## **GUIDE TO**

MINNESOTA

Department of Transportation

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November 1998

### Minnesota Department of Transportation

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## ARNE H. CARLSON GOVERNOR

#### STATE OF MINNESOTA

OFFICE OF THE GOVERNOR 130 STATE CAPITOL SAINT PAUL 55155

#### Dear Commissioner:

Welcome to the Department of Transportation. It is my pleasure to report to you that in the past eight years Minnesota has improved its overall transportation system, improved mobility for its citizens and economy, greatly increased the financial commitment to improving the transportation infrastructure without raising taxes, pursued many innovative transportation policies, and improved operational efficiency and financial management at the Minnesota Department of Transportation (Mn/DOT). The transportation system in Minnesota — air, rail, water, transit and highways — is in sound condition as we head into the next century.

#### Among our accomplishments:

- Achieved cost savings that, along with slightly higher state and federal funding, avoided a projected \$216 million deficit for 1998-1999 and substantially increased funding available for state highway construction.
- Established more conservative transportation budget projections that allow high confidence in the ability to complete state transportation projects on time and on budget.
- Created "Area Transportation Partnerships" to bring important transportation decisions closer to citizens and communities impacted.
- Completed the state's first Statewide Transportation Plan in 1996. The plan describes Minnesota's transportation systems and trends affecting transportation, establishes an investment framework, and lists the challenges facing the state's transportation system.
- Promoted intergovernmental and public-private partnerships for the delivery of government services.
- Assumed a national leadership role in developing and testing Intelligent Transportation Systems for traffic and incident management, transit and transportation information.
- Improved traffic and congestion management in the Twin Cities metropolitan area.

Many challenges remain as our infrastructure continues to age in the face of growing traffic volumes, increasing demand for transportation services and an expanding economy. The work of the past eight years, however, provides a solid base of knowledge, perspective and commitment to build upon. I wish you and your administration the best as you address Minnesota's transportation needs.

Warmest Regards,

ARNE H. CARLSON

Governor



**Transportation Building**395 John Ireland Boulevard
Saint Paul, Minnesota 55155-1899

January 4, 1998

Dear Mn/DOT Commissioner-Designee:

Congratulations on your appointment to lead the Minnesota Department of Transportation. Mn/DOT is one of the most exciting and professional organizations I have had the pleasure to be associated with, and I am certain you will enjoy the same success and positive experiences I have.

I am very proud that as you begin your tenure with Mn/DOT, you will inherit an agency that is in excellent financial condition, is strategically focused on Minnesota's future transportation needs, and is being managed by an outstanding roster of dedicated and experienced transportation professionals.

We have enjoyed many successes during the Carlson Administration, and yet many transportation challenges face our state. Mn/DOT's successes, current initiatives, existing controversies and emerging transportation issues are briefly outlined in this transition document, and will be explored in greater detail in other documents and as you meet with Mn/DOT staff throughout the transition process. All Mn/DOT employees are committed to a transition that is as positive, cooperative and thorough as possible.

Again, welcome to the Minnesota Department of Transportation. I wish you all the best in your endeavors and pledge my, and this agency's, full assistance in making your term an overwhelming success.

Sincerely,

James N. Denn Commissioner

#### Mn/DOT Profile

After a long history as the state's highway department, the Minnesota Department of Transportation (Mn/DOT) was created in 1976 to provide a balanced transportation system, including aeronautics, highways, motor carriers, ports, public transit, railroads and pipelines.

Mn/DOT is the principal agency for developing, implementing, administering, consolidating and coordinating state transportation policies, plans and programs (Minnesota Statutes, Chapter 174).

In performing our duties and fulfilling our responsibilities, Mn/DOT's overriding focus is to protect and enhance the safety of the traveling public, Mn/DOT workers in the field and the workplace, the workers of our private sector partners, and all who serve to enforce state and federal laws and regulations related to transporation.

Minnesota statutes and rules related to Mn/DOT responsibilities are: Chapters 11A, 13, 15A, 16B, 17, 84, 103A, 103C, 103E, 116, 116C, 117, 160-162, 165, 167, 169, 173, 174, 216C, 218, 219, 221, 222, 360, 457A and 505; Minnesota Rules 8800-8870.

#### **A Brief History**

The Minnesota Legislature began passing laws directing the townships and counties in road and bridge building matters from its early days of statehood in 1858. Although a constitutional amendment passed in 1898 finally allowed the state to participate directly in road development, the state did not begin building roads and bridges until after the State Highway Commission was created in 1905. State licensing of motor vehicles started in 1903, except where

municipalities had already done so.

From 1871 to 1905 the state gradually created a Railroad and Warehouse Commission and increased its powers from limited inspection of railways to establishing rates for railroads, regulating warehouse and grain handling, investigating carrier management, determining reasonable rates, ordering railroad companies to maintain safety devices and prosecuting cases before the U.S. Interstate Commerce Commission.

The period from 1911 to 1921 was very important to road building and highways. The Dunn Amendment of 1912 called for revising the road and bridge section of the constitution. Following the adoption of this amendment, an annual one mill tax levy was passed and rural roads were divided into three classes for construction and maintenance purposes: state, county and township roads.

Abolishing the Highway Commission in 1917, the Legislature created a Department of Highways. Charles M. Babcock of Elk River was chosen to be the first commissioner and was empowered to employ a support staff and a deputy commissioner who must be an engineer as well as road builder.

A constitutional amendment adopted in 1920 allowed for the creation of a system of 70 trunk highways. Legislation was passed in 1921 to make such a highway plan possible. This legislation required the commissioner of highways to carry out the provisions of the trunk highway amendment. The mandate for the Department was to acquire right of way, locate, construct, reconstruct, improve and maintain the trunk highways, let necessary contracts, buy needed material and equipment, and expend necessary funds. The same legislation authorized the commissioner to appoint two assistant commissioners, one of whom was to be an experienced highway engineer. The

commissioner was also authorized to employ skilled and unskilled employees as needed.

Later in the 1920s, Babcock fought for and won an amendment to the state constitution to use taxes on gasoline solely to build and maintain roads. The organization of the Highway Department reflected the need for a roadway system able to handle the growing numbers of motor vehicles. There were 920 motor vehicles registered in 1903 and 324,166 in 1920.

The 1920s and 1930s brought growth to the Railroad and Warehouse Commission. The Commission's jurisdiction steadily grew to regulating street railways, regulating common carriers with regular routes and regulating carriers on irregular routes.

Created on April 22, 1933, the Minnesota Aeronautics Commission focused its efforts on two main goals: to make aviation in Minnesota safe and to promote interest in aviation throughout the state. In 1943, the Aeronautics Commission became the Department of Aeronautics. An amendment to the constitution was proposed by the Legislature that the state be permitted to construct airports, issue bonds, levy excise taxes and tax aircraft. This amendment was submitted to and accepted by the voters in the general election of 1944.

The Federal Aid Highway Act of 1944 authorized funding for the postwar programs to improve secondary rural and urban roads. As a result, the State Aid Division was created in 1945 in the Department of Highways to work with Minnesota's cities and counties.

In 1956, Congress enacted laws that set up funding for the National System of Interstate and Defense Highways. Also in 1956, the voters of Minnesota approved a constitutional amendment to provide for the orderly distribution of state road user funds. The percentages established were 62 percent state, 29 percent county and 9 percent municipal.

The Department of Public Service was created in 1967 and the functions of the Railroad and Warehouse Commission were transferred to it. And in 1969 the Legislature established the Department of Public Safety. The Highway Patrol and Drivers License Bureau, both formerly a part of the Highway Department, were transferred to this new Department.

#### The Creation of Mn/DOT

Mn/DOT, or the Minnesota Department of Transportation, was created in 1976 by the Legislature to assume the activities of the former Departments of Aeronautics and of Highways and the transportation- related sections of the State Planning Agency and of the Public Service Department. In creating the Department of Transportation, the Legislature determined that Mn/DOT would be the principal agency to develop, implement, administer, consolidate and coordinate state transportation policies, plans and programs. Today Mn/DOT develops and implements policies, plans and programs for aeronautics, highways, motor carriers, ports, public transit and railroads.

Mn/DOT makes special efforts to consider the social, economic and environmental effects of its decisions and aggressively promotes the efficient use of energy resources for transportation purposes. It also maintains close working relationships with the many public and private individuals, groups and associations involved in transportation.

## Mn/DOT Bureaus and Divisions

#### Office of the Commissioner

James N. Denn, commissioner (651) 296-3000

Edwin H. Cohoon, deputy commissioner and chief financial officer (651) 296-7942

Darryl E. Durgin, deputy commissioner and chief engineer (651) 296-8532

William H. Schreiber, director, Intergovernmental Policy (651) 296-3306

Robert J. McFarlin Jr., director, Public Affairs (651) 296-0369

Invested with a number of duties by the Legislature and appointed by the Governor, the commissioner is chief administrator of the Department of Transportation. The commissioner is assisted by the deputy commissioner, Modal and Resource Management Bureau; the deputy commissioner, Engineering and Operations Bureau; and the directors of Intergovernmental Policy and of Public Affairs.

#### **Modal and Resource Management Bureau**

Edwin H. Cohoon, deputy commissioner/chief financial officer (651) 296-7942

#### **Finance and Administration Division**

Barbara L. Sundquist, division director/chief administrative officer (651) 297-8316

The Finance and Administration Division provides policy direction and support for the management of the department's fiscal, human and information resources; provides a number of administrative services to the department's divisions including human resource administration, labor relations, employee development, safety, workers compensation, workforce diversity, cost accounting, federal billing, fiscal reporting, budget preparation guidelines and management, investment management, contract administration, central office supplies and services, inventory and fixed asset management, procurement policy, central purchasing, and network management services; conducts studies in organizational management and administrative effectiveness; is the focal point for the department's work with the departments of Administration, Employee Relations, Finance, Revenue, and the Office of Administrative Hearings. The division also works closely with the Office of the Attorney General and maintains a close liaison with the State Board of Investment, the Federal Highway Administration, the Legislative Audit Commission and the Minnesota Legislature.

### Transportation Research and Investment Management Division

Randall K. Halvorson, division director (651) 296-1615

The Transportation Research and Investment Management Division directs Mn/DOT's strategic planning and statewide investment decision process; administers statewide modal programs including aeronautics, highways, railroads and waterways, and transit; is responsible for advancing research and new technology applications in transportation as well as enforcement of specific laws and regulations which ensure the safe movement of people and goods.

#### State Aid for Local Transportation Division

Patrick B. Murphy, division director (651) 296-9872

This division administers the distribution of state-aid and federal-aid funds to eligible counties, cities, and townships; authorizes grants for bridge construction on local road systems; provides technical assistance in the design, construction, and maintenance of the state-aid and federal-aid road systems.

#### **Engineering and Operations Bureau**

Darryl E. Durgin, deputy commissioner/chief engineer (651) 296-8532

#### **Engineering Services Division**

David Ekern, division director and assistant chief engineer (651) 297-4253

The Engineering Services Division assists and supports other divisions in the department with engineering expertise and other technical services; develops and issues standards, specifications, and manuals used by contractors and local governments; provides liaison with the Federal Highway Administration; conducts physical research.

#### **Operations Division**

Patrick C. Hughes, assistant commissioner (651) 296-3156

The Operations Division provides engineering leadership and direction to Mn/DOT offices and districts in the areas of Electronic Communications, (road) Maintenance operations; Quality and Traffic Engineering and provides services directly to the public through its 7 rural districts and 12 maintenance offices. The responsibility for transportation operations policy and quality assurance exists at the division-level. The division leadership also

ensures equitable resource allocation to its districts and offices; provides a forum for addressing resource sharing when necessary to relieve temporary workload imbalances; interacts with the State Legislature, various state departments and agencies, other governmental agencies, contractors and the general public.

#### **Metro Division**

Waters Edge Building 1500 W County Road B2 Roseville, MN 55113 Dick Stehr, division engineer (651) 582-1359

#### **Transportation District 1 - Duluth**

1123 Mesaba Ave Duluth, MN 55811 Mike Robinson, transportation district engineer (218) 723-4820 Ext. 3003

#### Transportation District 2 - Bemidji

3919 Highway 2 West PO Box 490 Bemidji, MN 56619 Steven Baker, transportation district engineer (218) 755-3815

#### **Transportation District 3 - Brainerd**

1991 Industrial Park Baxter, MN 56425 Donald L. Raisanen, transportation district engineer (218) 828-2463

#### **Transportation District 4 - Detroit Lakes**

P.O. Box 666 1000 W. Highway 10 Detroit Lakes, MN 56502 David G. Smilonich, transportation district engineer (218) 847-1552

#### **Transportation District 6 - Rochester**

Box 6177 2900 48th Street NW Rochester, MN 55903-6177 Nelrae Succio, transportation district engineer (507) 285-7374

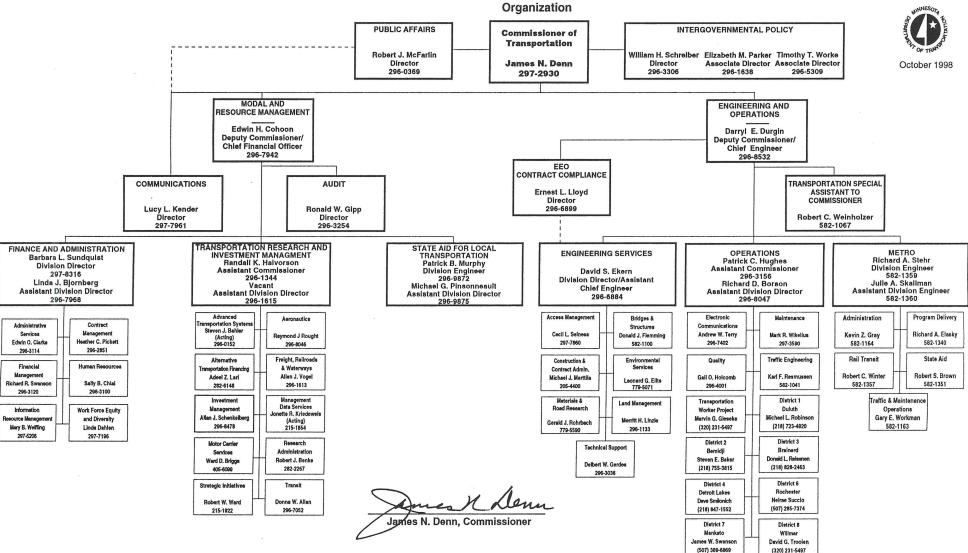
#### **Transportation District 7 - Mankato**

P.O. Box 4039 Mankato, MN 56001 James W. Swanson, transportation district engineer (507) 389-6869

#### **Transportation District 8 - Willmar**

P.O. Box 768
2505 Transportation Road
Willmar, MN 56201
David G. Trooien, transportation district engineer
(320) 231-5497

## STATE OF MINNESOTA Department of Transportation Organization



### Mn/DOT's Strategic Plan

The Minnesota Department of Transportation (Mn/DOT) serves the citizens of Minnesota who are concerned with:

- Being able to access goods and services when and where they want them
- Having transportation choices that balance personal, social, economic, and environmental values
- Having all transportation systems and services work smoothly together.

#### The Mn/DOT Vision

Mn/DOT's vision describes what the citizens want Minnesota's transportation network to become.

A coordinated transportation network that provides safe, user-friendly access and movement, and responds to the values of Minnesota's citizens.

#### Mn/DOT's Mission

Mn/DOT's mission statement describes its fundamental purpose.

To develop a coordinated transportation network

We will lead and act to:

- Preserve, manage and improve the state's highway system
- Promote and support the transit, air, rail, waterways, bicycle and pedestrian systems
- Promote non-travel alternatives
- Promote and support connections among transportation systems.

#### **Mn/DOT Directions**

#### 1. Safeguard what exists.

Mn/DOT's strongest commitment is to existing transportation systems.

To safeguard these systems, Mn/DOT will:

- Operate, maintain and preserve the state's highways
- Support transit, rail, water and air services
- Preserve transportation choices such as bikeways and walkways.

#### 2. Make the network operate better.

Mn/DOT will help increase Minnesota's economic competitiveness by improving the transportation systems.

To address the future, Mn/DOT will:

- > Improve system performance by:
- Improving safety
- Managing congestion
- Identifying critical system and resource needs
- Using Intelligent Transportation technologies
- Making selective additions to the system
- Promoting telework, transit and car pooling
- Responding to freight movement needs
- Coordinating access management
- Researching for better solutions

> Better connect and coordinate transporation systems and services using:

- Partnerships
- Shared information
- Joint planning
- Shared facilities.

#### 3. Make Mn/DOT work better.

Mn/DOT will continuously improve management of its resources.

To deliver quality service, Mn/DOT will:

- Emphasize strategic management, which includes (1) knowing its diverse customers and focusing projects and services to meet their needs, (2) managing resources using business planning quality innovations and customer-based performance measures.
- Develop financial management tools
- Emphasize human resource management
- Simplify and improve access to information.

#### **Mn/DOT Values**

The Minnesota Department of Transportation is a community of unique men and women united in public service.

Together we are resolved to:

- Put our customers first, treating them with respect and balancing their interests to achieve the greatest public good.
- Support and encourage each other, learning and growing, to fulfill our highest potential.
- Commit to continuous improvement of everything we do, learning from mistakes and successes alike.
- Sharpen our expertise in using information, tools and technology to stay on the cutting edge.
- Make decisions based on facts and sound judgement, accepting accountability for our actions.
- Think ahead, planning creatively for today and tomorrow.
- Hold ourselves to the highest standard of excellence and integrity, recognizing pride in hard work and our rich talent.
- Trust and respect each other.

## State Transportation Funding Sources (FY 1996 and FY 1997)

## The State and Federal Dollars Raised by Traditional Transportation Funding Sources

\* \$1.6 Billion in FY 1996 and \$1.8 Billion in FY 1997

		FY 1996 FY 1997 (\$ in Millions)	
State Motor Fuel Tax		\$ 527	\$ 548
Federal Transportation Aid		344	409
Vehicle License Taxes		508	535
Aviation, Environment & Special Revenues		22	22
Drivers License Fees		20	19
Fund Balance Advance		110	154
Investment Income		37	35
State General Fund		10	16
Accounts Receivable & Misc. Income		31	39
	Total	\$ 1,609	\$ 1,777

### Distribution of State Transportation Dollars (FY 1996 and FY 1997)

Mn/DOT directly controlled only \$1.027 billion in FY 1996 and \$1.156 billion in FY 1997 of total State Transportation Funds.

	FY 1996		FY 1997	
Total Transportation Funds	\$ 1.609	Billion	\$ 1.777	Billion
LESS:				
Dept. of Public Safety	\$ 78	Million	\$ 84	Million
Dept of Natural Resources	11	Million	12	Million
Other Departments	4	Million	5	Million
Refunds and Credits	31	Million	32	Million
Federal Highway Aid to Local Governments	56	Million	71	Million
Municipal Road Dedication	93	Million	96	Million
County Road Dedication	308	Million	321	Million
Total Available to Mn/DOT	\$ 1.027	Billion	\$ 1.156	Billion

#### Mn/DOT Annual Expenditures (FY 1996 and FY 1997)

	FY 1996	FY 1997 (\$ in Millions)
Total Dollars Available to Mn/DOT	\$1,027	\$ 1,156
State Construction Program	388	429
Construction Engineering	55	62
Design Engineering	41	62
Maintenance and Customer Support	270	332
Aeronautics, Greater MN Transit And Other Spending	92	83
Carryforward	179	188

## Mn/DOT Accomplishments

The Minnesota Department of Transportation has changed and improved dramatically since 1991. A \$1 billion organization, Mn/DOT has saved taxpayers millions of dollars by becoming measurably more efficient in its expenditure of taxpayer dollars and more consistent and reliable in the delivery of transportation projects and services.

To achieve these outcomes, Mn/DOT has flattened its management structure, decentralized decision making, increased its focus on quality improvement and customer service, increased technological research and implementation, increased its focus on diversity issues, and dramatically increased its commitment to long range strategic planning.

Clearly, Mn/DOT is a better, more efficient and effective agency today than it was eight years ago.

#### **Guiding Vision**

In May 1992, Commissioner Denn issued his "Philosophy, Goals and Visions for Mn/DOT," which have served as the guiding principles in pursuing change at Mn/DOT:

- Strengthen strategic thinking capabilities with particular emphasis on Continuous Quality Improvement (CQI), learning organization concepts and entrepreneurship.
   The end goal -- effective customer service.
- Be multimodal and intermodal in our thinking and actions.
- Ensure an institutional focus and commitment to innovation and the advancement and utilization of technology.
- Obtain adequate transportation funding.

- Be effective stewards of our resources.
- Develop Mn/DOT's human resource, both for the good of the individual employee and for the good of the organization.
- Value diversity. Externally expand the labor pool of qualified people to join Mn/DOT at all levels. Internally - provide a culture that is free from all forms of harassment, that recognizes and values diversity, and that celebrates that diversity.

From these principles have grown the significant initiatives, changes and accomplishments that have resulted in an improved Mn/DOT. For example, through office consolidations and other resource redirection, the following Mn/DOT offices have been created to provide focus to these principles.

- Quality Providing assistance and training to the organization in pursuing continuous quality improvement efforts.
- <u>Contract Management</u> Assisting and training Mn/DOT employees in drafting and reviewing state contracts and in state contracting processes and procedures.
- <u>Strategic Initiatives</u> Guiding the agencies long range strategic planning efforts.
- Research Administration Coordinating Mn/DOT's transportation research activities, especially partnerships with the University of Minnesota's Center for Transportation Studies.
- Advanced Transportation Systems Guiding Mn/DOT's activities in the international arena of advanced traffic management and traveler information technologies, including the state's Intelligent Transportation System (ITS) program, Minnesota Guidestar, and the Sustainable Transportation Initiatives group. Since 1991, Minnesota Guidestar has attracted more than \$13.5 million in private sector investments, utilized \$50 million in federal funds, and initiated more than 70 ITS research, test and deployment projects.

- Management Data Services Focused on the development and implementation of quantifiable agency performance measures and economic models for cost/benefit analysis of transportation decisions.
- <u>Information Resource Management</u> Providing decentralized information services, while increasing control and accountability for managing information as a shared, statewide resource.
- Alternative Transportation Financing Created to focus on the state's examination
  and possible implementation of toll road
  financing, congestion pricing, state
  infrastructure banks and other alternative
  forms of transportation financing.

#### **Agency Accomplishments**

The focus and direction provided by Commissioner Denn's May 1992 "Philosophy, Goals and Visions for Mn/DOT," has resulted in the following specific agency accomplishments.

#### Financial/Budget Management

- Achieving Greater Efficiencies and Performance: In 1992, state projections showed an alarming decline in funds expected to be available for the state highway construction program through the year 2000 without a state funding increase. Less than \$300 million was projected to be available for the construction program in FY 97, with funding continuing to fall in subsequent years.
  - Today, however, due to cost savings within Mn/DOT, as well as slightly higher state and federal revenues, nearly \$500 million will be available for the construction program in FY 2000.
- <u>Budget Honesty</u>: In the past, the development of the state highway construction program was based on unrealistic funding expectations. The result

- was overstated programs followed by painful project deferrals. While this practice of "over promising" may have produced short term political advantages for previous administrations, it was a poor business practice.
- In 1993 this flawed practice was corrected. Funding estimates for the state construction program are now more conservative, based on expected revenues from existing levels of state and federal transportation taxes. Mn/DOT now has a high degree of confidence in our ability to build the projects we promise to build -- on schedule and within budget.
- Transit Funding & Service Increased: State financial support for transit services in greater Minnesota has increased significantly during the Carlson Administration. In the 1990-91 biennium state funding for greater Minnesota transit was \$16 million; for the 1998-99 biennium funding will be \$27 million. In 1990, county-wide transit service was available in 37 greater Minnesota counties; today 53 counties have county-wide service.

#### Strategic Planning/Improving Management Practices

• Statewide Transportation Plan: Mn/DOT completed the state's first-ever Statewide Transportation Plan in 1996. The plan describes Minnesota's transportation systems, outlines the trends impacting transportation facilities and services, establishes an investment framework, and list the challenges facing the state's transportation system.

Area Transportation Partnerships (ATPs): In implementing the 1991 federal Intermodal Surface Transportation Efficiency Act (ISTEA), Mn/DOT created Area Transportation Partnerships (ATPs), bringing important transportation discussions and decisions closer to the citizens and communities we serve. ATPs are made up

- of transportation officials, local government leaders and taxpaying citizens, who review regional transportation needs and recommend priorities for transportation expenditures. Mn/DOT's ATP investment process is considered a national model of decentralized local input and involvement in transportation investment decision making.
- Building Partnerships: Mn/DOT is a leader in promoting intergovernmental and publicprivate partnerships for the delivery of government services. In an 1994 news conference held by Commissioner Denn and Governor Carlson, Mn/DOT released its first "Partnership Inventory," a catalog of 185 formal and informal Mn/DOT partnerships. The "Partnership Inventory" was updated in March 1996.
- Groundbreaking Code of Ethics: In June 1994, Mn/DOT developed an agency-specific "Code of Ethics," one of only a few such ethical guidelines in state government. The release of Mn/DOT's code generated very positive press coverage.

#### **Promoting Diversity**

Commissioner Denn is a visible leader in promoting diversity within Mn/DOT's work force and economic opportunity for minority owned and disadvantaged businesses. In 1993, Commissioner Denn received the President's Award from the National Association of Minority Contractors (NAMC) and the NAMC Foundation of Minnesota for his outstanding and ongoing efforts on behalf of minority contractors.

• <u>SEEDS Program</u>: Mn/DOT's student worker employment program for minority and economically disadvantaged students began in 1993. Approximately 150 students have participated in the program. Twenty-six former SEEDS students have been hired by Mn/DOT and other state agencies after completing their education and training.

- Mn/DOT's Work Force More Diverse:

  Targeted recruitment and hiring has resulted in some changes in the complexion of the work force at Mn/DOT. Since 1991, the total number of employees has remained constant, yet the number of women employed increased by 26.5 percent and the number of minorities by 40.1.
- National TRAC Program: Mn/DOT is a leader in the national Transportation Civil Engineering (TRAC) program, which is an innovative math and science program designed to interest a diverse pool of middle and high school students in a career in transportation. As of May 1997, Minnesota has the TRAC program in 60 schools throughout the state.

#### **Transportation Technology and Research**

- Minnesota Road Research Project (Mn/ROAD): The world's largest and most technologically advanced pavement research facility, Mn/ROAD, officially opened in August 1994. Located along I-94 near Monticello, Mn/ROAD uses more than 4,500 in-road sensors to measure the strain and pressure of traffic and weather on a variety of pavements and roadway designs. Mn/ROAD generates 30 megabytes of data daily for use by government, industry and academic researchers. Mn/ROAD is the principal focus in Mn/DOT expanding its international research partnerships, and is a major element in establishing Minnesota as an international leader in transportation research.
- Orion Project (ITS): Orion is one step towards the implementation of Intelligent Transportation Systems (ITS) projects and technologies in the areas of traffic and incident management, transit and dissemination of transportation information. Initiated in 1996, Orion features include: new arterial management strategies, integrated communications systems, mass

transit innovations, computer aided 911 service and an advanced travel information system. The focus of *Orion* is in the Twin Cities, with the goal being to have *Orion* components installed and running by the end of 1998.

#### **Major Transportation Projects & Improvements**

- Traffic Management in the Twin Cities: Mn/DOT has made significant progress in traffic management and congestion relief efforts since 1991. Traffic management systems have been applied to 120 additional metro freeway miles; 240 ramp meters have been added along with 120 additional traffic monitoring video cameras; 50 changeable message signs have been added to the system; High Occupancy Vehicle (HOV) systems were opened on I-394 and I-35W; real-time traffic information was added to Mn/DOT's web page; six Team Transit projects were completed allowing buses to use freeway shoulders to bypass congestion. Research shows that more than 1,200 crashes are being prevented each year on "managed" freeways, while crashes have increased on "un-managed" freeways.
- Significant Projects: In recent years, Mn/DOT has enjoyed the successful completion of many significant projects: the Bloomington Ferry Bridge, I-394, the I-94 Hudson Bridge, the I-94 Dartmouth Bridge, the TH 61 tunnels in Northeastern Minnesota, the TH 15 "Bridge of Hope," and many others.
- "Pontis" Bridge Management System:
   Mn/DOT has helped develop and implement
   the Pontis Bridge Management System that
   quantifies statewide bridge needs and
   optimizes the expenditure of resources for
   bridge activities.

#### **Awards**

Mn/DOT has received many state and national awards since 1991.

- <u>Diversity</u>: In 1993, Commissioner Denn received the President's Award from the National Association of Minority Contractors (NAMC) and the NAMC Foundation of Minnesota for his outstanding and ongoing efforts on behalf of minority contractors.
- Environmental Protection/Enhancement: Mn/DOT has been awarded numerous national, state and local honors in such areas as roadside landscaping, environmental partnerships, wildflower routes, hazardous waste management, biotechnology, erosion control, noise abatement, historical preservation, and community enhancement. In 1992, Mn/DOT's Community Roadside Enhancement Partnership program was awarded a Certificate of Environmental Achievement by Renew America.
- Engineering and Design Excellence: Mn/DOT has been recognized by the Federal Highway Administration (FHWA) for excellence in planning, design and development of safe, functional and environmentally sensitive highways. Since 1991, Mn/DOT has received 11 national FHWA "Excellence in Highway Design" biennial awards. In 1992, the Lafayette Bluff Tunnel on Highway 61 was selected as one of the "Seven Wonders of Engineering In Minnesota" by the Minnesota Society of Professional Engineers. I-394 earned similar recognition in 1994. In 1995, Mn/DOT and Buffalo Bituminous, Inc., earned awards of excellence from the national Associated Builders and Contractors for construction of the Minnesota Road Research Project (Mn/ROAD). In 1996, rehabilitation of the Stone Arch Bridge in Minneapolis received a Merit Award in Design from the National Endowment for the Arts and the U.S. Department of Transportation.

## **Key Mn/DOT Issues and Projects**

At any given time, Mn/DOT is likely managing several high profile transportation issues and projects important to Minnesota. Below is a brief overview of some of the issues and projects facing Mn/DOT today. Information on these items will be provided in greater detail as the Commissioner-designate meets with Mn/DOT staff in the course of transition.

## Long Range Transportation Policy Issues Facing Minnesota

Below is just a sampling of the strategic transportation policy issues Minnesota must address in the coming months and years.

- Transportation Resources: Transportation funding needs will continue to outpace financial resources well into the future. The system is aging faster, and user demands are growing faster, than the growth in available resources. For example:
  - \* \$10 billion in transportation needs face the Twin Cities metro area over the next 20 years, yet only \$3.5 billion in resources has been identified.
  - \* Bridges throughout the state need \$1.3 billion in investment over 10 years for repairs and replacement, representing an approximately 70% increase over existing investment levels. Mn/DOT is closely monitoring an emerging issue of "fracture critical" bridges throughout the state. Bridges showing "fracture critical" problems need to be repaired or replaced more quickly than would normally be the case.
  - \* The state Legislature has yet to identify a

- solution to the funding budget-busting "Mega" transportation projects, e.g., rebuilding of I-35W or I-494.
- \* Congestion is growing at a rapid rate, both in the metropolitan area and in economic centers around the state. Impact is measurable both in impacts on highway system and as a quality-of-life concern.
- New transportation funding mechanisms must be explored. Present system of state gasoline taxes, vehicle license fees and federal funds likely will not adequately address the financial needs facing the state's transportation system in the future, and will not truly reflect a "user fee" based system. New ways not just more ways -- to raise transportation \$\$\$\$ must be explored.
- Planning and completion time for major projects is increasing. Conflict between need to improve transportation infrastructure vs. anti-transportation, anti-growth advocates is escalating. Taxpayers and travelers are paying an ever-increasing cost for construction and travel-time delays. This is unacceptable and costly to the public and to local communities.
- What is the role of transit -- buses, LRT, commuter rail -- in the Twin Cities transportation future? Will the state commit to several billion dollars of investment to build a metro-wide LRT system, or will other transit options and mixes be explored? Who will pay the operating costs of expanded transit service, especially high-end, high-cost service like LRT?
- Implementation of New Federal
  Transportation Program: Earlier this year,
  Congress approved a new six-year federal
  transportation program. The federal
  program will provide Minnesota a significant
  boost in federal funds available for road
  construction, transit, enhancements and
  other transportation projects. The key
  implementation issue for Mn/DOT is the
  challenge of readying projects for
  construction to take full advantage of the

funding available. Agency staffing levels and worker shortages in technical and engineering disciplines are a serious concerns.

#### **Specific Projects of Immediate Interest**

Hiawatha Ave. Reconstruction & LRT:
 Planning and design for the rebuilding and rerouting the Hiawatha Ave./Trunk Highway 55 corridor between downtown Minneapolis and the Twin Cities airport is proceeding on schedule.

Project involves reconstruction of Hiawatha Ave./Trunk Highway 55 from Interstate 94 to Trunk Highway 62 (Crosstown) to fourlane divided boulevard design; addition of Light Rail Transit (LRT) from downtown Minneapolis to the MSP Airport, Mall of America and areas of Bloomington. The project also includes new bikeways and pedestrian facilities.

The first segment of road reconstruction between 32nd St. and 46th St. was completed in 1990. The final segment from 46th St. to Highway 62 (Crosstown) is scheduled to begin in 1999 and completed in 2001 or 2002. Pending federal approval and funding, construction of LRT in the corridor is expected to begin in 2000 and be completed in 2003.

Estimated total cost of road reconstruction = \$100 million. Current estimate of LRT project = \$400 million for Hiawatha Corridor segment, \$44 million for additional segments in downtown Minneapolis and Bloomington.

The project is supported by: City of Minneapolis, Minneapolis Park and Recreation Board, Hennepin County, Metropolitan Council, state Legislature, Mn/DOT, local, state and federal elected officials, Hiawatha Ave. Citizen Task Force. This project has been the target of protest by the organization Earth First! since early August. Protest activities continue, but have not impacted project planning or scheduling.

• St. Croix River Bridge: Recently, a citizen/community/government agency task force, led by former Mn/DOT Commissioner Dick Braun, put forth a compromise proposal for construction of a new bridge across the St. Croix River connecting Minnesota and Wisconsin in the vicinity of Stillwater, Minnesota. (In 1996, National Park Service objections stopped a previously proposed new bridge just months before construction was set to begin.)

A major issue yet to be resolved is what will happen - removal or preservation - to the old bridge in the area, the historic Stillwater Lift Bridge. Design and construction of the compromise new bridge will not go forward until the issue of the old bridge is resolved.

The responsible state and federal agencies, however, are devising a work plan to move the compromise proposal through the applicable state and federal approval processes. At this time, construction of the compromise proposal is likely still five to seven years away.

I-35W/Crosstown: The I-35W corridor is heavily congested, has high accident areas and poor geometrics in several locations. The unmet deficiencies in the corridor include road condition, safety, transit and capacity. Proposed improvements include reconstruction of the I-35W/Crosstown 62 commons section, and addition of a High Occupancy Vehicle (HOV) lane between 46th St. in Minneapolis and I-494 in Richfield/Bloomington. Construction of the three-phase project is scheduled to begin in 1999 and be completed by fall of 2003. Cost of the project is estimated at \$81.5 million.

- bridge over the Mississippi River has reached the end of its useful life. The bridge is also a "fracture critical" bridge, making it a priority for replacement. Some controversy has existed due to various opinions on the size and design of the replacement bridge. Public information meetings and other forums were completed by August 1998. A consensus alternative seems to have emerged. City approvals are currently being sought. Construction is expected to begin in 2001 and completed in 2003.
- Other Metro Road Projects with Significant Impacts: The eastern portion of the new TH 610 corridor in Brooklyn Park is under construction. Additional projects will follow through Osseo and Maple Grove to eventually connect to I-94 as funding is identified.

The TH 212 corridor in Eden Prairie is under construction and will continue west through Chanhassen and Chaska as funding is identified.

- Rural Road Projects: There are many rural highway projects of significance either in construction or planning stages throughout the state. Those projects will be thoroughly reviewed with Transportation District management during the course of transition meetings.
- "Connecting Minnesota" Fiber Optic Project: Ground was broken this fall on the Connecting Minnesota project. Announced in January 1998, Connecting Minnesota is a plan to build a statewide fiber-optic "backbone" for high-speed telecommunications throughout Greater Minnesota and in the Twin Cities metropolitan area. Connecting Minnesota is the result of a landmark partnership agreement between private sector developers and state government. In exchange for one-

time access to state freeway right-of-way, the developer will finance, build and maintain a fiber-optic backbone along some 2,000 miles of freeway and state highway, connecting rural Minnesota to more urbanized areas of the state. Minnesota schools, libraries and state and local governments will receive for free 20 percent of the network capacity for telecommunications use.

Some telecommunications interests have objected to this project and have taken their concerns to court. Mn/DOT and the state fully expect to prevail in this dispute and the project is expected to be completed in three years.

• Commuter Rail Study: Mn/DOT is currently in Phase II of a two-phase study examining the feasibility of commuter rail passenger service in the Twin Cities metro area. The primary goal of this study is to determine if commuter rail can provide a viable transportation option for the Twin Cities. Seven potential commuter rail corridors were identified in Phase I. Phase II will determine economic, financial, social and environmental effects, infrastructure needs, transportation impacts and a potential operating plan for rail service. A final report is due to the Minnesota Legislature February 1, 1999.

## Key Mn/DOT Constituencies

The constituencies important to Mn/DOT are many. Mn/DOT deals with or influences many area of transportation, and thus the welfare of the state's citizens, economy and quality of life. Constituencies are best described by interest areas, rather than by specific organizations or individuals.

#### **Key Constituent Areas**

- Citizens: Interested in (supportive, opposed or neutral) proposed transportation projects, safety, transportation taxes, maintenance of roads, transportation information, etc.
   Mn/DOT's largest constituency.
- Mn/DOT Employees: Mn/DOT's strongest asset is its highly skilled and professional work force throughout the state.
- Local Governments and Locally Elected
  Officials (includes legislators): Partners in
  examining, planning and pursuing large and
  small transportation projects. Often share
  duel decision and financial responsibility for
  transportation projects. Key here are
  relationships with the professional engineers
  and planners at municipal and county levels.
- Construction and Consulting Interests: Mn/DOT's principal responsibility is the building and maintenance of the state highway system. Much of that responsibility is fulfilled in partnership with the state's private sector construction and engineering consulting industries. Key groups are the Minnesota Transportation Alliance, Minnesota Highway Construction Industry Council, Consulting Engineers Council of Minnesota and groups representing various segments of the road construction industry.
- Environmental Interest Groups:
   Environmental protection and enhancement are strong principals at Mn/DOT. The

- agency works closely with a variety of environmental organizations in pursuit of these goals.
- Specific Transportation Areas: In addition to the construction industry, Mn/DOT maintains close relationships with organizations responsible for planning, implementing and advocating services in the areas of aeronautics, rail, transit and waterways.

# **Key Legislators and Legislative Committees** (1998 Session)

#### **State Senate**

#### **Senate Transportation Committee**

- Chair, Senator Carol Flynn (DFL-Mpls.)
- Vice Chair, Senator Steve Murphy (DFL-Red Wing)
- Ranking Minority Member, Senator Dick Day (R-Owatonna)
- · Committee Administrator, Gary Pagel

#### **Transportation Budget Division**

- Chair, Janet Johnson (DFL-North Branch)
- Division Administrator, Margaret Donahoe

#### **House of Representatives**

#### House Transportation & Transit Committee

- Chair, Rep. Jean Wagenius (DFL-Mpls.)
- Vice Chair, Rep. Al Juhnke (DFL-Willmar)
- Ranking Minority Member, Rep. Tom Workman (R-Chanhassen)
- Committee Administrator, Andre Colaiace

#### **Transportation & Transit Finance Division**

- Chair, Rep. Bernie Lieder (DFL-Crookston)
- Vice Chair, Rep. Mike Mahon (DFL-Bloomington)
- Lead Minority Member, Rep. Carol Molnau (R-Chaska)

#### **Governmental Operations Committee**

- Chair, Rep. Phyllis Kahn (DFL-Mpls.)
- Vice Chair, Rep. Bill Hilty (DFL-Finlayson)
- Ranking Minority Member, Rep. Kevin Knight (R-Bloomington)

### Early History of Transportation in Minnesota

Minnesota's lakes and rivers provided the first means of transportation for settlers and for trading goods. French fur traders who followed the routes used by American Indians and who ventured across the Great Lakes in birch bark canoes opened Minnesota's land area by 1650 to the western world. The French voyagers Marquette and Jolliet explored the Mississippi River from its headwaters at Lake Itasca to its confluence with the Arkansas River.

In the middle of the 18th century, Dakota Indians brought the first horses to the upper plains for use as beasts of burden and a means of transportation. The early 1800s saw oxcarts from the Red River Valley carrying furs and buffalo hides along a system of roads from the settlements around Pembina to St. Paul. The Red River Oxcart Trail paralleled the Mississippi River from St. Paul to Sauk Rapids. It then forked into trails leading west and north. The journey to Pembina took nearly a month, and the trail carried 500-600 carts a year during the 1850s. The earliest road was a trail used before 1816 by British soldiers between Grand Portage and Fort Charlotte on the Pigeon River.

The arrival in 1823 of the Virginia--the first steamboat to visit Fort Snelling--proved the upper Mississippi River could be navigated. It took 20 days, however, to travel from St. Louis due to channel conditions. Cargoes carried by the early steamboats consisted almost entirely of furs and military supplies.

When population centers along the rivers--such as St. Paul and Minneapolis--began to grow in the mid-1800s, cargoes expanded to include a wide variety of commodities as well as passengers. Individual entrepreneurs who were

in strong competition with one another operated the steamboats. Their operations, however, were generally unorganized and lacked scheduled arrival or departure times.

That changed in 1847 when the Minnesota Packet Company was created to help organize the industry by assigning steamboats to scheduled stops and time tables, especially on the passenger runs. Having begun regular service in March 1849, the steamboats for that first season brought news from Washington, D.C., of the creation of the Minnesota Territory.

Responding to requests from early Minnesota leaders, Congress appropriated \$40,000 in 1850 for a military road system. In 1851, the Minnesota Territorial Legislature required all healthy men from 21 to 50 years of age to work three days a year building roads.

Also in 1851, the U.S. Corps of Engineers responded to the need for safer navigation by initiating a major study of flood control and navigation on the Mississippi River. This study provided the basis for the 1878 Rivers and Harbors Act that authorized construction of a 4.5-foot deep channel from St. Louis to St. Paul. The project included the construction of dams to provide a more stable level of water in the channel in order to facilitate steamboat movement. The first bridge over the Mississippi River opened at St. Anthony Falls in 1855.

Minnesota railroad history, on the other hand, began when the Territorial Legislature chartered four land-grant railroad companies. By 1857, 27 charters had been issued. Because of financial difficulties, none of the building time-limits were met, and the Territory foreclosed, becoming the owner of all railroad properties.

The steamboat Alhambra delivered the state's first steam locomotive, the William Crooks, on Sept. 9, 1861. Five years later, the state was linked by rail to Chicago, Ill. On Feb. 15, 1870, the Northern Pacific Railway broke ground at

Thomson's Junction, west of Duluth. Fourteen years later the Northern Pacific route was completed from St. Paul to Portland, Ore., and to Tacoma, Wash. But by far the most celebrated railroader in Minnesota was the "Empire Builder," James J. Hill, founder of the Great Northern Railroad. In 1893, the Great Northern Railroad linked St. Paul to Seattle, Wash., with 1,816 miles of track.

By 1900, Minnesota railroads provided service on several routes to Chicago, two routes to the Pacific and routes to such points as Kansas City, Omaha, Los Angeles, Sault St. Marie, St. Louis and Winnipeg. Grain continued to be the staple commodity, but there was also important tonnage in lumber and ore. Over the years, manufacturing also increased its contribution of goods to state commerce.

The Minnesota rail network began as 10 miles in 1862 and reached 5,409.11 miles in 1890. By 1929, the number of miles of track had peaked at about 9,500 miles. From this peak, rail mileage declined during the years of the Great Depression as a result of competition from motor carriers, depletion of forests and bankruptcy of many railroad companies.

Automobiles were already in Minnesota by 1900, but had less than 75 miles of paved roads to use. The horse remained the people's engine. Steamdriven paddle wheelers still plied the Mississippi, trains had been operating for only 40 years, and electric trolley cars were introduced just nine years earlier. With mass production techniques developing rapidly, the Ford Motor Company opened it's Minneapolis plant in 1912 to build 10 automobiles a day.

In 1921, the Minnesota Department of Highways began contracting to build roads following the adoption of the trunk highway plan and the introduction of taxation of motor vehicles for trunk highway purposes. By 1925, more than 500,000 vehicles were registered in Minnesota, more than 15 million passengers traveled its

roads by bus, and comfortable, fast, trains traversed the state.

