OLA
OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA

EVALUATION REPORT

State Highways and Bridges

FEBRUARY 2008

PROGRAM EVALUATION DIVISION
Centennial Building – Suite 140
658 Cedar Street – St. Paul, MN 55155
Telephone: 651-296-4708 • Fax: 651-296-4712
E-mail: auditor@state.mn.us • Web Site: http://www.auditor.leg.state.mn.us
Through Minnesota Relay: 1-800-627-3529 or 7-1-1

Program Evaluation Division

The Program Evaluation Division was created within the Office of the Legislative Auditor (OLA) in 1975. The division's mission, as set forth in law, is to determine the degree to which state agencies and programs are accomplishing their goals and objectives and utilizing resources efficiently.

Topics for evaluations are approved by the Legislative Audit Commission (LAC), which has equal representation from the House and Senate and the two major political parties. However, evaluations by the office are independently researched by the Legislative Auditor's professional staff, and reports are issued without prior review by the commission or any other legislators. Findings, conclusions, and recommendations do not necessarily reflect the views of the LAC or any of its members.

A list of recent evaluations is on the last page of this report. A more complete list is available at OLA's web site (www.auditor.leg.state.mn.us), as are copies of evaluation reports.

The Office of the Legislative Auditor also includes a Financial Audit Division, which annually conducts an audit of the state's financial statements, an audit of federal funds administered by the state, and approximately 40 audits of individual state agencies, boards, and commissions. The division also investigates allegations of improper actions by state officials and employees.

Evaluation Staff

James Nobles, *Legislative Auditor*

Joel Alter
Valerie Bombach
David Chein
Christina Connelly
Jody Hauer
Daniel Jacobson
David Kirchner
Carrie Meyerhoff
Deborah Parker Junod
Katie Piehl
Judith Randall
Jo Vos
John Yunker

To obtain a copy of this document in an accessible format (electronic ASCII text, Braille, large print, or audio) please call 651-296-4708. People with hearing or speech disabilities may call us through Minnesota Relay by dialing 7-1-1 or 1-800-627-3529.

All OLA reports are available at our web site:
http://www.auditor.leg.state.mn.us

If you have comments about our work, or you want to suggest an audit, investigation, or evaluation, please contact us at 651-296-4708 or by e-mail at auditor@state.mn.us


Printed on Recycled Paper

OLA
OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA • James Nobles, Legislative Auditor

February 2008

Members of the Legislative Audit Commission:

Shortly after the I-35W bridge collapsed in Minneapolis on August 1, 2007, you added state highways and bridges to OLA's evaluation work agenda. You specifically asked for an update to our 1997 report, *Highway Spending*, which forecast future problems in the state's ability to maintain its highways and bridges.

Ten years later, those problems have arrived. According to Minnesota Department of Transportation (MnDOT) data, state highway surfaces have deteriorated, construction costs have escalated rapidly, and the department will not be able to meet its core goals without additional funding. We have no basis to dispute the grim picture these data present.

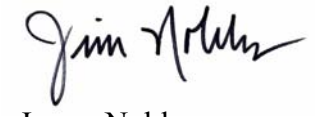
In recent years, policy makers have tried to address transportation's financial problem by borrowing money for highway expansion projects. While some borrowing and some expansion projects may be appropriate, this approach does not resolve the long-term need for permanent and stable funding to maintain and preserve existing highways and bridges.

Recent debates over how to finance Minnesota's transportation needs have become increasingly divisive and show there is no easy solution. Yet, we remain hopeful that an honest assessment of the challenges and choices Minnesota faces will help policy makers resolve their differences and reach agreement on a transportation funding package during the 2008 legislative session.

I want to acknowledge and thank officials and staff at MnDOT for their assistance with our evaluation. Despite the extraordinary strain and difficulty of the past several months, they were cooperative and prompt in response to requests for data, documents, and interviews. And in those interviews, officials and staff throughout MnDOT were open, insightful, and forthcoming.

I also want to acknowledge and thank the staff who conducted our evaluation—Deb Junod (project manager) and Carrie Meyerhoff. These past months have been difficult for them as well. They tackled this complex and controversial topic in the midst of other assignments and with a short timeline. This report is the result of their long hours and hard work.

Sincerely,



James Nobles
Legislative Auditor

Room 140 Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155-1603 • Tel: 651-296-4708 • Fax: 651-296-4712
E-mail: auditor@state.mn.us • Web Site: www.auditor.leg.state.mn.us • Through Minnesota Relay: 1-800-627-3529 or 7-1-1

Table of Contents

List of Tables and Figures

1 Background

SUMMARY

With over 135,000 miles of roads and 19,000 bridges and culverts, Minnesota has one of the largest public road systems in the country. Jurisdiction for building and maintaining this system is shared by the State of Minnesota, counties, cities, and townships. The roads and bridges owned by the state are referred to as the state trunk highway system. Although it includes only 9 percent of road miles, the state trunk highway system carries close to 60 percent of Minnesota's traffic. Funding for road and bridge construction, operation, and maintenance comes from a combination of state taxes, federal aid, and—for local roads and bridges—property taxes. The Minnesota Department of Transportation administers transportation programs and manages construction, operation, and maintenance of the state trunk highway system through its eight district offices.

In a 1997 report, *Highway Spending*, the Office of the Legislative Auditor said (1) the state had a backlog of structurally deficient bridges and an emerging problem with steel fatigue in bridges,[1] (2) state trunk highway pavements faced increasing resurfacing needs, and (3) the Minnesota Department of Transportation (MnDOT) probably did not perform enough preventive maintenance. In addition to identifying these growing preservation needs and presenting trend data on trunk highway funding and spending, the report found that MnDOT did not provide policymakers with adequate information on future pavement and bridge needs and the funding that would be required to meet them.

Following the collapse of the Interstate 35W bridge in Minneapolis on August 1, 2007, the Legislative Audit Commission directed our office to update the 1997 report, with a particular focus on the state's efforts to ensure the safety and preservation of Minnesota's bridges. As background for the evaluation, this chapter addresses the following questions:

- **How big is Minnesota's road and bridge system, and how is responsibility for it divided between the state and local jurisdictions?**
- **How are road and bridge construction and maintenance funded in Minnesota?**
- **How is the Minnesota Department of Transportation organized and staffed to manage state highways and bridges?**

[1] A bridge is classified as structurally deficient if any of its major components—deck, superstructure, or substructure—has received a "poor" condition rating under national bridge inspection standards or if the road approaches regularly overtop due to flooding. Classification as structurally deficient does not mean that the bridge is unsafe.

2 Trends

SUMMARY

When adjusted for inflation, Minnesota motor vehicle and fuel tax receipts have declined since fiscal year 2003 and will likely continue to do so through fiscal year 2011. Also since 2003, the Minnesota Department of Transportation (MnDOT) increased the proportion of state trunk highway funds spent on system preservation and construction and decreased the proportion spent on operations, research, and support. MnDOT staffing has declined as well. Since 2002, the condition of trunk highway pavements has generally deteriorated, and road conditions have not met MnDOT performance targets. The department predicts that by 2011, there will be twice as many road miles in poor condition than there were in 2007. In contrast, the overall structural condition of state trunk highway bridges improved between 2002 and 2006. Bridge replacement and preservation demands will increase in the next 20 years.

Construction of new roads and bridges to improve mobility and safety is an important public objective, but preservation of the existing infrastructure is essential. Accordingly, this chapter focuses on the condition of state trunk highway roads and bridges over time and how Minnesota has allocated resources to construct and maintain them. Specifically, we address the following questions:

- **How have state trunk highway resources and expenditures changed over time, and what factors influenced these trends?**

- **How has the condition of trunk highway pavements and bridges changed over time, and what factors influenced these trends?**

To answer these questions, we obtained and analyzed historical data on state motor vehicle and fuel taxes receipts, State Trunk Highway Fund revenues and expenditures, and Minnesota Department of Transportation (MnDOT) staff levels. To understand changes in the condition of trunk highway pavements, we obtained and analyzed MnDOT data for fiscal years 2002 to 2007 on two indicators of road condition: pavement smoothness and remaining service life. Comparable data for prior fiscal years were not readily available. To understand changes in the condition of Minnesota trunk highway bridges, we obtained bridge inspection data for 2002 to 2006 and analyzed it using various state and federal measures of structural condition. Comparable data for 2001 and earlier were not readily available. For both state trunk highway roads and bridges, we reviewed MnDOT performance reports, planning documents, and manuals. In addition, we interviewed officials from MnDOT's Finance Division, Bridge Office, Office of Materials (responsible for collection and analysis of data on road condition), Office of Investment Management, and four district offices.