

DECEMBER 2011

INSIDE



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Repair, Relink and Recover

The Iowa DOT's approach to the Missouri River flooding

For three of the last four years, Iowa has been dealt a heavy blow by flooding. The 2011 floods took a significant toll on several major roadways in western Iowa. Never before had the Iowa DOT had to deal with a flood of the magnitude and duration of the 2011 Missouri River event, which resulted in the closure of 67 miles of interstate, 10 miles of other state highways and three major river crossings.

From the initial warning of flooding in May, the Iowa DOT began planning for the water that eventually affected an entire regional transportation system serving Iowa, Nebraska, Kansas, Missouri and South Dakota.

Iowa's state highway system was first impacted by flooding June 1 with the closure of the Interstate 29 ramps at Hamilton Boulevard in Sioux City. On June 4, the U.S. Army Corps of Engineers released a flood inundation map showing areas likely to be flooded along the Missouri River. The forecast was bleak and showed an increased risk to several highways along the corridor in Iowa.

On June 10, the Iowa DOT's statewide operations center entered into emergency mode, coordinating daily meetings to plan for and mitigate, where possible, the impact of the flooding on the highways.

Conference calls were regularly scheduled with the Federal Highway Administration, surrounding state transportation departments and other Iowa state agencies to maintain an open line of communication to coordinate emergency response activities.

From June through September, 34 situation reports were generated to assure consistent information was being shared between all involved parties.

While addressing the potential and actual impacts of flooding on the state highway system, the Iowa DOT was also in the midst of preparing its own facilities located in the

path of the flood waters. The I-29 rest areas near Onawa were closed to use as a staging area for materials and sandbags placed for its protection. Equipment, salt and sand was removed from the Council Bluffs-north and Pacific Junction garages; and electronic weight measurement devices and office equipment were removed from the weigh scales located near Salix and in Fremont County. Utilities were shut off; computers and communications equipment were removed. Iowa DOT employees from around the state were involved in this effort.

Iowa DOT employees were also working long hours to keep the public informed of the situation and assist travelers and commercial motor carriers navigate the closures. From June 8 to July 12, more than 110 news releases were issued. Employees from many offices at the agency's main complex in Ames volunteered to staff a flood hotline, which received nearly 34,000 calls from travelers seeking alternative route information. The peak call volume was 3,800 calls in a 14-hour span when the I-680/I-29 interchange closed.

A Google-based road closure map was developed that provided regional travel information for Nebraska, Kansas, Iowa and Missouri to help travelers navigate around flooded state highways. The map received 2.8 million unique views from people all around the country and in Canada.

The Iowa DOT's active role in daily U.S. Army Corps of Engineers conference calls was instrumental in helping the department reach media markets beyond the state lines to keep them informed about the impacts to the highway system in Iowa. They also kept the Iowa DOT informed about scheduled increases in release rates from Gavins Point Dam and any levee breaches that had occurred. This information proved valuable in helping the Iowa DOT project flood inundation scenarios and direct resources to potential trouble areas.

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Mitigating the impact of the flooding on the state's highway system was in some instances a feasible option. Several mitigation methods were employed, including TrapBag® installation along I-29 near Blencoe and north of Missouri Valley and on U.S. 30. The barrier wall formed kept these vital links available to travelers following the closures on other sections of the interstate. The elevation of a section of I-29 north of Missouri Valley was raised to prevent it from being overtopped by flood waters. The foreslopes and shoulders of Iowa 175 were reinforced to mitigate damage to the roadway and allow it to be reopened quicker. Concrete barrier wall, sandbags, plastic and pumps were used on I-680 near Loveland and on Iowa 175.

Iowa DOT employees were responsible for installing and filling the TrapBags on U.S. 30, a process that took four days working around the clock to complete. The effort left the Office of Support Services scrambling to find portable showers and cots that could be used by employees at the work site.

When the flood water began to recede, and where the roadways were not destroyed, the first task was to remove the hazardous material, followed by debris removal and cleaning of the roadway. Once cleared of debris, the Iowa DOT began assessing the extent of the damage, which

included visual inspections and testing of the integrity and load-carrying capacity of the pavement and bridges.

Coordinators Bob Younie, director of the Office of Maintenance, and Michael Kennerly, director of the Office of Design, led teams of employees responsible for carrying out the agency's fast-track recovery effort. A variety of tasks were being performed simultaneously, from collecting damage assessment information to using ground-penetrating radar to look for voids under the pavement, overseeing consultant and contractor work, designing repair plans, preparing contract documents and holding emergency bid lettings.

Under the leadership of Iowa DOT Director Paul Trombino III, staff were asked to "be bold and innovative" in their approach to the recovery effort with the goal of restoring traffic on all affected roadways before the end of the year. Working in conjunction with the contracting and consulting industries, the Iowa DOT achieved this goal in November.

While creative problem solving and new ways of thinking were being utilized at every stage of the emergency response and recovery process, the Iowa DOT's commitment to quality and public safety remained foremost in the minds of employees.



I-680 at the height of the 2011 flooding in June



What was left of I-680 when the waters receded



Flooded Iowa 2



Crews rebuilding Iowa 2

Two major Missouri River crossings reopen Nov. 2 after months of flooding

I-680 opens Nov. 2 after monumental rebuilding effort

When the Missouri River severely damaged 3.1 miles of Interstate 680 between the river and I-29, closing it on June 9, there was an initial degree of uncertainty over exactly how long it would take to rebuild it and restore traffic.

Under ordinary circumstances, a project involving total reconstruction of a four-lane interstate highway, including removal and recycling of the existing pavement, would take nearly an entire construction season. But these were not ordinary circumstances and getting the road reopened to traffic before winter set in was a priority and essential to economic recovery from the flooding.

Iowa DOT employees across the spectrum of the agency began a unified effort to prepare for the rapid rebuilding of the roadway.

The design process was fast-tracked using a limited design approach - meaning not every detail was developed ahead of the construction process. Because the original plans from the 1970s were already on file electronically, the process was even quicker. The reconstructed roadway would also follow the original highway footprint, so there was no need to revisit the lengthy environmental process that could have delayed reconstruction.

Responding to an emergency construction bid letting on Sept. 23, a partnership of Peterson Contractors Inc. of Reinbeck and Reilly Construction of Ossian submitted the low bid of \$19.2 million. Federal Emergency Relief funds will reimburse the majority of the costs.

On Sept. 28 the contractors began 24-hour-a-day continuous operations at the site, which continued for 10 straight days. After the peak work period, operations shifted to 14- to 16-hour days.

Communication and coordination between the Iowa DOT and contractors was consistent and positive, solidifying the strong working relationship between the Iowa DOT and the contracting community in our state.

In just 34 days, the fully reconstructed roadway was reopened to traffic Nov. 2. More than 60,000 worker hours by more than 300 individuals from multiple contractors and subcontractors made the completion date possible.

At a relinking ceremony in Crescent Nov. 2, Gov. Terry Branstad and Lt. Gov. Kim Reynolds, along with Iowa DOT Director Paul Trombino III, spoke to a jubilant crowd of more



than 100. Director Trombino said: "The fast-track completion of this project is a testament to the dedicated and hard-working contractors, consultants, subcontractors and DOT employees who were focused on getting the road opened quickly to meet the needs of travelers and restore mobility in an area hard hit by the flooding."

Iowa 175

Also on Nov. 2, the barricades came down on the Missouri River crossing on Iowa 175 between Onawa, Iowa and Decatur, Neb. The highway and bridge had been closed since June 27 due to a large scour hole that formed around the bridge piers and eastern abutment.

In phase one of the flood recovery project, the nearly 50-foot-deep scour hole was filled and roadway embankment stabilized. The toll bridge was inspected and determined safe for travel.

The second stage of this project, including construction of a weir and dike, is being performed while the roadway is open to traffic.



Cork Peterson, Peterson Contractors Inc. presents Governor Branstad with an I-680 branded hard hat as a souvenir of the momentous occasion.

Rail safety at the Iowa State Fair

by Diane McCauley

On opening day of the Iowa State Fair, thousands of fairgoers strolling down the Grand Concourse were confronted with a stark reminder of the importance of rail safety. Parked on the street across from the grandstand was a crashed pickup truck that had lost a battle with a train. This graphic reminder was part of a one-day exhibit focused on rail safety hosted by the Iowa DOT's Office of Rail Transportation, Union Pacific Railroad and Operation Lifesaver, a non-profit rail safety organization funded primarily by the railroad industry and the federal government.

Visitors to the tent could watch a variety of Operation Lifesaver videos, pick up an Iowa rail map with rail safety tips or get a rail safety activity sheet to complete with their kids. And, if the crashed pickup or the videos didn't make enough of an impression, an interactive display powerfully drove home the impact of a train/car crash. When a bowling ball (representing the weight of a 50-car train) was unleashed down a track to strike a dangling ping pong ball (representing the weight of a car), both kids and adults let out a gasp of astonishment and shock. Many visitors were stunned when they learned that it takes a fully loaded train more than a mile to stop.

Staff had many conversations and answered questions from fairgoers about how to protect themselves when driving, biking or walking in the vicinity of trains and distributed more than 7,000 fans. Fairgoers could be seen carrying fans in the shape of an advance railroad warning sign as a reminder to be alert around trains.

The day at the fair provided a unique opportunity to drive home the message to look, listen and live, and to always expect a train – at any time, on any track, from any direction.



The Rail Office would like to thank the following for their support.

- Union Pacific Railroad for the use of the tent, fair admissions for volunteers and the donation of the fans
- Operation Lifesaver volunteers who staffed the tent (including several train engineers and other rail employees with first-hand knowledge of the tragedy that can result from inattention or poor choices at crossings); and transported the crashed pickup to and from the fair
- Phil Meraz who engineered and constructed the interactive display
- Iowa DOT's Office of Public Affairs for design and production of signs and handouts



Diane McCauley of the Office of Rail Transportation (in blue in foreground) assists fairgoers with helpful rail safety information.



Office of Rail Transportation employee Phil Meraz hands out fans to rail enthusiasts.

511 Web and phone service ready for winter weather

It's hard to believe, but the 511 traveler information has been around for more than a decade. Since its inception, the Iowa DOT has led the charge in improving the system to increase accuracy and dependability, and make 511 more user-friendly. The 511 system operates year-round, but from Oct. 15 to April 15, the traveler information system displays current road conditions of interstates and several state highways, allowing motorists to make more informed decisions when traveling in winter weather. The database of road condition information can be accessed online at www.511ia.org or by dialing 511 on your phone within Iowa or 800-288-1047 nationwide.

Sinclair Stolle, the Research and Technology Bureau's program manager for the 511 system, says the main goal is to increase safety by helping motorists make more informed travel decisions. "We are continually working on new features and ways of collecting and displaying data that make the system better. The intent of 511 nationwide is to allow motorists to make informed decisions about when and where they take to the road."

The Web version of 511 in Iowa is offered in three formats to meet varying needs and geared toward travelers who plan ahead. The full-feature option is best on broadband Internet connections and newer Web browsers. It offers real-time updates, streaming video from DOT traffic cameras, and a dynamic Google map. The streamlined version of 511 on the Internet is optimized for dial-up connections. It will work with any browser and uses static Google maps. Users with Web-enabled phones can take advantage of the mobile 511 version.

Full-feature

- Best on broadband Internet
- Best on newer browsers
- Uses a dynamic Google map



Streamlined

- Good for broadband or dial-up
- Works with any Web browser
- Uses static Google maps



Mobile

- For use on most Web-enabled phones



While driving, you might be tempted to call 511, especially if you encounter difficult driving conditions. But Stolle recommends putting safety first, and not using your cell phone to dial 511 while driving. Instead, pull off to a safe location (parking lot or other area designated for parked vehicles) or have a passenger make the call. 511's interactive voice system accepts voice commands or use of the phone's keypad.

Iowa's 511 system can be reached by dialing 511 within the geographic boundaries of the state. Dialing 511 in another state will reach that state's 511 system.

The Iowa DOT's Research and Technology Division, with the assistance of the Office of Public Affairs, will be conducting focus groups in January to gather information on possible improvements to the 511 system. If you would like more information on participating, contact Tracey Bramble at 515-239-1314 or tracey.bramble@dot.iowa.gov or Sinclair Stolle at 515-239-1933 or sinclair.stolle@dot.iowa.gov.



Traveler Information

www.511ia.org or dial 511

The terms and definitions used on 511 have also been updated this year to more clearly describe winter road conditions.

Normal or wet: Normal winter driving conditions exist. This includes dry and wet roadways, but any precipitation on the road is not freezing. A wet condition could result in reduced traction.

Partially or mostly covered: Rain, frost, ice, sleet/slush, snow or a mixture of precipitation is causing the roadway to be partially covered (up to 50 percent) or mostly covered (more than 50 percent). Drivers may experience periods when roadway markings are difficult to see. With continued precipitation, the roadway surface may become slick, snow packed and rutted.

Completely covered: The roadway is completely covered with precipitation (i.e., rain, frost, ice, sleet/slush, snow or a mixture). Roadway markings are obscured making it difficult to differentiate between the roadway and its surroundings. These conditions can make travel difficult and hazardous.

Travel not advised: The roadway has deteriorated to the point that it is very dangerous to travel. Emergency vehicles and snow removal equipment may be called off of the roadway due to the conditions. Some weather conditions can be severe enough that roadway treatments, such as salt or sand, are not effective. In the event of an emergency, it may be impossible to get emergency vehicles to the scene.

Impassable or closed: A road that is impassable is blocked by snow or vehicles. A road that is closed has travel restricted by barricades, fence, gate, equipment/vehicles or other physical means. Iowa law prohibits motorists from entering a closed roadway or moving traffic control devices.

To use the 511 phone system

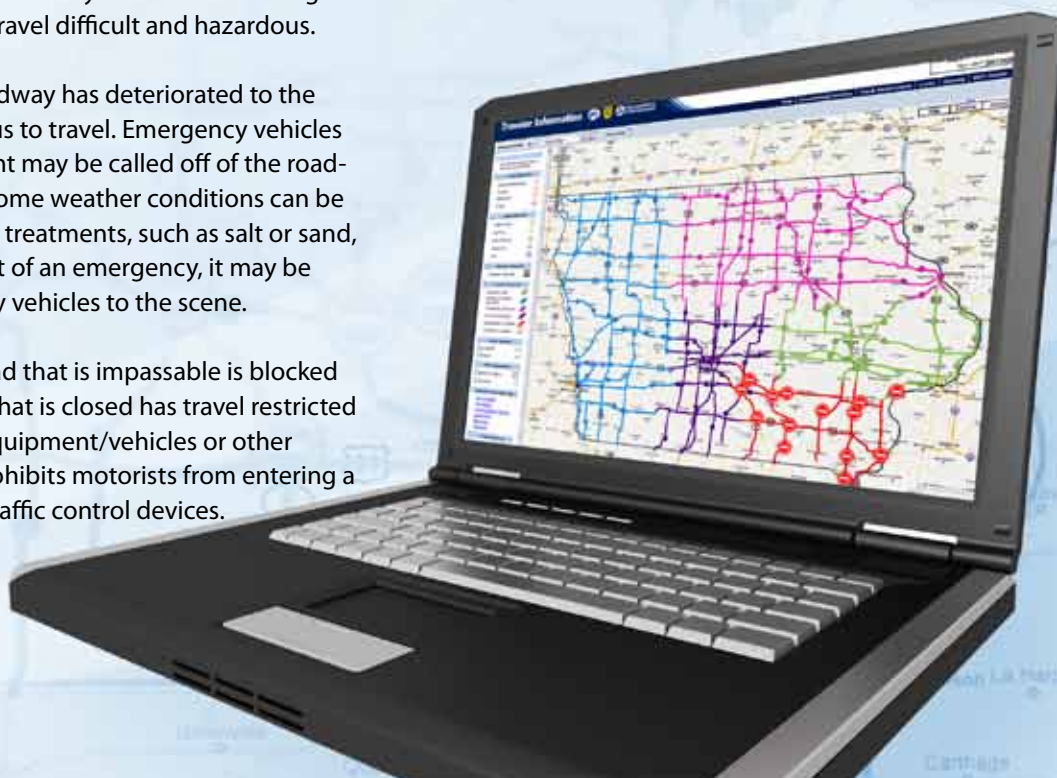
Getting started

- Dial **511** (within Iowa). Dial **1 800 288 1047** (nationwide)
- Once connected, you'll hear a welcome message with instructions on how to proceed. To skip the introduction, immediately say the route number you want.
- Speak or use your phone's keypad to make requests.
For example, you can request reports for U.S. 30 by saying "30" or by pressing **30#** on your keypad.
- To repeat a report, say "go back" or "repeat that."

How it's organized

Press **0** or say "menu" at anytime during your call to hear this menu of options.

- **1** or "Road reports" – reports by route number
- **2** or "Metro reports" – reports by metro region
- **3** or "Trucker's reports" – reports including size and weight restrictions
- **4** or "Nearby states' 511" – phone numbers for surrounding states' 511 phone systems
- **#** or "help" – instructions on use of 511



No denying it ... winter is here

Cold temperatures and snow remind us how treacherous winter weather can be. As always, Iowa DOT maintenance crews have been busy honing their existing practices to increase efficiency, and working to implement several new techniques designed to save money and boost the effectiveness of its winter operations. Below are just a few examples of the work underway or planned for the upcoming winter season.

Proper equipment calibration prevents waste

When working with equipment that automatically applies salt, sand and brine, proper calibration of that equipment are essential for ensuring just the right amount of materials are applied. Improperly calibrated equipment can cost an estimated \$1,417 per snowplow truck per winter season; with 900 trucks, that is a potential cost of \$1.3 million. Thus, the Iowa DOT is training its employees on proper calibration techniques.

Prewetting salt keeps it on the pavement

Prewetting salt before it is applied to the roadway is a cost-saving practice that helps ensure the majority of the salt remains on the pavement. Tests have shown that 96 percent of prewet salt stays on the road, while only 70 percent of dry salt will remain on the highway. Prewetting allows the salt to stick to the road surface, where it more quickly begins to melt snow and ice.

Salt application without prewetting



Salt application with prewetting



Salty mix keeps ice from sticking to roadway

The use of brine, a mix of salt and water, as an anti-icing tool has increased dramatically over the past several years, from approximately 4.5 million gallons in FY 1999 to nearly 15.5 million gallons in FY 2011. By placing brine on a roadway before a winter storm, ice and snow are less likely to bond to the pavement and are more easily removed from the roadway, resulting in reduced staff time expended clearing roads, less equipment wear and a reduction in the amount of rock salt and sand that is used.

Deicing equipment



Flexible-edge snowplow blades last longer and offer other advantages

The Iowa DOT has tested several varieties of flexible-edge snowplow blades over the last few years, comparing them to the standard carbide blades. Tests show flexible blades can reduce the cost per mile, on average, \$0.19 (from

Ready for winter, continued on next page

Ready for winter, continued from previous page

\$0.71 to \$0.52) by lasting three to five times longer. That also means snowplow trucks are spending more time on the road and less time in the shop changing blades.

Flexible-edge blades offer other advantages, including the fact they are less labor-intensive to change; seem to clear the roads better; create less vibration and noise, which reduces the wear on the trucks and lessens driver fatigue; and cause less damage to highway pavement markings, reducing the need to repaint lines; and are safer to install.

Flexible-edge blade showing 2-foot section detail



More precise application of salt reduces material loss

Salt is the single largest purchase necessary for winter maintenance operations. In state fiscal year 2011, the Iowa DOT spent \$15.1 million on salt. That cost is anticipated to rise in FY 2012. Since FY 2000, the cost of salt has increased from \$28.26 per ton to \$67.70 – an increase of more than 140 percent.

New technologies are being used to control the amount of salt, sand and brine applied to the roadway, and how it is distributed on the surface. This minimizes the loss of material and ensures it is used effectively.

Roadway weather information systems (RWIS) help make smart operational decisions

A recent cost-benefit analysis by Montana State University's researchers showed Iowa's use of RWIS technology yielded an 8:1 benefit-cost ratio. Pavement sensors, cameras, speed sensors and portable RWIS equipment provide supervisors with information about real-time roadway conditions. Supervisors use this information to help determine when trucks should be deployed, and what type of materials should be used and rates to be applied.

Much of the information available to supervisors is also provided online to assist motorists making travel decisions. Visit Weatherview at: <http://weatherview.iowadot.gov/>.

TowPlow tests yield positive results

Last year, the Iowa DOT tested three TowPlows in Des Moines, Waterloo and Sioux City. When a TowPlow is connected to a snowplow truck equipped with a 14-foot front plow, the combined unit can clear a swath 25 feet wide with a single pass. Essentially, one truck does the work of two. Eliminating the need for a second truck resulted in a 34 percent savings in staff time, and fuel and maintenance costs.

TowPlow front view



TowPlow rear view



Global positioning system (GPS) technology can assist in tracking and reducing costs

The Iowa DOT is gradually incorporating GPS technology into its winter operations. Last year a successful pilot project included equipping some snowplow trucks with GPS/automatic vehicle location (AVL) unit that linked a GPS receiver to sensors to allow the unit to collect data about the truck's spreader controller, plow position, engine temperature, pavement temperature, and vehicle location and speed. The GPS units will use cellular communications technologies to transmit this data.

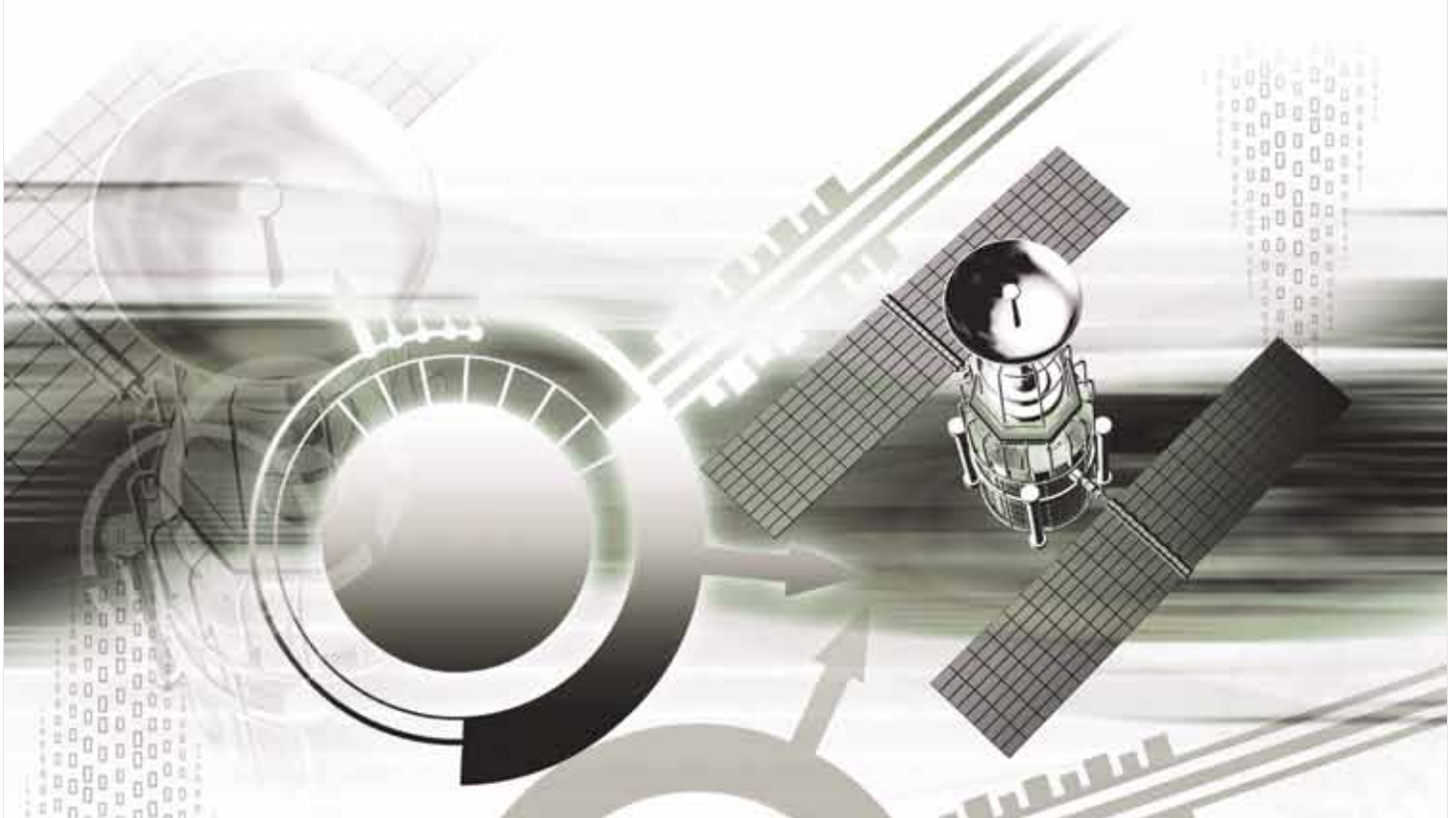
The AVL part of the technology is expected to show significant promise for meeting the challenge of simultaneously increasing productivity, quality and environmental stewardship. AVL will be increasingly used in winter maintenance operations, with such goals as improving agency efficiency and enhancing traveler information.

The AVL systems are a fleet management tool that integrates several technologies to allow a fleet manager or dispatcher to see the location of their vehicles at any given time. Our system can also indicate the status of each vehicle. For example, a GPS unit can automatically report whether the plow is up or down, and when it is spreading sand or salt.

Putting this kind of information at the hands of managers enables them to make more efficient use of their resources. Both public and private agencies are taking advantage of AVL to enhance efficiency and the effectiveness of their operations. AVL has been widely used in the trucking industry for several years. Many transit and emergency services agencies have also implemented AVL. Use among highway departments has been sparse, possibly because the benefits in that context are less obvious. Even so, several state departments of transportation and municipal public works departments have implemented AVL and found it to be a valuable tool for maintenance and operations activities.

Annette Dunn, winter operations administrator, said the Iowa DOT sees several benefits to using the GPS/AVL system. "We're always looking at ways to do what we do more efficiently and effectively," she said. "For the GPS/AVL system, the expected return on investment is estimated at \$6.40 for every \$1 spent. GPS units installed in snowplow trucks can track material use, plow blade use and other costs. And, when combined with other practices outlined above, GPS is expected to reduce operational costs."

GPS/AVL, continued on next page



GPS/AVL, continued from previous page

Dunn explained that the most basic information transmitted would be the truck's location. The highway maintenance supervisor and statewide operations center will be able to look at a map and see the precise location of a truck equipped with a GPS unit. If there is an emergency situation where a truck is needed, knowing the exact location of trucks on the road could significantly reduce response time and increase safety.

Beyond the basic location information, other sensors will provide a myriad of information to make winter operations more efficient. Eric Abrams, the DOT's geographic information systems coordinator, said, "This system is turning information produced by the truck into knowledge."

The trucks equipped with the GPS/AVL units transmit data back to the garage and operations center. Dunn said, "Because material effectiveness is closely tied to pavement temperature and precipitation type, the highway maintenance supervisor will be able to monitor spreader rates and temperature data to adjust rates on the fly, potentially making the material application more efficient."

Automating data collection is another benefit of the GPS/AVL units. Currently, garage personnel manually input information for material usage at the end of the snow runs. For trucks with a GPS/AVL unit, the Iowa DOT's IT Division is working on automatically collecting and sending the data

to a database, potentially reducing the amount of data entry needed by the garage personnel. Dunn added, "That saves a lot of time at the end of a long day in the truck."

As the data from the GPS units is downloaded, it can be aggregated in a single database that will assist the Iowa DOT in analyzing more effective material usage based on traffic pattern data in specific conditions, possibly reducing the amount of material used and saving money.



McGehee presents three human factors research projects to Iowa DOT

Excellent highway engineering and technologically advanced vehicle safety features are no match for the one element posing the most risk on Iowa highways, the driver. Partnering with Iowa's major universities, our state has become a leader in human factors research related to highway safety.

This summer, Dan McGehee, director of the Human Factors and Vehicle Safety Research Division at the University of Iowa's Public Policy Center, presented three ongoing research projects to Iowa DOT staff. The session, held in the Materials conference room in the Ames DOT complex, was also presented as a webinar to allow field personnel to participate without traveling.

Go Team project - There are a significant number of teenage fatalities each year in Iowa from vehicular crashes. Unlike other fatality rates, teen fatalities are not decreasing. While all states keep and analyze crash records, the amount of detail from each state varies. Specific crash-related factors may not reveal themselves in the overall state-based crash statistics. Analyzing each crash from a combination of law enforcement crash and reconstruction data, and news accounts can shed additional light on the specific details and context that relate to a teen crash fatality. Such information could provide unique and valuable information for the direction of state policies with regard to school permits and enhanced graduated driver's licensing programs.

A "Go Team," based off a concept developed by the National Transportation Safety Board, was assembled more than a year ago to develop case studies from police, media and medical examiner's reports about every fatal crash involving a teen driver in Iowa and then analyze policy changes that may increase safety. McGehee said, "The teams pulled together information from many sources to get a true picture of each crash."



The Go Team analyzed 88 fatal crashes involving 93 teens that occurred in 2009 and 2010. The study showed teen seat belt use is lower than the state average, especially in the back seat. Of the 88 crashes, 29 involved a vehicle occupant being ejected, 22 of those occupants were killed. Of the eight people partially ejected, all died. These numbers show the critical need for seat belt use and were used to support legislation passed in the Iowa General Assembly requiring seat belt use by all vehicle passengers age 18 and under, no matter where they are seated.

School and intermediate license drive-cam study
This project builds on two successful rural and urban teen driving studies that have been completed in rural Iowa and urban Minneapolis. The study will recruit 90 new drivers from rural high schools in Eastern Iowa. During the three-year study, drivers will receive weekly feedback on safety-related events that they may have triggered. Previous studies have shown an 88 percent reduction in traffic-related events among the riskiest drivers. Participants will receive video feedback during early licensure and throughout their most vulnerable years of driver training—through age 17½. The study will be supplemented with periodic surveys of their opinions on hazard and risk assessment—thus being able to judge how risk and hazard perceptions change as the drivers mature. Parents will be surveyed throughout the project so their input is also considered.

For the study, one half of the participants will have a video camera installed, but get no feedback on what the camera showed. This is the "control" group to show how natural maturation impacts driving skill. The other group will be given regular feedback when the event-triggered camera is activated. This includes excessive braking or swerving. The event will record 10 to 30 seconds before and after to provide context.

Human factors research, continued on next page

Human factors research, continued from previous page

McGehee described this research as age versus experience. Iowa is one of six states in the nation to allow teens younger than 16 years of age to drive unaccompanied with a minor school license (MSL). The study will track the effect of early driving on later driving behavior. The goal is to provide teachable moments for parents to mentor their young drivers and measure the effect of this early intervention on driver behavior. McGehee says the study may include up to 90 participants from Clear Creek Amana, Williamsburg, Iowa City, West Branch and Solon schools. The goal of the project is to include 30 kids with an MSL, 30 with current intermediate licenses that have previously had an MSL and 30 with a current intermediate license who did not have an MSL previously.

Implementing breath alcohol interlock devices - The goal of this project is to perform a systematic review of breath alcohol ignition interlock devices (IID) to understand how other states have integrated such systems into administrative and judicial practice, and to make recommendations for best practices in the state of Iowa. Towards this end, the University of Iowa and Iowa State University team developed an analytical framework and plan that examines how such systems have been implemented and evaluated. Understanding the history of implementation of such devices will help the state evaluate its OWI programs.

All three presentations are posted on the Iowa DOT's website at <http://www.iowadot.gov/research/video/videogallery.html>

QR code warning

It seems like someone is out to wreck every cool new tool that comes along. An article in the July/August INSIDE explained quick response (QR) codes and how they can be utilized. The following article is from the Better Business Bureau related to precautions to take when contemplating scanning a QR code.

Adapted from an article by Rachel Newman, Better Business Bureau (BBB) Consumer Alert – June 2011

One of the latest advances in reaching an audience - QR codes - are in magazines, on billboards and on storefronts. They are anywhere and everywhere. Because of the unique ability of QR codes to bridge the gap between our virtual reality and actual reality, many consumers forget that QR codes pose the same dangers as e-mails and websites.

Much like e-mail, QR codes were trustworthy enough in their conception, but as they have grown in popularity, they have helped scammers and hackers, who are looking to steal your personal information or corrupt your cellphone. QR codes are an easy way for hackers to take advantage of you, because most of us are still getting used to the idea that our phone is nothing more than a small computer. This small, handheld computer is still very much vulnerable in the same way as your desktop at home.

To avoid damaging your smartphone, the BBB warns consumers to use caution when using QR codes, and adhere to the following tips:

- If it smells phishy, throw it back. Most of us aren't tempted to open e-mails which are obviously spam. I wouldn't dare click on a link in an e-mail from Alma Hooker of the IRS, whose punctuation and grammar leave much to be desired. However, QR codes are tricky because you cannot weed out the bad from the good by simply looking at the barcode. Because the vulnerability is part of the design, the BBB suggests downloading an app on your phone that provides a preview to each code before it opens a web page. This way, you will have right of refusal if you think the QR code is corrupted.
- Back up your information. If you do get a virus from a QR code that damages the software on your smartphone, not all will be lost if you have backed up your phone to your computer. Generally, a smartphone does this on its own each time you plug your phone into your computer. If you make it a practice to back up your information regularly, you may lose the information in your phone, but at least not all the content will be lost.
- Use caution when using your smartphone for banking, shopping etc. We hear it all the time, but do we really listen? Using your smartphone to do any of your finances means that you are taking a chance with your money. QR codes give hackers new means of stealing your personal information if it's stored in your smartphone.



Are you being “engineered?”

At the Iowa DOT, we’re all familiar with engineering. A new meaning for engineer comes into play when the term “social” is used in conjunction with the word.

The phrase “social engineering” can be defined in various ways, relating to both physical and cyber aspects of that activity. For many, social engineering is referred to as an approach to gain access to information, primarily through misrepresentation, and often relies on the trusting nature of most individuals. It involves the conscious manipulation of people to obtain information without the individual realizing a security breach is occurring. Previous articles in INSIDE have discussed phishing scams, which are a form of social engineering, but there are other devious tactics used by those out to access information or systems by preying on the users’ trusting nature.

Piggybacking or tailgating

Many Iowa DOT facilities have controlled access. But all too often, employees will hold the door open for someone entering into a secure area or building without even knowing who the individual is or asking where they are going. The unauthorized individual may pretend to be a delivery person, a visitor or even a fellow employee. Be cautious if an unknown or unauthorized individual is trying to follow you through access doors and direct them to the main entrance or security station.

Shoulder surfing

This scenario refers to the ability of an attacker to gain access to information by simply watching what you are typing or seeing what is on your computer screen. This is known as “shoulder surfing” and can also be done by looking through a window, doorway or simply listening in on conversations. With the configuration of Iowa DOT offices, where employees are acquainted with those around them, this has not become a work issue. But all of us need to be mindful of who might be lurking over our shoulders as more and more employees are using mobile Iowa DOT devices, including laptop computers in public areas.

Be aware of your work environment and who is around you when you are working with confidential information, or even when you are typing in your password. Do not let others see you type your password, and protect your computer screen from unauthorized viewing. Computers in public areas should not have the monitors facing outward.

Baiting

Many Iowa DOT offices receive calls or visits from the public requesting information. In a baiting scheme, an attacker asking a variety of seemingly innocuous questions designed to “catch” the right answers. The attack is often done over the telephone, but can also be done in person. Items of conversation can also be introduced based upon replies received. Small amounts of facts are interjected at the right time into the conversation to make requests for information sound legitimate. Information you know could be valuable to an attacker - whether that information is about your work environment, fellow employees, projects or personal information - must be handled with care. Be mindful of what you say to whom. When answering inquiries, respond professionally and stick to the facts.

Surveys

Many employees receive requests to participate in surveys - whether online, via telephone or otherwise. The surveys may be for legitimate purposes or might be a scam. In either case, be aware of unwittingly disclosing information that may be used inappropriately. If you receive a survey request, you should contact the sponsoring organization to ensure the survey is legitimate, and make sure you are not sharing sensitive or confidential information with unauthorized individuals or organizations.

Dumpster diving

The Iowa DOT provides securely covered shred bins. By policy, all unneeded confidential or sensitive documents must be placed in these bins for secure disposal. If not disposed of properly, these documents may be a source of information for perpetrators attempting to obtain sensitive information. When confidential and sensitive documents are no longer needed, be sure to shred or properly destroy them following PPM 030.06, Records Management.

Putting it all together

The scenarios above represent just a few types of social engineering attempts you may encounter. By following some common sense rules and using your best judgment, you can

Cyber security, continued on next page

Cyber security, continued from previous page

defend against these attacks and better protect yourself and the information you are trusted to keep.

Before releasing any information to anyone, it is essential to at least establish:

- The confidentiality of the information.
- Your authority to exchange or release the information.
- The real identity of the third party (positive identification).
- The purpose of the exchange.

In summary, be aware of your surroundings. Make sure you know who is in range of hearing your conversation or seeing your work. Computer privacy screens are a great way to deter shoulder surfing in public places.

Before you throw something in the trash, ask yourself, "Is this something I would give to an unauthorized person or want to become publicly available?" If you are not certain, always err on the side of caution and shred the document or deposit it in a secure disposal container.

If you don't know someone who is in a restricted area, look for a badge or a visitor pass. If you are unsure about their authorization or access permission, report the situation to the appropriate staff.

- Adapted with permission from an article by William F. Pegrin, chair of the Multistate Information Sharing and Analysis Center.

Managing e-mail messages

Many Iowa DOT employees use e-mail every day. Here is a helpful tip to better manage the load of incoming messages. Create two new electronic folders, labeling them "waiting for response" and "Someday." When you receive new messages, move as many as you can into these two folders.

Waiting for response. Some important messages can linger in your inbox because you are waiting for more information from someone else. Yet, if you let those items slide toward the bottom of your inbox, you risk losing sight of them and forgetting them.

Think of the "waiting for response" folder as a temporary holding bin. The only items you should place in there are ones you need or want to act on, but cannot handle without someone else's input. Review the folder at the end of every day. Delete the items you handled during the day, send reminders regarding others and leave less urgent items for another day.

Someday. Some items wear out their welcome in your "waiting for response" folder. You may decide that they are not high priority, you may feel unable to track down the response you need, or you simply may choose not to act right now. However, you might not be ready to let them go for good.

Use your "Someday" folder to capture thoughts and tasks you want to keep in the back of your mind, even if you are not ready to add them to your calendar. Review items periodically, retrieving some, delegating some and deleting others entirely.

-Adapted from *More Time for You: A Powerful System to Organize Your Work and Get Things Done*, Rosemary Tator and Alesia Latson, www.amacombooks.org.



Thinking about spring?

Iowa Bicycle Summit to be held Jan. 27-28

The eighth annual Iowa Bicycle Summit will be held Jan. 27 and 28 at the Iowa Events Center – Veterans Auditorium in Des Moines. The gathering will take place from 8 a.m. to 5 p.m. each day and is sponsored by the Iowa Department of Transportation and Iowa Bicycle Coalition. The 2012 summit promises to be even better than ever by offering more exhibits, free advocacy workshops and new trail development sessions.

The Friday, Jan. 27, sessions will feature two workshops: a bicycle facility design workshop and a trail development workshop. Participants are welcome to attend sessions in either workshop. Engineers, planners, community officials, land managers, trail supporters, advocates and the public in general are encouraged to attend these sessions to learn more about development of bikeways in Iowa.

- The bicycle facility design workshop will be presented by Roger Geller. Geller is the city bicycle coordinator in Portland, Ore. His presentation will focus on the Urban Bikeway Design Guide by the National Association of City Transportation Officials.
- The trail development workshop will have sessions slated to discuss trail maintenance, design and policy issues.

The Saturday, Jan. 28, sessions will feature a variety of speakers presenting on topics including bicycle tourism, training, Safe Routes to School Program, trails and travel, safety, consumer equipment, and dirt. Also on Saturday, the Iowa Bicycle Summit will welcome a Consumer Bicycle Expo with more than 60 exhibitors expected to show the latest in bicycle gear, training, trails and events. "If you want to plan your summer bicycling vacation, you need to visit all the trails showcased at the event," states Mark Wyatt, executive director of the Iowa Bicycle Coalition.

Early registration prior to Jan. 1 is recommended. Friday registration is \$120 (\$150 after Jan. 1) and it includes summit materials, lunch and all breaks. There is no cost for attending the Saturday sessions. Lunch on Saturday will be on your own.



Following the summit on Saturday, the Iowa Bicycle Coalition and The Register's Annual Great Bicycle Ride Across Iowa (RAGBRAI) will hold a reception fundraiser at 8 p.m. in Des Moines at the Iowa Events Center – Veterans Memorial Auditorium. The 2012 RAGBRAI route will be announced at this event. The reception will feature a live and silent auction offering great cycling items, as well as door prizes and more. Tickets for the Saturday night event are \$30 each and can be purchased online at www.iowabicyclecoalition.org. All proceeds from the event benefit the Iowa Bicycle Coalition.



For questions regarding registration or the summit agenda, go to:

www.iowabicyclecoalition.org or
www.iowadot.gov/iowabikes, or
 call Milly Ortiz at 515-233-7733 or
 Mark Wyatt at 515-309-2867.

Family happenings

In memory



Sharon Kay (Woodley) Nail-Magee was born Aug. 2, 1935, to Leo Andrew and Mary Eleanor Woodley in Clarion, Iowa, and passed away peacefully on Aug. 15 in Sun City, Ariz. She was 76 years old.

Nail-Magee was active in PEO and the Hamilton County Republican Party. She also was a Cub Scout Den Mother. She had an

artistic flair and always had a craft or sewing project in progress. She loved to create flower arrangements and won many awards at the Hamilton County and Iowa State Fair – later becoming a Hamilton County and Iowa State flower judge.

Nail-Magee worked for the DOT from October 1977 until her retirement in December 1997. She started working for the Iowa DOT in a temporary position within the Personnel Office (later called the Human Resources Bureau and then the Bureau of Management) and became a permanent, full-time employee in January 1979. Her 20-year DOT career included serving as a personnel technician, personnel management specialist (classification and employee recruitment were two of her specialties), legislative liaison, and finally as a public service executive in the Office of Contract's civil rights section.

Nail-Magee leaves the following to solemnly celebrate her entrance into eternal life: sons, Christopher (Mary Kay) of Pittsburgh, Pa., and Andrew Charles (Beth) of North Pole, Alaska; two sisters, Susan Allen (Gary) of Phoenix, Ariz., and Nancy Carter (Gary) of Tucson, Ariz.; niece, Jill Olsen (Scott), Denver, Colo.; and nephew, Jason Allen (Pam Richards), Denver, Colo.; special friends, Jaraine and Gus Mohs of Ames, Iowa; and countless other family and friends.



Scott Falb lost his courageous fight with cancer Oct. 30, 2011. Falb was born on April 12, 1950, in Ames to Richard and Gloria Falb. He lived for many years throughout Minnesota. In 1972 he married Janice Tedrow and they were blessed with one daughter, Sara. He worked for the DOT in traffic safety. He was very passionate about his work and made many friends throughout his tenure.

Falb loved watching movies, traveling the world, playing his guitar and reading. He collected an extensive library of music and books. He loved spending time at Gray's Lake. He loved photography, as well as animals – especially dogs.

Those left to cherish Falb's memory are his wife, Janice; his daughter, Sara (Chris) Meadows; his father, Richard; his sisters, Sandy (Bob) and Sherry; five nieces and one nephew.

Falb was able to attend a retirement reception in his honor Monday, Oct. 24. Many Iowa DOT employees and representatives of other state and government agencies were able to visit with Falb and thank him for his many years of dedicated service to highway safety.



Maurice Francis Burr, 75, of Fairfax, died peacefully Thursday, Nov. 3, 2011, at St. Luke's Hospital in Cedar Rapids after a courageous battle with Parkinson's disease.

Maurice "Maury" was born July 25, 1936, in Garnavillo, to Arnold and Regina Burr. He graduated from St. Mary's High School in Guttenberg, received a B.A.

from Loras College in Dubuque and a B.S. in civil engineering from the University of Iowa in Iowa City. After college, Maury married his high school sweetheart, Lois DeSotel, on June 16, 1959, in Garnavillo.

Burr dedicated his entire 39-year professional career to serving the people of the state of Iowa as a civil engineer with the Iowa DOT. Before retiring in 1998, Burr was the District 6 engineer located in Cedar Rapids. Burr also diligently served the Catholic Church as a lecturer and religious education instructor at various parishes during his life.

After Burr's retirement from Iowa DOT, he could either be found traveling the country with his wife, Lois, fishing in his bass boat, cheering on his beloved Iowa Hawkeyes or spending time with his family.

Burr and Lois recently moved from Cedar Rapids, where they had lived for the past 23 years, to nearby Fairfax.

Burr will be lovingly missed by his wife, Lois, and family: son Gary (Chris) Burr, and grandchildren, Mitchell, Emily, Clayton and Laura, of Bishop, Ga.; son, Alan (Tracy Wagner) Burr, and grandchildren, Lauren, Rachel and Regina, of Bradenton, Fla.; daughter, Marcia (Vernon Scott) Bell, and grandchildren, Spc. Benjamin Bell, Ashley Bell, CPL. Justin Schultz, Benjamin Schultz and Gale Schultz; and son, Brian (Deb) Burr, and grandchildren, Jacob and Stephanie; and sisters-in-law, Margaret DeSotel and Carol DeSotel.



Masteller receives Iowa's Living Roadways award



Mark Masteller, chief landscape architect for the Iowa DOT, was recently honored by Iowa's Living Roadways as the "Landscape Architect of the Year." In the documentation given to attendees at the awards luncheon, Masteller is noted as a driving force behind the native prairies along Iowa's roadsides and showcase landscapes at our state's rest areas.

Masteller says he enjoys his work due to the variety of projects in which he is involved. He said, "On any given day I might be working on a design for a community streetscape, bat mitigation site, a wetland or woodland design, or an interstate rest area."

In 1996, Masteller collaborated with Julia Badenhope, Iowa Living Roadways Community Visioning Program director, to create Iowa's Living Roadways. He continues to be an active advisor for the program.



Iowa DOTers transport capitol Christmas tree

While it's not quite the Rockefeller Center spectacle, our own Iowa State Capitol Christmas tree was delivered to the capitol complex in mid-November by members of the Des Moines garage.

Highway technician associate (HTA) Rob Strickler said capitol complex employees cut the 32-foot Blue Spruce at a property just off Meredith Drive. Strickler, Larry Letze, garage operations assistant; Khashi Reyes, equipment operator senior; and Pat Burrell, Tom Prine, Jerry Adair and Mark Negrete, all HTAs, had a hand in loading the tree on to a lowboy trailer, transporting the tree and then setting the tree into a tree stand using an Iowa DOT high-reach truck.



Race for the Cure



Motor Vehicle team

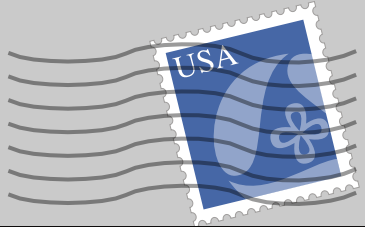


Many members of the Motor Vehicle team gathered for this photo on the capitol steps. The group numbered more than 60 this year, with many Iowa DOT offices represented.

Information Technology Division team



Information Technology Division team members in the picture include: Top row left to right - Kirsten Adams, Barb Weigel, Linda Torgeson, Judy Gibson, Karla Hocker and Colette Simpson. Bottom row left to right - Andrea McNamara, Nancy Goecke, Deb Corwin and Olya Arjmand. Iowa DOT ITD team members not pictured are Mary Johnson, Deb Thompson, Tim Mortvedt, Gina Perez, Jose Perez, Deb Shafer and Heather Thompson.



Kudos!

These are letters that have been submitted to the editor. They may have been edited for length and continuity.

To: Iowa DOT
From: John Rownd, Lincoln, Neb.

I am a retired 44-year employee of the Nebraska Department of Roads (NDOR). I just received notice from NDOR of the upcoming partial opening of Iowa 2 east of Nebraska City. What a great job by your agency and your contractor. Most folks don't have any idea how far in advance of the Oct. 12 bid date you had started your plan to get this accomplished in this time frame. Keep up the great work.



To: Dena Gray-Fisher, Office of Public Affairs
From: Kimberly Qualls, Northeast Kansas DOT public affairs manager

A huge THANK YOU and a billion KUDOS to the Iowa DOT for your assistance in creating and maintaining the regional detour map during these past few (long, at times) months! It is awesome to have such an incredible quad-state partnership, M-I-N-K, right here in the heart of the Midwest!

Again, thanks to all of our MINK DOT partners for your assistance and cooperation in partnering on communications during the 2011 Missouri River flooding event!



To: Iowa DOT
From: Melissa Black, Missouri DOT

Ditto from Missouri. Thanks for all your hard work during this crisis. It has been great working with all of you.



To: Susan Reding, Office of Motor Carrier Services
From: Ann and Gene Ibbotson

My husband and I are so grateful for the kindness shown to us. You all went way beyond your job descriptions! We truly appreciate each and every one of you all.

(Editor's note: The Ibbotsons were in the Office of Vehicle Services when Mrs. Ibbotson fell ill. Susan Reding, Desiree Burrows, Tonya Bishop and Tim Carlson came to her assistance, along with the wife of Office of Motor Vehicle Enforcement Captain Lance Evans, who is a nurse.)

To: Iowa DOT
From: Julie Miller
Thank you, thank you, thank you for getting Iowa 175 to Nebraska open before winter weather hit. I have been living in my camper since June 27 and it was getting a little cold. Again ... thank you!!



To: Iowa DOT
From: Cindy
I just want to give a big thank you to the Iowa DOT workers who helped out getting Interstate 680 and the Decatur bridge open in record time and before winter. Thank You, Thank You!!



To: Iowa DOT
From: lederbk75@aol.com

KUDOS to the Iowa DOT and all of the contracted firms and their employees for the fantastic work on I-680! It is so nice to have that stretch of road open again!



To: Iowa DOT
From: Roxanne Pogge, Humboldt

Just wanted to compliment the crew that worked on the U.S. 169 project south of Humboldt. I lived in the middle of the construction zone. The crew was extremely considerate, moving vehicles or waiting for us to come and go about our lives. Many of the neighbors commented about how courteous they were. They also busted the stereotype of a work crew with several gathered around a pickup watching one person work. That crew was always on the go working. They started early in the day and on several occasions worked late into the day. They deserve a pat on the back.

(Editor's note: Dennis Ward, construction technician supervisor in the Jefferson construction office was in charge of keeping this project on track.)



HyVee

Nutrition Notes

with Amy Clark



The joy and laughter of the holiday season can also give rise to a significant amount of stress. Most of us don't eat right when we're stressed. Rationally, we know we should eat better, but then the pressure of time constraints related to holiday activities hits, we find ourselves grabbing food on the run or skipping meals.

Eating right during stressful times is particularly important because stress affects how we use what we eat. When you're stressed, your body absorbs fewer nutrients as it excretes more, thus increasing your needs for the vitamins and minerals found in nutrient-rich foods.

Eating the right foods helps us cope with these changes and ensures that we have the ammunition we need to fight the energy-draining effects of stress. Not only can a well-balanced diet help during times of stress, but how well we eat before a stressful event also plays a role in how we handle that event.

To avoid putting any more stress on you with complicated lists of nutritional guidelines, follow these four rules.

Start with one ounce of prevention. A hectic schedule often affects our ability to shop for and prepare healthy meals. My advice: plan. Sit down at the beginning of the week and plan your meals and snacks for the week. If you have something on your mind and in the fridge for dinner, you are guaranteed to save time, spend less money, decrease your stress and increase your nutrition.

Add a generous serving of antioxidants. Antioxidants (like vitamin E, vitamin C and carotenoids) provide the nutrients you need to stay healthy and fight off stress. Super-size them. Vitamin E can be found in wheat germ, whole-grain products, many vegetable oils, almonds and seeds. Vitamin C is found in citrus fruits, broccoli, tomatoes, potatoes, peppers and cantaloupe. Carotenoids are found in deep-orange or dark-green produce, like sweet potatoes, pumpkin, carrots, spinach, broccoli and turnip greens.

Flavor with a pinch of leisure. Take time to enjoy your meal and pay conscious attention to how well you chew your food. This will reduce your stress by helping to take your mind off worrisome thoughts . . . not to mention well-chewed food is easier for our digestive systems to break down. Enjoy your meal time and make it a habit to chew each bite about 20 to 30 times.

Stir well, omitting (or limiting) caffeine and alcohol.

Coffee and other caffeinated foods can create anxiety, nervousness, depression and insomnia. And while alcohol may have a reputation as a relaxant, it can often have the exact opposite effect. Alcohol tends to overtax the liver, which may actually increase your tension. Try herbal teas, seltzer or hot water with lemon instead.

Eating a balanced diet and sticking to a scheduled meal plan are keys in winning the war against stress. Try Hy-Vee's Healthybites menus the next time you sit down to meal plan. These can be found at Hy-Vee or visit www.hy-vee.com. This brochure offers a dinner suggestion for every night of the week, and even includes a nutrient analysis, easy recipes and a shopping list.

Try this delicious recipe to add vitamin E through wheat germ and almond milk at breakfast time.

Blueberry Blast Smoothie

All you need:

- 1 cup frozen blueberries
- 8 ounces unsweetened almond milk
- ½ cup reduced-sugar orange juice
- 1 banana
- 1 tablespoon chia seed
- 1 tablespoon wheat germ



All you do:

Combine ingredients in blender and blend until smooth. Serve immediately.

Serves: 2

Serving size: 1 ½ cup

Nutrition facts per serving: 240 calories, 2.5 g fat, 0 g saturated fat, 0 g trans fat, 0 mg cholesterol, 50 mg sodium, 41 g carbohydrates, 5 g fiber, 27 g sugar, 6 g protein.

This information is not intended as medical advice. Please consult a medical professional for individual advice.

Service awards

Information supplied by the Office of Employee Services for December 2011

30 years

Rick Burr, Adair garage; **Francis Foarde**, Coralville garage; **Lori Halverson**, Driver Services; **Lavonne Short**, Vehicle Services

25 years

Brian Carlson, Transportation Data; **Lloyd Henderson**, Marion garage; **George Hurd**, West Union garage; **David Lorenzen**, Motor Vehicle Enforcement; **Scott Nelson**, Support Services; **Thomas Nixon**, Williams garage; **Randy Terrell**, Finance; **Dennis Wagoner**, Washington garage

20 years

Tammi Bell, Local Systems; **Mike Jenkins**, Des Moines construction

15 years

Stuart Allen, Independence garage; **Todd Chrasta**, Waterloo garage; **Danny Doren**, Sioux City-Hamilton garage; **Mark Haack**, De Witt garage; **Jason Jochims**, Cherokee construction; **Larry Letze**, Des Moines garage; **Todd Loges**, Donnellson garage; **David Putz**, Policy and Legislative Services; **Sinclair Stolle**, Research and Technology Bureau; **Valerie Wright**, Britt construction; **Michael Zeimen**, Bridges and Structures

10 years

Brian Skartvedt, Ames garage; **Stuart Turner**, Maintenance

5 years

Michelle Bush, Iowa City DL station; **Brad Carolus**, Garner garage; **Troy Dice**, Le Mars garage; **Forrest Gochenour**, Council Bluffs construction; **Felita Hayes**, Driver Services; **Benjamin Howell**, Grimes garage; **Frank Maher**, Altoona garage; **Erwin Martin**, Carlisle garage; **John Raymer**, Sioux City-Hamilton garage; **Derek Sellars**, District 5 materials; **Jeffrey Wesley**, Chariton garage; **Jack Winther**, Council Bluffs construction; **Todd Young**, Garner garage

Personnel updates

Information supplied by the Office of Employee Services for Sept. 30 to Oct. 27, 2011

New hires

Curtis Close, transportation driver, Support Services; **Charles Elmquist**, construction technician assistant, Design; **David Elsbernd**, mechanic, Decorah garage; **Scott Giberson**, highway technician associate, Fairfield garage; **Richard Hoffman**, equipment operator senior, Chariton garage; **Matthew Hix**, highway technician associate, Perry garage; **Michael Janechek**, transportation engineer intern, Design; **Zachary Keninger**, program planner 1, Transportation Data; **Timothy Larson**, highway technician associate, Clarinda garage; **Benjamin Peterson**, highway technician associate, Red Oak garage; **Diane Recker**, secretary 1, Cedar Rapids construction; **Michael Thiel**, construction technician assistant, Design

Promotions

James Albers, from highway technician, Correctionville garage to highway technician senior, Cherokee construction; **Rick Brooks**, from highway technician associate, Clarion garage to highway technician senior, Britt construction; **Kory Burch**, from highway technician associate, Cherokee garage to highway technician senior, Cherokee construction; **Robert Kurtz**, from highway technician associate, Correctionville garage to highway technician senior, Cherokee construction; **Huy Luong**, from design technician to transportation engineer intern, Design

Transfers

Todd Cline, highway technician associate, from Highway Helper to Altoona garage; **Lucas Eichenberger**, highway technician associate, from Algona garage to Swea City garage; **James Fox**, equipment operator senior, from De Soto garage to Bridges and Structures; **Ryan Fox**, highway technician associate, from Des Moines garage to Grimes garage; **Joshua Hart**, highway technician associate, within Grimes garage; **Michael Lynch**, highway technician, from Council Bluffs-south garage to Neola garage; **Andrew Martin**, mechanic, from Martensdale garage to Osceola garage; **Benjamin Petty**, equipment operator senior, District 6 paint crew to Davenport garage; **Jeremy Rouse**, equipment operator senior, from Williams garage to Dubuque garage; **William Schmidt**, highway technician associate, from Anamosa garage to Dyersville garage; **David Sperflage**, highway technician senior, from District 6 bridge crew to District 6 materials; **Charles Werner**, highway technician associate, from Hanlontown garage to Mason City garage; **Joshua White**, mechanic, from Anamosa garage to Maquoketa garage

Retirements

Scott Falb, program planner 3, Driver Services; **David Gates**, mechanic, Independence garage

2012 holidays

New Year's Day	Monday, Jan. 2, 2012
Martin Luther King Jr. Day	Monday, Jan. 16
Memorial Day	Monday, May 28
Independence Day	Wednesday, July 4
Labor Day	Monday, Sept. 3
Veterans Day	Monday, Nov. 12
Thanksgiving	Thursday, Nov. 22
Day after Thanksgiving	Friday, Nov. 23
Christmas	Tuesday, Dec. 25
New Year's Day	Tuesday, Jan. 1, 2013

Safety Joe the Scarecrow



Iowa DOT safety team member Chad Moser, Ames garage mechanic and District 1 safety committee member, came up with a good idea to help make people more aware of personal protective equipment (PPE). He created Safety Joe the Scarecrow. Safety Joe, wearing his safety hat and vest, stands near the entrance to the Ames garage reminding employees to drive in SLOW and asking them to wear PPE. Safety Joe's PPE will be changed for the seasons.

INSIDE

INSIDE is developed to help keep all Iowa DOT employees informed about critical issues affecting them, recognize DOT employees for their excellent service and share interesting aspects in the lives of our co-workers. For more information, contact Tracey Bramble, Office of Public Affairs, at 515-239-1314 or e-mail tracey.bramble@dot.iowa.gov.

Paul Trombino III, Director

Tracey Bramble, Public Affairs, editor
Christina Andersen, Public Affairs, desktop publisher
Printing Staff, Support Services, printing
Keven Arrowsmith, Public Affairs, photography



**Iowa Department
of Transportation**

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PLEASE RECYCLE THIS ISSUE

On the cover: Interstate 680 was badly damaged by Missouri River flooding, but fast-track recovery efforts helped reconstruction be completed in just 34 days.

December I-Spy clue: This little guy and lots of his relatives contributed to the flooding.

Fall I-Spy solution: There is a rake on the grill of the truck.

Service Area	Correspondent	Phone
District 1	Lori Wilkens , Des Moines	515-261-9500
District 2	Lu Mohorne , Mason City	641-423-7584
District 3	MaryBeth Banta , Sioux City	712-276-1451
District 4	Marlene Jensen , Atlantic	712-243-3355
District 5	Brenda Hadley , Fairfield	641-472-6142
District 6	Sandi Byers , Cedar Rapids	319-364-0235
Bridges and Structures	Judy Whitney , Ames	515-233-7917
Construction	Nancy McMenamin , Ames	515-239-1353
Contracts	Peg Muxfeldt , Ames	515-239-1422
Design	Judy Lensing , Ames	515-239-1469
General Counsel	Chris Crow , Ames	515-239-1509
Information Technology Division	Colette Simpson , Ames	515-233-7728
Local Systems	Gail Nordholm , Ames	515-239-1528
Location and Environment	Susie McCullough , Ames	515-239-1225
Maintenance	Cindy Shipley , Ames	515-239-1971
Materials	Brian Squier , Ames	515-233-7915
Modal offices	Cathy Mather , Ames	515-239-1140
Motor Vehicle Division	Diann McMillen , Ankeny	515-237-3250
Operations and Finance Division	Sheri Anderson , Ames	515-239-1340
Research and Technology Bureau	Lori Pflughaupt , Ames	515-239-1646
Right of Way	Tami Bailiff , Ames	515-239-1216
Systems Planning	Peggy Riecken , Ames	515-239-1664
Traffic and Safety	Stephanie Anderson , Ames	515-239-1746
Transportation Data	Jodi Clement , Ames	515-239-1289

Federal and state laws prohibit employment and/or public accommodation discrimination on the basis of age, color, creed, disability, gender identity, national origin, pregnancy, race, religion, sex, sexual orientation or veteran's status. If you believe you have been discriminated against, please contact the Iowa Civil Rights Commission at 800-457-4416 or Iowa Department of Transportation's affirmative action officer. If you need accommodations because of a disability to access the Iowa Department of Transportation's services, contact the agency's affirmative action officer at 800-262-0003.

Iowa showcase highlights 14-day bridge replacement

National bridge experts gather to learn more about how the accelerated bridge construction (ABC) approach can provide significant advantages

The Iowa DOT recently hosted the Keg Creek Bridge Replacement Showcase in Council Bluffs to highlight the advantages of using prefabricated bridge elements and systems, specifically on the U.S. 6 bridge over Keg Creek (see detailed article about the project in the May *INSIDE*). More than 80 participants from DOTs, Federal Highway Administration, toll agencies and consultants from across the country participated in the one-day event.

Mike LaViolette, principal bridge engineer in HTNB's Omaha office, and Bala Sivakumar, project director in HNTB's New York office, presented sessions covering the bridge design, specifications and construction methods used in the rapid renewal bridge project. Following the morning of presentations, the showcase attendees visited the bridge site to observe construction and the placement of ultra high performance concrete (UHPC).

Other presentations were made by Ahmad Abu-Hawash from the Iowa DOT's Office of Bridges and Structures, John Adam, Iowa DOT Highway Division director, and Matt Rouse, from Iowa State University.

"This was an exciting day for us," Sivakumar said. "Though the replacement only took two weeks, the process has taken nearly two years of national research. We're very proud of the final outcome."

In early 2010, the Iowa DOT was asked by the Transportation Research Board to participate in a demonstration project using ABC under the Strategic Highway Research Program (SHRP2). Iowa DOT has a long history of innovative bridge projects, and is a national leader in the use of UHPC for bridges.

Iowa DOT Research and Technology Director Sandra Larson said this particular bridge was chosen for the project because its construction represents a "typical" bridge project and the process used to construct it could be easily replicated around the country.

The bridge was prefabricated off-site and replaced in only 14 days. LaViolette said, "While the roadway was closed for two weeks for the bridge replacement, traditional construction methods would have required the complete closure of the road for four to six months and a 14-mile detour, resulting in substantial traffic disruption."

The demonstration bridge is the culmination of a four-year study of ABC led by HNTB under the SHRP2. This work will ultimately result in standards and specifications for ABC that states and agencies can use to quickly replace other bridges.

A second demonstration project is slated for New York's Interstate 84 over Dingle Ridge Road. Construction of the twin bridges will begin in late 2012. The New York Department of Transportation (NYSDOT) was initially planning to use a temporary bridge that would cost \$1.5 million while the twin bridges were replaced over a two-year time period. With HNTB's assistance, NYSDOT is able to replace each of the two heavily traveled bridges in just two consecutive week-end nights using the ABC process.

To see time-lapse video of the Iowa bridge construction, go to <http://www.iowadot.gov/us6KegCreek>.



Two large cranes lift the precast bridge deck into place.



The old U.S. 6 bridge was crushed and the concrete rubble used as rip rap.