Most of Kansas’s smallest cities have extremely limited resources for maintaining their roads. Some of those cities receive help from their counties. With this help they are able to provide their citizens with some basic street maintenance services with minimal city tax dollars. While state law allows governments to share road maintenance responsibilities (see box on next page), there is no uniform approach to providing road work assistance. Here is how five Kansas counties are handling the task.

**Chase County** assists two cities with road maintenance: Strong City and Cottonwood Falls. “We help out with pothole repair, lending equipment (rollers, brooms), and chip sealing on thorough-streets to county roads,” said Paul Jones, road and bridges supervisor. “We also have helped them out quite a bit with snow removal, especially lately.” The cities maintain their own interior streets.

For some projects, the cities contribute half the cost of the materials and the county provides the other half, plus labor and equipment. But for many projects, the county just does the work for no charge. “If we’re in the area, we just go ahead and do it,” said Jones.

Chase County also helps the school district with parking lot maintenance. “We plow their parking lots at no charge,” said Jones.

**Bourbon County** provides assistance for seven small cities: Redfield, Uniontown, Bronson, Fulton, Hiattville, Garland and Mapleton. The county helps with chip seal and asphalt overlays. “They buy the materials and we do the work,” said James Harris, county coordinator.

Bourbon County also helps these cities by providing snow removal on request, at no charge. “They are very small and just don’t have any money,” Harris explained.

**Jefferson County** charges for most work done for cities within their jurisdiction. Winchester, Nortonville, and Perry purchase road work materials and labor from the county, at cost. “That way they don’t have to hire an employee to do the continued on page 2 ➤
work and they don’t have to maintain equipment,” said Jefferson County roads superintendent Ron Karn.

Winter maintenance is major focus for the County's assistance to incorporated cities. (The County and does all road maintenance for unincorporated cities.) We blade, salt, sand and treat,” said Karn. “We might do 6-7 blocks, or up to 15 in one city. We either treat the streets or the city will buy material from us and do the work themselves,” said Karn.

Jefferson County charges for winter maintenance materials and hours of labor. “We'll charge about $65 per ton, including labor,” said Karn. “One ton costs us about $20.”

The County orders extra material to allow for city purchases, but the cities are asked to limit their material requests when necessary. “With all the snow we’ve been having lately, salt is scarce,” said Karn. “I ask the cities to only take what they really need. If their truck holds three treatments and they only need to do one right now, we’ll give them a partial load.”

Jefferson County has a policy that road work for cities is done on request. “We ran into a situation when we did some work—since we were in the area anyway—and the city told us they really didn’t want the work done,” said Karn. “To prevent this, we now require a phone call requesting the work.”

Jefferson County also rents out small equipment, such as a roller for street improvements and provides occasional assistance with street sweeping.

“We figure we’re here to help the small cities,” said Jefferson County roads superintendent Ron Karn. “Of course, county work is our top priority, but if we can help, we will.”

Riley County helps their small cities “with things like bridge repairs, pavement repairs, snow removal, and making signs,” said Rod Meredith, assistant public works director. “Some cities have their own road crews, so we do less for them.

Riley County charges its road-related work back to the municipality. “We charge for labor by the hour—with a 30 percent added for overhead costs—plus equipment and materials at cost,” said Meredith.

The county also loans out small pieces of equipment. “We use a check-out form,” Meredith said.

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**What does Kansas law say about counties helping cities?**

Several statutes relate to counties helping cities and towns with road work, or visa versa, for that matter. Here are a few key statutes:

KSA 68-572 allows for intergovernmental agreements between governing bodies for the “construction, reconstruction or maintenance of any roads or streets.” The law does not specify how this work shall be shared or who should pay what costs.

The statutes in the 68-506 series address several issues related to a specific type of road—city connecting links. These are city streets that connect county or state roads.

Statutes 68-506(a-c) address construction of connecting links. KSA 68-506a says that if a city's proposed connecting link has been declared a public utility and a benefit district...the city will be authorized to bear its proportion of the construction cost for such a link. 68-506B covers issues of letting contracts, changing a route and eminent domain for such a link.

KSA 506c covers apportionment of costs to the city and the county for constructing such a link.

Statutes 68-506(d&f) address maintenance of connecting links. KSA 68-506d says that cities are responsible for maintaining such links after they are constructed. KSA 68-506f provides an exception. It addresses the maintenance of connecting links within cities having less than 5,000 in population “in the system of county roadways and highways in the secondary road system...or in the system of county minor collector roads and highways.” It says that counties need to maintain those roads or reimburse cities if the cities maintain those roads.

Different statutes, 68-406a and 68-416a address which government entity is responsible for maintaining connecting links to state highways.

Refer to the [Kansas Statutes Annotated](https://www.ink.org/public/legislative/) for complete information. These are available in print or on the web at [www.ink.org/public/legislative/](http://www.ink.org/public/legislative/)

The definition of a connecting link was clarified in a Kansas Supreme Court case in 1934—City of Independence v. Montgomery County. The Court ruling quoted the 1926 Webster’s International Dictionary’s definitions of “connect” and “link,” and also said:

“It must be borne in mind that the county system of roads and the state highway system are two altogether different systems as far as construction and maintenance are concerned. Clearly, the intention of the legislature was that where a county road leads up to a town, and travel upon it goes over the streets of the city and out of the city by another county road, thus wearing out the city streets, a part of the gasoline tax money appropriated to maintain county highways should be used to maintain these streets. A connecting link, by its very name must be something that holds two different elements together.”

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<sup>Counties helping cities, continued from page 1</sup>
Stop! and Read this News about the MUTCD—Millennium Edition


The text of the 1000+ page Millennium Edition can be found, and downloaded from, the Federal Highway Administration’s MUTCD web site at: http://mutcd.fhwa.dot.gov.

According to the Final Rule, the new edition becomes effective on January 17, 2001. However, the FHWA is setting up later compliance dates for some portions of the MUTCD; the Final Rule directs readers to the Supplementary Section for further details.

The discussion of the Final Rule can be downloaded from the Federal Register at http://www.access.gpo.gov/su_docs/fedreg/a001218c.html, under “Federal Highway Administration.”

The standards, guidance, options, and support contained in the Manual are applicable to all public roads. The uniform application of traffic control devices (signs, traffic signals, and pavement markings) promotes the safe and efficient operation of streets and highways, highway-rail grade crossings, sidewalks, and bicycle facilities.

The APWA will be carrying a printed version in their catalog as soon as it is available.

The FHWA has partnered with the American Traffic Safety Services Association (ATSSA) to provide a satellite presentation of the MUTCD changes. Topics will include general provisions, signs, markings, low volume roads, and temporary traffic control for highway-rail grade crossings.

Seven locations in Kansas will host this training on March 20, 2001 (see page 14). Staff from KDOT, KU and K-State will be on hand to facilitate the discussion. You should receive a meeting announcement in the mail soon. You may register by mail or fax or on-line at www.kutc.ku.edu. For more information, call Rose Lichtenberg at (785) 864-2594.

Sources: http://mutcd.fhwa.dot.gov; e-mail message posted December 18, 2000, by Ann Daniels, AWPA.

Lisa Harris is editor of the KUTC Newsletter.
Hutchinson’s New Public Works Facility
Consolidates Equipment and Services

“IT’s a palace!” That’s how the City of Hutchinson’s new public works facility was described at a recent APWA roundtable meeting. With a total price tag of over $6 million, you might not be surprised. But while the facility is clearly impressive to see, what’s really impressive is how much bang Hutchinson got for its buck—two buildings totaling 108,000 square feet, housing 68 employees and serving several divisions. And because services are now consolidated in one location, Hutchinson will save money and resources in many ways.

Advantages to a new facility
In 1994, the City Council asked staff to evaluate the possibility of building a new public works facility that would consolidate personnel and equipment in one place. Dennis Clennan, Hutchinson’s director of public works, said the following reasons were identified for building such a facility:

- The existing public works building...
infrastructure was old and inadequate for the needs of the city;
• Several services could be provided at one central location;
• Divisions could be under one roof (water, sewer, street, purchasing, administration, and fleet maintenance, plus parks administration);
• By consolidating the water and sewer divisions and the refuse and food control divisions, three management positions could be eliminated;
• The city could have its first purchasing warehouse with more efficient procurement procedures for the entire city.

Quick timeline
After approval, the project proceeded quickly. Property was acquired in 1997 (mostly donated by Cargill). An environmental survey, with citizen oversight, was conducted to be sure that the land would be suitable for the project. DGM Maximus was hired to conduct a needs assessment, completed in 1997. The City Council authorized development of final plans in 1998. Landmark Architects and Engineers from Hutchinson completed the plans the same year, and the bid for construction was awarded to EW Johnson from Wichita in 1999. In 2000, the facility was ready for occupancy. The entire project took four years from conception to completion.

Main features
The new facility houses street, sewer, water, and parks staff, sign shops, administrative offices, fleet maintenance, central purchasing, and a heated vehicle storage room—all in a 72,000 square ft. building located on Plum Street. There is also a separate (unheated) 36,000 square ft. building for storing road equipment.

Aggregate, asphalt, sand, dirt, construction signs, pipe, manhole castings, water valves and fittings and other commodities used in day-to-day operations will be stored on the site. These items are currently stored at various places around town.

The fuel station at the new facility is used by all city vehicles. These vehicles are contained in a database that tracks and bills fuel consumption and repairs to each department.

What it Cost
$ 5,314,221 . . . construction
3,222,996 . . . architect’s fees
52,000 . . . . land acquisition
87,500 . . . . . furnishings
35,000 . . . . . fencing
16,000 . . . . . landscaping
142,000 . . . . telephones, computers, communication
40,600 . . . . . bond costs
81,000 . . . . . utility installation
28,000 . . . . . equipment for the purchasing warehouse
13,000 . . . . . shelving
38,700 . . . . . miscellaneous

$6,209,681 . . . Total Cost

The facility also includes many technologies that create a safer, healthier, and more efficient work environment.

Touring the facility
I recently received a tour of the new facility from Dennis Clennan. We started in the reception area, then toured the administrative offices equipped with a new space-saving file system similar to those used in medical offices. Division support staff share a common area that helps speed information-sharing among divisions.

Adjacent to the office area is a large central warehouse containing parts for maintenance and repair of all city vehicles. To ensure security, there is a separate caged room within the warehouse where pick-up orders are stored. This room is accessible from the outside 24 hours a day; the main warehouse has controlled access.

Our next stop was the impressive main shop. I noted that the floors looked clean enough to eat off of. Clennan grinned and said “We hope to keep them that way!”

Part of the cleanliness is attributable to the facility’s design. Separate continued on page 7 ➤
Anyone who has driven in Kansas in winter knows that deicing is a road maintenance necessity. However, some forms of deicing agents can cause significant harm to roadside vegetation, vehicles, bridges, and deicing equipment. Drinking water contamination has even been a concern in areas with shallow aquifers.

Some road departments are looking for more environmentally-friendly ways to keep the roads clear in winter. One such product is a relatively new additive called Ice Ban. The manufacturers claim it is nontoxic and has no adverse effects on plants, wildlife, or the water supply. Ice Ban has other benefits, as well—it reduces corrosion and increases the effectiveness of materials with which it is mixed.

Ice Ban was first used on roads in upstate New York in 1995. It is a natural concentrated liquid residue made from the wet milling of corn and production of alcohol. It is typically mixed with a magnesium or calcium chloride brine, or mixed with solid material like salt or sand. It increases the deicing potential of the material so less is needed to get the job done—note-worthy for Kansas road departments that have had difficulty getting their salt orders filled this winter!

Brine mixtures containing Ice Ban have at least 33 percent more deicing solids than brines alone, making them work more effectively for a longer period of time. These mixtures penetrate the snowpack vertically to the road surface, then spread out on the road. Unlike straight brines, these mixtures do not readily dilute, but instead adhere to the pavement, so they work longer. The residual effect can prevent new snow or ice from sticking to the road during subsequent storms.

Adding Ice Ban to brine mixtures also lowers the chance of corrosion. “When added at 5-20 percent of the mixture, corrosion can be reduced to less than distilled water,” says Mike Jones, Ice Ban’s sales rep for Kansas.

A significant benefit to adding Ice Ban to deicing material or brine is that it becomes more effective when the temperature really drops. Ice Ban freezes at temperatures lower than other deicers.

Adding Ice Ban to solid material can also help reduce loss of material at the outset due to “bounce and
scatter,” said Jones. Ice Ban makes the material stickier and heavier. “Ice Ban can be sprayed on stockpiles as they are formed,” said Jones. “It stays intact for years.”

Customer testimonials posted on Ice Ban’s web site indicate very few negative aspects of the product, but one concern is its viscous nature. Some road crews have reported that Ice Ban has plugged up spreader filters, but they concede that larger nozzles may alleviate the problem. They also note that the odor of Ice Ban can be a bit unpleasant.

Another concern is slipperiness. Roadway skid tests of brines mixed with Ice Ban have been performed by a number of states in the Snowbelt. Each test has found that Ice Ban yields to acceptable traction parameters. Studies have shown that the performance of a road treated with Ice-Ban is equivalent to a rain-wet road. Some customers still suggest caution in application, however; see box on previous page.

All in all, however, the advantages of Ice Ban appear to significantly outweigh the disadvantages. Ice Ban might be a good tool to add to your winter road maintenance strategy.

For more information, visit Ice Ban’s web site at www.iceban.com (our source for this article) or call Mike Jones, Kansas sales rep, at (816) 590-4556.

Kathryn Jensen is a senior in Journalism at the University of Kansas.

Hutchinson’s new facility
continued from page 5

areas have been built into the shop to isolate activities. The welding/fabrication area can be screened-off with a welding screen to keep fumes out of the main shop and other parts of the building. There is a separate room for working on small motors to isolate noise and exhaust. The washing/degreasing room prevents workers and clean equipment from being sprayed with waste water and grime.

A heated garage is adjacent to the main shop, with spaces for up to 30 vehicles. “We use it to park vehicles containing fluids or hydraulic equipment that would be affected by cold weather—vehicles we would want to start and drive right away during an emergency,” said Clennan.

The main shop has a 7-1/2 ton crane, a piece of equipment that required extra lobbying by Clennan for its installation. “We had to add height to the building to install it, and it took some convincing to get that to happen,” he said. “But it’s been well worth it,” Clennan said.

“The crane allows us to lift things much more easily, for example, getting a blade off a truck. This is a much safer situation for our workers.”

Other worker-friendly features of the new building include spacious locker rooms with showers and a large windowed break room.

“The break room gets a lot of use,” said Clennan. We often have staff presentations in here; it seats 90 people.” Clennan also noted that the break room is used as a gathering space for workers before their shifts begin, since they are not supposed to report to their work stations until the shift starts. “It helps us to comply with Fair Labor laws,” explained Clennan.

continued on page 10 ➤
Complying with GASB 34: How to value major capital investments

In our last issue, we explained that GASB Statement No. 34 (or “GASB 34” for short) sets new GAAP requirements for reporting major capital assets, including infrastructure assets like roads, bridges, water and sewer facilities, etc. Under GASB 34, Kansas governmental agencies that prepare GAAP statements must soon begin using accrual accounting methods for reporting such assets. This could be a major change for these agencies, which have traditionally used cash accounting reporting methods. Under cash accounting, physical assets appear on the books only during the year in which they are constructed; in subsequent years, they are off the books. Accrual accounting requires that the costs of long-lived assets be charged over the life of those assets.

GASB 34 is documented in a small paperback booklet devoted primarily to guidelines for developing financial statements and examples of such statements. The booklet defines capital assets, one class of which is infrastructure assets. The guidelines specifically identify roads, bridges, sewers, drainage systems, and other infrastructure commonly operated by local governments as capital assets.

According to GASB 34, each jurisdiction can use one of two general methods for valuing existing infrastructure assets: depreciation, or the modified approach. Whichever method is used, a fundamental requirement is a good inventory of assets. The inventory will include the historical cost, or estimated historical cost, of construction.

Depreciation method
The easiest method for valuing assets under GASB 34 is depreciation. Governments can use any reasonable and established method to depreciate an asset’s value over its useful life until it reaches salvage value. On each year’s financial statement, depreciation will be shown as an expense, and the capitalized value of the asset declines each year by the amount of the annual depreciation.

One simple method for determining depreciation is straight-line depreciation. The annual amount of straight-line depreciation is determined by the following equation:

\[ \text{annual depreciation} = \frac{\text{historical cost} - \text{salvage value}}{\text{useful life in years}} \]

This fairly straightforward method for valuing assets is commonly used by local governments to value rolling stock and other assets. However, this and other depreciation formulae for valuing assets may not be the best way to value infrastructure assets because it omits one critical variable: maintenance.

The life (and value) of a road or bridge largely depends on how well it is maintained. Regular maintenance adds value to infrastructure assets. For this reason, some agencies that have gotten a head start on valuing their existing capital assets have chosen not to use depreciation methods.

The alternative approach to valuing existing assets suggested by GASB 34 is called the “modified approach.”

Modified approach
The modified approach to valuing capital assets incorporates the benefits, or value, of maintenance activities into the reporting process. GASB 34 does not provide a complete description of such an approach but does describe the minimum tasks required inputs and outputs. In general, they include the following:

- maintain an up-to-date inventory of infrastructure assets;
- regularly assess the condition of all infrastructure assets and summarize the results, using a measurement scale;
- each year, estimate the annual cost required to maintain and preserve the assets at a minimum condition level established by the agency. This condition level should be expressed in terms of categories or a condition index (e.g., good, fair, and poor).

According to GASB 34, the assessment of infrastructure conditions must be conducted at least once every three years. In addition, the results of the three most recent condition assessments must provide reasonable assurance that the assets are being preserved approximately at or above the minimum condition level established by the agency.

Regarding reporting of those assets, according to Dennis Ross, P.E., Director of Professional Development for the American Public Works Association, “As long as the actual expenditure for maintenance and...
preservation meets or exceeds the predicted needs, the agency would not have to report the value of the assets. The information would be reported in the Required Supplemental Information (RSI) to the agency’s financial report.”

Determining the current value of infrastructure assets
Under the depreciation method for valuing assets, deriving a current value is fairly straightforward. However, under the modified approach, deriving a current value for infrastructure assets will be one of the most problematic requirements for city public works officials and county engineers. And it is also the one for which the least guidance is available.

The GASB 34 booklet’s discussion about valuing capital assets is rather brief and leaves a good deal of flexibility to engineers and other infrastructure managers. When addressing methods for estimating the value of capital assets, the text uses words like “professional judgment,” “reasonable,” and “consistent.” In other words, rather than prescribing rigid formulae for valuing assets, GASB 34 allows managers to estimate asset values through consistent and reasonable methods.

What’s next?
GASB 34 describes the required inputs and outputs of the modified approach in terms of an “asset management system.” In a future issue of the KUTC Newsletter, we’ll discuss how the elements of the modified approach can form the basis of a full-fledged asset management system for local agencies’ various capital assets.

This article was adapted with permission from the March-April 2000 issue of Technology News, Center for Transportation Research and Education, Iowa State University. It was written by Tom Maze, Transportation Sector Leader, Howard R. Green Company; former director of the Center for Transportation Research and Education, Ames, Iowa.

The depreciation method may not be the best way to value infrastructure assets because it omits one critical variable: maintenance.

Another source was “Start Tallying Your Infrastructure Assets,” by Dennis E. Ross, APWA Reporter, August 1999.

Correction: We apologize for spelling a Scot Loyd’s name incorrectly in our last article on GASB 34. He is a partner in Swindoll, Janzen, Hawk & Loyd, LLC.

What is the State of Kansas doing about GASB 34?
The State of Kansas is in the process of converting to GAAP reporting as set forth in GASB 34. The Financial Integrity Team in Central Accounting for Kansas Accounts and Reports (A&R) is spearheading this effort with help from consultants Allen, Gibbs & Houlik, L.C. and Berberich, Trahan & Co., PA. Their primary mission is to prepare a Comprehensive Annual Financial Report (CAFR) in compliance with GAAP using the new reporting model in fiscal year 2001 with minimal impact on state agencies.

A&R has a web site with information on the State’s conversion to GAAP. It is http://da.state.ks.us/ar/forum/gaap/default.htm.

Microsoft Excel and Access files are being used to translate the State’s central accounting data for use in GAAP reporting. A new fund structure has condensed the number of funds from 1,500 to less than 60.

To obtain information on capital assets, the consultants will assume 50 percent depreciation for the 1999 pro forma statements. For fiscal year 2000 and forward, a survey will be done to identify purchases for each of the last eight years for equipment and the last 40 years for buildings.

KDOT numbers will not be included in the Access tables because they will supply their own numbers. KDOT has estimated their assets at about $10 billion. They will be using the modified approach for asset valuation and will not employ the delayed implementation date option available.

Source: GAAP Conversion Summary Document, prepared in 2000 by Pam Karns, Kansas Financial Integrity Team leader.
Supervisor Training Well Received; More Sessions Planned for 2001

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

What do Kansas road crew supervisors say would increase their own job satisfaction and their crew's effectiveness? That was the first question asked at five fall LTAP sessions on successful supervision. Each of the 138 men and women who attended provided their top three answers. Their answers set the stage for the one-day session:

- Improve motivation
- Enhance communication—with crew members, with supervisors and with other crews
- Provide rewards—monetary, praise, more responsibility, more freedom, upward mobility
- Provide training—supervisory responsibilities and methods for teaching crew members
- Manage change—regarding downsizing, new methods
- Promote teamwork
- Manage time better
- Increase productivity/efficiency
- Have a voice in equipment purchases/needs, be included in staffing decisions
- Value planning time
- Need clear lines of authority and clear goal statements
- Instill good work ethics
- Develop conflict management skills

These topics and others were addressed by the instructor as he discussed creating a healthy work environment. Students were given examples of effective teams and why they work well. Opportunities were provided for students to assess their own supervisory styles.

We received many positive comments about this workshop. An example is this comment from Larry Engstrom, road supervisor for Wilson County: “My foreman and I attended the workshop in El Dorado. Before the class, we both thought we were doing a good job, but we found out we weren't! During our drive back home, we talked about what we would change. Now we are including more people in the planning process and our team motivation is up. We really appreciated the training.”

In the next few months we will review what we learned from this first attempt at providing supervisory training for Kansas road crew supervisors. We will refine the program and offer it again across Kansas in 2001. If you would like to schedule this training at or near your agency in 2001, call me at (785) 864-2594. There is no fee for hosting an LTAP workshop.

If you would like to have a copy of the Successful Supervision workbook used in this training, see page 15.

Rose Lichtenberg is training coordinator for Kansas LTAP.

Hutchinson's new facility, continued from page 7

After touring the rest of the main building, including a conference room, sign and paint shops, computer rooms and administrative offices, we stepped outside for a look at the road equipment building and city fuel station. Since the facility covers a lot of ground (the fuel tanks are over a city block away from the main building), staff sometimes use golf carts to get around.

The new facility replaces two existing public works buildings. An environmental assessment Phase I has been done for each property, and Phase II is in process. Once completed, staff will propose that the sites be sold.

If you are in the Hutchinson area, Clennan invites you to come and see their new building. You will be glad you did. Congratulations to Hutchinson's public works staff and to its forward-thinking City Council on such a fine facility.

For more information, contact Dennis Clennan, Hutchinson public works and engineering director, (316) 964-2644.

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KDOT Korner

The Mighty, the Versatile...Dump Truck!


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

In September 2000, KDOT participated in an equipment expo that showcased equipment innovations developed by DOTs in four states—Iowa, Kansas, Nebraska, and Missouri. Some of these innovations could be useful for city or county road departments.

KDOT innovations are featured on a video available from the Kansas LTAP. Rick Keefover, KDOT assistant equipment engineer, edited the video from a longer production by the Missouri DOT.

The video shows eight innovations developed by KDOT district staff. Each of the innovations is explained by a KDOT district team member who co-developed the innovation. The innovations are:

1) Cone trailer—This roomy trailer attaches directly and securely to the back of a dump truck, using pins and a sock hitch from an impact attenuator instead of a ball hitch. It does not “jack-knife” when pulling in and out of areas where cones and signs are placed, making it easier for a new employee to set up and take down a lane closure.

2) Anti-ice tank conversion to weed sprayer—This innovation uses an 1800 gallon tank with water in the front chamber (to balance the weight) and weed spray chemical in the back chamber. A hose reel with a handheld sprayer is connected to the center boom. The pump is controlled from the truck cab.

3) Weed spray truck modification with break-away bumper boom—This mechanism allows weed spraying along roads without having an operator outside the truck. The modification is designed to accommodate spraying two feet on each side of a guard rail in one pass. The unit can also spray shoulders and brush, and has a modification to spray vegetation 15-30 feet away. The spray mechanism is attached to a break-away arm in case the boom hits a post.

4) Dead animal lift—This is a snow plow scoop lift on a truck that has been modified to pick up and carry deer or other dead animals. It requires minimal assistance from crew. The scoop is large enough to hold more than one deer.

5) Dead animal lift II—This is a simple dump truck modification, using cable attached with chains to the back end. It saves the crew from lifting large dead animals, especially deer. When the truck bed is lowered, an animal can be laid against the lowered tailgate and attached to the cable. When the bed is raised, the animal is raised with it. Then the crew can drag the animal from the tailgate into the bed of the truck.

6) Mower tractor safety screen—The screen helps prevent debris from getting into the motor and the cab. It is angled-out so that the back window of the cab can be opened. The screen can be easily removed for motor maintenance.

7) Portable hydraulic unit—This was developed for when extra hydraulic power is needed; for example when lifting and lowering a salt conveyor. It is made from a salvaged fuel tank and motor and an hydraulic pump and oil filter system. It can also be used for lubricating spreader chains.

8) Concrete barrier repair truck—In this impressive retrofit of a dump truck, the bed was lengthened and rebuilt and storage bins were added for fasteners and tools. The on-board 6,000 lb. capacity hydraulic crane can turn 340 degrees to lift concrete barriers sections onto the truck. The truck can hold two sections of concrete barrier. This retrofit allows one truck to do the job that typically needs several vehicles, and only one lane of traffic needs to be closed.

For more information on these innovations, check out the video! Turn to page 15.
Topeka’s Audible Pedestrian Signals Aren’t for the Birds... Even Though They Sound Like it

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

If you stop at a pedestrian signal in downtown Topeka, in addition to seeing the customary “walk” and “don’t walk” panels, you might also hear “chirp!” or “cuckoo!” Several pedestrian signals have been retrofitted with audible signals according to recommendations of the American Disabilities Act (ADA).

Access to traffic signal information is important for pedestrians who have vision impairments. The U.S. Access Board notes that most intersections pose little difficulty for independent travelers (with proper training) who are blind or have low vision. But there are some intersection geometries, acoustic conditions, and traffic control systems that make it very difficult for persons who are visually impaired to obtain the cues necessary to cross streets independently and safely.

Topeka, along with many communities throughout the United States and other countries, are installing accessible pedestrian signals (APS) to help make intersections safer.

Different kinds of technology
An APS tells the walker which direction is clear of traffic. Several kinds of units are available to meet this need. All products provide a sound, a vibration at the signal post, or both, during the walk interval. A few devices have audio output that varies by message or repeat frequency as the pedestrian cycle changes from “walk” to “don’t start” to “don’t walk.”

The audible signals in Topeka tell walkers which direction is clear to cross—chirp for east/west and cuckoo for north/south. Topeka’s traffic operations section chose audible signals because they are effective—and are less expensive than other kinds of models, said Gene Duncan, traffic operations manager.

Topeka purchases their signal boxes from Traffic Parts, Inc. of Spring, Texas (phone: 800/345-6329). The units cost about $7,000 per corner or $28,000 per intersection. The boxes are retrofitted to existing pedestrian traffic signals. “They work on 110 volts and connect to the walk light,” said Duncan.

The benefits
Duncan notes that the audible signals perform well in providing safer mobility for persons who are visually impaired. Topeka works in concert with advocacy groups for the disabled who train individuals how to walk their surroundings.

Some problems
While audible signals clearly help some people, they annoy others, especially those who live close to the signals. Duncan said that residents in downtown apartments complained about hearing the signals all night long when their windows were open (for signals programmed to cycle and on off by themselves). To address this problem, the signals were programmed to turn off late at night.

Neighbors also have complained about the signal volume. The signals can be programmed to provide less volume, but Duncan notes that the signals have to be loud enough to be heard over traffic.

“It’s tricky,” Duncan said. “We don’t have a db meter or anything like that. We look at it on a case-by-case basis when we receive a complaint.”

Vandalism is also a concern, although a minor one in Topeka so
Are Accessible Signals Required by Law?

The Americans with Disabilities Act (ADA) requires access to the public right of way for individuals with disabilities. But does that mean communities have to install pedestrian accessible signals at every signalized intersection? The answer is no. The Transportation Equity Act for the 21st Century—TEA-21, the successor to ISTEA—directs that pedestrian safety considerations, including the installation of audible traffic signals, where appropriate, be included in new transportation plans and projects [Sec. 1202(g)(2)].

“Where appropriate” is up to each community to decide, although guidance is available from the U.S. Access Board. Kent Johnson, a staff member of the Great Plains Disability & Business Technical Assistance Center that serves several states including Kansas, notes: “The ADA says that crosswalks have to be accessible, but does not say how. The Access Board provides information and guidance for knowing where to install accessible intersections, but their suggestions do not constitute a final rule—they are not part of the law.”

The Access Board’s publication entitled Accessible Pedestrian Signals describes criteria used by various U.S. cities for determining when to install APS. It says “A number of U.S. jurisdictions have well-articulated systems for determining whether an APS is warranted. Each involves participation of one or more representatives of at least three groups of experts: traffic engineers, orientation and mobility specialists, and pedestrians who are blind.”

Some communities have highly structured intersection rating scales and require a certain number of points to warrant installing an APS. But intersection evaluations can be expensive. One city in Oregon has determined that the expense of evaluating an intersection is likely to be higher than simply installing the APS.

Other cities, like Topeka, use a less structured process. Topeka’s rule of thumb is to install APS at all new signalized intersections and retrofit existing intersections as requested by visually impaired individuals or advocacy groups for the disabled. A certain amount of money is budgeted for APS installation each year; if requests exceed that amount, the city council is asked for additional funds. No such request has been denied by the city council to date.

Accessible Pedestrian Signals lists the following factors to consider in determining whether an APS is warranted:

- Proximity to a facility for persons who are blind
- Proximity to alternate crossings, transit stops, and key pedestrian facilities
- Intersection configuration and street width
- Vehicle speed
- Traffic volume (either heavy or very light)
- Pedestrian accident records
- Demonstrated need or user request
- Presence of pedestrian push buttons
- Surrounding land use and neighborhood acceptance
- Existence of a signal that can be retrofitted

Like many other traffic safety issues, enforcement will happen in court. Governments may be legally liable if a person with a visual impairment is injured as a result of the absence of APS, especially if there has been a request for APS at the relevant intersection.

Intersections that are good candidates for APS include very wide crossings, secondary streets with very little traffic, non-orthogonal or skewed crossings, T-shaped intersections, high volumes of turning vehicles, split-phase signal timing and noisy intersections.

far. They have had one instance of vandalism in 7-8 years, says Duncan. He advises placing the boxes as high up the pole as possible so they cannot be reached from the ground. Even with this precaution, the boxes are not vandal-proof. In Topeka’s instance of vandalism, “someone climbed the pole and took out the box with a baseball bat, I guess,” said Duncan.

Where to get more information

For more information about Topeka’s audible traffic signals, call Gene Duncan at (785) 368-3913.

National guidelines for installing accessible traffic signals are published in Accessible Pedestrian Signals, by the U.S. Access Board. This 37-page document describes the types of products available on the market and where and under what conditions to install them. This publication is free of charge and can be obtained from the Great Plains Disability & Business Technical Assistance Center (DBTAC) at (800) 949-4232. Accessible Pedestrian Signals also lists sources for APS products along with a chart that compares the characteristics of the various kinds of units.

The Great Plains DBTAC has a free newsletter on a wide variety of ADA issues called The ADA Report. Additional information, with links to related web sites, can be found at the DBTAC’s web site at www.adata.org.

Don't let the Toy Story-like animated Aussie narrator from “down under” lead you to think that this videotape is a lightweight treatment of the dangers of digging. It provides an excellent overview of the factors to consider before digging or cleaning sewer lines. It clearly describes steps to take if your crew hits a gas, electric, water line or optical cable. It also describes safe procedures for cleaning sewer lines.

Some tips from the video:
—Don’t look directly into a cut fiber optic cable; it can damage your vision;
—Trenchless digging can sometimes result in a utility line being run through a sewer line, and you may not find out until the sewer line is cleaned the future (and the utility line is cut in the process).
—When digging, listen and be aware of odors, hissing, blowing dirt or bubbling water. If you staff encounter any of these signs that a utility line has been hit, they need to know what to do—and do it quickly, with confidence.

If your staff needs training in this area, or a refresher, turn to page 15 and borrow this video. It’s an excellent and memorable production and packs a lot of useful information into its seven-minute running time. Bob Keller, safety director for Dodge City’s street department, showed this video recently and said “All the guys enjoyed it very much. It was not only informative but entertaining as well.”

The videotape was produced in 1999 by the Kansas Gas Service.
Free Resources

Check off your selections, fill in the bottom portion, and return this form to:
KUTC Materials Request, 1530 W. 15th St., Room 2011, Lawrence, Kansas 66045
or fax to 785/864-3199

Videotapes

Two videotapes or one-hour’s worth of material per lending request. Two week lending period.

- Message From Down Under (re: digging dangers)
  7 minutes, by Kansas Gas Service, 1999. See page 14 for more information.
- Corridor Management
  12 minutes, by Kansas DOT. Describes several traffic planning options for balancing land use and public and private investment.
- Innovations 2000—Good Ideas from KDOT
  12.5 minutes, by Kansas DOT, 2000. Shows road equipment innovations developed by KDOT staff and showcased at “Innovations 2000,” a four-state equipment expo.

Publications

You are free to keep these unless otherwise noted.

- Anti-Icing With Salt Brine... A Key for Winter Maintenance Aresenals in the 21st Century
  4 minutes, The Salt Institute, 1999.
- Billion$ at Risk During Snow Emergencies
  (4 pages) This article from the Salt & Highway Deicing Newsletter discusses an economic analysis of the impact of winter weather conducted by Standard & Poor’s DRI. The Salt Institute, 1999.
- Serving Rural America
  (32 pages) Outlines USDOT-sponsored programs targeted at improving rural transportation infrastructure, services and safety. Information is general but includes web sites for more information. USDOT, 2000.

Order Form

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- Successful Supervision
  Workbook for Kansas LTAP workshop. Discusses strategies for successful supervision for road crew supervisors.

Equipment

Available free—for loan to local highway agencies. Call us at (785) 864-5658 to arrange time period needed for loan. There could be a waiting list for these items.

- Jamar Technologies, Inc. (DB-400) Turning Movement Counter Board
  A basic model for recording turning movements at intersections. The board is lightweight and comes with its own case.

- Jamar Technologies, Inc. (TDC-8) Turning Movement Counter Board
  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.

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www.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, towns, 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.

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