



Senate Fiscal Agency
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BILL ANALYSIS



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Senate Bill 494 (Substitute S-1 as passed by the Senate)
Sponsor: Senator Jud Gilbert, II
Committee: Transportation

(as enrolled)

Date Completed: 8-12-08

RATIONALE

Before using a new paving material as part of any major road project, the Michigan Department of Transportation (MDOT) must conduct a life-cycle cost analysis to determine if the product or technology is cost effective. Life-cycle cost analysis can provide an accurate comparison of materials that may have different initial costs, taking into account durability, maintenance costs, and replacement costs. For example, a type of paving material that is slightly more expensive than others but has higher durability could prove to be more cost effective in the long run. Currently, a life-cycle cost analysis must be conducted based on data collected on Michigan roads. Some believe that this requirement could be preventing the adoption of innovative technologies that have been successful in other states. It has been suggested that MDOT should be allowed to use comparable data from other states to evaluate materials for which no Michigan data are available.

CONTENT

The bill would amend the Michigan Transportation Fund law to permit the Michigan Department of Transportation, in conducting a life-cycle cost analysis of a paving material, to use comparable historical data from other states if no Michigan data were available.

The law requires MDOT to develop and implement a life-cycle cost analysis for each product for which total pavement costs exceed \$1.0 million, funded in whole or in part with State funds. The Department must design and award paving projects

using materials with the lowest life-cycle cost.

The life-cycle costs must compare equivalent designs and be based on Michigan's actual historic project maintenance, repair, and resurfacing schedules and costs as recorded by the pavement management system, and must include estimates of user costs throughout the entire pavement life.

Under the bill, for pavement projects for which there were no Michigan actual historic project maintenance, repair, and resurfacing schedules and costs as recorded by the pavement management system, MDOT could use actual historical and comparable data for equivalent designs from states with similar climates, soil structures, or vehicle traffic.

The bill includes a statement of legislative intent "that this amendatory act provide the department with the necessary flexibility to use pavement designs which have not been used in Michigan but have been used successfully in other states".

MCL 247.651h

ARGUMENTS

(Please note: The arguments contained in this analysis originate from sources outside the Senate Fiscal Agency. The Senate Fiscal Agency neither supports nor opposes legislation.)

Supporting Argument

The cost of maintaining Michigan's roads and highways has risen significantly in recent years, emphasizing the importance of making the most of the State's limited transportation revenue. Identifying new

paving materials that have a long life and low maintenance costs is an effective way to keep costs down. For example, rubberized asphalt evidently has many advantages over other paving materials. Made from discarded tires, it is more elastic than traditional asphalt, and is less prone to cracking during the freeze-and-thaw cycle. Typical asphalt also cracks along fault lines in the underlying pavement structure, a process known as reflective cracking. The greater elasticity of rubberized asphalt reduces reflective cracking, and extends the life of the pavement. The material reportedly also has greater skid resistance, and produces less tire noise. Those characteristics could make rubberized asphalt an appealing pavement material on many Michigan roads, particularly given the State's severe freeze-and-thaw cycles, which can cause extensive damage each year. Despite the potential benefits of this and other innovative materials, however, current law prevents their adoption unless MDOT has completed a life-cycle cost analysis of the product on Michigan roads. Generally, the cost of conducting such a test can be prohibitive, and the test is often unnecessary since there are data available from other states. The climate and soil conditions in neighboring states such as Ohio and Indiana are similar to Michigan's and would allow reasonable comparisons of paving material wear and durability. By authorizing MDOT to use data from comparable states to conduct a life-cycle cost analysis, the bill would help to ensure that the State chose the best and most cost-effective material, while making it easier for MDOT to adopt new and promising paving materials.

Legislative Analyst: Curtis Walker

FISCAL IMPACT

The bill would have no fiscal impact on State or local government.

Fiscal Analyst: Debra Hollon

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.