



UNIVERSITY OF MINNESOTA
TWIN CITIES

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CENTER FOR TRANSPORTATION STUDIES MARCH REPORT

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

170 PEOPLE ATTEND DEAKIN LUNCHEON

The Center's winter quarter luncheon drew over 170 people, who heard **Elizabeth Deakin** speak on "New Directions for Transportation and Land Use Planning." Deakin is Assistant Professor of City and Regional Planning at the University of California, Berkeley. She discussed the current challenges in transportation--influenced by demographic changes and a crisis in government finance--and presented ways that local governments are more closely linking land use development with infrastructure planning. She called for new institutions and new technology to help manage congestion and suggested, in the long term, that transportation growth will have to be managed through road pricing mechanisms. A copy of her speech is available by calling 626-1077.

CALIFORNIA INVESTIGATES MINNESOTA TAX-SHARING

In her visit to the Twin Cities, Elizabeth Deakin also conducted research on tax-sharing mechanisms, as part of an assignment she is carrying out for the California legislature. The Center organized a session for Deakin with **Jody Hauer** of the Citizens League, **Barbara Lukermann** of the Humphrey Institute, and **Gene Knaff** and **Carl Ohrn** of the Metropolitan Council to discuss how fiscal disparities mechanisms work in the Twin Cities metropolitan area. California is considering whether strengthened regional government and revenue-sharing will help address problems such as traffic congestion, where its strong city "home rule" is ineffective.

ADVISORY BOARD WILL DISCUSS TRANSPORTATION ISSUES

The Center's second Advisory Board meeting will be held this month. The purpose of the half-day meeting will be to identify transportation issues that deserve University research. Three U of M members of the Center's Executive Committee--**Fred Beier**, **Jim Infante**, and **Ed Schuh**--will open with brief presentations on transportation research possibilities and benefits. Members will then have an opportunity to identify issues and discuss research

priorities, which will be used to shape next year's research program for the Center. Results of this meeting will be available for distribution.

CONFERENCE ON ADVANCED TECHNOLOGIES IN TRANSPORTATION ENGINEERING

The American Society of Civil Engineers and the California Department of Transportation sponsored the "First International Conference on Applications of Advanced Technologies in Transportation Engineering" this past month in San Diego. Among its topics were vehicle navigation, expert systems, robotics, imaging, route guidance, data systems, and computer aided design. The U of M was well represented. **Panos Michalopoulos** presented "Machine Vision System for Multi-spot Vehicle Detection;" **Yorgos Stephanedes**, **I. Argyropoulos**, and **K. Chang** presented "Advanced Methods for Automated Real-Time Control in Freeway Corridors;" and **Dick Braun** moderated the Capstone Plenary Session on the future of advanced technologies.

FEDERAL RESEARCH FUNDS AVAILABLE FOR SECOND YEAR

The consortium of universities for federal region eight, now called the Mountains-Plains Consortium for Transportation Research and Extension, met in February to begin planning next year's research program. This will be the second year of the four-year, federal University Transportation Centers Program (UTCP). Research projects from the U of M, Colorado State, North Dakota State, Utah, Wyoming, and the University of Colorado at Denver will be submitted to USDOT through North Dakota State this spring. CTS staff also met this past month with **Chuck Foslein** and **Ron Shriver** of the Federal Highway Administration and with **Doug Differt**, **Gene Ofstead**, **Leo Korth** and **Merritt Linzie** from the Minnesota Department of Transportation to update them on the UTCP program and explore potential partnerships.

TIMBER BRIDGE PROPOSAL

Professor **Bruno Franck** of the U of M Department of Forest Products has joined professors **Ted Galambos**, **Cathy French**, and **Roberto Leon** from the Civil and Mineral Engineering Department to help the Minnesota Department of Natural Resources prepare a timber bridge demonstration proposal. **Eric Geisler** and **Chuck Kenow** of DNR submitted the proposal to the Forest Service of the USDA, in response to the federal Timber Bridge Initiative. The purpose of the initiative is to better utilize hardwood timber, diversify rural economies, provide needed bridges inexpensively, and develop and test new designs.

TRANSIT LABORATORY PROJECT

The Civil and Mineral Engineering Department and the Minnesota Department of Transportation are conducting a joint study of transit issues in Minnesota. Professor **Yorgos Stephanedes** and **Bangali Doumbia** are working closely with **Bob Works** of Mn/DOT to

identify the critical transit problems facing Minnesota. The initial list of problems was developed by 15 members of the state transit community. It is now being reviewed and ranked using the delphi process by international transit experts. A report will result that will outline key transit research areas.

DONALD HARPER RECEIVES AWARD

Donald Harper, professor of logistics in the Carlson School of Management, has received an award from the American Economic Association. He was named the Distinguished Member of the Transportation and Public Utilities Group in 1988. Harper has done extensive research on the regulation and deregulation of various transportation modes.

UNDERGROUND SPACE CENTER RESEARCH FOR MN/DOT

The Underground Space Center of the Civil and Mineral Engineering Department will begin the first phase of a research project for the Minnesota Department of Transportation on "Computer Simulation of Two-dimensional Frost Heave in Soils." **Ray Sterling** and **Slavek Michalowski** are principal investigators. They will work closely with **George Cochran** of Mn/DOT to investigate the effects of frost penetration on pavement performance and culverts. This project is part of Mn/DOT's initiative on cold region pavement research which will ultimately use a test facility being planned on Interstate 94 near Monticello.

MOBILITY 2000 WORKSHOP

The Mobility 2000 Group, originally a 19-member national group that includes Center director **Dick Braun**, held an invitational workshop in February that involved 60 public and private sector transportation leaders. The group has been looking at ways to expand research on advanced vehicle/highway systems, in response to developments in Europe and Japan. Subject areas include advanced traffic management systems, advanced driver information systems, automated vehicle control, and heavy vehicle systems. The group discussed organizational and funding issues and reaffirmed its commitment to a stronger U.S. role in developing this technology. The group is coordinated by **Lyle Saxton** of FHWA.

ART, ARCHITECTURE, AND ENGINEERING CONFERENCE

Registrations are now being taken for the April 13-14 conference, "Art, Architecture, and Engineering: A Collaboration in Urban Place Making." This conference will explore the collaborative process among artists, architects, and engineers and develop visions of how to make the modern city into a civilized urban place. The conference will present several national case studies in addition to local examples, such as the Whitney Pedestrian Bridge, the Minneapolis Sculpture Garden, and the Hennepin Avenue Bridge Project. A program, registration form, and art poster can be obtained by calling **Leslie Denny** at (612) 625-5813.

EDITOR JOINS CENTER STAFF

Pam Snopl, an editor for the Underground Space Center, will work part-time for CTS to help produce the Monthly Report and develop other CTS publications and communications, while continuing her work for the Underground Space Center. Pam's background includes technical writing and editing for the Supercomputer Center, Sperry Corporation, and the University of Wisconsin.

UPCOMING TRANSPORTATION EVENTS

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

- March 1-3 18th Annual Washington Fly-In, Minnesota Good Roads Incorporated. Channel Inn, Washington, D.C. Contact: **Jerry Anderson** of MGRI, 379-7227.
- March 30 MN Section ASCE Transportation Committee Luncheon. **Dave Holt**, Mn. Asphalt Pavers Assoc.: "Mn/DOT Quality Management Program for Bituminous Construction." Fort Snelling Officers' Club. Contact: **Paul Blum** of HNTB, 920-4666.
- April 13-14 University of Minnesota Conference, "Art, Architecture and Engineering: A Collaboration in Urban Place Making." Radisson University Hotel, Minneapolis. Contact: **Leslie Denny** of U of M Conference Services, 625-5813.
- April 27 MN Section ASCE Transportation Committee Luncheon. **Gene Skok**, Braun Pavement Technologies; **Rich Wolters**, Mn/DOT; and **Dick Ingberg**, SHRP: "Cold Weather Research Center." Fort Snelling Officers' Club. Contact: **Paul Blum** of HNTB, 920-4666.
- May 17-19 Women's Transportation Seminar, 1989 National Conference, "Transportation: The Global Challenge." Hotel Nikko, San Francisco, CA. Contact: **Elizabeth French**, (408) 299-2362.
- June 25-27 TRB Freeway Operations Committee Mid-Year Meeting and Conference. Radisson Hotel, Downtown Minneapolis. Contact: **Glen Carlson** of Mn/DOT 341-7500.