



UNIVERSITY OF MINNESOTA  
TWIN CITIES

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## CENTER FOR TRANSPORTATION STUDIES JUNE REPORT

A monthly report on transportation research, education and technology transfer activities at the University of Minnesota

### OVER 100 PEOPLE ATTEND ERVIN LUNCHEON

The Center's spring luncheon attracted over 100 people, who heard **Robert Ervin** from the University of Michigan speak on "Advanced Technologies in Transportation: Developing an Intelligent Vehicle-Highway System (IHVS)." According to Ervin, IHVS "is coming like a freight train" and some of its features, such as automatic route guidance, will be implemented on U.S. highways within the next decade. He described several major components of IVHS technology such as automatic headway control, collision avoidance, and automatic toll billing. Ervin expressed concern over the lack of coordinated IVHS planning among U.S. automakers, highway designers, and high-technology industries. Nations that can successfully integrate these sectors, he said, will take the lead in the development of IVHS technology. For a copy of the paper on which Ervin's speech is based, call (612) 626-1077.

### CENTER RECEIVES 31 TRANSPORTATION RESEARCH PROPOSALS

University of Minnesota faculty submitted 31 research proposals in response to the Center's Request for Proposals. Developed by the Center's Advisory Board and Executive Committee, the Request sought proposals that addressed three research emphases (distributed with the *May Report*) from faculty in multiple disciplines. The 31 responses addressed aspects of all three emphases. Over 15 disciplines from multiple U of M campuses were represented. In addition to full proposals, a number of researchers submitted one-page "Future Research Interests" descriptions. The Center plans to issue a second Request for Proposals in the winter quarter of 1989-90.

### TECHNICAL REVIEW COMMITTEE ESTABLISHED

The Center's Executive Committee will decide which projects should be funded, using up to \$600,000 of Center funds. A technical review committee, representing multiple disciplines and a mix of faculty and practitioners, has been established to conduct a peer review that will screen the proposals. The seven members of the review committee are: Professor **John Adams** of the Geography Department and the Humphrey Institute; **Robert Benke**, manager of research administration for the Minnesota Department of Transportation; Professor **Alan Ek**, head of the Forest Resources Department; Dr. **Randall Erickson**, technical director of traffic control materials at 3M; Professor **Matthew Huber** of the Civil and Mineral Engineering Department; **Carl Ohrn**, principal planner for the Metropolitan Council; and Professor **Gary Scudder** of the Operations and Management Science Department.

## **MN/DOT ALSO REVIEWING CTS RESEARCH PROPOSALS**

The Minnesota Department of Transportation has decided to use the CTS proposals as candidates for its COPTRS program (Cooperative Transportation Research and Studies). Mn/DOT is conducting a separate review of the 31 proposals based on its own criteria and may decide to provide funding in addition to CTS funding. When Mn/DOT and the Center's Executive Committee complete their evaluations, Center staff will work closely with **Bob Benke** and **Gabe Bodoczy** of Mn/DOT to coordinate funding decisions for those projects that are high priority for both organizations. Center staff will also work with other organizations that have expressed interest in providing funds for research projects.

## **RESEARCH STRATEGIES REPORT IS AVAILABLE**

The Center has developed a report that summarizes the results of its 1988-89 Advisory Board and Executive Committee meetings. These meetings, led by chair **Ray Lappegaard**, defined the research emphases used in the Request for Proposals. The report contains presentations made by **G. Edward Schuh**, dean of the Humphrey Institute; **Gordon Beavers**, associate dean of the Institute of Technology; and **Fred Beier**, director of the Logistics Management Research Center. It also contains the results of small group discussions and a survey of Advisory Board members, which provide a broad understanding of the concerns Minnesota leaders have about the state's transportation system. If you would like a copy of this report, please call (612) 626-1077.

## **MOUNTAINS-PLAINS CONSORTIUM (MPC) FOR TRANSPORTATION RESEARCH**

A six-university consortium, of which CTS is a member, has been named the Mountain-Plains Consortium (MPC). MPC is one of ten national transportation centers for university research funded by the U.S. Department of Transportation. The five other universities are North Dakota State University (the lead university), Colorado State University, the University of Colorado at Denver, the University of Wyoming, and Utah State University. The U of M received approximately \$100,000 for transportation research during this first year, which is expected to increase over the next three years. CTS will use this program as another source for funding projects that result from its RFP process. MPC held its first advisory council meeting on May 2-3 in Denver.

## **MINNESOTANS IN MPC MANAGEMENT STRUCTURE**

The Mountains-Plains Consortium is guided by an advisory council of transportation decision-makers, which consists of three representatives from each state. Representing Minnesota are **Doug Differt**, deputy commissioner of the Minnesota Department of Transportation; **Steve Quam**, mayor of Richfield; and **Russ Thompson**, director of transportation for CENEX/Land-o-Lakes. An executive committee, chaired by **Gene Griffin** of North Dakota State University and including CTS Director **Dick Braun**, directs MPC programs. Each state also has coordinators who are responsible for managing the research program within their state. **Bob Johns** of CTS is Minnesota's state coordinator.

## **RUSS THOMPSON IS ELECTED CHAIRMAN OF MPC ADVISORY COUNCIL**

In its first meeting, MPC council members elected **Russ Thompson** as chairman of the five-state advisory council. As director of transportation for CENEX/Land-o-Lakes (based in Inver Grove Heights), Thompson is involved in many transportation activities in the MPC region. On the second day of the meeting, Thompson led the council in a wide-ranging discussion of transportation challenges facing the MPC states. A common issue to all states was the importance of the transportation system to the rural economy and the concern that

diminishing transportation funding is threatening the economic well-being of the region. The MPC executive committee will be using advisory council input to guide its research program in the future.

### **TRANSPORTATION RESEARCH IS FOCUS OF MPO CONFERENCE**

The Metropolitan Planning Organization Conference, held May 1-3 in Rochester, included a session summarizing recent initiatives in transportation research. George Schoener of the Federal Highway Administration (FHWA) presented an overview of a number of research programs FHWA is sponsoring, particularly emphasizing initiatives aimed at reducing congestion in metropolitan areas. Bob Benke, manager of research administration for Mn/DOT, gave an overview of Mn/DOT's research program, including joint research efforts with the University of Minnesota through the COPTRS program. Amy Vennewitz of CTS presented a summary of the Center's recent Advisory Board activities, RFP process, and on-going research program.

### **ENGINEERING HIGHWAYS IN THE 21ST CENTURY**

The American Society of Civil Engineers sponsored "Engineering 21st Century Highways," a conference held in San Francisco this April. The three-day conference identified increased funding for highway research as a major goal, reports CTS Director Dick Braun, who chaired the final capstone session. The Highway User Federation, the Federal Highway Administration, and the American Road and Transportation Builders Association all advocate a minimum expenditure of \$100 million per year on highway research, which would be funded through the Surface Transportation Act of 1992. Participants also named safety as a major issue, and agreed that of the three targets for highway safety improvement programs--the roadway, the vehicle, and the driver--too little emphasis has been placed on the driver.

### **FEDERAL TRANSPORTATION RESEARCH RFP'S AVAILABLE FROM CENTER**

Two federal requests for transportation proposals are currently available from the Center. The Urban Mass Transportation Administration is awarding grants of up to \$85,000 for research in the areas of transportation funding, suburban mobility, public/private partnerships, and other topic areas. Proposals are due by June 26. The Strategic Highway Research Program (SHRP) is awarding grants of approximately \$100,000 for its IDEA (Innovations Deserving Exploratory Analysis) program. Proposals should address asphalt, pavement performance, highway operations, concrete, and structures, and can be submitted anytime. Copies of both RFP's are available from the Center.

### **TED GALAMBOS RECEIVES ASCE AWARD**

Professor Ted Galambos of the Department of Civil and Mineral Engineering received the Shortridge Hardesty award from the American Society of Civil Engineers. The award is in honor of his work with the Structural Stability Research Council for over two decades and for serving as its chairman. He recently completed editing the fourth edition of the "Guide to Stability Design Criteria for Modeling Structures," which is now in publication. Galambos has done extensive research on bridge design throughout his career.

### **AIRLINE DEREGULATION DISCUSSED AT MEETING**

Professor Russell B. Adams of the Department of Geography made a presentation this month to the Regional Science Association concerning airline deregulation impacts on intercity

passenger travel. Adams was also involved recently with a consulting firm in submitting a proposal to the Transportation Study Board on state transportation problems and issues.

#### **PAPERS ADDRESS TRANSIT SYSTEMS AND FREEWAY INCIDENTS**

A paper by Professor Yorgos Stephanedes and Eil Kwon on "Optimization Strategies for Transit Systems in Urban Corridors" was published in the *Transportation Research Bulletin*. Stephanedes also co-authored a paper with Murari Lakshminarayanan titled "Expert Systems for Strategic Response to Freeway Incidents." The paper was published by the American Society of Civil Engineers in the *Proceedings* of the First International Conference on Applications of Advanced Technologies in Transportation Engineering.

#### **TRANSPORTATION PRACTITIONERS INVITED TO UNIVERSITY**

The student section of the Institute of Transportation Engineers hosted two seminars in which local transportation practitioners were invited to make presentations on their professional activities. Gary Ries and Dick Lau, both of Mn/DOT's Traffic Management Center (TMC), spoke on TMC's Freeway Traffic Management Program. Ferrol Robinson and Dennis Eyler, both of Strgar-Roscoe-Fausch, spoke on urban transportation modeling procedures and techniques.

#### **UPCOMING TRANSPORTATION EVENTS**

If you have an event you would like publicized, please call the Center at (612) 626-1077.

- June 15            Public meeting on "Transportation and Economic Development: A Growing Partnership", sponsored by MN Good Roads Association, Fairmont VFW. Contact: Jerry Anderson, 379-7227.
- June 25-27        National Transportation Research Board Freeway Operations Conference and Mid-Year Meeting. Radisson Hotel, Downtown Minneapolis. Contact: Glen Carlson of Mn/DOT, 341-7500.
- June 26-29        Annual Meeting of the International Association of Great Lakes Ports. Radisson Duluth Hotel. Contact: Donald C. Wright of the Seaway Port Authority of Duluth, (218) 727-8525.
- June 28            Women's Transportation Seminar June luncheon meeting, "Triple Trailer Legislation: Pros and Cons", Jax Cafe, Minneapolis. Contact: Amy Vennewitz of CTS, 625-3019.
- August 6-10        URISA '89, Urban and Regional Information Systems Association Conference, "Charting the 90s: New Visions for Urban Technology." The Boston Marriott Copley Place. Contact: Tom Palmerlee of URISA, (202) 543-7141.
- August 13-16      1989 Highway Users Midwest Transportation Conference, Madden's Resort, Brainerd. Contact: Carol Lovro of Highway Users Federation, 290-0025.