

November 28, 2001

The Honorable Bill Purcell, Mayor  
Metropolitan Government of Nashville and  
Davidson County  
Metropolitan Courthouse  
Nashville, TN 37201

**Report of Internal Audit Section**

Dear Mayor Purcell:

We have recently completed a performance audit of the Metropolitan Government of Nashville and Davidson County's Fleet Operations. According to the *Government Auditing Standards* issued by the Comptroller General of the United States, "a performance audit is an objective and systematic examination of evidence for the purpose of providing an independent assessment of the performance of a government organization, program, activity, or function in order to provide information to improve public accountability and facilitate decision-making by parties with responsibility to oversee or initiate corrective action." A performance audit is different than a financial statement audit, which is limited to auditing financial statements and controls, without reviewing operations and performance. In performing this audit, we retained Transportation Consultants, Inc. (TCI) to work under our direction. Their final report dated November 2001,

*Metropolitan Nashville and Davidson County Fleet Performance Audit*, accompanies this letter and is hereby submitted to you.

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Internal Audit typically addresses audit reports to and obtains responses from the department head and the board or commission overseeing the department audited or, for departments without a board or commission, the department head and the Mayor. As more fully explained in the accompanying report from TCI, Metro's vehicle fleets and fleet operations have been fragmented among several Metro departments, namely General Services, the Fire Department, Water and Sewer, the Parks Department, and Public Works, all of which fall under the direct responsibility of the Mayor. Additionally, the Metropolitan Board of Education (MBOE) maintains fleets of school buses and other vehicles, and the Nashville Electric Service (NES), Metropolitan Transit Authority (MTA) and Metropolitan Development and Housing Agency (MDHA) maintain fleets of vehicles. The TCI report concludes that the fleets and fleet operations of the five Metro departments that report directly to the Mayor should be consolidated but that the fleets of MBOE, NES, MTA and MDHA are more distinct operations that would not benefit from significant coordination or integration with other Metro departments at this time. As a result, this report is being addressed to the Mayor, who has the ultimate overall managerial responsibility for the five Metro departments with fleet operations.

### **Objectives, Scope, and Methodology**

This audit represents the first comprehensive performance audit of Metro's fleet operations. The five Metro departments that were the primary focus of this audit have over 3,500 vehicles at a recorded cost of \$83.6 million. Those vehicles include police cars, fire trucks, ambulances, medium and heavy duty trucks, off road and grounds vehicles, cars, vans and light trucks. Metro's fleet is maintained in ten different garages by 75 mechanics and 33 other personnel at an approximate cost of \$8.7 million for the 2000-2001 fiscal year. The size and cost associated with Metro's other fleets are detailed in the accompanying TCI report.

The primary objectives of this performance audit were as follows:

- Review all major aspects of fleet operations for the five Metro departments, including assessing the efficiency and effectiveness of vehicle maintenance operations, capital replacement, vehicle utilization and parts inventory management.
- Compare Metro's cost of operations, key performance measures and overall operations to industry norms, benchmarks and best practices.

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- Assess the overall management of Metro's fleets, including organizational structure, staffing patterns, policies and procedures, and information technology.
- Review other practices associated with fleet management, including fuel management, take-home vehicle policies, cost recovery practices, and insurance policies.
- Develop findings and recommendations for any areas where performance could be improved.

Secondary objectives were to conduct a more in-depth review of the mechanical aspects of the MBOE and MTA fleets, to address any other significant aspects of the MBOE and MTA fleets not covered in their respective performance audits, to reassess the number of mechanics needed at MBOE, and to conduct high level reviews of the NES and MDHA fleets and fleet operations. The underlying rationale behind this work was to provide TCI's expertise for a high level assessment of departments that have more distinctive and less interdependent fleet operations.

The scope of the work included all aspects of operations related to the five Metro department fleet operations, and the audit focused on fiscal year 2001 performance and cost. Certain analyses required the consideration of financial results, performance and operations outside of that time period. The scope of work surrounding MBOE, NES, MTA and MDHA was similar but not as in-depth, given the more limited nature of the objectives of that work.

The methodology employed throughout this audit was one of objectively reviewing various forms of documentation, including written policies and procedures, financial information and various other forms of data, reports and information maintained by the five Metro departments and MBOE, NES, MTA and MDHA. Management and administrative personnel and mechanics at all major garage locations, as well as personnel from other Metro departments and other stakeholders, were interviewed, and various aspects of all fleet operations were directly observed. Data obtained from the various fleet maintenance systems in place was analyzed, and various aspects of fleet performance, cost and practices were compared to those of industry norms and to best practices.

We performed the audit procedures in accordance with generally accepted government auditing standards.

### **Findings and Recommendations**

TCI's report addresses the current fleet operations and the resulting findings and recommendations in detail. Following is an overview of some of the more significant findings and recommendations included in their report.

TCI found an overall lack of sound management over Metro's vehicle fleets and fleet maintenance operations. The current systems are fragmented, inefficient, and – in many areas – ineffective, sometimes resulting in unsafe conditions. It is important to note that mechanics and other fleet staff throughout Metro are hard-working and dedicated employees who genuinely appear to be trying to do their jobs in a professional and effective manner. The audit findings result from systemic problems due to the absence of a comprehensive, Metro-wide fleet management program with adequate systems and processes in place to support the staff responsible for the fleets and maintenance operations.

Overall findings with regard to Metro's collective fleet operations managed through General Services, the Fire Department, Water and Sewer, the Parks Department and Public Works are as follows.

- With the exception of the Motor Pool, auditor mechanical inspections uncovered unsafe vehicle conditions, particularly with regard to heavy equipment vehicles. Weekend safety inspections of 127 heavy equipment vehicles in operation at Water and Sewer and Public Works revealed safety problems on every vehicle inspected, resulting in those vehicles being taken out of service until they were repaired.
- Adequate capital replacement plans have not been in place, resulting in the fleets at Parks, Pubic Works, and Water and Sewer being excessively old and in poor condition. Additionally, the Motor Pool fund balance is being depleted because of the absence of a capital recovery plan for Police vehicles.
- There are not adequate information and fleet management systems in place, and each location has a different method of tracking fleet information, some of which are manual.
- For the locations where fleet management information is available, mechanic utilization is lower than industry norms, the level of preventative maintenance is lower than industry norms and the number of inactive vehicles is excessive.
- The cost of maintaining Metro's fleets is excessive when compared to industry norms.

- Mechanic training and certification were not always a priority, and most garage locations had safety and/or cleanliness issues, inadequate parts inventory accounting and controls, and poor tire management.
- Fuel management is not centralized, and adequate fuel information systems are not in place at all locations. Information on environmental compliance surrounding underground storage tanks was not easily obtainable.
- Central fleet policies are outdated, and management and maintenance procedures are not adequately documented in most garage locations.

TCI recommends consolidating Metro's fleets and fleet maintenance operations currently operating under General Services, the Fire Department, Water and Sewer, the Parks Department and Public Works. Organizationally, an Office of Fleet Management (OFM) should be established within General Services to be run by a professional fleet manager and other administrative staff who could manage a consolidated Metro-wide fleet operation. TCI recommends that the OFM include three main garage locations - one for light vehicles, one for heavy equipment vehicles, and one for grounds and other off-road equipment and vehicles, with a fourth heavy equipment garage that would provide limited inspections and preventative maintenance. Other aspects of this consolidation would include:

- OFM ownership of all vehicles, with departments leasing vehicles from OFM at rates that would fund a reasonable capital replacement plan.
- Full cost recovery for all maintenance and repair work.
- Consolidating existing garages into three main garages, plus a heavy equipment inspection/preventative maintenance location. Because Metro does not currently own an adequate alternative light vehicle garage facility, TCI is recommending further study surrounding a new location for a light vehicle garage, should the location of the existing Motor Pool be developed for other uses.
- Staffing the garages at levels that reflect industry norms, taking Metro's mechanic utilization experience into account.
- Centralizing all aspects of fuel management and conducting an additional study of the benefits of a fuel card program.
- A new fleet management information system that would support all aspects of fleet management and integrate into existing accounting and other systems.
- Updating all aspects of fleet policies and procedures.

It is estimated that implementing these recommendations would save \$2.9 million in fleet operating expenses over the next 5 years, while providing Metro with a well managed, safely maintained and appropriately utilized fleet. In addition to these savings, additional savings would be realized by a reduction in the fleet size through improved sharing and scheduling of heavy and other equipment. TCI has also recommended changing the fuel grade purchased, which would save Metro an estimated \$200,000 annually.

Other key recommendations include:

- Outsourcing tire management,
- Exploring the use of alternative fuel vehicles, and
- Considering self-insuring vehicle collision damage.

In order to implement the above, it is recommended that the Mayor appoint a task force with appropriate representatives from the five Metro departments that are consolidating their fleet operations, plus representatives from Finance, Human Resources, and Legal. Additionally, the existing executive order should be replaced by an executive order establishing an Office of Fleet Management and empowering that office to implement the recommendations made in this audit.

Given that the Office of Fleet Management will not be fully staffed until the 2002-2003 fiscal year, I am recommending that Metro obtain contract services to establish appropriate charge back rates and vehicle replacement rates for the 2002-2003 budget and to assist the task force and General Services in implementing the steps in Phase 1 of TCI's audit implementation plan, as needed.

With regard to the other departments and agencies reviewed, TCI found that NES was the best run fleet operation within Metro. NES's fleet and maintenance operations are well managed, and NES's fuel system and tire management program are models for the rest of Metro. TCI made a few recommendations for improvement to NES that were well received. Similarly, MDHA's fleet and maintenance operations are well run, and most of TCI's recommendations were implemented before this report was issued.

With regard to MTA, TCI recommended additional performance measurement and identified potential savings in parts management. Similar to the MTA performance audit, TCI recommended that MTA further analyze the number of mechanics and other maintenance workers needed to support the fleet. In the absence of reliable performance measures and other data, and given the more limited objectives and scope of their work at MTA, TCI was not able to recommend a specific target with regard to maintenance staffing. However, the overall cost of the fleet maintenance operation and other performance measurements suggest that staffing in that area may be higher than needed.

TCI's work at MBOE uncovered a number of problems in the bus maintenance operation, including identifying buses with potential safety problems that were pulled from service until they could be repaired. As a result, I previously recommended bringing in outside management on an interim basis in an attempt to provide the training and procedural changes necessary to improve the quality of the inspections and routine maintenance performed by the bus maintenance garage, and MBOE has established a separate contract for those services. Once the quality and efficiency of the work is up to a reasonable level and assuming the fleet size stays the same, TCI estimates that MBOE could reduce the number of mechanics on staff by 6 over the next three years, which is similar to the reduction recommended in the previous MBOE performance audit conducted by MGT of America. TCI also recommended that MBOE hire a fleet manager and that MBOE consider utilizing Metro's Office of Fleet Management for non-bus maintenance and repair needs.

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The Mayor's response to the audit recommendations surrounding the five Metro Departments is attached to this report. The portions of the TCI report related to MBOE, NES, MTA and MDHA have been provided to and reviewed with appropriate officials responsible for those departments and agencies. Those officials generally agree with TCI's findings and have committed to consider the related recommendations and respond to them in writing within two weeks of the issuance of this report.

We greatly appreciate the cooperation and help provided by General Services, the Fire Department, Water and Sewer, the Parks Department, Public Works, MBOE, NES, MTA, and MDHA.

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This report is intended for the information of the management of the Metropolitan Government of Nashville and Davidson County. This restriction is not intended to limit the distribution of this report, which is a matter of public record.

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Internal Audit Manager

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