

Audit Report

**Maryland Department of Transportation
The Secretary's Office**

April 2019



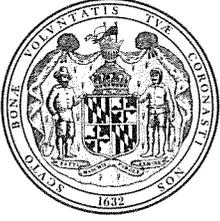
OFFICE OF LEGISLATIVE AUDITS
DEPARTMENT OF LEGISLATIVE SERVICES
MARYLAND GENERAL ASSEMBLY

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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

Victoria L. Gruber
Executive Director

Gregory A. Hook, CPA
Legislative Auditor

April 18, 2019

Senator Craig J. Zucker, Co-Chair, Joint Audit Committee
Delegate Shelly L. Hettleman, Co-Chair, Joint Audit Committee
Members of Joint Audit Committee
Annapolis, Maryland

Ladies and Gentlemen:

We have conducted a fiscal compliance audit of The Secretary's Office, including the Debt Service Requirements Program, of the Maryland Department of Transportation (MDOT), for the period beginning January 16, 2015 and ending May 6, 2018. MDOT provides overall direction and support to five transportation business units and administers the bond issuance and debt service activities associated with the Department's transportation bonds. MDOT also provides operating and capital grants for transit services in the Washington D.C. metropolitan area as well as grants to other governmental agencies for transportation-related purposes.

Our audit disclosed that MDOT did not establish an adequate process to ensure that only properly authorized human resources transactions were processed for its employees. As a result, MDOT lacked assurance that these critical transactions, such as employee additions, deletions, and adjustments to salary and/or grade were proper. Additionally, malware protection for MDOT computers was not sufficient to provide adequate assurance that all computers were properly protected from security risks.

Our audit also included a review to determine the status of the three findings contained in our preceding audit report. We determined that MDOT satisfactorily addressed these findings.

MDOT's response to this audit is included as an appendix to this report. We reviewed the response to our findings and related recommendations, and have concluded that the corrective actions identified are sufficient to address all audit issues.

We wish to acknowledge the cooperation extended to us during the audit by MDOT and its willingness to address the audit issues and implement appropriate corrective actions.

Respectfully submitted,

A handwritten signature in black ink that reads "Gregory A. Hook". The signature is written in a cursive style with a large, prominent initial 'G'.

Gregory A. Hook, CPA
Legislative Auditor

Background Information

Agency Responsibilities

The Maryland Department of Transportation – The Secretary’s Office (MDOT) provides overall direction and guidance to the Department including its five transportation business units (Maryland Aviation Administration, State Highway Administration, Motor Vehicle Administration, Maryland Port Authority, and Maryland Transit Administration). The other component of Maryland’s transportation system is the Maryland Transportation Authority (MdTA). Although Maryland’s Secretary of Transportation serves as the Authority’s chair, MdTA is not overseen by MDOT.

MDOT administers the bond issuance and debt service activities associated with Maryland’s consolidated transportation bonds and receives an appropriation for all debt service requirements. In addition, MDOT provides operating and capital grants to the Washington Metropolitan Area Transit Authority for transit services in the Washington, D.C. metropolitan area, as well as grants to other governmental agencies (such as local transportation planning agencies) for transportation-related purposes.

MDOT is also responsible for the operation of the Office of Transportation Technology Services, which provides computing resources to the various units of the Department and operates as a computer service bureau for these units. The computer service operations of the Office are addressed in a separate audit and, as such, were not included in the scope of this audit.

According to the State’s records, during fiscal year 2018, MDOT’s operating expenditures totaled approximately \$661.6 million, of which \$567 million related to operating and capital grants for transportation-related purposes. In addition, debt service payments totaled approximately \$340 million.

Audit of the Department’s Financial Statements

An independent accounting firm was engaged to audit the State of Maryland’s financial statements for the fiscal years ended June 30, 2015, 2016, 2017, and 2018. In conjunction with these audits, the firm was engaged to prepare separate audit reports on the Department’s financial statements. In the related audit reports, the firm stated that the Department’s financial statements presented fairly, in all material respects, the respective financial position of the governmental activities, the major fund, and the aggregate remaining fund information of the Department, and respective changes in financial position, for the years then

ended, in accordance with accounting principles generally accepted in the United States of America.

Status of Findings From Preceding Audit Report

Our audit included a review to determine the status of the three findings contained in our preceding audit report dated February 1, 2016. We determined that MDOT satisfactorily addressed these findings.

Findings and Recommendations

Human Resources Transactions

Finding 1

MDOT did not establish adequate procedures to ensure that only properly authorized transactions were processed for employees in its human resources records.

Analysis

MDOT did not establish adequate procedures to ensure that only properly authorized human resources transactions were processed for employees in its Human Resources Information System (HRIS). These critical transactions included employee additions, deletions, and adjustments to salary and/or grade.

Specifically, output reports of transactions recorded in HRIS were not verified to the supporting source documentation that served as the basis for the transactions' entry into HRIS to ensure that only authorized transactions were recorded for its employees. Rather, the reports were compared against information reflected in HRIS, which does not provide the necessary assurance that all recorded transactions were supported and appropriate. Consequently this process would not identify errors or improper transactions recorded in HRIS, prior to them being subsequently forwarded to MDOT's payroll unit and recorded in a separate automated system for further processing and submission to the State's Central Payroll Bureau.

According to MDOT's records, there were 176 transactions, including deletions and promotions, recorded in HRIS during fiscal year 2018 for MDOT employees. According to the State's records, MDOT had 318 authorized positions and related payroll expenditures totaled approximately \$32.7 million for fiscal year 2018.

Recommendation 1

We recommend that MDOT establish procedures requiring the timely independent review and verification of HRIS transaction output reports to supporting source documentation to ensure that only properly authorized transactions were recorded for its employees.

Information Systems Security and Control

Background

MDOT supports employee use of numerous information technology applications that operate on the Department's datacenter mainframe and various server platforms. MDOT supports the employee management information system, a critical payroll application used across the entire Department by other business units, as well as a related automated timesheet management application.

Finding 2

Malware protection for MDOT computers was not sufficient to provide adequate assurance that the computers were properly protected from security risks.

Analysis

Malware protection for MDOT computers was not sufficient to provide adequate assurance that the computers were properly protected from security risks. Our July 2018 testing disclosed the following conditions:

- Host-based firewalls were not enabled on the five laptop computers we tested. Therefore, when these laptops were used outside of the MDOT network they were susceptible to attack from untrusted traffic.
- Local administrative rights were not properly restricted. Our test of 10 regular employee users identified that 2 users were inappropriately assigned local administrative rights to their workstations. If these workstations were infected with malware, the malware would run with administrative rights and expose these workstations, and possibly the entire MDOT network to a greater risk of compromise than if the workstations' user accounts operated with user rights. In addition, the administrative rights would permit these 2 users to disable the malware protection software on their workstations.

The State of Maryland *Information Security Policy*, states that agencies, at a minimum, must protect against malicious code (viruses, worms, Trojan horses) by implementing protections (anti-virus, anti-malware) that, to the extent possible,

include a capability for automatic updates. Also, industry best practices recommend that workstation accounts for regular employees (non-administrators) run with standard user rights to lessen the risk of compromise from malware.

Recommendation 2

We recommend that MDOT

- a. ensure that all laptop computers are protected by an enabled and properly configured host-based firewall, and**
- b. ensure that administrative rights on workstations are restricted to only system and network administrators.**

Audit Scope, Objectives, and Methodology

We have conducted a fiscal compliance audit of the Maryland Department of Transportation - The Secretary's Office, including the Debt Service Requirements Program (MDOT), for the period beginning January 16, 2015 and ending May 6, 2018. The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

As prescribed by the State Government Article, Section 2-1221 of the Annotated Code of Maryland, the objectives of this audit were to examine MDOT's financial transactions, records, and internal control, and to evaluate its compliance with applicable State laws, rules, and regulations.

In planning and conducting our audit, we focused on the major financial-related areas of operations based on assessments of significance and risk. The areas addressed by the audit included certain programs associated with transportation activities (such as the consolidated transportation program), grants, contract procurements and invoice processing, payroll processing, and information systems security and control. Our audit also included certain payroll support services (such as processing of personnel transactions and maintenance of employee leave records) provided by MDOT to other units of the Department of Transportation. These support services were provided by the State Highway Administration (SHA) prior to November 2016, and were included in the scope of our audit of SHA prior to that date. We also determined the status of the findings contained in our preceding audit report.

Our audit did not include the computer operations of MDOT's Office of Technology Services that are addressed in a separate audit. Our audit also did not include an evaluation of internal controls over compliance with federal laws and regulations for federal financial assistance programs and an assessment of MDOT's compliance with those laws and regulations because the State of Maryland engages an independent accounting firm to annually audit such programs administered by State agencies, including MDOT.

An independent accounting firm was engaged to audit the State of Maryland's financial statements for the fiscal years ended June 30, 2015, 2016, 2017, and 2018. In conjunction with these audits, the firm was engaged to prepare separate audit reports on the Department of Transportation's financial statements. In the related audit reports, the firm stated that the Department's financial statements presented fairly, in all material respects, the respective financial position of the governmental activities, the major fund, and the aggregate remaining fund information of the Department, and respective changes in financial position, for the years then ended, in accordance with accounting principles generally accepted in the United States of America. We have relied on the work of the independent accounting firm to provide audit coverage pertaining to bond issuance and debt service payments. Our audit procedures in this area were generally limited, therefore, to obtaining a sufficient basis for that reliance.

To accomplish our audit objectives, our audit procedures included inquiries of appropriate personnel, inspections of documents and records, observations of MDOT's operations, and tests of transactions. Generally, transactions were selected for testing based on auditor judgment, which primarily considers risk. Unless otherwise specifically indicated, neither statistical nor non-statistical audit sampling was used to select the transactions tested. Therefore, the results of the tests cannot be used to project those results to the entire population from which the test items were selected.

We also performed various data extracts of pertinent information from the State's Financial Management Information System and the Department's Financial Management Information System (such as revenue and expenditure data) and the State's Central Payroll Bureau (payroll data). The extracts are performed as part of ongoing internal processes established by the Office of Legislative Audits and were subject to various tests to determine data reliability. We determined that the data extracted from these sources were sufficiently reliable for the purposes the data were used during this audit. We also extracted data from MDOT's payroll systems for the purpose of testing payroll transactions. We performed various tests of the relevant data and determined that the data were sufficiently reliable for the purposes the data were used during the audit. Finally, we performed other

auditing procedures that we considered necessary to achieve our audit objectives. The reliability of data used in this report for background or informational purposes was not assessed.

MDOT's management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records; effectiveness and efficiency of operations, including safeguarding of assets; and compliance with applicable laws, rules, and regulations are achieved.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports are designed to assist the Maryland General Assembly in exercising its legislative oversight function and to provide constructive recommendations for improving State operations. As a result, our reports generally do not address activities we reviewed that are functioning properly.

This report includes findings relating to conditions that we consider to be significant deficiencies in the design or operation of internal control that could adversely affect MDOT's ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable laws, rules, and regulations. Our audit also includes a finding regarding a significant instance of noncompliance with applicable laws, rules, or regulations. Other less significant findings were communicated to MDOT that did not warrant inclusion in this report.

MDOT's response to our findings and recommendations is included as an appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise MDOT regarding the results of our review of its response.



Larry Hogan
Governor
Boyd K. Rutherford
Lt. Governor
Pete K. Rahn
Secretary

Office of the Secretary

April 11, 2019

Gregory A. Hook, CPA
Legislative Auditor
Office of Legislative Audits
Department of Legislative Services
301 West Preston Street, Room 1202
Baltimore MD 21201

Dear Mr. Hook:

Enclosed please find the Maryland Department of Transportation The Secretary's Office (MDOT TSO) responses to the Office of Legislative Audit's audit report for the period beginning January 16, 2015 and ending May 6, 2018. Additionally, an electronic version of this document has been sent to your office via email.

If you have any additional questions or concerns, please contact Ms. Jaclyn D. Hartman, MDOT Chief Financial Officer, at 410-865-1035 or jhartman1@mdot.state.md.us. Of course, you may always contact me directly.

Sincerely,



Pete K. Rahn
Secretary

Confidential Enclosures

cc: Ms. Jaclyn D. Hartman, Chief Financial Officer, MDOT

**Maryland Department of Transportation
The Secretary's Office
Audit Responses
April 2019**

Human Resources Transactions

Finding 1

MDOT did not establish adequate procedures to ensure that only properly authorized transactions were processed for employees in its human resources records.

Recommendation 1

We recommend that MDOT establish procedures requiring the timely independent review and verification of HRIS transaction output reports to supporting source documentation to ensure that only properly authorized transactions were recorded for its employees.

Response:

MDOT TSO concurs with the auditor's recommendation. The HRIS transaction output report will be reviewed, signed and dated against the source documentation by the Human Resources Director or the Human Resources Deputy Director as an independent review and retained for four years or the beginning of the next audit period. This process was implemented effective April 1, 2019. Written procedures will be updated to reflect the additional verification.

Information Systems Security and Control

Finding 2

Malware protection for MDOT computers was not sufficient to provide adequate assurance that the computers were properly protected from security risks.

Recommendation 2

We recommend that MDOT

- a. ensure that all laptop computers are protected by an enabled and properly configured host-based firewall, and**
- b. ensure that administrative rights on workstations are restricted to only system and network administrators.**

Response:

- a. MDOT TSO concurs with the auditor's recommendation. MDOT TSO will ensure that all MDOT TSO laptops are protected by a host-based firewall that is properly configured to only allow necessary inbound, traffic. Testing of a host-based firewall was in progress at the time of the audit and will be completed by the end of FY 2019.
- b. MDOT TSO concurs with the auditor's recommendation. MDOT TSO will implement a formal process to request, approve, track and periodically review those individuals that require local administrative rights by December 31, 2019.

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