

PERFORMANCE AUDIT

DEPARTMENT OF TRANSPORTATION
SUNSET FACTORS AND SUMMARY REPORT

Report to the Arizona Legislature
By the Auditor General
October 1987
87-12

DOUGLAS R. NORTON, CPA
AUDITOR GENERAL

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

LINDA J. BLESSING, CPA
DEPUTY AUDITOR GENERAL

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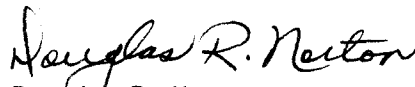
Members of the Arizona Legislature
The Honorable Evan Mecham, Governor
Mr. Charles L. Miller, Director
Arizona Department of Transportation

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Arizona Department of Transportation-Sunset Factors and Summary Report. This report is in response to a July 26, 1985, resolution of the Joint Legislative Oversight Committee.

Previous reports have addressed problems on the Department's two largest divisions. Audits were conducted on the Revenue Group Audit section and the commercial weight enforcement function of the Motor Vehicle Division, and on the highway maintenance equipment management, and construction management functions of the Highways Division. This report provides responses to the twelve statutory Sunset factors, and addresses recurring central management problems found in the Highways Division. The report also includes summaries of our five department audits.

My staff and I will be pleased to discuss or clarify items in the report.

Respectfully submitted,


Douglas R. Norton
Auditor General

Staff: William Thomson
Peter Francis
Deborah Klein

Enclosure

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Transportation (ADOT) in response to a July 26, 1985, resolution of the Joint Legislative Oversight Committee. The performance audit was conducted as part of the Sunset Review set forth in Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379. This report, the final in a series on ADOT, presents a response to the 12 statutory sunset factors and summarizes results of previous reports.

ADOT was established in 1973 by Senate Bill 1143, which combined the duties of the former Aeronautics and Highways Departments into a single agency. ADOT is responsible for providing an integrated and balanced state transportation system.

The Department is divided into five divisions under the Director's office.

- **Highways Division** (Estimated full-time equivalent employees (FTEs): 1,774) - Designs, constructs and maintains State highways. The Division is comprised of two major groups: Highway Development and Highway Operations. The Highway Development Group takes a project from inception to the point that a contract is awarded by the State Transportation Board. The Highway Operations Group is responsible for coordination, management and oversight of all construction to ensure that it meets specifications and that contractors fulfill their contractual obligations. The Group is also responsible for maintaining State highways.
- **Motor Vehicle Division** (Estimated FTEs: 841) - The Division is organized into five major groups: Field Services, Safety and Driver Responsibility, Integrated Services, Revenue, and Title and Registration. Field Services issues driver's licenses and conducts the weight enforcement program. The Safety and Driver Responsibility Groups administers the mandatory auto insurance law, administers the driver improvement and pupil transportation safety programs, and maintains records of DWI convictions. The Integrated Services Group maintains computerized records of vehicles registered, licensed drivers and vehicle titles. The Revenue Group collects taxes and fees from vehicle

registrations and driver's licenses, oil companies, and motor carriers. The Title and Registration Group is responsible for vehicle registration and titling.

- **Aeronautics Division** (Estimated FTEs: 15) – The Division develops and manages programs to assist and promote Arizona's aviation industry. The Division also registers and licenses general aviation aircraft.
- **Transportation Planning Division** (Estimated FTEs: 98) – The Division develops short-term policies, provides technical support, and periodically updates ADOT's long-range plans for integrated multimodal transportation.
- **Administrative Services Division** (Estimated FTEs: 281) – Performs service related functions for ADOT. Provides accounting and computer services for all divisions, forecasts revenues for the highway construction program, prepares the Department budget, prepares and implements all nonhighway contracts, operates the Department warehouse, and maintains and remodels all ADOT buildings in the Phoenix area.

Staffing and Budget

For fiscal year 1986-87, ADOT employed an estimated 3,098 full-time employees. Revenues for ADOT's operations are obtained from several sources, including the State Highway Fund, the State Aviation Fund and the General Fund. In addition to these funds, ADOT receives monies from the Federal government for highway construction. Federal funds are expected to total \$644 million over the next five years. Table 1 itemizes the Department's expenditures by program and type of expenditure, and the State fund summary.

TABLE 1

**ADOT ACTUAL AND ESTIMATED EXPENDITURES
BY DIVISION AND EXPENDITURE TYPE
AND ADOT FUND SUMMARY FOR
FISCAL YEARS 1985-86 THROUGH 1987-88
(UNAUDITED)**

	<u>Actual 1985-86</u>	<u>Estimated 1986-87</u>	<u>Approved 1987-88</u>
Program Summary			
Director's Staff	\$ 495,500	\$ 401,700	\$ 416,400
Highway Safety (a)	257,900	284,100	0
Highways Division	83,764,500	89,795,900	94,082,100
Transportation Planning	3,245,700	3,648,600	3,520,600
Public Transit Division	48,400	58,600	59,200
Administrative Services	19,002,100	22,638,700	24,117,500
Motor Vehicle Division	22,570,700	27,268,600	24,383,000
Aeronautics Division	527,200	694,200	709,500
Special Support Group	2,397,200	3,185,500	3,306,800
Total Programs	<u>\$132,309,200</u>	<u>\$147,975,900</u>	<u>\$150,595,100</u>
Expenditures			
FTE Positions	2,914.0	3,098.0	3,068.0
Personal Services	<u>\$ 50,650,900</u>	<u>\$ 55,813,800</u>	<u>\$ 57,646,500</u>
Employee Related Expenses	<u>\$ 10,578,000</u>	<u>\$ 11,877,300</u>	<u>\$ 11,721,500</u>
Professional And Outside Services	\$ 727,100	\$ 1,026,900	\$ 1,079,500
Travel - State	895,700	1,467,600	1,487,300
Travel - Out of State	90,200	112,500	110,500
Other Operating Expenses	12,599,000	15,439,700	16,944,500
Equipment	1,417,000	2,932,700	1,246,300
All Other Operating Expenses	<u>\$ 15,729,000</u>	<u>\$20,979,400</u>	<u>\$20,868,100</u>
Reduction (S.B. 1002)	<u>\$ 0</u>	<u>\$ (625,400)</u>	<u>\$ 0</u>
Subtotal	<u>15,729,000</u>	<u>20,354,000</u>	<u>20,868,100</u>
Operation Subtotal	<u>76,957,900</u>	<u>88,045,100</u>	<u>90,236,100</u>
Highway Maintenance	45,403,300	48,567,400	52,135,300
Special Line Items	9,948,000	11,363,400	8,223,700
Total Appropriated	<u>\$132,309,200</u>	<u>\$147,975,900</u>	<u>\$150,595,100</u>
Fund Summary			
State Highway Fund	\$131,717,800	\$147,201,000	\$149,800,300
State Aviation Fund	527,200	694,200	709,500
General Fund	64,200	80,700	85,300
Total Funds	<u>\$132,309,200</u>	<u>\$147,975,900</u>	<u>\$150,595,100</u>

(a) The Governor's Office of Highway Safety was transferred to the Department of Public Safety effective July 1, 1987.

Source: State of Arizona Appropriations Report, fiscal year 1988

Scope of Audits

Our performance audits of ADOT focused on the Department's two largest Divisions. Audits were conducted in the following areas.

Highways Division

Highway Maintenance
Equipment Management
Construction management

Motor Vehicle Division

Revenue Group
Commercial Vehicle Weight Enforcement

A third audit initiated within the Motor Vehicle Division – driver's licensing and title processing – was discontinued due to numerous operational changes that were being made at the time. ⁽¹⁾

In this report, we present responses to the 12 statutory sunset factors. We also discuss two central management problems we found in each of the three reviews we conducted on the Highways Division. Summaries of each report can be found on pages 15 through 33.

Our audits were conducted in accordance with generally accepted governmental auditing standards.

The Auditor General and staff express appreciation to the Director and staff of ADOT for their cooperation and assistance throughout each of our audits.

(1) The Joint Legislative Oversight Committee included the Motor Vehicle Division's driver's licensing and title processing function on the list of audits to be conducted during the 1989 sunset cycle.

SUNSET FACTORS

In accordance with Arizona Revised Statutes §41-2354, the Legislature should consider the following 12 factors in determining whether the Arizona Department of Transportation (ADOT) should be continued or terminated.

1. Objective and purpose in establishing the Department

In 1973 the Legislature enacted Senate Bill 1143, which merged the Highways and Aeronautics departments to form ADOT. ADOT's purpose is to provide an integrated and balanced state transportation system. A.R.S. §28-104.B requires ADOT to perform the following functions.

1. Register motor vehicles and aircraft, license drivers, collect revenues, enforce motor vehicle and aviation statutes, and perform related functions.
2. Do multi-modal state transportation planning, cooperate and coordinate transportation planning with local governments, and establish an annually updated priority program of capital improvements for all transportation modes.
3. Design and construct transportation facilities in accordance with a priority plan; and maintain and operate state highways, state airports, and state public transportation systems.
4. Investigate new transportation systems and cooperate with and advise local governments concerning the development and operation of public transit systems.
5. Have administrative jurisdiction of transportation safety programs and implement them in accordance with applicable law.

2. The effectiveness with which the Department has met its objective and purpose and the efficiency with which the Department has operated

We identified numerous ways ADOT could improve its efficiency and effectiveness within each of the divisions we reviewed.

- The Revenue Group Audit Section within the Motor Vehicle Division (MVD) could increase its effectiveness, and generate up to \$10.9 million

per year in additional audit assessments by increasing its audit coverage of commercial carriers. In addition, the Audit Section could increase its effectiveness by improving its audit selection procedures. Further, increasing the productivity of the Audit Section could increase revenue recovered through audit assessments by \$1.8 million to \$2.8 million annually. The Audit Section's effectiveness could be increased by establishing adequate controls to ensure the quality and integrity of audit modifications and taxpayer billings. Finally, the Audit Section's effectiveness could be increased by reducing the increase in the number of uncollectible accounts. (See Auditor General Report No. 86-7)

- The Motor Vehicle Division's effectiveness in enforcing commercial vehicle weight limits needs to be strengthened to control costly damage to roads caused by overweight trucks. MVD could improve its effectiveness by taking steps to stop trucks from bypassing ports of entry, fixing inoperative scales at MVD ports of entry, and increasing use of mobile crews in the interior of the State. As we note in our report, several statutory changes are also needed to support MVD enforcement. More should be done to hold companies liable for damage caused by their trucks when companies repeatedly violate weight limitations. (See Auditor General Report No. 86-9)
- ADOT's Maintenance Section could improve its efficiency by contracting out more maintenance activities. Private contractors have been able to perform several activities, such as curb sweeping and mowing, at less cost than ADOT. Further, effectiveness of the Maintenance Section could be improved by implementing needed improvements to the PeCos system used by the Section to plan, budget and control maintenance activities, and by establishing a method for evaluating district maintenance conditions. (See Auditor General Report No. 87-5)
- ADOT's Highways Division could improve its efficiency by increasing its control of construction staffing levels. Our analysis of construction engineering costs and other Statewide data indicates that overstaffing has cost the State an estimated \$7.4 million over the last four fiscal years. Further, ADOT's effectiveness could be increased by addressing system deficiencies in the Construction Engineering Manpower Management System (CEMMS). Currently, the system is not being used to effectively manage ADOT's construction engineering resources. In addition, ADOT has not adequately supported CEMMS. (See Auditor General Report No. 87-11)
- ADOT could improve its efficiency by reducing its fleet of cars and light trucks. ADOT could save more than \$1.7 million by not replacing 195 underutilized vehicles. Further, ADOT's Equipment Services Section could reduce the amount of time new vehicles remain unused before being placed into service. ADOT had 92 pieces of equipment worth approximately \$1 million at purchase that remained idle for six to 30 months. Finally, ADOT's Equipment Services Section could reduce the amount of time that District I's critical highway maintenance equipment is in the shop for repairs. (See Auditor General Report No. 87-9)

3. The extent to which the Department has operated within the public interest

ADOT's responsibility to provide an integrated and balanced State transportation system serves the public interest. The Highways Division designs, constructs and maintains State highways for public use. The Highways Division is in the process of expanding the highway system to improve public service. The Motor Vehicle Division's activities also serve the public interest. The Division has implemented a driver's license renewal by mail program to improve public convenience. Further, MVD has sought to implement changes in the title and registration process to reduce the amount of time it takes for the public to receive their titles.

4. The extent to which rules and regulations promulgated by the Department are consistent with the Legislative mandate

The Attorney General's Office is responsible for reviewing ADOT rules and determining if they are consistent with statute. The Attorney General's Office reviews Department rules through the formal certification process required by law.

5. The extent to which the Department has encouraged input from the public before promulgating rules and regulations and the extent to which it has informed the public as to its actions and their expected impact on the public

The Department has encouraged input from the public before promulgating rules and regulations by advertising proposed changes in the news media. Further, the Department holds public hearings before promulgating rules. In cases where rules and regulations may impact a specific group, the Department may send direct mailings notifying these groups of rule and regulation changes. For example, the Department recently changed the rules and regulations regarding prequalification of contractors. In this case, the Department sent a notice to contractors informing them of the proposed change.

The Department also involves the public in decisions regarding transportation projects. According to the Director of ADOT, "Citizens' advisory groups, public forums, public hearings, and meetings before local governing bodies are carried out routinely prior to construction projects being awarded."

6. The extent to which the Department has been able to investigate and resolve complaints that are within its jurisdiction

This factor does not apply since the Department is not a regulatory agency.

7. The extent to which the Attorney General or any other applicable agency of State government has the authority to prosecute actions under enabling legislation

According to ADOT's Attorney General representative, county attorneys prosecute actions relating to the Motor Vehicle Division laws. In our audit of the Motor Vehicle Division weight enforcement program, we found that the courts were not imposing sufficient penalties for violations. While some courts adhered to statutory fines, others reduced the amount of the fine. In June 1986, the Arizona Supreme Court issued a memo to all Arizona courts of limited jurisdiction advising them to impose the minimum statutory penalties, after this problem was brought to the Court's attention by our Office.

8. The extent to which the Department has addressed deficiencies in its enabling statutes which prevent it from fulfilling its statutory mandates

According to ADOT officials, ADOT has proposed legislation regarding the 65 mph speed limit bill, renewal of driver's licenses by mail, and the classification of driver's licenses for truck drivers. Further, ADOT played a key role in the legislation allowing counties to increase the sales tax by 1/2 cent with the proceeds going toward transportation improvements in the respective counties.

9. The extent to which changes are necessary in the laws of the Department to adequately comply with the factors listed in the Sunset Law

Our review of the Department indicated that statutes related to overweight trucks need to be amended to: 1) allow overweight axle citations to be issued even if the load is shifted, 2) assess higher penalties for repeat violations in excess of 2,500 pounds, and 3) permit courts to hold trucking companies or individuals who own or lease trucks jointly responsible with drivers for all weight violations.

10. The extent to which the termination of the Department would significantly harm the public health, safety or welfare

Termination of the Department of Transportation would have a detrimental impact on public welfare. ADOT designs, constructs and maintains the highway system for the entire State. Termination of ADOT would result in the loss of a Statewide system, and a perspective for planning, construction and maintenance of roadways that cross jurisdictional boundaries. According to the Director of the Department, termination of the Department would cause the functions currently performed by the Department to be assumed by the local communities. Further, he indicated that the cities and counties are not equipped to design, construct and maintain transportation facilities.

11. The extent to which the level of regulation exercised by the Department is appropriate and whether less or more stringent levels of regulation would be appropriate

This factor does not apply since the Department is not a regulatory agency.

12. The extent to which the Department has used private contractors in the performance of its duties and how effective use of private contractors could be accomplished

ADOT's greatest use of contractors is in its Highways Division, where contractors perform both construction and highway maintenance work.

Construction - Private contractors perform all road construction. In recent years, ADOT has also hired outside firms to assist in design and oversight of the construction program. However, ADOT may be able to expand its use of private contractors to perform the construction oversight function. In our audit of the construction function (See Auditor General Report No. 87-11), we found that ADOT could avoid increasing its current staffing levels by utilizing alternatives, such as contracting out more work, to meet anticipated short-term increases in workload. The primary advantage is that ADOT would only have to pay for the construction staff when they are needed. In addition to contracting out the oversight function, ADOT may be able to avoid increasing its staff size by contracting out specific functions such as surveying and lab work.

Maintenance Contracting - ADOT should continue to expand its use of contracting for the highway maintenance function. ADOT's Maintenance Section of the Highways Division hires private firms for maintenance activities such as rest area and picnic area maintenance, litter pickup, sweeping, trash collection, mowing, pumping and landscaping. The contract maintenance program has demonstrated that contractors are able to perform some maintenance activities at a lower cost than ADOT, while generally providing an improved level of service. In 1986, the approximate savings from the program were more than \$1.2 million.

Because of its cost effectiveness and improved level of service, the contracting program should be expanded. Many maintenance activities such as shoulder maintenance, culvert cleaning, guardrail repair and handpatching with premix are successfully contracted in other states.

RECURRING PROBLEMS FOUND IN THE HIGHWAYS DIVISION

Our three audits of the Highways Division revealed two common central management problems. First, management information systems that the Arizona Department of Transportation (ADOT) originally developed to provide better central control have experienced serious problems and are largely ineffective. A second but related problem is that ADOT's central office has not asserted a strong role in overseeing district operations.

Data Systems Are Deficient

The Highways Division is the largest division in ADOT, with operations throughout the State. In order to obtain better control of the construction, maintenance and equipment management functions, ADOT has spent considerable time and resources developing data systems. However, the data systems in these three major areas do not work as intended.

- **Construction** - In our construction audit, we found that the Construction Engineering Manpower Management System (CEMMS) was not used effectively. Since CEMMS was implemented in October 1982, ADOT has committed at least \$550,000 to the System, of which an estimated \$460,000 has been incurred by central office staff, with an additional \$93,000 paid to consultants. CEMMS was developed to plan and staff, budget, schedule, and monitor ADOT's construction engineering resources. Because of the System's ineffectiveness, it is not used to plan manpower needs. Further, CEMMS is not used to determine construction costs or monitor project progress. In addition, the construction orgs are not effectively using CEMMS to schedule personnel assignments and communicate the assignments to employees. Finally, although CEMMS is intended to identify significant problem areas, nearly half of the construction orgs do not receive CEMMS reports on a regular basis.
- **Maintenance** - In our maintenance audit, we found that the automated management system for planning, budgeting and controlling highway maintenance, called PeCos, did not work as intended. PeCos was implemented in 1971 to provide management support through an objective basis from which the maintenance program could be planned and executed. Despite its estimated \$720,000 annual cost, we found that PeCos was unreliable in projecting annual maintenance requirements, setting production rates for field staff, and assessing maintenance costs and resource requirements. Further, PeCos did not provide adequate operational support for central office and field management. For example, confidence in PeCos was so low that 11 of 12 of the org supervisors interviewed do not use, or even consider, PeCos planned accomplishments when scheduling maintenance work.

- **Equipment** - Central data management of the Equipment Services Section is performed through the Equipment Management System (EMS). However, the EMS system has shortcomings which severely limit its usefulness to both management and users. EMS was designed to track vehicle downtime. However, because of numerous errors the downtime information is unreliable. Further, we found shortcomings in the usefulness of the system for equipment utilization. The system was supposed to track equipment utilization, provide utilization analysis reports, provide fleet size analysis reports, set utilization standards, and provide utilization exception reports of below standard usage. However, the system is not used to monitor utilization.

Although problems have been brought to management's attention, ADOT has been slow to implement needed changes. Eight internal and external studies conducted on CEMMS pinpointed substantial changes needed to make the system viable. However, ADOT has not dedicated the resources needed to improve the system. Further, both a 1982 audit by our Office and a 1984 study conducted by a consultant hired by ADOT made recommendations for improvements to PeCos. Again, however, the recommendations of these studies have not yet been fully implemented. Finally, ADOT indicated in our 1983 report on the Equipment Section that the EMS system would be able to monitor utilization. Yet, the system is currently not performing this function.

ADOT Needs To Strengthen Central Oversight

ADOT's Central Office has not asserted a strong role in overseeing district operations of the Highways Division.

- **Maintenance** - In our maintenance audit, we found that central office had inadequate oversight of the maintenance function. Upper management, which oversees district operations, did not take a sufficient interest in maintenance management. The Deputy State Engineer of the Highway Operations Group, who oversees district operations, did not review any reports prepared by the Maintenance Section of the central office. Further, the Maintenance Section prepares and allocates the budget and oversees the maintenance management system; however, it had limited authority over district maintenance operations. As a result of limited authority, there is confusion as to the Maintenance Section's responsibility to monitor and control field performance. Thus, although the Section generates detailed reports on maintenance efforts, the Section does not review district conformance with performance standards or dictate how resources should be allocated.

- **Equipment Services** - In our audit of the Equipment Services Section, we found that oversight of equipment users was lacking. The Section had not developed standards for equipment utilization. Thus, exception reports showing users with inadequate utilization were not generated. Equipment Services officials indicated that the Section had only limited authority to take action when equipment was not sufficiently utilized. In addition to the lack of action by the Equipment Services Section, central management also failed to take action. Although central management was aware of problems with underutilization identified in our 1983 audit report, sufficient steps were not taken to ensure that recommendations were implemented.
- **Construction** - Central management has not taken a sufficiently aggressive role in controlling staffing levels and ensuring that CEMMS is properly utilized. Our audit revealed that ADOT's construction program was overstaffed. ADOT construction staff had not been adjusted based on workload. In addition, CEMMS, the manpower management system established to assist in adjusting construction staff levels to meet workload fluctuations, had not been fully utilized by ADOT. In fact, many orgs did not even receive reports generated by CEMMS. According to an ADOT consultant, central office staff involvement is essential for proper implementation of CEMMS. However, ADOT's central office had relinquished control of manpower management to the districts. Thus, ADOT lacks adequate Statewide management of construction engineering manpower.

(REPORT NO. 86-7) MOTOR VEHICLE DIVISION, REVENUE GROUP

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Transportation (ADOT) Motor Vehicle Division's Revenue Group, in response to a July 26, 1985 resolution of the Joint Legislative Oversight Committee. This performance audit is one in a series of audits on ADOT and was conducted as part of the Sunset Review set forth in Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379.

The Revenue Group serves as the revenue processing arm of the Motor Vehicle Division (MVD). The Revenue Group handles all revenues resulting from A.R.S. Title 28 (transportation code): approximately \$424 million annually. The major duties of the Revenue Group are to: 1) set up and monitor commercial carrier accounts to ensure compliance with Title 28 and other requirements; 2) receive, process and distribute all Title 28 tax and license revenues; and 3) audit commercial vehicle and distributor tax accounts to ensure proper tax reporting.

**Additional Audit Staff Could
Generate Millions of Dollars in Revenue
For the Highway User Revenue Fund**

The Revenue Group Audit Section does not conduct enough audits of commercial carriers. Currently the Section audits only about 2 percent of its accounts annually, resulting in potential lost assessments of as much as \$10.9 million per year. While audit coverage varies from state to state, Arizona's falls below that of several other states in at least two tax types.

Expanded audit coverage would substantially increase audit collections and improve compliance with Arizona tax laws. Increasing the Section's current coverage to 3.1 percent would produce approximately \$1.5 million in additional assessments, and could be accomplished with current staffing levels by implementing the productivity improvements recommended in Finding III (page 17). Increasing coverage to the 10 percent level would require 38 additional auditors, but could result in an additional \$10.9 million in assessments. The Audit Section should develop a plan to increase audit coverage and use the plan to request funding for needed staff.

Current Audit Selection Procedures Are Not Effective

The Audit Section's effectiveness is reduced by poor audit selection procedures. Currently, audits are selected based on individual, often arbitrary judgment and are not selected randomly. As a result, the Audit Section has audited 57 percent of the largest accounts we analyzed at least once in the past three years. Many of the largest accounts were audited repeatedly. The other 43 percent of large accounts and 96 percent of the remaining accounts we analyzed have not been audited. Because the Section focuses its efforts on a limited number of large accounts, most other taxpayers have little incentive to report their taxes properly. For example, one carrier who was reporting a zero monthly tax liability was assessed more than \$37,000 as the result of an audit. Such underreporting could be causing the State to lose substantial tax revenue.

To improve the effectiveness of its audit coverage, the Audit Section needs to develop selection criteria that ensure random coverage of accounts. Management should also review accounts to determine factors upon which selection could be based, including account size, to further maximize revenue recovery.

The Revenue Group Could Generate Additional Revenue By Increasing The Productivity Of Its Audit Section

The Audit Section could increase revenue recovered through audit assessments by approximately \$1.8 million to \$2.8 million annually by limiting special project assignments and automating auditor duties. Currently, auditors spend approximately 35 percent of their time on nonaudit duties. Using auditors for special projects has cost the State approximately \$4.3 million in the past three years, because the auditors were not using their time to generate audit assessments. MVD should limit use of audit staff for special projects.

The Audit Section could further increase productivity and generate more revenue by automating several audit processes. The experience of other audit organizations shows that the use of personal computers by auditors can decrease the time needed to complete each audit by 10 to 30 percent. This translates into additional audits with

an estimated \$351,000 to \$1.3 million in potential audit assessments. The Legislature should consider funding the Audit Section's 1987-88 budget request for eight microcomputers and software. Based on MVD's progress in implementing a computerized audit program, the Legislature should consider funding additional requests for computers in subsequent years.

The Audit Section Lacks Adequate Controls To Ensure Quality And Integrity Of Audit Modifications And Taxpayer Billings

The Audit Section does not have adequate controls to ensure accurate, justifiable audit assessment modifications and billings. Documentation to support audit assessment modifications reviewed by our staff was either weak or not available, even though the modifications resulted in reductions of the original assessment amount and ranged from approximately \$500 to \$368,000. Further, MVD audit supervisors did not sign-off on most of the modifications after the completion of each audit. The Audit Section also lacks adequate controls over assessment notifications, since individual auditors have control over both the audit and the taxpayer billing.

The Audit Section needs to enforce existing standards and policies governing assessment modifications and taxpayer notifications to ensure that all modifications are adequately documented and reviewed. ADOT's Internal Audit Section should periodically review the MVD Audit Section's internal controls over modifications and taxpayer notifications to ensure that they are adequate and are working as intended.

MVD Could Reduce Growth In The Number Of Uncollectible Accounts

The Revenue Group has difficulty collecting monies owed from commercial carrier accounts after all allowable collections procedures have been attempted. In order to prevent an increase in the number of such outstanding accounts, the Revenue Group could implement various monitoring procedures. For example, MVD could use a local publication to track in-State accounts entering bankruptcy proceedings so the State can file as a creditor before bankruptcy proceedings are final. MVD could also improve its ability to identify out-of-State accounts that may go bankrupt by monitoring the financial reporting of all carriers in and out of the State. It could also use an outside collection agency to track bankrupt out-of-State carriers.

(REPORT NO. 86-9) MOTOR VEHICLE DIVISION, WEIGHT ENFORCEMENT

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Transportation (ADOT), Motor Vehicle Division (MVD), weight enforcement function in response to a July 26, 1985, resolution of the Joint Legislative Oversight Committee. This performance audit is one in a series of audits on ADOT, and was conducted as part of the Sunset Review set forth in Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379.

Overweight trucks accelerate pavement deterioration and increase stress on bridge structures. This deterioration increases exponentially as truck weight increases. For example, a 100,000 pound truck does three times as much damage as an 80,000 pound truck. In order to mitigate the damage from overweight trucks, MVD has a weight enforcement program. This weight enforcement operation is comprised of 18 fixed ports of entry on the State's borders and several mobile scale crews that operate in the interior of the State.

Bypassing Of Ports Of Entry And Limited Enforcement Against Intrastate Traffic Weakens Weight Enforcement

Bypassing of ports of entry and limited use of mobile crews weakens MVD's enforcement effort. Although 33 paved roads lead into Arizona from surrounding states and Mexico, only 13 have ports of entry with operating scales. Although there is limited data on the number of trucks bypassing the ports, studies have shown that from 10 percent to 33 percent of trucks on Arizona highways are exceeding weight limits. MVD is preparing to implement a plan to prevent bypassing of ports; however, this plan will be limited to only the eastern border and portions of the northern border of the State.

Better enforcement is also necessary in the interior of the State to monitor those truckers who operate within Arizona's borders. For example, trucks carrying concrete, garbage, and sand and gravel frequently violate weight limits but travel only

short distances and do not pass through ports. MVD has placed a low priority on intrastate weight enforcement activities. Officers assigned to interior based mobile crews spend less than 50 percent of their time on weight enforcement.

Inoperative Scales Allow Many Trucks To Pass Through Ports Of Entry Without Being Weighed

Weight enforcement is further weakened because port scales are frequently inoperative. Because of frequent scale malfunctions, more than one-quarter million trucks, 13 percent of the trucks that could have been weighed in fiscal year 1984-85, were not weighed. One major cause of scale downtime is that port scales were not designed for the high traffic volumes at the ports. Another problem is that some of MVD's scale installations make maintenance and repair very difficult and costly. A 1985 ADOT report indicated that \$600,000 was needed to repair scales with significant maintenance problems.

MVD should consider purchasing heavier scales designed for high traffic volumes. Such scales cost approximately 10 to 15 percent more than the scales MVD has purchased in the past.

Overloaded Axles, Which Are Damaging And Occur Frequently, Cannot Be Cited Under Existing Law

Although overweight axles are a major cause of pavement damage, effective enforcement action cannot be taken in most cases. Truck related pavement damage is primarily caused by the weight on each of a truck's axles. Therefore, a truck with overloaded axles can cause damage even though its gross weight may be legal. However, current statutes require officers to allow shifting of a load when a vehicle is only over axle weight, not over gross limits. If the load is shifted to be within legal axle load limits, the driver cannot be cited. As a result, more than 90 percent of Arizona's weight enforcement violations between fiscal years 1982 and 1984 could not be cited.

The Legislature should consider modifying the statutes to allow citations for all overweight axle violations.

More Than One Third Of All Violators Are Not Assessed Minimum Statutory Fines

The judicial system often fails to enforce minimum statutory penalties against weight violators. Many courts incorrectly believe they have the authority to lower or suspend fines. As a result, 38 percent of overweight violators receive fines less than the minimum fines specified in statutes. The average fine reduction is \$750 for those fines that are reduced. This not only diminishes the deterrent effect of the penalties, but also translates into a revenue loss of approximately \$600,000 per year.

MVD should monitor fines imposed by the courts to ensure that the weight fine schedule established in statutes is applied. Noncompliance should be reported to the Arizona Supreme Court in order to ensure future compliance.

Greater Enforcement Effort Should Be Directed At Trucking Companies

Enforcement efforts should be directed at trucking companies as well as drivers. Although owners and companies may be responsible for overloads, they are currently not held accountable for weight violations committed with their trucks. Under existing statutes, courts are generally constrained to hold only the truck driver responsible for weight violations. This has provided sufficient enforcement problems that the City of Tempe enacted an ordinance that holds owners and drivers jointly liable for weight citation penalties.

Weight audits and civil penalties could also be used to direct enforcement action toward truck companies and owners. Audits of truck company weight records are an effective and efficient tool in identifying companies that repeatedly violate weight laws. Weight audits are successfully used by the state of Minnesota. After repeat violators are identified, civil suits can recover road damages they have caused. Texas and Minnesota have found that this action can be a very effective deterrent against intentional violations. For example, Texas collected more than \$1.3 million in damages in a seven-month period and has experienced a 30 percent reduction in gross weight violations since its civil program began in late 1984. Minnesota attributes a 55 percent reduction in overweight trucks between fiscal years 1982-83 and 1984-85 to weight audits and civil penalties.

The Legislature should consider amending the statutes to permit courts to hold trucking companies or individuals who own or lease trucks jointly responsible with drivers for all weight violations. In addition, the Legislature should consider giving MVD the authority to conduct audits of trucking company weight records. MVD should consider bringing civil action against companies that repeatedly violate weight limits.

**MVD Needs Better Information For Its
Weight Enforcement Program**

MVD needs more and better data on weight citations and on the location and movement of overweight trucks. Information on trucking company name, time and location of violation, fine amount, and truck weight is not presently available. MVD needs this information to evaluate its effectiveness, to enhance enforcement efforts against repeat violators, and to monitor court adherence to statutory fines.

(REPORT NO. 87-5) HIGHWAYS DIVISION, HIGHWAY MAINTENANCE FUNCTION

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Transportation (ADOT) in response to a July 26, 1985, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as part of the Sunset Review set forth in the Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379.

This is the third of several reports to be issued on the Arizona Department of Transportation. The report focuses on the Highway Maintenance Section of the Highways Division of ADOT.

Highway maintenance organizations (orgs) perform numerous maintenance activities including maintenance of paved surfaces, unpaved surfaces, unpaved shoulders, vegetation, roadsides, rest areas and landscapes. Major highway maintenance projects such as pavement overlays or reconstruction are generally performed by private contractors through the Construction Section of the Highways Division.

ADOT Should Continue To Expand Its Contract Maintenance Program

ADOT should expand its contracting of routine maintenance activities. ADOT's Maintenance Section uses private firms for maintenance activities such as rest and picnic area maintenance, litter pickup, sweeping, trash collection, mowing, pumping and landscaping. The contract maintenance program has demonstrated that contractors are able to perform some maintenance activities at a lower cost than ADOT, while generally providing an improved level of service. In 1986, the approximate savings from the program were more than \$1,200,000.

Because of its cost effectiveness and improved level of service, the contracting program should be expanded. Many maintenance activities such as shoulder maintenance, culvert cleaning, guardrail repair, and hand patching with premix are successfully contracted by other states. At a minimum, ADOT should evaluate the feasibility of contracting out these activities. In addition, the Legislature may wish to establish a technical advisory committee (consisting of representatives from

ADOT, private contractors and other persons knowledgeable in contracting and highway maintenance), to conduct a systematic evaluation of all maintenance activities to identify other activities that should be contracted.

ADOT's System For Planning, Budgeting And Controlling Highway Maintenance Continues To Need Significant Improvement To Meet Central Office And Field Management Needs

Despite its \$720,000 annual cost, ADOT's system for planning, budgeting and controlling highway maintenance, called PeCos, does not work as intended. PeCos is designed to help the central office plan an annual work program and budget available resources to accomplish the annual plan. PeCos should indicate the labor hours, and amount of materials and equipment required to do a given amount of work.

PeCos' usefulness is limited because key elements for: (1) projecting annual maintenance requirements, (2) setting production rates for field crews, and (3) assessing maintenance costs and resource requirements are inaccurate and unreliable. In eight of 12 activities reviewed, actual field productivity had no relationship to PeCos estimates. For example, for one of these activities, blading unpaved shoulders, daily production is estimated at either 4.5 or 4.6 shoulder miles; however, actual daily production ranged from .5 to 7.1 shoulder miles. This reduces PeCos usefulness as a planning and budgeting tool because reliable production estimates are necessary to develop a viable budget.

Nor does PeCos meet operational needs in the field. It does not enable area personnel to effectively plan and control the work of maintenance crews. Our analysis showed that confidence in PeCos is so low that 11 of the 12 org supervisors interviewed do not use, or even consider, PeCos planned work when scheduling maintenance activities.

ADOT Should Establish A Method For Evaluating District Maintenance Conditions

In addition to implementing needed improvements to its maintenance management system, ADOT needs to establish a method for evaluating the level of service provided by maintenance field crews. Field staff report the amount of work done but

do not systematically survey and report highway conditions. As a result, ADOT central office cannot compare highway conditions Statewide to direct resources to areas and activities of greatest need.

ADOT should consider adopting some methods used in other states. Florida and Ohio have supplemented their maintenance management systems by developing systematic approaches to evaluating maintenance conditions throughout their highway systems. Both states have developed condition standards. For example, one Florida standard requires that shoulders have no more than a 3 inch drop-off. Another standard requires that potholes be no greater than 1.5 square feet in area and 1.5 inches deep. Both Florida and Ohio send observers into the field each quarter to test for compliance with their standards.

Central Office Needs To Strengthen Its Oversight Of The Maintenance Function

Central office needs to strengthen its Statewide oversight of the maintenance function. Upper management, which oversees district operations, needs to take a greater interest in maintenance management. The Deputy State Engineer of the Highway Operations Group, who oversees district operations, does not review any reports prepared by the Maintenance Section of the central office. The Maintenance Section prepares and allocates the budget and oversees the maintenance management system; however, it has no line authority over district maintenance operations. As a result, Statewide oversight and enforcement is lacking. Deviations in field performance, such as an org that performs 100 percent less work on an activity than was planned, are not routinely pursued to determine if problems exist and corrective action is needed.

**(REPORT NO. 87-9) HIGHWAYS DIVISION
EQUIPMENT MANAGEMENT FUNCTION**

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Transportation (ADOT) equipment management function in response to a July 26, 1985, resolution of the Joint Legislative Oversight Committee. This performance audit is one in a series of audits on ADOT, and was conducted as part of the Sunset Review set forth in Arizona Revised Statutes §§41-2351 to 41-2379.

ADOT owns and maintains a fleet of approximately 3,450 pieces of equipment, with a total estimated replacement cost of \$64 million. The fleet consists of heavy equipment such as loaders, graders and snowplows, and lighter equipment, including a large passenger fleet. The Equipment Services Section is responsible for purchasing, maintaining and disposing of the equipment. However, according to Equipment Services officials, it does not have authority to control the size of the fleet.

Approximately 195 Cars And Trucks Could Be Eliminated From Its Fleet If ADOT Improved Efficiency and Did Not Replace Underutilized Vehicles

More than 15 percent of ADOT's cars and light trucks are underutilized and could be eliminated from ADOT's fleet, saving more than \$1.7 million in replacement costs alone. Based on a conservative measure of usage, we determined that ADOT could reduce its fleet by an estimated 195 vehicles. We believe this estimate is conservative because observations of construction field offices revealed that nearly 35 percent of assigned vehicles sat idle at each observed time during the day. The practice of assigning vehicles to individuals rather than pooling or using other alternatives contributes to the low usage. ADOT should require or encourage its employees to use alternative methods of transportation, including pooling vehicles and using personal cars.

Although ADOT has been aware of problems with underutilization, it has not taken sufficient action since our previous audit. In response to our 1983 audit, ADOT reduced the number of heavy equipment units in its fleet, and reduced the number of planned purchases of cars and pickups. However, ADOT did not develop a utilization

standard, and vehicle usage is not routinely reviewed. Further, the administrator of Equipment Services had not been given authority to recall or transfer any equipment that was underutilized or not justified. As a result, percentage of vehicles with low utilization (less than 1,000 miles per month) has increased from 43 to 48 percent.

ADOT Has Allowed \$1 Million Worth Of New Equipment To Sit Idle Too Long Before Placing It Into Service; Individual Units Have Been Delayed From Six Months To Two And One-Half Years

Ninety-two pieces of equipment worth approximately \$1 million at purchase have remained unused for six to 30 months before being placed into service. In contrast, other large fleet operations set goals of issuing new equipment well under two months. The following case examples illustrate the ADOT delays.

- In August 1984 ADOT accepted delivery of a number of 1-ton truck chassis, to which special beds were to be added. Five of these chassis, costing a total of \$48,000 at purchase, were not issued to users until January 1987.
- In mid-1985 ADOT accepted delivery of still more 1-ton truck chassis. As of June 24, 1987, 11 of these chassis were still on the Equipment Services lot, awaiting fabrication and attachment of special bodies.

Equipment Services' failure to issue equipment in a timely manner has resulted in wasted State funds as well as problems for some users. At a minimum, such extensive delays have led us to question whether several vehicles were really needed, at least at the time the purchases were made. Poor management and planning appear to have caused the excessive delays in issuing new equipment.

ADOT Could Reduce Equipment Downtime And Speed Repair Of Equipment Critical To Users

The amount of time critical highway maintenance equipment is in the Central shop for repairs is excessive. In extreme instances, equipment considered by highway maintenance foremen to be critical to their operations spent 100 days or more during a recent 12-month period in Equipment Services' central repair shop. A combination

of factors have caused this equipment to experience unnecessary downtime. Inadequate shop procedures for repair scheduling and tracking have contributed to the downtime. Changes that could decrease downtime include contracting out more repairs, keeping the shops open at night, improving the availability of parts for repairs, and evaluating equipment refurbishing decisions.

(REPORT NO. 87-11) HIGHWAYS DIVISION, CONSTRUCTION MANAGEMENT

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Transportation (ADOT), construction management function in response to a July 26, 1985, resolution of the Joint Legislative Oversight Committee. This performance audit is one in a series of audits on ADOT and was conducted as part of the Sunset Review set forth in Arizona Revised Statutes §§41-2351 through 41-2379.

ADOT oversees highway construction of all interstate, primary and secondary roadways to ensure that specifications are met and that contractors fulfill their legal obligations. To perform the oversight function, ADOT has approximately 600 construction staff located throughout the State. In recent years, ADOT has also contracted with private sector engineering consulting firms to provide oversight on some projects.

ADOT Has Not Adequately Controlled Construction Staffing Levels, Resulting in Overstaffing That Has Cost The State An Estimated \$7.4 Million Over The Last Four Fiscal Years

Over the last four years ADOT has overstaffed its construction function by 21 to 101 unnecessary staff annually, costing the State approximately \$7.4 million. Our estimate of overstaffing is based on analysis of data on three variables: 1) construction engineering (CE) costs, 2) the substantial variations in staff productivity, and 3) excessive amounts of non construction time charged by staff.

Our estimates were further supported by Auditor General staff field visits to construction orgs and ADOT's own field reviews which provided several examples of overstaffing.

- A District Two official acknowledges his district will be overstaffed by an average of 44 employees over the next 12 months.
- District Four maintains a permanent construction staff (averaging approximately 70 staff) year-round, although construction activities vary during the year due to climatic conditions. As a result, one resident engineer stated his org was overstaffed from eight to 14 positions for nine months of the year. Further, ADOT field reviews recently reported a surplus of 22 out of an average of 47 staff in two District Four orgs.

- ADOT field reviews also found significant amounts of excess hours charged to the survey function for several projects. ADOT found one project's survey charges overrunning estimates by 240 to 315 percent. Another project overran estimates by 6,000 hours. Central office staff attributed the overruns to staff charging excess time to this function.

ADOT's construction program will expand in three of the next five years. Before increasing staff size, ADOT should first consider making more use of consultant engineers, contracting out more of the construction engineering functions (such as surveying) and making better use of its own staff resources. These actions will help prevent staffing for peak workloads and the resultant overstaffing once the peaks have passed.

Because ADOT has failed to properly adjust past staffing levels to meet fluctuations in workload, we recommend that the Legislature consider setting and monitoring construction staffing levels, as is done in several other states. We also recommend a follow-up performance audit in two years to review ADOT's progress in managing construction staff size.

**ADOT'S Construction Engineering Manpower Management System
Is Not Being Utilized Effectively And
Needs Greater Management Support**

ADOT has not effectively used its construction engineering manpower management system (CEMMS) to adjust staffing levels based on workload. CEMMS was implemented in October 1982 to provide construction managers with tools to plan, schedule and control construction engineering personnel and costs.

We found, however, that despite the \$550,000 ADOT has committed to CEMMS since 1982, CEMMS is not being effectively utilized to manage CE resources.

- ADOT has not effectively used CEMMS' long-range labor planning and short-range project staffing functions to ensure that staffing levels are appropriate.
- The CEMMS budget function is not well understood or used by district personnel.

- ADOT has misused the CEMMS scheduling function, which if used properly, assesses short-term staffing needs and plans for efficient personnel use. For example, resident engineers have, in some cases, overstated staffing needs.
- CEMMS reports identifying ADOT construction engineering hours and cost overruns are not received by nearly half of the construction orgs. Some districts have stopped distribution of the reports. Without feedback, action cannot be taken to control costs. District personnel stated that even when problem projects are identified, little or no formal action is taken.

Although repeatedly informed of problems with CEMMS, ADOT management has taken little action to correct deficiencies or ensure system utilization. Problems with management direction, adequate district staff commitment, system analyses and updating and training have been reported to ADOT management regularly over the last five years by outside consultants and ADOT staff. ADOT upper management needs to make a firm commitment to address the problems with its manpower management system to ensure that ADOT uses its staff and other resources efficiently and effectively.



ARIZONA DEPARTMENT OF TRANSPORTATION

206 South Seventeenth Avenue Phoenix, Arizona 85007

EVAN MECHAM
Governor

October 29, 1987

CHARLES L. MILLER
Director

Mr. Douglas R. Norton
Auditor General
2700 N. Central Avenue, Suite 700
Phoenix, Arizona 85004

Dear Mr. Norton:

We are submitting the attached comments in regard to the Performance Audit of the Arizona Department of Transportation, Sunset Factors and Summary Report (No. 87-12). I appreciate the opportunity to provide these comments and have them included in the final report.

Sincerely,

Charles L. Miller
Director

CLM:RE:VN
Attachment



COMMENTS ON AUDITOR GENERAL'S REPORT 87-12

"A PERFORMANCE AUDIT OF THE
ARIZONA DEPARTMENT OF TRANSPORTATION
SUNSET FACTORS AND SUMMARY REPORT"

October 28, 1987

Auditor General's Report 87-12 contains the findings of the Auditor General concerning the twelve statutory sunset factors. In addition to these factors, the Auditor General has included summaries of recently completed audits conducted within the Arizona Department of Transportation.

Following are brief comments relative to each of the performance audits conducted in the Arizona Department of Transportation:

PERFORMANCE AUDIT 86-7
MOTOR VEHICLE DIVISION - REVENUE GROUP

This audit contains five findings relating to the operation of the Revenue Group. The department agrees with each of the findings and has taken action to respond to specific Auditor General recommendations. The department's detailed response to this report can be found in Audit No. 86-7, dated August 1986.

PERFORMANCE AUDIT 86-9
MOTOR VEHICLE DIVISION - WEIGHT ENFORCEMENT

Audit 86-9 contains six findings: five relating to the operation of the Weight Enforcement Section of the Motor Vehicle Division and one directed to the judicial system. The department has initiated steps to respond to each of the ADOT recommendations presented in the audit report. The department's detailed response to this report can be found in Audit No. 86-9, dated December 1986.

PERFORMANCE AUDIT 87-5
HIGHWAYS DIVISION - MAINTENANCE FUNCTION

Audit Report No. 87-5 contains four findings relating to the Maintenance function within the Highways Division. The department generally agrees with these findings and has initiated action to respond to the specific recommendations made by the Auditor General. The department's detailed response to this report can be found in Audit No. 87-5, dated August 1987.

PERFORMANCE AUDIT 87-9

DEPARTMENT OF TRANSPORTATION - EQUIPMENT MANAGEMENT

Audit 87-9 contains three findings relating to equipment management within the department. The department concurs with two recommendations and partially concurs with the other. Steps have been taken to respond to each of the recommendations presented by the Audit General. The department's detailed response to this report can be found in Audit No. 87-9, dated October 1987.

PERFORMANCE AUDIT 87-10

DEPARTMENT OF TRANSPORTATION - CONSTRUCTION MANAGEMENT

The Arizona Department of Transportation adamantly and totally disagrees with Finding I contained in Audit 87-10. The Department concurs with Finding II regarding the improvement and utilization of the Construction Engineering Manpower Management System.

The Department's detailed responses to this report can be found in Audit No. 87-9, dated October 1987.