



University hosts USDOT town hall discussion on U.S. transportation policy

The University of Minnesota was the site of a “Town Hall Discussion on U.S. Transportation Policy” on January 25, part of a nationwide listening tour led by U.S. Transportation Secretary **Ray LaHood** and U.S. Rep. **James L. Oberstar**. LaHood and Oberstar solicited feedback from local transportation stakeholders on the next surface transportation bill. The previous bill, known as SAFETEA-LU, expired last year. (A continuing resolution has extended funding at FY09 levels until a new bill is passed.)



Ray LaHood



James Oberstar

CTS and the Hubert H. Humphrey Institute of Public Affairs hosted this event in cooperation with the U.S. Department of Transportation. In his opening remarks, LaHood said the

president “wants a robust, comprehensive transportation program for America. He believes in it.” The administration, he continued, “will work with Congress to find a path forward for a good comprehensive bill, not dissimilar to the one Chairman Oberstar has written for the House. You have our commitment.”

LaHood also stressed that in all modes of transportation, “safety is our number one priority.” He particularly warned of the risks of distracted driving. “You cannot drive safely when you’re on your cell,” he said. “We’ll save a lot of lives if we can get unhooked.”

Oberstar, chairman of the House Transportation and Infrastructure Committee, began with comments on the impact of last year’s economic stimulus act. “We can account

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Human factors key to safe road design

If it looks like a freeway and acts like a freeway, motorists are likely to treat it like a freeway—even if the road in question is actually a suburban arterial. How drivers respond to the “road message” has important implications for safety, said human factors expert **Alison Smiley** in her presentation at the 2010 CTS Winter Luncheon.



Alison Smiley

The February 9 luncheon was sponsored by the Intelligent Transportation Systems (ITS) Institute, which is housed at CTS. The Institute’s director, **Max Donath**, introduced Smiley.

Smiley is president of HumanFactors North, Inc., and adjunct professor in the Department of Mechanical and Industrial Engineering at the University of Toronto and

adjunct professor in the Department of Civil Engineering at Ryerson University. In her presentation, titled “Saving Us from Ourselves: Human Factors and the Design of Safer Roads,” Smiley brought a human factors perspective to issues of road design.

Smiley drew a distinction between “implicit” and “explicit” road safety. Implicit road safety involves using road design standards to “build in” a certain level of safety during road construction; however, Smiley said, the effectiveness of the implicit approach is often limited in practice because design standards do not take into account actual crash statistics and rely on unsophisticated models of the human user.

In contrast, the explicit approach to safety uses crash data to determine the effectiveness of safety features via before-and-after analysis. In recent years, Smiley said, the use of sophisticated statistical approaches has boosted

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Topics announced for CTS Research Conference

Speakers and topics have been announced for the 21st Annual CTS Transportation Research Conference. The event returns to its usual location at the Saint Paul RiverCentre April 27–28.

The opening session—titled “How Do National Transportation Priorities Influence Local Decisions?”—will feature a keynote presentation by **Eric C. Peterson**, president of the American High Speed Rail Alliance, and comments from a panel of local experts. The luncheon speaker will be Professor **Catherine Ross** of the Georgia Institute of Technology, editor of the 2009 book *Megaregions: Planning for Global Competitiveness*. (See page 4 for details of both sessions.)

For the first time, CTS will post live Twitter updates during the conference. To follow CTS on Twitter, see <http://twitter.com/UMNCTS>.

The program and registration information have been mailed and are also posted at www.cts.umn.edu/Events/ResearchConf. For more information, contact the College of Continuing Education at 612-624-3708, cceconf5@umn.edu. **CTS**

for 760,000 direct jobs and jobs in the supply chain for highway and transit projects,” he said. A six-year bill would mean 6 million jobs, he added.

A follow-up to the stimulus bill is needed, Oberstar continued. By the end of May, 500 to 600 incomplete projects will run out of stimulus funds, and revenues to the Highway Users Fund are projected to drop 60 percent. “We are likely to face a confluence of those forces that will result in the loss of a million jobs, instead of creating a million jobs in the construction sector, just when we need it,” he said. “That’s why we passed a follow-on stimulus package in the House...and why we need a long-term six-year investment plan to build America together.”

The session also provided opportunities for other members of Minnesota’s Congressional delegation to share their thoughts.

Senator **Amy Klobuchar** said the next bill is an opportunity to bolster investment and bring jobs to the country. She thanked the secretary for his support of intelligent transportation systems (ITS) initiatives in Minnesota, noting the importance of “thinking and acting anew” in times of difficulty.

Rep. **Keith Ellison** said the backlog of infrastructure needs and high unemployment numbers mean this is a “great time” for passage of a bill. “The work needs doing, people need work. Let’s reauthorize Chairman Oberstar’s bill.” Ellison said he hopes creative financing, such as a national infrastructure bank, is considered in the legislation.

Rep. **Betty McCollum** said House members “in a bipartisan fashion” are very excited about Rep. Oberstar’s bill. In today’s economic environment, she said, every dollar should be scrutinized. “But pulling back from a critical long-term investment in transportation infrastructure is a terrible mistake, and one we should not make.”

The session also included comments by **Chris Coleman**, mayor of St. Paul, and **R.T. Rybak**, mayor of Minneapolis.

During a working lunch, USDOT leadership discussed the vision, priorities, and challenges for their respective modes. In opening remarks, **Laurie McGinnis**, acting director of CTS, discussed the importance of research in the next bill. **Peter Appel**, administrator



Peter Appel (at podium) and USDOT modal administrators

of the Research and Innovative Technology Administration (RITA), said “this administration and this DOT are committed to transportation research.” (The ITS Institute is part of the national University Transportation Center program, which RITA oversees.)

Another plenary panel featured a discussion of reauthorization issues with **Tom Sorel**, commissioner of the Minnesota Department of Transportation (and a member of the CTS Executive Committee); **Frank Busalacchi**, secretary of the Wisconsin DOT; **Steve Carter**, director of transportation planning with Target Corporation; and **Barbara McCann**, president of the Complete Streets Coalition.

The afternoon featured three breakout panels with local leaders, including several other members of the CTS Executive Committee:

State Sen. **D. Scott Dibble**; **Michael Huber**, Blue Cross Blue Shield Minnesota; **Jim Erkel**, Minnesota Center for Environmental Advocacy; **Margaret Donahoe**, Minnesota Transportation Alliance; and **Richard Murphy Jr.**, Murphy Warehousing.

- *Safety, Livability, and Sustainability.* Moderator: **Barb Thoman**, Transit for Livable Communities. Panelists: Dibble; Huber; Colonel **Mark Dunaski**, State Patrol; **Ethan Fawley**, Fresh Energy
- *Economic Development and State of Good Repair.* Moderator: Jim Erkel. Panelists: Donahoe; Murphy Jr.; **Jay Cowles**, Itasca Project; **Michael Lander**, The Lander Group; **Timothy Lynch**, American Trucking Association



Amy Klobuchar



Keith Ellison



Betty McCollum



Tom Sorel



Scott Dibble



Michael Huber



Jim Erkel



Margaret Donahoe



Richard Murphy Jr.

- *Rural and Tribal Transportation Issues.* Moderator: **John Robert Smith**, Reconnecting America. Panelists: **Victor Mendez**, Federal Highway Administrator; State Rep. **Bernie Lieder**; **Sue Miller**, Freeborn County; **Donovan Olson**, Fortune Transportation; **Burny Tibbetts**, White Earth Reservation
- LaHood, the modal administrators, and the Congressional delegation visited each breakout session to hear a summary of the key issues discussed.

The USDOT will post video of the event at a later date. **CTS**

2010 TERRA Pavement Conference: innovation and investment

What has been known for 13 years as the Minnesota Pavement Conference was rechristened this year as the 2010 TERRA Pavement Conference. TERRA (Transportation Engineering and Road Research Alliance) is a research governance structure formed in 2004 to foster a comprehensive road research program.

Tim Worke, TERRA co-chair and director of the highway and transportation division of the Associated General Contractors of Minnesota, opened the conference, held February 11 in St. Paul, and moderated the morning plenary session.

The conference was bookended by news about the state of the nation's pavements. One of the first presentations of the day was by U.S. Rep. **James L. Oberstar**, chairman of the House Transportation and Infrastructure Committee, who appeared via video from Washington, D.C. He emphasized that the deterioration of the country's pavements is accelerating and outlined the Surface Transportation Authorization Act of 2009, which he is cosponsoring in Congress to respond to the problem.

In the last presentation of the day, **Dave Janisch**, who manages Mn/DOT's state-wide pavement management program,

reinforced Oberstar's comments with statistical evidence of the spiraling downward trend in ride quality on Minnesota's pavements.

One of the conference's perennial highlights is the naming of the recipient of the annual Gerald Rohrbach Award for excellence in pavement research. **Mark Maloney**, last year's recipient and a member of the TERRA Board, presented the 2010 award to **Mike Robinson**, a Mn/DOT employee who has conducted innovative research on asphalt film thickness among other topics.

Conference topics included:

- Strategies for maintaining low-traffic-volume gravel roads
 - Construction techniques for pervious concrete pavements
 - Environmental effects of road deicing salt
 - Use of taconite as aggregate in bituminous pavements
 - How wind-farm development affects local roads
 - How funds from the American Recovery and Reinvestment Act (aka, the "Stimulus Package") are being used in Minnesota
- The Minnesota Department of Transportation cosponsored the

conference with TERRA in cooperation with the Minnesota Local Technical Assistance Program (which is housed at CTS), Department of Civil Engineering at the University of Minnesota, City Engineers Association of Minnesota, Minnesota County Engineers Association, Minnesota Street Superintendents Association, Minnesota chapter of the American Public Works Association, State Aid for Local Transportation at Mn/DOT, Minnesota Local Road Research Board, and Pavement Research Institute at the University.

Videos of conference presentations along with PowerPoint slides are available at www.terraroadalliance.org/events/pavementconf/2010/index.html. **CTS**



Mike Robinson, Mark Maloney

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the explicit approach, giving engineers a much better understanding of the effectiveness of crash countermeasures.

Human factors analysis can contribute to road safety in several important ways, Smiley said. By understanding how human limitations lead to particular types of crashes, engineers are better able to select appropriate countermeasures and determine the effectiveness of traffic controls. In addition, human factors research can support the development of user-focused road design standards and guide the design process in situations where no standards are available.

As an example of how human limitations affect road safety, Smiley explained how the human visual system gives drivers cues about changes in the distance to other vehicles. We don't perceive changes in distance in simple linear terms, she said; instead, the apparent size of an

object appears to change more rapidly the closer we are to it.

Because this visual cue is nonlinear, drivers find it difficult to distinguish between a gradual approach to another vehicle and a dangerous rapid approach until they are fairly close to the other vehicle. This limitation contributes to many rear-end crashes.

Knowing about this limitation enables us to design effective countermeasures to address the problem, Smiley explained. These include separating turning vehicles from through traffic, and warning drivers of stalled vehicles or traffic queues.

This human factors approach to safety is being incorporated into Safety Analyst, a new software tool under development by the Federal Highway Administration. Smiley highlighted her work with the human factors team helping to develop the software, which enables engineers to

screen the road network to identify areas with higher-than-expected crash rates and diagnose driver errors leading to particular types of crashes. Safety Analyst can also suggest appropriate countermeasures and perform cost-benefit analysis to determine the most suitable safety approach.

Smiley went on to discuss the role of human factors in road design standards, especially in cases where standards are not available. One such area is minimum spacing between interchanges, she said. In such cases, understanding how drivers process information can help designers avoid overloading drivers with too many complex tasks, thereby creating an unsafe road environment.

Human factors, Smiley concluded, can make a great contribution to road safety—both in terms of understanding the causes of crashes and helping engineers solve difficult safety problems. **CTS**

Opening conference session: national priorities, local decisions

How do national transportation priorities influence local decisions? Speakers will discuss the possible impacts of one such priority—the development of high-speed rail—in the opening plenary session of the CTS Transportation Research Conference on April 27.

Transportation infrastructure investments are guided by state and local government decisions. However, transportation priorities set at the national level can influence changes in direction at the state and local level, particularly if there are substantial resources attached to them. Decision makers may choose to make investment trade-offs at the expense of other infrastructure needs to position

themselves for additional federal funding.

Eric C. Peterson, president of the American High Speed Rail Alliance, will give the keynote presentation, titled “Building Momentum for Sustainable American High-Speed Rail.” His comments will focus on the six keys to successfully designing, building, and operating high-speed rail, a priority initiative for the Obama administration.

During the panel discussion that follows, Minnesota leaders will discuss how our state is being positioned to ensure it is part of a high-speed passenger rail network. They will also share how, if at all, focusing on national priorities affects road, bridge, and transit projects that

have been identified as investment priorities in Minnesota.

Panelists will be **Tim Henkel**, division director of modal planning and program management at Mn/DOT (invited); **David Levinson**, Richard P. Braun/CTS Chair in Transportation Engineering at the University of Minnesota; **Jim McDonough**, Ramsey County commissioner; and **Bob McFarlin**, District 3 Member of the Metropolitan Council.

To register or for more information, please see www.cts.umn.edu/Events/ResearchConf or contact the College of Continuing Education at 612-624-3708, cceconf5@umn.edu. **CTS**

‘Megaregions’ is topic of research conference luncheon

Just as the neighborhood is a critical building block for a city, says Professor **Catherine Ross**, cities are now the building blocks for megaregions, which in turn are the new economic unit in world markets.



Catherine Ross

Ross will discuss megaregions and their implications for transportation at the CTS Research Conference luncheon on April 27.

Mn/DOT commissioner **Tom Sorel** will give a short presentation to open the luncheon.

Megaregions are connected cities

and their surrounding areas, generally areas with a population of about 10 million. In the United States the 10 largest megaregions represent 80 percent of our economic activity, and seven of them have populations of 10 million people. With the U.S. population projected to increase by 130 million people over the next 40 years and countries such as China dominating the global stage, Ross asserts it is critical for America’s cities to think beyond the city limits and address issues such as infrastructure, water resources, mobility, and conservation on a regional scale. To survive locally and globally, she says, cities and states in a region need to

cooperate—not compete.

Ross is an internationally recognized expert on transportation and urban planning solutions and the editor of *Megaregions: Planning for Global Competitiveness* by Island Press (2009). She is the director of the Georgia Institute of Technology’s Center for Quality Growth and Regional Development.

Copies of her book will be available for purchase and signing at the conference.

To register or for more information, please see www.cts.umn.edu/Events/ResearchConf or the College of Continuing Education at 612-624-3708, cceconf5@umn.edu. **CTS**

Upcoming events *To see other events or publicize yours, visit www.cts.umn.edu/Events.*

Apr. 20–21	Spring Maintenance Training Expo, St. Cloud. See www.mnltap.umn.edu/Events/SpringMaintenanceExpo .	conference, St. Cloud. See www.matsa.us .
Apr. 20–21	2nd Annual Symposium on Mileage-Based User Fees, Minneapolis. Hosted by the Humphrey Institute, CTS, and the Texas Transportation Institute. See www.cts.umn.edu/Events/MBUF/index.html .	June 8–10 APWA Sustainability in Public Works Conference, Minneapolis. See http://sites.apwa.net/sustainability/2010/home.aspx .
Apr. 27–28	21st Annual CTS Transportation Research Conference, RiverCentre, St. Paul. See www.cts.umn.edu/Events/ResearchConf .	July 11–14 TRB Joint Summer Meeting: Planning and Performance Measurement for All Modes, Minneapolis. See www.trb.org/Calendar . CTS
Apr. 28–30	Minnesota Alcohol Traffic Safety Association annual	