2003 DRAFTING REQUEST

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Sen.Cowles@legis.state.wi.us

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Gary, Aaron

From:

Stuart, Todd

Sent:

Tuesday, January 20, 2004 3:00 PM

To:

Gary, Aaron

Subject:

Cowles drafting request re: DOT major highway L.A.B. recommendations

Aaron:

Senator Cowles would like to turn the recommendations made by the Legislative Audit Burea into a bill. Here is a link to the report and recommendations:

http://www.legis.state.wi.us/lab/reports/03-13full.pdf

Here is a copy of a draft release which outlines our general idea:

Major Highway Reform 1-04.doc

Please call with questions-

Todd C. Stuart
Office of State Senator Rob Cowles
608.266.0484 Office
608.267.0304 Fax
todd.stuart@legis.state.wi.us



MEMBER: Higher Education and Tourism Joint Committee on Audit State Building Commission

NEWS RELEASE FOR IMMEDIATE RELEASE January 24, 2004

For More Information Contact: Senator Cowles or Todd Stuart at 1-800-334-1465

Cowles to Introduce DOT Highway Costs Accountability Bill

Madison – Today State Senator Robert Cowles (R-Green Bay) announced he would introduce legislation that requires improved financial reporting for major highway projects. The proposed legislation is in response to developments in the last year and large future spending commitments. "I think we have a spending problem," Cowles said. "The Legislature has not been able to restrain itself with new road projects and there has been a serious lack of accountability."

The State Legislative Audit Bureau recently completed a study on the massive cost increases in road building projects. Costs associated with the state's major highway program have exceeded initial estimates by 69.5 percent in the past ten years to \$284.2 million. Seven projects were detailed, and final costs exceeded original estimates ranging from a 45.2 percent increase up to a 262.4 percent increase. Work on a stretch of Highway 41 increased 167 percent to \$41.9 million. "The major highways program needs some accountability to the taxpayer. We need to have more information and greater oversight."

The Legislative Audit Bureau made several recommendations to improve the program, including comprehensive and consistent cost information for road building projects. The bill adopts several of the Audit Bureau's recommendations:

- Develop comprehensive accounting for environmental expenditures. These costs include administrative, maintenance, right-of-way, real estate, engineering, contingency, plus home or business relocation costs.
- Mandate an annual report on complete expenditure information for all major highway projects to the Transportation Projects Commission and the Legislature.
- Consistently communicate changes in project design and scope, so that all parties understand when
 project of funding needs expand beyond initial proposals.
- Detail the amount and cost of all real estate the DOT purchases for major highway projects before recommendation to the Transportation Projects Commission.

This legislation is even more critical in light of developments in the last year and future commitments. The state is looking at billions in expenditures to rebuild the Marquette Interchange and the Southeastern Wisconsin freeway system over the next 20 years. The 2003-2005 state budget transferred \$675 million out of the road account into the general fund. The legislative audit bureau highlighted hundreds of millions in rising costs of the DOT. And finally, four executives were accused of rigging bids for state projects worth more than \$100 million earlier this month.

"These factors combined put enormous pressure on the transportation fund," said Cowles. "If we don't take steps to address this issue, we are either heading toward a huge increase in the gas tax or the majors program will be grinding to halt."

An Evaluation

Major Highway Program

Department of Transportation

LEGISLATIVE AUDIT BUREAU

The Bureau is a nonpartisan legislative service agency responsible for conducting financial and program evaluation audits of state agencies. The Bureau's purpose is to provide assurance to the Legislature that financial transactions and management decisions are made effectively, efficiently, and in compliance with state law and that state agencies carry out the policies of the Legislature and the Governor. Audit Bureau reports typically contain reviews of financial transactions, analyses of agency performance or public policy issues, conclusions regarding the causes of problems found, and recommendations for improvement.

Reports are submitted to the Joint Legislative Audit Committee and made available to other committees of the Legislature and to the public. The Audit Committee may arrange public hearings on the issues identified in a report and may introduce legislation in response to the audit recommendations. However, the findings, conclusions, and recommendations in the report are those of the Legislative Audit Bureau. For more information, write the Bureau at 22 E. Mifflin Street, Suite 500, Madison, WI 53703, call (608) 266-2818, or send e-mail to Leg.Audit.Info@legis.state.wi.us. Electronic copies of current reports are available on line at www.legis.state.wi.us/lab/windex.htm.

State Auditor - Janice Mueller

Audit Prepared by

Don Bezruki, Director and Contact Person Dean Swenson David Bajkiewicz Conor Smyth

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Appendices

Appendix 1—Statutorily Required Approval Process for Major Highway Projects Appendix 2—Time Line for the Highway 57 Green Bay to Dyckesville Project

Response

From the Department of Transportation

State of Wincommin \ LEGISLATIVE AUDIT BUREAU

JANICE MUELLER STATE AUDITOR

22 E. MIFFLIN ST., STE. 500 MADISON, WISCONSIN 53703 (608) 266-2818 FAX (608) 267-0410 Leg.Audit.Info@legis.state.wi.us

November 25, 2003

Senator Carol A. Roessler and Representative Suzanne Jeskewitz, Co-chairpersons Joint Legislative Audit Committee State Capitol Madison, Wisconsin 53702

Dear Senator Roessler and Representative Jeskewitz:

We have completed an evaluation of the Department of Transportation's (DOT's) major highway program, as requested by the Joint Legislative Audit Committee. In fiscal year (FY) 2002-03, DOT's total budget was \$2.4 billion; the major highway program's portion of the budget was \$241.6 million. In September 2003, 32 major highway projects were being planned or were under construction.

Major highway program funds can be used only for new construction projects that are specifically enumerated in statutes. To help determine the reasons for cost increases that occur between enumeration and completion, we reviewed seven current projects. We found that the estimated cost for each had increased by at least \$20.0 million since enumeration. The discretion DOT currently exercises in project selection, location, and design greatly affected these projects' costs.

We attempted to track the cost of complying with state and federal environmental laws, but the information DOT maintains on these expenditures is incomplete. DOT estimates that in FY 2001-02—the latest year for which data are available—these costs totaled \$29.1 million; however, contractors provided us with other examples of costs not included in DOT's estimates. We include a recommendation for improving DOT's monitoring of environmental expenditures.

We compared Wisconsin's transportation funding sources, spending, and highway conditions with other midwestern states'. Wisconsin is in the middle in state highway spending and conditions, but it relies on a narrower funding base and is increasingly using bonding for the highway program. As debt service increases, the amount of funds available to support future projects decreases. We list a number of challenges DOT and the Legislature will face as they seek to maintain the existing highways or expand the system to meet safety, economic development, and other needs. We also include a number of recommendations for improving DOT's estimating and cost-reporting processes.

We appreciate the courtesy and cooperation extended to us by DOT staff. The agency's response follows the appendices.

Respectfully submitted,

Spriee Muder

Janice Mueller State Auditor

JM/DB/ss

Report Highlights •

The cost of some major highway projects has increased considerably after enumeration.

Better financial record-keeping is needed for the major highway program.

> DOT's FY 2001-02 environmental expenditures were \$29.1 million.

The State's increasing reliance on bond proceeds to fund highway projects raises concerns.

Maintaining and expanding the State's highway system involves many challenges. The Department of Transportation (DOT) is responsible for building and maintaining Wisconsin's transportation infrastructure and, under the major highway program, constructs new or expanded state highways. The 15-member Transportation Projects Commission reviews DOT's proposals for major highway projects and recommends projects for enumeration by the Legislature and the Governor.

In fiscal year (FY) 2002-03, the major highway program's budget was \$241.6 million. In September 2003, 32 major highway projects were being planned or were under construction. However, in December 2002, DOT had indicated that four of these projects could not be enumerated because the program's increasing costs had reduced the amount of funding available for additional projects. Legislators raised concerns about this disclosure, as well as about the availability of funds to reconstruct the aging southeast Wisconsin freeway system and the extent to which bonds have been used to fund highway projects. Therefore, at the direction of the Joint Legislative Audit Committee, we evaluated:

- project selection, program expenditures, and cost increases related to the program;
- the effects of state and federal environmental laws on highway construction costs and practices;
- financing for transportation projects; and

 how Wisconsin's highways, transportation funding, and transportation spending compare to other midwestern states', and future financial demands on the Transportation Fund.

Project Cost Increases

DOT's expenditures for the major highway program increased 69.5 percent in the past ten years and totaled \$284.2 million in FY 2002-03. Construction contract costs, which accounted for nearly three-quarters of FY 2002-03 expenditures, increased 67.9 percent since FY 1993-94. In contrast, real estate expenditures nearly quadrupled, reaching \$43.8 million in FY 2002-03.

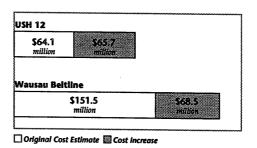
It will take more than 12 years, on average, to complete the projects that were underway in June 2003. DOT has considerable discretion in scheduling and designing major highway projects and may change a project's design to accommodate local officials, concerned citizens, and others the project will affect. Such changes can increase project costs significantly.

To help determine the reasons for cost increases in major highway projects, we reviewed seven current projects for which costs increased by at least \$20.0 million each. As shown in Figure 1, we found:

- The cost estimate for the United States Highway (USH) 12 (Sauk City to Middleton) project increased from \$64.1 million when it was enumerated in 1993 to \$129.8 million in June 2003. The increase is attributable to \$23.0 million in higher real estate costs that occurred because of project delays, and to upgrading a portion of the Middleton bypass.
- The cost estimate for the Interstate 39/USH 51 (Wausau beltline) project increased from \$151.5 million when it was enumerated in 2001 to \$220.0 million in June 2003. Approximately \$30.0 million of the increase resulted from a decision to upgrade the design speed of an interchange to 60 miles per hour, which resulted in five bridges being added to the project and several other bridges being lengthened to accommodate the higher traffic speed.

Figure 1

Project Cost Estimates



In 2002, DOT commissioned a value engineering study to identify potential cost savings on 21 major highway projects without altering their purpose or lowering safety, quality, or environmental standards. The study cost \$247,000.

In its November 2002 report, the engineering firm DOT hired identified \$382.0 million in potential savings. For example, it recommended that DOT construct two lanes, instead of four, on highways with low traffic volume. The firm also recommended scaling back several projects to their original planned scope. As of November 2003, DOT is continuing to analyze how much of the \$382.0 million in proposed savings measures it will implement.

Financial Reporting

DOT's financial record-keeping system makes it difficult to analyze expenditures for individual major highway projects. While DOT produces a monthly report that shows per project expenditures, the report excludes design and construction engineering expenditures, even though they can account for more than one-quarter of all project costs. Tracking changes to major highway projects is also made difficult by DOT's practice of separating portions of projects and combining them with other projects.

Environmental Expenditures

State and federal laws require DOT to avoid, minimize, and mitigate harmful environmental effects caused by transportation projects. DOT estimates its FY 2001-02 environmental expenditures for all state highway projects were \$29.1 million. These expenditures

include the costs of construction work, consultant contracts, payments to the Department of Natural Resources and the State Historical Society, and DOT's own staffing costs. Construction contractors believe their total costs to comply with all environmental regulations are significantly higher than DOT's estimates, but neither DOT nor the contractors provided supporting documentation to independently verify their estimates.

Revenue Sources

DOT is funded primarily by federal, state, and local revenue, as well as by proceeds from bonds. However, its largest revenue source is state fuel taxes. Transportation revenue for all DOT programs increased 49.6 percent from FY 1993-94 to FY 2002-03, when it totaled \$2.3 billion.

The major highway program has long been funded, in part, by transportation revenue bonds, which are repaid with proceeds from vehicle registration, title transfer, and related fees. The issuance of revenue bonds has allowed DOT to construct major highway projects without heavy reliance on other funding sources, but the resulting debt service leaves fewer funds available for projects. Debt service totaled \$101.1 million in FY 2002-03. The proportion of registration fee revenue required to cover debt service costs has been increasing and reached 27.4 percent in FY 2002-03. DOT estimates that annual debt service payments will exceed revenue bond proceeds from FY 2008-09 onward.

2003 Wisconsin Act 33, the 2003-05 Biennial Budget Act, expanded the issuance of bonds. It stipulated that \$565.5 million in general obligation bonds will be issued to fund, for the first time, rehabilitation projects and the southeast Wisconsin freeways program. Debt service costs for these bonds issued in the 2003-05 biennium will total \$767.6 million through FY 2024-25. As a result of recent legislation, the Transportation Fund will cover debt service costs during the 2003-05 biennium, but the General Fund will cover the costs thereafter.

Future Considerations

We compared Wisconsin's transportation funding sources, spending, and state highway conditions with other midwestern states'. Wisconsin ranks in the middle of seven midwestern states on state highway spending and conditions, but it relies on fewer sources of transportation revenue. It has the nation's highest gasoline tax rate, at 31.5 cents per gallon, but its \$55 annual vehicle

registration fee is among the lowest in the Midwest. In 2001, 79.9 percent of Wisconsin state highways had low levels of traffic congestion, and 57.5 percent had good or excellent pavement conditions.

The State's investments to date have resulted in a highway system that is generally in good condition, but policy-makers face many challenges as they seek to maintain existing highways and expand the system to meet future needs. These include:

- a \$5.2 billion shortfall identified in DOT's longrange state highway plan;
- reconstruction of the aging southeast Wisconsin freeway system, which has not yet been fully funded;
- increasing reliance on bonding;
- commitments to complete the 32 major highway projects currently enumerated; and
- the needs of other transportation programs that DOT manages.

Recommendations

Our recommendations address the need for DOT to:

- ☑ improve financial reporting by tracking:
 - the amount and cost of all real estate it purchases for each major highway project (p. 26); and
 - its environmental expenditures, and reporting its plan for doing so to the Joint Audit Committee by June 1, 2004 (p. 42);
- ☑ report to the Joint Audit Committee by February 2, 2004, on the amount of savings it expects to achieve as a result of its 2002 value engineering study (*p*. 31);
- ☑ report complete expenditure information for all major highway projects to the Transportation Projects Commission semiannually (*p.* 32);

8 * * * REPORT HIGHLIGHTS

- ☑ develop policies specifying that all project costs be included in the project cost estimates that are presented in the environmental documents it prepares (*p.* 43); and
- provide comprehensive and consistent project cost information, and communicate changes in the scope of projects (*p.* 70).

. . . .

Authorization of Major Highway Projects
Appropriation Trends
Southeast Wisconsin Freeway System

Introduction =

In FY 2002-03, the state highway program accounted for nearly one-half of DOT's \$2.4 billion budget. DOT plans, promotes, and provides financial support to road, air, water, and other transportation programs statewide. It is funded through the Transportation Fund, a segregated fund that receives revenue primarily from state, federal, and local sources and from bond proceeds. In addition to supporting the state highway program, DOT's FY 2002-03 budget of \$2.4 billion funded local transportation aids and capital assistance, operations, debt service, and other programs operated by DOT and other state agencies. However, the state highway program is DOT's largest, with a FY 2002-03 budget of \$1.2 billion.

The major highway program is one of five components of the state highway program.

The major highway program, which has been a focus of legislative attention and is the subject of our evaluation, is one of five components of the state highway program. The others are:

- the rehabilitation program, which funds resurfacing projects that maintain a smooth ride and protect the underlying base of state highways, as well as reconditioning projects that include both resurfacing and minor improvements, such as adding turn lanes at intersections, and reconstruction projects that involve rebuilding existing highways;
- the maintenance and traffic operations program, which funds repair work, traffic signals, pavement marking, and road signs;

- the southeast Wisconsin freeways program, which funds work that includes the Marquette Interchange; and
- administration.

Through the major highway program, DOT manages highway construction, reconstruction, and improvement projects that are specifically enumerated in statutes, cost at least \$5.0 million, and involve:

- constructing 2.5 miles or more of new highway;
- reconstructing or reconditioning an existing highway by relocating 2.5 miles or more or by adding one or more lanes of 5 miles or more; or
- improving 10 or more miles of an existing divided highway having two or more lanes in either direction to freeway standards, which restrict traffic access from intersecting roads.

Authorization of Major Highway Projects

Major highway projects must be authorized by the Legislature and the Governor before they are enumerated in statutes. To increase legislative influence in the selection of major highway projects, 1983 Wisconsin Act 27 created the Transportation Projects Commission to review DOT's proposals and recommend major projects for enumeration in statutes. The Transportation Projects Commission consists of:

- the Governor;
- five senators and five representatives who are appointed by the majority and minority parties;
- three members of the public who are appointed by the Governor; and
- DOT's Secretary, who is a nonvoting member.

Every two years, the Transportation Projects
Commission may recommend major highway projects for enumeration.

Every two years, the Transportation Projects Commission may recommend major highway projects for enumeration. Statutes prohibit it from recommending projects unless there is sufficient funding to allow construction to begin within six years. This prohibition does not apply to the Legislature.

In June 2002, DOT indicated that funding would be available within the required six-year period for the Transportation Projects Commission to recommend some new projects for enumeration. The four new projects under consideration in 2002 were:

- USH 41 from State Trunk Highway (STH) 26 to Breezewood Lane in Winnebago County;
- USH 41 from County Trunk Highway (CTH) F to CTH M in Brown County;
- USH 18 from Prairie du Chien to STH 60 in Crawford County; and
- USH 14 from Viroqua to Westby in Vernon County.

In 2002, the Transportation Projects Commission did not recommend any major highway projects for enumeration. However, when the Transportation Projects Commission met in December 2002 to make the final decision on its recommendations, it learned from DOT that because costs for previously enumerated projects had increased and future federal funding amounts were uncertain, funds were no longer available to enumerate any new projects. As a result, the Transportation Projects Commission did not recommend any projects for enumeration. However, in 2003 Wisconsin Act 33, the Legislature enumerated the four projects that had been under consideration.

Concerns have been raised about the availability of funds to complete all enumerated projects.

DOT's statement in December 2002 that cost increases had reduced the amount of funding available for additional projects prompted questions within the Legislature about the reasons for the cost increases and the accuracy of DOT's budgeting for individual projects. These questions joined long-standing concerns about the availability of funds to reconstruct the aging southeast Wisconsin freeway system and to complete other projects elsewhere in the state. In 2000, DOT had adopted a long-range highway plan, the State Highway Plan 2020, in which it proposed to spend \$20.4 billion over a 21-year period on state highways, but it expected revenues during this period to be \$5.2 billion less than that amount.

Concerns have also been raised about the extent to which bonds have been used to fund highway projects. The State has issued increasing amounts of transportation revenue bonds in recent years to help fund the major highway program. In addition, while general obligation bonds have been used in the past for other purposes, 2003 Wisconsin Act 33 provided that \$565.5 million in general obligation bonds will be issued for the first time to fund DOT's state highway rehabilitation and southeast Wisconsin freeways programs. These bonds will be repaid by the Transportation Fund during the 2003-05 biennium. While the bonds will allow DOT to complete projects, the resulting debt service will reduce the amount available to initiate projects in the future.

To address the Legislature's concerns, the Joint Legislative Audit Committee directed us to evaluate the process used to identify potential major highway projects and estimate their costs; factors that affect DOT's highway spending; DOT's revenue sources; and future financial demands on the Transportation Fund. In conducting this evaluation, we spoke with staff of DOT's central and district offices, as well as construction contractors, design engineers, environmental groups, and others interested in transportation issues. We also reviewed:

- DOT's most recent state highway plan and other project-planning documents;
- budget, expenditure, and revenue data from FY 1993-94 through FY 2002-03, as well as estimates for the 2003-05 biennium;
- DOT's policies and procedures;
- records of Transportation Projects Commission meetings held since 1990; and
- environmental and other documents associated with a sample of 22 major highway projects that were enumerated from 1987 through 1991.

In addition, we conducted a detailed analysis of the STH 57 (Green Bay to Dyckesville) project in order to better understand the process for identifying, selecting, and approving major highway projects. Although we obtained information about DOT's entire budget and all of its revenue sources, our analyses concentrated on the major highway program. We did not attempt to analyze funding or other issues related to DOT's other programs, such as aids for local roads or mass transit.

Appropriation Trends

Since FY 2001-02, \$699.2 million has been earmarked for transfer from the Transportation Fund to the General Fund.

In recent years, funding from the Transportation Fund was transferred to the General Fund to help address the State's budget deficit. 2001 Wisconsin Acts 16 and 109 transferred a total of \$11.5 million in FY 2001-02, and another \$12.4 million in FY 2002-03. 2003 Wisconsin Act 33 substantially increased this amount by requiring the transfer of \$400.0 million from the Transportation Fund for shared revenue payments to local governments, \$175.3 million for unspecified purposes, and \$100.0 million for K-12 equalization aids for local school districts.

In addition, we note the Transportation Fund supports several programs in other agencies. In FY 2002-03, \$25.8 million was transferred to other agencies, including \$16.6 million to the Department of Natural Resources to reflect state fuel tax revenue generated by boats, snowmobiles, and all-terrain vehicles, and \$9.2 million to other agencies.

As shown in Table 1, DOT's total appropriation increased 50.5 percent over a ten-year period to reach \$2.4 billion in FY 2002-03. The largest increase, 108.7 percent, was for debt service, while the state highway appropriation increased 69.5 percent. The local transportation aids program includes funding for local road maintenance, police, sewers, and sidewalks; transit systems; and transportation options for elderly and disabled individuals. The local transportation capital assistance program includes funding for local road and bridge construction, railroads, harbors, and airports. In constant dollars, based on the consumer price index used by DOT, the total appropriation increased 21.3 percent, and the state highway appropriation increased 36.6 percent.

Table 1

DOT Appropriations, by Program
(in millions)

			Percentage		
Program	FY 1993-94	FY 2002-03	Percentage Change	Change in Constant Dollars	
State Highway	\$ 685.5	\$1,162.2	69.5%	36.6%	
Local Transportation Aids	346.4	519.6	50.0	20.9	
Local Transportation Capital Assistance	284.7	309.3	8.6	(12.4)	
Transportation Operations	160.5	226.7	41.2	13.8	
Debt Service	50.7	105.8	108.7	68.2	
Other ¹	52.1	54.0	(3.6)	(16.5)	
Total	\$1,579.9	\$2,377.6	50.5	21.3	

¹ Includes transfers to other state agencies and amounts for data processing and fleet services.

As shown in Table 2, DOT's total appropriation increase was second-highest among three large state programs.

Table 2

Comparison of Selected Budgets
(in millions)

·	FY 1993-94	FY 2002-03	Percentage Change
Department of Corrections	\$ 326.1	\$ 975.7	199.2%
Department of Transportation	1,579.9	2,377.6	50.5
University of Wisconsin System	2,406.8	3,260.6	35.5

Since FY 1993-94, the major highway program's appropriation increased 54.1 percent.

Each of the state highway program's five components has its own appropriation, as shown in Table 3. The major highway program appropriation increased 54.1 percent from FY 1993-94 through FY 2002-03. During the same period, the increase was 55.2 percent for the rehabilitation program, 52.5 percent for administration, and 34.4 percent for the maintenance and traffic operations program. A separate appropriation for the southeast Wisconsin freeways program did not exist until FY 2001-02, when it was created as a way to provide and track funds for these large reconstruction projects.

Table 3

State Highway Program Appropriations
(in millions)

·	FY 1993-94	FY 2002-03	Percentage Change	Percentage Change in Constant Dollars
Rehabilitation	\$379.6	\$ 589.2	55.2%	25.1%
Major Highway	156.8	241.6	54.1	24.2
Maintenance and Traffic Operations	131.4	176.6	34.4	8.3
Southeast Wisconsin Freeways	0.0 ¹	127.8		_
Administration	17.7	27.0	52.5	22.9
Total	\$685.5	\$1,162.2	69.5	36.6

¹ A separate appropriation was not created for this program until FY 2001-02.

In FY 2002-03, revenue bond proceeds funded 53.9 percent of the major highway program.

The major highway program's funding sources include proceeds from revenue bonds, federal funds, and segregated state funds, as shown in Table 4. In FY 2002-03, proceeds from revenue bonds provided 53.9 percent of the program's annual funding.

Table 4

Funding Sources for the Major Highway Program
(in millions)

Fiscal Year	Revenue Bond Proceeds	Federal Funds	Segregated State Funds	Total
1993-94	\$106.1	\$ 42.0	\$ 8.7	\$ 156.8
1994-95	97.1	57.7	6.4	161.2
1995-96	108.6	50.6	6.4	165.6
1996-97	110.6	40.9	10.5	162.0
1997-98	110.5	64.4	20.5	195.4
1998-99	110.6	55.6	41.2	207.4
1999-2000	119.7	57.3	42.5	219.5
2000-01	119.9	60.9	42.2	223.0
2001-02	127.1	57.9	46.9	231.9
2002-03	130.2	57.9	53.5	241.6
2003-04	136.2	103.5	0.0	239.7
2004-05	136.8	79.0	23.2	239.0

Southeast Wisconsin Freeway System

As the Legislature considers the funding requirements for the state highway program, a significant factor will be the cost of reconstructing the southeast Wisconsin freeway system. The system, which is shown in Figure 2, is made up of 270 miles of state highways in Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha counties. Construction of the system began in 1952 and continued throughout the following 30 years. On an average weekday in 2003, approximately one-third of all travel by southeast Wisconsin residents occurs on the system, and almost all vehicle traffic passing through this area of the state uses the system. However, the system is nearing the end of its service life and needs to be reconstructed.

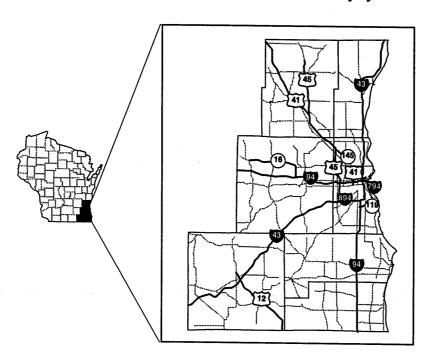


Figure 2
Southeast Wisconsin Freeway System

In May 2003, the Southeast Wisconsin Regional Planning Commission recommended a \$6.2 billion plan to rebuild the southeast Wisconsin freeway system to modern design standards and construct 127 miles of new freeway lanes over the next 30 years. The largest component of the system's reconstruction is the Marquette Interchange, which was completed in 1968 to handle approximately 150,000 vehicles per day, but which now handles more than 300,000 vehicles per day. Design features such as left-hand ramps and closely spaced interchanges have contributed to accidents and traffic congestion, and many of the 152 bridges that make up the interchange are nearing the end of their structural lives and need to be replaced.

Reconstructing the Marquette Interchange is projected to cost \$810.0 million.

In July 2003, DOT issued its plan to reconstruct the Marquette Interchange from spring 2004 through fall 2008, at an expected cost of \$810.0 million. DOT plans to shift all left-hand entrance and exit ramps to the right side of the highway, adjust ramp spacing to improve traffic flow and safety, and build six traffic lanes in and out of the interchange. Two lanes of traffic in all directions will remain open throughout the project. With regular maintenance, the reconstructed interchange is expected to last for approximately 75 years.

2001 Wisconsin Act 16, the 2001-03 Biennial Budget Act, provided \$160.6 million to the separate southeast Wisconsin freeways appropriation to fund costs incurred for preliminary work on the Marquette Interchange. At the beginning of the 2003-05 biennium, DOT had spent \$22.9 million of these funds. 2003 Wisconsin Act 33 provided an additional \$87.2 million for the southeast Wisconsin freeways appropriation in FY 2003-04, and \$173.7 million in FY 2004-05, most of which will be spent on the Marquette Interchange.

Decisions regarding the design and construction schedule for the Marquette Interchange have been finalized, and work on the interchange has begun. However, neither the precise level of funding nor the timing of projects in the remainder of the southeast Wisconsin freeway system has yet been decided.

Project Selection Program Expenditures Project Cost Increases

Major Highway Program •

As noted, every two years DOT may recommend potential major highway projects to the Transportation Projects Commission, which may recommend these or other projects to the Legislature for enumeration. We found that because the cost of major highway projects increases after enumeration, sometimes significantly, the funding available to undertake future projects is reduced. In addition, DOT does not track the total cost of individual projects, which prevents a complete analysis of the program's finances.

In August 2002, DOT revised how it estimates major highway project costs. As a result, it increased its cost estimates for the 28 projects that were enumerated at the time by \$108.0 million, including \$70.0 million for changes to construction and other project-related contracts, \$29.1 million for engineering oversight of construction work, and \$8.9 million for increased project costs. DOT also anticipated that federal revenue would decline in future years. Therefore, it informed the Transportation Projects Commission in December 2002 that there was insufficient funding to enumerate any projects in 2003, and the Commission did not recommend any projects to the Legislature. This raised concerns about DOT's management of the major highway program.

Project Selection

DOT identifies a list of potential major highway projects by using highway condition criteria established in its state highway plan. To assess the condition of highways, DOT measures pavement and bridge condition; traffic safety; and traffic congestion, which affects a driver's ability to enter and exit a highway, change lanes, and pass slower-moving vehicles. Before October 15 of every odd-numbered year, DOT reports potential projects to the Transportation Projects Commission, which may then conduct public hearings to obtain input from individuals and groups affected by the projects.

DOT ranks potential major highway projects based on five criteria.

Based on preliminary analyses of its data and on professional engineering judgment, DOT selects a limited number of candidate projects and provides them to the Transportation Projects Commission for its consideration. Chapter TRANS 210, Wis. Adm. Code, specifies that DOT is to evaluate and rank these candidate projects according to five weighted criteria, which are shown in Table 5, and to compile a composite score for each project. DOT recommends projects to the Commission based on their scores; available funds; and other factors, such as the equitable distribution of funds statewide and whether agreement exists on a project's concept. At this point, projects are conceptual and little, if any, design work has been completed.

Table 5

Criteria for Ranking Major Highway Project Candidates

Criteria	Weight	Consideration
Economic	40.0%	Evaluation of a project's ability to increase the competitiveness of existing businesses, attract new businesses, and improve connections among economic centers
Traffic Flow	20.0	Evaluation of a highway segment's existing and predicted traffic congestion and other related factors
Safety	20.0	Evaluation of the number and severity of crashes on a highway segment
Environmental	10.0	Evaluation of a project's environmental effects
Community Input	10.0	Evaluation of a project's community support or opposition and whether a project is consistent with local planning efforts

DOT forwards its final list of recommended projects to the Transportation Projects Commission by September 15 of each even-numbered year, and the Commission must then make its recommendations to the Legislature by December 15.

It takes 12 years, on average, from the enumeration of major highway projects to the completion of construction. The Legislature and the Governor enumerate projects in the biennial budget. However, construction does not typically begin for several years after a project has been enumerated, because the design plans and environmental studies must first be completed. It will take more than 12 years, on average, from enumeration until the scheduled completion of construction for the 28 major highway projects that were underway in June 2003.

Because the number of enumerated projects exceeded available funding, the delay between enumeration and the start of construction grew to ten years or more by the mid-1990s. As a result, 1997 Wisconsin Act 27 prohibited the Transportation Projects Commission from recommending any projects unless funding would be available for construction to begin within six years. As noted, this provision does not apply to the Legislature.

Recent statutory changes are intended to increase the Transportation Projects Commission's influence over the enumeration process. For example, 1999 Wisconsin Act 9 specified that the Commission is to approve the initiation of environmental studies; previously, DOT had decided on its own whether to initiate environmental studies for potential projects. The change is significant because projects for which environmental studies are completed are typically enumerated. Now, draft versions of environmental studies are completed before the Commission can recommend projects for enumeration, which may result in the Commission having more information about projects' proposed scopes, designs, and costs. Appendix 1 summarizes the statutorily required approval process for major highway projects.

In September 2003, 32 major highway projects were being planned or were under construction.

In September 2003, 32 major highway projects were being planned or were under construction. This includes the 28 major highway projects that were underway in June 2003, as shown in Table 6, and the four projects enumerated in 2003 Wisconsin Act 33:

- USH 41 from STH 26 to Breezewood Lane in Winnebago County, with an estimated cost of \$282.8 million;
- USH 41 from CTH F to CTH M in Brown County, with an estimated cost of \$257.7 million;
- USH 18 from Prairie du Chien to STH 60 in Crawford County, with an estimated cost of \$36.7 million; and
- USH 14 from Viroqua to Westby in Vernon County, with an estimated cost of \$51.5 million.

Table 6

Current Major Highway Projects
As of June 2003

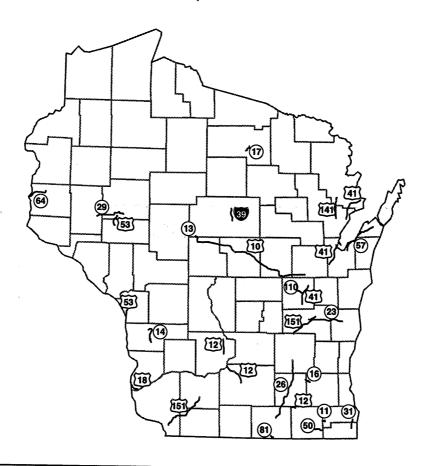
		Recommended by			Construction		Estimated
Hwy	Description	Department	Commission	Enumerated	Start	Finish	Cost ¹
151	Waupun-Fond du Lac	N	N	1989	2002	2007	\$ 115.8
10	Appleton-Marshfield	N	N	1989	2002	2013	388.7
29	Chippewa Falls Bypass	Υ	Υ	1991	2001	2006	164.0
12	Whitewater Bypass	Y	Y	1991	2002	2006	36.6
31	CTH S-STH 11	Y	Υ	1991	2000	2004	57.7
50	USH 12 Slades Corners	N	Υ	1991	2000	2003	22.6
57	Green Bay-Dyckesville	N	Y	1991	1999	2003	27.4
110	USH 41-STH 116	Υ	Υ	1991	2002	2005	41.9
41	Freeway Conversion	Y	Υ	1991	1993	2004	84.6
81/213	Beloit Bypass	Υ	Υ	1993	2006	2006	5.7
12	Sauk City-Middleton	Y	Υ	1993	2002	2006	129.8
13	Marshfield Boulevard	Y	Υ	1993	2001	2003	49.5
64	Houlton-New Richmond	Y	Υ	1993	2002	2006	116.5
151	Fond du Lac Bypass	Υ	Υ	1993	2003	2008	45.1
151	Belmont-Dodgeville	Υ	Y	1995	2001	2004	87.6
16	Oconomowoc Bypass	Υ	Y	1995	2003	2008	55.4
53	Eau Claire Bypass	Υ	Υ	1995	2002	2007	145.4
11	Burlington Bypass	Υ	Y	1997	2006	2011	107.6
12	Lake Delton-Sauk City	Y	Υ	1997	2007	2015	83.5
53	La Crosse Corridor	Y	Y	1997	2010	2012	88.0
57	Dyckesville-Sturgeon Bay	Y	Υ	1997	2005	2008	79.4
141	STH 22-STH 64	Y	Υ	1997	2004	2006	64.9
151	Dickeyville-Belmont	Y	Υ	1997	2003	2006	93.6
23	STH 67-USH 41	N	N	1999	2009	2011	51.4
41	Oconto-Peshtigo	N	N	1999	2007	2009	147.9
17	STH 17 Relocation	Υ	Υ	2001	2003	2003	9.6
26	Janesville-Watertown	Y	Υ	2001	2006	2015	212.9
39/51	Wausau Beltline	Y	Y	2001	2004	2013	
***************************************	Total	······	-	2001	2007	4012	\$2,733.1

¹ FY 2002-03 dollars, in millions; includes estimates for design and construction engineering costs.

Figure 3 shows the location of the 32 major highway projects that were being planned or were under construction as of September 2003.

Figure 3

Location of Major Highway Projects
As of September 2003



The Legislature recently enumerated \$828.0 million in projects that had not been recommended by the Transportation Projects Commission.

Our 1996 evaluation of transportation programs and revenues (report 96-19) noted that some questioned the need for the Transportation Projects Commission because it typically did not change DOT's project recommendations. This trend has continued. As a result, some continue to assert that the Transportation Projects Commission has not fulfilled its role. While the Commission has been somewhat successful in limiting the number of projects enumerated, the Legislature enumerated two projects in 1999 and four projects in 2003 that the Commission had not recommended.

DOT had not anticipated these projects, which are expected to cost \$828.0 million, in its program schedule and budget. As a result, construction of these recently enumerated projects may not begin for eight to ten years, or the completion of previously enumerated projects will be delayed. In addition, DOT may not recommend additional projects to the Transportation Projects Commission for enumeration in 2004.

Program Expenditures

Major highway program expenditures totaled \$284.2 million in FY 2002-03.

As shown in Table 7, major highway program expenditures totaled \$284.2 million in FY 2002-03 and increased 69.5 percent from FY 1993-94 expenditure levels. Program expenditures differ from amounts appropriated because of encumbrances and federal earmarked funds, which are provided throughout the State's fiscal year. Construction contracts, which accounted for nearly three-quarters of FY 2002-03 expenditures, increased 67.9 percent in the ten years shown. Real estate expenditures nearly quadrupled during the same period and were the second-largest expenditure category in FY 2002-03.

Table 7

Major Highway Program Expenditures, by Type

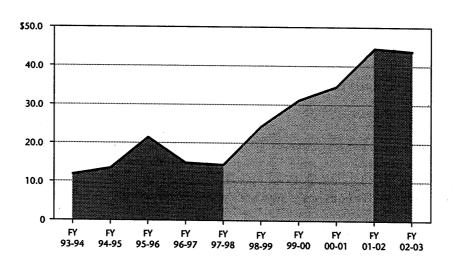
	FY 1993-94	FY 2002-03	Percentage Change	Percentage Change in Constant Dollars
Construction Contracts	\$120,921,000	\$203,035,000	67.9%	35.3%
Real Estate	11,763,000	43,772,000	272.1	199.9
Engineering Services	20,404,000	24,511,000	20.1	(3.2)
Salaries and Fringe Benefits	8,981,000	10,242,000	14.0	(8.1)
Prorated Costs	3,871,000	1,303,000	(66.3)	(72.9)
Fleet Charges and Other Administration	599,000	598,000	(0.2)	(19.5)
Maintenance and Materials	700,000	475,000	(32.1)	(45.3)
Travel and Training	378,000	242,000	(36.0)	(48.4)
Total	\$167,617,000	\$284,178,000	69.5	36.6

Real estate expenditures have increased steadily.

Real estate can represent a significant portion of individual project costs. For example, the STH 12 (Sauk City to Middleton) project involved the purchase of 783.1 acres, at a cost of \$32.2 million, which was 24.8 percent of the project's estimated total cost. As shown in Figure 4, real estate expenditures for the major highway program increased steadily from FY 1997-98 until FY 2001-02.

Figure 4

Real Estate Expenditures for the Major Highway Program
(in millions)



To explain the increase in its real estate expenditures, DOT notes that land costs typically increase faster than the inflation rate overall, and there have been a number of projects in or near urban areas, where land is often costly. DOT has also indicated that because it takes up to 12 years for project development to be completed and construction funding to become available, developers and landowners have time to rezone land for commercial use, which often makes the land more valuable and increases DOT's purchase costs.

As shown in Table 8, the number of acres DOT has purchased for the state highway program varies considerably from year to year. Yet despite a significant increase in real estate expenditures since FY 1997-98, DOT's central office does not keep separate records of the number of acres purchased for the major highway program or of real estate expenditures by individual project. DOT's existing data processing system would allow it to do so, and tracking real estate purchases would enable a more complete analysis of the costs of the major highway program.

Table 8

Acres of Real Estate Purchased by DOT for the State Highway Program

	Number	
	of Acres	
FY 1993-94	4,434	
FY 1994-95	4,034	
FY 1995-96	3,436	
FY 1996-97	1,897	
FY 1997-98	1,820	
FY 1998-99	2,001	
FY 1999-2000	2,990	
FY 2000-01	2,868	
FY 2001-02	3,995	
FY 2002-03	1,527	
······	······································	

☑ Recommendation

We recommend the Department of Transportation track the number of acres and the cost of all real estate it purchases for each major highway project.

Project Cost Increases

After projects have been enumerated, DOT has considerable discretion in deciding how and when to construct them. Concerns have been raised about the cost increases that occur on some major highway projects after enumeration, which reduces the funding available to enumerate additional projects.

State highways can be built in a variety of ways, including as freeways or expressways. Project costs can increase significantly when DOT chooses to upgrade a highway from expressway to freeway standards. An expressway typically has at-grade intersections with other roads that have lower traffic volumes, and traffic signals or signs at these intersections regulate traffic flow. In contrast, a freeway uses overpasses and underpasses—which are known as grade separations—and interchanges to restrict access from intersecting roads. Highways are typically upgraded from expressway to freeway standards for safety and traffic flow reasons.

DOT may also change a project's design to accommodate preferences of individuals it affects, including state and local officials, advocacy groups, and concerned citizens. Design engineers indicated to us that the public comment process for project designs has increased significantly during the past decade because DOT has tried to be more responsive to local preferences. For example, the original concept for the STH 57 (Green Bay to Dyckesville) project included expressway-style at-grade intersections. However, in response to the preferences of local officials, the final design incorporated both an interchange and an overpass south of Dyckesville and within two miles of each other. Their cost is expected to be \$4.7 million; the total project cost is now estimated at \$27.4 million. Appendix 2 provides a time line for the project.

Tracking cost increases on projects is difficult because DOT can change a project's parameters. We noted a number of instances in which portions of one enumerated project had been combined with another. For example, the STH 57 (Green Bay to Dyckesville) project originally extended from the junction with STH 54 north of Green Bay through the village of Dyckesville. However, DOT subsequently separated the interchange at the junction of STH 57 and STH 54 from the original project, and it transferred the Dyckesville bypass to another major highway project. While it may have been prudent for DOT to construct the project in this manner, doing so makes it difficult to compare the actual project costs with the cost estimates that had been provided to the Transportation Projects Commission.

The estimated costs of seven current projects have increased by at least \$20.0 million each.

To help determine the reasons for the cost increases for major highway projects, we reviewed the seven current projects shown in Table 9. As of June 2003, cost estimates for each of these projects had increased by at least \$20.0 million. Increases ranged from 45.2 percent to 262.4 percent.

Table 9

Cost Increases for Selected Major Highway Projects
(in millions)

Hwy	Description	Original Estimated Cost ¹	Estimated Cost as of June 2003 ¹	Percentage Change	Percentage Change in Constant Dollars
12	Whitewater Bypass	\$ 10.1	\$ 36.6	262.4%	169.1%
110	USH 41-STH 116	15.7	41.9	166.9	97.6
29	Chippewa Falls Bypass	77.2	164.0	112.4	52.8
64	Houlton-New Richmond	55.3	116.5	110.7	65.2
12	Sauk City-Middleton	64.1	129.8	102.5	58.9
53	Eau Claire Bypass	99.3	145.4	46.4	21.2
39/51	Wausau Beltline	151.5	220.0	45.2	39.7

¹ Includes estimates for design and construction engineering costs.

Estimated costs more than tripled for one of the seven projects we reviewed. Four of the seven projects' estimated costs more than doubled, and estimated costs increased by nearly half for the remaining two. Specifically, we found:

- The cost estimate for the USH 12 (Whitewater bypass) project more than tripled from 1991, when it was enumerated, to June 2003, when it reached \$36.6 million. Although the project was originally planned as 5.3 miles of two-lane highway, DOT extended it to 6.3 miles and purchased enough land to upgrade the highway to four lanes in the future. These changes required the construction of more costly bridges and the purchase and relocation of more residential and commercial properties.
- The cost estimate for the STH 110 (USH 41 to STH 116) project increased from \$15.7 million when it was enumerated in 1991 to \$41.9 million in June 2003. Although the project was originally planned as a four-lane expressway, DOT subsequently built much of the project as a freeway, which required the construction of frontage roads and more costly bridges.

- The cost estimate for the STH 29 (Chippewa Falls bypass) project, which is made up of two separate projects enumerated in 1989 and 1991, increased from \$77.2 million at enumeration to \$164.0 million in June 2003. While the original design added two highway lanes next to the existing two-lane highway, the final design relocated six miles of the highway, which required the purchase of considerably more land and the construction of four new highway lanes. In addition, five miles more than originally planned were built as a freeway, which required an additional interchange and two overpasses. Finally, two existing interchanges were expanded, and two new interchanges were added to the project.
- The cost estimate for the expansion of the STH 64 (Houlton to New Richmond) project increased from \$55.3 million when it was enumerated in 1993 to \$116.5 million in June 2003. While DOT originally planned the project as a four-lane expressway, it later changed the plan and built most of the project as a freeway, which increased construction costs and required more costly bridges, two additional interchanges, and two additional overpasses.
- The cost estimate for the USH 12 (Sauk City to Middleton) project increased from \$64.1 million when it was enumerated in 1993 to \$129.8 million in June 2003. The increase is attributable to \$23.0 million in higher real estate costs that occurred because of project delays and the planned upgrade of a portion of the Middleton bypass from a 60- to a 70-miles-per-hour design speed.
- The cost estimate for the USH 53 (Eau Claire bypass) project increased from \$99.3 million when it was enumerated in 1995 to \$145.4 million in June 2003. The increase resulted from the expansion of an interchange to allow access to STH 93, which was not included in the original project plan.

The cost estimate for the Interstate 39/USH 51 (Wausau beltline) project increased from \$151.5 million when it was enumerated in 2001 to \$220.0 million in June 2003. Approximately \$30.0 million of the increase resulted from a decision by DOT to upgrade an interchange from a 45- to a 60-miles-per-hour design speed. As a result, five bridges were added to the project, and several other bridges were lengthened to accommodate this traffic speed.

DOT's initial project cost estimates have often been inaccurate.

DOT cited inaccurate initial cost estimates as an additional reason why the anticipated costs of some projects have increased considerably over time. Historically, DOT's initial cost estimates were incomplete because little or no design work had been completed when it provided the estimates to the Transportation Projects Commission.

DOT is attempting to improve its ability to estimate and control project costs. First, since 2001 it has tried to provide more accurate initial cost estimates to the Transportation Projects Commission by completing 30 percent of design work by the time a project's draft environmental study is finalized, although it is hesitant to commit significant resources to design a project that might not be enumerated. Second, late in 2001 it created the Major Projects Peer Review Committee, which includes central office and district staff, to review project designs and assess the need for various features and changes. Too little time has passed for the effects of these two changes on project costs to be assessed.

Value Engineering

To recommend changes that would result in cost savings, DOT commissioned a value engineering study in 2002. Value engineering identifies ways to minimize a project's costs without altering its purpose or lowering safety, quality, and environmental standards. The Federal Highway Administration requires DOT to complete such a study for each federally aided project in the national highway system that costs more than \$25.0 million.

In November 2002, a value engineering study identified \$382.0 million in potential savings on 21 major highway projects.

In August 2002, after it determined that the anticipated cost of major highway projects had increased by \$108.0 million, DOT hired an engineering firm with highway design experience to identify potential savings on 17 enumerated and 4 proposed major highway projects. The firm was paid \$247,000. Its November 2002 report identified \$382.0 million in savings that could be achieved while maintaining DOT's design guidelines and other programmatic requirements. For example, the firm recommended changes such as:

- constructing two lanes, as opposed to four, on highways where traffic volume was low enough to be handled by a two-lane highway, for savings of \$116.3 million;
- using asphalt, rather than concrete, for savings of \$45.4 million; and
- scaling back the size and design of interchanges, for savings of \$45.4 million.

The firm also recommended scaling back several projects to their originally planned scope at the time of enumeration, for \$22.3 million in savings. For example:

- The USH 10 (Marshfield to Stevens Point) project was enumerated as a four-lane expressway, but DOT had subsequently decided to build it as a freeway. Reverting to an expressway along one part of the project would save \$10.7 million.
- The STH 64 (Houlton to New Richmond) project was enumerated with an intersection at County Highway V, but DOT subsequently upgraded the intersection to an interchange. Reverting to the intersection would save \$3.3 million.

For a variety of reasons, DOT decided not to implement most of the cost-saving measures recommended by the firm. It decided that the firm's recommendations did not take into account updated traffic volume that warranted the construction of interchanges, traffic characteristics such as the need for truck lanes along steep inclines, or public opinion as expressed by local officials who wanted specific interchanges to be built. As of November 2003, DOT was continuing its analysis of how much of the \$382.0 million in savings measures that were proposed in the value engineering study it would implement.

☑ Recommendation

We recommend the Department of Transportation report to the Joint Legislative Audit Committee by February 2, 2004, on the amount of savings it expects to achieve as a result of the November 2002 value engineering study, as well as the reasons why it does not plan to implement the study's other recommendations.

Improved Reporting

DOT's financial record-keeping system makes it difficult to analyze expenditures for individual major highway projects. While the central office produces a monthly report that includes per project expenditures for real estate, relocation of utilities, and construction, neither design nor construction engineering expenditures are reported on a per project basis, even though they can account for more than one-quarter of all project costs. Furthermore, some district staff stated that the project cost information they maintain differs from the amounts in the central office's reports.

Tracking changes to major highway project costs is also made difficult by DOT's practice of separating portions of projects and combining them with other projects. Because of this practice, it is unclear to individuals outside of DOT whether, for example, a decline in the latest cost estimate for a project resulted from cost savings, a reduction in the project's scope, or the transfer of some portion of the project into another project. In addition, DOT does not maintain expenditure information in a readily accessible format for projects or portions of projects that have been completed. For example, design costs are not maintained after design work has been completed, although construction of the project may not be completed for several years.

Financial reporting for the major highway program is inadequate. In order for the Legislature, the Transportation Projects Commission, and others to know how much each major highway project costs, as well as the extent to which project costs increase, DOT must aggregate and report comprehensive project expenditures, and retain expenditure information after projects are completed. With such information, the Legislature and the Transportation Projects Commission will be in a better position to understand the major highway program's financial status and the feasibility of enumerating additional projects.

☑ Recommendation

We recommend the Department of Transportation create a report to include all expenditures associated with each major highway project and provide it to the Transportation Projects Commission semiannually.