Pavements Are Assets

by Joe LaRusso, Illinois Pavement Preservation & Maintenance Association President

“Asset Management, Pavement Preservation, Preventive Maintenance” are the phrases that describe the momentous shift in public works policy for decades to come. I’m sure that you’ve heard or read about it by now – pavements are assets. Whether in robust or lean economic times, the intelligent allocation of precious dollars over a user agency’s pavement system makes both good sense and cents. A comprehensive pavement preservation and maintenance program, as part of a larger asset management system, is now a necessary tool for all user

(continued on page 6)
From the Desk of . . .

According to the Department of Labor, three of the top ten most dangerous jobs involve highways - #5 Driver/Sales Workers, #9 Construction Laborers, & #10 Truck Drivers. These statistics show that safe work zones are not only important to highway workers but also to motorists.

Following are some steps to promote safe work zones:

- **Trained Personnel.** Have your flaggers been trained in proper procedures? Do the workers know the correct use of traffic control devices? Do you know what is required by the Manual of Uniform Traffic Control Devices (MUTCD)?

- **Alert Flaggers.** If a flagger is required, make sure that your primary flagger has adequately scheduled breaks. An alert flagger is essential to a safe work zone.

- **Proper Work Zone Inspection.** Inspect your work zones daily. Make sure to document inspection date and time, and note any deficiencies. Require the contractor to correct problems. Modify the traffic control plan in the field if problems are occurring.

- **Public Relations.** Let the local media know about timelines of upcoming projects. Provide motorists with alternative routes. Minimize lane closures and stopped traffic, and avoid peak commuting hours. Cooperate with community events and business owners.

Most of these tips are common sense approaches and all require a proactive mind set. With your help traffic deaths in work zones can be reduced in Illinois. The Technology Transfer Center hopes that your agency has a safe, productive construction season.

Kevin Burke
T² Program Manager

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**TOP 10 MOST DANGEROUS JOBS**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Occupation</th>
<th>Fatality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Timber Cutters</td>
<td>117.8</td>
</tr>
<tr>
<td>2</td>
<td>Fishers</td>
<td>71.1</td>
</tr>
<tr>
<td>3</td>
<td>Pilots &amp; Navigators</td>
<td>69.8</td>
</tr>
<tr>
<td>4</td>
<td>Structural Metal Workers</td>
<td>58.2</td>
</tr>
<tr>
<td>5</td>
<td>Driver-Sales Workers</td>
<td>37.9</td>
</tr>
<tr>
<td>6</td>
<td>Roofers</td>
<td>37.0</td>
</tr>
<tr>
<td>7</td>
<td>Electrical Power Installers</td>
<td>32.5</td>
</tr>
<tr>
<td>8</td>
<td>Farm Occupations</td>
<td>28.0</td>
</tr>
<tr>
<td>9</td>
<td>Construction Laborers</td>
<td>27.7</td>
</tr>
<tr>
<td>10</td>
<td>Truck Drivers</td>
<td>25.0</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics

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**Editorial Note:**

The Work Zone Safety Task Force Article which appeared in the Spring 2004 edition of the Illinois Interchange Newsletter incorrectly stated that the fatalities were for the year 2004. The article should have stated that the fatalities occurred in 2003. We apologize for the error.
Rehab of Streets & Highways Seminar

On April 14, 2004, the Technology Transfer Center presented our annual Rehabilitation of Streets & Highways Seminar in Utica, IL. Over 100 local agency personnel attended the seminar to learn about new and innovative ways to preserve and rehabilitate highways.

Bill Vavrik, Applied Research Associates Inc., began the morning session by describing the concept of pavement preservation and the benefits of preventive maintenance. He also highlighted rehabilitation and preservation methods. The remaining morning speakers focused on concrete pavement rehabilitation, bituminous pavement rehabilitation, spray-injection technology, high performance patching materials, pavement testing, and crack sealing in two separate breakout sessions.

In the afternoon, participants were introduced to pavement rubblization techniques used to prepare existing concrete pavements into excellent sub-base for reconstruction. After this general topic, two concurrent sessions concluded the seminar. One session dealt with heat scarification and foamed asphalt. The other discussed worker protection and work zone safety.

We would like to thank the Operating Engineers Local 150 Union for allowing the seminar to be held at their union hall.

The organizations below sponsored the lunch and refreshment breaks during the seminar. Without these organizations, the seminar would not have been a success.
Mendocino County lies on the coast of California, about one hundred miles north of San Francisco. Mendocino County Department of Transportation (MCDOT) is responsible for just over one thousand centerline miles of roadway and serves a population of 87,000 people inhabiting an area of 3,510 square miles. By implementing a simple, yet thoughtful program they have achieved a 42% reduction in low volume road crashes.

While this figure may appear to be beyond the realm of believability to many safety professionals, let’s stretch plausibility even further by mentioning this program has been delivering this benefit for more than 10 years; and, the program cost is within every county’s reach, including even the most sparsely populated farm-to-market county, parish, or township.

Learn how they did it

You and your road safety management team are invited to experience the entire MCDOT process start to finish at the Mendocino County Road System Traffic Safety Review (RSTSR) Showcase in Ukiah, CA, on September 28-29, 2004.

At this Showcase, MCDOT staff will share every detail including all the start-up, roadway selection, field review, and deficiency correction processes as well as their subsequent treatment evaluation, treatment selection methodology and cost-benefit measurement process details.

An integral part of this Showcase experience will be guided visits to previously improved field sites. Each field site will be clearly defined showing the previous condition factors and the corrective measure implemented. Participants, as a group, will review and evaluate prior conditions and the applied corrective action. Upon returning to the Showcase auditorium, each team will share reports and their proposed corrective actions, and we will all discuss the potential solutions.

This Showcase is committed to provide all the information and post-showcase support agency personnel will need in order to return home and immediately begin implementing an RSTSR program. To meet that commitment, these key additional support items will be included:

1. A post-showcase support group will be available to all participating agency teams for “on call” assistance throughout their entire implementation process.
2. An easy to use Sign Management System (SMS) software package, developed by the New Hampshire LTAP Center, will be demonstrated and distributed at no cost to interested participants. Post-showcase user support is available through the New Hampshire LTAP Center.
3. An Asset Management software (continued on page 10)
Where’s My Check?

by Jim Layden, Bureau of Local Roads and Streets, IDOT

If you are waiting for a payment from the State, you can now access the Comptroller’s (IOC) website and check the payment’s status. The link and directions for use are located on the IDOT Website, www.dot.il.gov under Public Partners, Local Agency Resources, Where’s my Check – Link to Comptroller. You may also access the Comptroller’s Website directly at www.ioc.state.il.us. The Vendor Payments page of the Comptroller’s Website is secure and you will need your Taxpayer Identification Number (TIN) to gain access.

On the left side of the IOC main page, click Vendor Payments. A security box will appear - click Yes. Next, the Vendor Login screen appears - you are required to type your TIN and click OK. On the next screen, Vendor Summary, click Payments. This takes you to the Vendor Warrants page. Under the header Selection Criteria, scroll down to 494 – Transportation and click Find Warrants at the bottom of the screen. You have arrived at the Vendor Warrants screen which should include your warrant (check) number and the date it was issued by the IOC.

If the payment amount you are expecting is not shown on the Vendor Warrants screen, one or more of the following may have occurred:
1. The check/warrant is not being processed with the TIN entered on the Vendor Login screen,
2. Your invoice has not been processed by IDOT, and/or
3. Your invoice has not been processed by IOC.

If you have multiple TIN’s please attempt the same process with all possibilities which will require you to go back to the Vendor Login screen. To avoid this in the future please include your preferred TIN on all future funding agreements. If you have exhausted all TIN possibilities, please contact your District Office. If it has been over three weeks from the date of the District’s submittal to the Central Office please ask your District Office to make inquiries with the Central Office. If you have any questions contact Jim Layden at laydenmj@dot.il.gov.

Changes to IDOT’s Website and E-mails

In order to make it easier to communicate, IDOT has made changes to their website and e-mail addresses.

The Department’s homepage has been changed to: www.dot.il.gov

The Technology Transfer Centers new website address is: www.dot.il.gov/blr/t2center.html

Furthermore, all e-mail addresses for IDOT personnel have been changed to: username@dot.il.gov. The old e-mail addresses will continue to be supported at this time.
Pavements Are Assets  
(continued from page 1)

agencies. Preventive Maintenance saves money. Published studies document life-cycle cost savings of $4-$7 in the long run for every $1 spent on timely Preventive Maintenance. Applying the “Right Treatment to the Right Pavement at the Right Time” allows one to cover your assets and manage them in the most cost-effective manner possible. This benefits the user agencies, the taxpayers, the industry, and the government. Michigan DOT’s recently released study shows that by spending $80 million for preventive maintenance over five years, the overall rating of the pavement system improved and saved the state almost $700 million in rehabilitation and reconstruction costs. There are many other studies and programs that substantiate the myriad benefits of Preventive Maintenance.

The Illinois Pavement Preservation & Maintenance Association (ILPPMA) is a contractor-driven association recently formed to ensure that Illinois user agencies are well informed about Preventive Maintenance (PM) and receive the benefits of a positive Pavement Preservation program. Successful and proven PM programs exist in the states surrounding IL, specifically Michigan, Minnesota, and Missouri. Recent FHWA and AASHTO studies have shown that successful implementation requires user agency commitment (in both policy and dollars) and education, as well as adoption of the most advanced materials, designs, and application techniques. ILPPMA is a resource intimately familiar with the details of what works and why, in other states as well as Illinois.

The Preventive Maintenance treatments and methods we promote apply to both asphalt and concrete pavements, and for best results generally require action before a pavement slips into a condition requiring rehabilitation. Various Illinois agencies already use many of the PM treatments that are nationally proven to perform well. Throughout the state one will encounter the use of slurry seals and micro-surfacing, open-graded friction course (OGFC) and thin overlay hot-mix surfaces, concrete dowel bar retrofit and diamond grinding, etc. Each IDOT District, many counties, and many municipalities have successful examples of one or more of these PM treatments, and ILPPMA members can assist you in reviewing these applications and projects. In most of these situations, though, these treatments were not applied in a true Preventive manner using the latest technology, and it makes a big difference in the long run.

ILPPMA has recently been active in presenting the Preventive Maintenance concept to IDOT Districts. We look forward to continuing these efforts with T² and Local Roads, counties, municipalities, and townships. There are many ways for each type of agency to better and more economically manage their pavements and get a bigger bang for each buck. We can help show you the way.

For more information check out our web site at www.ilppma.org, or send me an email at jlarusso@earthlink.net.
A Cost Effective Solution for Soft or Loose Soils - Expanded Polystyrene Geofoam

By Gib Peaslee, Coordinator, NLTAPA Product Demonstration Showcase Program

When working on roadway projects, do you occasionally run across situations where the underlying soft soil is too soft and compressible to carry designed loads, or the estimated time-rate of settlement of an embankment exceeds acceptable standards? Have costly corrective fill measures still resulted in significant settlement or decreased stability over time? Do you deal with failing slopes, excessive culvert loads, or problems with high lateral loads behind retaining structures? Expanded Polystyrene Geofoam (EPS Geofoam) could be your answer!

EPS Geofoam is a rigid foam plastic engineered with a unit density as low as 1 pound per square foot, thus delivering a material that is 100 times lighter than most soils. In particular situations this extreme difference in density makes EPS Geofoam an attractive fill option. A lightweight manufactured molded block, EPS Geofoam can be easily cut to any size or shape at the job site. Additionally, as an embankment soil alternative, EPS Geofoam can be covered to look like a normal slope embankment or finished to look like a wall. This technology, when properly applied in the appropriate situation is a field tested, budget-friendly winner. Here is a look at some of the less obvious but very important field proven benefits:

- Accelerated construction
- Payroll, transportation and equipment cost savings
- Reduced labor time for construction
- Exerts little or no lateral load on retaining structures

University of Rhode Island Transportation Center are joining together with the Federal Highway Administration’s (FHWA) Rhode Island Division, the FHWA Resource Center, and the Rhode Island and Florida Local Technical Assistance Programs to present a one-day Demonstration Showcase on EPS Geofoam and recommended field applications – what to do and what not to do.

At the Showcase participants will experience and evaluate all aspects of this unique technology. Here’s a look at what to expect:

- Peter Osborn, FHWA Senior Geotechnical Engineer, will discuss the history and recommended applications for this technology.
- RIDOT planners, designers and engineers will discuss every aspect of the showcased project.
- Representatives from Cardi Corporation, the project construction contractor, will offer insights on the EPS Geofoam technology from their perspective as the installing contractor.
- A guided field visit to a previous EPS Geofoam installation will provide an opportunity for

Learn More About EPS Geofoam Technology

On Tuesday, June 22, 2004, the Rhode Island Department of Transportation (RIDOT) and the

(continued on page 8)
Expanded Polystyrene Geofoam  
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in-use evaluation. There is not much to see...but that’s the point!
• A guided visit to the actual construction site where participants will gain a real-time experience with EPS Geofoam block preparation and placement.
• A post-showcase support team will be available to assist with first-time applications back home.

Our goal is to provide a well-rounded professional learning opportunity including experienced professional support for your future EPS Geofoam implementation efforts. Decision-makers cannot afford to miss this opportunity. CEU and PDH credits are available for this Showcase.

Registration is $30 and includes all handout materials and lunch. For those requiring overnight accommodations, a group room block has been arranged at the Radisson Airport Hotel in Warwick, RI, for $89 per night for single or double occupancy. You may contact the hotel direct at 800/333-3333 or 401/739-3000. Please mention “University of Rhode Island Transportation Center” to receive this rate. To register, or for more information on this Showcase, visit www.pdshowcase.org or call Cathy Manchester at the Rhode Island LTAP Center, 401/874-7075 or Chris Ritch, at the Florida LTAP Center, 352/392-2371 ext. 223. Showcase facility and overnight accommodation location maps will be provided upon registration.

Energy Transfer Technology Inc.

Affiliated with Energy Transfer Technology, Inc. ‘Surrey, British Columbia, Canada

Energy Transfer Technology, Inc. is dedicated to providing hands-on training programs designed with your specific maintenance and safety requirements in mind. ETT trains to your requirements, including consideration of the participants’ level of knowledge—both initial and desired—and the types of equipment to be included in the instruction.

Classes are individually tailored to meet your company’s specific needs and are conducted on-site in your work environment. ETT’s instructional design depends on interactive discussions, often utilizing a working training unit, cutaways, charts, viewgraphs, handouts and the customer’s equipment for reference and examples. Texts are provided to each student for classroom use and future reference.

Research has proven that this format is the one which best aids skill retention and transfer back to the job where it really counts! Once a course is confirmed with your company, ETT works with your representative to customize program content and integrate your equipment schematics/drawings into the reference text. Our instructors, experts in their field and averaging twenty years experience, ensure that the final product meets the highest quality standards.

If you are interested in the Energy Transfer Technology, Inc.’s hands-on training programs, please complete the survey on page 9 and fax it to Scott Hammer at 412/291-3030 by June 30, 2004.
Attention Illinois City/County Fleet & Heavy Equipment Maintenance Supervisors!

(please forward to your fleet/equipment supervisor if this is not your responsibility-Thank you!)

ETT has approached the Illinois T² Center about offering fleet/heavy equipment maintenance skills and safety training to local agencies in Illinois. Since we do not have the resources to offer this training, ETT will use the following survey to judge the level of interest among Illinois local agencies. Please review the list of courses below and indicate by marking an ‘X’ in the space provided by the ten (10) courses that would be most beneficial to your technicians and your shop efficiency.

Most of these courses will be two days in length and held nearby your location at host local agency facility. **Cost for these two-day courses will be $425 per student** which includes two days of classroom and hands-on instruction, and the subject reference manual. Classes are limited to a maximum of 15 students and a minimum of 10 students. All students should bring note-taking material and non-host students are welcome to bring scan tools, if appropriate, to the class.

If there are training topics not listed here that your technicians need, please list them in the space provided at the bottom of the list. **Please call Scott Hammer at 814-456-0954 with any questions you may have.** Once you have finished the survey please fax it back to Scott Hammer at 412-291-3030 by June 30th, 2004 as the programs are scheduled to begin August 16th, 2004.

Thanks for your participation in this innovative Illinois program!

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<thead>
<tr>
<th>Course</th>
<th>Course</th>
<th>Course</th>
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<tbody>
<tr>
<td>Mobile Equip. Hydraulics</td>
<td>Fall Protection</td>
<td>Advanced Transmissions</td>
</tr>
<tr>
<td>Mobile Equip. Hydraulics II (extra shop day)</td>
<td>Truck/Auto Electrical Review/ Sensor Diagnosis (Basic Electrical Course)</td>
<td>Scan Tool Diagnosis/Electronically Controlled Automatic Transmissions</td>
</tr>
<tr>
<td>FPS Mobile Hydraulic Cert.</td>
<td>Basic Scan Tools Program</td>
<td>CNG Vehicle Troubleshooting</td>
</tr>
<tr>
<td>Lubrication-Mobile Equip.</td>
<td>No-Code Drive-ability</td>
<td>LPG Vehicle Troubleshooting</td>
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<tr>
<td>Hydrostatic Drives</td>
<td>Strategy-Based Diagnostics</td>
<td>Fuel Injection-GM</td>
</tr>
<tr>
<td>Air Brakes/Truck Pneumatic Systems/ABS Systems</td>
<td>Strategy-Based Diagnostics Plus (extra shop day)</td>
<td>Fuel Injection-Ford</td>
</tr>
<tr>
<td>Hydraulic ABS Brake Systems</td>
<td>Computer Strategies &amp; Diagnostics</td>
<td>Fuel Injection-Chrysler</td>
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<tr>
<td>Heavy Duty Brake Systems</td>
<td>Air Bag Systems (all Mfgs.)</td>
<td>4-Gas Analysis (Emissions)</td>
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<td>Mobile AC/Refrigeration</td>
<td>Heavy Duty Batteries/Charging/ Starting Systems</td>
<td>Aerial Equip. Safety Maintenance</td>
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<td>Advanced AC Controls</td>
<td>Truck/Heavy Equip. Electronics</td>
<td>Aerial Device DC Electronics Overview</td>
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<td>Automotive Engine Mechanics</td>
<td>Problem Diagnosis</td>
<td>Portable Message Sign Maintenance</td>
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<td>Diesel Engine Mechanics</td>
<td>Truck/Auto Electronics</td>
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<td>Heavy Equip. Operations</td>
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<td>Basic Rigging</td>
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City/County: _________________________________________________________________________

Name: ______________________________________________________________________________

Phone: _______________________________________________________________________________
Road Crashes Reduced in CA  
*(continued from page 4)*

Travel Stipend Program

Travel Stipend Program (TSP) scholarships are available for two rural agency teams per state or TTAP. TSPs will cover air travel, overnight accommodations and motor coach transportation fees directly related to this Showcase. Priority will be given to agencies meeting the following criteria: 1. Serving populations under 50,000; 2. Have extensive low volume road miles or high crash rates on low volume roads; 3. Have a restricted travel policy.

Upon registering, qualifying agencies will be provided further travel scholarship program details. For more information on the Travel Stipend Program contact Renee Curtis at the Florida LTAP Center, 352-392-2371 ext. 233, email: pdshowcase@ce.ufl.edu.

Showcase registration fees are not included in the Travel Stipend Program.

You should attend if…

- you are responsible for a large number of low volume roadway miles
- you are responsible for signs and markings of your roadways
- you think safety is important
- you are a public official concerned about roadway safety

Registration Information

The Showcase will convene at the Mendocino College in Ukiah, CA. The registration fee is $125 per person for the two-day Showcase. This includes lunch during the Showcase, a buffet dinner Tuesday night—perfect for renewing or establishing relationships—a complete manual containing illustrations and text of all presentations, and MCDOT sample final report tables. Registration fees are not refundable but substitutions are welcome. AAA Travel is available (800-881-6707 ext. 2234) to assist with airline and hotel accommodations for this Showcase. Area location maps for Ukiah, CA, will be provided upon registration. To register, or for more details, please visit www.pdshowcase.org or call Chris Ritch at the Florida LTAP Center, 352-392-2371 ext. 223, email: chris@ce.ufl.edu, or Daiana Mathis at the California LTAP Center, 510-231-5672, email: daianam@berkeley.edu.

We tip our hats to Stephen H. Ford, RCE, with MCDOT for developing and setting this program in motion and to Eugene Calvert, P.E., former MCDOT Director, for guiding the development of the TRB award winning paper calling national attention to this program. A heartfelt thank you is due the MCDOT management team and the Mendocino County Board of Supervisors for their willingness to share their valuable public safety program with the rest of the nation.
SAFETY CORNER

There are two main causes of accidents:
1. Unsafe acts of people.
2. Unsafe conditions.

Unsafe acts of people account for 80% of all accidents, unsafe conditions make up the remaining 20%.

TOIRMA Top 10 Safety Rules

1. KEEP ALL WALKING AND WORK AREAS CLEAN
2. KEEP STEPS AND CLIMBING SURFACES SECURE AND FREE OF DAMAGE
3. USE PROPER LIFTING TECHNIQUES
4. WEAR SAFETY GLASSES WHEN OPERATING ANY POWER EQUIPMENT
5. WEAR STEEL TOE FOOTWEAR
6. DO NOT WEAR JEWELRY
7. USE THREE-POINT CONTACT MOUNTING AND DISMOUNTING EQUIPMENT
8. INSPECT VEHICLES AND EQUIPMENT FOR SAFE OPERATING CONDITIONS
9. SEATBELTS WILL BE WORN AT ALL TIMES WHILE OPERATING TOWNSHIP VEHICLES OR EQUIPMENT
10. ONLY PROPERLY TRAINED AND QUALIFIED EMPLOYEES WILL OPERATE TOWNSHIP VEHICLES AND EQUIPMENT

We must all work together to correct the unsafe acts of people and unsafe conditions.

Your Township Partner

TOIRMA
Township Officials of Illinois Risk Management Association
The Technology Transfer (T²) Program is a nationwide effort financed jointly by the Federal Highway Administration and individual state departments of transportation. Its purpose is to transfer the latest state-of-the-art technology in the areas of roads and bridges by translating the technology into terms understood by local and state highway or transportation personnel.

The Illinois Interchange is published quarterly by the Illinois Technology Transfer Center at the Illinois Department of Transportation. Any opinions, findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect views of the Illinois Department of Transportation, or the Federal Highway Administration. Any product mentioned in the Illinois Interchange is for informational purposes only and should not be considered a product endorsement.

Illinois Technology Transfer Center
Illinois Department of Transportation
2300 South Dirksen Parkway - Room 205
Springfield, IL  62764
Fax (217) 785-7296

Program Coordinator:
KEVIN BURKE ....................... (217) 785-5048

Graphics Design Systems Specialist:
AMY NEALE ............................... (217) 782-1682

Training Development Technician:
ROY WILLIAMSON .................... (217) 785-2350

E-mail us at T2LRSDOT@dot.il.gov

Visit our website at www.dot.il.gov/blr/t2center.html

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T² Advisory Committee

Craig Fink (Chairman), County Engineer
DeWitt County
RR#2, Box 82P
Clinton, IL  61727
(217) 935-2438

Douglas Bishop, County Engineer
Perry County
3698 State Route 13/127
Pinckneyville, IL 62274
(618) 357-6556

Ed Reeder, Director of Public Works
City of Carbondale
200 S. Illinois Ave., P.O. Box 2047
Carbondale, IL 62901
(618) 549-5302

Lynn Krauss, Director of Public Works
Village of Oak Lawn
9446 S. Raymond Ave.
Oak Lawn, IL 60453
(708) 499-7816

Eldon Stahl, Highway Commissioner
Medina Township (Peoria County)
R.R.#1
Dunlap, IL 61525
(309) 579-3101

Olen Kibler, Highway Commissioner
Newman Township (Douglas County)
608 North Howard, Box 73
Newman, IL 61942
(217) 837-2723