilitation and
resurfacing work, as no stone matrix asphalt (SMA)
could be laid after early September due to falling
temperatures.

The current phase includes new surfacing on
International Drive, road rehabilitation on Minnesota
Drive, resurfacing of ramps, an overpass and four
bridges.

Material for the International Drive resurfacing
portion is about 13,600 t of Type 2 mix gradation
using AC5 oil with 19 mm minus material. The resur-
facing consists of a 51 mm lift of SMA using a PG 58-28
d polymer-modified AC5 oil. It will go on top of the
existing 152 mm crushed aggregate base and a 51 mm
lift of Type 2 placed last year.

Wilder is resurfacing International Drive with a Cat
AP-1055B asphalt paver with an Extend-A-Mat

“It’s not hard to achieve, but it
takes commitment.”
10-20B screed. International Drive is a four-lane split highway with width ranges from 6.1 to 17 m.

The Minnesota Drive portion will use 25,850 t of SMA. The road width ranges from 11.6 to 17 m. The project is a rehabilitation, so Wilder milled 51 mm, then added 51 mm of SMA.

Four bridge decks were stripped with hydraulic excavators and a fine levelling course was laid over the bridge deck, a new membrane applied, and a 51 mm lift over that in preparation for the 51 mm SMA lift.

The project specification calls for a smoothness reading of 0 to 3.5 bumps per mile (about 1.6 km) to be in the bonus, while a profilograph reading over seven warrants a re-do.

“It’s not hard to achieve, but it takes commitment,” says John Lambert, paving superintendent at Wilder.

Of course the crew can’t sacrifice smoothness in the name of time. “There are a few simple steps that we believe result in a smooth mat,” Lambert says. They include maintaining the proper head of material, keeping a consistent mix temperature, hiring and retaining good operators, and keeping a good grade. Another key practice is to keep the paver working.

A continually moving paving train makes it easier for the operator to keep a proper head of material and for the crew to keep the mix temperature consistent.

So how do you keep the paver moving? “Windrow elevating is by far the most effective way,” Lambert says. “I would estimate that 98% of our paving involves windrow elevators.”

As you might imagine, Wilder has a plan for that process, too. “We use belly dumps. A belly dump is able to keep ahead of the windrow elevator and lay down a windrow of mix for the pick-up machine. In addition, the belly dumps’ greater capacity and quick cycle time means fewer trucks and therefore a reduction in jobsite congestion and hauling costs.”

Following the belly dumps is a windrow elevator, usually a BG-650 Windrow Elevator, which is crucial to the smoothness in two ways, Lambert says. It prevents segregation by adding another mixing step to the paving process and also allows the paver to run continuously. Wilder currently owns one BC-650 Windrow Elevator and one CMI branded machine.

The windrow elevator is pushed by the AP-1055B asphalt paver. Lambert says the machine’s MobilTrac System is indispensable for use on crushed aggregate base course where a rubber tyre paver will spin out.

The paver can also handle large volumes of mix (41 t every 30 m) that the windrow elevators send its way.

The windrow paving process is a key component in Wilder’s commitment to a smooth surface. But regardless of how smooth a surface is put down, final densities had to be met.

“We experimented with two 363 m test sections and found that static rolling would not achieve close to target densities of 94% of Rice (theoretical maximum density),” Lambert says. “We found that breaking down in the 149–160°C range would get us about 90%. We put our intermediate roller on the surface at 121–143°C and did two vibratory passes. Our finish roller would roll static at the lower temperatures 60–88°C to achieve our target densities.”

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Sand Point Partners a 638 Road Project with BIA

Editor’s note: this article came from a November 29, 2000, presentation by Alvin Osterback at the 10th Annual BIA Provider’s Conference in Anchorage. Besides Sand Point, Igiugig and Egegik also did similar projects in slightly different ways.

BIA can provide for road construction under Public Law 93-638 contracting, a regulation which allows tribes to do all or some aspects of road construction. This can include construction management, project management and administration, and engineering services. The contracting process includes a proposal from the tribe, a joint scoping session, and negotiations. The 638 regulation allows for the tribe to get advance payments upon finalizing the contract.

Three different tribes described their experiences with the process. Sand Point Tribe did a 638 Partnership Contract, which is the focus of this article. Igiugig and Egegik did a 638 Direct Contract, in which they leased the equipment and hired all the labor. A tribe may also choose to subcontract the construction portion of the project.

Sand Point, a first class city, was receiving a new landfill, and they contracted with Red Sam Construction to build the landfill. However, they needed a road to get the 2.4 miles from the community to the landfill.

That’s where the Qagan Tayagungin Tribe of Sand Point and BIA entered the picture. Through BIA’s planning process, the road got onto a needs list, and ultimately through design and into construction.

Alvin Osterback, the tribe’s project manager for the road project, jokingly said that if you plan to partner a project with BIA, pick a young project manager at the beginning of the planning process, because he or she will be middle-aged by the time construction happens. And then the project manager can retire once all the payments get done and final reports and as-buils are completed. In that regard, BIA sounds very much like any other agency’s capital improvement and funding process.

The road project was a 638 partnership contract, where BIA provided equipment and a core crew to perform the work. A Tribal Employment Rights Office (TERO) ordinance was in place from the very beginning. Sand Point Tribe entered into a partnership agreement with BIA, in which Sand Point Tribe
performed many of the project contracting, administration, management, and construction activities, which included bidding on and purchasing materials. They negotiated with the Shumigan Native Corporation (a for-profit Native corporation) for the land on which to build the road and with the Aleut Regional Corporation for the rock source, which needed to be developed into the material source. Once all work was done, the agreement with Aleut Regional Corporation required doing a survey of the source. An original survey was done for the design, and now that the project is complete, an as-built survey is being done, as per the agreement with BIA.

Qagan Tayagungin Tribe of Sand Point also negotiated with BIA to train tribal members to run the equipment, and the tribe did some training on the job. Some people went to a BIA training school in Oregon, both before the construction started and during the winter of the first year, when construction was shut down. Osterback provided information about unions so the workers could decide whether they wanted to do a union project or not. The workers opted not to, mostly because of the short-term nature of the project. Sand Point paid Davis Bacon wages, which required them to set up a work schedule, figure out what they needed to recover, and then figure out what to pay the workers. They used two categories of workers: laborers and operators. Each job had its own set wage, with no increase for time in the position.

Besides partnering with BIA for training, Sand Point Tribe also had BIA provide the majority of the heavy equipment for the project. And they partnered with the City of Sand Point for compactor and a crusher to use at the material source.

Workers needed to have a valid driver’s license, not just an off-road license, and they needed commercial driver’s licenses. This required planning so people would be ready to work when the project was ready for construction. Osterback put information on the radio, sent out flyers, and set up a job bank. Sand Point got CDL books, study guides, and tests to begin with, then set up with the local police department to do the testing. Potential workers borrowed the books, studied, and got their CDLs ahead of the project. It turned out to be a pretty easy process. Most of the people got Class B CDLs, while others got the Class A, with a lot of attachments. Some people already had Class A CDLs with the hazardous materials part in order to haul fuel. Drug testing was a component throughout the project.

The project took two years. Some of the mobilization and most of the explosive work took place in the fall of 1998. In the spring of 1999 they mobilized more equipment and began crushing and placement of the subbase. Crushing activities covered two construction seasons. Paving happened during the summer of 2000. Osterback noted that if certain expertise is needed, be sure your contract has the capability to do that. They brought an expert in to run the pugmill, and then to run the laydown machine.

Sand Point Tribe did soils sampling ahead of time, to know what they had to contend with at the material source as well as what they had to build over. Where excavation occurred (excavation was minimal), the deepest areas were six to eight feet. In most places, they put rock on top of the native soils. In wet places, they used Tensar, a geotextile, to float the road, piling subbase on top of the Tensar. The subbase was a minimum of 24 inches in most areas, whether over the geotextile or over native soil.

Osterback says that you might think they built the road backwards, because they had to take equipment cross-country to the rock outcropping that would become the material source, and then build the road back toward town. It was the only choice, though, because that rock outcropping was the only material source anywhere near the project.

First, they drilled and dynamited the outcropping, then crushed the resulting pieces into the sizes of aggregate that they needed for the subbase and for the surfacing. Besides the gravel surfacing, they also crushed for a Scandinavian oil mix for paving, similar to a cold mix. In conjunction with the road to the...
National Association of County Engineers

The National Association of Counties (NACo) was created in 1935 when county officials wanted to have a strong voice in the nation’s capital. More than six decades later, NACo continues to ensure that the nation’s 3,066 counties are heard and understood in the White House and Congress. NACo’s membership totals almost 2,000 counties, representing over 75 percent of the nation’s population.

Alaska Municipal League

The Alaska Municipal League is an organization of city and borough governments in Alaska. AML advocates for statewide municipal issues, strengthens local governments by developing additional training and joint service programs, develops opportunities to build consensus and bridge the gap between rural and urban areas, and works to achieve a strong state-municipal relationship to better provide basic services to Alaska and its citizens and communities.

Denali Commission

The Denali Commission is an innovative federal-state partnership established by Congress in 1998 to provide critical utilities, infrastructure, and economic support throughout Alaska. It is charged to lower the cost of living and raise the standard of living in Alaska by delivering federal services in the most cost-effective manner possible.
Spinning Your Own Web Site: Part Three

Third in 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

Choosing and Organizing Content

Helpful, interesting information is the meat of a good web site. Web users will forgive many things, but if your site is light on information, they won’t visit again.

Before you decide what meaty content to include, think about the site’s overall purpose and who will be using it. The main purposes of a transportation agency’s web site are probably to inform, and perhaps interact with, the public.

Users Know What They Want to Know

Selecting appropriate content for your site will be easier once you analyze your potential users and think about the specific kinds of information they want or need. Potential users include:

- people who live in your city or county
- visitors to your area
- other city or county agencies or departments
- your city council or county supervisors
- utility companies
- local businesses
- contractors
- job seekers
- news media
- your employees
- and many others

Following are sample questions a typical web user would pose:

- Where and when (and possibly why) will streets or roads be reconstructed, repaired, or maintained?
- Main Street’s been torn up for two weeks; when is it going to be done?
- In the winter, what streets or roads are passable?
- Will you please put a stop sign at Second Street and Park Avenue?
- Do you have any job openings?
- How much is the department spending to replace the bridge over Iowa Creek?
- When are you going to fix that pothole on Center Street?
- When will you be accepting bids on the Strawberry Lane resurfacing project?

Does all of this sound familiar? Your agency is probably used to answering these kinds of questions. Make a list of common information requests that you’d like your web site to satisfy. Putting information such as snow policies and road construction plans on the web may reduce some phone inquiries.

Some information requests will be the same for more than one category of users. The condition of winter roads, for example, is a concern of local residents, travelers, your employees, the news media, and more.

Understanding the kinds of information your users are looking for will help you determine not only what kinds of information to include, but also some effective ways to organize it all. The kinds of information you want to publish on your web site should be the ultimate guide to the organizational scheme you choose.

Putting Your House in Order

So far this whole web site thing may sound like a piece of cake, especially if you’re an old hand at writing news releases and your office staff is topnotch
at handling customer and business calls. You may know exactly what information you want to publish online.

Consider this: When you respond to a customer or vendor call or fax a news release, you are providing information but you are not providing a context or organizational structure for that information. In other words, you are providing a piece of lumber, not the whole house.

A web site provides lots of information, lots of pieces of lumber, within the context of your agency—the house. To help users find their way to the information they want, your web site needs to present a clear, understandable structure, not stairways that go nowhere.

One organization scheme for your web site that seems simple and natural is to follow your agency’s own internal structure. For example, all information connected to traffic engineering would be found via a link to the traffic engineering department. There are at least two problems with this approach:
1. It can be confusing. What seems like an obvious arrangement of information to an internal audience can be obscure to an external one.
2. It may not support good public relations. External audiences may infer from this organization that you don’t really want to share information with the public.

So what are some other options? You can organize information by topic, by task, and by type of user. Topical schemes can be one of the most useful forms of organization. San Francisco, California’s public works department web site (www.sfdpw.com/direct.htm) is neatly divided into topics such as disability access, pothole repairs, street cleaning, and utility excavation.

A task-oriented scheme organizes content and applications into a collection of functions or tasks that users will want to perform, such as applying for a license or bidding on a job. While a transportation agency’s entire site would not fit this scheme, it may be helpful to think about what kinds of tasks you’d like users to perform on your site. For example, St. Paul, Minnesota’s public works department (www.ci.saint-paul.mn.us/publicworks/) offers a “pothole reporting station,” and every good web site has an e-mail link for questions or comments.

Organizing your content according to specific user groups may make sense for a transportation agency with clearly defined users such as area residents, travelers, contractors, and news media.

It’s also possible to try a mixture of organization schemes. The King County, Washington Department of Transportation (www.metrokc.gov/kcdot/) uses primarily a topical scheme combined with some task-oriented links.

Whatever type of organization you choose, it’s helpful to get feedback about it from people outside your agency. By paying careful attention to what your users want to know and anticipating where they might look for it, you’ll be able to develop a coherent, easily navigable web site that people can trust.

The next article in this series will cover navigation and labeling, the keys to helping users find their way around your site.

The University of Alaska Fairbanks Computing has a good starting place for beginning web site designers. Go to:

http://www.alaska.edu/info/computing/serve/marks.html
# Meetings & Events

## Training (www.dot.state.ak.us, click on “Training Opportunities”)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Sponsor/Contact</th>
<th>Location</th>
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<tbody>
<tr>
<td>Jan. 13</td>
<td>IRWA Land Title in Rural Alaska</td>
<td>Kathy Stubbs, 907-267-1284</td>
<td>Anchorage</td>
</tr>
<tr>
<td>Feb. 6–8</td>
<td>NHI 13239, Geotech and Foundation Engineering Module 9: Geotechnical Earthquake Engineering</td>
<td>Simon Howell 907-451-5482 *</td>
<td>Juneau</td>
</tr>
<tr>
<td>Feb. 8–9</td>
<td>NHI 13401 Principles of Writing Highway Construction Specifications</td>
<td>Simon Howell 907-451-5482 *</td>
<td>Fairbanks</td>
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<tr>
<td>Mar. 15–16</td>
<td>Human Factors Workshop; Older Drivers Workshop</td>
<td>Sharon McLeod-Everette 907-451-5323 *</td>
<td>Anchorage</td>
</tr>
<tr>
<td>Mar. 15–16</td>
<td>NHI 13144 Hot Mix Asphalt Production Facilities</td>
<td>Sharon McLeod-Everette 907-451-5323 *</td>
<td>Fairbanks</td>
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</tbody>
</table>

* www.dot.state.ak.us/external/state_wide/T2/cal.htm

## Meetings Around Alaska

### Society

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

* "Improving Alaska’s quality of transportation through technology application, training, and information exchange."
Sand Point had many benefits from the project. People had good jobs for nearly three summers. They were trained to do the jobs, and got good experience while they were working. The material source remains to provide rock for future projects. The community, tribal government, and city government were all pleased with the project and with the end result. Peggy Osterback noted that there is great community pride that comes with doing your own project with your own people—and because of that, the City of Sand Point, who is responsible for maintaining the road, will be sure to do a good job on it.

For more information about the Sand Point project, the planning process, and the agreement with BIA, contact Alvin Osterback at 907-373-5616, or BIA Highway Engineer Nancy Elrod at 907-586-7156. Dan Salmon, Igiugig, 907-533-3211 and Lucy Goode, Egegik, 907-233-2211 were project managers for other types of 638 contracting.