JULY 1998

CTRE en route

"CHANGE IS THE ONLY CONSTANT"

CTRE en Route highlights transportation research, education, and outreach at the Center for Transportation Research and Education at Iowa State University. It is published on line at http://www.ctre.iastate.edu/

DIVISION HIGHLIGHTS: INFRASTRUCTURE DESIGN AND DEVELOPMENT

APAI DONATION PROVIDES LAB EQUIPMENT

Not long after Brian Coree joined CTRE's staff as a materials engineer, specializing in asphalt materials, and Iowa State University's civil and construction engineering faculty as an assistant professor, the Asphalt Paving Association of Iowa (APAI) asked how they could help the asphalt program at ISU. Coree said the asphalt lab needed new equipment to teach Superpave.

Superpave—superior performing asphalt pavements—is a process for designing and analyzing performance-based mixes. The process is changing how asphalt roads are constructed. Based on Strategic Highway Research Program research, Superpave was designed to solve the persistent problems of rutting, low-temperature cracking, and fatigue cracking in asphalt cement concrete pavements.

With the APAI's $105,000 donation that was matched with $50,000 from ISU, Coree is purchasing equipment to make ISU's asphalt lab Superpave-compatible. The equipment includes a gyratory compactor, which is

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CROSSROADS 2000
a transportation research conference

August 19–20, 1998
Iowa State University
Ames, Iowa

sponsored by CTRE at Iowa State University
and
the Iowa Department of Transportation

details, page 15

Brian Coree checks readings on the new rotational viscometer.

INSIDE

CTRE
Center for Transportation Research and Education
IOWA STATE UNIVERSITY

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CTRE
Center for Transportation Research and Education
IOWA STATE UNIVERSITY
Iowa Department of Transportation

FROM THE DIRECTOR

Tom Maze

I have spent much of the last month trying to figure out what the new transportation authorization act, the Transportation Equity Act for the 21st Century or TEA-21, means to CTRE, to the federally funded research programs in which we participate, and to transportation programs in our state and region.

Although it will take a while to understand the implications of the legislation, TEA-21 clearly provides for increased transportation funding levels and thus expands the demand for research and training provided by organizations like CTRE. The new law also represents a fundamental change in how universities seek sponsorship at the federal level and demonstratively changes the number and the makeup of universities that are significant recipients of U.S. Department of Transportation university research funds.

Although it is hard to tell exactly how many university-based programs will directly benefit from activities or programs named in the bill, over 38 universities were explicitly named as recipients of specific projects or multi-year programs. In addition to the 38 designated university programs or projects, the bill continues the current 10 competitively selected, university transportation centers.

In many cases, the designated universities, like the University of Rhode Island and the University of Mississippi, have not been significant beneficiaries of transportation funding in the past. As a result, TEA-21 has given several universities the opportunity to cultivate transportation research and education programs and perhaps provide some equity between universities that have historically dominated transportation research and those that have not.

In addition to bringing new players to the table, TEA-21 also clearly demonstrates the power of winning university sponsorship through political muscle rather than through superior intellectual resources. The legislation marks a shift in how universities successfully cultivate federal sponsorship. Although I am disappointed to see merit-based awards being washed away by congressional designation, I also hope my congressman remains on the House's transportation and infrastructure committee long enough to see the next bill enacted in six years.

Since the transportation appropriation act for the 1988 federal fiscal year created the University Transportation Centers Program, the U.S. Department of Transportation has been quite successful at energizing the university transportation community. The 10 competitively awarded regional centers created in 1988, the six transportation institutes and four national centers designated by ISTEA, the Federal Highway Administration's (FHWA) three Intelligent Transportation Systems centers, FHWA's Eisenhower Fellowship program, and other federally sponsored programs have resulted in more students becoming interested in transportation-related education and careers, more faculty teaching transportation courses and transportation research, and transportation outreach being successfully delivered. For example, CTRE came of age as a result of the University Transportation Centers Program.

The heightened level of university-based activity was driven home to me through a recent faculty recruiting experience,

especially compared to a prior experience in 1993. In 1993 we advertised for a junior civil engineering faculty member with interests in transportation engineering. We received a dozen applications, of which only four came close to satisfying our needs; ultimately we interviewed only one person from the entire pool. We offered the one interviewee the job and felt very lucky when he accepted our offer.

Similarly, this year we were looking for a junior faculty member. This time, however, our advertisements generated nearly 60 applications, and almost all the applicants were qualified. Even after very narrowly defining the qualifications we were looking for, the search committee had a dickens of a time reducing the number of candidates down to a manageable short list. Many of the candidates had, in some way, been involved in one or more federally funded initiatives started since 1988. The candidate we selected and who accepted our offer completed his Ph.D. degree under the sponsorship of an Eisenhower graduate fellowship.

Federally funded, university-based research, education, and outreach has been a real shot in the arm for the transportation academic community. Given the rapid rate employers this year seem to be snapping up our transportation graduate students (see page 13), the shot in the arm seems to have come just in the nick of time. end

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central to Superpave, a bending beam rheometer, a direct shear rheometer, a pressure aging vessel, a rolling thin film oven, an NCAT ignition furnace, a direct tension tester, and a rotational viscometer.

Some of the equipment has arrived, including the new rolling thin film oven and pressure aging vessel, which artificially age asphalt to simulate years on the road. The rest of the equipment will be delivered over the summer. Coree says the equipment will be used in graduate and undergraduate pavement materials courses beginning fall 1998.

Coree is already using the gyratory compactor and rotational viscometer in a research project seeking to extend the utility of the Superpave gyratory compactor as a predictor of rutting. The Superpave gyratory compactor, in combination with the recently acquired Nottingham Asphalt Tester, is also being used in an Iowa Department of Transportation sponsored research program to refine and validate the Superpave recommended criteria for voids in the mineral aggregate. end

Left to right: Don Jordison, Gary Lemons, and George Jessen (APAI), Lowell Greimann (CCE), Brian Coree (CTRE/CCE), James Gauger (APAI), James Melsa (Dean, ISU College of Engineering), Tom Maze (CTRE)

DIVISION HIGHLIGHTS: TRANSPORTATION PLANNING AND INFORMATION SYSTEMS

MANAGING ROADWAY ACCESS

Project partners: Iowa Department of Transportation, Iowa Access Management Task Force, University of Northern Iowa

Access: Background

One of the most difficult problems in roadway administration and design is balancing roadways' dual function: serving through traffic and providing access to property. Providing inappropriate or excessive access to property on arterial roadways can lead to accidents, delays, and congestion.

Good access management practices—efficiently managing vehicles' access to and from major arterial roadways—can reduce accidents and generally improve traffic flow. Where access is well managed, motorists experience better fuel economy, reduced vehicle emissions, and fewer delays. In addition, incorporating sound access management strategies into existing arterials often increases their capacity, reducing the need to build costly new roadways and providing a maximum return on the investment in existing roadways.

Access: An Iowa Study

Because of rising levels of congestion and rising costs for new roadway construction, local and state transportation agencies are increasingly interested in access management techniques and projects. The extensive literature on access management indicates that access management projects often significantly improve traffic safety and operations without negatively affecting local businesses. However, most of the studies cited in the literature are from states considerably more urbanized than Iowa.

A recent project by CTRE, the Iowa Department of Transportation, the Iowa Access Management Task Force, and the University of Northern Iowa studied seven completed access management projects in Iowa. The projects represented a variety of access issues, geographic situations, and management strategies. Suburban, urban, small city, and rural access management projects were included. Most of the access improvements studied were completed in the mid-1990s. Where possible, at least three years of before-and-after data were used.

The Iowa case studies confirmed and expanded on the findings of the extensive North American literature on access management. The Iowa projects have had significant, positive effects in terms of improving traffic safety and roadway functioning, with generally no adverse effect on businesses along the studied corridors and, in some cases, an improved business environment along the corridors.

Access: Typical Improvements

According to the Federal Highway Administration, the basic elements of access management include limiting the number of driveways with access to roadways, providing plenty of space between driveways, and improving the design and location of driveways.

Typical access management projects in Iowa include one or more of the following specific improvements:

- consolidating or closing selected driveways to reduce conflicts associated with turning traffic
- adding continuous left-hand turning lanes to generally separate turning and through traffic

- adding frontage roads and backage roads to completely separate turning traffic from through traffic
- adding raised medians near major intersections to prevent some turning movements
- adding raised medians along entire roadways to eliminate many conflict points

The Iowa study focused primarily on the measured effects of access management on traffic safety and on adjacent business vitality, as well as the reaction of motorists to the improvements.

The study team used four methods to examine the seven selected case studies.

(1) Each case was examined in the field and as much historic information as possible was gathered, generally via project files from the Iowa Department of Transportation.

(2) Detailed before-and-after accident studies were conducted using the Iowa DOT's computerized Accident Location and Analysis System (PC-ALAS).

(3) Business trends for the studied corridors were analyzed, primarily using retail sales tax data.

(4) Opinion surveys of business owners and managers, as well as motorists and customers, were conducted along the corridors.

Access: Study Findings

The results from the Iowa case studies were overwhelmingly positive.

Traffic safety. A typical access management project in Iowa may be expected to

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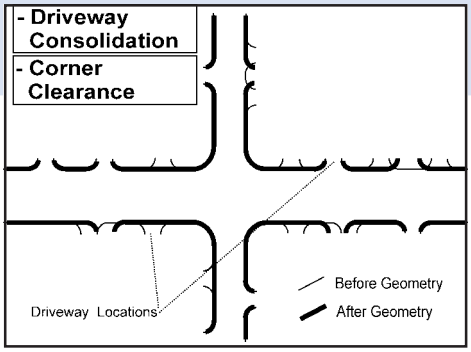

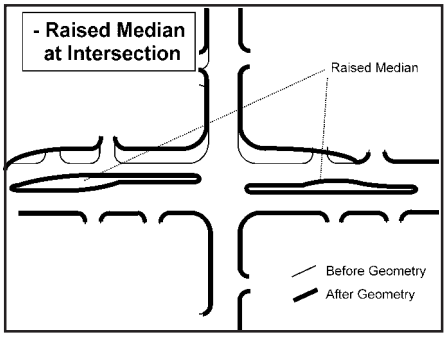

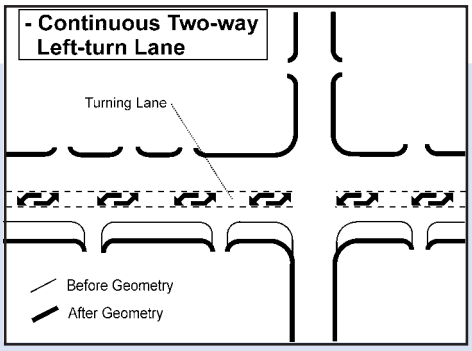

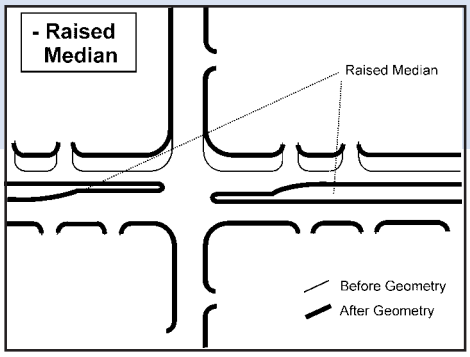

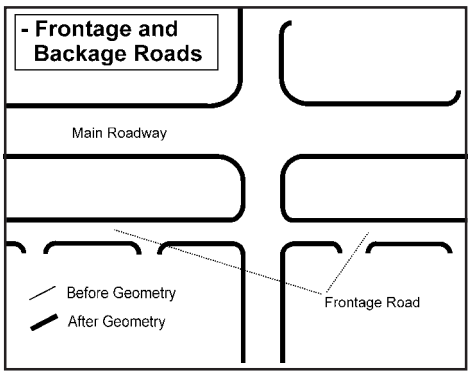

The illustrations depict five popular and effective access management strategies used in Iowa. Graphics by Chris Albrecht, graduate research assistant.

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reduce accident rates by 10 to 65 percent. The average reduction in accident rates for the seven projects was 40 percent.

Personal injury accidents and property damage accidents were reduced significantly, but property-damage-only accidents were reduced by a greater percentage.

At the same time, the access management projects raised the level of traffic service to motorists along the improved corridors during the peak hour by one level. Motorists could travel faster with less traffic congestion and fewer delays.

Business vitality and corridor development. Corridors with completed access management projects performed better in terms of retail sales than the surrounding communities. Business failure rates along access management corridors were generally at or below the statewide average for Iowa.

Eighty percent of businesses along access management corridors reported sales at least as high after access improvements were finished. Relatively few business owners (about five percent) felt they were hurt by the project.

About 80 percent of businesses reported no customer complaints about access to their businesses after the access projects were completed. Those businesses that tended to report complaints were highly oriented toward automobile traffic (e.g., restaurants, auto sales, and auto service).

Furthermore, some evidence from the Iowa case studies shows that business redevelopment, investment, and revitalization begins to occur along a corridor a few years after access management projects are completed.

Motorist opinions. Ninety to 100 percent of motorists surveyed in this study had favorable opinions about the roadway improvements. The vast majority agreed that the improved roadways were safer, easier to drive on, and more efficient.

Access: Barriers

A major obstacle to implementing access improvements, not only in Iowa but across the country, can be the lack of communication between the agencies responsible for roadways and agencies responsible for local land use planning and regulation.

In addition, the Iowa study found that a minority of businesses and motorists along a corridor proposed for access management improvements will not support the proposal because of feared sales declines and traveling inconvenience. Their perceptions can lead to difficulties for the agencies that must implement access management projects.

Access: Implementation

A vital first step in improving cooperation and support for access management

CONTINUED ON PAGE 12

Left-turn lanes can effectively manage roadway access. Photo courtesy of Snyder & Associates.

FACULTY AFFILIATE RESEARCH

DECISION MATRIX FOR THIN MAINTENANCE SURFACES

Several faculty at Iowa State University conduct research projects under CTRE's umbrella research agreement with the Iowa Department of Transportation. Like the research described here led by Charles T. Jahren, assistant professor of construction engineering, many of these projects result in immediate practical applications for the Iowa DOT's highway maintenance operations.

Project partner: Iowa Department of Transportation

Thin maintenance surfaces (TMS) can be cost effective treatments for maintaining the quality of pavements. TMS—including chip seals, slurry seals, and micro-surfacing—are usually applied to flexible pavements. Fog seals, crack repairs, and hot mix overlays are maintenance treatments that may affect the use of thin maintenance surfaces.

TMS are cost effective only when the right projects and treatments are selected and the timing is right. In most cases, the proper time is before the need is apparent to casual observers. Once pavements start to deteriorate, they deteriorate rapidly beyond the point where TMS is effective.

When TMS applications are properly timed, however, road networks show improvements in service life over the long term.

Because of their potential cost effectiveness, the Iowa Department of Transportation is planning to substantially increase its use of TMS. Charles Jahren, assistant professor of construction engineering at Iowa State University, is leading a project to develop a system for planning TMS maintenance programs tailored to Iowa's climate, materials, and contracting practices. The study will develop recommendations, guide specifications, and construction procedures regarding which surface treatments to use and when to use them to maximize cost effectiveness and maintain acceptable pavement conditions.

A primary product of the study will be a matrix of recommendations regarding particular TMS for specific traffic volumes, pavement conditions, and locally available materials. The study will also provide improved pavement assessment techniques with objective measures for identifying TMS candidates.

Jahren's team is also assisting with the design and monitoring of test sections of TMS throughout Iowa. One set of test sections to be constructed in summer 1998 on U.S. 69 will include micro-surfacing and chip seals. The chip seals will compare local and imported aggregate, one and two courses, and high float and cationic emulsion (binder). After construction the researchers will monitor performance.

The research team will issue a set of preliminary guidelines by December 1998. end

DIVISION HIGHLIGHTS: ADVANCED TRANSPORTATION TECHNOLOGIES

DEPLOYING ITS IN DES MOINES

Project partners: Des Moines Area Metropolitan Planning Organization, Iowa Department of Transportation, Allied Signal, Booz-Allen & Hamilton

In the last decade, a few large metropolitan areas have pioneered the use of intelligent transportation systems (ITS) to manage traffic and transit services. The significant benefits observed in these urban areas compelled the U.S. Department of Transportation (DOT) to sponsor a program of financial support to assist metropolitan areas in developing ITS strategic plans. The Des Moines Area Metropolitan Planning Organization (MPO) requested and received funding to develop a Des Moines area plan and, with matching funds from the MPO and the Iowa DOT, contracted with CTRE, Allied Signal, and Booz-Allen & Hamilton to develop the plan. When the project began in 1995, Des Moines was the smallest urban area undergoing such a strategic plan.

The Des Moines metropolitan area does not face the extreme levels of traffic congestion that forced larger urban areas like Minneapolis/St. Paul, Chicago, and Detroit to adopt ITS very early. Therefore, Des Moines can take advantage of tried and tested ITS functions and technology and accrue similar safety and travel productivity improvements through a well planned and incremental deployment of ITS. Such a deployment will not only help prevent the development of extreme traffic congestion in the Des Moines metropolitan area but will also help manage and alleviate traveler delays and disruptions caused by the reconstruction of I-235 through Des Moines, scheduled to begin early in the next decade.

Accommodating over 100,000 vehicles daily, I-235 acts as the major traffic artery across the Des Moines metropolitan area, serving both long-distance trips across, and circulation within, the metropolitan area. Although the Iowa DOT plans to minimize the disruption of normal commuting patterns during I-235 reconstruction, travel conditions across the urban area are likely to be affected and traffic is likely to be diverted to parallel streets.

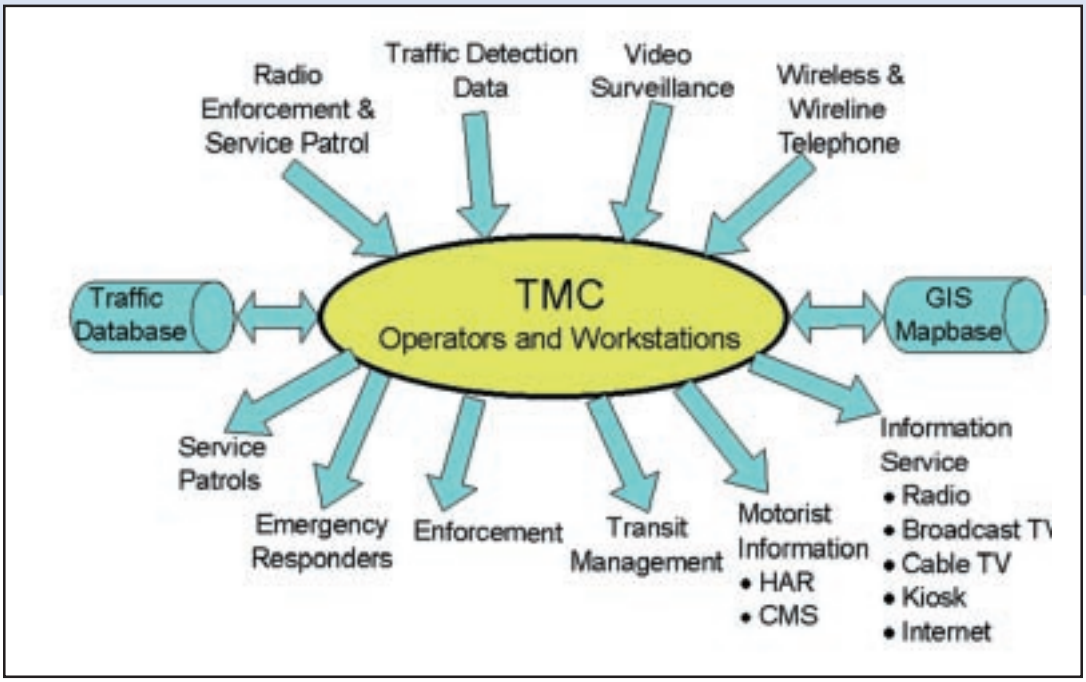
The ITS deployment plan was developed by the project partners under the direction of a steering committee representing ITS stakeholders in the Des Moines metropolitan area, including city and county traffic, engineering, police, and public works departments in the metropolitan area; Des Moines Transit Authority; Iowa State Highway Patrol; Federal Highway Administration; Iowa Motor Truck Association; Greater Des Moines Chamber of Commerce; and the Des Moines International Airport.

ITS: Basic Components

The plan serves as a road map for developing ITS in the Des Moines metropolitan area to improve traffic flow and safety on the freeways and surface streets, provide travelers with better information on weather and highway conditions, and make transit more efficient and convenient. The plan includes the following actions:

Traffic and safety applications

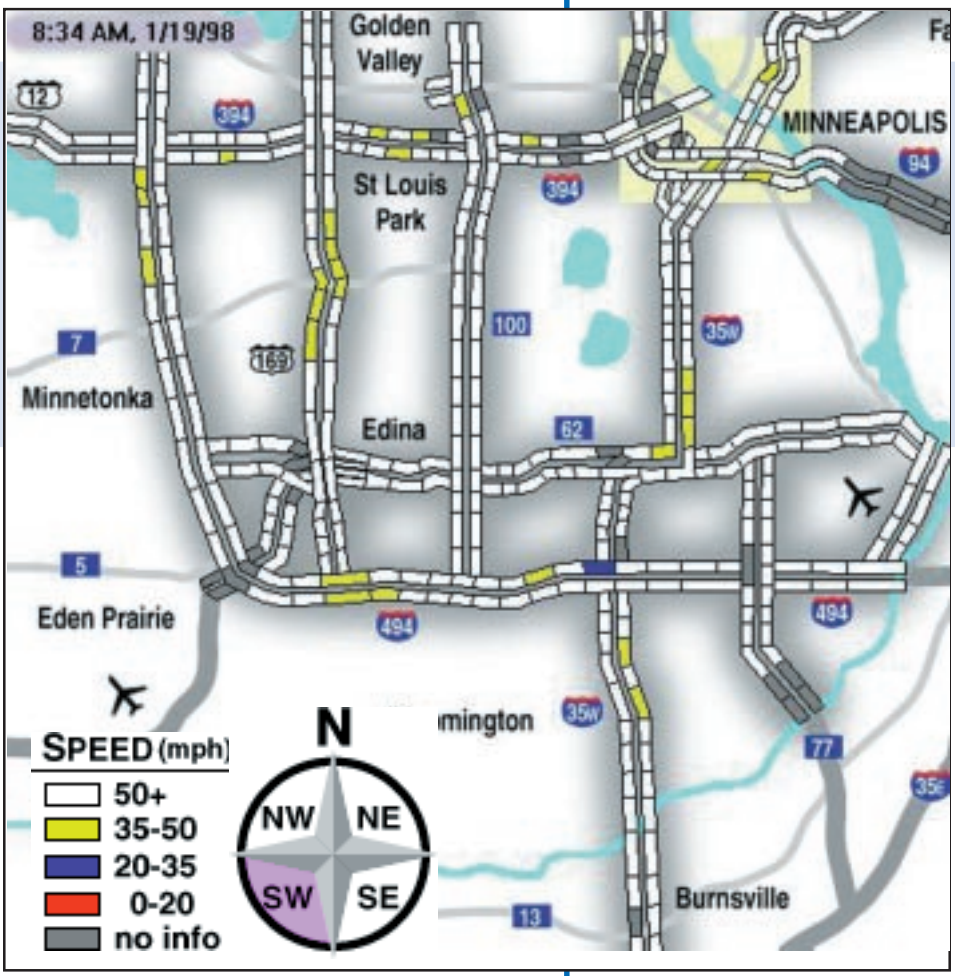
- Populate the metropolitan area's roadways with traffic surveillance and traffic management assets (such as Highway Advisory Radio transmitters, Changeable Message Signs, and traffic detectors), starting at high-incident and high-crash frequency locations.
- Develop a Transportation Management Center (TMC)—a physical space for



The graphic (left) represents the flow of information to and from the Transportation Management Center.

collecting real-time traffic and incident information and initiating appropriate responses across jurisdictions and lines of authority.

- Develop an incident management plan for freeways and freeway-design standard highways.
- Create an electronic communication system that provides metropolitan agencies responsible for responding to incidents with real-time data on incidents and real-time video images of incidents to allow for more efficient and swift management and clearance of incidents.
- Establish a traveler information system broadcast over the government access cable television channel, which scrolls through maps showing traffic speeds, locations of incidents, road conditions, and real-time video images.
- Develop a real-time traveler information system distributed over the Internet and at computer kiosks at public locations.



Minnesota's real-time traveler information system on the Internet (below) includes a graphic display of traffic speeds along highways in the Minneapolis/St. Paul area. Image courtesy of the Minnesota Department of Transportation, Traffic Net Web pages.

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Interjurisdictional traffic signals

- Execute an interjurisdictional traffic signal coordination memorandum of agreement between agencies operating traffic signals in the Des Moines metropolitan area.
- Conduct an engineering study of the physical equipment requirements to coordinate traffic signals across jurisdictions, particularly along I-235 reconstruction diversion routes.
- Implement a traffic signal coordination plan by traffic signal operating agencies.
- Where ramp meters are found to be feasible, coordinate ramp meters and traffic signals at the ramp terminals with traffic signals on adjacent streets.

Transit

- Develop traffic signal prioritization capabilities for Metro buses in downtown Des Moines, eventually migrating prioritization capabilities to signals outside of downtown.
- Adopt electronic payment system for transit services with the ability to upgrade to smart card technology in five years.

Conservative estimates of potential benefits to be realized from ITS deployments recommended in the strategic ITS deployment plan developed by CTRE and its partners were made using traffic data and crash statistics from the base year 1993 (traffic volumes and crashes have increased significantly since then). Conservatively, it is believed that the recommended systems would reduce traffic crashes on the Des Moines Interstate system by 100 per year (50 each in the morning and afternoon peak travel periods). Conservatively, speeds would increase by 14 percent (most metropolitan areas experience 20 to 48 percent increase in speed), and motorist travel hours would be reduced by about 250,000 hours per year (an estimated value of $2.8 million per year). Due to faster crash and incident clearance, delays would be reduced by 400,000 hours per year (an estimated value of $4.0 million per year).

The estimated quantitative benefits do not include the benefits travelers receive when they can make more informed decisions regarding whether to travel, the route to take, the time of departure, the mode selected, and the estimated arrival time; the safety benefits resulting from accident responders being more informed and responding more quickly; or the benefits to motor carriers and shippers of a more reliable transportation system. These benefits will be particularly critical when I-235 is being reconstructed and construction activities impact the flow of traffic across the metropolitan area.

ITS: Commercial Vehicles

The ITS deployment plan also addresses applications of ITS that specifically support commercial vehicle operations (CVO). Because of Des Moines' long distance from East and West Coast markets, Des Moines area shippers stand to benefit significantly from reduced shipping costs and improved motor carrier safety resulting from the implementation of ITS-CVO applications.

The focus of land-based international trade to and from the Des Moines metropolitan area has been on I-35. This is because I-35 is the most direct route to the Mexican border through the international port at Laredo, Texas. Roughly 40 percent of the value of all surface trade between Mexico and the United States crosses the border at one of the three Laredo area bridges. Because of the increasing importance of I-35 to international trade with Mexico, I-35 is being

promoted as an international trade corridor, and the North American Superhighway Coalition (NASCo) is requesting that congress provide a special designation for the highway.

Most ITS-CVO functions are under the purview of federal and state officials. For example, one of the principal applications of ITS-CVO is to check the size and weight of trucks on the freeway mainline at freeway speeds, allowing trucks within acceptable limits to bypass weigh stations without stopping to be checked and weighed on a static scale. Although the Des Moines Area MPO and local governments in the Des Moines metropolitan area do not have authority over many ITS-CVO functions, three areas of ITS-CVO where Des Moines area agencies and organizations can contribute directly to ITS-CVO efforts include:

- Providing commercial traveler information via the World Wide Web to allow commercial drivers to make more informed decisions regarding travel in, around, and through the Des Moines metropolitan area. A prototype Web site developed for this study includes such practical information as maps to emergency health and dental services.
- Developing ITS functions and services to support international trade from the Des Moines area. Services and facilities could include a location for carriers and vehicle operators to have customs inspections performed or to have vehicles repaired.
- Using ITS technology to more quickly and accurately determine the characteristics of, and mitigation strategies for, incidents involving hazardous materials. Specifically, the Des Moines Fire Department's Hazardous Materials Response team, the first response team for hazardous materials spills in the metropolitan area, could subscribe to Operation Respond Emergency Information System (OREIS), a

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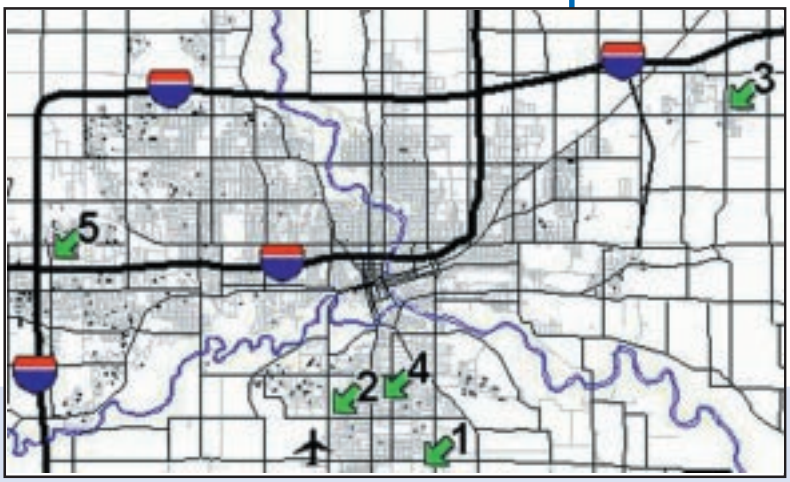

The locations of Des Moines-area dentists who take walk-in patients are shown on the prototype Web page for CVOs.

Accidents involving carriers of hazardous materials (below) require special handling. Photo courtesy of Federal Highway Administration.

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national database and response network supported by the National Institute of Occupational Safety and Health (NIOSH).

ITS: Implementing the Plan

Supporting decision making regarding ITS requires more sophisticated decision-making tools than those currently available to Des Moines agencies. Two computer tools are recommended for development. The first is a more precise travel demand model. The Des Moines Area MPO's current travel demand model estimates travel volumes for the entire day, and the model does not estimate the time of day trips are made. The model needs to be improved so that peak travel demand estimates can be made. The second recommendation is that a high-fidelity traffic simulation model be generated for Des Moines so that designers of the reconstructed I-235 and other transportation improvements can estimate the impacts of modifications to the transportation system.

ITS can provide Des Moines area travelers and goods transporters with enhanced transportation productivity, reliability, and safety. Implementing the ITS strategic plan will require strong leadership from public and private stakeholders. Unlike improvements to physical transportation infrastructure like a new bridge, a widened roadway, a new overpass, or a new fleet of buses, ITS improvements do not provide very visible signs of improvement that the general public can see, understand, and appreciate. At the same time, ITS improvements often compete for funding with physical infrastructure. Therefore, if ITS is to be deployed, influential individuals and/or organizations must champion ITS improvements.

The Des Moines Area MPO will serve as champion for the deployment of ITS in the Des Moines metropolitan area. In partnership with the MPO's member governments, the Iowa DOT, and the U.S. DOT, the MPO will champion ITS deployment in the metropolitan area. To guide the deployment of the plan, the steering committee for the ITS deployment study has become a standing committee and will now help steer implementation of the recommendations. **end**

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strategies is to identify and communicate the benefits of access management to all stakeholders. The study group is taking several actions to educate and inform the various constituents interested in and affected by access management.

- A May 1998 statewide conference brought together a variety of Iowa stakeholders to focus on the benefits of access management and identify best access management practices.
- The study group has published three reports: *Access Management: A Review of Recent Literature; Access Management: Current Policies and Practices in Iowa;* and *Access Management: Phase II Report* (as well as a *Phase II Summary Report*). These reports are online at the Iowa Access Management Project World Wide Web site: http://www.ctre.iastate.edu/access. Limited printed copies of the reports are available through CTRE.
- A brochure and videotape have been developed, and a how-to handbook will soon be available. **end**

STUDENTS

MOVITE WINNERS

Two CTRE graduate research assistants wrote winning papers for a student paper competition sponsored by the Missouri Valley section of the Institute of Transportation Engineers (MOVITE) in spring 1998. With a paper about how access management can improve highway safety, ***Steve Schrock*** (right), graduate student in civil engineering, earned first place. ***Brad Estochen***, graduate student in civil engineering, came in third with his paper about intelligent transportation systems applications with commercial vehicles. end

ENO FELLOW

Michael Anderson, CTRE graduate research assistant and PhD student in Iowa State University's Civil and Construction Engineering Department, was selected to attend the 1998 Leadership Development Conference held May 17–21, 1998, in Washington, D.C. The annual conference is sponsored by Eno Transportation Foundation, Inc. of Lansdowne, Virginia. Anderson was one of 20 Eno Fellows nationwide to attend this year's event.

The purpose of the fellowships, which pays all students' expenses during the five-day conference, is to expose students to firsthand experience in forming and developing transportation public policy.

Anderson says he has a clearer understanding now of how political decisions are made. He intends to be more proactive in helping shape policy in his career and "find ways to influence" policy, he says.

Anderson is the second recent CTRE graduate student to be named an Eno Fellow. Christopher Monsere, graduate student in civil engineering, was an Eno Fellow in 1997. end

ONWARD

Several graduate research assistants at CTRE are finishing their degree programs and taking positions in academia and the private sector. Our sincere congratulations to these students as they begin their careers:

Chris Albrecht (MS transportation): transportation planning consultant, BRW Inc., Minneapolis, Minnesota

Michael Anderson (PhD civil engineering): assistant professor of civil engineering, University of Alabama, Huntsville, Alabama

Jeff Gerken (MS civil engineering): traffic engineer, traffic engineering and transportation planning section of HDR Inc., Omaha, Nebraska

Dan Gieseman (MS civil engineering): program coordinator, Center for Transportation Research and Education, Iowa State University, Ames, Iowa

David Preissig (MS civil engineering): civil engineer, TranSystems Corporation, Schaumburg, Illinois

Jon Resler (MS civil engineering): transportation engineer, municipal division, HNTB, Overland Park, Kansas

STAFF

WELCOME

Dan Gieseman recently joined CTRE as transportation systems analyst. He will work primarily out of the center's GIS laboratory, which develops and implements transportation-related GIS applications.

Gieseman's responsibilities will include conducting research related to transportation policy and planning involving all transportation modes. He will also develop custom GIS applications for various information systems.

Currently, Gieseman is working on GIS implementation within the Iowa Department of Transportation. He is also developing an infrastructure management information system for and with the Iowa Department of Economic Development.

Gieseman received a master's degree in transportation from Iowa State University in May 1998. CTRE staff became well acquainted with him during his recent graduate assistantship at the center.

Welcome, Dan. end

AND FAREWELL

CTRE will miss ITS Specialist ***Mike Hancock***, who recently joined MechDyne, a privately held, Iowa-based engineering and high technology firm, as senior project engineer and manager.

In his five years with CTRE, Hancock was principal contributor for several ITS projects involving commercial vehicle operations, including AMASCOT, a three-state automated mileage and stateline crossing operational test. He has recently evaluated an operational test of one-stop, multistate electronic data interchange for motor carrier credentialing and permitting.

MechDyne provides engineering services; advanced vehicle, process, and event simulation; and simulation and visualization hardware and software. At MechDyne, Hancock will work as part of a management team marketing, designing, fabricating, and installing large- and small-screen simulation environment systems, as well as providing engineering and simulation services to public and private research institutions and businesses worldwide.

Our best wishes to you, Mike. end

EVENTS

CROSSROADS 2000 TRANSPORTATION CONFERENCE

August 19–20, 1998
Iowa State University
Ames, Iowa

Crossroads 200, a regional research conference, will be held August 19–20, 1998, at Iowa State University. The conference is sponsored by CTRE and the Iowa Department of Transportation.

Researchers from across the country will present papers at this second biennial event, and a complete conference proceedings will be available at the conference. Participants will select sessions according to their interests (see session topics at right). Topics cover a range of transportation issues and include basic and applied research. A different ITS issue will be addressed in each concurrent session.

Three transportation professionals—one from a public agency, a private enterprise, and academia—will be honored at the conference for their contributions to transportation-related research and practice.

Two special guest speakers will address participants. ***Robert Betsold,*** associate administrator for research and development with the Federal Highway Administration, has over 30 years of varied highway experience. He has served as the engineer manager for the Chicago Crosstown Expressway, deputy director for environment and design in the Chicago region, director of the Office of Implementation and the Office of Safety and Traffic Operations Research and Development, managing director of the Turner-Fairbank Highway Research Center, and deputy associate administrator for research and development.

Originally from Iowa, ***Francis "Frank" B. Francois***, executive director of the American Association of State Highway and Transportation Officials (AASHTO), will speak at the banquet and awards ceremony August 19. Before assuming management of AASHTO affairs in 1980, he spent 18 years as a member of the County Council of Prince George's County, Maryland, an elected position in which he worked closely with transportation, public works, environmental, and community development issues.

An information/registration brochure can be downloaded at http://www.ctre.iastate.edu/bulletin/crossreg.pdf. If you have questions about Crossroads 2000, contact Sharon Prochnow, 515-294-8103, sharon@ctre.iastate.edu. end

Crossroads 2000 Concurrent session topics

- Freeway Traffic Operation and Modeling
- Roadside Safety
- ITS in Trucking
- Winter Storm Maintenance
- Bridge Decks
- Managing Traffic and Programming Improvements in Medium and Small Cities
- Concrete Pavements
- Regional and State ITS Planning
- Use of Friction in Winter Storm Maintenance
- Bridge Repair and Evaluation
- Managing Highway Access
- Methods in Travel Demand Modeling
- ITS in International and Multimodal Freight Transportation
- Highway Maintenance Management Decision Making
- Improving Transportation Facility Construction
- Traffic Operations, Safety, and Crash Analysis
- Statewide Transportation Planning, Implementing ISTEA
- Urban ITS Deployment
- Developing Data and Data Management Resources for Transportation Analysis
- New Technologies and Techniques for Managing and Constructing Pavements
- Computerized Methods for Crash Analysis
- Transportation Planning, Land Use, and Economic Data
- Rural ITS Operational Tests
- Asphalt Pavements
- Freight Transportation Planning

CONFERENCE CALENDAR

August 19–20, 1998	Iowa State University	Crossroads 2000, a transportation research conference
October 7 & 14, 1998	Iowa State University and downlink sites across the country	Satellite Conference: Basic and Advanced Uses of the Internet and World Wide Web for Transportation Agencies and Professionals
November 20, 1998	Iowa State University	Transportation Scholars Conference

Do you have comments about the newsletter or questions about CTRE and its programs? Contact:

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