

FY 2009 RESEARCH PROBLEM STATEMENT

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TITLE

PEA-09-05 Local versus State Bridge Construction Costs

PROBLEM (Description of need)

A major component in the delivery of the highway construction program is the Local Government Program, which provides policy and program oversight and support to ODOT Regions and Local Agencies for Local Agency project development and delivery processes. The program helps Local Agencies develop the right project, in the right way, at the right time and with the right cost.

Bridge replacement programs use either state or federal funds. Some local agencies believe that due to different project development standards and requirements, bridge projects managed by ODOT (Highway Bridge Replacement) and using federal funds are more costly than those managed by local agencies, using state funds. The belief is that, for equivalent structures, the local agency management of a state funded project results in a lower cost to the taxpayer than State management of a federal-aid project. If bridge replacement costs are indeed less with state funded local agency managed projects, then scarce resources could be stretched further to address Oregon's highway infrastructure needs.

Since 2002 about \$400 million in bridge replacement projects have been undertaken by local agencies under the OTIA I, II, and III programs. During this same period about \$70 million in Federal Aid bridge replacement projects have been undertaken by ODOT. This amount of construction provides an unprecedented opportunity to conduct a systematic comparison of project costs. The Highway Division's Local Government Section has done some preliminary analysis into this question, but the results have been inconclusive, and the issue requires a more complex approach than current resources allow.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

A literature review should be done to determine the extent to which other states may have addressed this question and what they have learned about differences between local agency project costs and state costs.

Data on both methods of bridge replacement projects will be assembled and compared. The analysis will have to control for numerous variables such as project size, location, construction methods, year of construction, inflation factors, non-bridge components, etc. Project development information and applicable requirements and standards will also be investigated to determine their effects on project costs. For example, federally funded ODOT-managed projects must conform to federal Buy America and Disadvantaged Business Enterprise requirements, while state funded projects do not.

Preliminary examination of database information suggests that certain counties have had enough bridge replacement projects since 2002 to provide a ready means to control for project location. For example, during this period Columbia County has had 7 local agency OTIA bridge replacement projects managed by the county and 6 federal-aid bridge projects managed by ODOT. Douglas, Jackson, and Polk Counties have also had

several OTIA and federal-aid bridge replacement projects.

The objective of the analysis will be to determine if, other things equal, state funded local agency managed bridge replacement projects tend to be less costly (in terms of dollars spent and time required) than comparable federal-aid ODOT-managed projects. If there are differences, the study should identify the principal reasons and develop recommendations for appropriate steps ODOT could consider in order to take advantage of possible cost or time savings. For example: the study may establish that cost savings are mostly evident in smaller bridges. If local agency management of projects can reduce costs, such steps might include expansion of the Fund Exchange Program and/or expansion of the Local Agency Certification Program.

BENEFITS

Knowing how state funded local agency versus federal-aid ODOT management of highway bridge projects influences overall bridge costs would help ODOT in making decisions about appropriate funding sources and project management methods, resulting in cost efficiencies and savings in tax dollars.

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