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Richard Travis
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May 31, 2007

Debbie K. Davenport
Auditor General
2910 North 44th Street
Phoenix, Arizona 85008

Dear Mrs. Davenport:

Our thanks to you and your staff for the open dialogue and professionalism displayed during the audit of the Arizona Department of Transportation (ADOT) Highway Maintenance Program.

Finding 3: Division should improve method to determine maintenance needs and allocate maintenance dollars.

Recommendations:

1. **To better ensure that the state highway system's life expectancy, operational efficiency, appearance, and safety are maximized, the Division should:**
 - a. Develop and implement guidelines on how to identify annually needed maintenance work which would include frequency schedules, as appropriate, and periodic inspections to identify needed work;
 - b. Develop and implement guidelines on how to prioritize maintenance work to ensure that the most important state-wide maintenance needs are met first within available resources;
 - c. Identify, quantify, and prioritize maintenance needs to be done annually; and
 - d. Identify work that cannot be done with existing resources to identify any maintenance funding gap.

Agency Response:

The finding of the Auditor General is agreed to and the audit recommendations will be implemented.

As described in the American Association of State Highway and Transportation Officials (AASHTO) Guidelines for Maintenance Management Systems (MMS), MMS have evolved from output-focused systems (work units, quantities, expenditures) of the 1970's to the integrated, performance-based, outcome-driven systems of today. The Level of Service (LOS) Maintenance Budgeting System program that ADOT has developed is a critical component of our MMS, it represents the state-of-the-art in

performance-based maintenance budgeting and its structure is consistent with the AASHTO guidelines.

LOS is a performance-based system that does not quantify work to be done or maintenance needs at a detailed level, but rather identifies the performance level or target that is desired and the resources necessary to deliver that performance level. The LOS Maintenance Budgeting System is designed to prioritize maintenance work statewide by the process of setting target grades for each category. For example, setting a target of A for traffic vs. a target of a B+ for roadside is setting a statewide priority of traffic control features above roadside features.

There has been some level of frequency recommendation for many years in the maintenance activity guidelines. For example, the activity for Routine Signal/Lighting Maintenance and Inspection specifies bi-monthly frequency for ramp meters and signals and semi-annual frequency for highway lighting. The Pavement Management System (PMS) is capable of setting the recommended frequencies for pavement activities. The guidelines will be reviewed for appropriate frequency recommendations and changes made as necessary.

The upgraded PECOS application will allow districts to identify maintenance work to be done and will enable the district to set priorities in the planning module of the application. When planning work annually, each org supervisor has a variety of resources available, including PECOS reports, LOS data, PMS data, accident data, and more. When implemented, the new PECOS will provide a highly-integrated maintenance management system that will include interfaces with the LOS, Feature Inventory System, Sign Management System, Pavement Management System and the Equipment Services database. The integration will better position the agency to identify and quantify the gap in resources.

2. **To ensure that state-wide maintenance needs are addressed, the Division should develop and implement a methodology to allocate monies to districts and regions based on state-wide needs and priorities, and each district's and region's relative needs and roadway responsibilities (for example, lane miles and traffic flow).**

Agency Response:

The finding of the Auditor General is agreed to and the audit recommendations will be implemented.

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The current allocation process has not resulted in any significant imbalance or differences in conditions among districts as supported by the data in the pavement management system, preliminary Level-of-Service (LOS) data, or any other currently available measure. We will review the current allocation process. The new LOS Maintenance Budgeting System will improve our ability to do state-wide prioritization and allocation of monies to the districts.

We will implement these recommendations, which we believe will improve our internal processes.

Sincerely,

Victor M. Mendez