



PENNSYLVANIA TURNPIKE COMMISSION

A PERFORMANCE AUDIT

JANUARY 2013

JACK WAGNER, AUDITOR GENERAL

**PENNSYLVANIA DEPARTMENT OF THE AUDITOR GENERAL
BUREAU OF SPECIAL PERFORMANCE AUDITS**

January 8, 2013

Mr. William K. Lieberman, Chairman
Mr. Craig R. Shuey, Acting CEO
Pennsylvania Turnpike Commission
Post Office Box 67676
Harrisburg, Pennsylvania 17106-7676

Dear Messrs. Lieberman and Shuey:

Enclosed is our report that presents the results of our performance audit of the Pennsylvania Turnpike Commission. This audit is required under state law, specifically Section 706(b) of the Administrative Code of 1929, added by Section 1 of the Act of October 23, 1988 (P.L. 1059, No.122). Specifically, the law requires the Department of the Auditor General to conduct, on a quadrennial basis, a financial audit and a compliance audit (i.e., a type of performance audit) of the affairs and activities of the Commission.

Our performance audit covers the period of January 1, 2007, through August 31, 2011, unless otherwise indicated, and was conducted in accordance with generally accepted government auditing standards as issued by the Comptroller General of the United States.

With regard to the financial audit requirements, we have followed the same practice that my predecessors have followed since Act 122 went into effect, meaning that we did not conduct our own multi-year financial audit and instead reviewed audits and supporting documentation of the independent firm who annually audits the Commission's financial statements. Accordingly, we have reviewed those financial audits and the applicable working papers for the five fiscal years ending May 31, 2006, through May 31, 2010. My legal staff has advised me that this practice is sufficient to satisfy the audit mandate in Act 122.

In Finding One, we detail how the Turnpike Commission is losing money by allowing its employees to have unlimited toll-free access to the turnpike. We assert that the policy of allowing employees to have toll-free personal travel is in violation of the Trust Indenture, and we recommend that the Commission immediately cease the practice of toll-free personal travel for its employees.

In Finding Two, we highlight the Commission's inadequate oversight of its toll-free travel policies for contractors, consultants, and other state government officials, including the State Police, we recommend greater accountability and transparency related to toll-free travel.

Finding Three gives credit to the Commission for actively monitoring the E-ZPass system while Finding Four credits the Commission for monitoring, maintaining, and inspecting the turnpike tunnels yet highlights areas where we believe the Commission can do more to ensure safety.

In Finding Five, the report states that the Commission lacked transparency and accountability with regard to the commissioners travel expenses and we offer several recommendations to assist the Commission in reducing these expenses and providing improved transparency and accountability.

Finally, in Finding Six, we explain how the Turnpike Commission's use of interest-rate "swaps" cost \$108 million more than if the Commission had instead financed with fixed rate bonds. We reiterate my position that government entities should not gamble with taxpayer's monies and, therefore "swaps" should not be used as an instrument for financing debt.

The Department of the Auditor General previously reported in our Comprehensive Annual Financial Report that the Turnpike Commission is facing a worsening financial picture due to the burden placed on it with the passage of Act 44 of 2007. Although discussion about the burden of Act 44 is not specifically part of this audit, the burden relates to several findings in this report. The Commission has stated that it will raise tolls on its customers annually as a way to continue to finance the debt incurred in order to meet the required annual payment to PennDOT. The Commission is raising tolls at the same time that it continues to provide unlimited toll-free travel to its own employees, consultants, contractors and others. Additionally, because the Commission must issue bonds each year to cover its payment to PennDOT, we continue to assert that the Turnpike should not enter into any more swap transactions and further expose the Turnpike Commission to unnecessary risk.

In closing, we are pleased by the Turnpike Commission's positive response to many of our recommendations and we encourage the Commission to implement all the recommendations contained in this report.

Sincerely,

JACK WAGNER
Auditor General

cc: The Honorable Tom Corbett, Governor

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**Results
in
Brief**

In this special performance audit of the Pennsylvania Turnpike Commission (which we refer to as the Turnpike Commission or Turnpike), we found that the Turnpike Commission gave its employees and others (including consultants, contractors, and other state government officials) toll-free travel on the turnpike with little oversight over this usage. Further, we found that the Turnpike Commission incurred losses of \$108.9 million from its use of swap agreements. We reviewed the Turnpike commissioner expenses and found that travel reimbursement policies existed which were overly generous and permissive. We also found that while the Turnpike Commission monitored, maintained and inspected its tunnels, it has not implemented critical project management practices that would ensure tunnel inspection recommendations are implemented. Finally, and to the Turnpike's credit, we found that it has actively monitored the E-ZPass system to ensure correct fares are charged to Turnpike customers.

Our performance audit covers the period January 1, 2007, through August 31, 2011, unless otherwise noted. We conducted this audit in accordance with generally accepted government auditing standards as issued by the Comptroller General of the United States. Included in this audit report is an update to the recommendations we made in June 2008 when we last conducted a performance audit of the Turnpike Commission. Act 122 of 1988 requires us to audit the Turnpike Commission on a quadrennial basis.

Overall, we developed six findings and present 20 recommendations, summarized as follows:

Finding One: The Turnpike Commission lets its employees ride the turnpike toll-free, even for personal travel, costing the Turnpike millions of dollars in lost revenue. This generous perk continues with little oversight at a time when the Turnpike raises tolls for other travelers in its struggle with mounting debt.

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This finding discusses the Turnpike Commission's policy of allowing its employees toll-free access to the turnpike, whether the employee is on business or personal travel status. The Turnpike Commission concedes that it makes no distinction between personal or business toll-free travel, and therefore does not track employee personal toll-free usage. We believe this policy violates the Trust Indenture, which states that toll-free travel is to be for official use only. Additionally, the Turnpike Commission has little control over the devices used for granting toll-free travel, which could lead to possible cases of abuse.

To address Finding One, we recommend that the Turnpike Commission should (1) immediately stop granting personal toll-free travel to its employees. In addition, the Turnpike should adhere to the Trust Indenture provision that allows toll-free travel to employees in the "discharge of official duties" only. Accordingly, the Turnpike must rescind the policies that were implemented that violated the spirit of the Trust Indenture by decreeing that employees were on duty anytime they traveled the turnpike; and (2) aggressively and accurately monitor toll-free business travel to verify it indeed occurs in the actual "discharge of official duties" as per the Trust Indenture.

Finding Two: *The Turnpike Commission provided more than \$4.1 million of toll-free travel to nearly 5,000 consultants, contractors, and other state government officials. With little supervision over toll-free travel usage, the Turnpike could not ensure taxpayers that toll-free travel was limited to authorized use only.*

This finding discusses the Turnpike Commission's lack of oversight regarding the toll-free travel provided to non-employees. The Turnpike Commission issues an unlimited number of non-revenue cards to the contractors and consultants it hires without monitoring the toll-free travel usage. The Turnpike also issues highly mobile hybrid E-ZPass Transponders to the Pennsylvania State Police and other state

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officials for toll-free travel and relies on those agencies to ensure the usage is appropriate.

To address Finding Two, we recommend that the Turnpike Commission should (1) reexamine its practice of distributing toll-free travel privileges to an unlimited number of non-employees and take steps to reduce the number of persons given that privilege as soon as possible; (2) improve its oversight of non-employee toll-free usage by, at a minimum, including a photo on its non-revenue cards and requiring Turnpike Commission staff to monitor non-employee toll-free travel; and (3) be transparent about the toll-free travel it grants to all parties, including its own employees, state officials, and other non-employees, by posting monthly usage reports on its website.

Finding Three: The Turnpike Commission actively monitors the E-ZPass system to ensure correct fares are charged. Additionally, the Turnpike Commission conducts its own audits of the E-ZPass vendor.

This finding details the Turnpike Commission's process for monitoring its E-ZPass system. We found that the Turnpike Commission actively monitors the E-ZPass system by: conducting audits of TransCore (the E-ZPass administrator), testing of the E-ZPass system, testing new technologies at the Turnpike's test lanes, and using the Turnpike's alert monitoring system.

To address Finding Three, we recommend that the Turnpike Commission should (1) consider testing vehicles that exceed passenger vehicle specifications when conducting its random testing of the E-ZPass system; and (2) require TransCore to extend its E-ZPass customer service center phone hours beyond normal work hours. At a minimum, the E-ZPass customer service center should have extended evening hours on at least one day of the week.

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Finding Four: *While the Turnpike Commission monitored, maintained, and inspected its tunnels, it has not implemented critical project management practices that would ensure recommendations resulting from tunnel inspections are not overlooked.*

In Finding Four we discuss the Turnpike Commission's lack of safety-related devices including tunnels that do not have video cameras, fire detection systems, and suppression systems. The Turnpike Commission also lacks key project management components including an inspection database system that tracks tunnel inspections activities, and a single administrator who solely coordinates the tunnel work.

To address Finding Four, we recommend that the Turnpike Commission should (1) install video cameras in tunnels that do not already have video monitoring capability as soon as possible; (2) install fire detection and suppression systems in the tunnels that do not already have such detection systems as soon as possible; (3) ensure that each tunnel undergoes a routine inspection at least once every two years in accordance with its own guidelines and the pending FHWA regulations; (4) immediately expand the development and deployment of the OneDOT tunnel management tracking system so that all tunnel inspection recommendations and their implementation status are captured; (5) assign a person to be solely responsible for tunnel management. This person should coordinate all engineering, maintenance, inspection, and safety issues related to the turnpike's five tunnels; and (6) maintain its meeting schedule to ensure tunnel issues are addressed timely if the Turnpike Commission is going to continue to use a tunnel management committee as a monitoring tool.

Finding Five: *The Turnpike Commission is overly generous and permissive when reimbursing commissioners for expenses. Further, the Turnpike lacks transparency and accountability with regard to these expenses.*

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This finding details the excessive charges incurred by the Turnpike Commission on behalf of its commissioners, including Turnpike owned vehicle usage. The Turnpike Commission placed no monetary limitations on travel expenses of commissioners and reimbursed them for all claimed expenses without adequate supporting documentation.

To address Finding Five, we recommend that the Turnpike Commission should (1) place monetary limits on commissioners travel expenses. Commissioners should lead by example and abide by the monetary limits of any other Turnpike Commission employee; (2) require the commissioners to submit proper documentation (e.g., itemized receipts and appropriate justifications) for any expenses that exceed the monetary limits. Further, the Turnpike should not reimburse travel expenses that lack appropriate receipts; (3) discontinue the practice of providing personal vehicles for the commissioners and instead should reimburse commissioners for vehicle mileage incurred for business use only at current Internal Revenue Service rates; (4) not use the travel expense voucher process to pay for commissioner purchased cellular devices and other electronic equipment. Instead, the Turnpike's purchasing office should purchase these items to ensure the items are necessary and obtained at the most competitive price; and (5) post monthly expenses for its commissioners on its website in order to provide more accountability and transparency.

Finding Six: *The Turnpike Commission's use of interest rate "swaps" has cost the taxpayers and its toll-paying customers at least \$108.9 million dollars more than if the Turnpike had instead financed with conventional fixed rate bonds.*

In Finding Six we detail the problems inherent in the Turnpike's use of swap agreements. In our opinion, these highly complicated financial instruments are too risky and should never be used to finance public debt. Although disputed by the Turnpike Commission, we calculated that

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\$108.9 million has been lost through the Turnpike's use of swaps.

To address Finding Six, we recommend that the Turnpike Commission should, (1) terminate all remaining swaps as soon as it is fiscally responsible to do so and refinance, if necessary, with conventional fixed-rate bonds; and (2) promptly adopt a resolution unequivocally and permanently prohibiting the use of swaps in the future.

Response from the Turnpike Commission

The Turnpike Commission's response to our findings and recommendations and our evaluation of that response are presented on pages 91-102.

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Introduction and Background

This report by the Department of the Auditor General presents the results of a performance audit of the Pennsylvania Turnpike Commission (which we refer to as the Turnpike Commission or Turnpike), which operates and maintains the Pennsylvania turnpike. Listed below is general background information on the Turnpike Commission. This information provides a context for our audit.

Enabling legislation and amendments

The Turnpike Commission was established as an instrumentality of the Commonwealth by Act 1937-211, 36 P.S. §652a *et seq.* The Turnpike was given the power to construct, maintain, and operate a turnpike at locations approved by the Pennsylvania Department of Transportation (PennDOT). The law also gave the Turnpike authority to issue revenue bonds, to pay construction costs, and to collect tolls for the payment of the bonds, among other powers and duties.

Act 1985-61, the “Turnpike Organization, Extension and Toll Road Conversion Act,” expanded and modified earlier legislation and granted additional powers to the Turnpike.¹ Specifically, Act 61 authorized and empowered the Turnpike to undertake a program of capital improvements, as well as other construction projects, and authorized the issuance of revenue bonds to pay for the cost of such projects.

Act 44 of 2007² continued the Turnpike Organization, Extension and Toll Road Conversion Act. On July 18, 2007, the Governor signed Act 44 into law, creating a “public-public partnership” between the Turnpike and PennDOT to provide funding for roads, bridges, and transit throughout the Commonwealth. Under Act 44, a Lease and Funding Agreement was entered into by the Turnpike and PennDOT on

¹ 36 P.S. §651.1 *et seq.*

² 74 Pa C.S.A. §8101 *et seq.* and 8201 *et seq.*

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October 14, 2007, for a period of 50 years. In accordance with the agreement, the Turnpike paid the following amounts to PennDOT:

FY 2007-08	\$750 million
FY 2008-09	\$850 million
FY 2009-10	\$900 million
FY 2010-11	\$450 million
FY 2011-12	\$450 million

The Turnpike must continue to pay PennDOT \$450 million each year until 2057. By the end of the 50-year lease period outlined in the agreement, the Turnpike will have provided nearly \$24 billion in supplemental funding to non-turnpike projects.

Turnpike Commission composition

The Turnpike is governed by a commission which consists of five members, one of whom is the Pennsylvania Secretary of Transportation serving as an ex-officio member. The other four commissioners are appointed by the Governor with the advice and consent of two-thirds of the members of the Senate. The Secretary of Transportation may authorize the deputy secretary for highway administration to act and vote on his/her behalf. Each of the members serves four-year terms.

The Turnpike paid an annual salary of \$28,500 to the chairman of the commission, while the three other voting commissioners each received annual salaries of \$26,000 during the audit period covered by this report.³ Each member of the commission is also reimbursed for necessary expenses incurred in the performance of his/her duties.

³ These salaries have been in effect since December 21, 1988.

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Turnpike Commission powers and duties

The Turnpike has a broad mandate to oversee the entire Pennsylvania turnpike system. More specifically, the Turnpike has the following powers and duties:

- Maintain a principal office at a place designated by the commission
- Contract and be contracted within its own name
- Sue and be sued, plead and be impleaded
- Promulgate rules and regulations
- Acquire, hold, accept, own, use, hire, lease, exchange, operate, and dispose of personal property, real property, and interests in real property
- Make and enter into all contracts and agreements necessary or incidental to the performance of its duties and the execution of its powers
- Employ engineering, traffic, architectural, and construction experts and inspectors, attorneys, and other employees as necessary, and fix their compensation
- Negotiate and enter into interest rate swaps and other interest rate hedges to assist the Turnpike in managing interest cost and rate risk in connection with its debt
- Provide for the policing of the turnpike
- Control the maintenance and repair of the turnpike
- Fix tolls and borrow money to provide preliminary or interim financing, but not exceeding the estimated cost of the turnpike and the toll road conversions

**Turnpike description
and operational data**

Opened on October 1, 1940, with a 160-mile stretch of limited access roadway, the Pennsylvania turnpike is known as America's first modern toll highway. During the 1950's, four major extension projects expanded the turnpike from the Ohio State line to the New Jersey border and from Norristown to

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Scranton. Since 1990, three major expansions have occurred on the turnpike, creating the James J. Manderino Highway, the James E. Ross Highway, and the Amos K. Hutchinson Bypass.

As of May 31, 2011, the Turnpike controlled a total of 546 roadway miles. The Pennsylvania turnpike system includes an east-west mainline section (about 359 miles) traversing the southern portion of Pennsylvania and connecting with the Ohio turnpike at its western terminus and the New Jersey turnpike at its eastern terminus. Connecting with the mainline section is the northeast extension (111 miles). The southwestern expansion projects added an additional 76 miles.

The Turnpike manages 21 maintenance facilities, and 64 toll interchanges (31 on the mainline, 10 on the northeast extension, and 23 on the western expansion). The Turnpike also oversees the operation of 17 service plazas (15 on the mainline, and two on the northeast extension). Prominent features of the Pennsylvania turnpike include five tunnels (each about one mile in length) and 13 bridges.

During fiscal year 2010-11, traffic volume on the Pennsylvania turnpike totaled over 189 million vehicles, including 165 million passenger vehicles (87 percent) and 24 million commercial vehicles (13 percent). The total net revenue generated from tolls in fiscal year 2010-11 was \$763 million (\$436 million or 57 percent from passenger vehicles, and \$328 million or 43 percent from commercial vehicles).

Turnpike staffing and organizational structure

As of May 31, 2011, the Turnpike's workforce included 2,104 employees. Approximately 25 percent of the complement

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(or 530) is considered central office staff.⁴ The balance of the employees (852 in fare collection, and 722 in turnpike maintenance) are located at various toll plazas, maintenance facilities, and other field locations throughout the turnpike system.

A chief executive officer and a chief operating officer, administratively head the Turnpike. The Turnpike is divided into 12 divisions and five specialized offices as depicted in the organizational chart shown in Appendix B.

The Turnpike's headquarters are in the administration building located at the Harrisburg-East interchange of the turnpike. This building provides offices for the commissioners and their administrative staff, the Turnpike's engineering staff, as well as offices for the Pennsylvania State Police (Troop T), and the Turnpike's consulting engineer.

The Turnpike also maintains eastern and western regional offices, which are located near Philadelphia and Pittsburgh, respectively. Each regional office includes personnel from the engineering and maintenance departments, who oversee projects in their respective districts of the roadway.

**The Turnpike's consulting engineer –
Michael Baker, Jr., Inc.**

The Trust Indenture between the Turnpike and First Union National Bank, Trustee, dated July 1, 1986, requires the Turnpike to have a consulting engineer. Section 706 of that agreement states:

The Commission covenants that, until the Bonds secured hereby and the interest thereon shall

⁴ Turnpike officials noted that the majority of the 530 "other" staff work in offices that are located in the Harrisburg central office such as information technology, engineering, and legal; however, there are a small number of "other" employees that work in the regional offices.

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have been paid or provision for such payment shall have been made, it will, for the purpose of performing and carrying out the duties imposed on the consulting engineer by this Indenture, employ an independent engineer or engineering firm or corporation having a nationwide and favorable repute for skill and experience in such work.

Since 1956, Michael Baker, Jr., Inc., an engineering consulting and construction firm based in Pittsburgh, Pennsylvania, has served as the Turnpike's consulting engineer.

The services to be provided by Michael Baker, Jr., Inc., in its capacity as consulting engineer, are stated in the 1986 and 1994 Trust Indentures. These services include duties related to the issuance of revenue bonds, budget development, financial administration, and toll setting. The consulting engineer is also required to conduct the following:

- Review and approve all plans and specifications for construction
- Prepare progress reports on Turnpike construction projects and approve payments
- Make an annual inspection and report on the maintenance, repair, and operation of the turnpike system.

The Trust Indenture places additional responsibilities on the consulting engineer in such areas as insurance; the sale, lease, or encumbrance of property; and inspection of records. The Turnpike may also impose other duties on the consulting engineer by contract.

E-ZPass system

The Turnpike uses two toll collection systems on the Pennsylvania turnpike. The first of these systems is the

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traditional cash collection system, whereby turnpike customers stop and pay a cash toll to a toll collector.⁵ The other system is the E-ZPass system, which allows E-ZPass account holders to pass through designated E-ZPass toll lanes and pay for their tolls electronically.

The Turnpike opened E-ZPass for passenger vehicles on December 2, 2000, in southeastern and south central Pennsylvania. A little more than two years later on December 15, 2002, E-ZPass was available to all vehicles (including passenger cars, trucks, and buses) on the entire turnpike.

The Turnpike opened its first “express” E-ZPass lane at the Warrendale interchange in June 2004, and a second interchange, Mid-County, in October 2005. The express lanes are similar to the E-ZPass lanes in that customers do not stop or pay cash; however, unlike the E-ZPass lanes which require the traveler to slow down through the toll plaza interchange, the express lanes allow traffic to travel at normal speeds (55 mph) through the toll plaza. As of July 26, 2012, the Turnpike offers express lanes at six interchanges on the Pennsylvania turnpike.

The E-ZPass system has increased significantly since its inception in December 2000. In 2001, E-ZPass accounted for only 3 percent of the Turnpike’s total revenue. As of May 31, 2011, E-ZPass accounted for nearly 65 percent of the Turnpike’s total revenue.

According to the Turnpike, collecting tolls electronically is not only safer, faster and more convenient for customers, but it is better for the environment because it helps diminish idling at the toll plazas and also reduces the Turnpike’s operating costs.⁶ In an effort to increase E-ZPass participation, the Turnpike

⁵ No credit or debit cards are accepted at cash toll lanes. However, if a customer is unable to pay the incurred toll with cash, the Turnpike will issue an invoice to the traveler. For a \$1.00 transaction fee, the customer may then pay the invoice online using a credit or debit card. To avoid the added transaction fee, customers may mail a check or money order to the Turnpike Commission.

⁶ Pennsylvania Turnpike Commission, “Pa. Turnpike Reminds Motorists of 10% Cash-Only Toll Increase Next Year,” December 16, 2011.

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offers E-ZPass users a 17 percent savings over cash paying customers on the Pennsylvania turnpike. This savings over cash paying customers will increase to 25 percent starting January 6, 2013, when the Turnpike institutes new higher toll fares.

**The Turnpike is moving towards an
all-electronic tolling system**

On July 18, 2012, the Turnpike selected a program management firm to lead the future implementation of a cashless, all-electronic (AET) toll collection system.⁷

The AET system would be much different from the combined electronic and cash collection system now used on the Pennsylvania turnpike. With an AET system, tolls would be assessed without customers ever having to stop at a tollbooth; thus, providing a continuous flow of traffic and avoiding long lines and delays associated with cash payments. Instead, tolls would be assessed as customers drive beneath overhead structures, called “gantries,” that span travel lanes or ramps on the turnpike. Equipment mounted on the gantries would assess tolls via E-ZPass transponder or other electronic methods.⁸ All turnpike entrances and exits would remain open, but traditional tollbooths would eventually be phased out.

Current feasibility studies contracted by the Turnpike have found that a switch to electronic tolling would reduce operational costs between \$28.7 million and \$47.2 million annually. Savings would primarily come from reduced personnel costs. Additional savings are possible since the Turnpike would not need to maintain toll plazas, booths, and other related facilities; print toll tickets; or count and secure money from toll collections.

⁷ According to the Turnpike’s board meeting minutes, the commissioners voted unanimously to engage HNTB Corporation for program management services for all-electronic toll conversion.

⁸ Digital cameras on the overhead gantries would capture an image of the license plate for those without E-ZPass. The image would be used to identify the vehicle’s registered owner for billing purposes.

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Finding One

The Turnpike Commission lets its employees ride the turnpike toll-free, even for personal travel, costing the Turnpike millions of dollars in lost revenue. This generous perk continues with little oversight at a time when the Turnpike raises tolls for other travelers in its struggle with mounting debt.

The Turnpike Commission has stated that its employees are the eyes and ears of its roadways and that, accordingly, they are always on the job when traveling the turnpike—even for personal travel. As a result of this always-on-duty status, every one of the 2,100+ Turnpike employees can travel the turnpike toll-free any time they want, either by presenting their employee identification cards or by using a special E-ZPass transponder.

This generous perk lacks little oversight and comes at a time when most other turnpike travelers face rising tolls, and when the Turnpike itself is faced with mounting debt.

To justify its policy of toll-free travel, the Turnpike says its employees are always on duty. But it cannot prove the value or the benefit of that policy.

Toll-free travel on the turnpike for Turnpike employees has been a long-standing employee benefit. In a letter to us from the Turnpike Commission's former chief executive officer, he stated the following:

The value to our customers and emergency response personnel by having trained, knowledgeable eyes on the roadway is immeasurable and serves as a well-founded

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basis for granting our employees toll-free travel.⁹

When we discussed with Turnpike officials the specific basis for allowing employee toll-free travel, the Turnpike cited section 502 (b) of the 1986 Trust Indenture,¹⁰ amended and restated as of March 1, 2001, which states the following:

The Commission shall not grant free passage or reduced tolls within a class, except, in its discretion, it may do so... [t]o members, officers and employees of the Commission in the discharge of their official duties.

Readers will note that the Trust Indenture allows the Turnpike to offer its free passage to employees and others only “in the discharge of their official duties,” not for personal travel. In an obvious move to circumvent the official-duty requirement, the Turnpike adopted two policies that seemingly ensure its employees will always be on duty when they travel the Turnpike’s roadways.

1. Dated September 4, 1975, and revised January 29, 2001, the Turnpike’s *Assistance by Turnpike Employees* policy says the following:

...employees have a responsibility while traveling the Turnpike to render whatever assistance they can safely provide when requested by customers or other Turnpike employees providing their actions do not place their own, or any customer’s, safety in jeopardy.

⁹ The former chief executive officer stated in this same letter that on average, an estimated 7,000 calls per year are made to the Turnpike Commission’s traffic operations center by its employees; however, the Turnpike Commission could not provide evidence to fully support this claim.

¹⁰ The Trust Indenture is between the Turnpike Commission and First Union National Bank. A trust indenture is an agreement in a bond contract that represents the bondholders’ interest by highlighting the rules and responsibilities to which both parties must adhere.

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2. Dated September 27, 1976, and revised January 29, 2001, the *Turnpike Safety Responsibility* policy reaffirms the duty of employees to report vehicles that are being operated unsafely:

...a reaffirmation of responsibility of each employee of the Pennsylvania Turnpike Commission, particularly those who travel the Turnpike either in their own vehicles or in assigned Turnpike vehicles, the procedure for reporting any vehicle they observe operating in a hazardous or reckless manner.

Readers will note that nowhere do these two referenced policies provide for Turnpike employees to receive toll-free travel simply because they report hazardous situations or otherwise provide traveler assistance. But the Turnpike uses these policies as a back-door way to grant the unlimited toll-free turnpike travel while still operating within the confines of the Trust Indenture.

In other words, these Turnpike policies put Turnpike employees on the job whenever and wherever they travel the Pennsylvania turnpike. If these policies did not exist, the Turnpike would be violating its Trust Indenture by granting employees free passage for personal travel.

Employees' toll-free travel cost a minimum of \$1.4 million during our audit period, but that Turnpike-supplied figure is clearly low and comes with no supporting evidence

The Turnpike had 2,132 employees as of January 6, 2012, and granted each one unfettered access to the turnpike in one of two ways:

1. Generally, toll-free access is obtained via an employee's identification badge. The toll collector simply inserts the

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employee's badge into the card reader upon exit from the roadway and, in effect, waives the toll by registering it as zero. All 2,132 employees can travel toll-free using this option.

During the period January 1, 2007, through August 31, 2011, toll-free travel through the use of identification badges amounted to \$1,433,420 as shown below:

Employee toll-free travel reported by Turnpike Commission for employees using their identification badges	
Calendar year 2007	\$330,574
Calendar year 2008	\$275,673
Calendar year 2009	\$323,449
Calendar year 2010	\$305,509
January 1, 2011–August 31, 2011	\$198,215
Total	\$1,433,420
<i>Note: These are unaudited figures supplied by the Turnpike Commission; no supporting evidence accompanied this information.</i>	

How much was spent for *personal* travel via the employee-badge access is anyone's guess because, inexplicably, the Turnpike has not deemed it necessary to distinguish between personal and business travel. It should be important for the Turnpike to track how often employees on personal travel actually do report incidents or otherwise render assistance to travelers. In that way, the Turnpike could support the benefit of this employee perk versus the costs, especially when the general public has to pay for its own travel—even when voluntarily reporting incidents or rendering assistance to fellow travelers.

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When we asked if the Turnpike could provide even an estimate of the cost for toll-free personal travel by employees using their ID badges, the former chief executive officer of the Turnpike told us that personal toll-free travel for employees represented “an insignificant portion” of the total employees’ toll-free turnpike travel.

It is unclear how this amount can be deemed “insignificant” since the Turnpike doesn’t know what the amount is.

2. A second option for employee toll-free travel is by use of a special E-ZPass transponder.¹¹ Unlike the transponders provided to members of the general public whose tolls are charged to their individual accounts, this special “hybrid” transponder results in no tolls being charged to the employees for their in-state turnpike travel, whether personal or business. As of January 30, 2012, 655 of the Turnpike’s 2,132 employees had a special transponder to use for toll-free travel (in addition to their ID card if they so chose).

In addition to the Turnpike’s inability to provide specific dollar amounts for personal-versus-business toll-free travel when employees use their ID cards, the Turnpike could not tell us how much free travel was provided to its 655 employees who used their special E-ZPass transponders.

This inability to quantify the employee free E-ZPass travel occurs because the Turnpike lumps together *all* the travel costs for *all* the holders of special E-ZPass transponders, of which there were 1,609 hybrid transponders in use during the audit period. We address this issue of the non-employees and their special transponders in Finding Two; for now, however, we can say only that all 1,609 travelers with their special transponders enjoyed toll-free travel for

¹¹ Any individual with a hybrid transponder must maintain a minimum \$35 balance in the E-ZPass account to be used for travel on out-of-state toll roads.

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which the general public would have had to pay \$2,135,367 between January 1, 2007, and August 31, 2011.

Employee personal toll-free travel must stop. It is not tracked, it is an unnecessary perk, and it costs the Turnpike much-needed revenue.

Granting unlimited employee travel under the guise of employees providing “eyes and ears” coverage to the Turnpike is wrong. Not only does it make a mockery of the previously mentioned indenture, but it is based on no tracking or support to show how often the employees *are* in reality the eyes and ears that the Turnpike says they are. In fact, *any* individual, employee or not, has a moral if not a legal responsibility to render aid if needed by another traveler.

Moreover, in our age of expansive cellular communication, seeking emergency assistance is easily available at one’s fingertips. Further, and to the Turnpike’s credit, it has established emergency call boxes at every milepost which, in the absence of a cellular phone, allows any motorist to immediately signal for aid.

Viewed from another perspective, the Turnpike Commission is a state agency and as such, its employees are public employees whose actions are accountable to taxpayers. We believe it is completely contrary to good governance for a state agency to on one hand charge the public for a service and yet on the other hand extend the same service as a paid benefit to its employees.

For example, the Pennsylvania Game Commission does not extend free hunting licenses to its employees as a means of enhancing its “eyes and ears” across the Commonwealth and the state game lands. Nor does the Pennsylvania Department of Transportation allow its employees to have free driver licenses or vehicle registrations.

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As stated previously, the Turnpike does not track the amount of toll-free travel extended to its employees for personal travel. We also determined that the Turnpike does not provide adequate oversight over the toll-free travel to ensure misuse does not occur.

For example, with the special E-ZPass transponders, the Turnpike has so little control over the devices that the Turnpike has created the equivalent of “free passes” on the turnpike to *anyone* who obtains the device from an employee.

Because the transponders are highly mobile (i.e., the devices can be moved freely from one vehicle to another), we asked Turnpike officials how they ensure that only employees use the transponders. The officials stated that each employee, whether using an identification badge or a hybrid transponder, must sign a user agreement.¹² The agreements state that toll-free travel is solely for employee use, and violations may subject employees to disciplinary action and loss of the privileges.

While we believe that trusting an employee to do the “right thing” is reasonable, we also believe it is prudent for the Turnpike Commission to verify those actions. The mere act of signing a user agreement is not a foolproof means of preventing employee misuse.

At least with the use of identification badges, the Turnpike Commission has some means to verify that an employee is actually the appropriate person presenting the badge since the Turnpike Commission instructs toll collectors to compare the photograph on the badge to the occupant of the vehicle. However, with regard to the hybrid transponders, since the driver is using a non-manned turnpike lane, the Turnpike Commission has no way of knowing whether an employee is actually an occupant in the vehicle.

¹² The Turnpike Commission began using the “Non-Revenue/Identification Card Use Rules (PTC employees)” effective March 1, 2011, and the “Non-Revenue Transponder Program Guidelines” (hybrid transponder) effective December 19, 2003.

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We were also surprised to learn that the Turnpike does not routinely look at employee hybrid transponder accounts. Turnpike officials said that they may review an employees' account information if they get a tip about possible misuse of the transponder. At a minimum, we believe the Turnpike Commission should conduct periodic reviews of these accounts to highlight any unusual trends.

For example, because the Turnpike permits two methods for employees to obtain toll-free travel (employee identification badges and hybrid transponders), it is possible that an employee could use his or her badge for a daily commute, yet at the same time lend his or her transponder to someone else to use. Under the Turnpike's current control environment over special transponders, the Turnpike would never uncover such misuse, absent a tip from another person.

At least one other state, New Jersey, has completely eliminated employee toll-free passage on its roadways. Additionally, in November 2011, the Illinois Tollway sought to abandon its program of providing employees with toll-free (hybrid) transponders for commuting and official business use. (The Illinois Tollway already did not allow employees to have toll-free personal travel.) However, Illinois Tollway officials reported to us that its bargaining unit members have since filed an unfair labor practice over the action. Until that action is resolved, Illinois officials report the matter is on hold.

Illinois indicated that it was investigating at least five cases of abuse where the transponder was used for personal use. According to the Illinois Tollway, by eliminating the benefit it expected to save \$478,300 a year after new toll increases went into effect. Further, in discussing the decision to eliminate the benefit, one former Illinois Tollway official noted:¹³

¹³ Richard Wronski, "Tollway to drop free use for employees," *Chicago Tribune*, November 18, 2011, <<http://articles.chicagotribune.com/2011-11-18/news/ct-met-tollway-free-rides-20111118.html>>, accessed July 5, 2012.

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The tollway has a contract with the public to run an efficient, fair operation. For everyone who puts money in a toll basket, to give free transponders to employees was not, in my mind, a fair shake [to the public].

This commonsense thinking should serve as an example to the Pennsylvania Turnpike Commission.

The Turnpike Commission should immediately terminate the overly generous employee perk of granting toll-free personal travel

The Turnpike provided its 2,132 employees with unlimited toll-free travel which resulted in millions of lost toll revenue dollars from January 1, 2007, through August 31, 2011.

We can find no reasonable basis for granting Turnpike employees unlimited toll-free access to its roadways. While an argument could be made for allowing Turnpike employees to be granted toll-free *business* travel, no reasonable argument can be made for granting employees toll-free *personal* travel. Furthermore, it is hard to understand why the Turnpike believes it is acceptable to grant toll-free travel to its own employees while imposing annual toll increases on the traveling public.

Recommendations

1. The Turnpike Commission should immediately stop granting personal toll-free travel to its employees. In addition, the Turnpike should adhere to its Trust Indenture provision that allows toll-free travel to employees in the “discharge of official duties” only. Accordingly, the Turnpike must rescind the policies that were implemented that violated the spirit of the Trust Indenture by decreeing

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that employees were on duty anytime they traveled the turnpike.

2. No matter how the Turnpike provides its employees with toll-free business travel only, whether now or in the future with all-electronic tolling, the Turnpike should aggressively and accurately monitor this toll-free business travel to verify it indeed occurs in the actual “discharge of official duties” as per the Trust Indenture.

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The Turnpike Commission provided more than \$4.1 million of toll-free travel to nearly 5,000 consultants, contractors, and other state government officials. With little supervision over toll-free travel usage, the Turnpike could not ensure taxpayers that toll-free travel was limited to authorized use only.

As discussed in Finding One, the Turnpike Commission allows toll-free access to the turnpike for its employees. In addition to employees, we found that the Turnpike also routinely extended toll-free travel privileges to contractors, consultants, the Pennsylvania State Police, and to certain other state government officials.

The Turnpike reported that more than \$4.1 million worth of toll-free travel was granted during our audit period, January 1, 2007, through August 31, 2011. That amount was just for those individuals who used a Turnpike issued non-photo identification badge, also called a non-revenue card.

Additional toll-free travel was provided to those government employees and others who used the special transponders. Just as was the case for its own employees, the Turnpike would not tell us how much of the \$2.1 million in hybrid E-ZPass transponder usage was related to toll-free travel by non-employees.

In this finding, we explain the mechanics of how the Turnpike grants toll-free travel to non-employees. We also discuss the Turnpike's need to reevaluate the extent to which it provides toll-free travel to non-employees, and we show how the Turnpike Commission needs to improve its oversight of any toll-free travel it decides is prudent and reasonable to grant.

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The Turnpike Commission allowed more than \$4 million in toll-free travel by non-employees during our audit period

Toll-free travel for non-employees is granted using the same two methods described in Finding One. Non-employees use a non-photo identification card or a hybrid E-ZPass transponder. For non-employees, the identification card is an official Turnpike Commission non-revenue card.¹⁴ (We refer to these cards as non-revenue cards or official cards.)

Just as was the case for employees, the Turnpike again stated that its Trust Indenture allows it to grant toll-free travel to non-employees, citing the following passage:

The Commission shall not grant free passage or reduced tolls within a class, except, in its discretion, it may do so....:

.... (5) For use by the Pennsylvania State Police or by consultants, contractors or agents of the Commission where the Toll ultimately will be repaid directly or indirectly by the Commission.

With this authority in mind, the Turnpike issues non-revenue cards to the contractors and consultants it hires to perform specialized work because employees of those contractors use the turnpike. The Turnpike's position is that instead of contractors and consultants building the cost of tolls into the price of contracts, the Turnpike simply extends toll-free travel privileges to the contractors through non-revenue cards or hybrid transponders, thus removing that cost element from the contract.

¹⁴ The Turnpike Commission defines a non-revenue card as "a card distributed to personnel who are not employees of the Turnpike, but are traveling the Pennsylvania turnpike to conduct official Turnpike business."

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For those vendors to whom the Turnpike Commission gives non-revenue cards, we found that from January 1, 2007, through August 31, 2011, toll-free travel with official non-revenue cards amounted to more than \$4 million dollars. As shown in the table below, the majority of toll-free travel was used by 47 construction companies that held 2,453 official cards. Toll-free travel by these construction companies amounted to nearly \$2.9 million or 69 percent of toll-free travel by non-employees over the audit period. Other high users of non-revenue cards included consultants and authorized service providers, such as tow companies and service garages.

Non-Employee toll-free travel for the period January 1, 2007, through August 31, 2011 (through non-revenue cards only)		
User Category	Number of Non- Revenue Cards ^{a/}	Amount
Construction ^{b/}	2,453	\$2,893,839
Authorized Service Providers ^{c/}	533	324,833
Consultants	382	478,015
State Police-Troop T ^{d/}	254	197,821
TransCore ^{e/}	102	119,168
Service Plaza Operators	90	162,407
PennDOT ^{f/}	14	\$8,712
Total ^{g/}	3,828	\$4,184,795

a/ As of November 9, 2011. The actual number of cards varied during the course of the audit period.
b/ Includes a total of 47 different construction companies.
c/ Includes contractors who provide specialized service to the Turnpike, including garages, tow companies, and emergency medical service providers.
d/ The Turnpike Commission considers the Pennsylvania State Police to be a contractor since it provides law enforcement services at a cost to the Turnpike.
e/ TransCore is the vendor who maintains the E-ZPass system.
f/ The Turnpike Commission contracted with PennDOT to provide snow removal and grass mowing on a limited stretch of the turnpike while a certain segment was being rebuilt. As of January 2012, these cards are no longer active.
g/ These totals do not include contractors assigned hybrid E-ZPass transponders.
Note: These are unaudited figures supplied by the Turnpike Commission; no supporting evidence accompanied this information.

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In addition to the 3,828 non-revenue cards the Turnpike distributed for toll-free travel to non-employees, it also issued 954 special E-ZPass transponders to non-employees as of January 30, 2012. These 954 transponders were provided as follows:

- 799—PA State Police – off-pike (not Troop T)¹⁵
- 106—PA State Police - Troop T
- 19—Michael Baker Corporation, the Turnpike’s consulting engineer
- 30—state officials, as follows:
 - 13—Governor’s detail
 - 8—Governor’s office
 - 8—PennDOT¹⁶
 - 1—Lieutenant Governor

As previously discussed in Finding One, the Turnpike Commission stated that \$2,135,367 of toll-free travel was provided to the users of the 1,609 hybrid transponders during the audit period. Again, what the Turnpike was unable to tell us is how much of the \$2.1 million specifically relates to the 954 hybrid transponders used by non-employees. As a result, the actual total benefit granted by the Turnpike to non-employees is likely far greater than just the \$4.2 million shown in the previous table.

¹⁵ The Turnpike Commission sold 800 hybrid transponders to the Pennsylvania State Police (PSP) headquarters for distribution to various barracks statewide. According to the contract the transponder fees were as follows: interior/exterior transponders \$25.00 each, and bumper/roof mount transponders \$30.00 each.

¹⁶ Commission officials stated that these devices were initially assigned to deputy secretary positions within PennDOT but they may have been reassigned to different individuals under the current administration. The Commission provided us with an update on August 2012 stating that currently five of the eight transponders have been returned and the remaining three transponders have been assigned to deputy secretary positions.

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Numerous problems exist with the Turnpike Commission granting toll-free travel to non-employees and greater oversight is needed

As we discussed in Finding One, the possibility for misuse with respect to allowing employee toll-free travel is significant. As we highlight in our discussion that follows, the Turnpike Commission needs to strengthen its oversight of non-employee toll-free travel because the potential for misuse is as great among non-employees as it is with employees.

Non-Revenue Travel Continues to Expand. We are particularly concerned with the number of parties that have been given toll-free travel privileges. In March 1997, the Turnpike Commission had issued 4,728 non-revenue cards.¹⁷ At that time, hybrid E-ZPass transponders as a means of toll-free travel to employees or non-employees were not available.

As of November 2011, the number of devices handed out to allow toll-free travel had increased to 7,569—a more than 60 percent increase in fourteen years time,¹⁸ and an average of 4.3 percent per year since 1997.

Contributing to this increase is a contract that went into effect on February 2, 2006, between the Pennsylvania State Police (PSP) and the Turnpike Commission granting up to 800 hybrid transponders to off-pike troopers (non-Troop T). At the time of our audit, there were 799 active hybrid transponders on the State Police account that allowed for toll-free travel.

While the Turnpike's Trust Indenture specifically states that the Turnpike Commission is allowed to provide toll-free travel to the Pennsylvania State Police, we were alarmed that 799

¹⁷ Pennsylvania Legislative Budget and Finance Committee, *PA Turnpike Commission Performance Audit*, released July 1997, p. 217.

¹⁸ Includes all forms of non-revenue travel: employee identification, non-revenue cards, and E-ZPass hybrid transponders.

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hybrid transponders were issued to police members who are not part of Troop T. We would expect that toll-free travel would be provided to those troopers responsible for securing the turnpike—Troop T. The Turnpike merely cited the 2006 agreement when we asked why off-pike police had toll-free travel, and this agreement states only that the State Police “desires to participate in the Commission’s E-ZPass program.”

Hybrid E-ZPass Transponders are Highly Portable. As we stated in Finding One, the Turnpike has so little control over the hybrid transponders that it, in essence, has handed out unlimited “free passes” to the turnpike to anyone who is issued a transponder. And because the hybrid transponders can easily be moved from one vehicle to another, the Turnpike Commission has created the opportunity for “free passes” to anyone who “borrows” the transponder from an authorized user.

Only employees of Michael Baker Corporation and PSP Troop T must sign a user agreement that lists the guidelines of the toll-free travel program. The Turnpike Commission stated that, in accordance with the non-revenue program guidelines, employees of the Michael Baker Corporation and (PSP) Troop T who have hybrid transponders are not charged for travel on the Pennsylvania turnpike.¹⁹ In other words, non-employees who are issued a hybrid transponder are able to use the device for *both* business and personal toll-free travel.

The simple act of signing user agreements does not prevent the misuse of the hybrid transponders. And because the Turnpike Commission does not monitor the use of the devices, it has no way of knowing if the transponders are used by only those persons who sign the agreements.

¹⁹ On September 6, 2012, the Turnpike noted to us that it had looked at the operational value of issuing both non-revenue hybrid transponders and non-revenue cards to employees of Michael Baker. The Turnpike further noted that “it was currently in the process of withdrawing non-revenue card privileges and recalling all non-revenue hybrid transponders from employees at Michael Baker, with the exception of construction inspectors who will retain their non-revenue card privileges only.”

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With regard to the 30 state officials who are issued hybrid transponders, verbal requests were made by the agency's designee and approval was granted by the Turnpike's former chief executive officer and chief operating officer. In the case of the Governor's detail, the transponders are assigned to vehicles rather than to specific individuals. Therefore, individuals using the hybrid transponder may not be aware of the limitations placed on the type of travel permitted with the transponder.

With regard to the 799 hybrid transponders issued to off-pike State Police personnel, the Turnpike's 2006 agreement states that the transponders are to be used only in vehicles assigned to the State Police. According to the Turnpike Commission, the PSP incorporated "special orders" into the *PSP Operations Manual 7-17*, which contain provisions regarding the assignment of transponders and required documentation of usage.

The Turnpike Commission relies on the State Police to ensure that police employees follow the provisions. Because we did not audit the State Police, we do not know the extent to which the 799 individuals who benefit from the hybrid transponders are aware that the devices must be used in the police vehicle.

Greater Oversight Needed in the Number of Non-Revenue Cards Requested. The Turnpike Commission informed us that there are no limits to the number of non-revenue official cards a company may request. In fact, the Turnpike Commission informed us that it is possible for a construction company to request 100 or more cards.²⁰

The Turnpike Commission issued 2,453 non-revenue cards to 47 construction companies during our audit period, which equates to an average of 52 cards per company.

²⁰ Cards to construction companies are generally issued in the name of the company and not the individual employees of the company.

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Under existing Turnpike procedures, any vendor seeking to have toll-free privileges makes a request to the Turnpike for non-revenue cards. The vendor, upon approval, makes a \$50 deposit for *each* card requested, and this deposit will be reimbursed for all returned cards.²¹ According to Turnpike officials, this deposit encourages the return of non-revenue cards, and the deposit or part of the deposit may be forfeited to cover usage that is not in accordance with the Turnpike's "Non-Revenue Non-Employee Card Agreement."

Through this application process, the Turnpike Commission claims it makes a determination as to the reasonableness of the number of non-revenue cards requested. However, our review of the contractor non-revenue card application showed that no justification is required to support the number of cards requested.

Greater Oversight Needed by Toll Collectors. The Turnpike's policy titled *Non-Revenue Cards for Individuals Who Are Not Turnpike Employees* sets forth the parameters for non-revenue travel. The policy states the following:

Non-revenue cards will be issued for official turnpike business use only. Only the individual or company to whom they are issued may use the cards. Non-revenue cards are not transferable. Interchange restrictions and a two-year expiration date will apply to all cards issued unless otherwise specified. Cards may be renewed upon expiration when proper PTC approval has been given.

The Turnpike Commission's non-revenue cards are the approximate size of a credit card and contain a magnetic strip embedded with data. Printed on the front of each card is the

²¹ The Turnpike Commission began charging a \$50.00 deposit for all non-revenue cards effective March 2011.

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expiration date,²² the interchange restrictions,²³ and vehicle axle limits (e.g., a driver in a passenger sedan could not use a card issued for a dump truck).

In order to use a non-revenue card, the user must take a toll ticket when entering the turnpike. Upon exiting the turnpike, the user presents the toll ticket along with the user's authorized non-revenue card to the toll collector. The toll collector then visually inspects the card to ensure it is valid for use at that interchange and that the axle limitations are accurate.

If the card passes visual inspection, the toll collector inserts the non-revenue card into the card reader to determine if the card is valid.²⁴ A valid card warrants toll-free travel, but if the card is invalid, the toll collector is supposed to collect the pertinent toll from the driver.

While we are pleased that, at a minimum, the Turnpike places expiration dates and interchange restrictions on the cards, these features still fall short in ensuring that only authorized travel is permitted. Turnpike officials indicated to us that they instruct its toll collectors to verify that a non-revenue card is being used for official purposes by checking the card to the vehicle.

For example, if the card is issued to the XYZ Construction Company, toll collectors are expected to check that the person presenting the card is in a company vehicle marked XYZ Construction. While this may be a sensible approach for some vehicles (e.g., dump trucks), it is not practical in all cases, such as construction managers who may be operating a personal vehicle.

²² According to Turnpike officials, when a non-revenue card expires, the card is automatically removed from the "positive list." Authorized service provider non-revenue cards expire every two years. The expiration dates for all other non-revenue cards vary, and those terms are stated in each contract.

²³ According to Turnpike officials, each contract outlines certain interchanges that can be accessed.

²⁴ A card is valid if it appears on the Turnpike's "positive list." Updated twice a week by the Turnpike's card control center, the positive list contains all valid non-revenue cards. If the card is on the positive list, a green light appears, and the individual may exit the interchange. If the card is invalid or is unreadable by the reader, a red light appears and then the driver must pay the toll.

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We think photo identification should be included on the non-revenue cards, or at a minimum, the individuals presenting non-revenue cards to toll collectors should be required to also present company identification that identifies him or her to the card.

Instead, the Turnpike Commission relies on the toll collectors' discretion to request such information and to verify authorized use of the non-revenue cards.

Here again, the need for oversight is important because thousands of official cards have been issued, and the more cards issued, the greater the risk for misuse.

Greater Oversight Needed by Project Managers. Each contract representative must sign a *Non-Revenue Non-Employee Card Use Agreement*. The agreement sets forth the conditions for appropriate use of a non-revenue card and the penalties for inappropriate use, which include revoking the non-revenue card.

Turnpike officials informed us that it is up to the Turnpike Commission's project manager, contract manager, or project supervisor to ensure that a contractor's use of non-revenue cards is in accordance with the Turnpike's *Non-Revenue Non-Employee Card Use Agreement*. However, the Turnpike was unable to tell us explicitly the procedures used by Turnpike employees or the frequency in which such verification occurs.

The Turnpike assured us that there have been instances where a project manager requested a contractor's non-revenue official card usage records from the computer system. However, the Turnpike Commission could not provide documentation to support such project manager requests.

From our analysis, it seems that this important contract oversight function is up to the discretion of each project manager, contract manager, or project supervisor. Moreover, the Turnpike apparently recognizes that existing procedures

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and technology are lacking in this area, as it indicated to us that a new monitoring system was planned, which would regularly supply non-revenue card usage reports. The Turnpike was unable to give us a timetable on when such a system would be completed.

Greater Oversight Needed in Allowing Other State Officials Non-revenue Privileges. As we stated earlier in this finding, the Turnpike Commission gave 30 hybrid E-ZPass transponders to other state officials in the Governor’s office, the Governor’s detail, PennDOT, and the Lieutenant Governor. The public has the right to full transparency with regard to expenses incurred by government officials. Unfortunately the Turnpike Commission could not provide the dollar value by group of hybrid transponders users, and therefore, we cannot state—and the public does not know—the amount of toll-free travel granted to these officials.

The Turnpike Commission needs to immediately reevaluate toll-free travel granted to non-employees

The Turnpike has moved beyond what is sensible in granting toll-free travel privileges. While there are certainly legitimate parties and persons where it is reasonable to expect the Turnpike Commission might allow toll-free travel, such as construction vehicles, tow companies, emergency service providers, and Troop T, the Turnpike Commission must reevaluate the number of persons granted toll-free travel privileges and reduce that number as soon as possible.

In the case of contractors, we recognize that the Turnpike Commission might ultimately pay a contractor for toll fares, either through a stated provision in a contract or in increased contractor overhead. However, under the current system, Turnpike oversight is so minimal that we believe the Turnpike must move away from handing out official cards and hybrid transponders. Our analysis finds there are simply too many

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“loose ends” which create the potential for misuse of toll-free travel privileges by non-employees.

Further, as we stated in Finding One, we are especially concerned with the Turnpike’s practice of granting toll-free travel through the use of hybrid E-ZPass transponders since the Turnpike lacks any meaningful ability to monitor the use of these devices. The Turnpike Commission should stop issuing hybrid transponders with a personal account and instead issue Turnpike-owned transponders so that the Turnpike can monitor the usage and provide transparency to the public.

Recommendations

3. The Turnpike Commission should reexamine its practice of distributing toll-free travel privileges to an unlimited number of non-employees and take steps to reduce the number of persons given that privilege as soon as possible.
4. The Turnpike should improve its oversight of non-employee toll-free usage by, at a minimum, including a photo on its non-revenue cards and requiring Turnpike staff to monitor non-employee toll-free travel.
5. The Turnpike Commission should be transparent about the toll-free travel it grants to all parties, including its own employees, state officials, and other non-employees, by posting monthly usage reports on its website.

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The Turnpike Commission actively monitors the E-ZPass system to ensure correct fares are charged. Additionally, the Turnpike Commission conducts its own audits of the E-ZPass vendor.

During the period 2007 through 2011, the E-ZPass system has grown by approximately 16 percent. With nearly 65 percent of turnpike tolls now collected through the E-ZPass system, electronic toll collection has proven to be a popular endeavor for both the Turnpike Commission and its customers.²⁵ Part of this growth may be attributable to toll savings for those customers who do use E-ZPass. Turnpike customers who use E-ZPass currently receive a 17 percent discount on their tolls.

Given the increasing use of the E-ZPass system, we examined how the Turnpike Commission monitors the E-ZPass system and the E-ZPass system vendor. Further, we examined how the Turnpike ensures customers are charged the correct fare.

In this finding, we discuss the results of our examination, which found that, overall, the Turnpike has taken several measures to ensure the reliability of the E-ZPass system and the accuracy of fares charged to turnpike customer's E-ZPass accounts.

How does the E-ZPass system work?

The E-ZPass system, also known as electronic tolling, allows customers to have the convenience of completing toll transactions without cash or tickets. By using an E-ZPass transponder, customers simply travel through designated E-ZPass lanes at turnpike interchanges to have their tolls electronically recorded to a separate pre-funded account.

²⁵ For fiscal year ended May 31, 2011.

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When entering the turnpike, instead of collecting a toll ticket, an E-ZPass customer enters a designated E-ZPass lane where an antenna reads the customer's unique E-ZPass transponder signal as an "entry" to the turnpike. When the customer exits the turnpike, again via a designated E-ZPass lane, an "exit" is recorded, and the appropriate turnpike fare is deducted from the customer's pre-funded E-ZPass account. Customers initially establish their E-ZPass account by depositing \$35 into the account.²⁶ The account is replenished by mailing additional deposits to the Turnpike, or the E-ZPass account can be linked to a credit or debit card for automatic replenishment.

Customer complaints over inaccurate E-ZPass toll charges appear to be minimal

As we began our audit, we sought to identify information on the number of complaints filed by E-ZPass customers over inaccurate tolls charged to their accounts. However, as we researched the issue further, it became apparent to us that most of the complaints are the result of an error in which the system simply did not read the E-ZPass transponder, which may result in a V-toll charge to the user's E-ZPass account.²⁷

Resolution of V-tolls and other disputed tolls emanating from the E-ZPass system require the customer to contact the customer service center based in Harrisburg. Alternatively, the customer may be able to resolve the issue electronically through email.

While the E-ZPass customer has an electronic means for quick resolution of toll issues, we noted that if the customer needed to actually telephone the customer service center, it is only possible to do so Monday through Friday from 8:30 a.m. to

²⁶ In addition to the \$35 balance, a \$3 annual fee is charged.

²⁷ The Turnpike Commission stated that in order to dispute an E-ZPass fare charge on the turnpike, customers must complete form 33-11B and forward the completed form to the E-ZPass customer service center for resolution. As discussed later in this finding, the Turnpike does periodically audit the resolution of these complaint forms as part of its oversight of TransCore, the E-ZPass system vendor.

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5:00 p.m., which can be limiting to customers who must work during those hours.

This observation was reaffirmed when we conducted an Internet-based search for customer complaints with the E-ZPass system on the turnpike. Our research found several instances where customers complained of the E-ZPass customer service center only having “banker hours.”

How does the Turnpike ensure the E-ZPass system charges are accurate fares?

The primary way the Turnpike ensures that its customers are accurately charged the correct toll from the E-ZPass system is through random testing by Turnpike Commission toll revenue auditors. As part of the Turnpike’s oversight of the E-ZPass system, the Turnpike routinely has toll revenue auditors test the system through use of standard E-ZPass transponders assigned to toll revenue auditors. These transponders are not hybrid non-revenue transponders as discussed in Findings 1 and 2. Rather the toll revenue auditors’ transponders are linked to their personal accounts like those of the motoring public.

Using these private E-ZPass accounts, toll revenue auditors routinely travel the turnpike testing various E-ZPass lanes. Auditors complete log sheets documenting the time of day, the lane used, and note any unusual occurrences. Auditors also test for V-toll charges to ensure the system is functioning as intended. The toll revenue auditors then reconcile their individual log sheets to their personal E-ZPass accounts to ensure the fares are accurate.

During the period January 1, 2007, through August 31, 2011, toll revenue auditors conducted 2,395 of these independent E-ZPass test transactions. The Turnpike reported that in all of these transactions there were no toll discrepancies noted, and the fare was accurately charged to the toll revenue auditors’ accounts.

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As part of our audit procedures, we reviewed 578 of the 2,395 E-ZPass test transactions and found that in all cases the log sheet reconciled to the appropriate E-ZPass account. However, we did note that the toll revenue auditors only tested passenger vehicles in their test transactions.²⁸ Further, the Turnpike Commission auditors did not test every interchange on the turnpike.

Turnpike officials explained, however, that it does not believe all interchanges need to be tested, nor do all vehicles beyond class I need to be tested, since the system operates as a whole. In other words, if accurately computed at one interchange, the tolls would then be computed accurately at all other interchanges.

Regardless of these testing limitations (vehicle size and limited interchanges), since the Turnpike Commission has such a high incidence of compliance in its testing process, we believe the Turnpike is ensuring that customers are charged the correct fare.

**Other E-ZPass oversight provided
by the Turnpike Commission**

In addition to the testing performed by toll revenue auditors, the Turnpike performs additional oversight procedures in ensuring the E-ZPass system operates as intended.

Test Lane Facility. The Turnpike's oversight of the E-ZPass system is not solely confined to testing actual E-ZPass transactions. The Turnpike also maintains a test lane facility whereby it can thoroughly model and test possible situations in a controlled environment, as well as test new technologies.

²⁸ A passenger vehicle is a class 1 vehicle. The number of axles and total vehicle weight determine a vehicle's class. The highest vehicle class is class 9, which designates vehicles of 100,001 pounds or more. The Turnpike Commission does not own any vehicles beyond class 5.

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For example, by using the test lane facility, the Turnpike Commission creates situations involving:

- Hardware failures
- Software failures
- E-ZPass, cash and automated money machines
- Low balance transactions
- Bad license tag transactions
- Customers without cash transactions
- Worn or unreadable toll tickets

As a result of using these testing scenarios, the Turnpike works to identify potential E-ZPass system problems and then develops and tests workable solutions before rolling the solutions out to the full system. Issues that cannot be resolved during testing at the test facility are documented, and engineering change orders are placed with the E-ZPass system vendor, TransCore.

As part of our audit procedures, we toured the test lane facility and watched as Turnpike staff tested a new ticket. Although the test was not specific to the E-ZPass system, officials from TransCore were present, as were Turnpike personnel representing departments of information technology, fare collection, and toll revenue audit. Although we were only there to observe the facility and therefore, did not evaluate the validity of the Turnpike Commission's testing procedures, we found the test to be a good example of the technical aspects involved in evaluating the E-ZPass system.

Alert Monitoring System. In addition to the testing facility, the Turnpike also maintains an “alert monitoring system” through which system failures—including failures of the E-ZPass system—are instantaneously alerted in the Turnpike's network control center. The network control center is separate from the Turnpike's operations control center, which serves as the primary dispatch system for all incident management activities. However, like the operations control center, the network control center is staffed 24 hours a day, year round.

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Once the network control center receives an alert, a Turnpike system specialist tracks the service interruption and may even be able to repair the system remotely. For example, if a weight scale in an E-ZPass lane failed, thereby preventing the E-ZPass system from calculating correct fares, the lane can be immediately shut down and traffic redirected to another E-ZPass lane while the system resets itself. This immediate and automatic notification ensures that E-ZPass customers are not inconvenienced by lane disruptions.

We toured the operations control center and the network control center during our audit. We found both were appropriately staffed, and systems were being monitored. In fact, during our tour of the operations control center, an incident occurred in which a truck broke down in a travel lane. We observed dispatchers immediately dispatching the State Police to secure the area while also contacting a towing service to remove the vehicle. The operations control center was able to monitor the situation in real-time as it had video feed from an overhead camera. The entire incident was resolved in 30-40 minutes, and from our perspective, was remarkably efficient.

TransCore Audits. As an additional means of providing assurance over the E-ZPass system, the Turnpike conducts yearly internal control audits of the E-ZPass vendor, TransCore.²⁹ The Turnpike collaborates with its outside independent auditor when conducting this audit.

The Turnpike's audits of TransCore cover seven areas:

1. ***Daily cash settlement and monthly reconciliation process*** - to evaluate the controls related to daily cash settlement/monthly reconciliation processes and verify that the financial transactions processed by the

²⁹ An internal control audit generally evaluates whether controls established by management are effective and working as intended.

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customer service center have been properly recorded, reconciled, and deposited.

2. **Accounting interfaces** - to evaluate the key controls related to the transfer of essential accounting information between Turnpike accounting system and TransCore accounting system.
3. **Interagency group payables** – to verify that the exchange of payment and transaction information between the Turnpike and other E-ZPass toll agencies is accurate and performed timely.
4. **Recording of toll transactions** - to verify that the E-ZPass transactions processed at the lanes were accurately posted to the appropriate customer account. The Turnpike also verified that all transactions processed by the toll host computer were posted to the customer service center system.
5. **Disputed tolls** - to verify that a customer initiated request for a refund due to overcharged tolls had been processed properly by the customer service representative refund specialist and the correct adjustment had been applied to the appropriate customer account.
6. **Credit and collections** – to review the internal controls in place related to the correlation of funds owed to the Turnpike and funds collected.
7. **Access security** - to evaluate the controls in place related to the access security to the customer service center system and network.

We were particularly interested in the Turnpike's audit objectives relating to recording of toll transactions (number 4 above) and disputed tolls (number 5 above), since those objectives correlated with our own audit objective.

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We reviewed five years of Turnpike audit reports that fell within our audit period of January 1, 2007, through August 31, 2011. We found instances where the Turnpike had made recommendations and followed up with TransCore to ensure the recommendations were implemented in the subsequent year.

For example, in the Turnpike's "disputed toll" audit objective, we found that the Turnpike recommended to TransCore that it develop specific criteria for adjusting disputed tolls; thus reducing the subjectivity involved with the customer service representative in adjusting tolls. The Turnpike then followed-up on its recommendation in the following year and found that TransCore had fully implemented the recommendation. As a result, we believe the Turnpike Commission is taking an active role in monitoring its electronic toll vendor.

Conclusion

Expansion of electronic tolling potentially offers the Turnpike a "win-win" opportunity for the future. The Turnpike Commission wins by reducing its administrative costs—and the motoring public wins through reduced tolls, improved customer convenience and time saved traveling through interchanges. However, this potential win-win can only be sustained through a viable electronic tolling system that ensures customers are accurately charged for their travel on the turnpike.

Consequently, ensuring that Turnpike E-ZPass customers are charged the correct toll is a vital endeavor for the Turnpike Commission. Based on our review of the Turnpike's internal audits of TransCore, as well as the efforts undertaken by the Turnpike to randomly test the E-ZPass system through privately maintained E-ZPass accounts, we conclude that appropriate oversight exists to ensure electronic tolls are accurately charged to Turnpike customers who use the E-ZPass system.

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Additionally, with the Turnpike's creation of its test lane facility it has the capability of testing the system to make certain that the E-ZPass system achieves peak performance. Lastly, when coupled with the Turnpike's alert monitoring system, the Turnpike is able to ensure that the E-ZPass system is always operating and available to E-ZPass customers.

Recommendations

6. In conducting its random testing of the E-ZPass system by toll revenue auditors, the Turnpike should consider testing vehicles that exceed passenger vehicle specifications.
7. The Turnpike should require TransCore to extend its E-ZPass customer service center phone hours beyond normal work hours. At a minimum, the E-ZPass customer service center should have extended evening hours on at least one day of the week.

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While the Turnpike Commission monitored, maintained, and inspected its tunnels, it has not implemented critical project management practices that would ensure recommendations resulting from tunnel inspections are not overlooked.

The turnpike roadway system includes five tunnels.³⁰ Of these five sets of tunnels, four are located on the east/west corridor of the turnpike, and one is located on the northeast extension. The tunnels range from 43 to 72 years in age, with the oldest tunnels constructed in 1940 as part of the original roadway.

Roadway tunnels involve substantial upkeep and maintenance to ensure structural soundness. Because of the inherent risk associated with the confined and restricted space of tunnels, extensive safety protocols are required. As part of our audit, we reviewed the extent to which the Turnpike Commission is ensuring tunnel safety for the motoring public.

As discussed in this finding, we found that the Turnpike Commission is monitoring, maintaining, and inspecting its tunnels. However, based on our audit work, we have concluded that the Turnpike Commission needs to improve its administrative oversight of the tunnels.

**Background on the
Turnpike's tunnels**

Pennsylvania, because of its mountainous terrain, is home to numerous vehicular and rail tunnels. The Turnpike has five tunnels within its roadway system.

³⁰ While we state that the Turnpike Commission has five tunnels, each tunnel complex contains two tubes. The Allegheny, Blue Mountain, Kittatinny, and Tuscarora tunnels have eastbound and westbound tubes. The Lehigh tunnel has northbound and southbound tubes.

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The Turnpike constructed four of its tunnels as part of the turnpike's initial construction in 1940. These early tunnels were bi-directional—meaning that eastbound and westbound traffic passed within the confines of one tunnel tube.

Recognizing that bi-directional traffic greatly increased the likelihood of a head-on collision within the tunnels, the Turnpike expanded the tunnel system in the 1960s to develop parallel tunnel tubes. These tubes allow traffic to flow in just one direction.

An added benefit to parallel tubes is that in the event that one tube needs to be completely shut down for maintenance or an emergency, traffic can be switched to a bi-directional traffic pattern in the other non-affected tunnel tube. This crossover capability ensures that traffic continues to flow on the turnpike.

By 1969, the Turnpike Commission completed construction of its five tunnel complexes. Each tunnel complex has two travel lanes. The tunnels range in length from 4,727 feet to 6,070 feet.

As part of our audit, we examined the Turnpike Commission's performance with regard to monitoring, maintaining, and inspecting each of its tunnels. Specifically, we addressed the following:

- **Monitoring** – To what extent does the Turnpike monitor its tunnels?
- **Maintenance** – To what extent does the Turnpike ensure its tunnels receive needed maintenance?
- **Inspection** – To what extent does the Turnpike perform engineering inspections of its tunnels to ensure each tunnel is safe?

Our methodology for addressing these three areas involved meeting with Turnpike staff responsible for tunnel operations, maintenance, and turnpike safety, touring a tunnel operation

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room, reviewing proposed federal tunnel inspection regulations, reviewing Turnpike tunnel management committee meeting minutes, examining tunnel maintenance logs, and reviewing tunnel inspection reports. Our results are discussed in the following sections.

Monitoring: The Turnpike monitors all tunnels on an ongoing basis, but two tunnels lack automated fire detection systems.

The Turnpike Commission assigns tunnel operations staff to each of its five tunnels. This staff, comprised of tunnel operators and tunnel guards, is responsible for ongoing monitoring of each tunnel. Tunnel operations staff works rotating shifts to ensure coverage 24 hours a day, 365 days a year.

Tunnel operators monitor roadway traffic, detect incidents, log events, respond to facility and system alarms, respond and report to the Turnpike Commission's traffic operations center, and coordinate the activities of the tunnel guards.

One method tunnel operators use to monitor the tunnels is through the use of closed caption video cameras. The Turnpike has installed these cameras in three of its five tunnels. A fourth tunnel is currently being retrofitted with cameras, while the Turnpike reports that the fifth tunnel will be retrofitted soon. These cameras allow Turnpike tunnel operators to immediately detect any potential problems. As one tunnel operator reported to us during our tour, "When I see a lot of brake lights, I know there's a problem [in the tunnel]."

Tunnel guards also monitor tunnels. This staff conducts tunnel "drive-throughs" every two hours whereby they look for debris or other potential problems in each tunnel. Tunnel guards also serve as incident and event first responders, perform vehicle

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removal/site cleanup, and provide routine inspections and light maintenance as directed by tunnel operators.³¹

Tunnel guards complete log sheets documenting their drive-throughs of their assigned tunnels. For our audit period, January 1, 2007, through August 31, 2011, we examined 38 log sheets covering all the tunnels. While we noted some instances of clerical oversights (e.g., missing signatures, date or time incomplete, etc.), these logs showed evidence that the guards completed their assigned drive-throughs. These 38 logs also showed that the tunnel guards inspected various aspects of the tunnels such as electrical systems, generators, mechanical systems, and security doors during each eight-hour shift.

During our audit, we also met with tunnel operations staff at one of the Turnpike's larger tunnels³² and while there, we examined the overall operation of the tunnel control room. We noted that the Turnpike kept its own tow trucks at the tunnel to ensure that any stranded vehicles could be removed quickly rather than waiting for a contracted authorized service provider to remove the vehicles. In addition, we also noted that portable radios, which work inside the tunnels, were issued to the tunnel guards to ensure constant communication to the control room. Last, we accompanied the tunnel guards on a tunnel drive-through and observed the guards examining the tunnel.

Monitoring Weakness Identified. As part of our audit work related to tunnel monitoring, we reviewed the Turnpike's *Tunnel Operations Standard Operating Guidelines*. This review revealed that all but two tunnels (Tuscarora and Allegheny) have some form of automated fire detection system.³³

³¹ These routine inspections include activities such as looking for stopped vehicles, accidents, pedestrians, fire/smoke, debris in roadway, ice flows, suspicious activities, and any other abnormal conditions. These inspections are not part of the general and in-depth inspections that are discussed later in this finding.

³² The Blue Mountain and Kittatinny tunnels are actually two tunnels but because of the close proximity to each other it operates as a single complex.

³³ Each of Turnpike Commission's tunnels has portable fire extinguishers, emergency alarms, and fixed fire hydrants within its confines.

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Automated fire detection systems are an important backup protection to the tunnel operations staff that monitors the tunnels. While the Turnpike's video relays from within the tunnel serve as a means of fire detection, an automated fire detection system, which would register variations in temperature or carbon monoxide, would further supplement tunnel safety.³⁴ When coupled with a fire suppression system, automatic fire detection systems can potentially save lives and prevent further damage to the tunnel infrastructure.

Even a small fire occurring within a tunnel can cause significant damage since heat and lethal carbon monoxide cannot escape easily. For example, in October 2001, in a tunnel located in Switzerland, two trucks collided resulting in a fire. One of the trucks was carrying tires that were highly flammable. The ensuing fire from the accident killed 11 people and damaged over 95 trucks and cars. Damage to the tunnel from the fire required the tunnel's closure for more than two months for repairs.³⁵

At the time of the tunnels' construction there were no compliance standards for fire detection systems. According to the Turnpike, the Lehigh tunnel was equipped with a fire detection system in the 1990's when the tunnel was rehabilitated. Furthermore, Turnpike officials told us that they plan to install and/or upgrade the other tunnels with automated fire detection systems as they are rehabilitated.

³⁴ During our tour of the tunnel control center, we noticed that the center did have a fire alarm annunciator panel.

³⁵ The Fire Protection Research Foundation, *International Road Tunnel Fire Detection Research Project – Phase I: Review of Prior Test Programs and Tunnel Fires*, November 2003, pg. 16.

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Maintenance: The Turnpike performed routine and preventative maintenance on all its tunnels on a regular basis.

Proper tunnel maintenance expands a tunnel's lifespan and, when combined with effective monitoring, ensures traveler safety. We reviewed the extent to which the Turnpike Commission maintained its five tunnels during our audit period of January 1, 2007, through August 31, 2011.

The Turnpike Commission staff records all tunnel maintenance activities in tunnel maintenance logs; therefore, we reviewed a total of 36 maintenance logs that covered various maintenance activities at all five tunnels.

Our review of these 36 logs showed that the Turnpike performed maintenance on its tunnels on a regular basis. Specifically, tunnel maintenance activities included ice removal, lighting repair, tunnel sign repair, tunnel washing, and replacement of various electrical and mechanical items.

In addition to the routine maintenance and repair activities listed above, we found that the Turnpike Commission performed preventative maintenance on boilers, fuel tanks, and generators in the tunnels.

To examine tunnel maintenance further, we reviewed tunnel closure reports from the Turnpike's computer-aided dispatch system, which documents all tunnel incidents. Our review found several instances where the Turnpike Commission closed tunnels to conduct maintenance activities such as road patching, ice removal, debris removal, repair of loose tiles, and line painting.

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Inspections: While the Turnpike conducted periodic tunnel inspections, it needs to improve its administrative oversight of tunnel management to ensure all inspection deficiencies are addressed.

In 2006, as a passenger car traveled through a recently constructed tunnel in Boston, a portion of the tunnel's suspended concrete ceiling failed causing 26 tons of concrete to fall on the vehicle.³⁶ One person was killed instantly, and another sustained injuries.

Surprisingly, no inspections were performed to determine the physical and functional condition of the tunnel's ceiling system from the time the tunnel opened to traffic in 2003 until the day of the accident in 2006. Inspection of the tunnel's ceiling *after* the collapse revealed other sections were also near collapse. In fact, according to National Transportation Safety Board investigators, the ceiling anchors holding the suspended track were so compromised that even a cursory examination of the area would have revealed the structural weaknesses.³⁷

To be clear, none of the Turnpike Commission's tunnels are built using the materials used in the collapsed Boston tunnel. Moreover, the Turnpike Commission does inspect its tunnels, and as shown in the previous sections, monitors and maintains its tunnels.

No inspection standards. One of the lessons learned from the Massachusetts accident is that for tunnels, unlike bridges, there are no federal requirements for inspections. In fact, in its accident report recommendations, the National Transportation Safety Board recommended to the Federal Highway Administration that it establish a tunnel inspection program which would mandate the frequency and type of inspections to be completed by tunnel operators.

³⁶ The Massachusetts Turnpike Authority operates the connector tunnel.

³⁷ National Transportation Safety Board, "Ceiling Collapse in the Interstate 90 Connector Tunnel - Highway Accident Report NTSB/HAR-07/02," pp. 102-108.

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Federal regulations are currently in development; however, at the time of this report's release the regulations had not been finalized and adopted. The proposed regulations mandate that, at a minimum, agencies must conduct routine inspections in each tunnel at least once every two years.³⁸ In addition, a schedule should be developed based on the tunnel's age, traffic characteristics, geotechnical considerations, and known deficiencies as some tunnels may need to be inspected more frequently.

Turnpike Inspection Schedule. Since the Turnpike Commission has several tunnels that are in excess of 70 years old, it is imperative for the Turnpike to inspect its tunnels regularly. However, the Turnpike did not have a written policy stating an inspection schedule for its tunnels.

Turnpike officials stated to us that it conducts two different types of tunnel inspections at each tunnel. The first of these inspections is a "general inspection," which is supposed to be conducted every two years and is focused on ensuring each tunnel's structural integrity. The second inspection performed by the Turnpike Commission is an "in-depth" inspection. The Turnpike's practice has been to perform the in-depth inspections every five to eight years and involves more thorough inspections of each tunnel including structural, electrical, and mechanical elements. According to the Turnpike Commission, both of these inspections are typically contracted out to private civil engineering firms.

We reviewed the Turnpike's tunnel inspection schedule for the period January 1, 2000, through December 31, 2011, in order to determine how frequently the Turnpike Commission

³⁸ Routine, as defined by the Federal Highway Administration, includes structural, electrical, mechanical, fire suppression, ventilation, lighting, communication, monitoring, drainage, traffic signals, emergency response, and traffic safety components.

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inspects its tunnels.³⁹ The following table highlights the inspections completed during the period.

Status of Completed Turnpike Tunnel Inspections*										
In-depth (I) and General (G) January 1, 2000, through December 31, 2011										
	Allegheny		Tuscarora		Kittatinny		Blue Mountain		Lehigh	
2000										
2001	I			G		G		G		G
2002			I							
2003										G
2004					I		I			
2005		G							I	
2006	I									G
2007						G**		G**		
2008										G
2009			I							
2010					I		I			
2011		G		G		G		G		G

Notes:
*Includes both tunnel tubes (i.e., east/west or north/south).
**Includes only westbound tunnel tube.

Source: Developed by Department of the Auditor General staff from information obtained from the Turnpike Commission.

As shown in the table above, the Turnpike allows several years to elapse between its inspections—both for in-depth and general inspections. When we asked Turnpike officials about the apparent lapses in the tunnel inspections, they stated lapses occurred in the inspection cycles when tunnel rehabilitation

³⁹ We believe tunnel inspections are an integral element of tunnel safety. Because the Turnpike Commission inspects tunnels on a two-year and five to eight year rotation, we expanded our audit scope to gather a larger timeframe from which to review all inspections.

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projects and/or construction work was being done in the area near or adjacent to the tunnels.

Turnpike officials stated that in the interest of traffic safety, a change in traffic patterns must be at least two miles apart and since construction takes precedence over tunnel inspections, the inspections had to be delayed until the construction work was completed. For example, the Allegheny general inspection due in 2003 was delayed until 2005 because of a 2003-2004 construction project being conducted less than two miles west of the tunnel in the Somerset area.

Turnpike officials also explained that as a result of previous inspections, rehabilitation work was sometimes scheduled for a tunnel, which then altered the scheduled date of subsequent inspections. For example, based on the results of the 2002 in-depth inspection of the Tuscarora tunnel, the Turnpike developed a contract for a rehabilitation project conducted in the tunnel from 2003 through 2007. Therefore, the Turnpike did not conduct any tunnel inspections in the Tuscarora tunnel until after the rehabilitation project was completed, which is why seven years lapsed between in-depth inspections.

While the Turnpike is performing some level of inspection to its tunnels, it is apparent that the frequency of inspections does not comply with proposed federal regulations.

The Turnpike reported to us that it is aware of the proposed federal regulations and intends to follow the regulations when promulgated. The Turnpike further reported that it believes it has been at the forefront as far as tunnel inspections are concerned since many of the Federal Highway Administration proposed regulations are already met by the Turnpike.

Lack of Inspection Database. In addition to looking at the frequency of tunnel inspections, we also reviewed all in-depth and general inspection reports from January 1, 2007, through August 31, 2011. Based on our review of the in-depth tunnel inspection reports, we saw that the contractors inspected and

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tested the respective tunnel's structure, electrical systems, mechanical systems, and safety features. In addition, we saw that the contractors noted findings and recommendations for future repairs.

When we reviewed the general tunnel inspection reports, we found evidence of structural inspections. Specifically, the contractor made visual observations of the tunnel walls, ceilings, airshaft, water infiltration, and portals. Further, the inspectors made findings and recommendations for future repairs.⁴⁰

Because we saw recommendations for tunnel repairs in the inspection reports, we asked Turnpike Commission officials for a listing of all tunnel inspection report recommendations and the corresponding implementation status for each recommendation. According to these officials, the Turnpike does not maintain a system that tracks tunnel inspections including deficiencies, recommendations, and corrective repairs. We were surprised to find that the Turnpike lacks this tracking system for its tunnel inspections.

The Turnpike told us that tunnel staff accompanied the contractors during the tunnel inspections; therefore, if a critical issue was identified during the inspection, the tunnel staff on-site would have elevated attention to the observed conditions as deemed appropriate. However, in our opinion, without a tracking system the Turnpike lacks a necessary project management tool to ensure that all tunnel repairs are addressed.

According to Turnpike officials, the Turnpike Commission began in spring of 2011 to use a software program called "OneDOT Tunnel Management System" to collect in-depth tunnel inspection information. These officials further noted that the current OneDOT system has the ability to sort

⁴⁰ It is important to note that staff of the Department of the Auditor General who reviewed the inspection reports are not civil engineers, as such we make no conclusion as to the reasonableness of the inspection reports or the Turnpike Commission's explanation for the lapses in inspection frequency.

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information and generate reports; however, there is not enough data currently in the system to generate meaningful reports. Therefore, the Turnpike Commission only uses the OneDOT system for storing inspection information and does not use the system for tracking recommendations made as a result of the tunnel inspections or documenting corrective actions taken by the Turnpike Commission.

In the future, as more tunnel inspections are completed and information is added to the OneDOT system, the Turnpike plans to use the system to document recommendations made as a result of both the in-depth and general tunnel inspections and track corrective actions taken by the Turnpike although no firm timetable has been established for this tracking to occur.

The lack of a database to track tunnel inspection reports potentially leaves the Turnpike Commission at risk of not making timely repairs to its tunnels.

Turnpike's Tunnel Management Committee. Turnpike officials noted that, in the absence of a tracking system, the Turnpike has a tunnel management committee (tunnel committee) that meets every four months. The purpose of the tunnel committee is to provide an open forum for all Turnpike personnel with tunnel responsibilities to discuss tunnel-related issues including deficiencies identified during the tunnel inspections. The committee also coordinates necessary repairs to correct those deficiencies.

To determine the extent to which this committee addressed the recommendations in tunnel inspection reports, we reviewed meeting minutes for the period January 1, 2007, through August 31, 2011. During this period, the committee met ten times. We noted the following two issues from our review:

- The committee met only once during 2007
- From August 30, 2007, through October 29, 2008, there was a 14-month lapse between tunnel meetings

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The infrequency of tunnel committee meetings is important because, according to the Turnpike Commission, this committee serves as the principle means by which the Turnpike addresses tunnel deficiencies. Consequently, if the committee does not meet, or at best, meets infrequently, the Turnpike Commission is missing opportunities for effective project management over its tunnels.

Lack of a single contact person specific to tunnels. Our review of the tunnel committee meeting minutes highlighted another important fact—the Turnpike Commission lacks a single contact person specifically for tunnels. Instead, the Turnpike Commission has split responsibility for tunnel administration among its departments such as bridge engineering, maintenance, and facilities energy maintenance operations. With the tunnel committee not meeting regularly and with no tunnel inspections data in a tracking system, we are not assured that strong coordination and communication exists with regard to tunnel management.

With the promulgation of new federal regulations regarding tunnel inspections, the Turnpike Commission should have a single administrator whose sole responsibility is to oversee all aspects of tunnel management. Such a position could focus on compliance with the federal regulations as well as ensure all tunnel management issues are addressed at the Turnpike Commission.

Conclusion

Overall, we found no evidence that led us to conclude that the Turnpike Commission's tunnels are not safe. In fact, we found that the Turnpike monitored its tunnels through video cameras, by tunnel drive-throughs, and by contact with its travel operations center to ensure that incidents/problems that occurred in the tunnels were identified quickly and resolved in a timely manner. We also found that the Turnpike performed a

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considerable amount of routine maintenance activities as well as preventive maintenance to keep the tunnels safe.

Further, the Turnpike Commission conducted general and in-depth inspections at its tunnels on a periodic basis; however, these inspections were not always in agreement with the Turnpike's timelines or the timelines proposed by the federal government.

The Turnpike Commission did not have a strong method for tracking inspection recommendations, nor did the Turnpike have a single administrator coordinating the tunnel work conducted by three of its departments. Without these key project management components, the potential for an oversight with regard to tunnels repairs exists which could place the public's safety at risk.

Recommendations

8. The Turnpike Commission should install video cameras in tunnels that do not already have video monitoring capability as soon as possible.
9. The Turnpike Commission should install fire detection and suppression systems in the tunnels that do not already have such detection systems as soon as possible.
10. The Turnpike Commission should ensure that each tunnel undergoes a routine inspection at least once every two years in accordance with its own guidelines and the pending FHWA regulations.
11. The Turnpike Commission should immediately expand the development and deployment of the OneDOT tunnel management tracking system so that all tunnel inspection recommendations and their implementation status are captured.

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12. The Turnpike Commission should assign a person to be solely responsible for tunnel management. This person should coordinate all engineering, maintenance, inspection, and safety issues related to the turnpike's five tunnels.
 13. If the Turnpike Commission is going to continue to use a tunnel management committee as a monitoring tool, the committee must maintain its meeting schedule to ensure tunnel issues are addressed timely.

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Finding Five

The Turnpike Commission is overly generous and permissive when reimbursing commissioners for expenses. Further, the Turnpike lacks transparency and accountability with regard to these expenses.

As stated in the background section of this report, a commission consisting of five members serves as the Turnpike Commission's governing body. Four members are appointed by the Governor and confirmed by the Pennsylvania Senate. The Commonwealth's Secretary of Transportation is the fifth member and serves as an ex-officio member to the commission.

Each appointed commissioner serves a term of four years and may be reappointed to multiple terms. Turnpike officials stated that commissioners do not work a set schedule but instead are available to the Turnpike Commission's executive staff 24 hours a day, seven days a week.⁴¹

During the audit period January 1, 2007, through August 31, 2011, the Turnpike Commission had six different commissioners. The Turnpike Commission incurred \$539,201 in expenses, exclusive of salary and benefits for these six individuals who served during our audit period.⁴² Most of this amount was for vehicles for commissioners.

We examined commissioner expenses and found that the Turnpike was overly generous and permissive when reimbursing commissioners for expenses. We identified the

⁴¹ We inquired if commissioners completed timesheets or other documentation to substantiate this claim. Turnpike officials stated that commissioners do not complete timesheets. As a result, we could not substantiate commissioner availability; however, from commission meeting minutes we could see that typically commissioners do attend public board meetings in Harrisburg twice a month.

⁴² Turnpike paid an annual salary of \$28,500 to the chairman of the Turnpike Commission, while the three other voting commissioner's each received annual salaries of \$26,000 during the audit period covered by this report.

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following four areas where the commissioners were treated differently than the employees:

1. Commissioners were exempt from monetary limits intended to control travel expenses.
2. Commissioners did not submit itemized receipts making it difficult to verify whether expenses were reasonable.
3. The Turnpike purchased vehicles for commissioners and exempted them from “official use only” restrictions.
4. The Turnpike reimbursed commissioners for electronics and other miscellaneous service fees through travel expense vouchers.

The Turnpike exempted its commissioners from travel expense monetary limits

Although we saw that commissioners have attended national and international trade association meetings on occasion, most commissioner travel expenses were for travel to Harrisburg to attend the twice-monthly Turnpike Commission board meetings.⁴³

The Turnpike Commission requires all employees to follow its *Travel Procedure Manual*, which establishes per diem limits and lodging allowances, and places restrictions on certain expenses, such as the prohibition on reimbursement for alcoholic beverages. While all Turnpike employees are required to follow this travel manual, commissioners are specifically exempt from the manual’s monetary limits.

⁴³ During the period January 1, 2007, through August 31, 2011, the Turnpike held 101 board meetings. The Turnpike Commission provided catered food and beverage service at these meetings, which totaled \$17,800, or approximately \$176 per commission meeting.

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Prior to January 2011, commissioners were expected to follow the non-monetary requirements of the manual (e.g., no reimbursement for alcohol); however, revisions made to the manual in January 2011 no longer mention this requirement. While this revision would seem to indicate a more lenient attitude toward commissioner expenses, we do note that the 2011 revision also stated that receipts are required for reimbursements exceeding monetary limits, which is a requirement that was absent prior to the 2011 revision.

Exempting commissioners from monetary limits on travel is significant for at least two reasons. First, the policy exemption inhibits the Turnpike Commission's ability to manage its travel expenses effectively. Second, and more important, such blanket exemptions given to those charged with overall management fosters an attitude of a "privileged class" of employees within the Turnpike Commission.

**Commissioners did not provide itemized receipts,
making it difficult to verify the reasonableness
of the incurred expense**

As shown on the next page, expenses totaled \$539,201, exclusive of salaries and benefits, for six commissioners who served during the period January 1, 2007, to August 31, 2011.

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Turnpike commissioner expenses for the period January 1, 2007, through August 31, 2011	
Expense Category	Amount
Vehicles	\$406,497
Lodging	45,992
Fuel	29,642
Vehicle Maintenance	20,328
Subsistence (meals)	15,356
Transportation (rail, air, taxi)	7,903
Conference Fees	7,647
Electronic Devices	3,461
Miscellaneous	<u>2,375</u>
Total	\$539,201
Notes: Includes expenses for six commissioners. Does not include commissioners' salaries or benefits.	

Source: Developed by Department of the Auditor General staff from information provided by the Turnpike Commission.

We reviewed these expenses for reasonableness and prudence. However, we did not examine commissioner travel expenses for compliance with monetary limits since commissioners' travel expenses were not subject to limits.

In order to audit commissioner expenses for prudence, we examined all commissioner travel expense vouchers for the period January 1, 2007, through August 31, 2011.⁴⁴ We expected to see receipts attached to these vouchers since the 2011 Turnpike Commission travel manual required commissioners to submit receipts for expenses that exceeded certain monetary limits, even though commissioners were not bound to those limits.

However, in our review of the commissioners' travel expense vouchers, we found no itemized receipts. Instead we found

⁴⁴ Commissioners submitted 183 travel expense vouchers for reimbursement during January 1, 2007, through August 31, 2011.

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that commissioners provided only copies of their corporate credit card statements and thinly worded descriptions on the expense vouchers such as “dinner meeting” or “dinner meeting with senate staff re: I-80 tolling.”

For example, we noted the following expenses for meal reimbursements, all of which lacked a restaurant receipt:

- In July 2009, at a restaurant located within close proximity to Turnpike Commission headquarters, a charge of \$174.56
- In June 2009, at a restaurant in Hershey, a charge of \$135.68
- In February 2010, at a restaurant in downtown Harrisburg, a charge of \$494.10

As Harrisburg-based auditors, we know the above examples to be relatively expensive meal charges—certainly for one person, and especially so, when analyzing for prudence. For example, for a restaurant tab to total nearly \$500, we would hope it represented a meal for a large group of people conducting Turnpike business and involving no alcohol. However, because the expense voucher included no mention as to the number of attendees or the purpose of the meal, we could not determine that information.

Nonetheless, the overriding point to this discussion is that, absent any supporting documentation as to the nature of the expenses or the number of persons involved, we could not verify the prudence of the expenses. Accordingly, there is a complete lack of transparency as to what the Turnpike reimbursed commissioners for using toll customers’ monies.

Likewise, as was the case with missing receipts for meal charges, there was no documentation to substantiate lodging charges. Our review found that during the period January 1, 2007, through August 31, 2011, commissioners incurred 166 separate charges for lodging. However, because there were no

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itemized receipts, it was difficult to determine whether any other costs were included in the commissioners' overall lodging expenses.

Along these lines, we noted excessive charges incurred at one downtown Harrisburg hotel. For example, according to our research, as of October 2012, the government room rate for a standard room at this hotel was \$179 per night. Thus, we expected to see room charges for \$179 or less at this hotel. Instead, we found the following charges to commissioners' corporate credit card statements for this hotel:

- \$304.42 for a one night stay in March 2008
- \$315.38 for a one night stay in September 2008
- \$314.41 for a one night stay in February 2009
- \$309.99 for a one night stay in August 2010
- \$285.25 for a one night stay in March 2011

The above examples are just a small sample of all the charges we reviewed from this hotel. In total, there were 71 separate charges for the period January 1, 2007, through August 31, 2011, for this one hotel.⁴⁵ In our review for this period, we found only one charge (January 2011) that was close to the standard government rate of \$179 per night.

Judging by the high dollar amounts noted in the above examples, commissioners either opted for more luxurious room accommodations or other hotel charges were included in the final charge made to each commissioner's credit card. However, here again, because no itemized receipts were included with the expense vouchers, it was difficult to verify the nature and prudence of these expenses.

⁴⁵ One commissioner stayed at a luxury hotel in Hershey for one night at a cost of \$419.71; however, he sought reimbursement for \$242.89 or the rate the Turnpike would have paid at this downtown Harrisburg hotel. In reviewing the documentation surrounding this expense, we noted that a previous receipt was included from the downtown Harrisburg hotel to substantiate the charge. From that receipt, we could see that in addition to a room rate of \$199, valet parking at \$22 was also included. Conceivably, valet parking charges were also included in other commissioner stays at this Harrisburg hotel.

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Another issue related to this downtown Harrisburg hotel is a lack of a justification to explain the commissioner's choice to stay at this particular upscale hotel. More reasonably priced accommodations were available closer to the Turnpike's headquarters. For example, within three miles of the Turnpike's headquarters in Middletown are six reasonably priced hotels offering a rate of less than \$100 per night.⁴⁶

However, our review of commissioner expense vouchers found that more than half of the \$35,307 spent in Harrisburg area lodging was charged to this one upscale hotel located in downtown Harrisburg, which is not in close proximity to the Turnpike's headquarters. Moreover, the commissioners failed to record any justification on the vouchers for choosing this hotel over less expensive accommodations. Given that more prudent accommodations are located near Turnpike headquarters, we would be hard pressed to find any justification for this expense.

On a positive note, we found that one commissioner frequently stayed at a hotel closer to the Turnpike's headquarters for about \$83 a night. This fact demonstrates to us that more prudent accommodations were available.

Further, since commissioners were to be available 24/7 to the Turnpike, it would seem practical that commissioners would have wanted to stay in accommodations closer to the Turnpike's headquarters when in Harrisburg.

By reimbursing all meal and lodging expenses without itemized receipts or justification for the expensive hotels, the Turnpike once again granted its commissioners leniency. All expenses were allowed, and prudence did not appear to be a concern.

⁴⁶ These rates are as of October 2012 and are non-government rates; government rates may be even less. We did not verify the occupancy status of these six hotels for the dates when each commissioner stayed overnight in Harrisburg.

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**The Turnpike purchased vehicles totaling over
\$400,000 for commissioner use and
exempted the commissioners from
“official use only” requirements**

As a matter of policy, the Turnpike Commission assigns a vehicle to each commissioner. We examined expenses related to commissioner-assigned vehicles and noted the Turnpike spent \$406,497 purchasing vehicles for the six commissioners who served during our audit period of January 1, 2007, through August 31, 2011. Our examination found that the Turnpike spent between \$28,101 and \$38,001 for these vehicles. The vehicles were American-made sedans, station wagons, or large sport-utility vehicles.

Moreover, the Turnpike did not require the commissioners to use the vehicles for official-use only. As a result, commissioners were allowed to use the vehicles for both business and personal purposes. The Turnpike cited the need for commissioners to be available 24/7 as the basis for this generous policy.

In addition to the \$406,497 purchasing costs, the Turnpike spent an additional \$20,328 on vehicle maintenance and \$29,642 on fuel for the vehicles from January 1, 2007, through August 31, 2011.

In total, the Turnpike spent over \$450,000 on vehicle expenses for the commissioners. We do not believe that part-time commissioners require permanently assigned vehicles. Further, we found no convincing reason to allow commissioners to use commission purchased vehicles for personal use.

**The Turnpike paid for miscellaneous items
recorded on commissioner expense vouchers**

In examining commissioner travel expense vouchers we also noted that the Turnpike reimbursed commissioners for costs

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related to the purchase of cell phones and cell phone-related equipment. Similarly, some commissioners purchased computer equipment and computer software and were reimbursed for these expenses through expense vouchers.

Although these expenses were not a large dollar amount⁴⁷ in comparison to total Turnpike expenses, such devices should have been purchased directly by the Turnpike's purchasing staff to ensure only necessary equipment was obtained and the most competitive price was paid.

Other questionable expenses that the Turnpike also paid through travel expense vouchers were the following: monthly access charges for On-Star for one commissioner,⁴⁸ E-ZPass replenishment fees, and \$114 for one commissioner's Internet use while he was on an Amtrak train.

We are presenting these examples because these charges underscore the permissive and lenient attitude the Turnpike Commission took in paying commissioner expenses.

Conclusion

As evidenced by our review of commissioner expenses for the period January 1, 2007, through August 31, 2011, commissioners have complete autonomy regarding their expenses and Turnpike-owned vehicle usage. The Turnpike placed no monetary limitations on travel expenses of commissioners and reimbursed them for all claimed expenses without adequate supporting documentation.

We believe government officials should be held to a higher standard and that excessive and undocumented expenses should not be permitted nor reimbursed. The Turnpike

⁴⁷ The charges ranged from \$19 at a cell phone retail store to \$548 for a cellular phone.

⁴⁸ On-Star is a vehicle service provided through General Motors that offers vehicle navigation, accident assistance, and other concierge-type services.

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Commission needs to be fully transparent regarding expenses incurred by its commissioners, and moreover, commissioners need to be held accountable for those expenses.

Recommendations

14. The Turnpike Commission should place monetary limits on commissioners travel expenses. Commissioners should lead by example and abide by the monetary limits of any other Turnpike Commission employee.
15. The Turnpike Commission should require the commissioners to submit proper documentation (e.g., itemized receipts and appropriate justifications) for any expenses that exceed the monetary limits. Further, the Turnpike should not reimburse travel expenses that lack appropriate receipts.
16. The Turnpike Commission should discontinue the practice of providing personal vehicles for the commissioners and instead should reimburse commissioners for vehicle mileage incurred for business use only at current Internal Revenue Service rates. Such a change could result in substantial savings to the Turnpike.
17. The Turnpike Commission should not use the travel expense voucher process to pay for commissioner purchased cellular devices and other electronic equipment. Instead, the Turnpike's purchasing office should purchase these items to ensure the items are necessary and obtained at the most competitive price.
18. The Turnpike Commission should post monthly expenses for its commissioners on its website in order to provide more accountability and transparency.

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Finding Six

The Turnpike Commission’s use of interest rate “swaps” has cost the taxpayers and its toll-paying customers at least \$108.9 million dollars more than if the Turnpike had instead financed with conventional fixed rate bonds.

Swaps are financial instruments that form a contract between a debt-financing entity and an investment bank, speculating on the direction interest rates will move, as well as other unpredictable factors.⁴⁹ Specifically, the party to the contract that guesses correctly about whether interest rates will go up or down gets paid by the party to the contract that guesses incorrectly. The amount of money changing hands is determined by several factors, including the amount of the debt associated with the swap and the overall fluctuation of interest rates.

In theory, swaps allow entities to enter into variable-rate debt financing, and thereby take advantage of low interest rates, while at the same time mitigating the possibility of those same interest rates rising. In reality, however, swaps are complicated, risky financial instruments that can needlessly waste taxpayer funds if the public entity “bets” incorrectly on which way interest rates will move.

In addition to the possibility of losing money through incorrect fiscal assumptions, public funds can be wasted on financial advisors, legal fees, and underwriting fees, especially if these services are not competitively bid and evaluated for independence.

The Turnpike Commission’s use of swaps associated with its bond issues, which was a strategy designed to save money, has instead proven to saddle the commonwealth’s taxpayers and the Turnpike’s toll-paying customers with enormous costs.

⁴⁹ Swaps are also formally known as “interest rate management agreements” or “interest rate derivatives.”

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Given the Turnpike's precarious financial position relative to Act 44 payments, the Turnpike should not use these complicated and risky deals. As discussed further in the sections that follow, when financially feasible to do so, we call on the Turnpike Commission to terminate its swap deals and to ban all swap use in the future.

**The Turnpike has a losing record
with its swap deals**

In a letter dated April 23, 2010, Turnpike Commission officials stated that:

...interest rate derivatives (i.e., swaps) have served as an important tool in the management of the Commission's overall financing structure...prudent use of interest rate derivatives has allowed us to manage our exposure to interest rates and provide for a higher degree of cost and net revenue certainty for this complicated enterprise.

Our analysis of the Turnpike's use of interest rate derivatives (swaps) finds little prudence on the part of the Turnpike. In fact, our analysis of the Turnpike's terminated and active swaps found the use of swaps to be an unwise investment.

As shown on the following table, terminated swaps have cost the taxpayers of the Commonwealth and the Turnpike's toll-paying customers over \$59 million in swap-related fees, net swap interest, and swap termination payments.

This amount reflects the grand total of all known costs associated with the Turnpike Commission's *terminated* swap

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agreements.⁵⁰ The total net cost of this financing is the sum of the interest and other costs incurred on the swaps deals, with credit given for the cash receipts (if any) generated by the swaps.⁵¹

Actual Costs of Terminated Swap Agreements				
January 9, 2001, through December 22, 2009				
Swap Associated Bonds	Swap Termination Date	Net Swap Fees	Net Swap Interest Payments	Termination Payments
1998Q	01/09/2001	\$ 498,000	\$ 0	\$ (4,020,000)
2002B ^{a/}	n/a	170,000	(10,014,000)	n/a
2003C	04/23/2008	584,325	10,995,000	4,270,000
2002A	12/04/2009	212,450	56,010,000	24,887,900
2001U	12/22/2009	145,850	(33,874,000)	25,250,000
2002B	12/22/2009	31,700	(18,626,000)	2,528,000
	Subtotal	\$ 1,642,325	\$ 4,491,000	\$ 52,915,900
Total of All Known Costs for Terminated Swaps (Fees+Payments)				<u>\$ 59,049,225</u>
Notes:				
^{a/} The Turnpike noted that it successfully sold an interest rate “swaption” for which it received an up-front payment of \$10,014,000. A swaption is a financial agreement between parties that gives the option to enter into an interest rate swap. In exchange for an option premium, the buyer gains the right but not the obligation to enter into a specified swap agreement with the issuer on a specified future date. Although listed here as a terminated swap, the swaption the Turnpike Commission entered into was never exercised by the counterparty.				

Source: Developed by Department of the Auditor General staff from information provided by the Turnpike Commission.

⁵⁰ Because these swaps have been terminated, it is possible to determine the actual total cost of the financing. Actual total cost would include professional and administrative fees, net swap interest, termination fees, and up-front payments.

⁵¹ It should be noted that the swap counterparties also received “spread fees” associated with the issuance of the swaps, a form of profit on the transaction which the investment bank counter-parties typically refuse to disclose. Because these non-disclosed profits are not known, they cannot be included in the total cost illustrated in the table above.

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Despite a losing record on swap deals, the Turnpike continues to hold 23 active swaps on more than \$2 billion dollars of issued debt

According to the Turnpike's *Comprehensive Annual Financial Report for the Fiscal Year Ended May 31, 2011 and 2010* (CAFR) the Turnpike Commission has 23 outstanding swaps relating to \$2.119 billion of debt issued. Compounding the Turnpike's already poor experience with its now-terminated swaps is the fact that these active swaps are awash in red ink.

The Turnpike's 23 active swaps had a negative book fair value of \$29.3 million dollars as of May 31, 2011.⁵² In simpler terms, this means that if the Turnpike had decided, or was forced to terminate, all of its active swaps on May 31, 2011, it would have had to pay the counterparties at least \$29.3 million in termination fees.⁵³ In even simpler terms, this \$29.3 million represents the cost for what would be the Turnpike Commission's "bad guess" on interest rates.

Furthermore, as of August 31, 2011, the Turnpike had paid \$48.1 million more in swap interest to bank counterparties than it had received.⁵⁴ This is partially due to the credit crisis and the down-turn in financial markets, but it is also a result of the extremely volatile nature of swaps and the unpredictability of fluctuations in these interest rates. The Turnpike also paid over \$1.8 million in swap-related fees for its active swaps.

Conceivably, an argument could be made that interest rates could change, and that active swaps could start producing net interest payments from the bank counterparty. Some may argue that it would be unfair to report on such amounts until the swap is terminated or expires. While this is possible, we caution that the reverse is also possible, i.e., that interest rates

⁵² *Comprehensive Annual Financial Report for the Fiscal Year Ended May 31, 2011 and 2010*.

⁵³ In addition, the Turnpike Commission would have incurred interest on amortizing these payments over the life of a bond refunding or reissuance.

⁵⁴ This figure is derived by subtracting the \$102,881,207 payments received by the Turnpike from the \$150,987,367 payments made by the Turnpike as of August 31, 2011, for the active swaps.

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could change for the worse and the Turnpike Commission's swaps will continue to decline in value.

While only time will tell whether the Turnpike Commission's currently active swaps turn favorable, the swaps' current status is negative. Even with credit given for the Turnpike's few early favorable experiences, the overall experience with swaps is overwhelmingly negative.

As is illustrated on the table below, the aggregate cost of both terminated and active swaps to the Turnpike as of August 31, 2011, stands at more than \$108.9 million.

Aggregate Costs of the Turnpike's Swaps December 16, 1998, through August 31, 2011	
Payments	Amount
Swap Fees Paid on Terminated Swaps	\$ 1,642,325
Net Swap Interest Payments - Terminated Swaps	4,491,000
Net Swap Termination Payments	<u>52,915,900</u>
Subtotal Terminated Swap Costs	\$ 59,049,225
Swap Fees Paid on Active Swaps	\$ 1,816,748
Net Swap Interest Payments - Active Swaps	<u>48,106,160</u>
Subtotal Active Swap Costs	\$ 49,922,908
Grand Total of Swap Costs as of August 31, 2011	<u>\$ 108,972,133</u>

Source: Developed by Department of the Auditor General staff from information provided by the Turnpike Commission.

**Conclusion: Swaps are a bad bet for the Turnpike,
its toll-paying customers, and the
Commonwealth's taxpayers**

If the Turnpike Commission had simply issued conventional fixed-rate debt, and never ventured into swaps, it could have

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saved the taxpayers over \$108.9 million, which equates to approximately 1.72 months of operating revenue.⁵⁵

We also reject the counter-argument that not all swap deals turn sour, and that many swap deals have saved a great deal of money. That position brings no comfort to the many public entities that have been badly served by swap deals that backfired.

The fundamental guiding principle in handling public funds is that they should never be exposed to the risk of financial loss. Swaps may be perfectly acceptable in the private sector, where private citizens are free to decide how much risk they can tolerate when their own money is at stake. But swaps should have no role in government, where the taxpayers' money is at stake.

The Department of the Auditor General's position on swaps has been clearly stated on many previous occasions; however, it bears repeating here. Quite simply, the use of swaps amounts to gambling with public money. As this finding illustrates, the multitude of hidden risks in swaps deals makes them inherently unsuitable for public finance.

Public debt should be financed with fixed-interest rate conventional bonds that are transparent, reliable, and easily understood by decision-makers and the public. After all, it is the taxpayers, not the public officials, who bear the losses resulting from a bad bet.

Recommendations

19. The Turnpike Commission should terminate all remaining swaps as soon as it is fiscally responsible to do so and

⁵⁵ According to the Turnpike's CAFR for the fiscal year ended May 31, 2011, total operating revenue for the year was \$758.6 million, or approximately \$63.2 million per month.

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refinance, if necessary, with conventional fixed-rate bonds.

20. The Turnpike Commission should promptly adopt a resolution unequivocally and permanently prohibiting the use of swaps in the future.

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**Status of
Prior Audit
Findings**

Released in June 2008, our previous quadrennial performance audit of the Turnpike Commission covered the period January 1, 2003, through December 31, 2005, and resulted in five findings. In response to these five findings, we made 23 recommendations for improving the Turnpike Commission's operations. Further, in that same audit report, we made four additional recommendations that resulted from the Turnpike Commission's failure to implement recommendations from our 2003 performance audit report.

Determining the implementation status of previous audit recommendations is important because if audit recommendations are implemented, it illustrates both the capacity of the Turnpike to adapt and improve, as well as the value of the performance audit to the commonwealth's taxpayers. Moreover, generally accepted government auditing standards require that auditors evaluate whether the audited entity has taken appropriate corrective action to address findings and recommendations from previous engagements that are significant to the current audit objectives.⁵⁶

As part of our current audit, we followed up on the implementation status of our June 2008 recommendations. To determine whether prior audit recommendations were implemented, we performed the following:

- Reviewed our prior audit report and corresponding working papers
- Interviewed pertinent Turnpike employees
- Obtained and analyzed the Turnpike's responses to our written requests for information

⁵⁶ Section 7.36, *Government Auditing Standards*, July 2007 revision, issued by the Comptroller General of the United States, United States Government Accountability Office, Washington, D.C.

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- Reviewed pertinent Turnpike policies and procedures
- Conducted Internet research
- Performed audit work that included examining and analyzing available Turnpike documents and records

The scope of our review and audit work focused on the current audit period, January 1, 2007, through August 31, 2011, but we also considered all corrective actions taken by the Turnpike Commission through July 31, 2012.

In the sections that follow, we present a brief summary of the recommendations made, the Turnpike Commission's current implementation status, and our final analysis and conclusion regarding the Turnpike's implementation of the recommendations.

Finding Number 1: The Turnpike Commission prioritized safety but has not established a chain of command that culminates with a single safety director.

Recommendations. For the Turnpike to address this finding we recommended that the Turnpike do the following:

1. Appoint an executive-level safety director to be ultimately accountable for coordinating all aspects of safety, including the regular analysis of accident statistics. This position should be on an equal level with the other directors within the organization and should also report directly to the Turnpike Commission's chief operating officer.
2. Maximize the results and benefits of the \$29+ million it pays each year to Troop T of the Pennsylvania State Police (PSP) by executing a written agreement with the

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PSP to delineate responsibilities and performance measures.

3. Insist that Troop T obtain at least two four-wheel drive vehicles for each of the nine Troop T stations for use during hazardous weather conditions.

Current status. During our audit, we found the following:

1. The Turnpike created the position of director of operations safety and incident response in September 2009, and this position reports directly to the Turnpike Commission's chief operating officer.
2. The Turnpike reviewed the statute outlining PSP Troop T responsibilities and determined that an executed agreement was not necessary. Further, the Turnpike meets annually with Troop T who submits a budget to the Turnpike. The Turnpike reviews the budget and reimburses Troop T for services provided.
3. Troop T believes it has adequate vehicle coverage to perform its patrol responsibilities on the turnpike.

Our final analysis and conclusion. Based on the Turnpike's work in creating and filling the director of operations safety and incident response position, as well as the Turnpike's efforts to oversee Troop T's budget requests, we conclude that the Turnpike has taken appropriate corrective action to address the recommendations.

Finding Number 2: The Turnpike Commission did not fully utilize available accident information.

Recommendations. To address finding two, we recommended that the Turnpike Commission do the following:

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4. Turnpike Commission employees perform routine, standardized, systematic, and documented accident trend analysis on all statistics in its accident database.
5. Ensure that accident information is entered into its accident database timely.
6. Ensure that its database includes information from all the categories included on the uniform accident report forms and that every category can be isolated for inclusion in reports.

Current status. In February 2008, the Turnpike terminated its use of the accident database known as the collision analysis reporting system. In its place, the Turnpike's traffic operations center distributes a daily incident report to all Turnpike departments. According to the Turnpike, the departments review the information in the incident report for trends, issues, and concerns that cause roadway hazards.

Our final analysis and conclusion. Although the Turnpike has terminated its collision analysis reporting system, we believe the Turnpike's efforts in distributing daily incident reports to all Turnpike departments is a reasonable means of highlighting trends, issues, and concerns relating to roadway hazards. Therefore, we conclude the Turnpike Commission has addressed the recommendations.

Finding Number 3: The Turnpike Commission did not perform consistently in its dissemination of roadway and traffic information.

Recommendations. To address finding three, we recommended the Turnpike Commission do the following:

7. Ensure that its website is organized in a more user-friendly manner.

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8. Routinely review its website to ensure the accuracy and availability of listed links.
9. Monitor the highway advisory radio continuously for accuracy and clarity.
10. Ensure that portable message boards on the roadway reflect either current traffic conditions or—if the boards are used prospectively—information that explains when the listed conditions are expected to occur.
11. Use available technology to ensure that the highway advisory radio is operational the entire length of the turnpike, including in tunnels.

Current status. In response to the above recommendations, during our current audit, we found the following:

7. The Turnpike Commission has taken actions to ensure that its website is organized in such a way that is more user-friendly. Specifically, the Turnpike’s home page includes scrolling information alerting users to traffic conditions. Additionally, the Turnpike has developed hands-free mobile cell phone applications, which “speak” to users regarding travel alerts.
8. The Turnpike stated that it routinely checks its website for outdated links by using an electronic tool to identify potential address inaccuracies or breaks. We reviewed the Turnpike Commission’s website and found the links to be current.
9. In May 2008, the Turnpike upgraded the highway advisory radio system to a digital communication system improving the speed and clarity of the broadcast.
10. The Turnpike stated that portable message boards are programmed by Turnpike staff to reflect the traffic incident/event and can be transported by maintenance staff upon notification of a traffic event. Based on our audit work and observations while traveling the turnpike,

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we found no evidence to dispute the Turnpike Commission's statements.

11. The Turnpike stated that the highway advisory radio transmitters span the entire state, and the average broadcast radius is about 5 miles. However, the radio is broadcasted on an AM frequency; therefore, transmitter range may fluctuate from interchange to interchange depending on local terrain, interference from other transmissions, and other factors.

Our final analysis and conclusion. Based on the improvements the Turnpike made to its website, as well as to its highway radio advisory system, we conclude the Turnpike took corrective actions to implement the recommendations.

Finding Number 4:

The Turnpike Commission did not ensure that vehicles entering or exiting the turnpike at E-ZPass toll plazas traveled at safe speeds.

Recommendations. To address finding four, we made the following five recommendations to the Turnpike Commission:

12. Take action to monitor and enforce the posted speed limits at all toll plazas. Not only is such action a safety measure, but it also is a measure to ensure that E-ZPass customers comply with their E-ZPass agreements. Actions should include the imposition of penalties for violating E-ZPass speed limits, including the revocation of the E-ZPass privileges of repeat violators, the installation of warning systems at toll plazas to call attention to drivers who exceed posted speed limits, and potentially the issuance of traffic citations for violation of the Motor Vehicle Code. If legislative changes are needed to permit more aggressive enforcement, the Turnpike Commission should lobby for such changes.

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13. Institute a public awareness campaign to advise customers of speed limits at toll plazas and the consequences for violating those speed limits.
14. Ensure that the speed monitoring reports received from TransCore contain data for all toll plazas and for all E-ZPass vehicles entering and exiting the turnpike.
15. Ensure that it thoroughly reviews the speed monitoring reports and communicates the results to the appropriate officials for action.
16. Implement the necessary policies and procedures to provide the highest possible level of traveler and employee safety.

Current status. During our current audit, we found the following:

12. The Federal Highway Administration recommended a maximum posted speed limit of 25-30 miles per hour at non-express electronic toll collection lanes. Based on Turnpike speed reports, we found that the majority of E-ZPass customers travel below 25 miles per hour, which would indicate that the majority of customers are traveling at safe speeds through the dedicated E-ZPass lanes. Further, we saw evidence that the Turnpike Commission performs regular reviews and analysis on the E-ZPass speed reports.
13. The Turnpike implemented a public awareness campaign; however, the campaign's focus was on distracted driving (specifically, texting) as the Turnpike believed this was a more pressing safety issue than speeding in E-ZPass lanes.
14. The Turnpike stated that vehicle speeds are captured for all entry and exit lanes but reported only for dedicated E-ZPass lanes. Capturing vehicle speeds in lanes that accept both cash and E-ZPass would not be meaningful

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since cash paying customers come to a stop in order to pay the toll.

15. See number 12 above.
16. Currently, speed display monitors are not at all dedicated E-ZPass lanes. Although the Turnpike does not believe that speeding in E-ZPass lanes is a significant concern, the Turnpike reported that it is considering placing speed display monitors at every dedicated E-ZPass lane. The speed display monitors are simply a visual reminder for drivers of their speeds while traveling through the dedicated E-ZPass lanes.

Our final analysis and conclusion. We conclude that the Turnpike is taking steps to monitor speeds at its entry and exit lanes. While the Turnpike did not fully implement every recommendation, in light of the fact that the Turnpike has indicated it is moving to an “all electronic tolling” system, the above recommendations are no longer a priority. Once the Turnpike implements the new electronic tolling system, we will reevaluate this issue at that time. In the meantime, the Turnpike should continue to monitor speeds and place speed display monitors at E-ZPass lanes.

Finding Number 5: **The Turnpike Commission wrote off over \$2.6 million in fiscal year 2006-07 by collecting only a portion of unpaid E-ZPass lane tolls and fees, some of which represented violations from previous years. Equally important, there were even more toll violators that the Turnpike Commission could neither identify nor count, a problem that resulted in still more lost revenue.**

Recommendations. To ensure that all toll revenues to the Turnpike are collected and available for use in operating the turnpike, we recommended the Turnpike do the following:

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17. Increase the administrative fee imposed on each notification sent for an E-ZPass toll violation to the statutory maximum of \$35.
18. Lobby the General Assembly for legislation to allow the Turnpike Commission to impose more meaningful penalties for E-ZPass toll violations.
19. Reduce the time between when a violation occurs and when the first notice is sent to the violator, and reduce the time between when a violation occurs and when it is sent to the collection agency.
20. Analyze whether it would achieve a better response rate by discontinuing the third and fourth notices and, instead, letting the collection agency take over after the second notice fails to bring a response.
21. Capture a digital image of the license plate for every vehicle that exits the turnpike in an E-ZPass lane, including lanes used for both cash and E-ZPass customers, in order to identify toll violators.
22. Aggressively pursue all options to obtain motor vehicle information from the states currently not included in the law enforcement system database used to identify E-ZPass toll violators.
23. Post signs in all toll plaza lanes that remind customers that toll evasion is a violation of the law and inform them of the penalties for violating the law.

Current status. During our current audit, we found the following:

17. The administrative fee imposed on each notification sent for an E-ZPass toll violation has not increased to the statutory maximum of \$35.
18. The Turnpike Commission has drafted proposed language for legislation to put a hold on vehicle registrations with

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- outstanding or unpaid E-ZPass account balances. The Pennsylvania Department of Transportation has provided comments. The Turnpike Commission reported to us that it is now in the process of identifying a legislative strategy to move this legislation forward.
19. Since 2009, the Turnpike reduced the amount of time by 50 percent between the first request for payment and when the customer's violation is sent to collections.
 20. In September 2008, the Turnpike decreased the number of notices sent to toll violators from four to two notices.
 21. The Turnpike stated that the violation enforcement system (VES) is disabled in lanes that accept both cash and E-ZPass because the VES would process cash customers as violations. Since the VES is not active in the mixed-mode lanes, the toll collector is responsible for identifying and reporting toll violators to the Turnpike Commission's traffic operations center (TOC). The TOC then reports the violation to Troop T of the Pennsylvania State Police, who responds accordingly.
 22. The Turnpike reported that seven states do not share motor vehicle information with the law enforcement system database. Four of these states have legislation prohibiting the release of motor vehicle registration information, and the remaining three states have a lengthy manual process for identification of individuals that does not meet Pennsylvania's statutory timeframe in which to notify violators.
 23. The Turnpike posted signs displaying information regarding violation enforcement; however, the signs were eventually replaced with signs conveying other messages.

Our final analysis and conclusion. Although the Turnpike has yet to raise the administrative fee on E-ZPass violation notices to \$35 (recommendation 17), we believe the Turnpike has made an effort to address the remaining recommendations.

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Further, as previously stated, the Turnpike's efforts to move toward an all electronic tolling system will allow the Turnpike to better address toll violations as it will have video evidence. As a result, we conclude the Turnpike has taken appropriate corrective action to address the remaining recommendations.

**Other recommendations made during our June 2008
performance audit of the Turnpike**

Recommendations. In our June 2008 performance audit of the Turnpike, we similarly followed up on previous audit recommendations that resulted from our March 2003 audit report. As part of that audit work, we found that the Turnpike had implemented the recommendations with the exception of the finding area pertaining to the Turnpike's use of pool vehicles. Specifically, we found that the Turnpike was not ensuring that vehicle reports were complete and accurate; therefore, we recommended the Turnpike do the following:

24. On a monthly basis, compare the list of employees required to submit a mileage report with the list of those who have submitted a report.
25. On a quarterly basis, compare the Turnpike's vehicle reports to ensure each report is complete and accurate.
26. In the *Executive Director Annual Review*, include monthly mileage reports for pool vehicles assigned to departments on a long-term basis.
27. Create a vehicle database that contains all pertinent information on all Turnpike vehicles.

Current status. As part of our current audit, we found the following:

24. In August 2011, the Turnpike began conducting reviews of monthly mileage reports to ensure that employees

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- required to submit mileage reports do, in fact, submit the reports.
25. In August 2011, the Turnpike began conducting monthly reviews of the central pool vehicle reports and forwarding them to the director of maintenance for review and signature. Department heads review and sign all other pool vehicle assignments.
 26. Beginning in June 2012, the Turnpike assigned its pool vehicles for a maximum period of 30 days. Use of a vehicle beyond 30 days results in a vehicle being assigned to an individual permanently.
 27. The Turnpike initiated fleet tracking software in its accounting system that contains all pertinent information regarding Turnpike vehicles.

Our final analysis and conclusion. Based on the Turnpike's efforts to improve its oversight of its pool vehicles, we conclude that the Turnpike Commission has taken appropriate corrective action to address the recommendations.

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Appendix A**Objectives,
Scope, and
Methodology**

State law requires the Department of the Auditor General to audit the Pennsylvania Turnpike Commission. Specifically, Section 706(b) of the Administrative Code of 1929⁵⁷ provides that "...the Auditor General shall, on a quadrennial basis, conduct a financial audit and a compliance [performance] audit of the affairs and activities of the Pennsylvania Turnpike Commission." In addition, the Turnpike Organization, Extension and Toll Road Conversion Act⁵⁸ added by Act 44 of 2007, requires that "At least once every four years, the Department of the Auditor General shall review the performance, procedures, operating budget, capital budget and debt of the commission and shall audit the accounts of the commission."

Our performance audit was conducted in accordance with *Government Auditing Standards* as issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We provided our draft report to Turnpike Commission management on December 10, 2012, and held an exit conference with Turnpike officials on December 20, 2012.

Objectives

Our performance audit of the Pennsylvania Turnpike Commission focused on the following objectives:

1. To determine whether the Turnpike Commission is complying with its policies and procedures related to allowing toll-free turnpike travel to its employees and

⁵⁷ 71 P.S. § 246(b), as amended by Act 122 of 1988.

⁵⁸ 74 Pa.C.S. § 8204(b)(1)

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- others, and the extent to which the Turnpike allows toll-free turnpike travel.
2. To determine whether the Turnpike Commission's swap agreements are the best use of public funds.
 3. To determine the expenses incurred by the Turnpike Commission for its commissioners including, but not limited to, salaries and travel.
 4. To evaluate the efforts the Turnpike Commission is taking with regard to tunnel safety.
 5. To evaluate whether the Turnpike is effectively monitoring the E-ZPass toll collection system.
 6. To determine the status of our recommendations made to the Turnpike in our prior audit report released June 2008.

With regard to the financial audit, we have followed the same practice that our department has followed since Act 122 went into effect. Specifically, we did not conduct our own financial audit; instead, we reviewed the audit reports and supporting documentation of the independent firm who annually audits the Turnpike Commission's financial statements. Accordingly, we reviewed those financial audits and the supporting working papers for the five fiscal years ended May 31, 2006, through May 31, 2010.

Scope

Audit scope sets the time boundaries for the audit objectives. Our audit scope was January 1, 2007, through August 31, 2011, unless otherwise noted.

With respect to our objective on tunnel safety, because we believe tunnel inspections are an integral element to safety, we extended our scope to be the period January 1, 2000, through

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December 31, 2011. This expanded scope allowed us to more accurately capture inspections completed by the Turnpike.

Additionally, our work related to swaps covered the period December 16, 1998, through August 31, 2011.

The majority of our audit work was conducted from September 2011 through October 2012, although we continued to finalize our work through the issuance of this report.

Methodology

The Turnpike Commission's management is responsible for establishing and maintaining effective internal controls to provide reasonable assurance that the Turnpike Commission is in compliance with applicable laws, regulations, contracts, grant agreements, and administrative policies and procedures.

Within the context of our audit objectives, we obtained an understanding of internal controls and assessed whether those controls were properly designed and implemented. Additionally, we gained a high-level understanding of the Turnpike Commission's information technology (IT) environment and evaluated whether internal controls specific to IT were present. Any significant deficiencies found during the audit are included in this report.

To address our audit objectives, we performed the following procedures:

- Interviewed pertinent Turnpike Commission management officials and staff.
- Reviewed the Turnpike Commission's annual reports.
- Attended Turnpike commission meetings held during the period of April 3, 2012, through October 16, 2012.

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- Reviewed commission meeting minutes posted on the Turnpike's website for the period of January 2010 through October 2012.
- Obtained and reviewed financial audits conducted by the Turnpike's independent auditors for the period June 1, 2005, through May 31, 2012.
- Obtained and reviewed the Department of the Auditor General's prior audit report on the Turnpike Commission released in June 2008.
- Obtained and reviewed pertinent sections of the Trust Indenture between the Turnpike Commission and First Union National Bank dated July 1, 1986, (restated as of March 1, 2001) which allows the Turnpike Commission to grant toll-free travel on the Pennsylvania turnpike.
- Obtained and reviewed the Turnpike Commission's policies and procedures for granting toll-free travel on the Pennsylvania turnpike.
- Obtained and reviewed the Turnpike's agreement with the Pennsylvania State Police (PSP) which grants toll-free turnpike travel to the PSP.
- Reviewed and analyzed information obtained from the Turnpike on the number of individuals and associated costs for toll-free turnpike travel provided by the Turnpike.
- Conducted Internet research to determine if other state turnpike systems grant free or reduced-fare travel to their employees or others.
- Obtained and reviewed the Turnpike Commission's policies pertaining to swap agreements.

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- Obtained and reviewed the Turnpike Commission's policies, procedures, and guidelines related to the inspections and maintenance of turnpike tunnels.
 - Obtained and reviewed the Federal Highway Administration's proposed regulations establishing guidelines for tunnel inspections.
 - Conducted Internet research on other states' tunnel inspection programs, as well as any reports on tunnel safety or best practices.
 - Obtained and examined the Turnpike Commission's tunnel inspection schedule and inspection reports including findings and recommendations, as well as an explanation of any actions taken to address deficiencies identified during the inspections.
 - Obtained and reviewed a sample of Turnpike's work orders showing routine maintenance performed in all five tunnels between the two-year and five-year inspections for the period of January 1, 2007, through August 31, 2011.
 - Obtained and reviewed a sample of tunnel log sheets verifying the two-hour drive through inspections conducted by Turnpike tunnel guards.
 - Obtained and reviewed a report generated by the Turnpike Commission's computer-aided dispatch system listing traffic control incidents resulting in tunnel closures and the implementation of bi-directional traffic patterns.
 - Toured the Kittatinny/Blue Mountain tunnels and observed the daily operations conducted by tunnel maintenance staff.
 - Obtained and reviewed a sample of internal audits conducted by the Turnpike Commission regarding the E-ZPass toll collection system.

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- Obtained and reviewed Turnpike audits of the E-ZPass toll collection system operated by TransCore, the Turnpike Commission's E-ZPass administrator, for the period of January 1, 2007, through August 31, 2011.
- Toured the Turnpike Commission's traffic control center and observed the alert monitoring system which detects system failures that occur at the Turnpike's office buildings and on the turnpike roadway.
- Toured the Turnpike Commission's test lane facility and observed testing procedures.
- Conducted Internet research to find E-ZPass consumer complaints where a Pennsylvania E-ZPass customer was charged an incorrect fare or violation when traveling the turnpike.
- Obtained and reviewed the Turnpike Commissions policies related to business-related travel, vehicles, and electronic devices.
- Obtained and reviewed the commissioners' expenses paid by the Turnpike including business-related travel, vehicle, and electronic devices.

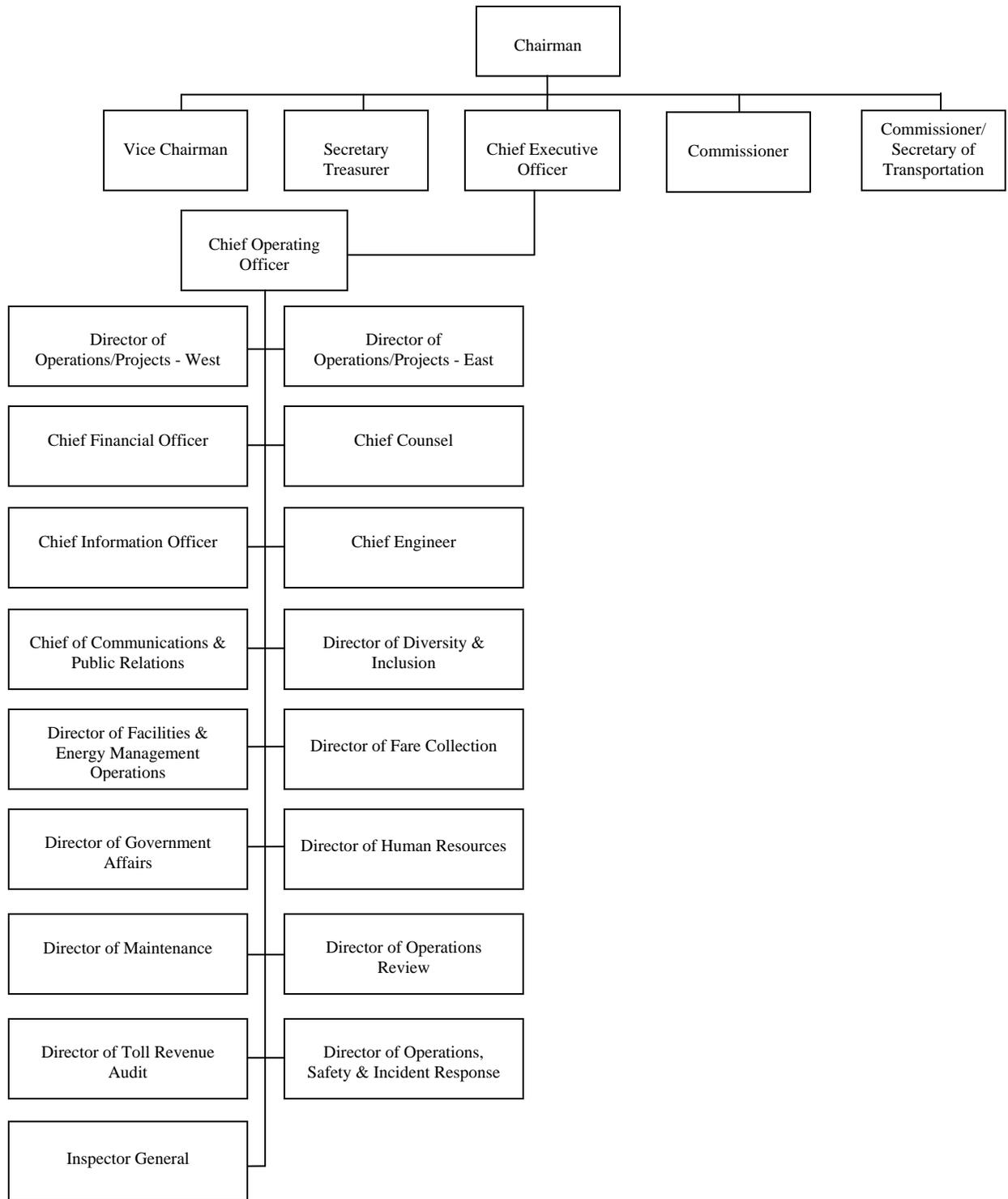
Findings and Recommendations

Our audit contains six findings and 20 recommendations related to the operation and maintenance of the Pennsylvania turnpike.

Our expectation is that the findings and recommendations presented herein will improve the Turnpike Commission's administration of the turnpike and will provide a framework for corrective action where necessary. We will follow-up on our audit recommendations when we conduct our next audit of the Turnpike Commission.

Pennsylvania Turnpike Commission

Organization Chart as of May 31, 2012



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**Audit Response
from the
Turnpike
Commission
with evaluation
from the
Department of
the Auditor
General**

The Turnpike Commission’s full response to this audit report is reproduced in its entirety on the following pages. Here, however, in accordance with generally accepted government auditing standards, we present our evaluation of the Turnpike’s response.

Our Evaluation of the Turnpike Commission’s Comments

No changes were made to the audit report based on the Turnpike Commission’s response. We firmly stand by each of our findings and recommendations.

Although the Turnpike appears to have accepted some of our recommendations, we caution that, first, the Turnpike must implement all of the recommendations in order to improve its performance in the areas we have identified. Second, the Turnpike must implement the recommendations via actions that are measurable in future audits. For example, in its response, the Turnpike frequently says it “intends to consider” or that it will “research the feasibility” of certain recommendations, but these responses do not show measurable corrective actions and completion dates.

We offer a further evaluation about some specific findings.

In Finding One, we called on the Turnpike Commission to stop granting personal toll-free travel to its employees, and to do so immediately. The Turnpike says it disagrees with our calling the toll-free policy a “generous perk” and with our assertion that millions of dollars of revenue are lost when employees do not have to pay tolls for personal travel. However, it does not make sense for the Turnpike to say the perk is neither generous nor a lost-revenue issue when—as the Turnpike acknowledges—that personal travel usage is not even tracked.

In its response, the Turnpike Commission did not directly address the issue of at least 650 employees having two ways to obtain toll-free travel (E-ZPass transponders and employee ID card). The Commission states that it will consider modifying

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non-revenue usage policies to reduce the possibility of abuse, and we believe the practice of multiple free passes should be the starting point for corrective action.

Further, while the Turnpike Commission “believes” it is in full compliance with the toll covenants set forth by its Trust Indenture, we note that it is only able to make this claim so long as its vaguely worded policy statement declaring all employees as “on duty” when traveling the turnpike remains in place. If this policy were to be repealed, the Turnpike Commission would not be in compliance with the Trust Indenture when it allowed toll-free travel for employees who were not on official Turnpike business. Therefore, we continue to assert that the Turnpike Commission should abandon its current employee non-revenue usage policy and adopt one that clearly complies with the Trust Indenture—no personal toll-free travel for employees.

With regard to our finding and recommendations related to tunnels, it is good to see that the Turnpike will schedule tunnel management committee meetings on a four-month cycle and include PennDOT tunnel personnel in those meetings. However, we continue to stand by our recommendations that the Turnpike Commission should assign a person to be *solely* responsible for tunnel management, and it should ensure that it conducts, not just schedules, in-depth inspections on a five-year cycle.

The Turnpike Commission must also ensure that two of its tunnels have fire detection systems similar to those in the other three tunnels. The Turnpike should clearly indicate *when* this life-safety improvement will occur, which should be as soon as possible.

With regard to our finding and recommendations related to the Turnpike Commission’s generous practices in reimbursing commissioners’ travel expenses, we take issue with the Turnpike Commission’s response. In particular, the Turnpike states that it is important to consider the “unique and trying”

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times that the Turnpike Commission faced related to leasing of the turnpike and I-80 tolling (events that occurred during our audit period). According to the Turnpike Commission, these events caused “significantly more commissioner activity” than is normal. This explanation underscores our very point—commissioner expenses need to be fully transparent and accountable. The commissioners should lead by example, and accordingly, we offered five common sense recommendations to ensure accountability and transparency. While the Commission does not directly address our recommendations, it essentially said “No” to them by stating only that it will review and consider our recommendations.

Finally, with respect to the Commission’s response to our interest-rate swap finding our response can most simply be summarized to this point: we have a philosophical difference with the Turnpike Commission on how public debt should be managed. Our belief is that taxpayer funds should never be exposed to risk, and that taxpayers do not and cannot support a debt policy that is understandable only to those in the financial services industry who themselves benefit from that policy. We hold that public debt should be financed only with fixed-interest rate conventional bonds—and not risky synthetic financial instruments. We firmly believe that the Turnpike Commission will be better positioned to manage its debt implications resulting from Act 44, if it stays away from swaps that subject the Turnpike to greater—and completely unacceptable—risk.



COMMONWEALTH OF PENNSYLVANIA
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January 2, 2013

The Honorable Jack Wagner
Auditor General
229 Finance Building
Harrisburg, PA 17120

Dear General Wagner,

On behalf of Chairman Bill Lieberman and our Commissioners, I provide to you the Pennsylvania Turnpike Commission's response to your draft audit report issued December 10, 2012. We appreciate the opportunity offered to the Commission to provide our comments to this report.

In general terms, we believe that the findings in the audit suggest that the Commission is meeting its mission statement and serving the public well as a steward of the responsibility for improving, operating and maintaining the nation's first superhighway. The topic areas of the audit findings and recommendations, while important to consider, suggest that the Turnpike is a well-run operation given our areas of responsibility, breadth of geographic coverage and age of the system. While we disagree necessarily upon the weight of each of your recommendations it is clear to me that when system safety and provision of services are considered, the Pennsylvania Turnpike Commission is performing as should be expected.

This roadway is operated by a dedicated staff of professionals who understand both the need to be responsive as well operate safely and efficiently in order to meet the needs and expectations of our traveling customers. For this reason we take issue with your characterization that the Turnpike was difficult to deal with regarding your requests for data regarding contractor and employee travel policies for non-revenue travel. We do not believe that anyone at the Commission intentionally attempted to delay or otherwise interfere with your review functions. As we believe you have correctly pointed out, the Commission must implement an added measure of accountability with regard to non-revenue travel on the Turnpike and as a simple matter of fact; some of the data you requested simply does not exist. As a result of this reality, we commit to exploring ways to ensure that this data, where practical, can be generated and that greater accountability is achieved system-wide.

In any organization the setting of priorities requires an understanding of the levels of risk associated with each challenge. Under the leadership of our Commissioners, the Turnpike is currently engaging in multiple internal reform efforts aimed at reducing our fiscal footprint, increasing our effective utilization of technology, improving roadway maintenance, rebuilding the roadway and updating our internal control processes. We believe that these areas will net the Commission with the greatest operational cost reductions and long term system benefits.

Having said this, and despite the fact that we do not necessarily agree with all of the findings and recommendations, your review of our performance has given us additional areas to consider as a part of our long

The Honorable Jack Wagner

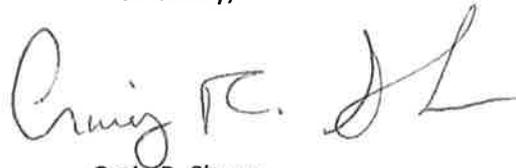
January 2, 2012

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term strategy to position the organization for future challenges and as such each will be given the appropriate level of attention as we continue to modernize our operations and readjust our priorities.

In closing, we believe you will find our comments useful to your final audit report. Should you have any questions regarding any statements included in our response, please contact me directly so that the issues can be addressed without delay.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig R. Shuey". The signature is fluid and cursive, with the first name "Craig" being the most prominent.

Craig R. Shuey

Acting Chief Executive Officer

Enclosure

CC: The Honorable William K. Lieberman, Chairman
The Honorable A. Michael Pratt, Vice Chairman
The Honorable James W. Lincoln, Secretary Treasurer
The Honorable Pasquale T. Deon, Commissioner
Doreen A. McCall, Chief Counsel
David A. Gentile, Chief Compliance Officer
William J. Capone, Chief of Communications & Public Relations
Bradley J. Heigel, Chief Engineer
Nikolaus Grieshaber, Chief Financial Officer
Mark P. Compton

Pennsylvania Turnpike Commission

Draft Performance Audit Response Document

December 31, 2012

Finding One-Commission Response

The Draft Report states: The Turnpike Commission lets its employees ride the Turnpike toll-free, even for personal travel, costing the Turnpike millions of dollars in lost revenue. This generous perk continues with little oversight at a time when the Turnpike raises tolls for other travelers in its struggle with mounting debt.

Recommendation 1 - The Turnpike Commission should immediately stop granting personal toll-free travel to its employees. In addition, the Turnpike should adhere to its Trust Indenture provision that allows toll-free travel to employees in the "discharge of official duties" only. Accordingly, the Turnpike must rescind the policies that were implemented that violated the spirit of the Trust Indenture by decreeing that employees were on duty anytime they traveled the Turnpike.

Recommendation 2 - No matter how the Turnpike provides its employees with toll-free business travel only, whether now or in the future with all-electronic tolling, the Turnpike should aggressively and accurately monitor this toll-free business travel to verify it indeed occurs in the actual "discharge of official duties" as per the Trust Indenture.

The Commission concurs in the Auditor General's assertion that the Commission does not distinguish between personal and business travel in tracking usage. Since the Commission is a 24/7 operation and the majority of our employees (maintenance operators, toll collectors, emergency responders) are subject to working any day at any time, the issue becomes very difficult and potentially labor-intensive to manually distinguish between business and personal usage. The Auditor General is also correct regarding the susceptibility of abuse for employee identification cards and transponders.

The Commission is ever mindful of its contractual obligations under the Amended and Restated Trust Indenture dated March 1, 2001, and believes it is in full compliance with the toll covenants set forth therein. The Commission's longstanding road safety policies underscore the genuine "round-the-clock" responsibility that Turnpike employees bear when traveling on the Turnpike, and provides a reasonable basis to exempt such employees from paying tolls pursuant to the express language of Section 502(b)(3) of such indenture.

The Commission respectfully disagrees with the Auditor General's characterization of the existing employee non-revenue usage policies as being a "generous perk" and the assertion that the Commission is losing millions of dollars of revenue due to personal travel. The Commission recognizes its obligations to take all reasonable measures to reduce fraud and abuse, and will, therefore, research the feasibility and cost-effectiveness of developing queries and techniques to monitor usage and identify potential misuse. The Commission will also consider modifying its existing employee non-revenue usage policies, as considered appropriate, to reduce the possibility of abuse.

The linkage between this long-standing Commission policy and the coming toll increase is a wholly unfair characterization. As is clearly understood by the Auditor General, evidenced by numerous letters, news conferences and two public hearings, the toll increase planned for 2013 is necessary to finance the cumulative impact of the annual payments made by the Commission, beginning in 2008, which assist the Department of Transportation in meeting transportation funding needs Commonwealth-wide as required by Act 44 of 2007. Annual payment amounts made to the Commonwealth by the Commission have ranged from \$900 million in 2010 to the current \$450 million. Clearly, whether or not the policy remains in place will have absolutely no bearing on whether or not the toll increase is required.

The Commission does, however, agree that more must be done to ensure that the privilege is not being abused and we have been working on establishing an effective means of auditing this area of our operations. The Compliance Department, having recently been constituted and reorganized, is beginning a comprehensive series of business practice reviews and among the early areas of exploration will cover establishing tighter controls over this privilege.

Finding Two-Commission Response

The Draft Report states: The Turnpike Commission provided more than \$4.1 million of toll-free travel to nearly 5,000 consultants, contractors, and other state government officials. With little supervision over toll-free travel usage, the Turnpike could not ensure taxpayers that toll-free travel was limited to authorized use only.

Recommendation 3 - The Turnpike Commission should reexamine its practice of distributing toll-free travel privileges to an unlimited number of non-employees and take steps to reduce the number of persons given that privilege as soon as possible.

Recommendation 4 - The Turnpike Commission should improve its oversight of non-employee toll-free usage by, at a minimum, including a photo on its non-revenue cards and requiring Turnpike staff to monitor non-employee toll-free travel.

Recommendation 5 - The Turnpike Commission should also be transparent about the toll-free travel it grants to all parties, including its own employees, state officials, and other non-employees, by posting monthly usage reports on its website.

The Commission agrees that, while the potential for abuse of any benefit always exists, the presence of that risk does not result in a violation of the Indenture covenant concerning free passage. As further detailed in the audit report, the Commission also grants free passage to a number of other categories of persons which are all expressly permitted by the Indenture.

Similarly to what was stated regarding Finding One, the Commission agrees to develop and implement policies and electronic-reporting capabilities to improve the review and management of non-employee/non-revenue privileges. Specifically, the Commission will develop and issue new policies and procedures requiring management review and approval of the individuals having valid non-revenue privileges, as well as their non-revenue activity. The Commission will also require the Toll Revenue Audit

Department to periodically audit non-revenue approvals and usage to ensure compliance with policy/procedural requirements. The Commission will also consider modifying its existing non-employee non-revenue usage policies, as considered appropriate, to reduce the possibility of abuse.

Finding Three-Commission Response

The Draft Report states: The Turnpike Commission actively monitors the E-ZPass system to ensure correct fares are charged. Additionally, the Turnpike Commission conducts its own audits of the E-ZPass vendor.

Recommendation 6 - In conducting its random testing of the E-ZPass system by toll revenue auditors, the Turnpike should consider testing vehicles that exceed passenger vehicle specifications.

Recommendation 7 - The Turnpike should require TransCore to extend its E-ZPass customer service center phone hours beyond normal work hours. At a minimum, the E-ZPass customer service center should have extended evening hours on at least one day of the week.

The Compliance Department would like to thank the Auditor General and his staff for recognizing the efforts of our Toll Revenue Audit Group in ensuring the accuracy of the E-ZPass system. The audit process will continue to evolve with the implementation of All-Electronic Tolling. We do recognize the need to test vehicles that exceed passenger vehicle specifications. During our testing at the test lane facility, we utilize several classes (3, 4 and 5) of vehicles from the Commission's Maintenance Department to test the software prior to implementation. We will continue to investigate and promote the use of our Maintenance Department vehicles in performing our random testing, or in contracting with Commercial Driver's License (CDL) vendors to assist with the testing.

Finding Four-Commission Response

The Draft Report states: While the Turnpike Commission monitored, maintained, and inspected its tunnels, it has not implemented critical project management practices that would ensure recommendations resulting from tunnel inspections are not overlooked.

Recommendation 8 - The Turnpike Commission should install video cameras in tunnels that do not already have video monitoring capability as soon as possible.

Four of its five tunnels already have closed circuit video monitoring cameras installed. The Commission will include video monitoring at its fifth tunnel as part of an upcoming rehabilitation project.

Recommendation 9 - The Turnpike Commission should install fire detection and suppression systems in the tunnels that do not already have such detection systems as soon as possible.

All five tunnels have fire hydrants. Three of the tunnels already have fire detection systems installed. At a fourth tunnel a project has been developed; however, an acceptable bid has not been received to date. The Commission will assess its fire detection needs for the remaining tunnel and finalize a scope of work to bid in accordance with project budgets and delivery schedules.

Recommendation 10 - The Turnpike Commission should ensure that each tunnel undergoes a routine inspection at least once every two years in accordance with its own guidelines and the pending FHWA regulations.

As a leader in the transportation industry, the Commission's inspection program is being evaluated by FHWA as a model for the Federal inspection program. The frequency and type of tunnel inspections proposed in the Federal regulations are based largely on the Commission's established practices. The Commission completes a general inspection at its tunnels every two years as part of its biennial bridge inspection program, as well as, schedules an in-depth inspection on a five year cycle.

Recommendation 11 – The Turnpike Commission should immediately expand the development and deployment of the OneDOT tunnel management tracking system so that all tunnel inspection recommendations and their implementation status are captured.

In spring 2011, the Commission began using the OneDOT Tunnel Management System software to collect tunnel inspection information. While a useful management tool, OneDot was designed to record existing tunnel conditions. It does not currently have a feature to track repairs.

Recommendation 12 – The Turnpike Commission should assign a person to be solely responsible for tunnel management. This person should coordinate all engineering, maintenance, inspection, and safety issues related to the turnpike's five tunnels.

The Commission utilizes the Tunnel Management Committee to discuss, coordinate and track tunnel inspection recommendations. Brian M. Ranck, P.E., Bridge/Tunnel Maintenance Coordinator is the committee chair and the primary point of contact for tunnel structure issues.

Recommendation 13 – The Turnpike Commission is going to continue to use a tunnel management committee as a monitoring tool, the committee must maintain its meeting schedule to ensure tunnel issues are addressed timely.

Over the last nine years, the Committee has met on a regular basis. However, the Commission acknowledges that in 2007 and 2008, the Committee did not maintain its meeting schedule because of changes in personnel and employee responsibilities. Nevertheless, during that period, the Maintenance, Engineering, Facilities and Operation, Safety and Incident Response Departments coordinated efforts and maintained interdepartmental communications regarding tunnel management. Moving forward, committee meetings are scheduled on a four month cycle, and future meetings will include an invitation to PennDOT District 11-0 tunnel personnel. Including PennDOT will allow both transportation organizations to collaborate on best practices.

Finding Five-Commission Response

The Draft Report states: The Turnpike Commission is overly generous and permissive when reimbursing commissioners for expenses. Further, the Turnpike lacks transparency and accountability with regard to these expenses.

Recommendation 14 - The Turnpike Commission should place monetary limits on commissioners travel expenses. Commissioners should lead by example and abide by the monetary limited of any other Turnpike Commission employee.

Recommendation 15 - The Turnpike Commission should require the commissioners to submit proper documentation (e.g. itemized receipts and appropriate justifications) for any expenses that exceed the monetary limits. Further, the Turnpike should not reimburse travel expenses that lack appropriate receipts.

Recommendation 16 - The Turnpike Commission should discontinue the practice of providing personal vehicles for the commissioners and instead should reimburse commissioners for vehicle mileage incurred for business use only at current Internal Revenue Service rates. Such a change could result in substantial savings to the Turnpike.

Recommendation 17 - The Turnpike Commission should not use the travel expense voucher process to pay for commissioner purchased cellular devices and other electronic equipment. Instead, the Turnpike's purchasing office should purchase these items to ensure the items are necessary and obtained at the most competitive price.

Recommendation 18 - The Turnpike Commission should post monthly expenses for its commissioners on its website in order to provide more accountability and transparency.

The Rules and Regulations governing how the Commission conducts business require bi-monthly public meetings of a quorum of members in order for the regular business of the Turnpike to occur. Generally, this is achieved by meeting in Harrisburg on the first and third Tuesday of each month. The Commissioners reside throughout the Commonwealth, and as such, most meetings require travel. Recently, however, the Commission has begun a program of limiting the Harrisburg meetings of the Commission to one per month with a second monthly meeting occurring via teleconference. The result of this change will ultimately reflect a significant reduction in the amount of travel expenses related to the twice-monthly regular meetings. On a wider scale, the Commission is currently acquiring technology to make more efficient use of modern video conferencing, thus reducing overall travel by Commission employees.

We believe it is also important to consider what was transpiring during the period of time covered by this audit, January 1, 2007, through August 31, 2011. These were certainly unique and trying times for the Pennsylvania Turnpike Commission requiring significantly more commissioner activity than is normal and currently experienced. Very early in the audit period, then Governor Ed Rendell proposed a lease of the Pennsylvania Turnpike, which was followed by the debate and legislative activity surrounding what became Act 44 of 2007. Further, 2008 through 2010 encompassed the period of time when both the private lease of the Turnpike and the application to toll I-80 were being discussed in both Harrisburg and Washington, DC. During that time, the Commissioners met more frequently in Harrisburg, participated extensively in dealings with the legislature during public hearings, and were engaged in the application process with the Federal Highway Administration regarding the I-80 tolling application.

As the travel related expenses of all Commission employees are analyzed and reviewed to ensure only the most necessary and reasonable expense levels are approved for payment, the Commission intends to include the expenses of the Commissioners and Executive-level staff in that ongoing review and will consider the recommendations made by the Auditor General as this review progresses.

Finding Six-Commission Response

The Draft Report states: The Turnpike Commission’s use of interest rate “swaps” has cost the taxpayers and its toll-paying customers at least \$108.9 million dollars more than if the Turnpike had instead financed with conventional fixed rate bonds.

Recommendation 19 - The Turnpike Commission should terminate all remaining swaps as soon as it is fiscally responsible to do so and refinance, if necessary, with conventional fixed-rate bonds.

Recommendation 20 - The Turnpike Commission should promptly adopt a resolution unequivocally and permanently prohibiting the use of swaps in the future.

Although the Commission understands the Auditor General’s position related to interest rate swaps as provided in the Auditor General Report (“Report”), the Auditor General’s analysis is incomplete and leads to incorrect conclusions. We respectfully disagree with the analytical methodology used that resulted in a calculated total loss of \$108.9 million from the use of swap agreements. Specifically, the Report states that the Commission had losses of \$59 million related to terminations of a number of previously executed swaps. The following discussion presents information that supports the Commission's position that it did not incur losses as represented by the Auditor General's report.

The termination value is the present value of the fixed rate payments on the swap calculated based on the difference in the “current” market swap rate and the existing swap rate. As the swap rate is set at the execution date of the swap agreement, the value changes as interest rates fluctuate. In fact, as rates decline, the termination value or market value of the swap will increase in negative value reflecting the ability to issue debt at lower interest rates. The termination payments were funded with tax-exempt fixed rate bonds issued at lower fixed rates than existed on the swaps. The underlying debt now outstanding is fixed rate and pays lower interest than the net swap payments would have on the swap had the swap remained outstanding.

The Commission did not have a loss of \$59 million related to the termination of the swaps but, in fact, LOWERED its overall debt service that resulted in a present value SAVINGS of \$10.8 million. A summary of those results are shown below, and the complete analysis is available for your review.

Bonds/ Swap	Principal	Swap Rate	Termination Payment	Refunding Bonds (2009B)	Present Value Savings
2001U	\$169.9 mil	4.214%	\$25.5 mil	\$184.4 mil	\$6.5 mil
2002A	\$154.7 mil	4.403%	\$24.8 mil	\$134.1 mil	\$0.8 mil
2002B	\$ 35.8 mil	4.538%	\$ 2.5 mil	\$ 35.7 mil	<u>\$3.5 mil</u>
				Total	<u>\$10.8 mil</u>

The above summary includes all swap fees and net interest payments assumed through final maturity and the funded termination payment. The final results of the amendment to the Series 2003C swap is unknown at this time, as the original swap was converted to a basis swap and is still outstanding. The Commission was able to reduce its swap exposure by converting the swap from a synthetic fixed rate swap to a basis swap, which has lower overall risk.

The Report also states that the Commission had losses of \$49.9 million on active swaps. This analysis is also incomplete and leads to incorrect conclusions.

Swaps are generally used as “synthetic” alternatives to either traditional fixed rate debt or variable rate debt. The measure of the overall benefit of a swap in this form is the comparison between the other “alternatives” at the time the swap was executed and not a comparison between the payments made and received within the swap agreement only. All swaps must be related to underlying and outstanding debt, and as such, the results of the underlying debt must also be included in any analysis. The Commission completed a study in December of 2010 which highlighted more accurate comparisons. This report was previously forwarded to the Auditor General's office. Additional copies can be made available upon request.

In order to calculate the “loss” or savings associated with any swap, you must also include the underlying debt and related interest expense. Each of the swaps in the analysis had tax-exempt variable rate bonds as the underlying debt. The swap interest received by the Commission offset the interest due on the underlying bonds. This offset then results in a net fixed interest rate payment by the Commission on the swap which is exactly the same as issuing traditional fixed rate bonds. As such, the net interest paid on a swap should not be viewed as an “additional cost or loss.” The net interest is a cost of borrowing just like interest paid on fixed or variable rate municipal bonds without an associated swap. At the time debt is issued, the Commission thoroughly analyzes the market conditions and issues debt using the most cost-effective method at that time.

The Commission utilizes an integrated approach to asset/liability management. As such, we believe that it is inappropriate to focus on the cash flow of any one trade as indicative of the performance of the interest rate management strategy associated with that trade, especially over a very short period. The mark-to-market values of a swap approximate what would be paid or received from swap counterparties for the termination of any given trade. The net cash flow of any given trade does not represent money lost (or earned) that cash flow is part of an overall interest rate management strategy. As an example, in a synthetic fixed rate trade, the Commission entered into a floating rate financing together with an interest rate swap. While the swap itself may have resulted in significant cash outflows, the purpose of the trade was to provide an overall fixed rate that the Commission found to be to its advantage. Looking at the cash flow of the swap in a vacuum presumes that the Commission might have simply used floating rate debt for its financing requirements (which would not have been prudent at the time of issuance). The Commission maintains in its financial policies that it will not issue more than 25% variable debt as a matter of prudent fiscal practice.

Pennsylvania Turnpike Commission

*Pennsylvania Department of the Auditor General
Jack Wagner, Auditor General
January 2013*

**Audit Report
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