CTE Research Projects Presented at 2011 TRB Annual Meeting

Senior research associate Leigh Lane was invited to present on several CTE research topics at the 90th Annual Meeting of the Transportation Research Board (TRB) held January 23-27, 2011 in Washington, DC.

Through the TRB, CTE research contributes to the national discourse on transportation and environmental issues and serves as an important resource for transportation-related decisionmaking.

The Center’s research selected for presentation at this year’s TRB Annual Meeting included:

**Getting CSS off the Ground: FHWA’s Technical Assistance** – a podium presentation of the technical assistance provided to several state DOTs towards implementation of Context Sensitive Solutions (CSS) principles.

This assistance included workshops, facilitated discussions, and customized sessions on various aspects of CSS. Lane, working with consultants from The Louis Berger Group, Inc., was one of the expert team members leading the technical assistance efforts in six states.

**Livability in the Transportation Context** – Lane was the opening speaker in a session addressing the important relationship of livability and sustainability to transportation and the environment.

The session provided an understanding of livability, sustainability and environmental considerations in transportation, and explored how these factors can be measured and applied.

NCHRP Project 25-25 Task 62: Improving Public Outreach for Transportation Projects by Use of Citizen Coalitions – a poster presentation on the results of a National Cooperative Research Program (NCHRP) project to help transportation agencies identify citizen coalitions that can provide valuable insight and input into the transportation decisionmaking process, as well as help them more effectively and efficiently engage their stakeholders to better understand community interests and needs.

Lane’s presentation illustrated how transportation practitioners can leverage the skills, expertise, political and social capital of citizen coalition groups to more effectively and efficiently solve transportation problems while supporting a good quality of life.

Hartell Participates in Climate Leadership Academy on Low Carbon Transportation

CTE research associate Ann Hartell traveled to Arlington, VA, to participate in the Climate Leadership Academy on Low Carbon Transportation as a member of a team from the City of Durham, NC. The Academy, held June 8-10, 2011, was sponsored by the Institute for Sustainable Communities, an outreach and engagement nonprofit.

Speakers and faculty at the three-day event included leading analysts and practitioners who discussed how to provide transit and nonmotorized transportation options through innovative funding partnerships, building local support, and integrating transportation planning with housing and economic development planning. The Durham team joined participants from thirteen other cities and regions from across the country.

From left: John Tallmadge, CTE’s Ann Hartell, Scott Whiteman, Joey Hopkins, and Ellen Beckmann.

In addition to Hartell, the Durham team consisted of John Tallmadge, Triangle Transit; Scott Whiteman, Durham City/County Planning Department; Joey Hopkins, NCDOT Division 5; and Ellen Beckmann, Durham-Chapel Hill-Carrboro MPO/City of Durham Transportation Department. The Durham team plans to incorporate an index that combines housing and transportation costs for households as a part of their transit planning in anticipation of the results of an upcoming transit sales tax referendum to support regional rail projects and improved bus service.
CSS Research Highlighted at USDOT RITA Exhibition

A poster highlighting CTE’s nationally recognized research and technology transfer activities on Context Sensitive Solutions (CSS) was exhibited at the US Department of Transportation’s University Research Technology Transfer Day, held April 6, 2011, in Washington, DC. CTE associate director James Martin attended the event and presented the poster on “Context Sensitive Solutions: Equipping Transportation Professionals for The Challenge of Meeting Livability and Sustainability Goals.”

Organized by the University of Maryland and sponsored by the USDOT’s Research and Innovative Technology Administration (RITA), the one-day exhibition of prominent university transportation products highlighted the accomplishments and impacts of the USDOT’s college- and university-based research and education programs. In addition, the event showcased the transfer of technology from the university transportation programs in use at various federal, state and local agencies.

Nearly 30 research abstracts from university transportation centers across the country, including CTE, were selected for poster presentation at the event. Six of the projects presented in the poster session were also selected for podium sessions in which the researchers shared their experiences in bringing their research to practice. Attendees included researchers and students from 25 universities, the Federal Highway Administration, the Federal Aviation Administration, and state DOT personnel.

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. CTE is national leader in CSS research and training. For more information visit the CTE website at www.cte.ncsu.edu.

CSS Case Study Published in NC Planning Journal

A study on Context Sensitive Solutions (CSS) by CTE research associate Ann Hartell was invited for publication in the Spring 2011 issue of Carolina Planning, an academic journal produced by the University of North Carolina.

The journal article titled “Transportation in North Carolina” presents selected case studies and commentary from Hartell and fellow members of the North Carolina Chapter of the American Planning Association. Hartell’s paper on “Context Sensitive Solutions: Linking Mobility with Community and Environmental Needs” is featured in the article.

Hartell’s research at CTE focuses on community impacts, social aspects of transportation, and the transportation decisionmaking process. In the journal article Hartell discusses the importance of CSS in guiding the design of highways, roadways and transportation facilities to fit within the character of the surrounding environment.

CSS helps stakeholders involved with designing and implementing transportation improvements to understand the affected landscape, community, valued resources, and role of various modes of transportation in each unique context before developing engineering solutions. Hartell details the core CSS principles and how federal and state DOTs utilize CSS to implement projects within existing constraints.

Carolina Planning, published annually by the UNC Department of City and Regional Planning, is the oldest student-run planning publication in the country. Articles selected for the journal are written by academics and practitioners, covering a wide range of topics relevant to today’s planning challenges. For more information visit http://carolinaplanning.unc.edu.
CTE Contributes to National Research on Transportation for Livability Communities

A presentation by CTE researchers on community context was accepted for the Transportation for Livable Communities Conference held October 18–19, 2010 in Washington, DC. Organized by the Transportation Research Board and sponsored by the USDOT Research and Innovative Technology Administration, the conference brought together university researchers and transportation practitioners to share results, explore challenges, and identify future research on incorporating livability into transportation programs and projects.

Senior research associate Leigh Lane presented a poster, co-authored by research associate Ann Hartell, on “How to Define Community Context and Translate the Information into Indicators to Evaluate Different Transportation Solutions.” The presentation highlighted CTE’s work on three national highway research projects – two for the National Cooperative Highway Research Program (NCHRP) and one for the Strategic Highway Research Program (SHRP2) – which focused on understanding community quality of life considerations as part of transportation decisionmaking.

The presentation provided useful information to both practitioners and researchers for defining community context, and to guide practitioners on quality of life considerations in creating livable communities through transportation investment.

CTE’s participation in the conference contributed to the development of a future transportation research agenda directed toward achieving livability, a major area of emphasis for USDOT. University transportation centers like CTE play a unique role in accomplishing the research agenda necessary to advance transportation for livable communities. For more information about the conference visit www.trb.org/conferences/livability2010.aspx.

NCSU Engineering Students Explore NCDOT Passenger Rail Operations

In April 2011, twelve North Carolina State University engineering students from Dr. George List’s railroad engineering class in the Department of Civil, Construction and Environmental Engineering participated in a field tour of the North Carolina Department of Transportation’s Capital Rail Yard in Raleigh.

Facilitated by CTE’s passenger rail researcher David Robinson, Ph.D., P.E., the tour was led by the NCDOT Rail Division’s facilities engineering staff.

During the two-hour field tour, the students were treated to close-up views of passenger cars in the routine maintenance shop, vintage passenger cars awaiting refurbishment in anticipation of service expansion in two years, several locomotives, as well as on-going construction improvements being made to the yard to improve capacity and efficiency.

The NCDOT Rail Division currently operates Amtrak’s “Piedmont” service of daily round trips between Charlotte and Raleigh, as well as financially supporting Amtrak’s daily “Carolinian” service between Charlotte and New York, which also serves Raleigh and other North Carolina cities.

Since 2010 Dr. Robinson has served as corporate public outreach consultant to the NCDOT Rail Division to support the department’s passenger rail improvements, and as facilitator for engineering student experiences at NCDOT rail facilities.

CTE Supports NCDOT Complete Streets Policy

Working with contractor PB Americas, Inc., CTE is supporting the North Carolina Department of Transportation in implementing its NCDOT Complete Streets Planning and Design Guidelines.

For this project CTE is developing a training program as well as providing expertise on website design and maintenance. Senior research associate Leigh Lane and web development specialist Nancy Bailey are guiding CTE’s task work on the project.

NCDOT adopted a “Complete Streets” policy in 2009 which directs the Department to consider and incorporate several modes of transportation when building new projects or making improvements to existing infrastructure.

Under the policy, NCDOT will collaborate with cities, towns and community stakeholders to provide the transportation options needed to serve the community and complement the context of the area. NCDOT is developing planning and design guidelines to support the new policy.

CTE is taking the lead on all training activities to implement the Complete Streets guidelines including development of a basic training class framework with learning modules linked to specific aspects of the guidelines. This effort includes working with an NCDOT Advisory Team to identify learning goals and objectives that reflect the key messages and information communicated by the guidelines.

CTE will recommend a training program development and delivery plan for educating NCDOT staff and their stakeholders on implementing the guidelines through all phases of transportation decisionmaking.

For more information visit www.nccompletestreets.org.
CTE Developing NCDOT Sustainability Plan

CTE is preparing a “Sustainability Blueprint” for the North Carolina Department of Transportation to institutionalize sustainable principles and practices throughout all functions of NCDOT, including planning, project/program development, project delivery, and internal operations.

Led by CTE senior research associate Leigh Lane, the project began with an extensive review of state DOT policies and plans across the nation. The review identified and synthesized “best practices” in promoting sustainability and creating a framework for sustainable decisionmaking. Following the review, CTE released an NCDOT-wide survey to identify existing sustainable practices and worked with departmental advisory groups to define four “focus areas” of sustainability. These focus areas will guide the identification of goals and strategies for the plan.

CTE is collaborating with Planning Communities, LLC, to conduct outreach both within and external to NCDOT in support of the Sustainability Blueprint. Through interactive focus group sessions with NCDOT employees, the project team is introducing the concept of sustainability, identifying existing NCDOT practices and programs that align with the four focus areas, and determining new strategies that could be promoted in the plan. Meetings and interviews with external partners – including MPOs/RPOs, councils of government, other state agencies, transit service providers, and private industry – are also being conducted to identify sustainable strategies and collaborative partnerships for implementation.

Following completion of the outreach process in September 2011, the project team will prepare the final NCDOT Sustainability Blueprint which will provide a framework of goals, objectives, and strategies for the promotion of sustainable outcomes, as well as a set of performance measures to monitor implementation progress and effectiveness over time.

CTE Welcomes New Student Interns

CTE is pleased to welcome to its staff two new student interns, Matt Watterson and Kagure Wamunyu. These individuals are making valuable contributions to CTE’s research and project activities.

Matt Watterson will be putting his skills to work on research applicable to North Carolina Department of Transportation’s sustainability blueprint process. He will be part of a team working on sustainability indicators research as well as working on a project to inventory tools and methods to evaluate return on investment of sustainable practices.

Watterson hopes his research work here at CTE will lead to greater application of the benefits in livability and long-term viability associated with such techniques as NCDOT implements their Sustainability Blueprint.

A recent graduate of East Carolina University, Watterson holds a master’s degree in geography with a supplemental certificate in geographic information systems. His undergraduate work, also completed at East Carolina, was in urban and regional planning. The focus of his master’s thesis was on the application of sustainable principles to historic preservation-based heritage tourism in the downtown district of New Bern, North Carolina.

Kagure Wamunyu also will be part of the tools and methods inventory team for the NCDOT sustainability blueprint process. She views this internship as an opportunity to make a contribution in the field of transportation and she hopes that her research at CTE will help in shaping the sustainability practices of NCDOT as well as DOTs in other parts of the world.

A current student at Meredith College in Raleigh, Wamunyu is working toward a bachelor’s degree in mathematics. At Meredith, she is participating in an engineering dual degree program with North Carolina State University in which she is also enrolled in the College of Engineerig pursuing a degree in civil engineering.

In 2010, Wamunyu received the Banks Memorial Undergraduate Scholarship and Louise Moritz Molitoris Leadership Scholarship for Undergraduates from the North Carolina Triangle Chapter of Women in Transportation (WTS). She went on to be awarded the Banks Memorial Undergraduate Scholarship at the WTS International level.

Wamunyu developed an interest in exploring the issues between land development and transportation infrastructure while living in Nairobi, Kenya, where traffic congestion is a serious problem during peak hours. Her career interests lie in planning and policy arenas that will help shape better land use and transportation decisions.
CTE News & Notes

Planning for ICOET 2011 Conference in Seattle

CTE is planning the 2011 International Conference on Ecology and Transportation (ICOET), to be held August 21–25, 2011 in Seattle, WA. Over 500 transportation professionals and researchers from around the world – a record number for ICOET – are expected to attend. Washington State DOT Secretary Paula Hammond will provide opening remarks, and Dr. Mark Shaffer, National Climate Change Policy Advisor for the US Fish and Wildlife Service, will deliver the keynote address.

Held every two years, ICOET provides a forum for ecologists, highway planners, resource managers, and engineers from around the world to gather and share quality research and best management practices, address current issues, and find solutions to transportation and ecological concerns. This year’s conference theme of “Sustainability in Motion” focuses on moving toward transportation solutions that protect natural ecosystems while supporting a good quality of life.

ICOET 2011 participants will have the opportunity to attend over 20 educational sessions with more than 165 technical paper presentations and poster presentations. Conference co-host Washington State DOT will also conduct three field trips for attendees.

ICOET continued on page 6

Improving Public Outreach for Transportation Projects

Citizen coalitions can be an important resource for transportation agencies, providing convenient access to the public to facilitate meaningful engagement and improve public outreach during all phases of a transportation project. Working with citizen coalitions has become more important than ever with the increasing focus on creating transportation solutions that support livable and sustainable communities.

CTE senior research associate Leigh Lane, working with contractor The Louis Berger Group, Inc., led a research project for the National Cooperative Highway Research Program (NCHRP) to help transportation agencies identify coalitions that can provide valuable input into the transportation decisionmaking process. The research would also help agencies more effectively engage stakeholders through the use of citizen coalition groups.

A key product of this research project, titled NCHRP 25-25 Task 62: Improving Public Outreach for Transportation Projects by Use of Citizen Coalitions, is an inventory of 85 coalitions involved in transportation policies, programs, and projects at various levels. The coalitions inventoried cover a range of topic areas including social equity, environmental protection, sustainable strategies, public health, air quality impacts, and historic and cultural preservation.

The project report provides transportation practitioners with an extensive inventory of coalitions they can engage to better support public outreach efforts, advice on how to identify other coalitions, effective strategies used by coalitions to engage their constituencies which transportation agencies can learn from, and advice on how to build long-term relationships with citizen coalition groups. The report shows practitioners how they can leverage the skills, expertise, political and social capital of citizen coalition groups to more effectively and efficiently solve transportation problems while supporting a good quality of life.

The report is available online at http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP25-25(62)_FR.pdf.
showcasing the nationally recognized work of the DOT and its partner organizations in the areas of Ecological Connectivity, Aquatic Ecosystems, and Sustainability in Urban Environments.

CTE is lead organizer and a co-sponsor of ICOET since its inception in 2001. The conference is principally sponsored by the Federal Highway Administration and receives broad support from several federal resource agencies, state transportation agencies, universities, non-governmental organizations, and private consulting firms.

For more information visit www.icoet.net.