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# Are We There Yet?

South Carolina Transportation Technology Transfer Service

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## Is the Price of Fuel Getting You Down? Here Are 37 Ways to Control Fuel Costs

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 APWA Reporter September 2008*

In many government budgets the overall cost of fuel is probably now the largest expense item in the budget. When I moved to Lynchburg, VA in 2000 the price of fuel reached its low-water mark of 73 cents a gallon for gasoline and 78 cents for diesel—today the same products cost us \$3.50 and \$4.45 respectively. Mind you, diesel fuel is now the ultra-low-sulfur variety, but this change alone is not the culprit causing such a steep rise in its price. In the same year (2000) fuel expense comprised about a fourth of our entire operating budget. For the current fiscal year it will exceed 60% of the budget!

The economists and other experts familiar with the world petroleum market accuse demand for such steep increases in price and they may be right. The United States is the world's largest importer of petroleum products and today imports around 70% of its needs. Japan used to be second on the petroleum import list but recently China took over this position. Asian countries such as China and India in the past have relied rather substantially on bicycles for transportation but that is changing as each country gears up to manufacture their own automobile—China is building the Chery and India has the Tata Indica. With the Asian population

constituting over one-half of the total population in the world, the demand for petroleum products in that part of the world will continue to expand which will most likely cause the price of fuel to further escalate.

Despite rising fuel prices, the fuel economy of vehicles is one of consumers' lowest priorities. It's unfortunate to say but most folks have little concern about conserving something that does not affect their personal pocketbook and the price of fuel going into a city vehicle is not costing the employee anything. This further exacerbates the rising fuel cost problem making it imperative that government officials find ways to constrain usage and better yet reduce cost wherever possible. What follows are ideas and thoughts to address the problem of increased fuel cost and what we can do to better manage the problem.

One of the most successful things we can do is look for ways to reduce the size of the vehicle being used. When fuel prices rise and economy becomes a namesake again, the vehicle manufacturers immediately begin scaling back vehicle size. We should do the same in our organizations. Will a compact sedan work instead of the intermediate or full-size varieties? And, can a compact pickup suffice instead of the ¾-ton or ½-ton monsters on the road? Not always does this solve the problem, but the vast majority of times we have found it does when times are like they are today. And

**The LTAP Center for South Carolina**



don't forget that downsizing also includes reducing the size of the engine such as going down to a six- or four-cylinder motor instead of the eight-banger that most likely just is not needed.

What follows are a dozen broad measures for reducing fuel consumption and 25 other tips that can help the cause.

**Limit Idle Time:** Avoid excessive sitting and idling. Shut off the engine while waiting or working in the field. Try not to travel during times of heavy traffic such as rush hour to reduce idling time. Modify your police patrolling policy to allow police patrol units to sit idle for 15 minutes of every hour. Regarding large trucks, a half-gallon of fuel is consumed while left to idle for an hour and in the process 40 miles of engine wear and tear is added to the vehicle. Adopt an anti-idling policy if necessary.

**Tire Pressure:** Drivers should make sure their vehicle tires are properly inflated. Statistics show that tires alone account for 4-7% of a car's fuel consumption. Keep your tires properly inflated by checking the owner's manual or the door placard for recommended pressure—don't rely on the psi pressure listed on the tire sidewall because that pressure is the maximum pressure the tire can safely handle while cold. Tires underinflated by 4-5 psi will increase fuel consumption by at least 10%. Do not check the pressure when the tires are warm from driving—let them cool down first. Keep up with your wheel alignments. An alignment is warranted if there is uneven tread wear or if your vehicle "pulls" to one side on a flat road.

**Cargo:** Remove debris and excess items daily from the vehicle that add weight such as unnecessary tools and equipment. It's surprising how much stuff can accumulate in a vehicle especially in the trunk or the back of a pickup. Less weight means better fuel economy—200# of weight reduces fuel economy by 1 MPG.

**Plan Trips:** Look at your schedule and activities and try to consolidate your daily trips. Some trips may be unnecessary. Plan your work to accomplish your task without multiple trips for tools and supplies. Trailer equipment to the job site rather than driving it along with multiple vehicles.

**Close Windows:** Use windows and air conditioning wisely. Due to air resistance your mileage should improve if you keep your windows closed at speeds above 35 miles per hour. Air conditioning reduces fuel economy by 10-20% so don't use it if you don't need it.

**Drive Gently:** Avoid sudden acceleration and jerky stop-and-go. Anticipate the traffic patterns ahead of you and adjust your speed gradually and well in advance. Pretend there is an egg between your foot and the accelerator. Observe speed limits—there is 10-15% improvement in fuel economy if one drives 55 MPH instead of 65 MPH.

**Warm-Ups:** Today's modern vehicle is designed to warm up much quicker and in a matter of seconds so forget about those five minute warm-ups in the morning unless you're driving a large diesel vehicle and even then three minutes will suffice. The most fuel-efficient way to warm up a vehicle is to drive it, not idle it.

**Reduce Your Vehicle Size:** Reduce the size of the vehicle you're driving to the work site. Don't take a dump truck when a pickup will do and drive the small car instead of the big one for many of your errands. Purchase a vehicle with six or four cylinders instead of a big eight-banger.

**Consolidate:** For Police and Fire use call management and when possible limit the number of vehicles sent to respond to a call. For other city operations, supervisors should park their vehicles and ride with crews to a job site. Use a crew cab truck to get to a job site when several workers need to get there.

**Engine Performance:** A well-maintained engine operates more efficiently and will get better fuel mileage. Check your oil, filters and fluids periodically and don't procrastinate on getting your vehicle in for preventive maintenance when prompted.

**Experiment with Alternative Fuel Vehicles:** Purchase hybrid vehicles or drive vehicles that operate on alternative fuels such as natural gas, propane, bio-diesel, ethanol, etc.

**Fuel Up at the Right Time:** Fill up in the early morning when the ground temperature is still cold. Most fuel storage tanks are underground and the colder the ground the more dense the fuel. When it gets warmer fuel expands so refueling in the afternoon or evening means a gallon is not exactly a gallon. Fill up when your tank is half full. The more fuel in your tank the less air occupying its empty space. Fuel evaporates fast which means the more you put in your tank the more you will lose from evaporation.

#### Other Suggestions

1. Park vehicles in the shade to reduce fuel evaporation that occurs when parked under the hot sun; plus, the air conditioner doesn't have to work as hard cooling a vehicle that isn't hot from the sun.
2. Eliminate buying premium unleaded fuel which has 30% more greenhouse emissions compared to regular unleaded fuel; octane has nothing to do with performance but only volatility in combustion chamber.
3. Go to a 4-day, 10-hour work week to reduce the standard commute to one less day.
4. Monitor employees with take-home vehicles, 4WD vehicles and SUVs
5. Monitor fuel credit card purchases to ferret out any dishonesty.

6. Reprogram engine computers to shut diesel-powered vehicles down after a certain amount of idle time.
7. Install governors on vehicles (Big Brother approach).
8. Do not allow employees to start their vehicles before clocking in.
9. Set a target to reduce fuel expense with incentives back to employees who succeed.
10. For vehicles with a fuel economy reading as part of the vehicle gauge package, have drivers keep the MPG reading visible at all times to monitor fuel economy and their driving habits.
11. Track utilization and run fuel exception reports to see who are the big users and monitor their use.
12. Use autotherm systems.
13. Install pre-heaters on large trucks to heat hydraulic oil and coolants to reduce idling time.
14. Use nitrogen-filled tires which assists the tire in maintaining its pressure longer which leads to better fuel economy.
15. Pull over and stop engine when making cell phone calls.
16. Use GPS and GIS to improve routing.
17. Install data recorders to see where trips are being taken.
18. Use camera phones to document items to avoid making a repeat trip.
19. Provide employees with an incentive for using mass transit or incorporate a flex time work schedule so all employees don't leave work at the same time causing traffic congestion which leads to increased idle time.
20. Make only right-hand turns like UPS to avoid waiting in traffic to turn left.
21. Purchase electronic PTOs.
22. Ride bikes to work.
23. Establish a satellite work yard to reduce travel time of ferrying equipment to work sites.
24. Partner with adjoining communities to fill up vehicles at their site rather than driving back across town to yours.
25. If living in a hilly area don't punch the accelerator when climbing a hill because pushing on accelerator is just a waste of fuel.

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## NHI Is Now Offering Free Web-Based Training

Federal Highway Administration's National Highway Institutes (NHI) is now offering a free web-based training course on pavement preservation designs for state and local highway agency personnel and contractors.

The 6.5 hour course, Pavement Preservation Treatment Contractions (Course No. FHWA-NHI-131110), introduces pavement preservation concepts and techniques and provides a solid foundation of knowledge on preservation practices. The course covers project and treatment selection, including design and construction of the following treatments:

- Crack sealing, crack filling and joint sealing of flexible pavements
- Patching and edge repair
- Chip seals
- Microsurfacing projects
- Thin functional and maintenance overlay projects
- Ultra thin, hot-mixed, bonded overlay projects
- Pavement preservation treatment

To take the training course, visit the NHI website at [www.nhi.fhwa.dot.gov](http://www.nhi.fhwa.dot.gov). Choose "Enroll in a Session" under the heading "What Would You Like to Do?" Enter FHWA-NHI-131110 into the course number field and hit search or enter. Participants can view the Pavement Preservation Treatment Construction Guide online at <http://fhwapap34.fhwa.dot.gov/NHIPPTCG/index1.htm>.

The Pavement Preservation Treatment Construction Guide offers short animated clips to help further explain the process of how damage occurs and how to fix it. Other free courses offered by NHI include:

- Pavement management systems: Characteristics of an effective program
- Basic materials for highway and structure construction and maintenance
- Ethics awareness for the transportation industry
- Basic construction and maintenance documentation—Improving daily diary
- Hardened concrete properties; durability
- Plan of action for scour critical bridges
- Traffic monitoring and pavement design programs
- Highway performance monitoring system—An Introduction.

## E-Yikes! Electronic Records Can Turn Into a Minefield

By Larry Caudle

For those of us who started our working career with a desk calendar and a Rolodex, the computer age brought almost unimaginable information-management capabilities and convenience. In the construction industry, these renovations have proven especially useful. Interconnecting Blackberries, desktop computers and remote-access laptop computers have unleashed significant benefits, including enhanced and inexpensive internal and external communication. However, as with every technical advance there is some related pitfall or risk.

### Hit the Save button

Contractors should be mindful that e-mail and other electronic data and information must be preserved when it relates to reasonably foreseeable civil or criminal litigation (whether involved as a litigant or a third party) or a governmental agency investigation (for example, an investigation by OSHA, the Justice Department or a state attorney general).

Once the duty to preserve information arises, corporate management must take affirmative steps to preserve relevant electronic data that they know, or should within reason know, are relevant or might lead to the discovery of admissible evidence. The duty to preserve material evidence arises not only during litigation but also extends to that period before the litigation when a party reasonably should know that the evidence may be relevant to anticipated litigation. The willful destruction of evidence or the failure to preserve potential evidence in a pending or future litigation is called “spoliation” by the courts.

Courts are increasingly inclined to hold corporations accountable for spoliation. The punishment handed down for spoliation can be severe. In 2004, a federal judge punished a company for deleting relevant e-mails by deciding to instruct the jury during the trial that the contents of the e-mails would have been favorable to the party deprived of them. In addition, failure to properly manage electronic documents can produce increased litigation costs, regulatory penalties and court-imposed sanctions. A corporation will not be excused from the duty to preserve electronic evidence merely because of its size or the attendant expense or complexity of compliance.

Every company should consider how it will discharge its preservation duties before the occasion arises. Written policies and procedures should be prepared, which are practical and reasonable. There is no one-size-fits-all approach that will satisfy the needs of every company. The president of a small construction firm with a single

computer network and a few employees may well develop a simple yet highly effective document-management policy that would be wholly inappropriate for a larger contractor. Unless some legal duty requires an organization to keep electronic information, the systematic destruction of electronic information is perfectly fine and defensible. The key is to know when it is necessary to retain all information and to take the appropriate measures to retain it.

A document retention and preservation policy should outline the steps that will be undertaken when a duty to preserve electronic information arises. At a minimum, this policy involves notifying all employees likely to possess relevant information to preserve such information. At the same time, employees must be instructed to cease the deletion or destruction of any relevant electronic records. This is sometimes referred to as a “litigation hold.” Management must communicate a litigation hold clearly, forcefully and promptly, and the company should document its efforts. Thorough and effective planning can minimize and manage these risks, whereas waiting until the situation arises to take action will likely lead to the costly destruction of records. ▾

Roads and Bridges

[www.roadbridges.com](http://www.roadbridges.com)

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## Construction Equipment Visibility

NIOSH is introducing a new web page on blind areas around equipment. The web page, designed for safety personnel and instructors, can be used to raise awareness on the hazards of working around construction vehicles and equipment. Blind area diagrams for 38 types of construction equipment are available for download or print. A blind area diagram is a detailed visual representation of the area around a vehicle or piece of equipment that can not be seen from the operator’s position. The Construction Equipment Visibility webpage can be found at <http://www.cdc.gov/niosh/topics/highwayworkzones/BAD/default.html>. For more information about NIOSH research on construction equipment visibility contact: David E. Fosbroke ([def2@cdc.gov](mailto:def2@cdc.gov)). ▾

# Performance Contracting: A New Way of Doing Business

Faced with the daunting combination of aging highway infrastructure, rising congestion, and shrinking budgets, transportation departments nationwide are looking for new methods to meet these challenges and reconstruct and rehabilitate roads and bridges better, faster, safer, and more cost effectively. Innovations that are transforming today's project development and delivery process include alternative contracting methods such as warranty contracting, design-build, and performance contracting for construction. Using the performance contracting approach, a transportation agency defines a desired project outcome and then allows the contractor to determine how to carry out the work to meet the performance goals, following the acceptance methods and criteria, rather than specifying the methods to be used.



**The Michigan Department of Transportation's first performance contracting project includes rehabilitating 8.8 km (5.5 mi) of roadway on M-115 and replacing the superstructure on two bridges.**

"Where project outcomes are clear and mutually understood, performance contracting can save time and money and improve contract management," says Jim Sorenson of the Federal Highway Administration's (FHWA) Office of Asset Management. Contractors can also benefit from having the flexibility to determine how best to accomplish the desired outcome.

To encourage the implementation of performance contracting, FHWA's Highways for LIFE (HfL) program has developed a Performance Contracting for Construction (PCfC) Implementation Framework. This framework was developed with input from several State highway agencies, the Associated General Contractors, and the American Road and Transportation Builders Association. HfL will also hold workshops in up to six pilot States to assist agencies with using performance contracting on specific projects. The first workshop was held in Lansing, Michigan, in April 2007. Officials and staff at the Michigan Department of

Transportation (MDOT) were interested in learning more about how they could use performance contracting to improve quality and reduce construction time for a planned reconstruction of M-115 in Clare County. The project would include rehabilitating 8.8 km (5.5 mi) of roadway and replacing the superstructure on two bridges. The concrete pavement had originally been placed in 1940 and subsequently overlaid with hot-mix asphalt, while the two bridges had been built in 1938.

Workshop attendees included representatives from MDOT, FHWA's Michigan division office, and local contracting firms and industry associations. "The workshop laid the foundation for this performance contracting project," says Jack Hofweber of MDOT. "It was very helpful and covered both the establishment of good performance goals and how to measure and test performance." The workshop was invaluable," adds Tom Fudaly of FHWA's Michigan division office. "It helped guide all of us through the process of implementing performance contracting."

Michigan applied for and received \$1 million in HfL funding for the project. The project was bid in December 2007, and construction began in spring 2008. Performance goals established by MDOT include baselines for when M-115 is to be fully open again to traffic; pavement performance, including ride quality; worker safety; and minimization of motorist delay. The \$4.5 million contract includes up to \$400,000 in incentives for meeting performance goals, as well as disincentives. While the initial cost for the performance-based contract is higher than a traditional contract would have been, "we believe it has increased the value and helped us achieve a better fix," says Hofweber.

Work on the new bridges is now complete. Phase two of the project, reconstructing the roadway, began in August. The project is expected to be completed by November 2008. If the road is open to traffic, as defined in the contract, before November 11, the contractor would meet the target performance goal. The contract includes a 5-year pavement performance warranty.

"The planning and construction have gone very well to date," says Hofweber. An added benefit is that the contract has helped to spur the use of innovations to meet the performance goals, including rapid bridge construction. Accelerated bridge construction techniques such as prefabrication of the new bridge deck have been successfully used on the project. "This has definitely speeded up construction," says Fudaly. "We've been happy with the process and think that the use of the performance contract will result in a better quality job."



**The pavement is rubblized on M-115 in Clare County, Michigan.**



**Michigan's performance-based contract includes a 5-year pavement performance warranty.**

“Performance contracting has been a great learning experience for Michigan’s contractors,” says Douglas Needham of the Michigan Infrastructure and Transportation Association. “The cooperation and communication among industry, MDOT, and FHWA has proven beneficial throughout the process. Although cost is always a consideration when selecting a contractor, on future performance contracting projects, we would encourage an even greater emphasis be placed on innovation.”

“As experience is gained with performance contracting, we would expect this alternative contracting method may even be competitive with or lower than the traditional low bid process,” says Sorenson. “We have seen this as States have moved from using method-based mix designs to a contractor-furnished job mix formula for hot-mix asphalt. The effective contractor has been able to control costs when bidding his or her own job mix formula for hot-mix asphalt.”

The HfL program held a PCfC Project Showcase in Clare, Michigan, on September 30, 2008. The showcase included an overview of the PCfC framework, a discussion of MDOT’s experiences with the M-115 project, and information on the contractor’s perspective in constructing the project.

A second PCfC workshop was held August 26–28,



**The mid-section of the precast superstructure for a bridge on M-115 is placed as part of the Michigan Department of Transportation’s performance contracting project.**

2008, in Tallahassee, Florida. The workshop focused on strategies for using performance contracting on a project on I-4 in Orlando. Participants included representatives from the Florida Department of Transportation, Florida Transportation Builders Association, and FHWA’s Florida division office. “The workshop went very well. It allowed participants to discuss performance goals, share concerns, and provide insight,” says Byron Lord of FHWA’s HfL program. A third PCfC workshop was scheduled for Colorado in November.

For more information on Michigan’s M-115 project, contact Jack Hofweber at MDOT, 989-775-6104, ext. 302 (email: [hofweberj@michigan.gov](mailto:hofweberj@michigan.gov)), or Tom Fudaly in FHWA’s Michigan division office, 517-702-1831 (email: [thomas.fudaly@fhwa.dot.gov](mailto:thomas.fudaly@fhwa.dot.gov)). To learn more about the PCfC Implementation Framework or becoming a HfL pilot State, contact Mary Huie at FHWA, 202-366-3039 (email: [mary.huie@fhwa.dot.gov](mailto:mary.huie@fhwa.dot.gov)). The draft framework is available on the HfL Web site at [www.fhwa.dot.gov/hfl/framework](http://www.fhwa.dot.gov/hfl/framework).

# Boomer Crisis: Real or Perceived?

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Let's set the stage. In today's workforce, Baby Boomers are the largest generational group. Look at this table:

Matures	Born 1925-1945 75 Million	5% of Workforce
Baby Boomers	Born 1946-1964 80 Million	45% of Workforce
Generation X	Born 1965-1984 46 Million	40% of Workforce
Millenials	Born 1985-2005 76 Million	10% of Workforce

Some interesting numbers jump out at us from this table. First, the difference in workforce numbers between Baby Boomers and Gen X is staggering, 80 million versus 46 million. The obvious consequence of this is that when Baby Boomers leave the workforce, there are not enough Gen Xers to take their place. The good news is that the Millennials are a large generational group and they will be able to help make up those differences in pure numbers at some point as they join the workforce. However, the oldest people in the Millennial generation are only 23 years old. They still have at least 15 years to go before they are all assimilated into the workforce.

Let's look at some more facts. AARP figures indicate that in 2007, 28% of the U.S. workforce was over age 50. By 2016, that number will increase to one-third of the workforce, about 33%. At the same time, there is a smaller pool of younger workers available to replace the older workers.

Now, let's contrast this with the reality of public sector employment. Every study and report I have seen indicates that the percentage of older workers is much higher in the public sector than in the private sector. About 45% of workers are over 45 years of age in the public sector vs. 30% over age 45 in the private sector. This problem is compounded by the reality that younger workers tend to gravitate toward the private sector, so the age gap is widening. When you translate those figures into those eligible for retirement, 45% of public sector employees can retire tomorrow versus 25% in the private sector. This is somewhat due to enhanced retirement benefits in the

public sector. Many public sector retirement plans begin their eligibility at age 50. When you work the numbers, it becomes a disadvantage to the employee to keep on working as many could retire at 75%—90% of their pay with 30 years of service.

Many of you reading this are probably thinking that the perception of a Boomer crisis has been muted by the current economic woes of the country. For some that have seen their 401K's lose significant value that may be true, but Boomers have already been doing something that many have not noticed. As an example, I retired from a public employee retirement system. I am age 55. However, I'm not "retired." What I did was change careers. Many retired public sector employees have found that continuing to work in the public sector became an economic disadvantage. If we wanted to go back to work for government we found there were limits on how much we could earn or how many hours we could work. For those who only want temporary employment or want to do part-time consulting, that's fine. However, many Baby Boomers want to continue to work, and information from a survey conducted by the U.S. division of Toronto-based Sun Life Financial, Inc., indicates that nearly half of the workers in the United States expect to be working at the traditional retirement age of 67. However, it is not money that is the main motivator. Nearly 83% responded that they would be working either full or part-time to stay mentally engaged. Money, health benefits, love of career, and staying close to people were also important. This isn't surprising. The Baby Boomer generation is viewed by the other generations as the generation that "Lives to Work." We identify ourselves by our careers, our jobs and our titles. We've made personal sacrifices for our job. We've tended to be loyal to our employer. We don't change jobs as often as the younger generations.

Back to the initial premise of the article. Is there a Boomer crisis? Is it real, or is it perceived? Based on sheer numbers, it is a real crisis that is looming and could have an even larger impact on the public sector. Where perception comes in is whether Boomers will really retire when they become eligible. The indicators seem to say no...but. The "but" comes in because they may retire from their public sector jobs and go to work somewhere else. They will do what I did. I "re-careered." The public sector has an opportunity to jump back in and relook at how they view their aging workforce. I have seen public sector agencies almost invite their older workers to leave. Even when downsizing wasn't part of the equation, older employees were viewed as dinosaurs. We aren't as techno-savvy as Generation X or the Millennials. Remember, when Baby

*(cont. on page 10)*

# Safety Zone



## 10 Tire Tips—For Tire Life and Worker Safety

**1 Under-inflation costs money.** Operating on soft tires means they wear faster and the truck burns more fuel. At normal speeds, you'll cut tire life by 16% and increase fuel use by 2% by running tires at 20% under recommended pressure.

**2 Explosion is possible.** Any radial tire that has been driven at less than 80% of its recommended pressure has the potential to “zipper rupture” when it's re-inflated. A zipper rupture is when the side of a radial tire explodes during inflation. You can learn to recognize hazardous tires and how to re-inflate them safely from videos or in training programs.

**3 Expect tires to lose air.** Rubber tires are made of a porous material; they lose air continuously. A truck tire is expected to lose up to two pounds a month according to industry standards. In addition, air can leak through valve caps or small punctures.

**4 Think about outside temperature.** A tire will gain or lose a pound of pressure with every 10 degree difference in outdoor temperature. “You could check truck tires in August and put in 100 pounds of pressure. You should check tire pressure every season at a bare minimum, and more often is better. There's a direct relationship between proper air pressure and tire life, and it could have lost 15 pounds of air by the time you are plowing snow in November or December,” says Lampe. “You could be plowing with an under-inflated tire and it isn't due for regular preventive maintenance.”

**5 Know the proper pressure.** Tires are designed to run at specific pressures based on the total load. Gather information on each truck's actual axle load, then use standard load charts to calculate the correct tire pressure. Ask your tire supplier for help and training (Also, see load charts at [www.goodyear.com/truck](http://www.goodyear.com/truck)).

**6 Calibrate gauges monthly.** Even with regular checking tires could be at the wrong pressure due to faulty gauges. “On average, about 15% of gauges in a facility are

not properly calibrated,” says Lampe. You should invest in a master gauge (about \$100) and calibrate all the gauges in the shop monthly, he advises.

**7 Check pressure every season or before use.** You should check tire pressure every season at a bare minimum, and more often is better. For infrequently used or seasonal equipment—like motor graders, for example—check tire pressure before using it. To get an accurate reading, be sure the tire is cold; at least three hours after last use.

**8 “Read” tires regularly.** Check for signs of wear before tires sustain serious damage. Regularly look at tire walls for signs of zippering; inspect for cuts, cracks, blisters, or bulges. Measure tread depth. (It should be no less than  $\frac{4}{32}$ “ on the steer axle and no less than  $\frac{2}{32}$ “ on all others.) Run your hand over the tread and feel for abnormalities like rib edge feathering or cupping. Feathering is an early sign of misalignment or could be caused by improper pressure. Take the tire/wheel assembly off and look at the face of the tire for any type of irregular wear pattern. For example, drive tires may develop heel and toe wear.

**9 Rotate tire position for longer life.** Any rotation schedule is better than no rotation, Lampe says. How often it's needed depends on truck usage. “If it rolls very little, you may only need to rotate every other year.”

**10 Repair correctly.** The only proper way to fix a tire is to put a patch on the inside and a plug through the injured area. Any repair from the outside will void the tire warranty, even if it is properly fixed afterwards. “Twenty-five to forty percent of all tires repaired out there today are probably not repaired properly. Besides voiding the warranty it's a safety issue,” says Lampe. Tires are tougher than ever these days, so it's easy to forget about them. Remembering a few basics can save you money, and may keep you safer, according to Larry Lampe, a trainer for Pomp's Tire Service in Green Bay. “There's a direct relationship between proper air pressure and tire life,” says Lampe. “It's the most basic and the most overlooked factor.”

## 2009 T<sup>3</sup>S Workshops Planned

The tentative list of T<sup>3</sup>S workshops that will be offered in 2009 has been established. We have several new courses that we will be presenting along with topics that have remained popular through the years.

In 2004 T<sup>3</sup>S became a co-sponsor, along with the Clemson Extension Service, the SC Department of Transportation, and the SC Department of Health and Environmental Control, offering Certified Erosion Prevention and Sediment Control Inspector Course numerous times throughout the year. Back by popular demand, we will again offer these courses throughout the year as well as Certified Storm Water Plan Review, which will be a two-day course designed for technical staff who are not licensed professional engineers.

Dealing with Difficult People will be offered in January followed by Chainsaw and Trimmer Safety. Another course that will be back by popular demand is Technical Writing. We will also be offering Basic Work Zone Safety throughout 2009. These classes are held to small enrollments, so register early.

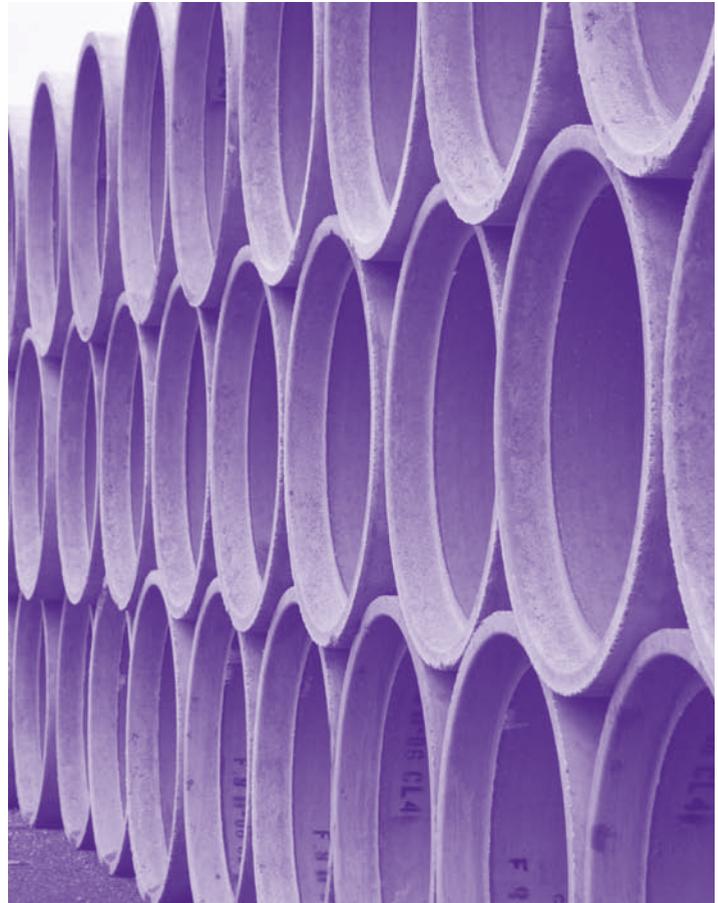
New course offerings for 2009 include Basic Hydraulics for Storm Water Crews, Intermediate Surveying, and Communicating with the Public Sector.

In 2007 Ken Wood from FHWA presented Basics of the MUTCD which was a huge success. We have asked him to return in 2009 for a workshop on the new Sign Retroreflectivity requirements.

Back by popular demand will be the Seventh Annual Count on Concrete Conference. We also will be presenting a course on Pervious Concrete Applications for local agencies.

We will continue to send out brochures announcing the workshops, and as dates are finalized, information will be posted on our web site at [www.clemson.edu/t3s](http://www.clemson.edu/t3s) that will allow you to register early for the classes that have limited space.

If you have any questions regarding any workshops we have planned, please feel free to contact me at 888-414-3069. We look forward to seeing you soon. ♡



Boomers entered the workforce, a “cell phone” was something that a prisoner used to make their one phone call and a “Blackberry” was something you ate. Public sector jobs have evolved over the years, but we haven’t helped employees in those jobs adapt to the changing workplace. Consequently, we look at the Baby Boomers and say they can’t keep up. However, the smart employer looks at them and says, we need to provide training and maybe we need to change job descriptions to reflect the reality of what is needed today. Reorganizing job functions can sometimes solve the problem. Additional training is a must.

Many of you can remember that only a few years ago, you could send out a job announcement and receive 50 job applications for a key position. Now you are lucky to get any qualified applicants and, in many cases, jobs stay vacant much longer than they used to. The public sector has been notoriously slow in recruiting employees. It can take months in some cases. The job seeker doesn’t have the patience anymore to deal with the pace of public sector recruiting. It is a job seekers market. They have the leverage, not the employer. As an employer, if you put a price on your turnover and recruiting, you’d be astounded what it costs your organization in real dollars and productivity for every vacancy you have. So what can we do and what should we do?

AARP has a recognition program called AARP Best Employers for Workers over 50. It is sort of a Best Places to Work for older workers. They look at a number of categories: Recruiting, Training, Phased Retirement, Retiree Relations, and Caregiving Programs. It is not surprising to me that there are no government employers on the list. The list is populated by healthcare organizations, financial institutions, some nonprofits, and universities. There is one public school district on the list, Brevard, Florida at number thirteen. Here is a compilation of some of the winning strategies from the AARP list that I believe can have direct application to the public sector:

### Recruiting

- Developing specific alumni programs designed to attract mature and retired workers to mentor and train younger employees
- Tapping into community resources, such as senior groups, to recruit for part-time or temporary employment opportunities
- Maintaining a database of retirees who are interested in returning to work on a part-time basis

### Training

- Computer skills programs, including programs targeted specifically for workers age 50+
- Refresher courses for mature workers who are

reentering the workforce after being away for a number of years

- Assigning mature workers to train others by using them as “expert” teachers and mentors

### Phased Retirement

- Implementing flexible-work schedules and job-sharing programs as ways to ease pre-retirees into retirement
- Allowing employees to retire and return to work for special assignments or projects
- Allowing retirees who return to work to collect their pensions

### Retiree Relations

- Alumni programs, retiree associations, and retiree newsletters that keep retirees abreast of current developments concerning their former employers
- Rosters of retirees who can be contacted for special work assignments
- Invitations to ongoing employer activities, such as benefit fairs, flu-shot clinics, and awards luncheons

### Caregiving Programs

- Paid and unpaid time off to care for family members
- Education on eldercare issues, such as workshops and seminars

In my last local government job, I had a seasonal employee who worked in our City parks program. He helps take care of the City planters and sprinkler systems. He is 69 years old and his goal is to work until he turns 70. I could only wish to be in the shape he is in if I make it to 70. The point is that there are workers out there who want to stay engaged and be relevant in today’s workplace. Every seven seconds, a Baby Boomer reaches retirement age. So, what are we going to do about it? We can do what we’ve always done and get what we’ve always gotten, or we can brainstorm ways to leverage this valuable fount of knowledge and experience and continue to use them well into their retirement years. It’s a win-win. Local government needs the workers and continuum of knowledge and Baby Boomers love to work!

“The best way to predict the future is to create it.” – Peter Drucker

“The great use of life is to spend it for something that will outlast us.” – William James

“Today we are wasting resources of incalculable value: the accumulated knowledge, the mature wisdom, the seasoned experience, the skilled capacities, the productivity of a great and growing number of our people—our senior citizens.” – Senator John F. Kennedy, 1956.

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## Information Request and Address Change Form

Videos and publications from our library are available on-line at [www.clemson.edu/t3s](http://www.clemson.edu/t3s).

The videos and publications are free to individuals employed by any city, county, or state government agency in South Carolina. You can obtain a free single copy of most publications, or borrow a copy of one of our “for loan” publications and videos.

### Transportation Technology Transfer Service

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### DVDs

*Bloodborne Pathogens: Take Precautions, Coastal*

Description: Your employees can never be too careful when it comes to the risks of deadly bloodborne pathogens. This program covers the three main types of these organisms including the symptoms and routes of transmission. It also discusses methods to avoid infection and ways to deal with incidents in the work environment.

*First Aid: Prepared to Help, Coastal.*

Description: Being the first on the scene of a workplace accident can be cause for panic. But with the training provided in this program, you can be confident that your employees can keep their cool, respond swiftly and apply life-saving measures. Get first aid tips and learn these emergency response

*Roadway Worker Safety: In the Zone, Coastal*

Description: Roadway work is full of potential hazards from passing traffic to trenches, equipment, electrical hazards, and noise. Keep your workers aware of the many dangers they face in the work zone.

*Driven to Distraction, Coastal*

Description: This program illustrates just how dangerous distracted driving can be. The main character is the embodiment of the various distractions that accompany drivers. The impact of this program is powerful and memorable.

*Safe Winter Driving, Coastal*

Description: Winter driving presents special driving hazards. This program reviews special safety techniques to help employees overcome these hazards.

*Defensive Driving: 15 Passenger Vans, Coastal*

Description: Driving 15-passenger vans requires certain safety precautions. Understanding why these vans need special care will get you and your passengers to your destination safely.

*Defensive Driving for Government Employees, Coastal*

Description: Every 12 minutes in the US, someone dies in a car accident. For government employees, motor vehicle accidents are by far the leading cause of death on the job. This new program looks at techniques to help prevent accidents from happening, and in the case of unavoidable accidents, help lessen their severity.

### Videos

Defensive Driving: A Crash Course

Defensive Driving for Government Employees

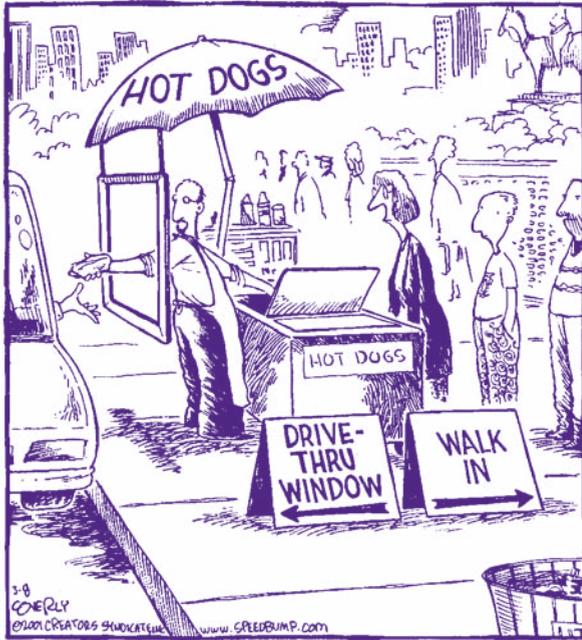
Defensive Driving: 15 Passenger Vans

### Publications

Sign Sheeting Products and Regulations

## SPEED BUMP

Dave Coverly



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