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# UTCA NEWS

University Transportation Center for Alabama

Volume 11, Number 1

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## Introduction to the UTCA

Since becoming a university transportation center of the US Department of Transportation in 1999, The University Transportation Center for Alabama (UTCA) has conducted transportation education, research, and technology transfer activities throughout the state and region. Faculty and students at The University of Alabama (UA), The University of Alabama at Birmingham (UAB), and The University of Alabama in Huntsville (UAH) have participated in all of these service areas.



Our mission reflects the mission of the US Department of Transportation. Specifically, the UTCA seeks

to advance technology and expertise in the multiple disciplines that comprise transportation through the mechanisms of education, research, and technology transfer while serving as a university-based center of excellence (*2006 UTCA Strategic Plan*, p. 12).

Our theme – *Management and Safety of Transportation Systems* – reflects the transportation needs of Alabama and the expertise of The University of Alabama System faculty. Last year the Executive Committee narrowed and sharpened the focus of the UTCA research program. Many management research projects now focus on maximizing traffic management and minimizing congestion. Similarly, some new safety research projects highlight infrastructure sustainability.

## The Director's Notes

The UTCA has an impressive history of research excellence, and we are particularly excited about the projects funded in 2009. Researchers will be investigating a number of “cutting edge” issues including the feasibility of public-private partnerships and transit-oriented development. Abstracts of all projects funded in 2009 are included in this newsletter.

To facilitate more interdisciplinary research, UTCA headquarters will be moving to Bevell Hall at the end of the summer. Our new offices will adjoin those of the Aging Infrastructure Systems Center of Excellence (AISCE), and we look forward to renewed collaboration with this research partner.

Sincerely,

Jay K. Lindly

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On Tuesday, December 11, 2008, Executive Director Dr. Jay K. Lindly welcomed members of the USDOT/RITA Site Visit Team to Center headquarters. The Site Visit Team included Dr. Curtis Tompkins, Director of the University Transportation Centers (UTCs) Program; Ms. Amy Stearns, University Programs Specialist; and Ms. Denise Dunn, Program Coordinator/Analyst.

Following introductions and the approval of the agenda, Dr. Lindly provided an overview of the Center's operations. This overview included the history, mission, theme, organizational structure, and Advisory Board of UTCA.

The next segment of the meeting focused on research selection and performance. First, Dr. Fouad H. Fouad, UTCA Associate Director at the UAB campus, explained the research project award process. Then, Dr. Houssam Toutanji, UTCA Associate Director at the UAH campus, discussed several ways faculty share their research findings with the transportation community.



Ms. Dunn, Ms. Stearns, and Dr. Turner

After a short break, Dr. Lindly and Dr. Michael Hardin, UTCA Associate Director at the UA campus, highlighted UTCA's accomplishments in education, human resources, and diversity. Ms. Mary Beth Wilkes, a senior civil engineering student at The University of Alabama, shared her experiences as student director of the 2008 Advanced Transportation Institute.

The first afternoon session focused on administrative procedures. First, UTCA Editorial Assistant Dr. Janet Lynn Norton spoke about the Center's publications and website. UTCA Administrative Secretary Ms. Connie Harris then outlined procedures for fulfilling the daily, on-going financial responsibilities of the Center. Finally, Ms. Tammy Hudson, Associate Director of Contract and Grant

Accounting in UA's Office of Sponsored Programs, and Senior Financial Analyst Ms. Kara Gibson led a detailed discussion of UTCA funding and budgeting procedures at the university level.



Dr. Tompkins

Following the afternoon break, Dr. Daniel S. Turner led the discussion of UTCA **Project #07407 – Pilot Study: School Bus Seat Belts**, which particularly interested the RITA Site Visit Team. As Dr. Turner, founding Executive Director of UTCA explained, "The purpose of this project is to conduct a pilot study to assess the impact of lap/shoulder seat belts on a limited number of Alabama school buses. The Alabama State Department of Education purchased 12 school buses equipped with various types of three-point seat belts. The buses were also equipped with four ceiling mounted video cameras to gather data on seat belt use."

UA transportation engineering graduate student Ms. Elsa Tedla next led a tour of the two UTCA lab facilities. The group first toured the Transportation Modeling and Simulation Lab where attendees saw students working with digital images from the **School Bus Seat Belts** project.

Later, the group toured the UTCA ITS lab where undergraduate and graduate students can monitor and evaluate traffic flow from a variety of intersections using direct video feed from the City of Tuscaloosa Department of Transportation.

Before the close of the meeting, the RITA Site Visit Team talked with Mr. Jeffery Brown, Research and Development Engineer from the Alabama Department of Transportation (ALDOT). Mr. Brown described the extremely positive and productive relationship ALDOT and UTCA have developed and shared his thoughts on the reasons for this long-standing partnership. Joining Mr. Brown from the ALDOT Central Office in Montgomery, AL was Ms. Michelle Owens, Assistant Research and Development Engineer.

In conclusion, Dr. Lindly thanked participants for an enjoyable, informative meeting. UTCA staff, EXCOM, students, and friends were delighted to have shared their past accomplishments and plans for the future with the RITA Site Visit Team.



## The Effectiveness of Recent Developments in Automobile Safety

This news item is a summary of a presentation entitled The Effectiveness of Recent Developments in Automobile Safety by Russell Griffin, doctoral student in the UAB School of Public Health, Department of Epidemiology. The presentation is part of the Research in Progress *ONLINE* Seminar Series co-sponsored by the Injury Control Research Center, UAB UTC, and UTCA. Additional information on this webinar and others may be found at <http://www.uab.edu/utc/Research%20in%20Progress%20Seminar%20Series.htm>.

During the past 15 years the motor vehicle collision (MVC) fatality rate for passenger car occupants has decreased by approximately 30%. This decrease occurred both per 100,000 registered passenger cars and per 100 million vehicle miles traveled.

Part of the decrease in the fatality rates can be explained by advancements in automobile safety. Two of the more recent developments are second generation airbags (SGAs) and electronic stability control (ESC) systems.

Airbags, designed in the 1970s, were installed in most car models by the late 1980s. These first generation airbags (FGAs) were designed to protect the unbelted, adult male in the 50<sup>th</sup> percentile of body weight and deploy at a velocity between 140-200 mph. By the early 1990s, concerns arose regarding airbag-related injuries and deaths for children and small-stature adults. It was believed that the velocity at which the FGAs deployed resulted in increased injury risk to these populations. In response to these concerns, airbags were depowered beginning in 1998 model year vehicles, deploying at a velocity 20-35% slower than FGAs.

Two studies have examined the association between mortality risk and airbag generation (Braver, et al. 2008; Olson, et al. 2006). Both reported no difference in mortality risk for SGA compared to FGA; however, neither study examined whether non-fatal injury risk was different between airbag generations. To address this, we conducted a study using data from the National Automotive Sampling Survey (NASS) Crashworthiness Data System (CDS) to examine whether non-fatal injury risk among front-seat occupants differed between airbag generations in frontal MVCs (MacLennan, 2008a). The results suggested that airbags can be depowered without appreciably altering the injury risk for occupants with the exception of thoracic injuries - which showed an increased risk. Future research into the causes of the increased risk of thoracic injury can help to determine whether there truly is no difference regarding injury risk by airbag generation.


While airbags are designed to mitigate injury severity once a MVC occurs, ESC is designed to prevent

MVCs - particularly those MVCs involving roll-overs. ESC utilizes a combination of sensors (e.g., lateral acceleration and yaw rate), brakes, engine control modules, and vehicle steering response to determine whether a vehicle is traveling on its intended path. If the system determines the vehicle is traveling on a yaw deviation from its intended course, the vehicle's brakes are applied to steer the vehicle onto the proper steering path. In doing so, rollover can be prevented by allowing the vehicle to avoid obstacles that can trip a rollover (e.g., guard rail or road shoulder).

Previous research has suggested that ESC reduces rollover risk by 40%; however, this research has been limited by including certain vehicle types (i.e., passenger cars), small sample sizes, or restriction to fatal rollover MVCs (Lie, et al. 2006; Dang, 2005; Farmer, et al. 2004; Kweon, et al. 2003). To address these limitations, we conducted a study to determine the association between ESC and rollover risk among a nationally representative sample of MVCs regardless of severity of injury sustained or vehicle type (MacLennan, 2008b).

Using data from the 1996-2006 NASS General Estimates System (GES) we concluded that, combined with previous research, ESC appears to lower the risk of rollover. This effect is particularly strong for SUVs and vans, which have a higher tendency to rollover than passenger cars due to a higher ratio of height of center-of-gravity to vehicle width (i.e., static stability factor). The safety enhancement of ESC can be aided through combined use with other advanced safety systems such as rollover protection systems (which prevent rollover by preventing vehicle body roll) and side airbags.

These two studies highlight the need for continued monitoring of the effectiveness of safety systems in automobiles. Just as pharmaceutical drugs are created in controlled environments, so are automobile safety systems. And just as pharmaceutical drugs require monitoring after going on the market, so do automobile safety systems, as what is efficacious in the lab may not be effective in "real-world" situations.

References are on page 4. 



## UTCA and the FTA Sponsored National Research Workshop

The UTCA and the Federal Transit Administration (FTA) sponsored a one-day research workshop on March 11, 2009 at the Holiday Inn Rosslyn in Arlington, VA. The workshop was one of several similar opportunities sponsored by the FTA in such cities as Reno, Toronto, Denver, and Birmingham. At each location representatives from academia, the FTA, and transit systems met to produce practical research agendas on two transit topics chosen for that workshop. The Arlington workshop offered a unique opportunity to define critical research needs in two important transit areas – (1) *Developing a Transit Safety Culture* and (2) *Workforce Planning*.

The workshop began with opening remarks by Mr. Vincent Valdes, Associate Administrator for Research, Demonstration, and Innovation in the FTA. Then, participants heard presentations from FTA officials, transit providers, and university transportation center researchers. These presentations highlighted the problems, needs, and available resources in the two critical research areas. Mr. James Corless, Campaign Director for Transportation for America, summarized the intent of the workshop in a keynote presentation that emphasized two areas:

- the importance of making safety consciousness a system-wide goal
- the importance of succession planning in workforce development

In the afternoon, focus discussion groups met and brainstormed practical research agendas for FTA consideration. Dr. Beverly Sauer, Professor at the McDonough School of Business of Georgetown University, was the facilitator of the discussion group on *Developing a Transit Safety Culture*. This group addressed several issues related to transit safety culture including developing techniques to assist in risk analysis, formulating reports that will drive safety improvements, and communicating management's safety goals to first line workers.

Mr. Bill Harvey, FTA representative on the Learning and Development Council of the US Department of Transportation, was the facilitator of the discussion group on *Workforce Planning*. Questions guiding this session included: (1) How focused should recruiting be? (2) Where is the best place to recruit? (3) How does succession planning fit in with overall recruiting efforts?

At the end of the day, the two discussion groups reconvened and shared their ideas. This workshop provided a forum for FTA representatives, transit providers, and university researchers to collaboratively address common transportation problems and identify potential research partners. Approximately 55 attendees from 19 states as well as the District of Columbia and Canada shared their expertise.

This workshop was coordinated by Ms. Lisa Colbert of the FTA and Dr. Jay K. Lindly of The University of Alabama and was sponsored by a grant from the FTA's Office of Research, Demonstration, and Innovation and UTCA Project #06112.

## The Effectiveness of Recent Developments in Automobile Safety (continued)

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## UTCA Student of the Year

The University Transportation Center for Alabama is proud to recognize Ms. Elsa Tedla as its *2008 Student of the Year*. Ms. Tedla, a native of Ethiopia, earned a bachelor's degree in civil engineering in 2002 from Jimma University in Ethiopia. In 2003 she traveled to the United States for advanced study and has since become a naturalized citizen. Elsa is currently pursuing a master's degree in civil engineering at The University of Alabama.

Ms. Tedla was selected *2008 Student of the Year* largely for her work on **Project #07407 - School Bus Seat Belts: A Pilot Study**, a project sponsored by the Alabama State Department of Education. Elsa has been in charge of reviewing confidential digital images from participating school systems to determine appropriate seat belt usage. Her work includes training undergraduate students, working with school bus transportation directors in 10 different school systems, coping with three different video capture systems, and supervising image review efforts.

The formal presentation of the *Student of the Year* award occurred in Washington, DC during the Transportation Research Board's Annual Meeting. Accompanying Ms. Tedla to the awards banquet were her husband, Mr. Menasse Kumlachew; Dr. Daniel S. Turner, UTCA's founding Executive Director; and Dr. Jay K. Lindly, UTCA's current Executive Director.



**Mr. Paul Brubaker, Mr. Norman Mineta, Dr. Randy Machemehl, and Ms. Elsa Tedla at the Awards Banquet**

## 3<sup>rd</sup> Annual Student Awards Luncheon Celebrated the Achievements of Transportation Students

Students from the three campuses of The University of Alabama System are engaged in a variety of transportation-related research activities. A UTCA project (#08303) headed by Dr. Mike Anderson of The University of Alabama in Huntsville helped identify deserving transportation students and provided a forum in which they could present their research. First, students were invited to present abstracts of their research to a panel of representatives from each campus, and then winners were selected.



**Student Presenters at the 3<sup>rd</sup> Annual Awards Luncheon**

These students were invited to present their research at the 3<sup>rd</sup> Annual Student Awards Luncheon on December 5, 2008. This award luncheon, held at The University of Alabama at Birmingham (UAB), was organized and hosted by the Institute of Transportation Engineers (ITE) Student Chapter at UAB. Three students from each campus – UA, UAB, and UAH – presented technical papers to showcase their research activities. The following students made presentations: Ozge Cavusoglu (UAB), Walter Ellenburg (UAH), Germin Fadel (UAB), Saravanan Gurupackiam (UA), Mang Han (UAH), Tahmina Khan (UAH), Menasse Kumlachew (UA), Michael Shinouda (UAB), and Moses Tefe (UA).

All presenters received monetary awards allowing them to attend the 88<sup>th</sup> Annual Meeting of the Transportation Research Board in Washington, DC in January 2009.

### New Projects Funded for 2009

The UTCA has funded 10 projects from 2009 UTC monies. An additional project is being funded by the Alabama Department of Transportation. These projects are briefly described in the following pages.

**Project #08403 – Feasibility Study Guidelines for Public-Private Projects**, Dr. Jay Lindly, Principal Investigator, UA. The Alabama Department of Transportation (ALDOT) depends largely upon federal aid and the collection of gasoline and motor fuels taxes to support new and rehabilitation projects. It is expected that ALDOT's revenue will be seriously threatened by low fuel consumption due to the introduction of hybrid and alternative fuel vehicles in recent years. Alternative means of financing must be developed to address increasing financial shortfalls in Alabama's transportation funding. ALDOT may wish to move towards Public-Private Partnerships (P3) whenever possible to improve roadway infrastructure. Results from this research project should enhance ALDOT's ability to identify P3 opportunities and evaluate the economic feasibility of P3 proposals. (This project is being funded by ALDOT.)

**Project #09104 – Optimal Traffic Resource Allocation and Management**, Dr. Burcu Keskin, Principal Investigator, UA. It is believed that concentrated traffic enforcement efforts have a positive impact in reducing the number of crashes and discouraging dangerous behavior due to their visibility. Relying on this belief, this research effort addresses the problem of covering (blanketing) critical crash zones while determining the location, number, and patrol routes of police officers. This problem will be undertaken by developing specific optimization models for maximum covering and patrol routing.

**Project #09108 – Advanced Transportation Institute 2009**, Dr. Daniel Turner, Principal Investigator, UA. The objective of the Advanced Transportation

Institute 2009 (ATI-09) is to introduce junior and senior high school students, with preference to groups traditionally underrepresented in engineering disciplines, to transportation careers. The University Transportation Center for Alabama (UTCA) and the Alabama Department of Transportation (ALDOT) Personnel Bureau will co-sponsor the Institute. It will be held in ALDOT's headquarters complex in Montgomery, AL. The agenda for the week-long program includes presentations on topics such as transportation careers, how to select and enter a university, and how to obtain scholarships. Additional presentations will be made by practitioners to explore various sectors of transportation, including planning, design, construction, maintenance, traffic engineering, and bridge design. In 2008 a second session of ATI was initiated at the ALDOT 5<sup>th</sup> Division offices in Tuscaloosa (ATI-5<sup>th</sup> Div-08). The session leaders were members of the Tuscaloosa Junior Chapter of the National Society of Black Engineers. The Tuscaloosa session will be held again this year.

**Project #09109 – Preparing for Transit-Oriented Development: A Primer and Training Course**, Dr. Daniel Turner, Principal Investigator, UA. In many locations in the United States, public transit is a viable alternative to large personal vehicles. Public transit reduces congestion, and it reduces traffic crashes. To date, transit has not been a widely accepted mode of travel to Alabama's citizens due to their passion for individual travel. To summarize existing transit systems in Alabama, the user group is too small and too wide spread, convenience is low, and expectations of transit are low for both users and the general public. Transit-oriented development (TOD) solves one of the major difficulties by generating a small but densely populated cluster of transit users around each transit station. It has gained popularity as a strategy to address a number of urban problems, including traffic congestion, shortage of affordable housing, air pollution, lack of neighborhood identity, and urban sprawl. In effect, TOD encourages clusters of dense residential development around transit stations or transit pickup points. The objective of this project is to develop a primer that elected officials, planners and transportation agencies may use to visualize, design, and implement transit-oriented development patterns in Alabama. The Regional Planning Commission of Greater Birmingham and the Alabama Department of Transportation will be the key players in any effort to implement TOD in Alabama, and these two agencies will be involved throughout this UTCA project.

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### New Projects Funded for 2009 (continued)

**Project #09201 – Measuring Non-Recurrent Congestion in Alabama Cities**, Mr. Andrew Sullivan, Principal Investigator, UAB. To effectively allocate resources to address congestion, transportation managers need to better understand the relative magnitudes of recurrent vs. non-recurrent congestion in their region. Of the two, recurrent congestion is the easier to estimate; its predictable nature lends itself well to simulation modeling. Non-recurrent congestion is far more difficult to quantify. Some large US cities (Los Angeles, San Francisco, Seattle) have developed methodologies to quantify non-recurrent congestion on their roadway networks, but these methodologies are largely confined to freeway corridors and rely on extensive sensor networks already in place. In the small and medium sized cities common in the Southeast these sensor networks simply don't exist and are too expensive to implement on a wide scale. This project will attempt to fill that void by developing methodologies that rely on low-cost data collection and analysis techniques to estimate non-recurrent congestion on key facilities. This study will initially focus on interstate and freeway facilities, but there is a need to develop methodologies that apply to arterial routes as well.

**Project #09203 – Design of VMS Bridge Support Structures for Fatigue Loads**, Dr. Fouad H. Fouad, Principal Investigator, UAB. The 2001 edition of the *Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals* by the American Association of State Highway and Transportation Officials (AASHTO) has been revised in its entirety through a major research project conducted under the auspices of the National Cooperative Highway Research Program (NCHRP 17-10). A major part of the revision includes updated provisions and criteria for extreme wind loads and new provisions and criteria on fatigue design. These provisions differ considerably from those in previous editions of the *Standard Specifications*. The impact of the fatigue criteria on the design of highway overhead variable message sign (VMS) support structures has not been evaluated and is not currently being implemented by the Alabama Department of Transportation (ALDOT). The main goal of this study is to conduct an experimental program to develop realistic loading criteria for the use in fatigue design of bridge-type overhead VMS support structures.

**Project #09207 - Evaluation of Cracking Potential of Concrete Mixtures**, Dr. Lianxiang Du, Principal Investigator, UAB. Cracking of Portland cement concrete is always a headache for structure and

pavement engineers. Currently, several test methods have been used to evaluate the cracking potential of concrete. However, results are not satisfactory. This project will explore a new test method which will attempt to produce a pure tension condition. This new method will use a pancake-shape specimen and monitor the strain development with time of concrete under a controlled environment. The results from the new test method will be compared to other test methods, and the effectiveness of this method will thus be verified.

**Project #09301 – Modeling Damage in Concrete Pavements and Bridges**, Dr. Ken Zuo, Principal Investigator, UAH. The objective of the proposed research project is to develop a micromechanics-based constitutive model capable of predicting damage and failure in concrete pavements and bridges under general (three-dimensional) loading conditions. It is also the objective of the project to numerically implement the constitutive model into ABAQUS finite element code for engineering analysis. Concrete material is brittle under normal conditions and is subject to cracking and damage under low tensile loading. Repairing or replacing damaged concrete pavements and bridges can be very costly. An ability to accurately model the evolution of damage in concrete under three-dimensional, cyclic mechanical and thermal loading can help the engineer to make more informed assessment as to whether an existing bridge or pavement with damage is still safe under the design load. We plan to first study the response of microcracks in concrete under three-dimensional stress state (e.g., opening, shear, growth of cracks), and the new macroscopic (continuum level) model will be developed by applying statistical averaging to the response of an ensemble of microdefects in the material. The project will also numerically implement the new model as a user-defined material subroutine in ABAQUS analysis code and conduct numerical tests to verify the model implementation.

**Project #09305 – Road Embankment and Slope Stabilization**, Dr. Mohamed Ashour, Principal Investigator, UAH. The objective of this project is to develop a rational design technique that characterizes and evaluates the stability of slopes and road embankments using a single row or multiple rows of driven piles. Compared to current methods, the project will provide realistic modeling for pile-stabilized slopes and appropriate evaluation for the safety of existing slopes/road embankments pre and

*continued on page 10*



## National Safety Council Calls for Nationwide Ban on Cell Phone Use While Driving

This news item is a summary of a press statement released by the National Safety Council. It contains *verbatim* excerpts from the original statement. The press statement may be downloaded in its entirety from the NSC website at <http://www.nsc.org>.

Itasca, Ill. – January 12, 2009 - The National Safety Council today is calling on motorists to stop using cell phones and messaging devices while driving, and is urging businesses to enact policies prohibiting it, while encouraging governors and legislators in all 50 states and the District of Columbia to pass laws banning the behavior.



“Studies show that driving while talking on a cell phone is extremely dangerous and puts drivers at a four times greater risk of a crash,” said Janet Froetscher, president and CEO of the NSC. “Driving drunk is also dangerous and against the law. When our

friends have been drinking, we take the car keys away. It’s time to take the cell phone away.”

A study from the Harvard Center of Risk Analysis estimates that cell phone use while driving contributes to six percent of crashes, which equates to 636,000 crashes, 330,000 injuries, 12,000 serious injuries and 2,600 deaths each year. The study also put the annual financial toll of cell phone-related crashes at \$43 billion.

Talking on a cell phone may be less distracting than some other activities people may engage in while driving, but the use of cell phones and texting devices is much more pervasive, making it more dangerous overall, Froetscher said. The NSC also points to studies from researchers at the University of Utah that show that hands-free devices do not make cell phone calls while driving safe. Another study demonstrates that talking to passengers, as opposed to talking on a cell phone, actually makes adult drivers safer, because passengers help alert drivers to potential driving risks.

“When you’re on a call, even if both hands are on the wheel, your head is in the call, and not on your driving,” Froetscher said. “Unlike the passenger sitting next to you, the person on the other end of the call is oblivious to your driving conditions. The passenger provides another pair of eyes on the road.”

A significant amount of vehicular cell phone use is done on the job. Many businesses have already acknowledged the injuries and costs associated with this behavior by adopting policies that ban cell phone use by employees on the roads. Among NSC member businesses that responded to a survey, 45% said they have company policies prohibiting on-road cell phone use. Of those, 85% said the policies make no difference in business productivity.

“Anyone with a busy job knows the temptation to multi-task and stay in touch with the office while driving,” Froetscher said. “Believe me, I’ve been there. I didn’t realize how much risk I was taking. Most people don’t. Employers understand how dangerous the behavior is and their potential liability. We are asking all businesses to join us by adopting policies banning calling and texting while driving on the job.”

Froetscher is sending letters this week to all governors and state legislative leaders, encouraging them to adopt statewide bans. She acknowledged that achieving and enforcing bans in all states will be a challenge, but she said the NSC has successfully faced similar challenges in the past, such as seatbelt enforcement.

“It may be hard for some people to imagine how certain laws, such as those concerning drunk driving, teen driving, seatbelt use and booster seats, can be enforced by observation alone,” Froetscher said. “Smart people in law enforcement get together to address such issues. They develop creative and successful measures to identify violators, such as high-visibility enforcement strategies.”

The NSC will take a three-fold approach to leading change: advocating legislation; educating the public and businesses about the risk of cell phone use while driving; and supplementing distracted driving content in its training of 1.5 million people annually in defensive driving.

“The change we are looking for, to stop cell phone use while driving, won’t happen overnight. There will be a day, however, when we look back and wonder how we could have been so reckless with our cell phones and texting devices,” Froetscher said.





## Local Police Weigh in on Texting While Driving

This article by Ms. Cassandra Mickens was published in *The Shelby County Reporter* on 2/23/2009. It is reprinted in this newsletter by written permission of the author.

The Alabama House of Representatives' 92-4 vote last week to ban text messaging while driving came as welcome news to some Shelby County (AL) police departments.

As the bill heads to the Senate for a vote, Montevallo Interim Police Chief Steve Holt hopes the Senate follows the House's lead. Holt said text messaging while driving is all too common on Shelby County roadways.

"If this bill becomes a law, it'll be one of the best laws (the Legislature) has passed in a while," Holt said. "When your attention is on your phone and not on the road, there's no way you can concentrate on what you're doing. We've even witnessed people typing on computers on the console of their cars while driving down the road."

Holt said inattention coupled with curvy, two-lane roads have led to serious wrecks in Montevallo. Holt did not have data available to determine whether the wrecks were linked to text messaging.

The bill, introduced by Rep. Jim McClendon, R-Springville, would make it illegal to send or read text messages behind the wheel. The bill also bans the manual operation of navigation devices.



Under the bill, motorists would be charged \$25 for the first offense, \$50 for the second offense, and \$75 for the third offense. Convictions would be noted on drivers' records as a one-point violation.

McClendon has also proposed a second bill that would ban the use of cell phones while driving unless the driver is using a hands-free device.

Alabaster Deputy Police Chief Curtis Rigney said the ban should encompass more than text messaging. Rigney believes all road distractions, from reading newspapers to watching car TV monitors, should be prohibited.

"Our officers can tell you they've seen some crazy things," Rigney said. "If you're in a 3,000-pound vehicle driving 60, 70 miles per hour, that should be the focus of your concentration. If you're behind the wheel, you should be concentrating on driving and that's it."

Pelham Police Chief Tommy Thomas is in favor of the bill; however, he admits it would be difficult for officers to discern motorists who are texting while driving.

"We've all seen texting while driving. We are all aware that texting is a problem," Thomas said. "But texting is one of those things that is not as readily apparent as cell phone usage. From a law enforcement standpoint, (the ban) would be difficult to enforce."

Rigney agreed. "How is an officer supposed to see someone who has a cell phone in their lap who is texting?" he questioned.

Holt said enforcing the ban is easier said than done. Officers could only issue warnings to blatant violators while discreet text messaging goes unseen and unpunished.



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Thomasville, AL

## *Construction Industry:*

**Mr. Billy Norrell**  
Executive Director  
Alabama Road Builders Association  
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## *FHWA Representatives:*

**Mr. Grant Zammit**  
Traffic Management/System  
Operations Specialist  
FHWA Resource Center  
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**Mr. Eddie Curtis**  
Traffic Management Specialist  
Office of Transportation Management  
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## New Projects Funded for 2009 (continued)

post pile installation. The soil mass driving forces caused by failed or vulnerable slopes/road embankments will be determined along with the size/type of piles needed to stabilize these slopes or road embankments. The influence of ground surface topography and soil types on pile resistance will be considered in the project. The project aims to increase the level of design confidence and to expedite the restoration of the traffic service. A computer program with graphics user interface will be developed to implement the proposed procedure. Such a design tool will provide the length and size of desired piles, pile lateral response (i.e. pile deflection, moment, and shear force), pile performance ratio, and slope/embankment safety pre and post pile installation.

**Project #09306 – Transportation Engineering Advancement and Mentoring Program (TEAM)**, Dr. Kathleen Leonard, Principal Investigator, UAH. The Transportation Engineering Advancement and Mentoring (TEAM) Program is a hybrid of the past UTCA summer program aimed at middle-school females with the addition of school visits to science classes. The strategy of this program is aimed at producing students who know “how to find out” and “how to examine and evaluate evidence.” Mentors (students and professionals) will make several

visits to their classes for one-on-one time. The first visit will coincide with National Engineers’ Week in February and culminate with a design build competition at a fall campus visit day. The hands-on activities were developed in previous UTCA grants program (GUTEP). This year will also include new alternative energy technologies and more female senior personnel. The participants will use real world transportation examples and new technologies in their activities. The Principal Investigator will continue to work with local school districts to incorporate transportation engineering-related topics into the science curriculum.

**Project #09307 – Student Funding to Attend TRB Conference**, Dr. Michael Anderson, Principal Investigator, UAH. Students from the three campuses of The University of Alabama System are engaged in a variety of transportation-related research activities. This project intends to provide a mechanism to (1) identify deserving transportation students; (2) establish a forum for the students to present the results of their research to transportation professionals, faculty, and other student in a professional setting; and (3) allow the students to expand their education by attending the Annual Meeting of the Transportation Research Board in Washington, DC.

