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## Asset Inventory System: Pilot Project

### Problem

The SHA Fiscal Year 2004- 2007 Business Plan contemplates six general goals to improve the highway system. Each goal has a series of specific objectives with quantitative and qualitative measurements and target dates in order to be able to assess progress. Goal 3 in the Business Plan deals directly with the maintenance and quality of the highway system. Some of the specific objectives within this general goal include: Pavement Ride, Bridge Condition, Pavement Condition, Highway Signs, Line Striping, Roadway Appearance, Roadway Drainage, Roadway Lighting, etc.

The SHA has recognized the lack of a structured and consistent decision making process to help meet the goals established in the Business Plan. Consequently, the SHA decided to form the Asset Management Steering Committee with the participation of key SHA Offices and consultants to develop an Asset Management System Implementation Plan.

### Objective

The implementation work plan included a Pilot Study to evaluate and assess the kind of system (automated technology or manual survey) that can be used to collect asset inventory data and identify the most suitable system for the SHA. Some of the specific objectives of the Pilot Study were to:

- Collect automated inventory data on a representative sample of the state highway network
- Assess the validity of information collected in the asset inventory data trials
- Develop appropriate estimates of resources needed (man-hours, minimum staffing, number of vehicles, etc) based on information from the field trials
- Assess cost-effectiveness of various collection methods
- Identify shortcomings and benefits of each data collection effort

### Description

Two companies capable of performing automated video data collection (Roadware Group, Inc and Enterprise Information Solutions, Inc (EIS)) were selected to inventory roadside assets including point and linear maintenance features selected based on the objectives of the Business Plan. Additionally, the SHA Office of Maintenance (OOM) was asked to conduct a windshield type survey to complement the two automated systems and serve as a base case to compare against the automated inventory methods.

The Asset Management Steering Committee designated Applied Research Associates, Inc (ARA) to compare and evaluate the automated systems and the OOM survey, as well as to identify strategic points to help recognize a cost-effective system or combination of systems for the SHA.

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**Results**

The cost per mile of performing an asset inventory at a network level based on the information provided would be in the range of approximately \$105/mile to \$312/mile depending upon the approach or procedure selected. This range could account for a number of scenarios ranging from fully outsourced to some combination of existing in-house resources and outsourcing to create an asset inventory database.

Before proceeding with the next step, it is imperative for the SHA to define and delineate some important aspects regarding its present requirements and needs. The SHA should consider developing a plan for an asset inventory that is consistent with the objectives of the asset management system implementation, and that addresses the specific requirements and uses of the data needed. As part of this plan the SHA should...

- Identify the complete list of required assets and clearly define the specific associated attributes and/or features needed for the inventory database
- Consider who will be using the data and what type of privileges/rights these users will have over the data
- Create a document that defines the criteria and guidelines for asset characterization and extraction/capturing.
- Develop a training program for the SHA staff that would be involved in the asset inventory and asset management system implementation.
- Select the appropriate asset inventory system based on operational level needs that would satisfy SHA's data requirements
- Define the asset inventory system maintenance procedures and policies

**Report Information**

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