

Centered on Service

SPECIAL YEAR-IN-PERSPECTIVE EDITION

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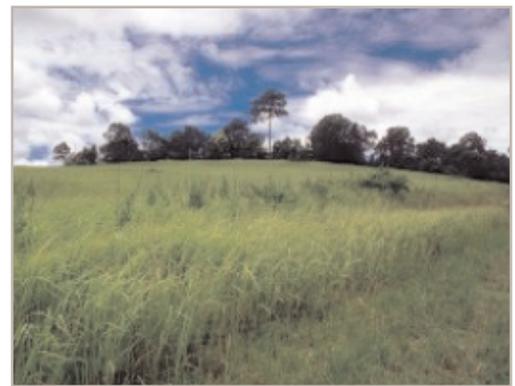
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Efficient Method Developed to Assess Transportation-Related Carbon Monoxide Pollutants

During the development of a transportation project, air quality analysis is a key part of the planning and design process. One of the most studied air pollutants for a transportation project is carbon monoxide (CO). CO resulted from vehicles operating on a proposed roadway cannot contribute to concentrations that violate the National Ambient Air Quality Standard (NAAQS).



To conduct a project level CO analysis is a complex task. It involves running two separate complicated computer models. These two computer models are used to compute motor vehicle emission factors and CO concentrations related to a proposed roadway project.



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To efficiently utilize available resources and reduce time required to conduct a transportation project analysis, State DOTs, working with the Federal Highway Administration, have been developing alternative methodologies in analyzing the CO issue. One of the outcomes is the development of screening tools by using

the so-called concurrent “worst case” scenario strategy. The rationale of this strategy is that if the concurrent worst-case scenario does not produce a violation, other cases will not produce violations. By embedding the worst-case data in the screening program, it eliminates the need to collect site-specific metrological, fleet, and other environmental condition data. Efforts can be concentrated on scenarios that fail the screening test.

The FHWA Resource Center promoted this to the Florida DOT to develop and update the model due to new regulations. They also provided testing and review of the program.



The Florida Solution

In the early 1990s, the Florida Department of Transportation (FDOT) developed a manual CO screening procedure utilized for all transportation projects. As a Project Development and Environment contract administrator and negotiator at that time, the author experienced a minimum of 80% staff time reduction due to the implementation of this manual screening procedure. Recognizing the success of the program, the FDOT converted the manual procedure into a desktop computerized program in the late 1990s. Compared with the manual procedure, the computerized program eliminated the need to manually round down traffic speed and round up traffic volume (obtaining a worst case scenario) that was occasionally confusing to new practitioners.

In early 2004, FDOT’s Environmental Management Office released its latest interim Florida CO Screening Program. According to Mariano Berrios, the Environmental Programs Administrator for the FDOT, this release has incorporated EPA’s latest MOBILE6 program. He noted that the program “will be continuously upgraded as the motor vehicle emission factor model is updated.” Berrios estimates that over the last decade the computerized CO screening program has saved his agency a minimum of 90% staff time on project level CO analysis. At the same time, the screening program has enabled Department staff to concentrate more time on tackling scenarios that failed the screening test. He highly praised the FHWA-FL Division and the FHWA Resource Center for their “continuous support, assistance, and leadership role in the development of the screening program”.

“The FDOT and the FHWA work together as one team. We trust each other,” said Berrios.

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TECHNICAL ASSISTANCE & TRAINING

Networking Through
Conferences, Symposia and Workshops

Virginia DOT and Resource Center Co-host National Roadside Vegetation Management Workshop

The Virginia Department of Transportation and the FHWA Resource Center’s Environmental Technical Service Team co-hosted the first-ever **National Roadside Vegetation Management Workshop** in Norfolk, VA, December 1-3, 2004. While it was the sixth such workshop conducted in the Mid-Atlantic region, it marks the first time all 52 State

DOT and the FHWA Division vegetation program managers were invited.

“It was good to hear how other States handle similar problems.”
T.O.M., Fredericksburg, VA

More than 100 specialists, from both

management and operations ranks, came together from 10 States to confront problems and constraints faced by public works agencies throughout the United States, and to look for solutions and technologies available to address them.

SPEAKERS AND TOPICS INCLUDED:

☞ **Welcoming Remarks** – FHWA Virginia Division Administrator Roberto Fonseca-Martinez and Phillip Shucet, Virginia DOT Commissioner.

☞ **National Perspective on Roadside Management in the United States** – The FHWA’s Bonnie Harper-Lore laid the foundation for subsequent discussions on invasive plant species (weeds) that are becoming major problems along the Nation’s highways.

☞ **DOT Roadside Partnerships** – Maryland State Highway Administration’s Leroy Jonas offered information on a number of ways to engage the energies and interests of organizations who care about the ecology and appearance of our roadsides. Jonas had many success stories – and pictures of beautiful roadsides – to share.

“ . . . presentation on DOT partnerships—very impressive . . . what can be accomplished with teamwork to save money, work more efficiently, educate public and beautify roadway.”
Anonymous, from participant evaluation

☞ **North Carolina’s Roadsides and On-going/Future Challenges** – Don Smith of North Carolina DOT cited the magnificent wildflower displays along his State’s roadsides, but officials there have the same overall vegetation problems as all other States – namely, more work to be done than people or money to do it.

☞ The **Texas Vegetation Management Program** was presented by John Mason of Texas DOT. Texas is world famous for those splendid displays of blue bonnets along the State’s roadsides each spring. However, given the size of Texas, crews there have found that by *keeping it simple* – limiting choices to a few regional-specific determinants (such as grass varieties, seed supply, and equipment design) – they are better able to accomplish their mission. With contractual assistance from the Texas Transportation Institute (TTI), the State DOT has assumed a lot of the necessary program responsibilities in-house, such as designing equipment and producing seed. In a separate presentation, Mason shared information about a pooled-fund vegetation/sedimentation research study he oversees at his agency’s Hydraulics and ESC Laboratory. Virginia DOT is a contributor to that pooled-fund study.

GIS Applications were reviewed by Chris Glazier of Utah DOT, who said that the technology is only 5% of the overall effort in his State. Good data and knowledgeable roadway crews are the critical ingredients for a successful GIS program, he said.

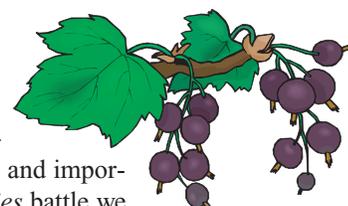
“I liked the GIS – Great potential for VDOT; also the Texas Sediment Lab.”
Infrastructure Management, NOVA

☞ **Virginia’s Senate Bill 260** was discussed by Jim Carr, Assistant Secretary of Transportation for Virginia DOT. The Senate legislation allows private interests to finance the design, implementation, and long-term maintenance of gateway vegetation displays. Virginia DOT must approve and will ultimately oversee the implementation of the designs, so Carr took advantage of the workshop as a chance to gain input on the criteria that DOT should apply. Workshop participants offered the valuable suggestion that a list of Virginia-specific invasive plants – some still commonly promoted by the nursery industry and landscape designers – should be distributed Statewide. The list would include species that should never be considered for these designs, negating the need to continuously veto those selections as design plans are submitted. It was also suggested that designs using native plant species should be encouraged – even promoted – because their survival history is better and they require less irrigation and maintenance.

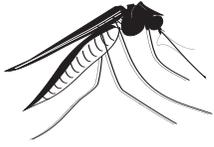
“SB 260 – It is one of the best roadside initiatives we’ve seen in recent years.” Anonymous, from participant evaluation

☞ **DOT Applications in Arboriculture Law** was presented by Vic Merullo of Merullo, Reister & Swinford Co., an attorney specializing in the *law of trees*. He focused on the sources and weight of law, including legislative law, case law, common law, basic rights, negligence, duty and injury. He also shared case studies in which suits had been brought over alleged damage caused by trees.

☞ “Weeds Across the Borders” (international borders, that is) was presented by Bonnie Harper-Lore. She helped participants better appreciate the scope and importance of this *invasive plant species* battle we all fight. Many were surprised to learn that Mexico is a leader among the “big three” North American jurisdictions (U.S., Canada and Mexico) in these conversations.



☞ **GIS and Adirondack Park Invasive Plants Project**, as presented by John Falge of the New York DOT, showed how a low-tech application of GIS can be very successful when employed by a group of agencies that all have a stake in controlling invasive plants that do not respect boundaries.



☞ Mosquito Management – Invasive plants are not the only invaders using our corridors and not respecting boundaries. Mosquitoes, those carriers of West Nile

Virus, can also be our nemeses, reported by David Gaines, Virginia Department of Health. Ponded water on highway rights-of-way can provide a perfect incubator for mosquitoes, depending upon rain patterns. Gaines said that you must know and understand the mosquito specie and effective control measures in order to be an effective partner in any eradication effort.

☞ Alternative Use of Native Plants was discussed by Cole Burrell, of Native Landscape Design and Restoration. Burrell presented a gorgeous slideshow of attractive plant species we have grown to love, but now are identified as “invasive”. He displayed native plants that have much the same appearance and function but can be used in place of the invasive variety.

“Alternative Use of Native Plants/It made me aware of plants I had no idea were invasive”
*Engineering Technician, VDOT

☞ Three research faculty members from Virginia Tech shared findings from their applied research studies for VDOT in areas of **Turf Management** (Mike Goatley), and **Weed Management** (Shawn Askew and Jeff Derr).

The workshop produced valuable dialogue among participants and with the various speakers. A large volume of related print materials and informational resources were made available to attendees by speakers, VDOT, and the FHWA.

“ ‘Require’ DAs, DMEs and at least one employee in upper level residency management to attend, for each Residency in the State . . . Overall, good conference and thank you so very much for holding this conference! I hope this type of conference will occur at least once every two years.”
Roadside Manager, Staunton, VA

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FHWA Hydraulics Team, NCDOT Host National Hydraulic Engineering Conference

Adopting the theme of “transforming technology and research into practice,” the FHWA National Hydraulics Team and the North Carolina Department of Transportation (NCDOT) co-hosted the transportation community’s **2004 National Hydraulic Engineering Conference** in Asheville, NC, in late August/early September 2004. The conference provided a forum for government agencies, universities, and private industry to share the latest in hydraulic engineering research, techniques, software, and products while highlighting the close partnerships that exist among these organizations.

Conference participants numbered more than 200, including representatives from 27 State Departments of Transportation, 8 universities, 10 governmental agencies affiliated with the transportation field, and more than 38 consultants and manufacturers.

Conference discussions included a review of national research activities and critical hydraulics issues encountered by State DOTs. Brigham Young University’s Environmental Modeling Research Laboratory presented overviews of the FHWA-sponsored Watershed Modeling System and Surface-Water Modeling System, which were followed by talks of States’ experiences with these software applications.

Other conference sessions included presentations of research and practical experience on varied topics including hydrology, coastal engineering (presented by the University of South Alabama’s Coastal Transportation Engineering Research and Education Center), culvert and pipe research, plans of action for scour critical bridges, bridge scour, stream stability, and environmental issues.

Real-world examples of practical design and application were provided by the conference co-host, NCDOT, which sponsored a field trip to two nearby construction projects: Transportation Improvement Project A-10’s extension of Highway I-26 north from Asheville to the Tennessee State line, an Environmental Excellence Award winner in 2003; and a bioretention facility on Highway I-40 at Swannanoa River that incorporates a state-of-the-art design to purify highway stormwater runoff before it enters the ecosystem. Both projects highlighted implementation of context sensitive design and construction procedures that focus on integrating engineering applications with environmental stewardship.



Conference attendees tour a state-of-the-art bioretention basin designed by NCDOT to treat highway stormwater runoff.

The FHWA National Hydraulics Team also coordinated closely with exhibitors from private industry – consisting of consultants, manufacturers and suppliers – who set up displays illustrating the state-of-the-art in hydraulics services, techniques and products. For example, a spokesperson from Ayres Associates utilized a portable flume to demonstrate culvert inlet and outlet design approaches and open-channel flow principles; FDH Engineering was on-hand to discuss the use of non-destructive dispersive wave techniques to evaluate the sizes, depths, and qualitative conditions of in-place foundation systems; and a representative of US Engineering Solutions Corp., was available to exhibit Scour Watch™, a web-based software system designed to aid transportation professionals with the prediction, identification, recording, and monitoring of flooding events that affect scour-susceptible structures. The FHWA National



Johnny Morris, a senior associate with Ayres Associates, demonstrates open-channel flow principles in a portable flume used in several National Highway Institute training courses.

turnout and positive feedback from participants. A general sentiment about the conference was captured by comments from Julie Taylor of the Louisiana DOT: “...a great oppor-

Hydraulics Team acknowledged the sponsorship and participation of all 18 exhibitors who helped to make the conference a great success.

The conference’s success was measured by both the considerable

tunity to get the latest updates...and to surround yourself with other professionals who share similar concerns and yet offer different solutions to hydraulic and hydrology problems.” In addition, Mike Tuttle of the Vermont DOT offered the following appraisal: “The mix of speakers was excellent, and I was impressed with the depth of knowledge of the presenters.”

To download presentations from the conference or to view winning pictures from a conference-sponsored bridge and culvert photo contest, visit

<http://www.fhwa.dot.gov/bridge/hyd2004.htm>. Additional details on the FHWA Resource Center Geotechnical and Hydraulics Team, the branch of the FHWA NHT primarily responsible for training, technical assistance and technology deployment, can be found at <http://www.fhwa.dot.gov/resourcecenter/teamhydr.cfm>.

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Transport, Weather, and Technology Communities Gather at National Highway Visibility Conference

As you’re walking out the door to start your busy day, you say a quick good-bye to the family whom you look forward to seeing at day’s end. While making your daily commute, you come upon a large patch of fog. You think to yourself, “This is no big deal – I’ve been through this before.” You reduce your speed and carefully enter a sea of white.

Without warning, you slam on the brakes and rear-end a vehicle. As you sit and try to calm yourself, you are slammed from behind, and then hit from the side. Now you’re praying to live through this chaos. Your car begins to spin, and metal begins crunching and bending around you. As the collisions continue, you can only hold on and hope for the madness to end. Each second feels like an eternity.

Finally, the pummeling ends and you realize that you’re trapped. Moments of silence pass until at last a rescue worker releases you from the mangled wreckage. You feel lucky to come out of the mass of metal and glass unscathed. You ask yourself as you look over the field of rubble and carnage, “How did this happen?”

It's because of collisions like this that the **fog-related 2004 National Highway Visibility Conference** was held.

On May 18-19, the transportation, weather, and technology communities came together at the University of Wisconsin to discuss mitigation strategies for low visibility conditions, highway safety and mobility in low visibility conditions, low visibility warning systems, road weather management program activities, and future steps to address these issues. It has been eight years since the last such conference.

"It's about saving lives"

"It's about saving lives," said Ray Murphy, ITS Specialist at the FHWA Resource Center. "The goal was to exchange best practices and new technologies."

The technology transfer of best practices is important to the safety and growth in transportation. The conference helped advance these goals by bringing together the National Weather Service, NOAA, State DOTs, and private vendors.

The conference, which was sponsored by the Federal Highway Administration, Wisconsin Department of Transportation, AAA Wisconsin, the Midwest Regional University Transportation Center, Wisconsin Traffic Operations and Safety Laboratory, and Wisconsin ITS Alliance, featured new technologies, experts from around the world, and breakthroughs to prevent tragic crashes. The primary goal of the conference was to establish a framework for advancing visibility-oriented technology, State/Federal programs, and an on-going national dialogue.

The conference was prompted by an October 11, 2002 crash on Interstate 43 in Sheboygan County, Wisconsin. That crash involved 50 cars, killing 10 people and injuring 39 others, including 8 serious injuries.

Strategies to Deal With the Challenge of Fog

When fog occurs on the roadway, visibility distance is hindered. This in turn impacts traffic flow through automobile speed, which leads to increased speed variance between drivers, delayed travel time and ultimately increased collision risk. The operational impacts of fog hinge on driver

capabilities/behavior, road treatment strategy, access control, and speed limit control. Some possible methods of dealing with low visibility conditions include advisory, control and treatment strategies.

Advisory strategies provide information on predicted and prevailing conditions. Control strategies regulate traffic flow and roadway capacity. Treatment strategies supply resources to roads to mitigate weather impacts.

The benefits of road weather management strategies include improved safety due to reduced crash risk, increased mobility due to restored capacity, reduced delays, and more uniform traffic flow. Other benefits include increased productivity due to reduced labor, treatment material, and equipment costs.

GIS Technology

Another technological system discussed at the conference is the Geographic Information System (GIS). Ultimately GIS is another strategy to improve travel in low visibility conditions.

A number of State DOTs presented technology systems being used in their States. These presentations played a pivotal role informing other States of existing solutions to the visibility problems. Before the solutions, came tragic stories, and after the solutions, came successes. A number of States such as Alabama, California, South Carolina, Tennessee, and Utah presented their warning systems.

In a 4-year period before their low visibility warning system was installed, 19 fog-related crashes occurred on the freeways in the Stockton-Manteca area of San Joaquin County, California. The freeways in this particular area are prone to low visibility conditions. Visibility is reduced by wind-blown dust in the summer and dense fog in the winter. Because of such events, Cal. DOT, also known as Caltrans, implemented an automated system to warn motorists of driving hazards.

Since its implementation in November of 1996, there have been **no** fog-related crashes in the Stockton Manteca area. This is a drastic change from the 19 crashes that occurred during the four year period before the system was deployed. Similar results have been experienced in South Carolina.

The decision support software for the central computer predicts or detects foggy conditions, correlates environmental data with predetermined response strategies, and alerts traffic managers in the district office. Operators may accept or decline response strategies recommended by the computer

system. Potential advisory and control strategies include displaying pre-programmed messages on DMS, illuminating pavement lights to guide vehicles through the fog, extinguishing overhead street lights to minimize glare. Other, more drastic strategies include closing the freeway and detouring traffic to Interstate 26 and US Highway 17, or informing Highway Patrol officers to erect barricades to close the freeway.



The outcome of this system enhanced mobility by providing traveler information and clearly separating travel lanes with pavement lights. Furthermore, no fog-related crashes have occurred since the system's deployment.

Due to high traffic volumes and local conditions prone to dense fog formation, the Utah DOT deployed a low visibility warning system on Interstate 215 to inform motorists of safe travel speeds and to promote more uniform traffic flow. The system has been installed on a two-mile strip of highway located above the Jordan River in Salt Lake City where multi-vehicle, fog related crashes have occurred.

The outcome of this system showed that overly cautious drivers sped up when advisory information was displayed, which resulted in a 15 percent increase in average speed from 54 to 62 mph. This particular increase caused a 22 percent decrease in speed variance from 9.5 to 7.4 mph. This reduction in speed variance improved mobility and safety by promoting more uniform traffic flow and minimizing the risk of initial, secondary and multi-vehicle crashes.

For each of the presenting States, successes were encountered when using the low visibility warning systems. The successes in each of the States were not only important to the lives of travelers within the respective States, but also to the lives of travelers within the nation. This particular conference not only spread the word of success to other States, but also spread the aims and activities of the Road Weather Management Program to all who attended.

During the **fog-related 2004 National Highway Visibility Conference** it was conveyed to those attending, that a part-

nership was developed between the National Oceanic and Atmospheric Administration (NOAA) and the Federal Highway Administration (FHWA). The Road Weather Management Program also promoted new tools and technologies such as the Nationwide Surface Transportation Weather Observing System and Weather-Responsive Traffic Management. The Road Weather Management Program has developed outreach and training materials through best practices for Road Weather Management and Intelligent Transportation Systems (ITS) standards. As discussed during the conference it is obvious that the Road Weather Management Program members have been working exhaustively towards their goals.

The success of this conference can be measured at this time by the relationships forged between States and partnerships created between organizations. "They had a good cross-section of involvement, including engineers, RWIS people, DOT people ...," says Charlie Ginnocchio, southeast region manager of ADDCO. "I think they brought together a good group of people with relative expertise and good discussions," says Dr. Amanda Staudt, Board on Atmospheric Sciences and Climate National Research Council/National Academies.

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First Web Conference on Maintenance Decision Support System Focuses on Solutions

On November 22, the FHWA Road Weather Management and Operations Task Force held its first web conference on the Maintenance Decision Support System. The MDSS project was a multi-year effort to prototype and field-test advanced decision support for winter maintenance managers.

Prototype development began in September 2000, led by FHWA and Mitretek, with formation of a stakeholder group and definition of winter road maintenance requirements under the Surface Transportation Weather Decision Support Requirements (STWDSR) project. A consortium of national laboratories developed the functional MDSS prototype. The prototype was demonstrated and field tested in Iowa in 2003 and 2004. Continued development and testing of the functional prototype is ongoing.

Also discussed during the conference was the Pooled Fund Study (PFS) – the result of a multi-State effort to bring about an operational Maintenance Decision Support System (MDSS) for State transportation agencies. Research objectives for the PFS include:

- To assess the need, potential benefit, and receptivity in participating State transportation departments for State and regional Maintenance Decision Support Systems; and
- To build and evaluate an operational Maintenance Decision Support System that will meet the defined functional requirements in the participating State transportation departments.

The Road Weather Management Program, within the FHWA Office of Operations, seeks to better understand the impacts of weather on roadways, and promote strategies and tools to mitigate those impacts. Envisioned is a system that provides “Anytime, Anywhere Road Weather Information” for road users and road operating agencies, as well as a robust, competitive market for road weather services.

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Air Quality Team Sponsors Second Federal Partners’ Roundtable

In early 2004, the FHWA Resource Center Air Quality Technical Service Team held its second Federal Partners’ Roundtable in Atlanta. The Roundtable consists of the FHWA Division Office and Resource Center staff, EPA and FTA; and was initiated as a strategy help the transportation community to meet the new transportation conformity requirements under the proposed new National Ambient Air Quality Standards (NAAQS).



Photo caption goes here

With the new NAAQS in place, many areas throughout the Southern and Eastern regions of the country would face new technical and procedural work to ensure their transportation plans and programs do not degrade the Nation’s air quality – and to ensure that transportation projects are not encumbered by the new regulations. The objective of the Roundtable was to establish a collaborative process within the Federal agencies to help each area meet these challenges. Consequently, the Air Quality Technical Service Team brought together representatives from several FHWA Division offices, the Resource Center, Headquarters, two EPA regions and two FTA regions.

Prior to the meeting, each FHWA Division Office conducted a detailed “status and needs assessment” of their State with regard to air quality planning. It was clear early in the process that there would be a need for training to raise the level of expertise within most States. As a result, the first day of the Roundtable consisted of a “Train-the-Trainer” session.

This effort ensured that each representative was knowledgeable of the implications of new regulatory requirements and their role, such that they could provide a basic level of assistance to their respective State. In addition, the Roundtable conducted an analysis of each State’s needs assessment, identifying the Federal partner resources available to meet specific needs.

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TRAINING

Designing Pedestrian Facilities for Accessibility

The United States Department of Transportation is one of the implementing agencies of Title II of the Americans with Disabilities Act (ADA) of 1990. The law requires that the Federal Highway Administration (FHWA) oversee and implement the regulations for state and local governments. Specifically, the FHWA has the oversight responsibility for pedestrian accommodations in the public right-of-way (r-o-w).



The goal of the FHWA's National Resource Center Civil Rights Technical Service Team is to heighten the awareness of design professionals and local, state and federal stakeholders of the FHWA's responsibility to build pedestrian facilities in accordance with the ADA and the ADA Accessibility Guidelines (ADAAG) and further the FHWA's commitment to safety – a FHWA vital goal.

Anita Elion, the lead Civil Rights Specialist on this national initiative, worked with several industry professionals to revise the training materials to produce a product that illustrates more than just the ADAAG minimum requirements. The *Designing Pedestrian Facilities for Accessibility Training* provides information on the legal framework and facility design needs of people with disabilities and the importance of documentation in the transportation decision making process. Planners and engineers are the primary audience, but there are benefits for local, state and federal stakeholders. After completing the training, attendees should be able to apply ADA accessibility guidelines when designing pedestrian facilities for mobility, independence, and safety; evaluate practices and policies for discrimination; and create a pedestrian environment that is usable for all.

FY 2005 Designing Pedestrian Facilities for Accessibility Training Schedule

- FHWA Iowa Division Office in conjunction with the Iowa Center for Transportation Research and Education at Iowa State University – October 19-20, 2004; December 14, 2004; and January 25, 2005.

- FHWA Florida Division Office in conjunction with the Florida Local Technical Assistance Program (LTAP) at the University of Florida Center for Technology Transfer - May 19-20, 2005, Naples; May 26-27, 2005, Orlando; June 6-7, 2005, Panama City.
- FHWA Oregon Division Office – date to be determined.

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TECHNOLOGY DEPLOYMENT

Teamwork Works FHWA Forms Traffic Analysis Tools Team, Toolbox

The FHWA has formed a traffic analysis tools team that is comprised of members from the FHWA Resource Center, Divisions, Headquarters, and Turner Fairbanks Research Center. The team is charged with achieving a wider acceptance of traffic analysis tools/models and ensuring that the tools can be trusted to provide accurate, reliable results. The team intends to increase awareness and capabilities regarding the available tools in an effort to promote informed decision making when addressing the goals of the FHWA in congestion management and safety.



As part of these efforts, a Traffic Analysis Toolbox has

been developed, consisting of five volumes that will assist in better use of traffic analysis methodologies. In addition, a newly developed outreach plan will extend these efforts to users and decision makers through training, technical assistance, and technology deployment.

As an example of these efforts, a partnership effort has been created between the FHWA Minnesota Division and Minnesota DOT has produced a manual. As a result, Minnesota DOT has formed its own traffic analysis/simulation group in-house, as well as a guide for simulation application and project application that includes a procedure for consultants to use when preparing traffic simulation studies for State and local projects.

These efforts demonstrate a high degree of team effort across the FHWA, as well as technology deployment and adaptation of advanced analysis tools.

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Learn About Market-Ready Technologies Through Demonstrations and Showcase Seminars

The FHWA Resource Center is your link to the latest innovations in transportation technology. Through onsite demonstrations and showcase seminars about market-ready technologies, we help State and local agencies realize, first-hand, the benefits of these advances before implementing them.

A market-ready technology must—

- Support the FHWA priorities, including strategic goals.
- Accommodate a user’s need with a likelihood of implementation.
- Be developed to the point of being truly market-ready.
- Have expertise available to support development and implementation.

The FHWA, in conjunction with the American Association of State Highway and Transportation Officials, has selected market-ready technologies and innovations that warrant



The Technology and Innovation Resource Guide

special focus and deployment in the transportation sector. We know these tools support agency goals, are developed to the point of being truly market-ready, and have the necessary expertise available to support deployment and implementation.

The Technical Service Teams work with our customers to deploy these market-ready technologies and innovations in their respective areas of expertise, as well as other innovative concepts and practices. We also provide a handy resource, *Technology and Innovation Resource Guide*, for information and benefits about the latest available technical solutions that are working on road systems around the Nation.

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PARTNERSHIPS

SEP-15: New Approaches Allow Efficient Delivery of Transportation Projects

SEP-15 is a new experimental process that allows the FHWA to identify, for trial evaluation, new public-private partnership approaches to project delivery. These new approaches are expected to allow the efficient delivery of transportation projects without impairing the FHWA's mission to protect both the environment and American taxpayers. SEP-15 addresses, but is not limited to, four major components of project delivery: contracting, compliance with environmental requirements, right-of-way acquisition, and project finance. Elements of the transportation planning process may be involved as well.

Application Process

SEP-15 applications should be submitted by a State Department of Transportation to the appropriate FHWA Division Office. Applicants may include localities and private transportation ventures as project sponsors but must include the State DOT. SEP-15 applications should provide a brief description of the project and specific Federal-aid program areas of experimentation, explain the innovative techniques proposed and the expected value of those techniques, and identify proposed performance measures to evaluate the success of the SEP-15 project.

It is anticipated that SEP-15 applications will include suggested changes to the FHWA's traditional project approval procedures and may require some modifications in the implementation of FHWA policy. Deviations from current title 23, U.S.C., requirements and generally applicable FHWA regulations also may be involved. For these reasons, the Division Office will forward the application to the Deputy Administrator who will appoint the Division Administrator and a senior member of the FHWA leadership to be co-facilitators for the project. The co-facilitators will form a team consisting of the FHWA staff familiar with the areas of policy addressed in the application and, if appropriate, staff from other agencies potentially affected by the application. This team will assist the co-facilitators in preliminarily deciding whether the application is an appropriate candidate for SEP-15.

If the co-facilitators determine the project is not appropriate for SEP-15, the Division Administrator will notify the State DOT. Otherwise, the project sponsors (both public and private) will be asked to make a formal presentation of SEP-15 application. The presentation should include proposed milestones for advancing the project and address any questions of the co-facilitators. This meeting will be scheduled by the co-facilitators within thirty (30) days after their preliminary determination that the project is appropriate for SEP-15 consideration.

After the meeting, the co-facilitators will determine if they have sufficient information upon which to form a recommendation. The co-facilitators will notify the applicant if additional information is needed. If not, the co-facilitators will forward a recommendation to the Deputy Administrator who will make the final determination on whether the application should be approved allowing it to proceed under SEP-15. If the application is not approved, the Division Administrator will notify the State DOT.

If the Deputy Administrator approves the application, the co-facilitators will work with the public and private project sponsors to draft an Early Development Agreement (EDA) within sixty (60) days of receipt of the Deputy Administrator's approval of the application. The EDA should contain parameters to guide such key elements as project planning and design, environmental review, ROW acquisition, procurement method, regulatory compliance, timelines, financing, construction and operation. The EDA should also identify the performance measures that will be used to evaluate the success of the SEP-15 process. The EDA can be modified over time as the project matures. The original EDA and any amendments thereto must be approved by the Deputy Administrator.

The co-facilitators will be responsible for ensuring that the project is coordinated within the Department of Transportation and other stakeholders in the Federal government. If the project is one also being considered by the President's Environmental Streamlining Task Force created



under Executive Order 13274, the co-facilitators will work with the members of the Task Force to help identify any concerns Federal agencies may have with the project and assist the project sponsors in addressing those concerns. The co-facilitators will be responsible for monitoring the status of the project through the start of construction and ensure that FHWA approval is provided at key stages of the project's development.

Upon the completion of major milestones, the public-private sponsors will be responsible for submitting an independently prepared report that summarizes lessons learned from the SEP-15 process. These reports shall include the experiment undertaken, the lessons learned, evaluate the success of the process and its impact on the project, and recommend statutory and regulatory changes with an explanation of how the changes will improve the delivery of the Federal-aid highway program. The reports should be submitted to the co-facilitators.

In their SEP-15 application, project sponsors, may suggest revisions to the procedures outlined above if other procedures would better meet the goals of SEP-15.

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SPECIAL FEATURE

Resource Center Assists During Hurricane Evacuation

The 2004 Atlantic hurricane season was one of the busiest and most destructive in history. For the largest such storm, some 2.5 million residents were told to evacuate a 310-mile stretch of Florida's eastern coastline in advance of Hurricane Frances.

Florida was hit with hurricane after hurricane in '04, forcing residents to flee their homes and businesses en masse. The numbers of people evacuated reached record highs for Florida, according to the National Oceanic and Atmospheric Administration (NOAA).

During the time of impending destruction, three members of the FHWA Resource Center assisted in the evacuation process. Greg Jones, Grant Zammit and Daniel Grate are members of the regional emergency transportation team. As representatives from the Department of Transportation, they serve whenever an emergency involves transportation issues in more than one State.

The group met in Atlanta at the Federal Emergency Management Agency (FEMA) Operations Center, away from the storm area, in order to avoid power outages. Their job was to provide coordination between adjoining States.



Conditions were heightened because of Frances, which was the most devastating of storms and included other States. There was a higher volume of people and traffic leaving the State than during a typical hurricane.

"We were notified of a 20-mile back-up starting in Valdosta, Georgia," said Jones. "We were then able to notify the appropriate authorities and reverse the north lanes long enough to relieve the congestion." The reversal was for a 40-mile stretch of highway. The team's resources and contacts were such that they could make adjustments very quickly and efficiently.



This is one of many examples of the help they provided while working 36 hours in advance of the storm and with a 24-hour rotation as needed.

Another example was the storm's destruction of the Interstate 10 bridge. The FHWA Resource Center team was one of the first to notify the Alabama Highway Patrol and Department of Transportation, arranging for rapid closure of I-10 and mapping appropriate detours.

Resource Center in Action

Hurricanes Charley, Frances, Ivan, and Jeanne brought an unprecedented series of challenges to the doorstep of the U. S. Department of Transportation, other Federal agencies, the State of Florida, and other State and local governments. The FHWA Resource Center has one position on staff, the Regional Emergency Transportation Representative (RETREP) – one of nine such positions in the Department – solely dedicated to planning, exercising, and responding to the Department's requirements under the National Response Plan (NRP).

In support of Region 4, the Region 5 RETREP responded, as did many U. S. DOT employees. After arriving in Tampa shortly after the airport reopened on August 14 (the day after Charley struck Punta Gorda), the Region 5 RETREP spent 31 of the next 38 days providing leadership and technical knowledge of the NRP and rigorously responding to requests for assistance from the State of Florida via FEMA. The main focus was the extensive logistical challenge involved in coordinating the tracking and contracting of thousands of truckloads and air shipments of water, ice, meals, generators, and numerous other commodities among many Federal, State, local, and private organizations. Additional duties included relaying transportation infrastructure assessments and waiver/statutory information regarding hours of service, size and weight, and the International Fuel Tax Agreement (IFTA).

Taken together, the efforts of the FHWA Resource Center and various other agencies helped to mobilize a massive, well-orchestrated response to an unprecedented series of weather-related obstacles. These efforts helped to make a bad situation much more bearable and safe for a frightened and displaced traveling public.

For more information, contact:

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CENTERED ON QUALITY

Resource Center Assists PA Division Office To Improve ITS Specifications

Because State matching funds can be endangered if project plans, specifications and estimates are not streamlined for approval, the FHWA Resource Center often responds to requests from States to assist with this process. Recently, the Resource Center collaborated with the Pennsylvania Division Office (DO) and the Pennsylvania DOT to enhance project specifications through the systems engineering process.

To meet the short timeframe for obtaining PennDOT's ITS project approval by the Division Office, Pennsylvania DOT

asked the Resource Center and DO several times to complete their reviews within three to five days. The typical turnaround time to review documents for a significant, complex project is between two weeks and a month. However, the Resource Center rose to the challenge and completed the review in days rather than weeks. Resource Center staff “burned the midnight oil,” working on weekends, holidays and many hours beyond the typical business day.

The most significant outcome of this project was a change in communications design. During one of the specification reviews, Resource Center staff discovered that only one communications link was proposed to communicate and control all the DMS and HAR field devices. Through the center’s advice to develop a Concept of Operations Plan for the project, Pennsylvania DOT was able to quickly acknowledge that having a single communications link

would defeat the purpose and need for the project.

For example, if the Pennsylvania DOT needed to post a system-wide AMBER Alert, a single

communications link would require dial-up for each DMS and HAR device separately in order to get the time-sensitive information either posted on a sign or broadcast over a transmitter. For the number of DMS and HAR units in the system, this could take an hour or more rather than the required minutes.

Based on recommendations from the Resource Center and DO, additional communications links were added to make the system more responsive to operational needs. More importantly, a design flaw was caught that may have kept a multi-million dollar ITS project from providing significant benefits to the Pennsylvania DOT and the motoring public.

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CENTERED ON RESULTS

Employee Highlight: Douglas Townes, Construction and Contract Administration Engineer

Construction and Project Management Engineers are the stewards of highway projects and production. In the ever-changing environment of this profession, it becomes necessary for all personnel to keep up to date on the latest training and technologies.

Fortunately, if you are an engineer seeking to expand your knowledge of current construction/maintenance technologies, there are resources to assist you. Douglas Townes, Construction and Contract Administration Engineer with the FHWA Resource Center, works alongside several team members to offer a new approach to answer your needs. Douglas joined the Resource Center in September 2004 with more than 17 years of State and Federal experience in Construction.

During his tenure with the DOT, he served as an area construction engineer, then as the State Construction Training Manager, implementing innovative quality and training to key construction and materials personnel.



Douglas’ most recent work with division offices focuses on two specific areas. Your office can call Douglas and/or the Construction and Project Management Technical Service Team to support your initiatives and requirements to gain knowledge and qualification in key areas:

- **Training:** The Office of Infrastructure and the National Highway Institute have formed a Construction Stewardship Team with a main goal to offer a workshop that focuses on construction program management and oversight. Douglas is an instructor on the team, where the course provides in-depth training to new engineers and serves as a refresher course for veteran staff. The team plans to rotate across field offices in all 52 divisions during FY2005-06 to

provide the training. Information on this course is available— if your division has not already, make plans to participate in this course by contacting the Construction Stewardship Team today.

- **TCCC:** The TCCC, or Transportation Curriculum Coordination Council, was founded in 2000 as a partnership between FHWA divisions, State DOTs, NHI, AASHTO, and regional certification groups to create a highly trained workforce and generate awareness of technical courses being developed or already available within the construction/maintenance area. Douglas is among the founders of the Council, and serves on several of the Council's subcommittees to gain State/private partnership support and ensure success of the program.

For more information, contact:

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Finance Technical Service Team Hosts Two Events

Among its major accomplishments during 2004, the Finance Technical Service Team hosted two dynamic events that will set the tone for Federal, State, and local financial specialists and managers in years to come. In addition to these events, the team completed several groundbreaking initiatives with State offices and other DOT agencies.

Last March, the team hosted the **Field Financial Management Conference** in Las Vegas. The first of its kind, this meeting provided service to the FHWA Financial Managers and Specialists from Headquarters, Federal Lands, and Divisions along the West, Midwest, and Northeastern regions. The meeting specifically addressed Internal Control issues and the AASHTO Internal Audit Guide, where John Jeffers (TST Internal Control Specialist) and Gina Laney (Financial Specialist) discussed pertinent information that divisions need to know.

Other topics discussed included TIFIA, Reauthorization, Career Planning for Financial Staff, FMIS 4, Cost Accounting, and more. Jennifer Mayer, Innovative Finance Specialist for the TST, spearheaded the event for the team.

In early September, the team also hosted the **GARVEE/Federal-Aid Grant Management Tools Workshop** in Boston. This meeting targeted States in need of learning about various funding programs such as GARVEEs, RVEEs, and General Obligation bonds that are used to finance infrastructure projects.

Jim Hatter, Innovative Finance Specialist for the Technical Service Team, led the team during the conference and coordinated guest speakers from the private sector financial services industry to discuss the rating process, bond insurance, and oversight of non-traditionally financed projects. Many States benefited from the conference and agreed that the information provided will be utilized.

In addition to hosting the two major conferences, experts on the team provided several technical briefings to high-level State Public Officers who requested innovative transportation finance toolkits and best practices. The Resource Center's Fred Werner, Prabhat Dikshit and the rest of the Finance Team advised GSA Officials serving North Border States, Arizona Division, Arizona Department of Transportation, the U.S. Department of Homeland Security, and the U.S./Mexico Joint Working Committee on innovative finance techniques to accelerate border projects. In Hawaii, the team supported the Governor's Task Force and the Division Administrator on innovative transportation finance tools for the Oahu Rapid Transit System. In North Carolina, the experts provided technical assistance to the Deputy Secretary of Transportation, Chief Financial Officer, and all management for NCDOT.

Commenting on the success of the team during the past year, Team Leader Thay Bishop noted that "Focus, innovation, and commitment from our finance technical experts are the keys to delivering superior services." The team has embraced this strategy and has moved aggressively forward on its 2005 goals, including continued work on Freight and Border Initiative projects, as well as Internal Control and Stewardship efforts.

For more information, contact:

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Technical Service Teams Add New Staff and Expertise

In 2004, the FHWA Resource Center employed several new staff members and expanded the services of the Technical Service Teams:



AIR QUALITY

Karen Kwiterovich

Air Quality Specialist
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Karen's focus is on transportation conformity and the CMAQ Program. Karen comes to the FHWA from the Baltimore Metropolitan Council where she served as an Environmental Planner. She acted as the Project Manager for conformity determinations made in the Baltimore region. Karen also acted as the lead staff for the Interagency Consultation Group in the Baltimore region, and as the MPO representative to the Baltimore Clean Cities Coalition. Prior to working for the Baltimore Metropolitan Council, she worked as an Environmental Policy Analyst for ISSI Consulting Group. Karen has a Bachelor of Arts in Sociology and a Master of Science in Environmental Sciences and Policy from Johns Hopkins University.



CIVIL RIGHTS

Deborah Johnson, Team Leader, Civil Rights Technical Service Team

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Deborah's areas of expertise include Civil Rights, Title VI, Title VII, Diversity, Strategic and Business Planning, and Performance Measurements. She began her career in Civil Rights in 1982 and comes to the FHWA from the Internal Revenue Service, where Deborah served as the Civil Rights Manager for the External Civil Rights Unit. Deborah is a graduate of Virginia State University with a Bachelor of Science in Sociology, and she also has an EEO Studies Certificate from Cornell University. Her professional highlights include IRS Commissioner's Award on Restructure and Reform Design Team, served on several national task forces and committees, conference chairperson for first national EEO and Diversity Training Seminar, and advisor for Civil Rights Executive Councils.



CONSTRUCTION AND PROJECT MANAGEMENT

Mary Lou Masko, Construction Management Engineer, (404) 562-3920,
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Mary Lou's specialty areas include construction project management, contract administration and documentation, claims review, contract change orders, project reviews, construction inspection and materials, CQC/QC/QA, fieldManager/transport, field troubleshooting, constructability, and surveying. She has 20 years in her current field, including 14 years with the Michigan Department of Transportation (MDOT) as the Resident Engineer responsible for overseeing multiple field offices, up to 30 projects totaling \$184 million. She also has 3 years as a consultant Project Manager for MDOT in claims review, final record reviews, and project close-out for MDOT projects, in addition to 3 years as a consultant Resident Engineer for the Hawaii Department of Transportation, where she was the Resident Engineer for a \$10 million Federal-aid bridge replacement project. Mary Lou received her BSCE from the University of Michigan and is a Licensed Professional Engineer.

Douglas Townes, Construction and Contract Administration Engineer, (404) 562-3914, (404) 562-3700,
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Douglas' specialty areas include construction administration and construction training. He has 17 years in his current field. In construction administration, Douglas developed the Florida Construction Project Administration Manual (CPAM) and wrote the Construction Claims, Supplemental Agreement and Time Extension procedures for Florida. He was on the 1996 SCAN tour of the SE for Construction Contract Claims and authored several of the reports for the team. As a Construction Area Engineer in Florida, Douglas was responsible for review of various District's construction progress and conformance with project specifications and related contract documents. He assisted with the development of Florida's QC/QA specifications. In construction training, Douglas was the State Construction Training Manager for Florida DOT for 8 years, and is a founding member of the Transportation Curriculum Coordination Council (TCCC). He has a BS in Mechanical Engineering from the Georgia Institute of Technology, an MBA from the Keller Graduate School of Business, and he is a Licensed Professional Engineer.



GEOTECHNICAL AND HYDRAULICS

Eric Brown, Hydraulics Engineer,
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(text to come)



PAVEMENTS AND MATERIALS

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Chris joins the FHWA Resource Center as a Pavements and Materials Engineer. He entered the FHWA through the Professional Development Program. Prior to the Resource Center, Chris was a Transportation Engineer with the Georgia Division from 2002 to 2004, and a Pavement and Materials Engineer in the Indiana Division from 2000 to 2002. He is a graduate of Auburn University with a Bachelor of Science in Civil Engineering and a Master of Science in Civil Engineering.



PLANNING

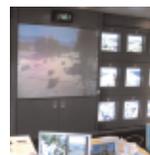
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Jocelyn is involved in the development and deployment of freight related training and technical assistance as well as metropolitan planning. She has more than 10 years of experience in transportation planning, with a particular focus on freight planning. Prior to joining the FHWA, she was a Senior Transportation Planner with the Baltimore Metropolitan Council where she was responsible for overseeing all of the Baltimore MPO's efforts in the area of freight planning and coordination of the BMC's long-range plan. In particular, she was extremely proactive in initiating freight public-private partnerships and in coordinating BMC freight efforts with the private sector, Maryland DOT and other local and state agencies. BMC's efforts at engaging the private sector in the freight planning process have been extremely successful and have been used as best practice examples on a national basis. In addition, while at the BMC, she led efforts to identify major areas of truck activity, intermodal facilities and road segments carrying

heavy truck volumes, in support of a truck rest stop study for the region. She also was a critical member of the technical review panel of the new NHI course, Integrating Freight in the Transportation Planning Process, and provided critical input from a local and state viewpoint. Prior to this, Jocelyn was a transit planner with the Alexandria Transit Company in Alexandria, VA where she was responsible for ridership and budget analyses, route planning and schedule adjustments and a variety of special projects.

Supin Yoder, Planning Modeling Specialist
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Supin is involved in the development and deployment of training and technical in modeling and forecasting. She has more than 15 years of experience in transportation planning and travel demand modeling, experience that has been gained both in the consulting world and the public sector. Most recently, she was a Senior Transportation Modeler with Wilbur Smith Associates in the Chicago office. In this position, she served as a project manager for many multi-modal multi-jurisdictional projects encompassing statewide, MPO, county and corridor model applications and development. Some of her customers included the states of Louisiana, Kentucky and Virginia, the Houston MPO and the cities of Chicago and Cleveland. In 2003, one of the studies she managed won ITE's Best Practices Awards. Prior to her time at Wilbur Smith, she worked as a principal planning modeler with the Regional Transportation Authority in Chicago for 10 years where she was responsible for the calibration, validation and application of RTA's travel model. In addition, she has done project-based consulting for Bechtel on major transportation projects in Hong Kong.



OPERATIONS

James Sturdevant
Traffic Management/System
Operations Specialist

Jim joins the FHWA from the Indiana Department of Transportation in the Indianapolis area, where he was employed as a Senior Traffic Systems Engineer. He received a BSCE from the University of Colorado, is a Licensed Professional Engineer in Indiana, and has multiple IMSA Certifications (International Municipal Signal Association). He brings experience in traffic engineering, traffic management, specifications, and traffic signal systems. Jim's reporting date is January 24, 2005.

Kenneth Wood, Traffic Management and Systems
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Ken joins the FHWA from the Illinois Department of Transportation, where he was employed as the State Traffic Operations Engineer. He brings a wealth of experience and knowledge in operations from approximately 27 years with the IDOT where he served on the NCUTCD for the MUTCD, oversaw numerous contracts dealing with the application of traffic control devices and ITS, chaired the Governors Work Zone Safety Task Force involving labor unions, contractors, IL Toll Highway Authority, FHWA, and IDOT; he served on the Evacuation Subcommittee of the Illinois Terrorism Task Force to plan for evacuations of the Chicago CBD, O'Hare, and Midway Int'l Airports and other urban areas throughout the state. In the aftermath of the deadly train-school bus crash in the Chicago suburb of Fox River Grove, he co-chaired the task force of the IDOT, railroads, and Illinois Commerce Commission, as well as coordinated other internal inspection activities and guided external standards teams, to address deficiencies in the interconnection technologies of the traffic signals and rail crossings in Illinois and nationwide. He received a Bachelors Degree (Civil Engineering) and Masters Degree (Public Administration) from the University of Illinois and is a Licensed Professional Engineer.



SAFETY AND DESIGN **Christopher Webster,**

(text to come)



STRUCTURES **Douglas Edwards** Senior Structural Engineer (404) 562-3673 douglas.edwards@fhwa.dot.gov

Douglas began his engineering career with the state of Indiana in 1972. He joined FHWA in 1978, coming to the Resource Center in 2004. He received his Bachelor of Science in Civil Engineering from Purdue University. His areas of expertise include national bridge inspection program; highway bridge replacement and rehabilitation program; bridge design, construction, rehabilitation, and maintenance; and segmental bridges and high performance concrete. He is experienced in design, construction, maintenance, and inspection of bridges; provides design, construction, and program support to Division offices, State DOTs, local agencies, and consultants; involved in design of major structures and deployment of new bridge technologies, particularly those related to high performance material, seg-

mental design and construction. Some of Douglas' professional highlights include the following: chair of Segmental Concrete Bridge Technology (SCBT) Virtual Team; serves on FHWA Bridge Leadership Council; member of High Performance Concrete Virtual Team; and serves as Ex Officio member on AASHTO T-4 Technical Committee for Construction (Subcommittee on Bridges and Structures). Douglas is a Licensed Professional Engineer.

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Derrell joined the Federal Highway Administration in 1984 and went through the "Accelerated Bridge Training Program." Then he spent 18 years in bridge design with the Federal Lands Bridge Office in Lakewood Colorado, where he gained his extensive experience in the design and analysis of complex structures through his work on numerous structure types in high seismic areas. Derrell is a licensed P.E in the State of Colorado. He is a graduate of the University of Tennessee in 1983 with a Bachelor of Science degree specializing in structures. He has a Master of Engineering degree specializing in structural analysis and design from the University of Tennessee. Seven years later, he returned to school on the "FHWA Work Study Program" and is a graduate of the University of California at Berkeley with a Master of Science degree, specializing in seismic design and analysis. Derrell will be working primarily this year in the Bridge Safety, Reliability and Security area and also on the deployment of High Performance Steel.

In Memoriam: Barry Berkovitz Leaves a Legacy of Professionalism, Expertise, and Dedication

Barry C. Berkovitz, Geotechnical Engineer in Atlanta, age 55, passed away on Monday, July 12, 2004. His wife Patricia Berkovitz and children, Heidi, Andrew, Mindy, and Kayla Freedman were close at hand providing love and encouragement. His unconditional love and support, as well as his ability to laugh, will be missed by all.

Barry joined the Federal Highway Administration in 1985. In his most recent position, Barry served as Senior Geotechnical Engineer for the FHWA Resource Center. He had extensive experience in project designs, construction, inspection, field assistance, research and development activities, training and technology transfer programs, as well as research and development activities. Barry also

worked for more than 10 years in private practice, as well as in County government.

Peter Osborn, Team Leader for the Geotechnical and Hydraulics Team of the FHWA Resource Center, said, “Barry Berkovitz will be long remembered for his passion for Geotechnical Engineering and his unique style of doing business. He most enjoyed helping others with unusual Geotechnical problems and finding creative solutions. His ability to think out of the box resulted in many major contributions to the Geotechnical Engineering community. He was a good friend to many and made a lasting impression on all he encountered. We will all miss Barry.”

Barry was well respected for his professional ability and technical knowledge. “I have only known Barry the last couple of years, but I was very impressed by his friendliness and his enthusiasm for the projects he was working on,” said Gary Evans, Geotechnical Engineer, Western Federal Lands Division. “He was a good influence and will be missed in the geotechnical world.”

His colleagues remember him as a leader in his field.

“Barry has been a friend, colleague and trusted FHWA employee who was among the national experts at his craft,” stated Jim St. John, Director of Field Services, South, FHWA.

“Barry was a great engineer who was always striving to update geotechnical engineers on new and improved technologies. He will be sorely missed,” said Kaye Chancellor, Montgomery, Alabama.

“I will never forget the week I spent traveling by auto with Barry and two geotech co-workers throughout Florida in 1986. This was the beginning of a long and memorable friendship. Barry was one of the most professionally dedicated persons I have ever encountered,” said Doug Edwards, Senior Structures Engineer, FHWA Resource Center.

“In the 20 years I knew Barry, I always considered him much more than a co-worker, but also a good friend as well. He was one of the most knowledgeable Geotechnical Engineers in the field,” added Paul Simon, Raleigh, North Carolina.

Barry’s experience included drilled shaft foundations, applied geophysics and NDT methods, high capacity foundation load tests, corrosion evaluation of metallic elements in MSE walls, rockfall hazard rating system, plasma arc for environmental mitigation and ground improvement, slope maintenance and slide restoration, drilled shaft foundations,

applied geophysics and NDT methods, high capacity foundation load tests, corrosion evaluation of metallic reinforced MSE walls, rockfall hazard rating system, plasma arc for environmental mitigation and ground improvement, and slope maintenance and slide restoration.



Barry also is well remembered for his personality and openness, along with those gifts of warm bagels he shared with his friends and office mates. Joe Caliendo, Associate Professor, Civil and Environmental Engineering, Utah State University, recalled, “Barry was one of the most enthusiastic Geotechnical Engineers ever, always willing to share his expertise. He was a fun loving and good person.”

“He loved to share stories about his past experiences,” said Rich Barrow, Construction Quality Assurance Specialist, Western Federal Lands Division. “Barry had a passion for his work in the Geophysical and corrosion monitoring areas. He had a good sense of humor. One thing that I will remember the most is Barry inviting the entire geo-team to his house in Atlanta this last February for dinner. We got to meet his wife, see his art collection, and learn about a different side of Barry.”

Vonita Porch, Procurement Specialist, FHWA Resource Center, said, “I worked with Barry over 6 years at the Resource Center, and he was one of my favorite co-workers. I love to laugh and Barry had a great sense of humor; he kept me laughing. When I think back on it, he kept me laughing so I would not mind when he called me from home or on the road for a favor. I would sometimes think, ‘It’s Barry again; I wonder what he wants this time,’ and my usual reply, ‘Let me see what I can do.’ I am going to miss his calls; I am going to miss his smile, his laughter and those fresh warm bagels.”

Elaine Binkley, Atlanta Administrative Service Team, FHWA, added, “I’ll always remember Barry as a ‘giver.’ Some years ago when I was new to the FHWA Region 4 office and a first-time homeowner, Barry (and another engineer, Frank) helped me fix a severe drainage problem. I think of Barry during heavy rains as I watch my backyard drain in just the way he planned. Barry made his mark on this world in many different ways, touching lives along the way.”

Barry earned his Bachelor of Science in Civil Engineering at New England College and his Master in Science in Civil Engineering from the Technical University of Nova Scotia.

“Barry has been a leader in the select and close family of Geotechnical Engineers in the FHWA for many years,” said Craig Dewey, Design Operations Engineer, Western Federal Lands Division. He will be missed by all of us who have long respected his work. His works will continue to provide a reminder of his professional accomplishments, but our memories of Barry, our friend, and our good times together will also be long lasting.”

Centered on Service is a monthly newsletter dedicated to sharing success stories and updates on FHWA Resource Center projects and ongoing news about services provided by the Technical Service Teams to FHWA Divisions, Headquarters Offices, and State Partners.

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