



Performance Review

Fleet Services Division of the Public Works and Transportation Department

September 18, 2006

Report No. 07-01

**Office of the County Auditor
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Executive Summary

This report presents the results of a Performance Review of the Fleet Services Division of the Public Works and Transportation Department. Our findings and recommendations, contained in pages 9 through 14, are summarized below.

Finding 1

Fleet Services has established a model program to monitor performance but should address program limitations to help ensure continuous improvement and employee accountability

- In Fiscal Year 2001, the Division developed and implemented the Process Audit and Competitiveness Examination (P.A.C.E.) program to conduct a detailed examination of its critical internal functions, processes and operations.
- We concluded the P.A.C.E. program is structurally sound and contains essential features. P.A.C.E. reviews are conducted systematically and periodically, by independent teams, who quantify results in six operational areas and prepare corrective action plans to remedy operational problems.
- However, P.A.C.E. appears to fall short of achieving two key program objectives: “continuous improvement” and employee accountability. Fleet Services officials provided insufficient evidence that P.A.C.E. results are consistently used by managers to (1) identify operational problems, modify internal processes and improve performance, and (2) hold individual employees accountable for their performance.
- Fleet Services officials acknowledge the P.A.C.E. program’s limitations, saying P.A.C.E. is evolving and was initially designed as an “informal management tool.”
- To address limitations with P.A.C.E., we recommend the Board of County Commissioners direct the County Administrator to: (1) develop an action plan and implementation timetable to ensure P.A.C.E. results are consistently used to improve performance and to hold employees accountable for their performance, and (2) report its progress in implementing the action plan to the Board in a preliminary report by March 31, 2007, and a final status report by September 30, 2007.

Finding 2

Improving mechanic productivity would help control rising Fleet Services costs

- Measuring employee productivity is important to help ensure quality services are provided at the lowest cost possible.
- Although Fleet Services collects and reports quarterly employee productivity data to the Office of Management and Budget (OMB) on “the percentage of labor hours

worked versus available annually,” this measure does not help managers ensure mechanics work as efficiently and effectively as possible.

- A better measurement of mechanic productivity is how timely mechanics complete work orders. To facilitate this measurement, many local governments use industry “flat rate” standards or have developed in-house timeliness standards based on historical performance data. As of July 2006 Fleet Services had established time standards for its “basic” repair and maintenance activities, such as checking and replacing fluids, belts and tires, which represents only 12% of all work. The balance of mechanical work performed does not have established standards, thus impeding managers’ ability to hold mechanics accountable for their productivity.
- We found that mechanic productivity, as measured by the average amount of time mechanics spent per work order, declined by 41% over the past three years. Mechanics took an average of one hour longer to complete each work order, from 2.44 hours in Fiscal Year 2003 to 3.45 hours in Fiscal Year 2005. Between fiscal years 2003 and 2005, the number of fire apparatus equipment maintained by the Division grew by 85. Completing repair orders for this special equipment takes an average of 7.8 hours, which is more than twice the average time required to complete orders for all equipment. This could account for approximately 20% of the decline in mechanic productivity during this time period. Fleet Services officials could not provide any further explanation for this decline in mechanic productivity. However, officials noted that since 2003 management has made a concerted effort to properly capture mechanic labor hours while reducing the number of work orders.
- Improving mechanic productivity would reduce the need for mechanics; for example, if Fleet could reduce time spent per work order by 27 minutes, to 3.0 hours, it would need five fewer mechanics and one less support staff, which translates into estimated annual cost savings of \$400,000.
- To better measure mechanic productivity and help ensure maintenance services are provided at the lowest cost possible, we recommend the Board of County Commissioners direct the County Administrator to (1) develop and implement time standards for the remaining repair and maintenance activities, (2) analyze historical work order data to identify specific reasons for declining mechanic productivity since Fiscal Year 2003, (3) develop an action plan and implementation timetable, including specific process changes, to evaluate mechanic productivity, and (4) report its progress in implementing the action plan to the Board in a preliminary report by March 31, 2007, and a final status report by September 30, 2007 that addresses mechanic productivity levels and the appropriateness of staffing levels.

Purpose and Scope

This report presents the results of a Performance Review of the Fleet Services Division within the Public Works and Transportation Department.

The purpose of this review is to assess the quality of Fleet Services' internal operational performance measurement system and to identify options to improve performance and reduce operating costs.

To accomplish our objectives, we:

- Reviewed pertinent performance measurement, general management and performance management literature;
- Analyzed available performance data on Fleet Services operations;
- Analyzed information provided by Fleet Services managers and employees relative to specific management processes and controls;
- Reviewed applicable Fleet Services Division records and documents, including relevant policies and procedures;
- Interviewed Fleet Services Division managers and employees;
- Conducted telephone interviews with selected fleet liaisons; and
- Benchmarked Fleet Services' performance against other large Florida counties

Background

The Fleet Services Division, within the Public Works and Transportation Department, maintains the County's fleet vehicles and operates the County's fuel system. As of July 2006, Fleet Services maintained 2,384 vehicles and equipment (see Exhibit 1). Fleet Services classifies vehicles and equipment as general purpose and special purpose.¹

Exhibit 1

As of July 2006, Fleet Services maintained 2,384 vehicles and equipment, including 294 vehicles owned by other governmental entities

	General Purpose	Special Purpose	Total
Vehicles/equipment maintained by Fleet Services	1,077	1,013	2,090
Maintained by Fleet Services/owned by other entities	113	181	294
Total	1,190	1,194	2,384

Source: Fleet Services Division

¹ General purpose vehicles are high speed, multipurpose road vehicles including sedans and trucks rated less than 1.5 ton with general purpose bodies. Special purpose vehicles are high speed, single purpose road vehicles such as motorcycles, tractor trucks, and trucks weighing 1.5 ton or greater.

The County’s fleet includes alternative fueled vehicles, including 139 compressed natural gas vehicles, 25 liquefied petroleum gas vehicles, and 24 electric vehicles.

The Division operates three Fleet Service Centers and 13 fuel sites throughout the County. The Division operates as an internal services fund, charging customers for fleet related services.² Each service center is self sufficient, meaning that expenditures equal revenues.

The Fleet Services Division is comprised of three sections: Vehicle Management, Inventory Control, and Equipment Maintenance. As shown in Exhibit 2 below, Fleet Services’ proposed Fiscal Year 2007 budget is \$11.6 million with 68 full-time equivalent (FTE) positions.

Exhibit 2
Fleet Services’ proposed FY 2007 budget and FTE positions

Entity	Budget	FTE
Vehicle Management Section	\$2,761,870	10
Inventory Control Section	\$3,014,390	6
Equipment Maintenance Section	\$5,805,780	52
Fleet Services Division	\$11,582,040	68

Source: Fleet Services Division’s proposed Fiscal Year 2007 operating budget

Vehicle Management

The goal of the Vehicle Management Section is to manage the County equipment fleet, ensuring adequate fleet size, composition and availability for County agency use. Vehicle Management plans, directs and controls all administrative work involving acquisition, assignment, utilization, replacement, and disposal of vehicles. The section also manages the Division’s financial system and is responsible for all financial activities of the internal services fund.

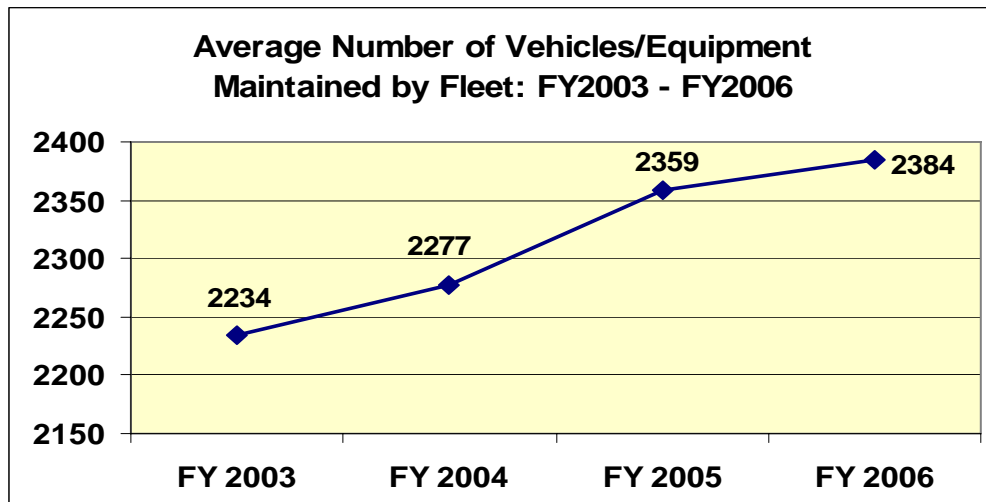
This section’s personnel analyze criteria for vehicle replacement, develop specifications and make recommendations for replacing vehicles to the County’s Office of Management and Budget. In Fiscal Year 2005, the average replacement age for general purpose vehicles was eight years and the average mileage at replacement was 87,324. For Fiscal Year 2007, Fleet Services has budgeted \$1.3 million for vehicle replacement.

As shown in Exhibit 3 on the next page, the number of vehicles and equipment maintained by Fleet Services has increased in the past several years. For example, the average annual fleet size increased by 6.7%, from 2,234 vehicles and equipment in Fiscal Year 2003 to 2,384 vehicles and equipment in Fiscal Year 2006.

² The internal services fund is established as a governmental leasing service, with the purpose of recovering the capital cost of general purpose vehicles.

Exhibit 3

The number of vehicles and equipment maintained by Fleet Services has increased by 150 (6.7%) since Fiscal Year 2003



Source: Fleet Services Division

Inventory Control

The Inventory Control Section’s goal is to efficiently procure, stock, and issue the repair parts and fuel needed by fleet utilization, ensuring adequate and available inventory. Inventory Control is responsible for developing, implementing and expanding the capacity of the Fleet Management System, while ensuring the overall efficiency and effectiveness of the inventory system.

Fleet Services provides fuel to all County agencies reporting to the County Administrator. The price charged to County agencies includes a distributor mark-up or discount, freight charges, Fleet Services’ fuel mark-up, and applicable taxes.

As of July 2006, the total value of the inventory was \$493,114. Exhibit 4 below shows fuel usage and cost for the past several fiscal years.

Exhibit 4

Fuel usage and cost for the past several fiscal years

Fiscal Year	Gallons	Cost
2003	1,138,902	\$1,628,907
2004	1,158,097	\$1,669,776
2005	1,188,168	\$2,419,748
2006 ³	992,198	\$2,968,483

Source: Fleet Services Division

³ Fiscal Year 2006 figures cover the period of October 1, 2005, to June 30, 2006

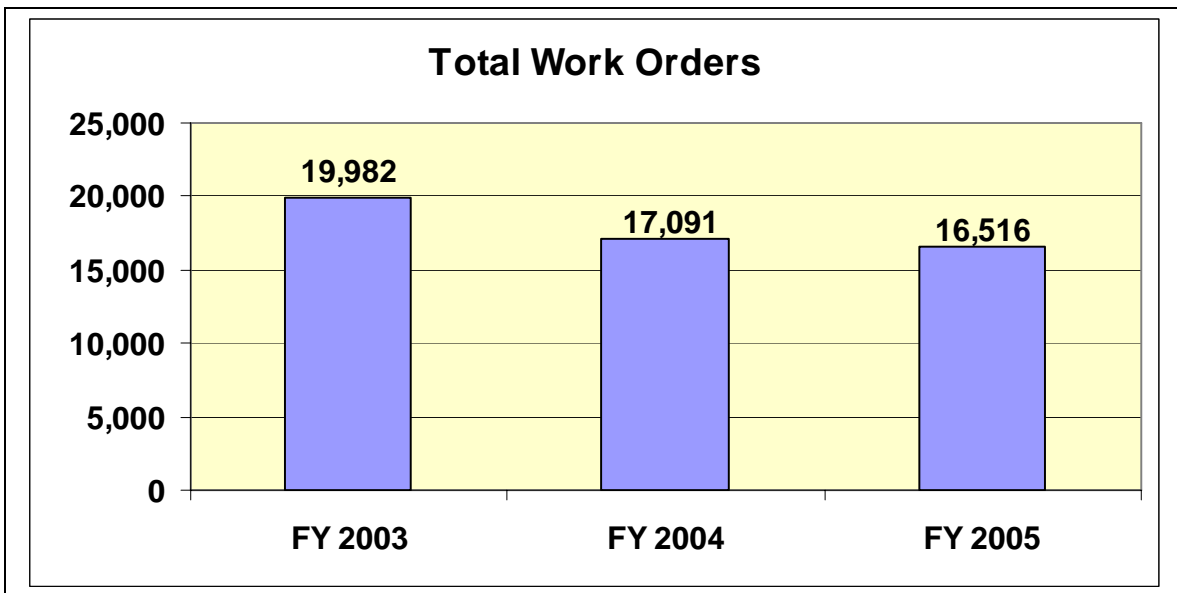
Equipment Maintenance

The goal of the Equipment Maintenance Section is to maintain the County equipment fleet for use by other County agencies at the lowest possible cost, ensuring fleet safety and reliability. According to the Fiscal Year 2006 operating budget, Equipment Maintenance is to “maintain an extremely aggressive preventive maintenance program so that scheduled repairs make up 70 percent of work volume.” Equipment Maintenance provides routine scheduled maintenance, such as oil changes and tire rotation, and unscheduled repairs of fleet vehicles, such as breakdowns, road calls and accidents.

As shown in Exhibit 5 below, the volume of maintenance work orders has declined over the past several years. For example, the number of work orders decreased by 17.3%, from 19,982 work orders in Fiscal Year 2003 to 16,516 work orders in Fiscal Year 2005.

Exhibit 5

The number of maintenance work orders declined between fiscal years 2003 and 2005 even though the number of maintained vehicles and equipment increased during the same period of time



Source: Fleet Services Division

Equipment Maintenance is the largest Fleet Services section, having 52 FTE positions, of which 46 are mechanics and 6 are support staff. Three-fourths of Fleet Services mechanics are Automotive Service Excellence (ASE) certified and 12 mechanics have one or more Emergency Vehicle Technician (EVT) certifications.

Findings and Recommendations

Finding 1

Fleet Services has established a model program to monitor performance but should address program limitations to help ensure continuous performance improvements and employee accountability

To effectively manage operations, Fleet Services managers need more information than what is reported quarterly to the Office of Management and Budget (OMB). The OMB measures generally relate to Fleet Services' overall performance rather than how it performs specific functions and activities. While the OMB data is useful to policymakers for accountability purposes it has limited utility to help managers quickly identify and correct operational problems.

For example, a performance measure Fleet Services collects and reports to OMB quarterly is the "percentage of time general fleet equipment is available." While this measure provides aggregate data on how quickly Fleet performs maintenance activities, it does not provide sufficient detailed information to help managers monitor whether any shop is experiencing difficulty meeting timeliness objectives.

In Fiscal Year 2001, the Division developed and implemented a program to conduct a detailed examination of its critical internal functions, processes and operations. The Process Audit and Competitiveness Examination (P.A.C.E.) program reviews data for 73 internal performance measures within six operational areas: health and safety including OSHA and environmental infractions; parts inventory operations; maintenance operations; business operations; computer operations; and fuel island operations.

In recent years, the P.A.C.E. program has garnered national recognition for its innovation. For example, Fleet Services received two national awards in 2003 and was awarded the California Fleet News Award in 2005 for Best Fleet Practices.

In a March 2005 report, the Office of the County Auditor evaluated the quality of the performance measurement and reporting systems for 64 County agencies. We found that Fleet Services was one of only four of twenty-six divisions examined that systematically collected and analyzed internal operational data through its P.A.C.E. program to efficiently and effectively monitor performance.

The P.A.C.E. program is structurally sound, contains essential features

We observed a P.A.C.E. review in April 2006 and analyzed P.A.C.E. review results for four service centers for the past five fiscal years. We also reviewed program documents and interviewed Fleet Services managers to obtain additional information about selected P.A.C.E. reviews.

We concluded that the P.A.C.E. program is structured to provide critical internal data to help managers effectively manage operations. P.A.C.E. contains several essential features, which enhance its effectiveness, including:

- Systematic: P.A.C.E. uses a standardized format, and measures and targets are modified periodically to ensure they remain relevant and meaningful;
- Periodic: P.A.C.E. reviews are conducted biannually, although historically some centers have received only annual examinations;
- Objectivity/independence: P.A.C.E. reviews are conducted by teams of at least two persons per area, who are trained to “further enhance the level and depth of examination in each particular area;”
- Quantitative: Each item in the examination is assigned a quantitative value, resulting in a numerical score for each of the eight areas reviewed, enabling comparisons across centers and over time; and
- Corrective action: Areas of “low performance” are brought to the attention of “responsible persons,” who prepare a corrective action plan for “immediate implementation.”

P.A.C.E. appears to fall short of achieving two key program objectives

Two key P.A.C.E. program objectives are “continuous improvement” and “employee accountability.” According to Division documents, the program was “designed to measure and document performance,” and provide for “constant improvement.” Division officials stated that the program seeks to “keep raising the performance bar” to continually improve its performance. Division officials also stated that P.A.C.E. program results are “incorporated into everyone’s annual performance evaluation” to ensure employee accountability as well as the program’s continued viability.

To ascertain whether these key objectives were achieved, we analyzed results of 29 P.A.C.E. reviews since Fiscal Year 2001 and performance appraisal forms for four Fleet Services managers since Fiscal Year 2002. We expected to see documentation showing that P.A.C.E. review results were consistently used by managers to identify operational problems, modify internal processes and subsequently quantify results or impacts of any process changes that were made. We found only one such example: from November 2004 to April 2006, Fleet Services was able to increase the Inventory Section’s “parts on demand rate” by 11% through better use of the automatic reorder function of the automated parts inventory system. We concluded that P.A.C.E. results have not been consistently used by Fleet management to make operational improvements.

Similarly, there is limited evidence that P.A.C.E. results are used to hold employees accountable for their performance; we identified three primary deficiencies:

- First, it is unclear how P.A.C.E. results are used to rate employees' performance. While all four managers' evaluations we reviewed specifically mentioned P.A.C.E., we found no apparent link between P.A.C.E. results and their performance ratings. For example, one superintendent received a satisfactory performance rating in 2003 even though his evaluation stated that "scores needed to be improved in four examined areas."
- Second, there is no apparent link between P.A.C.E. results and employee rewards and sanctions. A good accountability system provides incentives for good performance and disincentives for less than satisfactory performance. We found insufficient documentation tying P.A.C.E. results to rewards such as cash bonuses.
- Third, few employees' evaluations incorporate P.A.C.E. results. As of Fiscal Year 2006, only four managers' evaluations even mentioned P.A.C.E. even though the key program objective is to incorporate P.A.C.E. results into "everyone's evaluation."

Fleet Services officials said that the P.A.C.E. program is still evolving and that it was initially designed to be an "informal management tool." Consequently, Fleet Services officials could not provide us with sufficient evidence showing that the P.A.C.E. program has achieved its two key objectives of continuous improvement and employee accountability. In August 2006, Fleet Services officials acknowledged the P.A.C.E. program's limitations and said they would develop an action plan and implementation timetable to enhance its effectiveness.

Recommendations

To address the limitations of the P.A.C.E. program mentioned above, we recommend the Board of County Commissioners direct the County Administrator to take the following actions.

- Develop an action plan and implementation timetable to ensure continuous improvement and employee accountability. The action plan should specify the process needed to ensure Fleet managers routinely and consistently use P.A.C.E. results to identify operational issues, develop corrective action plans and monitor progress in correcting operational problems. The action plan should also specify how P.A.C.E. results are to be used in the annual employee evaluation process to provide appropriate incentives and disincentives for employee performance.
- Report its progress in implementing the action plan to the Board of County Commissioners in a preliminary report by March 31, 2007, and a final status report by September 30, 2007. The final report should include documentation showing specifically how P.A.C.E. results were used to improve operations and hold employees accountable for their individual performance.

Finding 2

Improving mechanic productivity would help control rising Fleet Services costs

Measuring employee productivity is important to help ensure quality services are provided at the lowest cost possible. Productivity is generally defined as the ratio between the quantity of goods and services produced to the quantity of resources used to produce them. Typically, this ratio is expressed as output to input; for example, inspections completed per staff day.

A productivity measure that Fleet Services collects and reports quarterly to the Office of Management and Budget (OMB) is the “percentage of labor hours worked versus available annually.” This measure, which represents a direct versus indirect time analysis, is a commonly used standard to measure employee productivity. This measure helps Division managers track the amount of time mechanics spend on maintenance work as opposed to other non-maintenance related activities. However, it does not help managers ensure the mechanics’ work is done as efficiently and effectively as possible.

A better measurement of mechanic productivity is how timely mechanics complete work orders. Fleet Services has collected data relative to the “amount of time mechanics spend per work order” since Fiscal Year 2001.

We analyzed available data to assess mechanic productivity; two common methodologies are comparing the average amount of time mechanics spend per work order to (1) a generally accepted industry standard or benchmark, and (2) its own performance over time. Our analysis disclosed that:

- Fleet Services has established time standards for only 12% of its repair and maintenance work, impeding managers’ ability to hold mechanics accountable for their productivity; and
- Mechanic productivity has declined substantially over the past several fiscal years, diminishing operational efficiency and program effectiveness.

Industry time standards

In the automotive industry, the use of time standards or “flat rate” standards is a common practice to hold mechanics accountable for producing work that is acceptable in terms of quantity and quality. Flat rate standard is defined as “the time necessary for a qualified worker, working at a pace ordinarily used, under capable supervision, and experiencing normal fatigue and delays to do a defined amount of work following the prescribed methods.” The use of flat rate standards by a fleet services organization is beneficial for the following reasons:

- Evaluating individual mechanic performance and productivity;
- Determining each mechanic’s training needs;

- Comparing the relative efficacy of various repair methods;
- Assessing labor and equipment requirements;
- Balancing and scheduling work loads; and
- Benchmarking with other local government fleet organizations

Many local governments use time standards to gauge mechanic productivity. Some local governments, such as Los Angeles County, California, and Maricopa County, Arizona, use time standards found in automotive industry reference manuals, such as Chilton, Mitchell, Haynes and Bosch. These manuals contain time standards for repair and maintenance work for most types of vehicles, by year, make and model. For example, for a 300 Series Chrysler Magnum, the 2006 Chilton Manual's time standard to complete oil and filter changes is .3 hours and to rotate tires is .6 hours. Time standards also take into consideration the skill level of the mechanic with "A" being the highest skilled individual and "C" being the least skilled.

Other local governments use time standards developed in-house from historical repair and maintenance data. For example, Palm Beach County, Florida, has developed and implemented time standards for its preventative maintenance services, tires and brakes. Miami-Dade County, Florida, uses time standards for all light vehicle repairs. The City of Indianapolis, Indiana, uses time standards for all vehicle repair and maintenance work.

In contrast, Broward County's Fleet Services Division uses time standards for only its "basic" preventative maintenance activities, such as checking and replacing fluids, belts and tires, which represent approximately 12% of all repair and maintenance activities performed Fleet mechanics. In August 2006, Fleet Services officials told us they planned to use historical performance data to develop time standards for the remaining repair and maintenance activities during Fiscal Year 2007.

Declining mechanic productivity

Mechanic productivity, as measured by the average amount of time mechanics spent per work order, declined by 41% over the past three years. Mechanics took an average of one hour longer to complete each work order, from 2.44 hours in Fiscal Year 2003 to 3.45 hours in Fiscal Year 2005.

Between fiscal years 2003 and 2005, the number of fire apparatus equipment maintained by the Division grew by 85. Completing repair orders for this special equipment takes an average of 7.8 hours, which is more than twice the average time required to complete orders for all equipment. This could account for approximately 20% of the decline in mechanic productivity during this time period.

Fleet Services officials could not provide any further explanation for this decline in mechanic productivity. However, officials noted that since 2003 management has made a concerted effort to properly capture mechanic labor hours while reducing the number of work orders.

Improving mechanic productivity would reduce the need for the existing number of mechanics. For example, if Fleet Services could improve mechanic productivity by reducing the average time mechanics spend per work order by 27 minutes, to 3.0 hours, it would need five fewer mechanics and one less support staff. This reduction in staff translates into estimated annual cost savings of \$400,000.

This is significant because most Fleet Services cost increases in recent years are outside the Division's control. For example, of the \$1.8 million projected cost increase from Fiscal Year 2006 to Fiscal Year 2007, \$1.2 million is for fuel and \$400,000 is for parts, while only \$200,000 is for employee salaries and benefits.

Recommendations

To better measure mechanic productivity and help ensure maintenance services are provided at the lowest cost possible, we recommend the Board of County Commissioners direct the County Administrator to take the following actions.

- Develop and implement time standards for the remaining repair and maintenance activities. Once these standards are adopted, and annually thereafter, these standards should be used to assess the extent to which each mechanic meets timeliness objectives.
- Analyze historical work order data to identify specific reasons for declining productivity levels.
- Develop an action plan and implementation timetable to evaluate mechanic productivity. The plan should specify changes that need to be made to maintenance work processes and incentives and disincentives that need to be adopted.
- Report its progress in implementing the action plan to the Board in a preliminary report by March 31, 2007, and a final status report by September 30, 2007. The final report should address mechanic productivity levels and the appropriateness of staffing levels.