TECHNOLOGY FOR
Alaskan Transportation
DOT Statewide Research, Development, & Technical Transfer
Local Technical Assistance Program

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

Winter 2012, No. 86

In this issue . . .

Life on the Edge Gets a Little Safer in Alaska

The Alaska motorist contends with numerous hazards, from big moose to bad weather. When an incident occurs and a driver leaves the pavement surface and attempts to steer back onto the pavement, the tire can scrub along the pavement drop-off, resisting the driver's attempt to get back on the roadway, leading to overcorrection and a possible accident. In Alaska, roadway departures account for around 50% of vehicle fatalities on average. The Safety Edge is a paving technique intended to minimize drop-off related crashes. With this treatment, the pavement edge is sloped at a 30-degree angle. This angle makes it easier for a driver to safely reenter the roadway after inadvertently driving onto the shoulder.

"The Safety Edge provides a strong, durable transition for all vehicles and helps prevent pavement edge raveling, contributing to longer pavement life. By including the Safety Edge detail while

(continued on page 2)

Over Twenty-Five Years of Applied Coastal Engineering in Alaska

What is Coastal Engineering?

Coastal engineering is the planning, design, construction, and operation of infrastructure projects in the coastal environment.

What is the History of Coastal Engineering in DOT&PF?

In 1982, Harvey Smith was hired by the Department of Transportation and Public Facilities as a design manager for the Central Region Buildings and Harbors Section. He was immediately tasked with the design of the state's most challenging harbor projects, including redesign of several that had experienced catastrophic failure soon after construction.

Due to an ever-increasing workload, in 1990, Ruth Carter, a Central Region engineer in training working

(continued on page 4)

Proposed 3,000-foot runway and small boat harbor (rendering by Harvey Smith, ADOT&PF, image by J. Richardson, Anchorage, AK).

Safety Edge (continued from page 1)

Safety Edge shoe with modified back plate

Floating cotter pin for engaging and disengaging Safety Edge

Top view of Safety Edge shoe with modified back plate

3" x 5 ¼" after rolling (approx. 30 degrees)

Angle after rolling

paving, this pavement improvement and safety countermeasure can be implemented system wide at a low cost," said Andy Mergenmeier of the Federal Highway Administration (FHWA).

Success in other states has raised the awareness of Safety Edges and was identified to be one of the technologies promoted by FHWA's Every Day Counts (EDC) initiative in 2010. As part of the EDC effort, Al Fletcher of FHWA's Alaska Division and Ken Kochevar of FHWA's California Division found support for the Safety Edge with Lon Krol, Alaska DOT&PF's Northern Region construction chief. Krol identified a project on the Steese Highway as a good candidate for Safety Edge, and his staff coordinated with the project's contractor, Great Northwest Inc.

Great Northwest paved the approach roads from the plant to the project using TransTech System's solution known as the Shoulder Wedge Maker™. These are shoes installed on both right and left ends of the paving screed. They were used in the test project's 14-foot wide, 1000-foot long road. Installation of the shoes took about two hours as the contractor had to fabricate an additional base plate due to conflicting bolts on the back of the screed and curvature at the bottom of the screed. The contractor suggested that the thickness of the shoe metal should be increased for greater longevity.

Overall, everyone working on the Steese project was pleased with the results. Not only was the Safety Edge created with minimal impacts to time and materials, but the shoe provided some extra compaction that otherwise would not occur.

Advances in equipment over the past year have made the Safety Edge even easier to implement. Four commercial equipment manufacturers now offer devices for creating the 30-degree pavement edge on asphalt pavements. These devices can be attached to paving machines and are the only additional equipment needed, adding very little to construction costs.

Implementation resources available from FHWA at http://safety.fhwa.dot.gov/roadway_dept/pavement/safedge include: a new *Guide Specification for Safety edge: A Guidance Memorandum*, examples of state specifications and policies, and field reports from state demonstration projects conducted in 2010 and 2011. Additional field reports will be added as they are completed. Also available are answers to frequently asked questions and fact sheets on such topics as "Steps to Implementing the Safety Edge" and "How Does Safety Edge Compare to Conventional Paving?"

Typical Safety Edge

"We are seeing more states interested in using the Safety Edge," said Mergenmeier. To continue to aid implementation efforts, FHWA is developing a *Safety Edge Design and Construction Guide* that will be available in fall 2011. Based on results from the state demonstration projects, the guide will feature general design and construction considerations as well as specific considerations for constructing the Safety Edge in conjunction with new asphalt or concrete pavements or overlays. Also covered are details related to the use of the Safety Edge technology for pavement rehabilitation projects, such as minor widening, resurfacing, and mill and overlay.

For more information on the Safety Edge, visit www.fhwa.dot.gov/everydaycounts. Information is also available by contacting your local FHWA division office.

Coastal Engineering (continued from page 1)

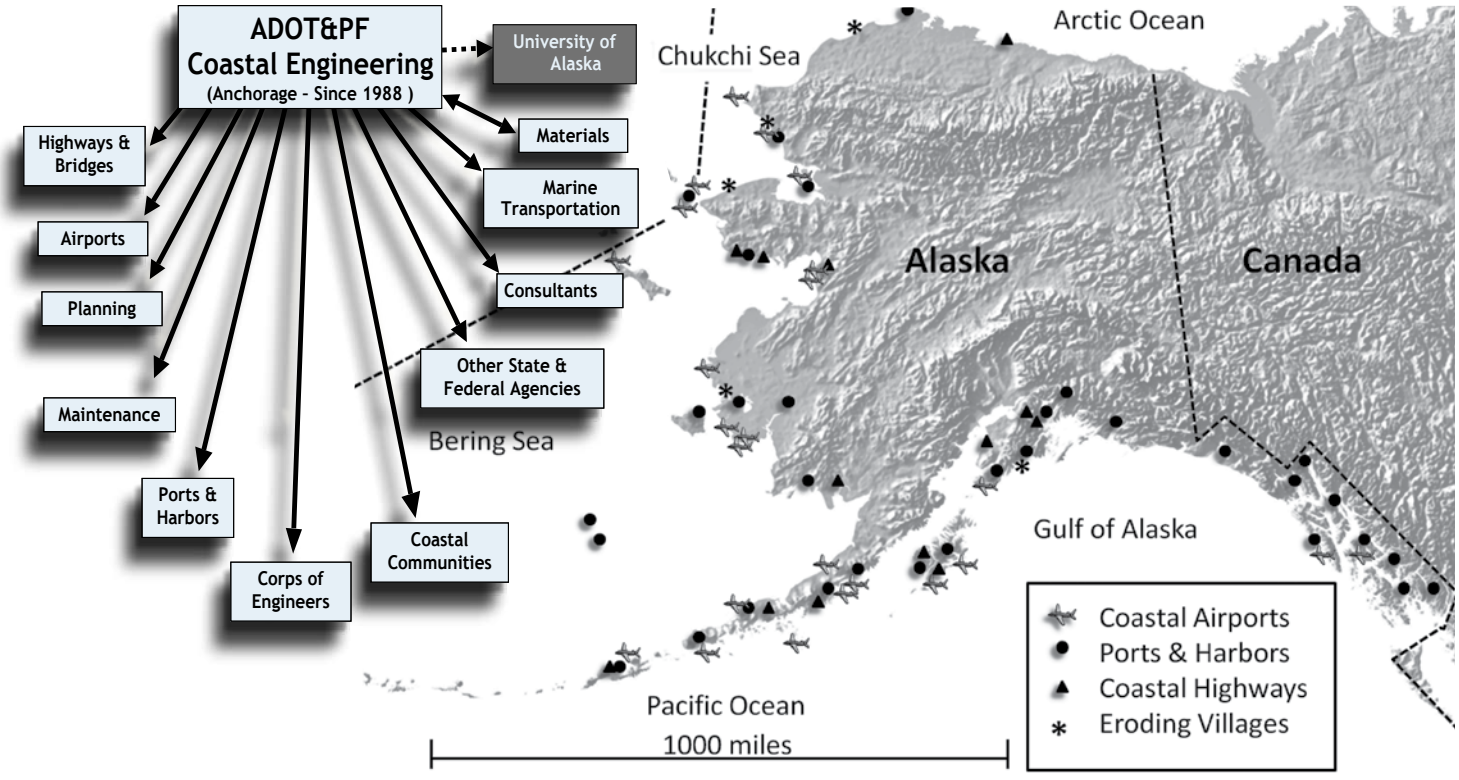
in Statewide Materials at the time, was hired to assist Harvey. Soon a permanent position was created to keep Ruth on board. Ruth and Harvey stayed in Anchorage in order to have close proximity to the U.S. Army Corps of Engineers and to allow greater access to the newly developing harbors in Central and Northern Regions.

This specialized team has received international recognition for their work. In 2004, they coauthored the *Alaska Coastal and Harbor Design Procedures Manual,* which still provides guidance to many professionals in Alaska. Much of their earlier work is in marine water quality; Harvey coauthored "Protecting Water Quality in Marinas" for PIANC in 2008. Harvey and Ruth were contributors to the ASCE of *Planning and Design Guidelines for Small Craft Harbors*, revised edition. They coauthored "Achieving and Maintaining Water Quality in Small Boat Harbors," and Harvey's "Effects of Planform Geometry on Tidal Flushing and Mixing in Marinas" is still the definitive publication used in harbor design by the USACE and others. Although as yet unpublished, Ruth and Harvey worked more recently on a study with USFWS on a harbor aquatic vegetation study" comparing vegetation in harbors with water quality. Over the past few years, they have done presentations at numerous local and international conferences.

Over the past twenty-five years the projects have evolved from traditional rock revetments to softer, dynamically stable designs or alternatives such as retreating from the coast. In earlier years, as Alaska's infrastructure expanded, more work was done on harbor projects; as the state has divested itself of harbor ownership, coastal engineering work has been increasingly oriented toward airports and highways. Due to increasingly high costs for large armor, recent projects have relied more heavily on dynamic stability and softer designs. Case studies of some of the more challenging projects constructed are presented herein.

Most of these projects were constructed in remote areas of Alaska with little data available. Each case study presents a problem, challenges, and the solution along with technical design elements and specific arctic coastal considerations.

What we do: the engineering support structure and project locations around Alaska. (Annotated base map © National Park Service.)



Case Study 1: Little Diomede Heliport, Depth Limited Waves (1992)

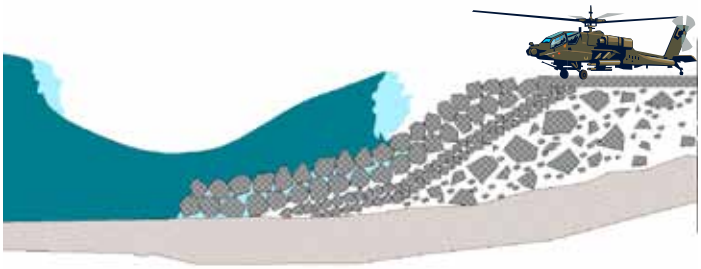
In 1992, the State of Alaska determined that a heliport was needed for Little Diomede. It would be one of the first composite slope structures in the U.S. And possibly the world.

The remote residents of Little Diomede Island can look over the Bering Straits and view the Russian Island of Big Diomede, 2.5 miles away. The topography on and offshore near the village is steep and formidable, and there was no flat area onshore large enough to land a helicopter. The community had used a grounded barge as a landing pad until it corroded to the point that it would no longer support the helicopters. There are deep-water significant wave heights of over 35 feet, and the area is subjected to sheets of ice over 6 feet thick.

The Little Diomede heliport design considerations were: 30 to 40-foot seas, over six feet of ice, and exposed to both the Bering and Chukchi Seas.

To deal with the large waves, the heliport was moved shoreward until the design wave was reduced to a 12-foot refracted, depth-limited wave, allowing the median rock size to be reduced to 6 tons. A circular design with a compound slope was used to accommodate winter ice conditions and reduce wave run-up; the lower portion was constructed at a 4:1 slope with random placement that transitioned to special placement on a 1.5:1 on the upper reaches of the structure.

The heliport's special features include a design for depth limited 12-foot wave (six-ton armor stone) and a composite slope (4:1 lower slope, 1.5:1 upper slope) The composite slope increases stability against both waves and ice and decreases wave run-up. The porous core reduces wave run-up also and increases stability and reduces uplift on the concrete landing pad.



A section showing the composite slope, special placement, and landing pad.

The use of special placement allowed us to use six-ton armor stone on both slopes.

High permeability was retained throughout the entire core of the structure to dissipate wave energy and minimize overtopping, further reducing the required armor size. High uplift forces from surging waves also required development of a special connection for the concrete planks that form the helicopter landing pad; the connection also improved the ease of handing and placement during construction.

Since its completion, the helipad landing lights have been periodically destroyed due to overtopping waves, but the structure has remained intact.

There is currently a proposal to construct a 3,000 foot runway for the island. This project would preserve the heliport, provide a small boat basin and protected barge landing in addition to improving aviation safety.

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Coastal Engineering (continued)

Case Study 2: Seward Highway, Turnagain Arm – Ice Picking (1993)

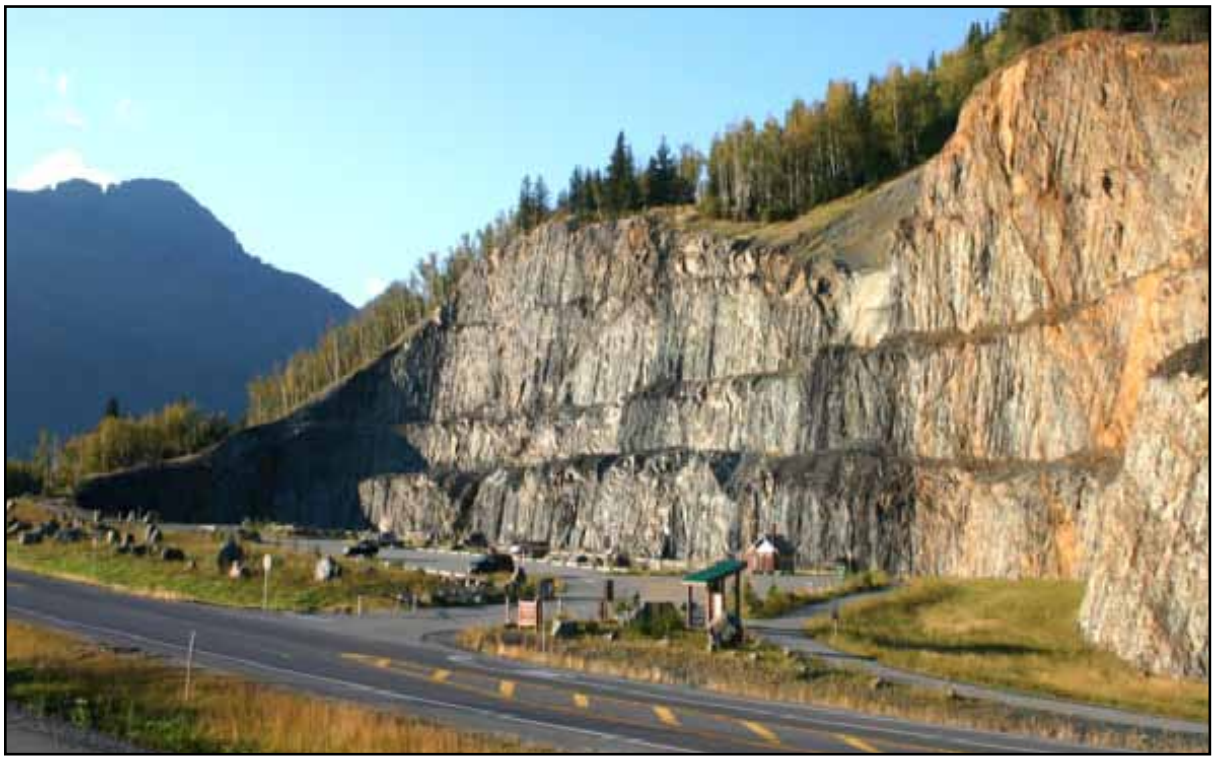
Using Milder Slopes and Use of Local Rock

The Seward Highway provides a vital link between Anchorage and the Kenai Peninsula. The pioneer highway alignment was along a steep slope where it would be closed several times each year due to avalanches. Consequently, beginning in 1993, sections of the Seward Highway were relocated onto the mudflats of Turnagain Arm in the upper reaches of Cook Inlet. The upper Turnagain Arm runs dry during lower tides except for residual drainage of saltwater tidal prism and influence of multiple freshwater rivers. Low tide drainage channels change constantly. During winter months fast ice may form throughout the entire tidal range.

Shore protection for these eight miles of roadway is exposed to 5-foot waves, a 4-foot tidal bore, 35-foot tides and 6-foot ice floes. Tidal currents can reach six knots or more on ebb tides. Wind and tidal data was collected for three years at several locations along the arm; a complex statistical analysis of the data was used to determine phase and height relationships between this section of Turnagain Arm and the nearest established National Oceanic and Atmospheric (NOAA) tidal reference station at Anchorage. In addition to the phase and height variations, predicted tidal elevations along the project are effected by channel alignment, winds, and ice. All coastal processes were combined to determine design conditions and evaluate risk of overtopping. An iterative analysis was used to evaluate incremental costs of each foot of roadway elevation to establish the optimum elevation and balanc it with long-term maintenance.

The revetment was designed with several unique features. Based on field observations of existing rockwork along the highway and railroad, the slope was flattened from a 1.5 to 2.0 horizontal to 1.0 vertical to reduce ice picking that was caused when cantilevered ice would topple, carrying large armor stone down the slope. The top section used larger stone that was designed for waves using Hudson's formula; whereas the bottom was designed for currents using boundary shear stress. The rock sizes were modified to allow use of local rock adjacent to the project for the armor; these quarries created turnouts at Bird Creek among others and reduced the cost from over $30 to about $11 per cubic yard. Additional rock was placed at the toe to create a launching section when undercut by migrating drainage channels.

Seward Highway near Girdwood with Harvey Smith in lower left for scale (photograph by Ruth Carter, Anchorage, AK, April 2011).



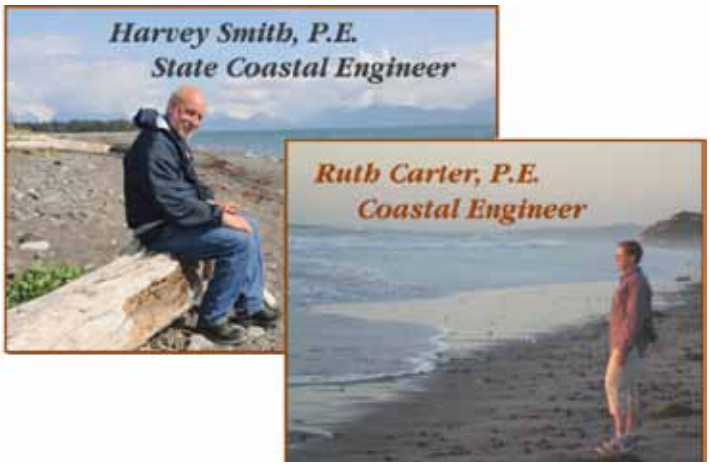
Seward Highway turnout developed from project quarry (photograph by Harvey Smith, Anchorage, AK).

The Turnagain Arm revetment project began in 1993 and has continued in phases; the next phase, closer to Anchorage, will be exposed to larger waves. The design rock section presented herein has been adopted by the Alaska Railroad and department for use along Turnagain Arm with appropriate design modifications made to accommodate varying coastal exposure.

Summary

Each of the case studies presented here was designed and constructed with little data. The designs relied heavily on evaluating existing coastal features. Alaska has the longest and most variable coastline in the United States. There are more than 100 coastal communities scattered over 40,000 miles of coastline. Each has its own unique relationship with the sea. Many have learned to adapt and live in harmony, while others try to resist with brute force. Due to the increased cost of coastal construction, the state's position is to learn from those that adapt.

Consequently, the trend of the Alaska DOT&PF Coastal Engineering Section is to increasingly use soft designs, so that we "don't fight the sea with brute force but with soft persuasion" (Bijker 1996).



Where Do We Go From Here?

Over the next 25 years, the Coastal Engineering Section is looking ahead to the challenges of global climate change and sea level rise. Also, there is a high interest in development of the Northwest Passage through the Arctic. The team has already gotten on board with proposed sites for future port development along the arctic coast.

AUTC and Alaska DOT Research: A Successful and Growing Partnership

from AUTC newsletter Vol. 4, no. 2, by Clint Adler, P.E., Chief of Research Development & Technology Transfer, Alaska Department of Transportation & Public Facilities.

"Founded on trust" and "make deals unabashedly" are two keys to building robust transportation research and technology programs. I am happy that these philosophies typify the blossoming relationship between the Alaska Department of Transportation & Public Facilities (ADOT&PF) and the Alaska University Transportation Center (AUTC). This relationship is founded on trust because AUTC's researchers have repeatedly demonstrated sincere desire and willingness to meet with ADOT&PF staff and take the time to listen and learn about the unique challenges and constraints Alaska's transportation practitioners face on a daily basis. Likewise, there has been tremendous ingenuity and dedication from all who have discovered the rewards of collaboration amongst diverse teams to develop unique solutions to increasingly interdisciplinary transportation challenges.

Our Maturing Relationships are Paying Dividends in Several Ways.

Workforce development: Students working on transportation research projects develop expertise and experience they'll need in the workforce. The demand for well-prepared transportation professionals has never been higher. ADOT&PF and transportation agencies across the nation are facing the perfect storm as the baby boomers that make up the majority of mid- to senior managers retire, and delivering and financing transportation programs becomes increasingly complicated. This environment requires new approaches to educating the nation's transportation professionals. AUTC has risen to the challenge by developing new course offerings for undergraduates and practicing professionals alike.

Capacity & Expertise: As the wave of retirees take their knowledge with them, and public sector budgets tighten, ADOT&PF's need to augment its capabilities with additional specialized knowledge and skills grows. AUTC's availability to rapidly assist with planning, design, construction, and maintenance issues pays big dividends. For example, AUTC investigations into dust control methods at rural airports are resulting in more cost-effective management of hundreds of Alaska's rural airport runways and roads.

Leveraging Resources: Federal and state transportation funding laws allow AUTC and ADOT&PF to match funding, typically on a 50/50 basis. But AUTC and its faculty and staff have not stopped there. We have been very happy to partner on efforts involving pooled resources from multiple partners, such as the Alaska Railroad, other state DOTs and universities, and even other nations. AUTC has been instrumental in integrating these resources into our joint efforts.

On behalf of ADOT&PF, I thank all AUTC faculty and staff for their willingness and dedication to developing a successful partnership for improving transportation in Alaska and beyond.

The Road Dust Institute: A New Partnership for Managing Dust at Transportation Facilities

from AUTC newsletter Vol. 5, no. 5, by Billy Connor, Director, Alaska University Transportation Center

AUTC has partnered with the Western Transportation Institute; the University of California, Davis; the University of Nevada, Las Vegas; and FHWA to form the Road Dust Institute. According to its mission statement, "The Road Dust Institute (RDI) provides tools to manage dust on transportation facilities through research, education, and technology transfer, thereby supporting improvements in health, safety, mobility, environmental sustainability, and livability. RDI's unique knowledge, experience, and capabilities provide for collaboration, partnering, and consolidation of resources to address the needs of industry, government, and other stakeholders to reduce the impacts of dust."

Working with industry and interested stakeholders, the RDI is working to eliminate the adverse impacts of transportation-related dust. As part of its outreach program, the RDI held the second Road Dust Best Management Practices Conference in Las Vegas,

Nevada, November 7–9, 2011. The conference brings together researchers and federal, local, state, and county road practitioners to discuss dust-management practices. This year's conference will feature presentations and training by national and international experts in dust management. Attendees will be given the opportunity to interact with the experts through poster sessions, round table dialogue, and training sessions.

Dust continues to be a serious concern in Alaska and the nation. The EPA estimated in 2005 that 10.5 tons of fine particulates (dust) were produced from the nation's 1.3 million roads (*Federal Register*, 2006). This equates to a staggering 7.9 tons of dust per mile of unpaved road per year. Considering the in-place cost for base course material to be $25 per ton, the cost to federal, state, and local agencies for dust loss is estimated at $260 million per year. This cost only represents loss of fine particles and does not include the associated cost of aggregate loss. Before the ADOT&PF implemented a dust-management program on the Dalton Highway between Fairbanks and Prudhoe Bay, about an inch of surfacing was lost per year due to traffic. That inch translates to costs that exceed $24,000 per mile per year. In the 1980s, ADOT&PF began using calcium chloride to manage the dust. Presently, this application costs about $6,000 per mile.

There are numerous other reasons to control dust, including safety. Dust from a vehicle can reduce visibility to nearly zero, and under certain conditions, several minutes can pass before full visibility is restored.

Dust also negatively affects the quality of life for those who live along gravel roads. Delucchi (1998) calculated the unaccounted cost of mortality and morbidity due to road dust at between $3 billion and $153.5 billion (1990–91 dollars).

Billy Connor, AUTC director, and Clint Adler, P.E., Chief of ADOT&PF's Research Development and Technology Transfer.

Dried salmon is a major source of food in the diet of rural Alaskans. Dust from village streets forces villagers to dry their fish miles from their homes and risk the loss of fish to hungry animals looking for an easy meal. Calcium chloride is not an acceptable palliative due to the bitter taste it imparts to the drying fish.

Over the past four years, AUTC has been working to find an inexpensive solution to Alaska's dust problem. Unfortunately, we quickly found that there is no standard for measuring the effectiveness of palliatives. As a result, suppliers were left to define the effectiveness of their products. While most suppliers are trying to be honest in their evaluations, the lack of standards makes it nearly impossible to compare products or to compare results from one location to another. In most cases, the effectiveness of a product is subjective.

Through the RDI, we will be developing uniform dust-management standards, performance measures, and testing procedures.

To learn more about the second Road Dust Best Management Practices Conference, visit http://roaddustinstitute.org/conference.

Congratulations to Our 2011 Graduates

The UAF Graduate Certificate in Construction Management program saw its first three graduates last spring. Jeff Russell and Andrew Schultz, of the Alaska Department of Transportation & Public Facilities, and Scott Shopa, of the US Army Medical Service Corps, will take a new level of expertise back to their professional communities.

With dedication and hard work, all three completed 15 graduate-level credits in construction project management while performing at their existing jobs. All three will be better equipped to take on large projects and to mentor the new professional staff who join their organizations. With new skills and increasing confidence, these professionals will be better placed for promotion opportunities and more challenging projects.

The Graduate Certificate Program in Construction Management was designed to make relevant, top quality education available to employees at a cost and time commitment attractive to their employers.

Bob Perkins, professor of Engineering Management at UAF, notes that "about a third of our civil engineering graduates go into the field with very little management training. Our goal was to offer a program that would offer advanced training to practicing

(continued)

Graduates (continued)

engineers. We found that there was also a group of technical professionals who could use the same training." Many professionals also saw a need for more training in communications—the "human side" of construction.

As the program has grown, UAF tapped Keith Whitaker, an engineer with expertise in design construction and litigation, to run the program.

"These are the best type of students," said Whitaker, "hard-working, focused, enjoyable to have in class. I think they're already seeing the benefits of this program." Whitaker's goal for the coming years is to attract more students from a wider range of employers, including the private sector.

"One great thing about this program is that the students come in with this large body of knowledge that they share with each other and with their instructors," said Perkins.

Above, left to right: Jeff Russell, maintenance and operations supervisor for AKDOT&PF's Northern Region; Andrew Schultz, engineering assistant for AKDOT&PF's Northern Region; and Scott Shopa, officer with the Construction Branch of the US Army Medical Service Corps. All photos supplied by the students.

The new graduate program is supported by a group of organizations, including the Alaska DOT&PF Research, Development, and Technology Transfer and the Alaska University Transportation Center.

Reprinted from AUTC newsletter, Vol. 5, No. 1

Meetings and Training Around Alaska

Society	Chapter	Meeting Days	Location	Contact
ASCE	Anchorage	Monthly, 3rd Tues., noon	Moose Lodge	
	Fairbanks	Monthly, 3rd Wed., noon except Sept. and Feb.	Westmark Hotel	
	Juneau	Monthly, 2nd Wed., noon except June–Aug	2nd Fl. Conf. Rm at AEL&P	
ASPE	Anchorage	Monthly, 2nd Thurs., noon except summer	Coast International Inn	Jennifer Gibson, 343-8130
	Fairbanks	Monthly, 1st Mon., noon	Regency Hotel	
	Juneau	Monthly, 2nd Wed., noon except June–Aug.	2nd Fl. Conf. Rm at AEL&P	
ASPLS	Anchorage	Monthly, 3rd Tues., noon	Sourdough Mining Co.	George Strother, 745-9810
	Fairbanks	Monthly, 4th Tues., noon	Westmark Hotel	
	Mat-Su Valley	Monthly, last Wed., noon	Windbreak Cafe	
AWRA	Northern Region	Monthly, 3rd Wed., noon	Rm 531 Duckering Bldg., UAF	Larry Hinzman, 474-7331
ICBO	Northern Chapter	Monthly, 1st Wed., noon except July and Aug.	Zach's Sophie Station	Tom Marsh, 451-9353
ITE	Anchorage	Monthly, 1st Tues., noon except July and Aug.	Ak. Aviation Heritage Museum	Karthik Murugesan, 272-1877
IRWA	Sourdough Ch. 49	Monthly, 3rd Thurs., noon except July & Dec.	West Coast International Inn	
	Arctic Trails Ch. 71	Monthly, 2nd Thurs., noon except July & Dec.	Zach's Sophie Station	
Asphalt Pavement Alliance	Alaska	3rd Wednesday of every other month	varies	John Lambert 267-5294
PE in Government	Anchorage	Monthly, last Fri., 7 a.m.	Elmer's Restaurant	
Soc. of Women Eng.	Anchorage	Monthly, 2nd Wednesday at 5:30pm.	DOWL HKM	Stephanie Mormilo at 562-2000 Virginia Groeschel at 562-2000

Upcoming Training

Construction Management Series: Managing Change Productively
Jan. 25 to Feb. 29 in Fairbanks

Construction Management Series: Construction Claims
Feb. 13 to Mar. 1 in Fairbanks

For information about T2-sponsored training, contact:

Dave Waldo at 907-451-5323,
david.waldo@alaska.gov
or
Simon Howell at 907-451-5482,
simon.howell@alaska.gov
or go to: www.dot.state.ak.us

In the Spotlight at the Asphalt Pavement Summit

by Rob Harper, AUTC Communication Specialist

The 2011 Alaska Asphalt Pavement Summit brought nearly 300 transportation professionals to Anchorage to collaborate on innovative, cost-saving solutions to Alaska's unique pavement preservation challenges.

The two-day summit took place at the Dena'ina Convention Center in Anchorage, Oct. 31–Nov. 1. It was promoted as the only forum of its kind where highly specialized state and international specialists collaborate to address ways to make pavement last longer and cost less in Alaska and other cold regions.

Angela Parsons, research and development engineer for the ADOT&PF, talks with a reporter at the 2011 Alaska Asphalt Pavement Summit (Anchorage, AK, November 1).

As ADOT&PF professionals are well aware, few places in the United States pose the unique combination of transportation challenges involving permafrost, frozen ground, extreme ice and moisture erosion, and rapid surface deterioration due to harsh climates.

Attendees and presenters included engineers, planners, researchers, government officials, contractors, consultants, scientists, crew bosses, private industry, and technology experts from Alaska, the Lower 48, and foreign countries dealing with similar cold-climate issues.

"This event is about leveraging the diverse expertise of many different fields to try and solve our pavement preservation challenges," says Billy Connor, director of the Alaska University Transportation Center.

Presentations addressed a variety of topics like methods of making stronger warm mix asphalt, recycled asphalt applications, and the use of thermal imaging on the Seward Highway. Innovations like these are helping improve asphalt in ways that help reduce costs and protect the environment. ADOT&PF crews, for instance, reduce the asphalt's mix temperature, thereby lowering production emissions and fuel costs.

"Together we can figure out how to make longer-lasting pavement to reduce maintenance costs and improve safety," said Angela Parsons, ADOT&PF research and development engineer.

As the U.S. Congress debated versions of a national transportation bill in tight budgetary times, the summit drew attention to how Alaska is doing more with less under major challenges:

• The State of Alaska spends up to $140 million a year on surface maintenance. This figure does not include the costs local municipalities like Anchorage spend on road upkeep (source: ADOT&PF).

• On average, Alaskans drive up to 4.9 billion miles per year, and Alaskans per capita drive 7,600 miles in a single year—many average much more (source: FHWA).

• For every dollar the state doesn't spend to fix a road, each member of the public will pay an estimated three dollars as poor pavement brings on issues like vehicle damage and maintenance, insurance claims and raised premiums, and wasted gas from congestion (source: AUTC).

Addressing a topic of both statewide and national importance, the summit drew much media interest and resulted in 14 different news stories about its proceedings in print, TV, radio, online, and specialty news outlets.

The summit's primary sponsors were the Alaska University Transportation Center and the Alaska Department of Transportation and Public Facilities. Eleven different sponsors from the paving industry hosted a reception the first night of the summit. Other sponsors helped support costs associated with the event and presentations.

Following the summit was a kickoff meeting for an innovative research partnership evaluating methods of crack sealing on Alaska's asphalt pavements, conducted by AUTC and ADOT&PF.

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Welcome Rob Harper

AUTC Communication Specialist
Joint appointment with ADOT&PF

Rob Harper comes to us from his home state of Montana, where he has a communications background in state government, higher education, and a variety of campaigns. His work with DOT and AUTC will center on communicating the value of ongoing research projects to target audiences and stakeholder groups. With graduate degrees in communications and geography, he specializes in strategic communications planning, team-based collaboration, process design, media relations, and infrastructure and natural resource issues. Having worked in Alaska only briefly before coming on board with DOT and AUTC, Harper considers himself new to Alaska and is hoping to learn as much as he can about the landscape, infrastructure, and research work going on here in our department.

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