An issue on worker safety and workforce development

Diabetes and drivers

What a road operations manager must know

. . . by Pat Weaver . . . . . . . . . . . . . . . . . . . .

That phone call wasn’t the first one you’ve had about Joe this week. Mrs. Jones called to complain about the near miss she’d had that morning with the dump truck Joe was driving on County Road 10. She reported that he pulled out right in front of her. They almost collided.

You know that Joe has diabetes, but don’t know if he takes insulin. In thinking back, you also realize that he’s had several appointments with his eye doctor lately. Joe has worked for you for several years, all without incident except a minor fender bender when he backed into a pole a couple of years ago. But now, two complaints in one week... What do you do? And how fast must you act?

As a road operations manager, your responsibility is to operate with due diligence to ensure the safety of your employees and the public—and comply with the law. At the same time, policies should not take away the rights and dignity of an employee unless there is an expectation that it protects the safety of your operation. Do you have policies in place right now that help you respond appropriately when faced with an event that appears to compromise safety?

This article will review some of the factors you should consider, and will provide some recommendations and resources for taking action.

Why is diabetes a concern for drivers?

Short-term and long-term symptoms of diabetes are both of concern for drivers. In the short term, diabetes can make an individual feel sleepy or dizzy, be confused, have blurred vision or, in more extreme circumstances, lose consciousness or have a seizure. Long term symptoms include nerve damage in hands, legs, feet or eyes, or blindness. Any of these symptoms affect the ability to drive safely.

The incidence of diabetes increases significantly with age and some population groups—specifically, individuals with African, Hispanic or Native American heritage—and is increasing at an alarming rate in the United States.

The incidence of diabetes increases significantly with age and some population groups—specifically, individuals with African, Hispanic or Native American heritage—and is increasing at an alarming rate in the United States.

As a road operations manager, you are increasingly likely to come into contact with a driver with diabetes who has been diagnosed and, perhaps, some who have not. One study predicts an increase to 30.3 million people in the U.S. over the next 25 years, a more than 65 percent increase in incidence over today (Wild, 2004).

continued on page 2 ➤
Diabetes and drivers, continued from page 1

The regulatory side of the question

There are some specific regulatory issues that address drivers with insulin-dependent diabetes, and the regulations are different for public road departments and contractors. Some states, including Kansas, follow strict interstate regulations for travel just within the state, as well as across state lines. Kansas also has a waiver program to allow some flexibility in these rules.

Interstate divers—those who cross state lines—are federally regulated by the Federal Motor Carrier Safety Regulations of the U.S. Department of Transportation which outline physical requirements for drivers (49 CFR Part 391, Subpart B 391.15). The regulations, enforced by the FMCSA (Federal Motor Carrier Safety Administration), state that “a person shall not drive a commercial motor vehicle unless he/she is physically qualified to do so…”

A person can’t hold a CDL if he or she has an established medical history or clinical diagnosis of diabetes currently requiring insulin for control—unless granted an exemption. FMCSA may grant an exemption from the Federal diabetes standard for commercial divers for a renewable 2-year period if it finds that an exemption would likely achieve an equivalent level of safety. The burden of proof for determining this equivalent level of safety is substantial and includes driving experience, driving record and past incidence of diabetes complications. It is the responsibility of the driver to apply for this exemption. [The specific requirements of the waiver process are under review by the FMCSA, however, many of the physical symptoms of diabetes are still covered in other areas.]

Other medical conditions covered by the FMCSA include no current clinical diagnosis of any cardiovascular disease of any variety known to be accompanied by dizziness, shortness of breath, collapse, or congestive heart failure; no current clinical diagnosis of high blood pressure likely to interfere with his or her ability to operate a vehicle safely; and no mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with his or her ability to drive safely.

Each state is permitted by Federal law to choose whether to apply Federal regulations to the safety qualifications for intrastate commercial drivers. In Kansas, a CDL-licensed driver would address the employee’s functional ability to operate a vehicle safely.

In the example shared in this article, there are two levels of concern. The first is the issue of a driver with diabetes and reports of unsafe driving, and what actions must be taken in response.

The second issue is determining what policies and procedures to establish that will: (1) screen out drivers in the hiring process who are not qualified to safely perform the essential tasks of the job, (2) set a standard of safety within the department that requires drivers to identify any condition or circumstance he or she believes could compromise the safe operation of a vehicle, (3) monitor performance of drivers on an ongoing basis and take the appropriate immediate action when deficiencies are identified or safety is compromised, and (4) document any action taken that demonstrates your priority of safety.

A road department may be confronted with a wide variety of circumstances that could affect a driver’s ability to do the job safely and the policies should be flexible enough to address these circumstances.

City, county and township drivers are exempt from [FMCSA’s diabetes] regulations, but drivers who work for private contractors (many of whom work on public roads) must be in compliance. However, everyone should have and enforce policies about driving with medical conditions that compromise safety.

Do your agency policies provide enough guidance?

Even if your employees are exempt from diabetes regulations, the safety concerns still exist. Having policies that address health-related driving concerns is just good business. As you’ve probably experienced, there are no absolutes on writing policies to ensure your drivers will work safely at all times. Policies attempt to put reasonable procedures in place and then describe actions and consequences if there is a failure to comply. Ideally, a policy would address the employee’s functional ability to operate a vehicle safely.

Policies that may help

Examples of policies that screen drivers in the hiring process include the requirements for a physical and eye exam, a valid driver’s license, a good driving record, pre-employment drug and alcohol testing, and a road test. Some guidance on how to interview potential drivers may be found in Questions and Answers About Diabetes in the Workplace and the Americans with Disabilities Act (see Sources on page 4.)
Policies that set a standard of safety within the department once a driver is hired require certain actions from drivers to prevent and/or identify situations that could possibly affect driving performance, such as: (1) annual physical examinations certifying fitness to drive, (2) random drug and alcohol testing, and (3) requirements to report the use of prescription and over-the-counter drugs with a medical sign-off that the medications do not affect ability to drive safely.

In addition to these requirements, many departments offer safety training as part of their regular operating procedures.

One agency manager, when asked how he would handle a report of a driver's reckless driving, responded that he would "immediately speak with the [driver] about the complaints and the concern and what is happening from their point of view.... What are their concerns? Does the illness or treatment require/merit consideration of a medical leave of absence to pursue treatment and resolution?"

The manager said he would also immediately conduct a few unobserved on-the-street observations to determine and document performance level.

If a physical exam is required of your drivers, whether by federal standard or by agency policy, consider requiring all drivers to obtain their examination from a common medical examiner, ideally from an occupational medicine group, according to Rick Morse, Manager, Maryland Transit Administration Utilization Review and Workers Compensation Program. Morse recommends that the employer also pay for the physical to allow the [road department] access to information about the exam to eliminate the possibility that poor results from an exam might be concealed.

**Conclusion**

Addressing an issue such as driver health which may affect safe driving performance points out the importance of written policies and procedures. Your policies address standards for hiring drivers, standards for safe operating practices, and responses you, as a manager, will take when those standards are not met. At a minimum, your department certainly should have a policy that requires each driver to be appropriately licensed and meet the health requirements to hold that license, as a way to identify poor vision or other conditions that affect the ability to drive safely. If the requirement is for a CDL, and you are not a unit of government in the state, a driver with insulin-dependent diabetes is not eligible for a license without obtaining a waiver.

Any driver holding any license in Kansas has the responsibility to report his/her condition to the Kansas Division of Motor Vehicles if there has been loss or alteration of consciousness within the last three years.
Prevent DROWNING — in email

by Brandon Garrison . . . . . . . .

Email has earned a place in the public sector as an effective communication tool. It makes it easier for the public to receive assistance and information and for public sector staff and officials to communicate with each other. However, unless properly managed, it's like having dozens and dozens of citizens and staff and colleagues appear at your door every day. The amount of information and requests can be overwhelming, and trying to keep up can leave you wanting for air. With this article we'll throw you a lifesaver of practical tips so you don't continue to drown in email.

“Contact Us” Web site feature: More trouble than it's worth?

Many public works agencies welcome public feedback by providing an email link such as “Contact Us,” on the agency’s Web site. This seems like a good idea in the interest of public service, but it should be used with care. While customer feedback can help improve services, many communities lack the personnel to process a significant volume of email. If the “Contact Us” feature happens to do double-duty, providing a venue for complaints or questions and soliciting comments on agency initiatives, agencies must split their time between appeasing unhappy customers, answering questions, and analyzing open-ended responses.

An easy way to lessen the amount of citizen email you receive is to provide answers to frequently asked questions on your Web site. Customers may be more satisfied when they don’t have to go to the trouble of asking a question and waiting for an answer.

Next, separate the customer feedback function from direct questions and complaints. Rather than offering a simple email link for open-ended feedback, provide a survey that covers situations a customer might face, with multiple choice or yes/no answers. Using this format, feedback becomes easier to breakdown into useful statistics.

A good example of the above strategies is found at the Manhattan, KS, public works home page at

Sources:


Tips to prevent e-mail overload

Here are some tips to save you time and headaches in using email. Tips 1-5 are from leadership trainer Stever Robbins’ Web site. His examples are for a business environment, but the advice can be adapted to any field. The rest of the tips are from author Kaitlin Duck Sherwood’s Web site. Sherwood has written books on the subject of email overload. See page 6 for information about their Web sites.

How to send better email:

1. Use a subject line to summarize, not describe.
   
   **Bad Subject Line:**
   “Deadline Discussion”
   
   **Good Subject Line:**
   “Recommend we ship product April 4th”

2. Give your reader full context at the start of a forwarded message. Instead of forwarding a message and jumping right into the subject, summarize all of the previous messages and then follow with your reply. That will save the reader the trouble of wading through all the messages, and it will provide the context for your reply.

3. When CCing (copying) multiple people, tell each reader why he or she should care about the message.
   
   **Bad CC Message:**
   To: Abby Gail, Bill Fold, Cindy Rella
   Subject: Web site design draft is done
   The Web site draft is done. Check it out in the attached file. The design firm will need our responses by the end of the week.

   **Good CC Message:**
   To: Abby Gail, Bill Fold, Cindy Rella
   Subject: Web site design draft is done
   AG: DECISION NEEDED. Get marketing to approve the draft.
   BF: PLEASE VERIFY. Does the slogan capture our branding?
   CR: FYI, if we need a redesign, your project will slip.

4. Keep it short. Fit the meat of your message is in the first two paragraphs—the amount normally visible in the preview pane of an email browser.

5. If you are forwarding someone else’s message, edit out any information irrelevant to the other reader(s).

6. Use formal language and end messages with “No Reply Needed” to discourage responses.

7. Discuss only one issue per message. People frequently forget about all but the first or last things said.

For better email management:

1. If your email program has tools called rules or filters, use them to automatically prioritize your inbox. If possible, use rules to assign each message a category (or label) based on what group the sender belongs to. If you assign the categories so that they sort in the same order as their probable importance, then you can easily sort your inbox to list messages in roughly the order you want to deal with them.

2. If your email program allows it, put two buttons in the toolbar—one for moving the selected message(s) to a final resting place and one for moving to the next message. If you are done with a message, press the first button. If you still need to do something with a message, press the second button.

3. Use rules to assign junk email a very low-priority category or move it to another folder. (But do not delete junk email automatically! Your rules will make mistakes sometimes.)
Email overload, continued from page 5

no sign of ending, take initiative and make a point of meeting in person or talking on the phone. See more tips on page 5.

Email isn’t the only distraction you have to deal with at work. Treat cellular phones and PDAs in the same way. Put the cell phone on vibrate, and ignore the Blackberry. Just because these gadgets are always with you doesn’t mean you always have to answer them. Being responsive is generally good public service, but you can take it too far when it interferes with other important tasks. These messages usually can wait until your designated time for answering them.

An abundance of information benefits today’s transportation professionals in many ways. Learn how to manage this information so that it won’t become too much of a good thing.

Suggested Web sites on email overload

Contains articles that address the problem of email overload and information overload in general. Take a self-test to determine whether you are a victim of information overload.

http://overcomeemailoverload.com/. This site was created by email expert and author Kaitlin Duck Sherwood solely to help with email management. It provides helpful tips, articles, and essays. Her link, “Sherwood’s Top Tips for Overcoming Email Overload” is well worth reading.

When the heat is on...

... by Lisa Harris

When faced with an angry commissioner or citizen, it’s tough to keep your cool. But maintaining self control can help you influence the resolution.

Bacall & Associates, authors of Diffusing Hostile Customers Workbook, say it’s vital to gain control of the interaction so that the angry person responds to you, rather than you reacting to the person. They suggest being assertive; not aggressive and not too passive. The authors note that “a very angry person is not ‘ready’ to resolve the situation through problem-solving. He/she will be too emotional to think constructively, so the first step is to deal with the person’s feelings.” They recommend that you help angry people feel they have choices, options and control.

Bacall & Associates’ book has many practical tips and suggestions for specific things to say to get things under control and moving in a constructive direction. Their book is available at: http://www.work911.com/products.

The Conflict Research Consortium at the University of Colorado reviewed Dealing with an Angry Public by Lawrence Susskind and Patrick Field on their Web site: http://www.crininfo.org/booksummary/10563/. The authors stress the importance of honesty, attentiveness, and accountability in inspiring the trust that is necessary for successfully handling difficult situations. They recommend to “… seek, first and foremost, to do the right thing ...effective leadership requires sharing information with others, and listening to and learning from others.” Good advice.

Cuidado...Tramo en Reparación*

Need help with your construction Spanish?
ARTBA and the National Association of Women in Construction announce the availability of two books to help you and your staff communicate better with Spanish speaking workers.

The Spanish-English Construction Communication book includes advanced terms and 11 chapters on communication, safety and overcoming language barriers. Thousands of words are arranged into lists of safety terms, related slang and common sentences related to each phase of construction.

• 1-10 copies are $28.00/book
• 11-25 copies are $25.00/book

The pocket sized Spanish-English Dictionary for Construction is the perfect companion for the communication book. It includes over 1,400 words and terms that are used on the jobsite every day. There is a 10 book minimum order.

• 10-25 copies are $13.00/book
• 26-99 copies are $11.00/book
• 100-499 copies are $9.00/book

To order, visit the ARTBA Store at www.artba.org or call Christy Woodall at ARTBA at (888)-821-9653 ext. 181. Credit cards are accepted.

Reprinted with permission of the Michigan LTAP.

*Caution...Road Work Ahead
Shop safety tips

Here is some helpful information intended to help prevent shop worker injuries. We've provided valuable safety information for workers and supervisors alike. This information was gathered from the Kansas LTAP and Minnesota LTAP workplace safety sheets.

Advice for all shop workers

Here are some simple tips to reduce the likelihood of a shop accident.

Tripping
— Keep access-ways and aisles free of debris.
— Return tools and excess material to their proper storage area immediately after use.
— Minimize the use of extension cords or other loose wires. When you do use them, properly cover or mark them to prevent tripping or shock.
— Mark obstructions such as low overheads or steps with highly visible warning signs.
— Put small hand tools in their proper places. Small hand tools lying about or improperly stored are especially hazardous because they are a common sight; workers are less likely to notice a screwdriver on a step or an open knife on a table.

Slipping
— Clean up spills promptly, but do not use highly volatile solvents such as Naphaline or alcohol. Instead, use a biodegradable solvent.
— Remove grease, oil, ice, snow, or mud from steps, walks, ladders, etc.

Stacking materials
— Do not allow material to protrude past shelf or bin edges.
— Use a front lip in stack bins to prevent material from falling out of the bin.
— When you are stacking uneven material, use pallets to level the stacks.

Combustible and hazardous material
— Store flammables in their designated areas in proper containers with proper labels: oily rags in covered cans; paint in a paint locker; explosives in a protective hut; fuel oil and kerosene behind a concrete barrier. Use fire safety cabinets.
— Store all tires vertically in racks.
— Remove nails from excess lumber and then sort them by size and store them in a separate area.
— Keep gas cylinders strapped to supports. Make sure gas cylinders are capped when you are moving them.
— Check the fire extinguishers monthly and maintain inspection records. Have the extinguishers inspected yearly by a fire extinguisher company.
— Know how to use a respirator to be safe around airborne toxic materials.

Leaning equipment
— Store pipe, ladders, structural steel, and other materials horizontally, or secure them with brackets. Vibration from machines or accidental brushing could cause them to fall.

Abrasive wheel machinery
— Always keep guards in place and use proper face, eye, and hand protection.
— Always keep the spindle end, nut, and flange projections protected with rigid protective guarding to prevent getting your sleeve, hand or other body parts caught in the machine.
— Keep all sources of ignition (for example lit cigarettes, welding heaters, running vehicles, and sparks from steel striking concrete) away from combustible storage. Remember combustible gases are heavier than air and normally collect in potentially explosive pockets near the ground.
— Make sure the work rest is attached and kept 1/8 inch from the stone wheel on bench grinders to prevent objects from becoming wedged in between the grinder wheel and the rest.
— On bench grinders, make sure the “tongue” guard (upper adjustable guard) is tightened within 1/4 inch of the stone to assure broken parts or continued on next page
Shop safety, continued from page 7

—Use flanges to secure the grinding stones. All flanges should be uniform in size and strength and meet all manufacturer specifications.

Sources:

Shop safety advice for supervisors

Shop supervisors can use this information to help make the workplace safer and educate employees about shop safety.

Shop safety and storage tips
—Designate and label a storage space for everything.
—Provide sufficient cleaning tools: brooms, clean rags, and spill absorbers.
—Make sure that workers using chemical cleaners are following the listed instructions.
—Define areas for scrap storage and schedule regular collection, removal, and disposal.
—Assign your workers clean-up responsibilities and make sure work sites are cleaned and cleared before quitting time. It is wise to designate times specifically for cleaning.
—Before you begin a project acquire only materials, parts and tools that you really need from storage areas and suppliers to avoid clutter.
—Provide the proper fire extinguishers for different types of fires. Properly label, regularly inspect, and maintain fire extinguishers in easily accessible locations.
—Install non-slip treads on ramps and steps.
—Remove weeds around combustible storage areas, including tanks and pipes where combustible material is stored or transported.
—Clearly mark aisles and passageways.
—Secure all storage racks to the floor, wall and each other.
—Provide designated racks for sheet metal and pipe.

Suggestions for shop safety training
—Prepare a list of work site items. Ask your crew to identify each item’s proper storage place or procedure.
—Draw a simple floor plan of your work area, and ask the crew to identify who is responsible for clean-up of each area. Assign clean-up responsibilities for any unassigned areas.
—Coordinate with your local fire department to provide your crew demonstrations of fire hazards and training in fire fighting.

Safety equipment to have on hand
—safety glasses, goggles, or shields
—steel-toed shoes and metatarsal foot protection
—hard hats
—work gloves with palm and knuckle reinforcement

Poison ivy quiz

... by Lisa Harris .................

W hen you head for the weeds to do some brush-cutting, you may be get more than you bargained for. Test your knowledge about poison ivy. Answers are below.

True or false?
1) False. Dead plants remain active much longer than two years; up to 10 years in dry climates like in Kansas.
2) True. Poison ivy can only be contacted by touching the plants. If you stay away the plants, and if not possible, thorough washing.
3) Scratching poison ivy blisters will spread the rash.
4) False. Poison ivy is contagious.
5) Allergic reactions to poison ivy generally decrease with age.

Source: www.zanfel.com/help/rashfaq.html. See page 14 for a free brochure about poison ivy.
Do all your drivers need CDLs?

Do your employees who drive heavy equipment each need a commercial drivers license (CDL)? Federal laws spell out certain types of vehicles that require their operators to obtain CDLs, and where they can be driven. Those laws also apply in Kansas. In fact, the Kansas interpretation of those regulations is more strict than the federal guidance.

According to Terry Mitchell, public service administrator with the Kansas Department of Motor Vehicles, CDLs are required for vehicles that weigh more than 26,000 pounds, are designed to carry 16 or more passengers, or transport hazardous material. There are three classes of CDL license—A, B and C—depending on the vehicles driven and what is being transported. Special endorsements may be required as well. For example, drivers of vehicles transporting hazardous material must obtain a specific endorsement that requires, among other things, that the driver be fingerprinted, cleared by the FBI, KBI, and a Homeland Security threat assessment. Vehicles in road departments typically require Class A or B licenses, unless the vehicle is placarded for transporting hazardous materials.

Federal regulations exempt operators of certain types of heavy equipment, such as motor graders, bulldozers, compactors and excavators, from the requirement to hold a CDL. The reasoning behind this, according to federal guidance, is that these types of vehicles are probably not going to be driven on public roads.

In 1997, the Kansas Attorney General issued an opinion that these types of vehicles are, in fact, likely to be on public roads, and because of that, their drivers require CDLs.

Federal regulations also exempt snow plow operators in an emergency if a community’s regular CDL drivers are not available. However, Kansas law does not exempt any snow plow drivers (see K.S.A. 8-2, 127).

In concert with the Kansas interpretation, and in the interest of safety, continued on page 13 ➤
Top reasons NOT to have crew members become road scholars

... by Rose Lichtenberg . . . . . . . . . . . . . . . .

I don’t want my crews to know anything I don’t know. Does it really matter where a good idea comes from? The good ideas of leaders and followers, both, are essential for a strong work group. Encourage your crews to learn new skills and better ways to do things. The more they feel ownership of their work, the better the quality of the work.

Internal agency training is adequate for my crews. How do you know that? Students learn from instructors. They also learn from their peers. Training outside of your own agency allows access to those who do your job from across the State. External training requires that the student leave his/her regular job setting and focus on learning. That sounds good to me.

It’s just too expensive to train our crews. What are you currently paying when accidents occur, or when workers misuse equipment, or when workers don’t buy into your way of doing things? Training more than pays for itself. In general, KS LTAP 6-hour courses cost $65 per person, the TASK program charges $5 per person, and KAC charges average about $100 per person. It takes two years or more to complete any of the current Kansas County Road Scholar Program levels. The cost to obtain the “Technical Skills” certificate is about $500, the cost to obtain the “Supervisory Skills” certificate is about $1,000, and the cost to obtain the “Executive Skills” certificate is about $1,200.

Why train? —especially at the crew level—they just leave. But what if they stay? Maybe if you better-trained your staff you would have less turnover.

I hope you have been persuaded to give the Road Scholar program another look! For more information contact Rose Lichtenberg at KS LTAP, (785) 864-2594 or by email at rosemary@ku.edu. ■

Recent Road Scholar graduates, May 2006

<table>
<thead>
<tr>
<th>Technical Skills</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocky Brown</td>
<td>Barber</td>
</tr>
<tr>
<td>Bob Caley</td>
<td>Riley</td>
</tr>
<tr>
<td>Mike DeWilde</td>
<td>Jefferson</td>
</tr>
<tr>
<td>Kevin Ellis</td>
<td>Saline</td>
</tr>
<tr>
<td>Chris Friess</td>
<td>Saline</td>
</tr>
<tr>
<td>Rod Meredith</td>
<td>Riley</td>
</tr>
<tr>
<td>Walter Noll</td>
<td>Johnson</td>
</tr>
<tr>
<td>Todd Ryne</td>
<td>Jefferson</td>
</tr>
<tr>
<td>Willie Vidricksen</td>
<td>Saline</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supervisor Skills</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doug Young</td>
<td>Coffey</td>
</tr>
<tr>
<td>John Zuern</td>
<td>Coffey</td>
</tr>
</tbody>
</table>

KUTC is one of four entities focusing on transportation at KU and K-State

Until recently there were two university-based centers—one at KU and one at K-State—that focused on transportation issues. Now there are two more. Here’s a look at all four.

KU Transportation Center. The KUTC (which publishes this newsletter) was started in 1982 and houses three public service/technology transfer programs—Kansas LTAP for local road departments and Kansas RTAP for transit agencies. Each of these programs provides training, a newsletter, one-on-one technical assistance, a lending library and Web resources.

The KUTC also houses the Traffic Assistance Services to Kansas (TASK) program, operated jointly with K-State, that provides traffic safety training around the state.

For more information visit www.kutc.ku.edu

K-State Center for Transportation Research & Training. This Center provides technical information about roundabouts. Visit www.k-state.edu/roundabouts/.

K-State’s arm of the TASK program is in their Continuing Education Department. Visit http://www.dce.k-state.edu/dce/conf/task/index.html.

KU Transportation Research Institute (TRI). This new institute in KU’s School of Engineering is designed to foster cross-disciplinary studies on critical national transportation issues with broad societal significance. Major focus areas are: 1) vehicle emissions and environment,

next page, 3rd column ➤
KDOT’s training program for minorities and women

... by Lisa Harris .................

[Here's one way KDOT is working to increase the pool of qualified road construction workers in the state.]

Women and minorities have historically been under-represented and under-trained in road maintenance operations in the United States. The Federal Highway Administration has been working to change that, and requires states to have a program to provide training and new skills for these particular populations.

KDOT has had such a program for more than a decade. Contractors who work for KDOT must provide a certain number of hours of training to eligible crew members, based on the size and length of time of the road project. Training must be from an approved source, which KDOT has identified as either: 1) training requirements outlined by the Kansas Contractor’s Association or 2) apprenticeship programs of unions. A contractor could also devise a specialized training program if the above programs don’t meet their needs, with KDOT approval required before starting the training.


The guidebook lists the main types of training available to women and minorities through this program (see box above).

The contractor has the option of training individuals who already work for the company or hiring new employees for training. When the training is provided to existing employees, contractors are generally upgrading someone from an unskilled to a skilled worker.

Within the last two years, 21 females and 88 minority males were trained under the program. Over 300 individuals have been trained to date, by 73 construction companies.

The most common types of training received by participants include equipment operator, rough carpenter and form setter.

For more information about the program, call Debra Hepp at (785) 296-6676.

Training available through this program:

- Asphalt lab technician
- Asphalt paving machine
- Asphalt plant operator
- Bridge construction specialist
- Bulldozer operator
- Carpenter
- Carpenter, rough
- Concrete finisher (paving)
- Crane or machine power swing
- Equipment operator
- Foreman/forewoman
- Form setter (curb and gutter)
- Form setter (structures)
- Motor grader operator
- Paving equipment operator
- Pile driver/operator
- Pipelayer (sewer and water line)
- Reinforcing steel setter (structures)
- Roller or compactor operator
- Roller operator (finish asphalt)
- Scraper operator
- Service person (equipment)
- Steel worker
- Surveying technician
- Tractor operator (Over 80 HP)
- Tractor operator (Under 80 HP)
- Trenching machine operator

Transportation entities, continued from page 10

2) infrastructure, and 3) advanced vehicle technologies. Researchers in these areas will be seeking large-scale projects that include design, demonstration, analysis, and evaluation. The institute was initiated by a $14.5 million grant from the U.S. Department of Transportation and will involve researchers from several schools and departments at the University of Kansas.

The KUTC will be under the umbrella of this new institute. KUTC’s Executive Director, Pat Weaver, is also the TRI’s Associate Director for Outreach. The TRI’s Web site is http://tri.engr.ku.edu/research/foci.html.

National Research Center for Rural Transportation Infrastructure and Safety. K-State has been awarded $500,000 to establish a land-grant University Transportation Center (UTC) to address three topics: 1) the cost-effective preservation of rural transportation infrastructure, 2) safe operation of that infrastructure for an aging population, and 3) safe operation for movement of agricultural products with respect to terrorist threat or disease outbreak. The Center will work closely with the recently established National Agricultural Biosecurity Center at K-State, and the regional Civil Infrastructures Systems Laboratories, also housed at K-State. The Lab is used for accelerated testing of pavement and large-scale structural members used in bridges.
Marked crosswalks are thought to increase the visibility and therefore, safety, of pedestrians crossing a street. But do they in every case? This article will share the results of a University of North Carolina study to determine whether marked crosswalks increase or decrease pedestrian safety at uncontrolled crossings. Uncontrolled crossings are locations without a traffic signal or stop sign controlling traffic approaches.

Study objective and methods
The 5-year study, commissioned by the Federal Highway Administration, compared pedestrian crash data at marked crosswalks and unmarked crossing areas from 1994 to 1999. Data were collected at 2,000 sites (half of them marked) in 30 cities across the United States. Each marked crosswalk was compared with a nearby unmarked crossing area. Many of the study’s marked and unmarked crosswalks were at opposite sides of the same intersection. Data were not collected at school crossings.

Detailed data were collected on traffic volume, pedestrian exposure, number of lanes, median type, speed limit, and other site variables. Cause of crash was also examined (see Figure 1 on next page). To compare safety between marked and unmarked crosswalks, the data collected were extrapolated to model pedestrian crash rates per million of pedestrian crossings.

The results
The study found that there was no difference in pedestrian safety between marked and unmarked crosswalks at uncontrolled locations under the following conditions:
- two-lane roads;
- multilane roads without raised medians and average daily traffic volume below 12,000;
- multilane roads with raised medians and average daily traffic volume below 15,000.

Surprisingly, there was a significant increase in crashes on roads with marked (versus unmarked) crosswalks under the following conditions:
- multilane roads without raised medians and average daily traffic volume above 12,000;
- multilane roads with raised medians and average daily traffic volume above 15,000.

Speed, lanes, type of markings
After controlling for factors such as pedestrian and traffic volume, speed limit was not found to be related to crash frequency in this study. However, the authors point out that because 93 percent of study sites had speed limits 25 to 35 mi/h, the lack of association between vehicle speed and crash frequency may be due to lack of speed limit variation in this study.

Multilane crossings had higher crash rates than two-lane crossings. For both marked and unmarked multilane crossings, those with raised medians or raised crossing islands had lower pedestrian crash rates than multilane crossings without them.

Type of crosswalk marking pattern (parallel lines, zebra stripes, etc.) had no effect on pedestrian crash rate.

MUTCD guidelines
The Manual on Uniform Traffic Control Devices (MUTCD) does not give specific guidelines (such as pedestrian or traffic volume thresholds) for when marked crosswalks should be used at uncontrolled crossings. Instead, its guidance includes:
- Crosswalk width should not be less than 6 feet;
- multilane roads with raised medians and average daily traffic volume above 15,000.
Crosswalk markings should be provided at points of pedestrian concentration, such as at loading islands, mid-block pedestrian islands, and/or where pedestrians need assistance in determining the proper place to cross the street.

The MUTCD also says “Crosswalk lines should not be used indiscriminately. An engineering study should be performed before they are installed at locations away from traffic signals or STOP signs.”

Study conclusions
The study’s report says that “under no condition was the presence of a marked crosswalk alone at an uncontrolled location associated with a significantly lower pedestrian crash rate compared to an unmarked crosswalk.” This finding makes a strong argument for not spending funds to simply mark crosswalks to try to improve safety at uncontrolled intersections. However, the report also says that marked crosswalks are appropriate in a few cases (eg. at selected low-speed, two-lane streets at downtown crossing locations).

The report also states that measures such as installing pedestrian refuge islands and reducing street crossing distance with chicanes might be considered instead, or along with crosswalk markings. The effectiveness of a marked crosswalk increases when coupled with these improvements.

The report contains a detailed table (Table 11, page 54 in the report) that provides guidance on whether an uncontrolled locations might be a candidate for a marked crosswalk—alone or with other improvements. The table has too much information to print here but can be accessed online.

The study’s report also recommends that parking be set back from the approach to uncontrolled crosswalks by 20-50 ft., depending on the speed of the road, to improve vision between motorists and pedestrians.

Figure 1. Cause of pedestrian crashes at marked and unmarked intersection crosswalks, by category

Note: The “failed to yield” designation was assigned based on the police officer’s determination of who was at fault, and is not necessarily a proper or legally correct conclusion for a given crash.

Source of data: Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations, FHWA, September 2005.

CDL needed?
continued from page 9

the Kansas DOT and many local road departments require a CDL for all equipment operators. Page 9 shows some examples.

The Commercial Drivers License Program has rigorous standards for safety, and CDL holders are required to have random drug tests. While getting a license itself isn’t very expensive, the costs for drug tests add up.

We’ve heard that some counties choose to not require CDLs for all their heavy-vehicle drivers, because of the cost of drug testing. If that’s true for you, make sure those vehicles stay off public roads, as defined by the Federal government, unless they are being driven by one of your CDL-holders who has the proper class of CDL (and endorsements, if applicable) for that vehicle. Otherwise you will be inviting a lawsuit if one of those vehicles is involved in a crash.

For more information, contact Terry Mitchell at the Kansas Department of Revenue at (785) 296-5767.

Sources:
10 Questions about Kansas CDLs http://www.testquestionsandanswers.com/cdl/kansas.html

Reviews

... by Lisa Harris .............

Temporary Traffic Control Zones (Checklist), compiled by Kansas LTAP, March 2006. This handy glove-box card has basic information on setting up a temporary traffic control zone. It was prepared by Kansas LTAP from information in Better Roads magazine. It contains an illustration of a typical work zone and a safety checklist.


Poison Ivy, Oak & Sumac: A Rash of Information about Identification, Treatment and Prevention, Zanfel Laboratories, 2006. This brochure provides a lot of good, basic information about poison ivy and similar plants, in an easy-to-understand format. Includes photographs of the plants and what a typical rash looks like. The brochure is produced by the manufacturer of a product that reduces poison ivy symptoms, but it is not heavy on the advertising. Zanfel also has excellent information on poison ivy at its Web site at www.zanfel.com.

Calendar

See our web site for even more calendar listings. Go to www.kutc.ku.edu and click on “Training Calendar.”

August 14-15
Introduction to GIS: Transportation Applications in Lawrence

September 10-13
APWA International Congress in Kansas City, MO www.apwa.net

October
Snow and Ice Control (▲T)
Five Sessions

October
Gravel Road Maintenance (▲T)
Five Sessions

October 2-6
Kansas City Metro Chapter APWA Snow Roadeo
Call Joseph Johnson, Chapter President, at 913-339-6700 X 131

October 10
APWA Kansas Chapter Fall Membership Meeting in Topeka
Call Kenzil Lynn at 785-827-3603

October 18-19
MINK Regional Local Roads Meeting in St. Joseph, MO
Call Gary Rosewicz at 785-537-6330

November
Concrete Streets and Local Roads Seminar in Overland Park
Contact: MO/KS ACPA at 913-381-2251

November 19-21
Kansas Association of Counties Annual Meeting in Topeka
Call 785-272-2585

Unless otherwise indicated, for information on calendar items (or to suggest a topic for an LTAP workshop), contact: Rose Lichtenberg, LTAP Training Coordinator, 785/864-2594, rosemary@ku.edu.

**To arrange for an APWA “Click Listen and Learn” downlink at your location, call Carrie Merker at 816/848-2792. Cost is $150 per downlink for APWA members; otherwise $200. Presentations are also available on CD for $49 for APWA members; otherwise $59.

▲T = Kansas County Road Scholar Program Technical skills required course
▲S = Kansas County Road Scholar Program Supervisory skills required course
Free Resources

CD ..........................
This CD is free.

❑ Comprehensive Intersection Resource Library, version 3
  FHWA, 2006. A compilation of resources and educational materials about traditional signalized and unsignalized intersections, roundabouts, highway/rail grade crossings, and nontraditional intersections. A useful addition to any traffic engineer’s or transportation planner’s “toolbox.”

Publications ..............
You are free to keep these unless otherwise noted.

❑ Temporary Traffic Control Zones (Checklist)
  Kansas LTAP 2006.
❑ Portable Changeable Message Sign (PCMS) Handbook
  FHWA, November 2003.
❑ Poison Ivy, Oak & Sumac: A Rash of Information about Identification, Treatment and Prevention
  Zanfel Laboratories, 2006.
❑ Hot In-Place Asphalt Recycling Application Checklist
  FHWA, November 2005.
❑ Cold In-Place Asphalt Recycling Application Checklist
  FHWA, November 2005.
❑ Slurry Seal Application Checklist
  FHWA, November 2005.

Equipment .................
We offer turning movement counter boards for loan to local highway agencies. Call us at (785) 864-5658 to arrange a loan. There could be a waiting list for these items.

❑ Turning Movement Counter Board DB-400, Jamar Technologies, Inc.
  A basic model for recording turning movements at intersections. The board is lightweight and comes with its own case.
❑ Turning Movement Counter Board TDC-8, Jamar Technologies, Inc.
  Can be used to do turning movement counts, classification counts, gap studies, stop-delay studies, speed studies, and travel time studies. The board is lightweight and comes with its own case.

Order Form .............................

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone number</th>
<th>❑ send materials indicated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>email address</td>
<td>❑ address correction</td>
</tr>
<tr>
<td>Agency</td>
<td></td>
<td>❑ add to newsletter mail list</td>
</tr>
<tr>
<td>Street Address</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>Zip+4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For requests outside the United States: After receiving your request, we will notify you of the postage cost and will send materials after receiving payment for postage.
Let us at the KUTC help you find the answers to your transportation-related questions.

KUTC, 1530 W. 15th St. #2160, Lawrence, KS, 66045
Call 785/864-5658 (fax 785/864-3199)
www.ksltap.kutc.ku.edu

The Kansas Local Technical Assistance Program (LTAP) is an educational, research and service program of the Kansas University Transportation Center (KUTC), located in the University of Kansas School of Engineering. Its purpose is to provide information to local and county highway agencies and transportation personnel by translating into understandable terms the latest technologies in the areas of roads, highways and bridges.

The KUTC Newsletter is one of the KUTC’s educational activities. Published quarterly, the newsletter is free to counties, cities, townships, tribal governments, road districts and others with transportation responsibilities. Editorial decisions are made by the KUTC. Engineering practices and procedures set forth in this newsletter shall be implemented by or under the supervision of a licensed professional engineer in accordance with Kansas state statutes dealing with the technical professions.

Winter 2006 issue—Copyright © 2006 by the KUTC. All rights reserved. Reproduction of material in this newsletter requires written permission.

KUTC Executive Director . . . . . . . . . . . . . . . . . . . . . . Pat Weaver
LTAP Directors . . . . . . . . . . . . . Pat Weaver and Tom Mulinazzi
Editor . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Lisa Harris
Contributing Writers . . . . Brandon Garrison, Laura Snyder
 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Justin Dorsey

Kansas LTAP is co-sponsored by the Federal Highway Administration and the Kansas DOT.