

AUGUST REPORT

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

MN/DOT, HONEYWELL, AND CTS SUBMIT JOINT PROPOSAL TO FHWA

The Minnesota Department of Transportation, Honeywell, Inc., and the Center recently submitted a proposal in response to a Federal Highway Administration request for proposals (RFP) for Intelligent Vehicle/Highway Systems research. The RFP, "Traffic Modeling to Support Advanced Driver Information Systems," calls for the design of a real-time dynamic traffic assignment and simulation model that will satisfy the requirements of an integrated Advanced Traffic Management System (ATMS) and Advanced Driver Information System (ADIS). The partnership of a public transportation agency, private industry, and academia brings a unique combination of research, development, and implementation capabilities to the project. **Jim Wright** and **Jim Aswegan** of Mn/DOT's Office of Traffic Management led the proposal development, with involvement from **Sterling Stackhouse** and other staff from Honeywell's Sensor and Systems Development Center, and Professors **Yorgos Stephanedes** and **Gary Davis** of the Department of Civil and Mineral Engineering.

MONTHLY REPORT'S ANNIVERSARY; MAILING LIST UPDATE FORM ENCLOSED

The Center has now published the *Monthly Report* for two years, and our mailing list has grown to over 1600 persons, primarily Minnesotans. As in the past, we plan to use the mailing list to distribute other Center publications including brochures, reports, and announcements of upcoming events. Please complete and return the enclosed card so that we may update our mailing list and keep you informed of these activities.

MINNESOTA ROAD RESEARCH PROJECT UPDATE

The annual meeting in July of the Minnesota Road Research Project (Mn/ROAD) featured a progress report on several program developments. **Nelrae Succio**, Mn/DOT project manager for Mn/ROAD, gave a project update and coordinated the meeting. Mn/ROAD is a joint research and testing program between the Minnesota Department of Transportation and the University of Minnesota that focuses on the performance of pavement, particularly in a cold weather climate. A segment of I-94 interstate near St. Cloud is currently under construction that will contain several pavement test samples and sophisticated instrumentation. This laboratory will use live traffic over several years to test research results developed by University and Mn/DOT researchers. Professor **David Newcomb** of the Department of Civil and Mineral Engineering outlined current research projects and research plans for the future, and **Bob Johns** of the Center spoke on how critical the Mn/ROAD project is to one of the Center's four research emphases, "The Transportation Infrastructure."

NEW CHAIR FOR PAVEMENT RESEARCH IS BEING ESTABLISHED

In honor of **Miles S. Kersten**, professor emeritus of soil mechanics at the University's Department of Civil and Mineral Engineering, a new chair is being created to finance a second assistant professor in pavement engineering. Fund-raising for the Miles Kersten Chair has passed the halfway point, with approximately \$360,000 of the \$500,000 having been raised. The new assistantship will provide support for the efforts of Professor **Dave Newcomb**, University coordinator for Mn/ROAD, and allow greater University participation in

the Mn/ROAD pavement research project. The endowed chair is sponsored by the Minnesota Surveyors and Engineers Society.

RESEARCH PROGRAM IN TRANSPORTATION AND THE ECONOMY REFINED

Principal investigators of two projects funded by the Center in the area of "Transportation and the Economy" have been working jointly to define the scope and interrelationships of their proposed work. **Candace Campbell** of the Humphrey Institute will work on a project titled "Analysis of Demand for Transportation in the Upper Midwest by Functional Economic Area, Labor Market Area, and Industry," and **Wilbur Maki** and **Doug Olson** of Agricultural and Applied Economics received funding to complete a related project on "Interregional Trade and the Demand for Transportation in the Upper Midwest." The two projects deal with a number of similar research issues such as predicting the future demand for transportation in the Twin Cities metro area, Greater Minnesota, and the Upper Midwest; and analyzing the potential impacts on transportation of future economic scenarios. The joint work of the research teams will assure that both projects benefit from common interests and results. Additional faculty collaborating in this research include **Herb Mohring** of Economics and **Rick Lichty** and **Kjell Knudsen** of the University of Minnesota, Duluth.

CENTER TO FUND BICYCLE RESEARCH

The Center has detailed the research plans for the bicycle research it will fund, as announced in the *June Report*. The Center is providing funding to Professor **Robert Sykes** of the Department of Landscape Architecture to complete a project titled "Land Design for Bicycle Transportation in Minnesota Cities." The project will develop, illustrate, and evaluate physical design strategies for integrating bicycle transportation into new and existing physical patterns, particularly emphasizing the utilitarian aspects, rather than recreational aspects, of bicycle use. Bicycle transportation is a key element in one of the Center's research emphases, "Transportation and the Environment." **Jim Dustrude** of Mn/DOT, **Paul Swenson** of the DNR, and **Ron Nickerson**, a legislative staff member, participated in the discussions leading to the project's formation and will continue their involvement as part of the project management team.

TRANSPORTATION RESEARCH BOARD HOLDS MIDYEAR MEETING

The transportation planning and administration committees of the Transportation Research Board (TRB) held their midyear meeting in July in Oakland, where they heard an update on national policy planning by **Tony Kane** of FHWA. Each modal organization in the USDOT is currently drafting legislation for the 1991 reauthorization of the Transportation Act, focusing on the following themes: simplification of processes, flexibility for states, and greater reliance on user fees. Of particular interest is the national highway system being developed, including approximately 100,000 to 150,000 miles of interstate and arterial roadways. The committees also heard a presentation on the transportation effects of the Bay Area earthquake, which demonstrated the adaptability of travelers and agencies and supported the case for redundant transportation systems. In addition, the University of California, Berkeley presented the PATH program, an ambitious intelligent vehicle/highway systems research program that focuses on the development of automatically controlled vehicles. Minnesota was represented at the meeting by **Randy Halvorson** and **Kathy Briscoe** of Mn/DOT and **Bob Johns** of the Center.

UNIVERSITY ROLE IN AIR TRAFFIC CONTROLLER TRAINING

A year ago the Center funded a project by the Psychology Department to research and develop improved methods for air traffic controller training. Professors **Phil Ackerman** and **Ruth Kanfer** recently presented their plans and initial findings to the Mid-America Aviation Resource Consortium (MARC), a group of

representatives of universities and technical schools coordinated by **Dick Keinz**. MARC received federal funding, with the help of Congressman **Martin Sabo**, for developing an air traffic controller training facility, which is scheduled to open this winter at the Flying Cloud airport under the direction of **Rich Peterson**. MARC has asked Ackerman and Kanfer to prepare a proposal for continued involvement in the project as advisors and evaluators of the training program.

IVHS, TRANSPORTATION FUNDING DISCUSSED AT LOCAL MEETINGS

During the past month CTS Director **Dick Braun** gave a presentation to the Transportation Study Board concerning Intelligent Vehicle/Highway Systems (IVHS), transportation funding, and the base funding needs of the Center. He also appeared before the Sensible Land Use Coalition, which provided an opportunity to discuss transportation challenges in a joint appearance with **Mike Ehrlichmann**, chair of the Regional Transit Board. Additionally, Braun participated in a discussion on transportation matters, particularly cold weather research, with a delegation from Finland that was visiting the University.

FACULTY ACTIVITIES

Professors **J.W. Jang** and **Iwao Iwasaki** of the Mineral Resource Research Center submitted a proposal to the National Cooperative Highway Research Project (NCHRP) on the "Performance of Epoxy-Coated Reinforcing Steel in Highway Bridges." They have also received funding from Mn/DOT for a project on the effect of salt additives on rebar corrosion. Professor **Bruno Franck** of Forest Products was invited to participate in the two-day working session of the Steel and Timber Bridge Commission of the International Association of Bridge and Structural Engineers in Brussels, Belgium, this coming September. Professor **Robert Erickson** presented the results of a timber bridge creep study at the June 1990 Conference of the Forest Products Research Society in Salt Lake City. Erickson, Franck, **Vernon Guyer**, and **Robert Seavey** of Forest Products are working on this project.

UPCOMING TRANSPORTATION EVENTS

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

- | | |
|---------------|--|
| August 14 | Women's Transportation Seminar Monthly Meeting, Scenic Ride Aboard Minnesota Transportation Museum Steam Locomotive Train, Stillwater, Minnesota. Families welcome. Contact Lisa Raduenz at (612) 929-1561. |
| October 10 | Annual Meeting, Minnesota Transportation Alliance, St. Paul Radisson, St. Paul, Minnesota. Contact Jerry Anderson at (612) 379-7227. |
| October 10 | Regional Transit Board Annual Conference, Holiday Inn North, Brooklyn Center, Minnesota. Contact Suzanne Hanson of the RTB at (612) 229-2720. |
| October 11-12 | Minnesota Public Transit Association's Annual Conference, Holiday Inn North, Brooklyn Center, Minnesota. Contact Janice Hennings at (612) 884-7439. |