The Center for Transportation and the Environment conducts innovative programs of research, education, and technology transfer that seek to mitigate the impacts of surface transportation on the environment.

CTE is an activity of the University Transportation Centers Program, administered by the Research and Innovative Technology Administration of the United States Department of Transportation. CTE is recognized as a national university transportation center of excellence.

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From the Director

The Center for Transportation and the Environment (CTE), established in 1991 as a national center within the Institute for Transportation Research and Education at North Carolina State University, continues to carry out a wide range of research, education, and technology transfer initiatives related to environmental issues at the local, state, and national levels. Many of these activities are performed in CTE’s role as a national university transportation center of excellence.

This report highlights some of CTE’s activities in FY2008-2009. Numerous research projects have been initiated or completed through our partnership with the North Carolina Department of Transportation. They are described briefly later in this report and in more detail on our website. These projects involve faculty and students from a range of departments and universities. CTE also participated in two projects funded by the National Cooperative Highway Research Program (NCHRP) that were completed this year. In one project, CTE staff Leigh Lane and Ann Hartell, working with colleagues from other organizations, examined methods for assessing social, cultural, and economic effects of transportation projects to provide guidance to practitioners. In another NCHRP project, James Martin and Katie McDermott, along with colleagues from Mulkey Engineers, examined temporary bridging during construction projects to minimize adverse impacts on waterways and wetlands and provided a guidebook for practice. During the last year, CTE also continued to build on its prior work to develop and implement educational programs on Context Sensitive Solutions. Finally, CTE has maintained its strong emphasis on technology transfer through training programs, conferences (e.g., planning for ICOET 2009), and teleconferences (e.g., the December webcast on transportation and climate change).

All of these activities are carried out by an outstanding and highly motivated group of staff and students, such as Daniel Findley, our student of the year, and the staff members highlighted in this report. All of us look forward to any suggestions you may have regarding future initiatives on which we may collaborate.

Sincerely,

E. Downey Brill, Jr., PhD
## Management Structure

CTE is administered by North Carolina State University, reporting to the Office of the Vice Chancellor for Research and Graduate Studies, and is one of over 60 research centers, institutes, and laboratories on campus. CTE is located on NCSU’s Centennial Campus in the offices of the Institute for Transportation Research and Education (ITRE).

The Center’s research, education, and technology transfer programs are guided by the CTE Advisory Committee, which provides valuable input on program activities. The committee is composed of representatives from government, academia, and non-profits. In addition, ITRE’s Advisory Council receives regular updates on CTE activities and provides input at the request of the Center’s director, Dr. E. Downey Brill, Jr.

### CTE Advisory Committee 2008-2009

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<tr>
<th>Name</th>
<th>Title</th>
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<tr>
<td>Eugene Conti, Jr., PhD</td>
<td>Secretary</td>
<td>North Carolina Department of Transportation</td>
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<td>Gorman Gilbert, PhD, PE</td>
<td>Director, Director</td>
<td>Oklahoma Transportation Center Oklahoma State University Stillwater, OK</td>
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<td>Nagui M. Rouphail, PhD</td>
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<tr>
<td>Robert E. Skinner</td>
<td>Executive Director</td>
<td>Transportation Research Board Washington, DC</td>
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### ITRE Advisory Council 2008-2009

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<tr>
<th>Name</th>
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<tr>
<td>Jim Westmoreland, PE (Council Chair)</td>
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<td>North Carolina Department of Transportation</td>
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<tr>
<td>Stephanie Ayers</td>
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<td>North Carolina Ports Authority Wilmington, NC</td>
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<td>Eugene Conti, Jr., PhD</td>
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<td>Kathryn Dobie, PhD</td>
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<td>NC A&amp;T State University Greensboro, NC</td>
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<td>Mark Dunzo</td>
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<td>Kimley-Horn and Associates, Inc. Cary, NC</td>
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<td>Larry Goode, PhD, PE</td>
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<td>Transportation Consultant Raleigh, NC</td>
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<td>David Harkey, PhD, PE</td>
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<td>University of North Carolina Highway Safety Research Center Chapel Hill, NC</td>
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<tr>
<td>Edd Hauser, PhD, PE</td>
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<td>Center for Transportation Policy Studies University of North Carolina at Charlotte Charlotte, NC</td>
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<tr>
<td>David King</td>
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<td>Triangle Transit Authority Research Triangle Park, NC</td>
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<tr>
<td>George List, PhD, PE</td>
<td></td>
<td>Civil, Construction and Environmental Engineering North Carolina State University Raleigh, NC</td>
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<tr>
<td>Catherine McGhee, PE</td>
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<td>Virginia Transportation Research Council Charlottesville, VA</td>
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<td>Keith Parker</td>
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<td>Charlotte Area Transit System Charlotte, NC</td>
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<td>John F. Sullivan, III</td>
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<td>Federal Highway Administration North Carolina Division Raleigh, NC</td>
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<td>C. Michael Walton, PhD, PE</td>
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<td>Civil Engineering University of Texas at Austin Austin, TX</td>
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<tr>
<td>Robert Wimmer</td>
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<td>Toyota Motor North America Washington, DC</td>
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Center Staff

E. Downey Brill, Jr., PhD  
*Director*

James B. Martin, MCE, PE  
*Associate Director*

David Robinson, PhD, PE  
*Senior Research Associate*

Leigh B. Lane, BSCE  
*Senior Research Associate*

Ann Hartell, MRP  
*Research Associate*

Katie McDermott, MA  
*Technology Transfer Director*

Eugene Murray, BA  
*Distance Learning Specialist*

Nancy Bailey, MLS  
*Web Development Specialist*

Walt Thomas, BA  
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North Carolina State University  
Raleigh, NC

2008-2009 Annual Report
The Center for Transportation and the Environment is funded by the Research and Innovative Technology Administration of the US Department of Transportation, with matching support from the North Carolina Department of Transportation.

CTE’s total annual operating budget for FY2008-09 was $914,000. USDOT provided $457,000 through the University Transportation Centers Program. NCDOT provided the full state match requirement of $457,000 through its funding of CTE / NCDOT joint research projects.
Research Program

Since 1998 CTE has partnered with the North Carolina Department of Transportation to conduct a joint environmental research program. The partnership was established following the Center’s reauthorization in the Transportation Equity Act for the 21st Century (TEA-21).

Each year the NCDOT Research and Development Unit requests research proposals addressing transportation needs from across the state. Representatives from CTE, ITRE, and the Federal Highway Administration NC Division Office serve on a technical advisory committee responsible for reviewing and selecting the research projects. Contracts for all project awards are administered by ITRE. CTE’s director serves on each individual environmental research project committee, which is responsible for providing overall guidance to the principal investigator(s) and monitoring their progress through project completion.

The CTE / NCDOT partnership has generated significant research results in various environmental areas, including air quality, water quality, wetlands mitigation, vegetation management, wildlife management, highway construction materials, and new technologies. During 2008-2009, the research program involved the active participation of more than 46 students and 25 university faculty representing many academic disciplines.

For more information on the program and research projects, please visit the CTE website at [www.cte.ncsu.edu/cte/research](http://www.cte.ncsu.edu/cte/research).

New Projects

The following new research projects were awarded during the 2008-2009 reporting period.

**Propagation and Culture of Federally Listed Freshwater Mussel Species (HWY-2009-16)**
Performing Organization: North Carolina State University
Principal Investigator: Dr. Jay F. Levine
Period: July, 2008 – December, 2010

**Assessment of Bioenergy Crop Production along NC Highway Right of Ways (HWY-2009-19)**
Performing Organization: North Carolina State University
Principal Investigator: Matthew W. Veal
Period: March, 2009 – May, 2011

**Effects of Highway Construction on Two Streams in Yancey County (HWY-2009-23)**
Performing Organization: North Carolina State University
Principal Investigator: Dr. Daniel E. Line
Period: August, 2008 – August, 2011

Completed Project

The following research project was completed, and a final report issued, during the 2008-2009 reporting period. Final reports and other project details are available through the CTE website at [www.cte.ncsu.edu/cte/research](http://www.cte.ncsu.edu/cte/research).

**Stilling Basin Design and Operation for Water Quality: Field Testing (HWY-2007-02)**
Performing Organization: North Carolina State University
Principal Investigator: Dr. Richard A. McLaughlin
Ongoing Projects
The following research projects were in progress or in the draft final report stage during this reporting period.

Performing Organization: University of North Carolina at Charlotte
Principal Investigators: Dr. Craig Allan, Dr. Jy Wu

**Innovative & Environmentally Responsible Methods for Controlling Invasive Woody Plant Species in NC Right of Ways (HWY-2006-05)**
Performing Organization: North Carolina State University
Principal Investigators: Dr. Joe C. Neal, Dr. Jim Burton
Period: July, 2005 – August, 2009

**Effectiveness of Bear Crossings on I-26 in Madison County, North Carolina (HWY-2006-14)**
Performing Organization: North Carolina State University
Principal Investigators: Dr. Richard A. Lancia, Dr. Phillip D. Doerr

**Platinum Markers as Indicators of Transportation Impact (HWY-2007-03)**
Performing Organization: North Carolina State University
Principal Investigators: Dr. W. Gregory Cope, Dr. Thomas J. Kwak, Dr. Damian Shea
Period: July, 2006 – June, 2009

**Evaluation of Nutrient Loading Rates and Effectiveness of Roadside Vegetative Connectivity for Managing Runoff from Secondary Roads (HWY-2007-04)**
Performing Organization: University of North Carolina at Charlotte
Principal Investigators: Dr. Jy Wu, Dr. Craig Allan
Period: July, 2006 – August, 2009

**Ongoing Maintenance and Enhancement of Precipitation Alert and Visualization Tool in Support of NCDOT’s Storm Water Quality Monitoring (HWY-2007-20)**
Performing Organization: North Carolina State University
Principal Investigator: Dr. Sethu Raman
Period: July, 2006 – June, 2009

**Research of Hydrologic and Water Quality Performance of Four Linear Wetlands in Eastern North Carolina and House Creek Watershed Interchange Retrofits (HWY-2007-21)**
Performing Organization: North Carolina State University
Principal Investigator: Dr. William Hunt
Period: March, 2007 – June, 2010

**Methodology to Assess Vegetation, Hydrologic & Soil Parameters that Affect Wetland Restoration Success (HWY-2008-16)**
Performing Organization: North Carolina State University
Principal Investigator: Dr. Mike J. Vepraskas

**Effects of Highway Construction in Sedgefield Lakes and King’s Mill Continued (HWY-2008-17)**
Performing Organization: North Carolina State University
Principal Investigators: Dr. Daniel E. Line, Dr. Jean Spooner

**Shoreline Monitoring at Oregon Inlet Terminal Groin (HWY-2009-21)**
Performing Organization: North Carolina State University
Principal Investigator: Dr. Margery F. Overton
Period: July, 2008 – August, 2009
Research Presentations and Publications

The National Cooperative Highway Research Program (NCHRP), managed by the Transportation Research Board (TRB), conducts research in problem areas that affect highway planning, design, construction, operation, and maintenance nationwide. Reports from two NCHRP projects in which CTE participated were published in 2008. Through NCHRP, CTE research contributes to the national discourse on transportation and environmental issues and serves as an important resource for transportation decision-making.

Transportation Project Effects on Communities

In September, 2008, the American Association of State Highway and Transportation Officials (AASHTO) released the report “NCHRP 08-36, Task 66: Improved Methods for Assessing Social, Cultural, and Economic Effects of Transportation Projects.” Developed for AASHTO’s Standing Committee on Planning, this CTE study identifies existing and emerging community and social impact assessment measures that can be used as indicators of the quality of a community’s life. A range of measures and methods are described and demonstrated, through application to a case study. These methods are applicable to long-range planning, project scoping, Community Impact Assessment and National Environmental Policy Act (NEPA) analysis, and post-project evaluation.

The report provides an in-depth, cross-disciplinary literature review and interviews with scholars both outside and within the transportation profession to build on current practice. Extensive notes and documentation on data sources and analysis techniques provide practitioners with a ready reference guide for implementation.

CTE conducted the study under subcontract to Cambridge Systematics. CTE researchers Leigh Lane and Ann Hartell conducted the study, with additional contributions from Teresa Townsend, AICP, Jeremy Scott and Greg Ferrara, and project oversight from John Suhrbier of Cambridge Systematics. The full report is available from the AASHTO Statewide Planning website at www.statewideplanning.org/resource.php?id=234.

Research on Temporary Bridging Solutions

Also in September, 2008, NCHRP released Research Results Digest 330, a digest of the report “The Use of Temporary Bridging to Avoid and Minimize Impacts to Waters and Wetlands during Highway Construction.” CTE, working in collaboration with Mulkey Engineers and Consultants, recently prepared a guidebook to accompany the full report.

Construction projects over waterways frequently involve traffic detours, or temporary construction access, built into or completely across a stream. Current construction methods discharge fill, requiring state DOTs to expend significant resources on environmental permitting and compensatory mitigation. An alternative practice is to use temporary bridging, such as floating or prefabricated bridging, or built-in-place structures. If temporary bridging is practicable in avoiding or minimizing impacts, there is an opportunity to protect the environment and reduce costs.

The NCHRP research provides a detailed look at state DOT practices in the use of temporary bridging, including results of a national Web-based survey and follow-up interviews with selected states to provide further context for the analysis of the survey responses. The study also developed a straightforward set of criteria to assist decision-makers in their selection and use of temporary bridging for traffic detours or construction access.

The guidebook and final report are scheduled for release by the Transportation Research Board in the coming months. The Research Results Digest 330 was released in September 2008 and is available online from the TRB website at http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_330.pdf.
Supporting the North Carolina Ecosystem Enhancement Program

Since 2003, CTE senior research associate Dr. David Robinson has worked alongside staff of the North Carolina Ecosystem Enhancement Program (EEP) to implement a nationally-recognized environmental mitigation program that also supports economic growth in the state. EEP is a unique partnership between the NC Department of Transportation (NCDOT), NC Department of Environment and Natural Resources (NCDENR), and the US Army Corps of Engineers. EEP provides mitigation for NCDOT’s transportation infrastructure projects and, in the past five years, has helped to facilitate more than $3 billion in road construction without a single project delay due to a lack of mitigation. EEP presently maintains hundreds of stream and wetland restoration, enhancement and conservation projects statewide.

Through a contract between NC State University and NCDENR, CTE’s Robinson has been involved in all aspects of EEP programs, focusing currently on strategic planning and developing a financial database to track and forecast project costs and budgets with more precision. Robinson also forecasts the in-lieu fee programs for wetland, stream, nutrient offset and stream buffer mitigation. He provides analysis of proposed state and federal mitigation legislation, and determines the potential financial and organizational impacts on the program. CTE is proud to support EEP in its ongoing efforts to preserve and protect wetlands, streams and riparian areas throughout North Carolina. For more information, visit the EEP website at www.nceep.net.

Student of the Year

CTE selected Daniel Findley as the recipient of its Student of the Year award for 2008. He was recognized at the annual awards banquet for the Council for University Transportation Centers held January, 2009, in Washington, DC. This award is given by each of the University Transportation Centers (UTC) sponsored by the U.S. Department of Transportation.

Findley, a PhD candidate in civil engineering at North Carolina State University, has research interests that include the economic impacts of transportation, safety and the implementation of innovative solutions to transportation issues. His current research focuses on the economic impacts of access management; the primary goal being to complete a before-and-after study of the installation of access management techniques using business data.

In addition to his research, Findley is an instructor in the Fundamental Engineering Principles program and the Highway Engineering Concepts course at the Institute for Transportation Research and Education (ITRE). He has also been involved in some North Carolina DOT training for level of service and economic impact software, and has presented at several conferences. Findley is a member of the Institute of Transportation Engineers and Chi Epsilon, the national civil engineering honor society.

Each year CTE recognizes a graduate student within its Graduate Research Fellowship Program or Research Program whose academic work exemplifies outstanding research and leadership qualities in the transportation and environment field. Students of the Year are recognized at the annual UTC awards banquet, conducted in concert with the Transportation Research Board (TRB) annual meeting. Each recipient receives $1,000 plus registration and expenses for the TRB annual meeting.
Education Program

Context Sensitive Solutions (CSS), a collaborative process for transportation planning and design, is a central focus of CTE’s education program activities. CSS is an interdisciplinary approach which partners transportation professionals with regulatory agencies, local governments, citizens and other stakeholders to consider the total context within which a transportation project will exist and to achieve solutions that integrate the project with the environment and community it serves. Since 2003 CTE has been a nationally recognized expert and leader in CSS research and education. In 2008-2009 CTE conducted training in CSS and related environmental areas to support the professional development needs of more than 100 practitioners. The Center also supported graduate student research through its Student of the Year award (see page 10). More information about CTE’s education program can be found at www.cte.ncsu.edu/cte/education.

CSS Training Curriculum Updated

In 2008, CTE updated the training materials for its three-day course titled “Context Sensitive Solutions: A Better Way.” This CSS training is regularly delivered to transportation professionals from across North Carolina. The course presents a large number of examples of flexible highway design, careful attention to environmental quality and effective stakeholder engagement techniques. The curriculum includes a combination of presentation material, facilitated discussions and an extended role-playing exercise during which participants work through a complex project scenario.

The revised curriculum focuses on updated information and images about the featured examples and practices. The curriculum reflects the broad range of North Carolina DOT programs and highlights exemplary projects that enhance communities and environmental quality across the state. New examples include the NCDOT-sponsored website for the Clayton Grade Separation project at a railroad crossing, demonstrating an effective use of new technology to communicate with stakeholders and document the progress of a project. Information for NCDOT’s Reedy Creek Greenway project was added to illustrate how flexible roadway design, careful attention to the needs of cyclists, and collaboration with adjacent landowners delivered an award-winning project of great value to stakeholders. Updated information on a project that incorporated a critical wildlife crossing in western North Carolina is also included to illustrate careful consideration of ecosystem needs.

The NCDOT programs for materials recycling, roadside color canopies, and spot safety analyses are also included in the revised course. The revised materials ensure that NCDOT employees and other participants will receive current information so they will be well-equipped to apply the principles of CSS in their day-to-day work.

NCDOT Training

During 2008-2009 CTE continued its on-going training support for North Carolina Department of Transportation employees in two critical environmental areas.

Thirty-five NCDOT employees successfully completed CTE’s three-day course on "Context Sensitive Solutions: A Better Way". The in-depth training covers CSS approaches and tools from transportation planning, project development, and design to right-of-way, construction, operations, and maintenance. Participants learn through lectures, case study presentations, facilitated group discussions, and decision-making exercises. Since 2003, CTE has delivered more than 50 CSS courses to over 1,600 transportation department staff, local agencies and consultant groups across the state. Learn more about the Center’s CSS training at www.cte.ncsu.edu/cte/education/css-training.asp.

CTE also provided instructional and administrative support for the NCDOT’s Merger 01 training courses. Merger 01 is a process to streamline transportation project development and permitting, and provide a forum for federal, state and local agencies to discuss and reach consensus on ways to meet the regulatory requirements of Section 404 of the Clean Water Act during the NEPA/SEPA decision-making phase. Seventy transportation executives and practitioners participated in Merger 01 training in 2008-2009. More information about Merger 01 can be found on the NCDOT website at www.ncdot.org/doh/preconstruct/pe/merger01.
Technology Transfer Program

CTE’s technology transfer activities in 2008-2009 utilized both Web-based and traditional forums to connect students and practitioners with current information about transportation and environmental research and policy issues. Fostering communication and collaboration between transportation and environmental professionals is integral to the Center’s mission. CTE is continually seeking technology transfer opportunities to increase and improve access to information on current research applications, best practices, and policies. For more information on the CTE technology transfer program, please visit the website at www.cte.ncsu.edu/cte/techtransfer.

Webcast on Transportation and Climate Change

More than 670 transportation and environmental professionals registered to view CTE’s December, 2008 live webcast teleconference on “Transportation and Climate Change: Time to Think, Plan, Mitigate, and Adapt.” The two-hour program drew a record audience from the US, Canada, UK, Spain and Australia as expert panelists discussed the current practice and emerging issues for integrating climate change considerations into transportation planning. Following the presentations, the webcast also provided an interactive Q&A session with panelists. Audience participants from state DOTs, MPOs and RPOs, environmental agencies, non-governmental organizations, universities and private-sector organizations, eagerly submitted dozens of questions by email and phone.

The successful webcast is the forty-third program in CTE’s long running annual series of teleconferences addressing emerging policy issues, research innovations, and best practices in transportation and the environment. More information on this teleconference, including archives of past programs, is available on the CTE website www.cte.ncsu.edu/cte/techtransfer/teleconferences.

Web Streaming for US EPA Teleconferences

Since 2001 CTE and the US Environmental Protection Agency (EPA) have maintained a cooperative agreement to support each other’s technology transfer activities. CTE provides Web streaming and hosting for teleconference broadcasts produced by the EPA Agency Office of Air Quality Planning and Standards. Each program addresses important current issues for state, local and tribal air pollution and planning professionals. The programs are carried live over EPA’s Air Pollution Distance Learning Network, then are hosted on the Center’s Web server for on-demand viewing and archiving. In 2008-2009, CTE added two EPA broadcasts to its online archive. To view these and other EPA broadcasts, visit www.cte.ncsu.edu/cte/techtransfer/teleconferences/epabroadcasts.asp.

Climate and Air Quality: Applications for Air Quality Professionals (October 2008)

This three-hour training discusses the interactions between climate change and air quality programs. Part one of the broadcast explores possible impacts of climate change on air quality and how emissions of criteria pollutants may impact climate. This segment features leading scientists, researchers, and environmental professionals describing multi-pollutant approaches and tools that are addressing those impacts. The second part of the program highlights two successful initiatives: Connecticut’s Climate Change Action Plan and the Dallas, Texas Sustainable Skyline Initiative. This segment features business leaders, elected officials and air quality planners. A question and answer session follows each segment.

Lead National Ambient Air Quality Standards Update (December 2008)

This two-hour seminar addresses the revisions to the lead National Ambient Air Quality Standards (NAAQS). The broadcast features EPA experts discussing the revisions to the primary and secondary standards set in 1978, the health effects related basis for the revisions, and the process that led to the revisions. The broadcast addresses new monitoring requirements and the strategy for transitioning from the old lead standard to the new standards. A panel of experts answers questions from the viewing audience. Materials may be downloaded at www.epa.gov/apti to accompany the program.

Center for Transportation and the Environment
Conferences and Workshops

CTE annually co-sponsors and serves as lead organizer for professional development conferences and workshops that relate to the Center’s mission of mitigating the impacts of surface transportation development on the environment. During 2008-2009 the Center engaged in these activities:

**ICOET 2009 Conference in Planning**

CTE conducted planning for the 2009 International Conference on Ecology and Transportation (ICOET), to be held September 13-17, in Duluth, Minnesota. In fall of 2008, the Call for Abstracts was issued seeking abstracts for technical papers and poster presentations that fit with the conference theme “Adapting to Change”. Over 200 abstracts from researchers and practitioners in 16 countries were submitted and reviewed by the ICOET Program Committee. CTE and the conference Steering Committee are collaborating to develop the conference program, which includes a full schedule of presentations, poster sessions, and field trips.

ICOET is a multi-disciplinary conference conducted biennially to identify and share quality research applications and best management practices that address wildlife, habitat, and ecosystem issues related to the delivery of surface transportation systems. The timely 2009 conference theme recognizes that transportation systems and ecosystems need to be addressed in the context of global climate change and shifts in transportation funding and priorities. The ICOET 2009 program will focus on the challenges ahead as transportation and ecology professionals must adapt for future global climate changes, shifts in transportation demand and patterns, and evolving environmental and transportation policy.

Principally sponsored by the Federal Highway Administration, ICOET receives broad support from several federal resource agencies, state transportation agencies, universities, non-governmental organizations, and private consulting firms. CTE is lead organizer and co-sponsor of the conference and has been an integral part of ICOET since its inception. Visit [www.icoet.net](http://www.icoet.net) for a complete program and conference information.

**Context Sensitive Solutions National Dialog**

CTE is partnering with the Federal Highway Administration (FHWA) to begin a national dialog about Context Sensitive Solutions (CSS). With the launch of the “CSS National Dialog” website in January, 2009, the project will facilitate an ongoing exchange of ideas and build momentum for wider implementation of CSS in the transportation industry. CTE associate director James Martin, PE, and research associate Ann Hartell are lead CTE staff, with contributions from the Center’s Web developer Nancy Bailey. The project sponsor is the FHWA’s Office of Planning, Environment and Realty’s Surface Transportation Environment and Planning Cooperative Research Program (STEP).

CSS is a collaborative, interdisciplinary approach to planning, designing and implementing transportation facilities. The approach involves all stakeholders in developing infrastructure that fits the physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. Since 2003 CTE has been a national leader in CSS research and training, conducting professional development for thousands of transportation practitioners across the country.

The CSS National Dialog will feature a series of one-day workshops to be held in various regions of the U.S., each focusing on a particular aspect of CSS and using transportation projects, programs or plans to highlight best practices and provide a springboard for discussion and interaction. The Dialog collected over 90 submissions from across the country, representing best practices in the application of CSS principles to transportation projects, programs and plans. The workshops will also feature discussion panels drawn from the host region. For more information, visit the website [www.cssnationaldialog.org](http://www.cssnationaldialog.org).
Transportation Research Board Participation

TRB standing committees facilitate the exchange of research information and results, which is vital to improving the nation’s transportation systems. Committees develop research problem statements for the TRB research agenda, review and recommend papers for presentation and publication at the TRB Annual Meeting, as well as organize professional development workshops and related activities. CTE has a long and successful history of participation in TRB, which continued in 2008-2009.

CTE director E. Downey Brill, Jr., PhD, was appointed in 2008 to TRB’s ADC10 Environmental Analysis in Transportation committee. ADC10 emphasizes protection and enhancement of the environment as an integral part of transportation planning, decision-making, and mitigation strategies, policies, and processes, as well as multidisciplinary impact considerations. Brill succeeds CTE associate director James Martin, PE, who served on ADC10 for the previous nine years.

Ann Hartell, CTE research associate, will serve on the ADD20 Committee on Social and Economic Factors of Transportation beginning in 2009. The scope of ADD20 includes direct and indirect social and economic effects of transportation systems, both within the transportation corridor and within the larger regions affected.

CTE associate director James Martin, PE, presented at a workshop on transportation environmental research during the TRB Annual Meeting held January 2009 in Washington, DC. Martin’s presentation on “Environmental Research in Transportation at the University” was part of an expert panel featured at the workshop. The workshop explored the transportation environmental research process including how to generate and prioritize ideas; funding, completing, and promoting research; populating research databases, and capturing successes and failures in research implementation.

CTE is pleased to continue its participation with TRB and to contribute valued perspectives on current issues facing transportation and the environment. To learn more about the Transportation Research Board visit www.trb.org.

Advising on State Transportation Infrastructure Issues

In February, 2009, the Institute for Emerging Issues (IEI) at North Carolina State University hosted its annual forum in Raleigh, NC. Titled “Changing Landscapes: Building the Good Growth State?” the two-day event brought together state, national, and international leaders to examine the impacts of North Carolina’s growing population and transitioning economy on its infrastructure.

CTE research associate Ann Hartell was invited to serve on a working group to provide expert input to Institute staff developing ideas and topics for debate at the forum. Prior to the forum, Hartell and fellow working group members met and discussed the challenges North Carolina is currently facing in four areas: transportation, housing, school construction, and water and sewer. Hartell was invited to participate based on her knowledge of the interaction between land use and transportation.

The IEI is a public policy, think-and-do tank that convenes leaders from business, nonprofit organizations, government and higher education to tackle issues that challenge North Carolina’s future growth and prosperity. For more information on the Institute for Emerging Issues, visit www.ncsu.edu/iei.
Environmental Communications Support

CTE provides on-going website hosting and maintenance for three environmental committees of the Transportation Research Board to support their communications and planning activities. CTE also hosts and moderates several email listservs that facilitate information sharing among the committees, as well provide support for FHWA program activities and targeted communications for practitioners. In 2008-2009 the Center managed these environmental communications activities:

• TRB ADC10 Environmental Analysis in Transportation website
• TRB ADC30 Ecology and Transportation website
• TRB ADC50 Historic and Archaeological Preservation in Transportation website
• TRANSENVIRO – listserv for government officials, transportation and environmental professionals, and the public to informally exchange news about current research, discussion of problems and solutions, requests for advice and assistance, and announcements of upcoming conferences and events.
• WFTLISTSERV – listserv for officials, professionals, and public interest groups working in wildlife, fisheries, and transportation fields to exchange of information and ideas regarding new research applications, policy issues, best practices, and upcoming events. The listserv includes subscribers who are active in the International Conference on Ecology and Transportation (ICOET).
• ROADSIDES – listserv for transportation officials, scientists, practitioners, and university researchers working in vegetation management along highway corridors. Subscribers include professionals working in landscape, maintenance, environmental services, erosion control and turf establishment, noxious weeds and native plants to increase information-sharing and networking. The listserv supports the Federal Highway Administration’s Roadside Vegetation Program.
• TRANSARCH – listserv for cultural resource specialists, including archaeologists, historians, structural historians, and anthropologists, employed in transportation agencies. Subscribers share their individual knowledge, experience, and ideas on cultural resource problems with a nationwide audience of colleagues facing the same challenges. TransArch list members are restricted to staff of state, provincial, tribal, and county transportation agencies and to staff of the Federal Highway Administration.

More information and links to TRB committee websites can be found at [www.cte.ncsu.edu/cte/trbpartners](http://www.cte.ncsu.edu/cte/trbpartners). For details on subscribing to the above listservs, visit [www.cte.ncsu.edu/cte/lists/index.asp](http://www.cte.ncsu.edu/cte/lists/index.asp).
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