



Legislative Fiscal Bureau

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Joint Committee on Finance

Paper #745

State Highway Rehabilitation Funding and Highway Engineering Positions (DOT -- State Highway Program)

[LFB 2005-07 Budget Summary: Page 480, #1 & Page 484, #6]

CURRENT LAW

The state highway rehabilitation program is responsible for the reconstruction, reconditioning, and resurfacing of the highways and bridges of the state trunk highway system, except for the freeways of southeast Wisconsin. In 2004-05, total funding for the program is \$554,661,300, which includes \$37,678,300 SEG, \$286,983,000 FED, and \$230,000,000 in general obligation bonds. However, for reasons explained later in this paper, base funding for the program is \$454,372,000. The funding changes in the Governor's bill are made to this base.

GOVERNOR

Increase funding for the state highway rehabilitation program by a total of \$140,585,900 in 2005-06 and \$159,709,500 in 2006-07, which is the net effect of the following changes: (a) an increase of \$130,701,500 SEG in 2005-06 and \$98,729,300 SEG in 2006-07; and (b) an increase of \$9,884,400 FED in 2005-06 and \$60,980,200 FED in 2006-07.

Provide \$722,000 SEG and 10.0 SEG positions in 2006-07 in the state highway rehabilitation program to allow the Department to add 10 highway engineers in regional transportation offices.

DISCUSSION POINTS

1. The funding increases in the bill are intended to accomplish the following three objectives: (a) to provide increases to the appropriation base to raise the level of funding to the

actual 2004-05 funding level; (b) to provide 2.0% annual inflationary increases; and (c) to provide additional funding to increase the level of service provided by the program. These three adjustments are described in more detail in the points following the table below.

2. The following table shows the actual level of funding provided in 2004-05, the appropriation base level of funding, and the level of funding provided by the bill. The amounts shown for 2005-06 and 2006-07 reflect the funding decisions discussed in this paper, plus other, smaller funding changes, such as standard budget adjustments and savings associated with budget efficiency measures and departmental reorganization. The funding amounts also reflect a decision to substitute \$250,000,000 of SEG funds in 2005-06 with an equal amount of GPR-supported bonds, which enables a transfer of \$250,000,000 from the transportation fund to the general fund. Total funding for the program would be increased by 7.0% in 2005-06 above the actual 2004-05 funding level and an additional 3.2% in 2006-07 over 2005-06.

<u>Fund Source</u>	<u>Actual 2004-05 Funding Level</u>	<u>2004-05 Appropriation Base</u>	<u>Governor</u>	
			<u>2005-06</u>	<u>2006-07</u>
SEG	\$37,678,300	\$167,389,000	\$46,581,600	\$264,401,000
FED	286,983,000	286,983,000	296,867,400	347,963,200
Gen. Ob. Bonds	<u>230,000,000</u>	<u>0</u>	<u>250,000,000</u>	<u>0</u>
Total	\$554,661,300	\$454,372,000	\$593,449,000	\$612,364,200

3. The above table shows both the actual 2004-05 funding level and the 2004-05 appropriation base to highlight the difference between these two amounts. In 2004-05, the program received \$230,000,000 in GPR-supported, general obligation bonds, and although a provision of the 2003-05 budget required DOT, in preparing its 2005-07 budget request, to make an adjustment to the appropriation base to replace those bonds with SEG funds in the ongoing base for the program, the required adjustment was less than the amount of bonds used in 2004-05. Consequently, while the total appropriation base for the program is \$454,372,000, the actual funding level in 2004-05 is \$554,661,300, a difference of \$100,289,300. The bill provides funding with the intent of filling the gap between the appropriation base and the actual funding level. However, the amounts provided are \$101,182,100 in 2005-06 and \$101,183,800 in 2006-07, which exceeds the amount needed to fill the gap by \$892,800 in 2005-06 and \$894,500 in 2006-07. The provision of this additional amount has the effect of reversing SEG reductions under separate decision items for standard budget adjustments and a transfer to the departmental management and operations appropriation for rent adjustments. The funding in the bill could be reduced by these amounts if the goal of providing this increase is only to replace the bonds used in 2004-05 with SEG and FED funds in the ongoing base, without reversing other decision items that are more administrative in nature.

4. The 2% inflationary adjustment for the program, which is calculated on a base that excludes state-funded salary and fringe benefit costs, amounts to increases of \$10,903,800 in 2005-06 and \$22,025,700 in 2006-07. Like for the state highway rehabilitation program, 2.0% annual inflationary adjustments were also provided for several other DOT programs, including local

transportation aids, certain local transportation assistance programs, and the major highway development and highway maintenance and traffic operations programs. This calculation, however, incorrectly overstates the funding base by \$2,000,000. A 2.0% increase on the corrected base would be lower than the amounts provided in the bill by \$40,000 in 2005-06 and \$80,800 in 2006-07.

5. Additional increases of \$28,500,000 in 2005-06 and \$36,500,000 in 2006-07 would be provided above the inflationary increase. According to the Executive Budget Book, these amounts are intended to allow the Department to maintain the pavement quality of existing state highways.

6. The Department's 2005-07 budget request included performance measures for state highway program pavement quality. On two different measures of average pavement roughness and distress, the condition of state highways has improved slightly over the past few years. However, these data do not yet reflect any negative impact that may have been caused by the reductions in funding for the program in both years of the 2003-05 biennium. Total funding for the state highway rehabilitation program declined in the two years of the 2003-05 biennium, relative to the 2002-03 base. The program was funded at \$538,508,700 in 2003-04 and \$554,661,300 in 2004-05, a biennial reduction of \$18,880,200 (1.7% from base year doubled).

7. The funding increases provided to maintain pavement quality would provide a level of funding that is slightly higher than the funding that would result if the 2002-03 base (the funding level prior to the 2003-05 cuts) was increased by the rate of inflation for each year through 2005-06 and 2006-07. The amount by which the funding exceeds a strictly inflationary adjustment from the 2002-03 base is approximately \$3.4 million in 2005-06 and \$11.3 million in 2006-07. One alternative would be to decrease the funding in the bill by these amounts, which would provide a level of funding consistent with the real dollar funding level provided in 2002-03. A case could also be made, however, that the additional funding may be needed to, in effect, catch up with the project delays that may have resulted from the 2003-05 funding reduction. Over the four-year period, the actual 2003-05 funding plus the 2005-07 funding under the bill would be \$45.7 million less than the amounts that would have been available over that period if inflationary increases had been provided in each year.

8. The funding decisions made for the state highway rehabilitation program will need to be made in the context of an overall consideration of available transportation revenues and funding demands in other programs. The Committee may decide, for instance, that the above-inflationary increase must be reduced or eliminated. An alternative funding decision would be to provide even percentage increases in both years, as shown in the following table, instead of the bill's inflationary and pavement quality increases.

Annual % Increase	Change to Base		Change to Bill	
	<u>2005-06</u>	<u>2006-07</u>	<u>2005-06</u>	<u>2006-07</u>
1.0%	\$5,431,900	\$10,918,100	-\$33,971,900	-\$47,607,600
2.0	10,863,800	21,944,900	-28,540,000	-36,580,800
3.0	16,295,700	33,080,300	-23,108,100	-25,445,400
4.0	21,727,600	44,324,300	-17,676,200	-14,201,400
5.0	27,159,500	55,677,000	-12,244,300	-2,848,700
6.0	32,591,400	67,138,300	-6,812,400	8,612,600

9. If a decision is made to retain the bill's use of \$250,000,000 in GPR-supported general obligation bonds for the program, the Committee may wish to consider modifications to make the bond authorization consistent with a current law provision that prohibits the Department from using funds provided for the state highway rehabilitation program for projects on the southeast Wisconsin freeway rehabilitation program. As drafted, the bonds are included in the same bond authorization that was used to provide \$565.5 million for the state highway rehabilitation and southeast Wisconsin freeway rehabilitation programs during the 2003-05 biennium. Although the new \$250,000,000 in bond authority is intended for the state highway rehabilitation program, it could also legally be used for the southeast Wisconsin freeway rehabilitation program. To preclude this possibility, the bonds could be authorized in a new statutory section that would limit the use of the bonds to state highway rehabilitation projects. (The fiscal aspects of this bonding are discussed in more detail in LFB Issue Paper #717).

10. In addition to the funding increases for state highway rehabilitation projects, the bill would provide \$722,000 SEG and 10.0 SEG positions in 2006-07 to allow the Department to add 10 highway engineers in regional transportation offices. The administration indicates that the addition of highway engineering positions is needed due to the bill's proposed increases in the size of the state highway rehabilitation program, as well as the proposed increase to the major highway development program. The Department indicates that the positions would be civil engineers engaged in highway design.

11. The Department currently has 336 civil engineer positions, so the additional 10.0 positions would be a 3% increase in the number of these positions.

12. Although the rationale given for the 10 additional engineering positions is related to the funding increase for the state highway program, the positions would not be provided until the second year. Since the increases to the state highway rehabilitation program are provided in both years, one alternative would be to provide the additional positions in 2005-06. Assuming that three-fourths of the salary and fringe benefits costs would be incurred in the first year, the additional cost associated with providing the positions earlier would be \$551,500 SEG in 2005-06.

13. The 2003-05 budget eliminated 29 civil engineer positions in the Department's regional transportation district offices. Consequently, the bill's position increase would restore only about one-third of the number previously eliminated.

14. The Department indicates that about 42% of highway project design work was done by DOT employees in 2003-04, while the remaining 58% was done by consultants. The percentage of design work done by Department employees has declined over the last several years. In 1999, for instance, the Department indicates that 59% of design work was done by DOT employees. However, increases in the size of the highway program over the last decade, with no additional staff, have required the Department to rely more heavily on consultants. Furthermore, the 42% figure is based on data that does not reflect the full effect of the position cuts occurring in the 2003-05 budget. Consequently, the percentage of design work conducted by DOT employees may decline further in 2004-05. Given the delayed impact of the 2003-05 position cuts and the proposed increase in the overall size of the highway program, the 10 additional engineering positions are unlikely to increase the proportion of design work done by DOT staff above 42%.

15. The Department has indicated that performing a substantial share of design work by Department employees helps to maintain a reasonable level of competition for consultant contracts. Another reason is to maintain enough expertise among DOT staff to provide a sufficient level of policy guidance for the Department and accountability to the public. In many cases, persons who are affected by highway projects may prefer to direct their questions or concerns to a Department employee rather than a hired consultant. In addition, DOT staff may be in a better position to make decisions on sensitive issues than a consultant.

16. The Department did a study of the relative cost of performing project design by DOT engineering staff versus engineering consultants in 2004, and concluded that, on average, design costs are lower when done by DOT engineering staff than when done by private engineering consultants. The study estimated that the Department's costs are about 18% higher for project designs done by consultant engineers compared to those done by staff engineers.

17. With an expansion in the funding provided for the highway program, the amount of design engineering needed will also increase. Without additional DOT engineering positions, the Department would rely more heavily on consultant engineers for this expansion, which would mean that some of the funding increase would go toward this purpose instead of toward project construction. Since the salary, fringe benefits, and supplies costs of the additional positions would be funded as a separate decision item, more of the funding increases for the program would go towards projects rather than design. However, since new Department employees would likely be inexperienced engineers, these savings would not be realized initially.

18. In a response to DOT's study of engineering costs, DOA prepared a report that criticized the study's methodology. One of the principal critiques was that the study adjusted for the cost of a DOT engineer by assuming that only about 70% of the employee's time is devoted to project design, since other time is devoted to non-project related work, training, or paid leave. DOA's report notes that while this other time is not devoted to projects, the Department must still pay the salary costs associated with non-project hours. In contrast, DOT pays engineering consultants only for hours devoted to project design, which, DOA argued, means that the comparison is not made on consistent terms. However, DOT has responded to this critique by noting that an employee's non-project hours were figured into the analysis through the use of an

overhead rate that includes these costs as well as various other expenses, such as support staff and facilities costs, and that DOA therefore double-counted these costs.

19. Regardless of the methodology used for the comparison, the analysis will be affected by the types of projects that are assigned to DOT staff versus the types that are done by consultants. For instance, projects that are, on average, more complex may be assigned to consultants, which could make the design work done by DOT staff look more efficient by comparison. To some extent, the Department's study controlled for these effects by considering the various types of projects separately. For instance, design work done on a bridge project was only compared with other bridge projects, not with highway reconstruction or other types of projects. In addition, the Department has asserted that the relative assignment of projects within each category "appears to be comparable and does not favor in-house results."

20. Given that the percentage of design work done by DOT staff has declined in recent years, some may wish to provide an additional increase to the number of engineering positions in order to come closer to a goal of performing at least 50% of design with Department staff. One alternative would be to provide an additional 19.0 civil engineer positions in 2006-07, which, when added to the 10.0 positions provided in the bill in that year, would restore the number eliminated by the 2003-05 budget. The cost of providing an additional 19.0 positions would be \$1,371,800 in 2006-07.

21. The Department indicates that it takes about three years after an entry-level civil engineer begins employment before he or she is fully utilized in the highway improvement program. Therefore, a decision to provide additional civil engineer positions involves committing resources now without receiving the full benefits until later. Therefore, a case can be made that position increases for the purpose of increasing the percentage of design work done by Department employees should be initiated gradually in order to avoid committing too high a level of program resources for training at any one time.

22. DOT estimates, based on 2003-04 data, that each increase of 16.75 positions would increase the percentage of design work done by Department employees by one percentage point. However, the Department notes that the 16.75 positions would have to involve several types of position classifications in addition to civil engineers, including engineering technicians, real estate specialists, surveyors, and contract specialists. Therefore, position increases for only civil engineers may allow DOT to increase the percentage of certain types of design work done by Department employees, but may necessitate continued reliance on consultants for other types of design-related activities.

23. Given the limitations outlined in the previous two points, it may not be feasible to significantly increase the percentage of design work done by DOT employees during the biennium by adding civil engineering positions. If an eventual increase in this percentage is desired, the Committee could require the Department to include in its 2007-09 budget request a proposal to add engineering and other positions necessary to gradually increase the Department's capacity to conduct 50% of design work by Department employees.

ALTERNATIVES

A. State Highway Rehabilitation Funding

1. Approve the Governor's recommendation to increase funding for the state highway rehabilitation program by a total of \$140,585,900 in 2005-06 and \$159,709,500 in 2006-07, which is the net effect of the following changes: (a) an increase of \$130,701,500 SEG in 2005-06 and \$98,729,300 SEG in 2006-07; and (b) an increase of \$9,884,400 FED in 2005-06 and \$60,980,200 FED in 2006-07.

2. Modify the Governor's recommendation by making one or both of the following adjustments:

a. Reduce funding by \$892,800 SEG in 2005-06 and \$894,500 SEG in 2006-07 to adjust the amount provided for restoring the appropriation base to the actual 2004-05 budgeted level, without the additional adjustment to reverse standard budget adjustments and rent adjustment decision items.

<u>Alternative A2a</u>	<u>SEG</u>
2005-07 FUNDING (Change to Bill)	- \$1,787,300

b. Reduce funding by \$40,000 SEG in 2005-06 and \$80,800 SEG in 2006-07 to make a correction to the base used for the purposes of calculating the 2.0% annual inflationary adjustment.

<u>Alternative A2b</u>	<u>SEG</u>
2005-07 FUNDING (Change to Bill)	- \$120,800

c. Reduce funding by \$3,400,000 SEG in 2005-06 and \$11,300,000 SEG in 2006-07 to provide a level of funding equal to the amount that would be available if the 2002-03 funding level were adjusted by inflation.

<u>Alternative A2c</u>	<u>SEG</u>
2005-07 FUNDING (Change to Bill)	-\$14,700,000

3. Modify the Governor's recommendation by instead providing changes in SEG funding as shown in the following table to provide the corresponding annual percentage increases for the program. In addition to the percentage increases, the table also shows the funding changes associated with no increase, other than the increase to the base to equal the actual funding level in 2004-05.

Annual % Increase	SEG Change to Bill	
	<u>2005-06</u>	<u>2006-07</u>
a. 0.0%	-\$39,403,800	-\$58,525,700
b. 1.0	-33,971,900	-47,607,600
c. 2.0	-28,540,000	-36,580,800
d. 3.0	-23,108,100	-25,445,400
e. 4.0	-17,676,200	-14,201,400
f. 5.0	-12,244,300	-2,848,700
g. 6.0	-6,812,400	8,612,600

4. Delete provision.

<u>Alternative A4</u>	<u>FED</u>	<u>SEG</u>	<u>TOTAL</u>
2005-07 FUNDING (Change to Bill)	- \$70,864,600	- \$229,430,800	- \$300,295,400

B. General Obligation Bonds for State Highway Rehabilitation

1. Approve the Governor's recommendation to provide any additional GPR-supported general obligation bonding in an existing bonding authorization that could be used for state highway rehabilitation or southeast Wisconsin freeway rehabilitation projects.

2. Modify the Governor's recommendation by creating a new bonding authorization for the GPR-supported bonds that may only be used on the state highway rehabilitation program. [A decision to eliminate or modify the provision of bonds for this purpose could be made under the alternatives in LFB Issue Paper #717.]

C. Highway Engineering Positions

1. Approve the Governor's recommendation to provide \$722,000 SEG and 10.0 SEG positions in 2006-07 in the state highway rehabilitation program to allow the Department to add 10 highway engineers in regional transportation offices.

2. Modify the Governor's recommendation by adopting one or more of the following alternatives:

a. Provide \$551,500 SEG and 10.0 SEG positions in 2005-06, to allow the Department to hire the additional civil engineers in the first year of the biennium.

<u>Alternative C2a</u>	<u>SEG</u>
2005-07 FUNDING (Change to Bill)	\$551,500

b. Provide an additional \$1,371,800 SEG and 19.0 SEG positions in 2006-07 to restore the number of civil engineer positions that the Department had prior to the 2003-05 budget.

<u>Alternative C2b</u>	<u>SEG</u>
2005-07 FUNDING (Change to Bill)	\$1,371,800
2005-07 POSITIONS (Change to Bill)	19.00

c. Require DOT to include in its 2007-09 budget request a proposal to add engineering and other positions necessary to gradually increase the Department's capacity to conduct 50% of design work by Department employees.

3. Delete provision.

<u>Alternative C3</u>	<u>SEG</u>
2005-07 FUNDING (Change to Bill)	- \$722,000
2006-07 POSITIONS (Change to Bill)	- 10.00

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