Web Conferencing—Not Just For I.T. Gurus Anymore

By Dave Waldo

Let’s face it, for most of us the best way to exchange ideas and information is live, in person, face-to-face, where the benefits from human interaction can be fully appreciated. We’ve all heard the social scientists’ claims that a large percentage of communication is nonverbal. When we remove visual and tactile senses from the equation, we’ve obviously lost something. Unfortunately, limits on time and other resources often force us to compromise.

What are other options when we can’t meet live?

(continued on page 2)

Finding Borders: the Discovery of a Journey

by Bryr Ludington

There have been three articles in Technology for Alaskan Transportation recounting the expedition of Ed Borders, who, in the winter of 1941, travelled on foot the nearly 1,600-mile proposed route of the Alaska Highway. His expedition was in service of the International Highway Commission, a committee created by President Roosevelt to determine if such a colossal project was even remotely possible.

It was clearly a good idea, to link the contiguous states to the riches of its untapped territory, but it was also a matter of some urgency. Alaska was a vast, undefended quarter through which the Japanese might march right in and attack. It required fortification, and this was only possible through an inland supply route, one less treacherous and costly than the waterways of the Inside Passage. Maps had been drawn, theoretical lines traced through sketched mountains, and scattered first-person accounts had been gathered. But every campaign made by Alaska engineers since the 1920s to convince the federal government to build the road had been met with skepticism. Not enough data, too many blank stretches on the map, far too many potentially catastrophic variables. Best guesses were just not sufficient collateral to catalyze the largest construction project on this continent since the Panama Canal.

And then along came Ed. The previous articles describe how he wandered into his particular moment in Alaska history and did his part to make the Alcan a reality. He clearly belongs in the company of Alaska pioneers whose remarkable contributions helped shape Alaska into what it is today. But Ed belongs specifically to the tradition of pioneers who formed the

(continued on page 4)
Teleconference

We’ve all participated in teleconferences. They are quick and easy to setup, and with cell phones you can participate nearly anywhere. They’re great for short meetings, especially with a group of folks who know each other and share an understanding of the topic. But the farther you stray from that scenario, the more a teleconference tends to lose effectiveness.

Video Conference

Video conferencing is almost like being there. Almost. Real-time interactive video adds a great deal, but there are several issues that tend to restrict widespread use:

- Expense of purchasing video equipment and a “smart classroom”
- Frequent network glitches, network manager issues, and lack of site availability. The more locations you add the more cumbersome for the moderator and problems are only multiplied.
- Need to travel to a video conference site. They’re around but not necessarily readily available.
- Time to set up an event and cost of air-time and possible room rental.

Solving these problems costs money. If cost and site availability are not an obstacle, then certainly video conferencing is the best option to replace traditional meeting venues. Since saving time and money was the whole point in the first place, then you might want to consider web conferences.

Web Conference

Shortly after the terrorist attacks of 9/11, web conferences gained popularity. Meetings needed to continue even though travel was not possible or severely hampered. At the time, the technology was still in its infancy, and popularity waned as folks started to travel again. With the current economic downturn, we again have a compelling reason to look at web conferencing. Fortunately, the technology has come a long way in eight years.

In fact, in the not-so-distant future, web conferencing is likely to replace video conferencing. Currently the technology exists to match video conference capabilities. Then what’s the holdup? Implementation. Specifically implementation of the network infrastructure. We are often at the mercy of the communication service providers. To be fair, they are only designing and installing networks as economies of scale dictate. To sustain expensive upgrades they need the technology to function correctly for all or most users, at similar performance levels, simultaneously. This means they wait to roll out upgrades incrementally. Fortunately, most agencies and many companies currently have what’s needed for a basic web conference.

How to Get Started

Several sections around DOT&PF are using web conferencing. It’s a great option for a meeting or conference using the technology that most of us have at our workstations:

- computer,
- high speed internet, and
- phone.

Terminology often used interchangeably to describe meetings conducted over the internet:

web conference: used to conduct live meetings, trainings, or presentations via the Internet
web meeting or virtual meeting: terms often used interchangeably with web conference
webinar: delivered primarily from the speaker to the audience with limited audience interaction
webcast: used to describe webinars that are one-way transmissions
If you want to conduct a web conference and feel you’re I.T. challenged, find someone in your office to help who has I.T. tendencies. Once you go through the process the first time, it’s pretty easy.

1. Choose a web conference provider that is “platform agnostic.” Say what? That’s I.T. speak for “hosted on their server not ours.” I.T. personnel want to minimize their involvement and support while conserving server functions.

2. There are several providers to choose from and most have free trial versions. GoToMeeting is a popular choice, with an easy-to-learn user interface that integrates with Microsoft Outlook. Once you get through the learning curve with a provider then stick with them—familiarity minimizes set-up time for you and your participants.

3. Test your selected provider with two to three co-workers. As the moderator, you just need to follow the service provider instructions. A log-in is sent to your participants. Once they log in they can see what you see on your screen. You can deliver a PowerPoint presentation, share documents, and use numerous other advanced features.

4. Choose your voice option. Most of us using web conferences are using the telephone—essentially conducting a teleconference with shared computer screens. An emerging technology is Voice Over IP or Voice Over Internet Protocol, which allows the audio to come over the network through the same interface as your web conference provider. Not all web conference providers have this option, not all networks can support this, and not everyone has speakers.

5. Be ready for glitches—even with proper preparation they occur. Most of the web conference providers offer tech support: how much you pay for the provider seems directly proportional to speed and quality of the support. Have a contingency plan. You can always default to a teleconference, and if you’ve distributed materials ahead of time you’re golden. This is the benefit of using the telephone as part of your conference.

**Getting Fancy**

A classroom equipped with the following can turn a web conference into a web classroom:
- LCD projector and screen
- speakers
- webcam (optional)

There are several advantages to getting participants to share sites. This option conserves bandwidth, may reduce set-up time, and gives the event the feel of a real event by increasing face-to-face interaction. Once you have the classroom infrastructure in place, it’s really not much harder to conduct a web conference classroom-style.

If you have the network capabilities to support a web camera it might be something to try. But don’t get hung up on this—if it works, great. Otherwise move on.

**Housekeeping Tips**

To help ensure that your web conference runs smoothly, it is advisable to do the following:
- Plan the web conference well in advance.
- Be familiar with your web conference provider by conducting a test run.
- Advise participants of the conference call date, time, and planned duration.
- Provide printed materials to participants in advance—an agenda, meeting notes, hardware and software instructions, etc.
- If you’re using a classroom option, get your sites up and running 15 minutes before participants arrive. This allows time to work out any bugs.
- Test the audio.
- Let people know the online conference is about to begin.
- Encourage questions to be directed to specific individuals or locations.
- Ask participants to identify themselves when speaking and to speak clearly.
- Have a contingency plan—i.e., teleconference as default option.

For more info on web conferencing browse WebMeetings.org, where some of the information came for this article:

http://web-meetings.org/

---

Browse the following site to see features of the top ten web conferencing services as recommended by To Muse, an online tech news blog:

http://tomuse.com/top-10-free-web-conference-services/
foundation of the Alaska Department of Transportation, the engineers and builders who laid the trails, tracks, and roads through the wilderness. They brought would-be Alaskans to their new homes, linked existing communities and gathered urban centers, and connected Alaska to the rest of the world.

It is fitting that Ed’s story, largely forgotten since his death nearly 65 years ago, would reappear for the first time in a historical column in this newsletter, and that it would be DOT that would ensure the preservation of this part of its long heritage. But it was only by chance that Ed resurfaced at all.

In the summer of 2007, Judie Triplehorn at the Keith B. Mather Library (in the UAF Geophysical Institute) noticed a spiral bound, photocopied manuscript in a year-old donation to the library and chanced to flip through it. It seemed interesting, so she sent it over to Dave Waldo at Research and Technology Transfer. I was working for Dave as a publications intern while in grad school at UAF, and he asked me to look through the manuscript to see if it was worth mentioning in the historical column of the newsletter. So I began flipping through the document that would not only yield a number of articles for the newsletter, but would become central to my academic and professional life for the next few years.

The manuscript was gifted to the Keith B. Mather library by a distant relation of the Borders family, a local woman named Kathy Blanchard. A similar donation lay still unprocessed in the Alaska Polar Regions archives and included not only another copy of the manuscript but also photos of Ed, a few other documents, and a DVD. On the disc was a very rough and smeared copy of an old film, almost impossible to make out: featureless faces, melted landscapes. I flipped over the paper case to find a heartbreaking note: “Copy of Ed Borders’ film – original lost in house fire, 1972.” The letter that originally accompanied the small collection wrote that it belonged to Ed’s cousin, who had always hoped to do something meaningful with it. But her health failed, and her family believed it would have been her wish to preserve the artifacts in the UAF museum. But between the letter, the few papers, and what Blanchard knew of Ed’s descendents, I believed I was looking at the extent of Ed’s legacy.

What we did have, however, was a wonderfully written manuscript describing a unique expedition and preserving a moment in Alaska history that would otherwise have been lost. I wrote the editor of Alaska magazine about Ed and, in October 2008, Ed was featured in an article with a painter’s renditions of scenes from his travels. Responses to the article confirmed what Dave Waldo and I knew: that Ed’s story was important to Alaskans and the preservation of his history was a service to the heritage of state.

Earlier that year, again with Judie Triplehorn’s help, we discovered that Ed’s widow, Betty Jo Holland, was interested in helping us preserve Ed’s legacy by providing an oral history record and possibly donating part of her collection of Ed’s possessions to the UAF archives. DOT arranged for me to travel to Malad, Idaho, to meet with Betty and her family, who greeted me with incredible hospitality and generosity. I spent three days recording Betty’s stories and marveling over the many keepsakes that had once belonged to her first husband. She brought out his camera, a 1938 Exacta Kine, still in its leather case, the straps still as soft as if they were brand new. There was the Kodak Cine 16 mm movie camera Ed used to make the lost film, with its small lens and hand crank. She had his journals from which he wrote the manuscript, consisting of pages of his scrawling print. There were envelopes filled with photographs, the husky dog Butch’s original discharge papers, and scores of documents from Ed’s days working with the International Highway Commission, including a letter signed by President Roosevelt’s Secretary of State Cordell Hull.

But the most amazing artifact came out of Betty’s closet in a large pizza box, sealed with decades-old masking tape. It was a reel of 16 mm film, the original footage taken by Ed in the winter of 1941. It hadn’t been

Ed Borders gears up on the morning of Jan. 21, 1941, the first day of his expedition.

Finding borders (continued from page 1)
lost in a fire after all, but had been safe in its makeshift canister for years. The 68-year-old film still looked glossy and supple, and I thought about this while fighting my way through airport security the next day, watching the box be opened and closed by TSA personnel, the reel of film flipped and turned and prodded until the officers were satisfied that it could not be detonated. The air in the Pocatello airport was dry and dusty, people sneezed and coughed around me, the harsh overhead lights reflected in the exposed trailing end of the black film. I checked all the baggage that belonged to me so that I wouldn’t have to let the film, or the box full of photos and papers that Betty had allowed me to bring back to Fairbanks, out of my sight for a moment.

Inside that box were irreplaceable treasures, not just having to do with Ed, but unique bits of Alaska history such as a photograph showing a group of men in parkas and mushing gear, smiling in front of their enormous and over-laden dogsleds. They were a team from the U.S. Army Corps of Engineers on a surveying mission that had crossed paths with Ed in Burwash Landing. In the next few weeks, the entire group would be lost in the wilderness. Locals would blame their impractical sleds.

Over the next few months, we scanned the photos and documents to preserve them and negotiated the donation of the film to the Alaska Film Archives at UAF, where it will be restored, copied for public viewing, and preserved in the vaults. The remainder of Betty’s collection was returned to her, reorganized in protective sheets and containers.

With so much new information on Ed, including a large sheaf of handwritten pages that may be the missing half of his unfinished manuscript, I decided to begin work on a book about his expedition and the cultural and literary context of his writings, and that research has become the center of my PhD dissertation. I have been delighted and moved by the number of letters and e-mails in response to the articles in this newsletter, the article in Alaska magazine, and a paper on Ed that I presented at the Alaska Historical Society annual meeting in 2008. One such letter came from Ed’s grandson, currently serving in Iraq, who wrote to tell me how proud he was of his grandfather. More recently, I have been put in contact with a woman in Burwash Landing who may remember Ed passing through in 1941, and I am making some wonderful connections among those involved with the history of the First Special Services Force, hoping I may come across more information on Capt. Elden Borders, who fought and died with the FSSF in Italy in 1943.

When Dave Waldo dropped that manuscript in my lap two years ago, I had no idea how fortunate I was, not only to be in the position to give Ed’s story the time and work it deserved, but more importantly, to be lucky enough to be working for DOT in an internship that would provide me with this, and many other, incredible opportunities for professional development. Almost everything I am doing in my academic and professional career can be traced to projects I worked on, people I met, or things I learned while in that internship. I would like to express my gratitude to Dave Waldo and everyone else I worked with at Research and T2, and, on Ed’s behalf, to DOT at large for welcoming him back.

Bryr Ludington is a former DOT intern who is pursuing an interdisciplinary PhD in northern literature and writing at UAF. She is writing a book about Elden “Ed” Borders. If you have any information about Borders or the context of his expedition, please contact her at bryrludington@yahoo.com, or Dave Waldo at david.waldo@alaska.gov.

The other three Ed Borders stories and the Alaska magazine article are at these links:
http://www.dot.state.ak.us/stwddes/research/assets/pdf/07v32n2.pdf
http://www.dot.state.ak.us/stwddes/research/assets/pdf/07v32n3.pdf
http://www.dot.state.ak.us/stwddes/research/assets/pdf/08v33n1.pdf
n=com_content&task=view

Betty Holland reminisces as she gazes upon her late husband’s purple heart. Twenty-seven-year-old Captain Elden Borders received the Purple Heart posthumously after being killed in action on December 6, 1943, while serving with the U.S. 5th Army in northern Italy.
A simple mistake by a pilot on a bright, summer day nearly ended in disaster. The near-miss cannot be attributed to the pilot’s quick thinking or the safety features on the aircraft. Instead, a construction crew on the ground was the hero that day, having taken a few safety precautions before the shift ended.

The year was 2007 and the airport was the Ralph Calhoun Airport in Tanana, Alaska. Brice Construction was the company on site. The airport construction project was a $9 million upgrade that meant a longer runway and the installation of airport lights; both important safety improvements for the community. The aircraft, a Beechcraft 1900, held over a dozen people while the pilot made the simple mistake of landing on the wrong side of the airport: the closed side. It’s an easy error and one that’s made occasionally on airport construction projects in Alaska and the Lower 48. Sometimes the ground crew contributes to the mistake, and sometimes the pilot does, but much of the time it’s a series of missteps by both parties.

The mistakes happen too often. At least two additional landings have occurred on closed sections of an airport construction project in Alaska since the Tanana incident. One simple mistake and an otherwise flawless flight could end in tragedy.

The near-tragedies highlighted what role construction can play in aviation crashes. Pilots already face safety challenges, including weather, terrain, and distance. So the Federal Aviation Administration (FAA) and the State of Alaska Department of Transportation and Public Facilities (DOT&PF) decided to do something about it. Working together, they created a documentary-style video for both pilots and contractors to increase the safety of airports that are under construction.

In the summer of 2008, a small video production team went into the field, talking to pilots, mechanics, airport managers, aviation experts, and construction crews about what a construction project means to the safe operation of an airport. The information trickled in at first, then slowly built as people talked about their experiences, what they had learned, and what they would like to see in the future.

The result is a video that reflects the challenges of bringing the improvements to the airport while accommodating an active runway. The issues that emerged as the video developed were not complicated, but were things that put people and equipment at risk and needed to be addressed.

A few of the lessons that construction crews shared include:

- Review Notice to Airmen (NOTAM) prior to departure.
- Conduct a visual inspection of the airfield, particularly if the airport is unfamiliar.
- Use good, clear radio announcements.
- If there is any condition on the runway that needs clarification, communicate your concern to the folks on the ground. Use the construction crews as your resource.

A few of the lessons that pilots shared include:

- Become familiar with airport operations, plane types, and landing frequency.
- Become familiar with aviation terminology.
- Monitor the common traffic area frequency and respond to inbound planes.
- Stop construction and move equipment off runway during landings.
- Never park equipment on or near runways.
- Never park equipment in airport safety areas.
- Operational areas should be smooth and free of dips, ruts, or bumps.
- Temporary markings should be clear and visible.

A final cut of the video is being distributed for review this fall. Once complete, DOT&PF plans to make the program required material for construction crews before they begin work, and FAA plans to distribute it through Alaska’s flying community.

That flight into Tanana on that bright sunny day in 2007 was saved by a few of the simple safety measures followed by the construction crew. First, they made it a policy to never park equipment at the airport, even in the closed section. Second, they took the time to spread the newly placed material out before calling it a day. While the landing was rough by all accounts, the passengers and plane made it through without a scratch. That is a good day’s work.

Near Disaster Prompts Aviation Safety Video
by Shannon McCarthy
T2 Launches Enhanced Training Management System

If you’ve visited our website lately, you probably noticed we have a new training management system. Our training calendar hasn’t changed its looks much, but it’s way different under the hood. It’s now a dynamic system that allows students to track their training, review rosters in real time, manage their user profiles, review and print transcripts, and print certificates.

If you’re a DOT & PF employee your login ID for this system is the same as for your e-mail account username—for example for David J. Waldo it is “djwaldo.” The system does not know your e-mail password. If you’re a first time user, you’ll need to click the "help" button and enter your login ID for your temporary password to be sent. Once you’re in the system you can change your password and manage your account using "my profile.”

For a brief tutorial follow the annotated screen shots.

(continued on next page)
Training Management System (continued)

By selecting "My Profile" you can edit your account at any time. Although there is no sensitive information stored in our database, as a precaution, we encourage you to change your password to something unique. Just remember this password is not your DOT&PF password and it never expires.

Selecting "My Transcript" allows you to review and print transcripts.

You can print a certificate from a completed course by selecting this icon.

If you're having difficulty during log-in try using the "help" feature. Most issues are password related. Enter your login-in. For DOT employees this is the same as for your e-mail. The system will e-mail you your password. If you continue to have problems contact T2.
This has been a big year for Construction Career Day in Alaska, with two events in Fairbanks and one in Mat-Su, introducing nearly 1,500 students and 300 educators to careers in construction and transportation.

It all began three years ago when two Alaska DOT&PF sections, the Civil Rights Office and Technology Transfer (T2), began discussions on developing a Construction Career Day (CCD) in Alaska. For several years CCDs have been emerging all over the country as part of the Federal Highway Administration’s effort to promote the transportation industry and the careers it offers for America’s youth.

Building on the success of these events in the Lower 48, and tapping into the model promoted by FHWA, Civil Rights and T2 formed a partnership with local unions, school districts, state agencies, the University of Alaska, and numerous private sector professional organizations and trade associations. A steering committee was established for a pilot event in Mat-Su for the spring of 2008. We were able to put the plan in motion thanks to the FHWA National OJT Grant secured by the Civil Rights Office as well as funds from T2 and the Alaska University Transportation Center (AUTC). Later the Alaska Department of Labor became a major contributor and is now playing a major role along with AUTC and DOT&PF.

By Dave Waldo

An apprentice from the Alaska Joint Electrical Apprenticeship and Training Trust shows a Mat-SU CCD participant the proper way to wire an electrical receptacle.

Exhibiting a steady hand, one of many Mat-Su CCD participants uses oxygen-and-acetylene torches to cut metal with the help of Alaska Iron Workers Local Union 751.


What Really Makes CCD Worth the Time and Resources?

It’s the kids. Our evaluation, surveys, and anecdotes indicate this is a high-value event. After all, how many of us knew what we wanted to do after high school? Students have a chance to see what’s out there in the construction and transportation industry, to explore the possibilities from asphalt paving to work zone inspection and everything in between. We saw a wide spectrum of student interest. Some wanted to know more about apprenticeships, others were thinking of degrees in engineering or training related to surveying, and

(continued on next page)
many were thinking the construction industry would provide summer work to fund their career ambitions. Some left with more questions, but they all left with a day of hands-on experiences and a 32-page Alaska Construction Career Day Guide that outlines helpful resources, websites, and information that could lead them to a career in the construction or transportation industry.

CCDs generally consist of three major components:

**Career Expo:** A construction trade and educational trade show where students can learn about construction career opportunities from vocational schools, four- and two-year colleges, state and local governments, contractors, and the trades.

**Hands-on:** Students can try welding, tying rebar, surveying, heavy equipment simulators, screw guns, nail guns, and electrical wiring.

**Heavy Equipment:** Students operate the arm of mini excavators and sit in trucks, front end loaders, dozers, and graders.

**Where Do We Go From Here?**

I think most involved agree that CCD must continue in Alaska, as student attendance and enthusiasm clearly demonstrate. Diminishing financial resources demand that we think in terms of sustainability. But how can we ensure program longevity that won’t be subject to the ebb and flow of grants and resources of sponsoring institutions? One idea is to create AKCCD.org, a non-profit organization to manage CCDs in Alaska, which would have the advantage of fundraising led by a board of directors made up of representatives from the construction and transportation industry. Although this hasn’t moved beyond concept, several folks involved in Alaska CCD think it is worth exploration.

In the meantime, be looking for upcoming CCD events in Mat-Su in late April 2010, and in Fairbanks in late September 2010.

More information at these web sites:

**For the Alaska CCD website and video go to:**
http://www.akconstructioncareerdays.org/

**For the national CCD site:**
http://131.128.106.188/nccdc/content_template.asp?incomingcontent=home.asp&headline=Welcome!
Highlight on Research

New Report on Naturally Occurring Asbestos in Alaska
A Recent Study Reviews Policies in the Lower 48 and Offers Suggestions

Technical Translation by Bryr Ludington

Asbestos. The word itself, derived from the Greek for “indestructible” or “inextinguishable,” has a sinister ring to it. Associated with other words such as mesothelioma, asbestosis, and cancers of the lung, esophagus, stomach lining, and colon, the silicate material that was used for years in everything from floor materials and insulation to spray-on fireproofing and automotive brakes was classified by the EPA as a Group A carcinogen and all new uses were banned in 1989. Because of the serious health and safety risks of airborne asbestos fibers, mining and industrial use of asbestos is now rare, and the use of existing asbestos materials is heavily regulated by state and federal statutes.

Although the danger posed to the public by the presence of asbestos fibers in buildings and materials steadily decreases, there remains the problem of naturally occurring asbestos, or NOA. Asbestos, after all, is a term for a variety of magnesium silicate minerals that naturally occur in fibrous form. NOA is a generic term used to identify any of the six varieties of asbestos when encountered in natural geologic deposits. Commercially viable asbestos was mined as raw ore and then crushed down into a suitable form for industrial application. Therefore, NOA describes asbestos as it occurs in the rock or soil and does not describe a distinct variety of asbestos. NOA most often occurs in metamorphosed ultramafic rock, but can also occur in sedimentary rock, in stream deposits, and soils derived from any of the above. Natural weathering or, to a greater extent, human disturbance can break NOA down into microscopic fibers that can easily become airborne, causing the same inhalation danger as industrial asbestos dust.

Existing asbestos materials are heavily regulated by such entities as the Consumer Product Safety Commission, the EPA, and OSHA. NOA, on the other hand, is not regulated by any federal agency and only by a few state agencies in the Lower 48. The presence of asbestos or asbestiform (fibrous) minerals in rocks has been identified in 20 states, including Alaska, but the responses of local governments to the threat of airborne NOA is varied. A recent report produced by a joint project of the Institute of Northern Engineering and Nortech views the experiences and policies of other states in dealing with NOA. Based on their analysis, the authors offer recommendations as to the development of a program in Alaska to handle NOA issues here.

NOA in Alaska

Alaska has large known deposits of the kinds of rock and ore characteristic of NOA occurrences. Although documented encounters with NOA are few as yet, the increasing research and development of NOA coupled with ever-expanding construction needs prompts expectations of future encounters on a much larger scale.

For example, scattered veins of asbestos were found in the following Juneau quarries: Lemon Creek, Treadwell, Upper and Lower Fish Creek, and Bonnie Brae. The City and Borough of Juneau expects asbestos to be present in the majority of high-quality rock deposits in the area. In 2000, during a project to replace culverts and bridge abutments as well as to add surfacing material to about 20 miles of the Dalton Highway, the material site being used was found to contain asbestos-bearing rock. The discovery and subsequent closures and tests caused significant delays and increased project costs. As in the Juneau quarries, NOA was only discovered at the Dalton material site after workers had already begun to remove the material and were already exposed to the airborne fibers. In Ambler, a Kowagniut Inupiat village about 320 miles northwest of Fairbanks, the sole source of gravel aggregate, which had already been used for all roads in the village, including airport runways, was found to contain NOA. In Ambler, the main mode of transportation on these unpaved surfaces is ATVs, which generate substantial visible dust. Analysis determined that this created a higher-than-average asbestos health risk to the public. Several community projects in Ambler

(continued on next page)
were put on hold or cancelled due to the closing of the quarry.

The demand for gravel in Alaska construction projects is immense. DOT Northern Region used 2 million cubic yards of gravel from 64 different material sites in 2007 alone. The Trans-Alaska Pipeline project used 73 million cubic yards and, not including the upgrade work required, the projected gas pipeline will need to mine 50 to 60 million cubic yards of new gravel. There are also access roads, airports, railroad extensions, and other projects across the state that all have substantial gravel demands.

Although finding NOA in source material during the preconstruction geological exploration is never a good thing, the ramifications are nothing next to discovering the asbestos after use of the material has begun. Therefore, all projects that use source materials from areas that contain possible asbestos-containing rock bodies, or areas that are located down-gradient or downstream from such deposits, must include analysis for asbestos as part of material site exploration.

Once the presence of asbestos is confirmed at the material site, the stakeholders must make a choice: transport non-NOA materials from another site or, if no other materials are available, use the NOA-containing materials. If materials containing NOA are used, strategies to deal with material safely must be employed.

**NOA Control Strategies and Technologies**

There are four main approaches to handling NOA-containing materials: manage in place, dust suppression methods, covering or capping, and road maintenance.

**Manage-in-Place**

When NOA is discovered, the ideal approach is to leave it alone and undisturbed. This is especially the case if the NOA remains unexposed. In Fairfax, Virginia, for example, a large deposit of NOA exists beneath non-NOA material. For the moment, it is safely covered and asbestos fibers cannot become airborne. As long as construction demands do not require the disturbance of the NOA deposit, Fairfax County has decided to leave it alone. Another manage-in-place strategy is to separate the NOA from the non-NOA material. This is only practical, however, if the NOA deposit is relatively small; unfortunately, NOA deposits often extend for miles.

**Dust Suppression**

If the NOA must be disturbed, precautions must be taken to limit activities that generate dust, thus causing the fibers to become airborne. Dust suppression is the most common engineering control used to reduce dust and limit asbestos exposure. Following are three practices that reduce exposure to NOA during excavation, grading, or utility work at construction sites.

**Reducing Vehicle Traffic and/or Speed:** The higher the number of vehicles driving on an unpaved road, the higher the dust emissions. Weight or use restrictions can limit the traffic, as can limiting the public access to that road. The speed of vehicles on an unpaved road is also proportional to the dust generated. For example, reducing speed from 40 mph to 20 mph results in a 65% reduction in dust emissions; a further reduction to 15 mph results in an 80% reduction. However, neither traffic nor speed reduction solves the problem of exposed NOA materials on the road.

**Water Application:** Federal asbestos regulations require “wet methods” to be used when there is a danger of asbestos-containing materials releasing fibers into the air. The surface tension of water droplets causes the asbestos fibers to adhere to one another, reducing the amount of dust released when disturbed. Water application provides effective but short-term reductions in dust generation as long as water is reapplied every half hour to twelve hours, depending on temperature and humidity. Regular, light watering is more effective than less frequent, heavy watering.

**Increasing Moisture Content:** The application of calcium chloride can also help in dust suppression. The salt absorbs moisture from the atmosphere and keeps the treated soil at a higher moisture content. Possible disadvantages of using salt include potentially slippery roads, vehicle corrosion, and wash-off in heavy rain. Calcium chloride has been used for dust control in Kotzebue, at Red Dog Mine, and in Haines, among other locations. Problems have included metal corrosion and degradation to nearby vegetation, surface and groundwater, and aquatic species. Calcium chloride also lowers the freezing temperature of water, which can alter the thermal stability of treated soils.

**Covering and Capping**

Another common control strategy is to cover (or cap) the exposed NOA material. Possible materials include non-NOA soil or rock, concrete, chemical sealants or dust suppressants, chip seals, limestone
aggregate, petroleum sealants, asphalt paving, geotextiles, wood chips, mulch, sand, pea gravel, shredded rubber, rubber mats, and vegetation.

Road Maintenance
The effectiveness of any dust suppression method is dependent upon quality road maintenance. Factors such as type of road, traffic volume, intended use, climate, type of dust suppressant, drainage, and available maintenance resources all must be considered when choosing how to control NOA-containing materials.

Conclusions and Recommendations
Because of the prevalence of NOA gravels throughout the Lower 48 and Alaska, policies and regulations need to be developed to prevent NOA impact on public health and project development. NOA gravels can be used safely with proper training and implementation of appropriate control strategies and technologies. Established programs in other states focus on geologic mapping of NOA areas, characterization of NOA-free material as having less than 0.25% asbestos content, local authority enforcement, and development of necessary program exemptions. These programs were developed across public health, environmental, and air pollution divisions at the state level and implemented at the local, county level.

The report recommends that, at minimum, Alaska DOT develop internal NOA M&O and design standards for DOT projects. These standards should involve resource characterization, acquisition, and use, as well as training and the development of design requirements, contractor’s work practices, and M&O practices.

(continued on back page)
Workzone Safety Grant Courses in Alaska

Enroll Now, Don't Delay!

The American Traffic Safety Services Association (ATSSA) is offering several courses as part of a Federal Highway Administration grant to provide roadway safety training nationwide for workers and others who make their livelihood on America’s roadways.

The courses will be held in communities all over Alaska between mid-December 2009 and late March 2010. Most of the courses are one or two days with a nominal fee schedule. These are open courses, and are first come first served.

Fees are:
- $25 for public officials (state and local government)
- $50 all others
- Free to federal employees

Enroll now at ATSSA’s website:
www.atssa.com/cs/course_information/courses_by_state?state=11

or

Dave Waldo at 907-451-5323, david.waldo@alaska.gov

ATSSA Training Schedule for Alaska this winter

<table>
<thead>
<tr>
<th>Course</th>
<th>City</th>
<th>Begin Date</th>
<th>End Date</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law Enforcement Train-the-Trainer Course</td>
<td>Juneau</td>
<td>2/12/2010</td>
<td>2/12/2010</td>
<td>Eric Perry</td>
</tr>
<tr>
<td>Maintenance and Short Duration Activities</td>
<td>Anchorage</td>
<td>1/11/2010</td>
<td>1/11/2010</td>
<td>Tim Luttrell</td>
</tr>
<tr>
<td>Urban Work Zone Design</td>
<td>Anchorage</td>
<td>1/6/2010</td>
<td>1/7/2010</td>
<td>Tim Luttrell</td>
</tr>
</tbody>
</table>
Meetings Around Alaska

<table>
<thead>
<tr>
<th>Society</th>
<th>Chapter</th>
<th>Meeting Days</th>
<th>Location &amp; Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCE</td>
<td>Anchorage</td>
<td>Monthly, 3rd Tues., noon</td>
<td>Moose Lodge</td>
</tr>
<tr>
<td></td>
<td>Fairbanks</td>
<td>Monthly, 3rd Wed., noon*</td>
<td>Westmark Hotel</td>
</tr>
<tr>
<td></td>
<td>Juneau</td>
<td>Monthly, 2nd Wed., noon*</td>
<td>Breakwater Restaurant</td>
</tr>
<tr>
<td>ASPE</td>
<td>Anchorage</td>
<td>Monthly, 2nd Thurs., noon*</td>
<td>Coast International Inn</td>
</tr>
<tr>
<td></td>
<td>Fairbanks</td>
<td>Monthly, 1st Mon., noon</td>
<td>Regency Hotel</td>
</tr>
<tr>
<td></td>
<td>Juneau</td>
<td>Monthly, 2nd Wed., noon*</td>
<td>Westmark Hotel</td>
</tr>
<tr>
<td>ASPLS</td>
<td>Anchorage</td>
<td>Monthly, 3rd Tues., noon</td>
<td>Sourdough Mining Co. 5200 Juneau st.</td>
</tr>
<tr>
<td></td>
<td>Fairbanks</td>
<td>Monthly, 4th Tues., noon</td>
<td>Westmark Hotel</td>
</tr>
<tr>
<td></td>
<td>Mat-Su Valley</td>
<td>Monthly, last Wed., noon</td>
<td>Windbreak Cafe</td>
</tr>
<tr>
<td>AWRA</td>
<td>Northern Region</td>
<td>Monthly, 3rd Wed., noon</td>
<td>Rm 531 Duckering Bldg.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>University of Alaska Fairbanks</td>
</tr>
<tr>
<td>ICBO</td>
<td>Northern Chapter</td>
<td>Monthly, 1st Wed., noon</td>
<td>Zach’s Sophie Station</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tom Marsh, 451-9353</td>
</tr>
<tr>
<td>ITE</td>
<td>Anchorage</td>
<td>Monthly, 1st Tues., noon**</td>
<td>Alaska Aviation Heritage Museum</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Karthik Murugesan, 272-1877</td>
</tr>
<tr>
<td>IRWA</td>
<td>Sourdough Ch. 49</td>
<td>Monthly, 3rd Thurs., noon**</td>
<td>West Coast International Inn</td>
</tr>
<tr>
<td></td>
<td>Arctic Trails Ch. 71</td>
<td>Monthly, 2nd Thurs., noon**</td>
<td>Zach’s Sophie Station</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>** except July &amp; Dec.</td>
</tr>
<tr>
<td>Asphalt Pavement Alliance</td>
<td>Alaska</td>
<td>3rd Wednesday of every other month</td>
<td>varies</td>
</tr>
<tr>
<td>PE in Government</td>
<td>Anchorage</td>
<td>Monthly, last Fri., 7 a.m.</td>
<td>Elmer’s Restaurant</td>
</tr>
<tr>
<td>Society of Women Engineers</td>
<td>Anchorage</td>
<td>Monthly, 1st Wed. 5:30 p.m. except July and August</td>
<td>DOWL Engineers</td>
</tr>
</tbody>
</table>

November

Asphalt Summit
Nov. 18 to Nov. 19 in Anchorage

Bidtab IV - Contracts
Nov. 2 in Fairbanks
Nov. 5 in Anchorage

Bidtab IV - Estimating and Research
Nov. 4 in Anchorage

Bidtab IV - General Discussion Q&A
Nov. 2 in Fairbanks
Nov. 6 in Anchorage

Bidtab IV - Introduction to Bidtab IV for Contracts & Specialists
Nov. 5 in Anchorage

Bidtab IV - Introduction to Bidtab IV for Estimators & Designers
Nov. 4 in Anchorage

Bidtab IV - Specialty Forms & Data Conformance
Nov. 6 in Anchorage

NHI 310110A: Federal-Aid Highway 101 (State Version)
Nov. 2 to 3 in Anchorage

Transportation Data Workshop
Nov. 13 in Juneau

Warrant Level 2
Nov. 19 in Fairbanks

Warrant Level 3
Nov. 20 Fairbanks

December

NHI 380070A: Safety Effects of Geometric Design Features for Two-Lane Rural Highways
Dec. 4 in Anchorage

Writing Skills Workshop
Dec. 15 to 18 in Juneau

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
Naturally Occurring Asbestos in Alaska (continued from page 13)

The authors further recommend that ADOT encourage the development of a more holistic statewide approach that involves all stakeholders and develops a statewide cross-agency consensus standard for NOA use.

Perkins, Robert A., Hargesheimer, John, & Winterfeld, Aaron. (2009). Naturally Occurring Asbestos in Alaska and Experiences and Policy of Other States Regarding its Use. For more information please contact jim. sweeney@alaska.gov

This photo is an excellent example of naturally occurring asbestos in Alaska.