

Financial Management Practices Audit Report

---

Cecil County Public Schools

July 2017

---



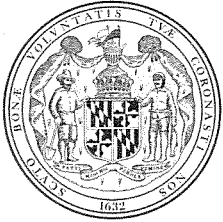
OFFICE OF LEGISLATIVE AUDITS  
DEPARTMENT OF LEGISLATIVE SERVICES  
MARYLAND GENERAL ASSEMBLY

**For further information concerning this report contact:**

**Department of Legislative Services**  
**Office of Legislative Audits**  
301 West Preston Street, Room 1202  
Baltimore, Maryland 21201  
Phone: 410-946-5900 · 301-970-5900  
Toll Free in Maryland: 1-877-486-9964  
Maryland Relay: 711  
TTY: 410-946-5401 · 301-970-5401  
E-mail: [OLAWebmaster@ola.state.md.us](mailto:OLAWebmaster@ola.state.md.us)  
Website: [www.ola.state.md.us](http://www.ola.state.md.us)

**The Office of Legislative Audits operates a Fraud Hotline to report fraud, waste, or abuse involving State of Maryland government resources. Reports of fraud, waste, or abuse may be communicated anonymously by a toll-free call to 1-877-FRAUD-11, by mail to the Fraud Hotline, c/o Office of Legislative Audits, or through the Office's website.**

*The Department of Legislative Services does not discriminate on the basis of age, ancestry, color, creed, marital status, national origin, race, religion, gender, gender identity, sexual orientation, or disability in the admission or access to its programs, services, or activities. The Department's Information Officer has been designated to coordinate compliance with the nondiscrimination requirements contained in Section 35.107 of the Department of Justice Regulations. Requests for assistance should be directed to the Information Officer at 410-946-5400 or 410-970-5400.*



DEPARTMENT OF LEGISLATIVE SERVICES  
OFFICE OF LEGISLATIVE AUDITS  
MARYLAND GENERAL ASSEMBLY

July 26, 2017

Warren G. Deschenaux  
Executive Director

Thomas J. Barnickel III, CPA  
Legislative Auditor

Senator Craig J. Zucker, Co-Chair, Joint Audit Committee  
Delegate C. William Frick, Co-Chair, Joint Audit Committee  
Members of Joint Audit Committee  
Annapolis, Maryland

Ladies and Gentlemen:

We conducted an audit of the financial management practices of the Cecil County Public Schools (CCPS) in accordance with the requirements of the State Government Article, Section 2-1220(e) of the Annotated Code of Maryland. The objectives of this audit were to evaluate whether CCPS' procedures and controls were effective in accounting for and safeguarding its assets and whether its policies provided for the efficient use of financial resources.

Our audit disclosed that CCPS needs to improve internal controls and accountability in a number of areas including procurement and disbursements, payroll processing, equipment inventory, transportation services, and information systems. Also in the transportation services area, we identified numerous deficiencies contributing to inefficiencies and excessive costs.

For example, CCPS had not established processes to limit or monitor critical system capabilities assigned to employees, including users of CCPS' automated procurement and accounts payable system and the human resources and payroll system, to ensure that they were necessary, appropriate, or properly restricted, and we found certain users could perform incompatible functions. Consequently, there was an increased risk of unauthorized vendor payments and payroll transactions. Furthermore, there was no documented independent review and approval of monthly bus contractor payments, which totaled \$8.1 million in fiscal year 2015.

We also found that CCPS needs to ensure its methodology for determining payments to bus contractors results in the best value. For example, we estimated that payments to bus contractors for the purchase price and investment return of buses placed in service since 2005, was \$7.8 million more, because the investment rate of return was higher than recommended.

In addition, payments to bus contractors for bus maintenance costs were negotiated without any evidence CCPS had determined their reasonableness, and the value of federal excise taxes (\$379,000 over a five-year period) were not excluded from payments to contractors for fuel usage. Finally, CCPS did not perform a system-wide route analysis and we found through testing that ridership on certain routes was lower than bus capacities, with some bus routes operating at less than 50 percent of the desired capacity.

We also found that significant risks existed within the CCPS computer network. For example, certain publicly accessible servers were not isolated in a separate protected network zone, and an intrusion detection prevention system was not properly configured to protect the network. Furthermore, students had unrestricted wireless network access to the CCPS data center that housed the servers hosting critical CCPS systems. Also, anyone in the vicinity of all middle and elementary schools could gain wireless network access to the CCPS data center (and critical systems), as the networks did not require user authentication. Finally, workstations and servers were not sufficiently protected against malware and CCPS did not have an information technology Disaster Recovery Plan.

CCPS frequently did not make use of a competitive procurement process, and certain procurements were awarded that did not follow the published bid evaluation criteria, or were justified by piggybacking on expired contracts of other government entities. In addition, CCPS entered into three power purchasing agreements with a solar energy provider at an estimated total cost of \$14.1 million, without using a competitive procurement process or determining whether it had received the most favorable terms. We noted that other local government entities appeared to have obtained more favorable terms for similar agreements during the same time-periods.

CCPS did take several measures to ensure the accuracy of employee and retiree healthcare cost, which in fiscal year 2016 totaled in excess of \$17 million. For example, CCPS periodically bid its healthcare contracts and had audits of dependents' eligibility and healthcare claims.

The CCPS response to this audit is included as an Appendix to this report. We wish to acknowledge the cooperation extended to us during our audit by CCPS.

Respectfully submitted,



Thomas J. Barnickel III, CPA  
Legislative Auditor

# Table of Contents

|   |    |
|---|----|
| <b>Background Information</b>   | 6  |
| Statistical Overview  | 6  |
| Oversight   | 6  |
| External Audits   | 6  |
| Status of Findings From Preceding Audit Report  | 7  |
| <b>Findings and Recommendations</b>   | 8  |
| <b>Revenue and Billing Cycle</b>  |    |
| * Finding 1 – There was no independent verification that all recorded collections were subsequently deposited.  | 9  |
| <b>Federal Funds</b>  | 9  |
| <b>Procurement and Disbursement Cycle</b>   |    |
| * Finding 2 – CCPS had not established adequate internal controls over its automated accounts payable functions.  | 11 |
| Finding 3 – CCPS did not use the methodology described in the request for proposal when evaluating the bids for certain professional services.  | 12 |
| Finding 4 – CCPS did not assess the benefits of using intergovernmental cooperative purchasing agreements (ICPA) as required by law, nor in most cases did it establish that the ICPA's were awarded through a competitive procurement process. | 13 |
| <b>Human Resources and Payroll</b>  |    |
| * Finding 5 – Human resources and payroll system user capabilities were not adequately monitored and restricted. In addition, independent reviews of personnel and payroll transactions were not performed.                                     | 14 |
| <br>  |    |
| * Denotes item repeated in full or part from preceding audit report   |    |

|   |   |    |
|---|---|----|
| <b>Inventory Control and Accountability</b>                 |   |    |
| *   | Finding 6 – CCPS had not established adequate controls over its automated equipment inventory records as system entries were not independently verified and access to the records was not adequately restricted.  | 16 |
| <b>Information Technology</b>                               |   |    |
| *   | Finding 7 – Database and server controls were not sufficient, as security activity was not logged.  | 18 |
| *   | Finding 8 – CCPS did not have a Disaster Recovery Plan for recovering computer operations.  | 18 |
|   | Finding 9 – The CCPS computer network was not adequately secured, as the internal network could be exposed to attack from external sources and reports of attacks from the CCPS intrusion detection prevention system were either not generated or when generated not reviewed.         | 19 |
|   | Finding 10 – Workstations and servers were not adequately protected against malware.  | 20 |
| <b>Facilities Construction, Renovation, and Maintenance</b> |   |    |
|   | Finding 11 – CCPS executed three 20-year power-purchasing agreements with a solar provider without a competitive process or a formal financial analysis, and without evidence it had fully resolved the risk concerns of its legal counsel.   | 22 |
| <b>Transportation Services</b>                              |   |    |
|   | Finding 12 – CCPS did not establish comprehensive bus routing procedures and did not periodically perform a system-wide analysis of bus routes and related bus capacities to maximize the efficiency of its bus routes and address bus routes operating below ridership capacity goals. | 25 |
| *   | Finding 13 – Certain elements used to determine payments to bus contractors did not reflect market conditions, use actual costs, or consider available fuel credits, resulting in higher payments than necessary for student transportation services.                                   | 26 |
| *   | <b>Denotes item repeated in full or part from preceding audit report</b>  |    |

|  |          |
|--|----------|
| * Finding 14 – There was no documented independent review and approval of the monthly payments for contractor bus operating costs, and user access to the automated system used to calculate bus payments was not adequately restricted. | 28       |
| <b>Food Services</b>   | 29       |
| <b>School Board Operations</b>   | 30       |
| <b>Other Financial Controls</b>  | 30       |
| <b>Audit Scope, Objectives, and Methodology</b>  | 32       |
| <b>Agency Response</b>   | Appendix |

\* Denotes item repeated in full or part from preceding audit report

# Background Information

## Statistical Overview

According to student enrollment records compiled by the Maryland State Department of Education (MSDE), Cecil County Public Schools (CCPS) ranks 14<sup>th</sup> in student enrollment among the 24 public school systems in Maryland. Fiscal year 2015 full-time student enrollment was 15,681 students. CCPS has 30 schools, consisting of 17 elementary, 6 middle schools, 5 high schools, a vocational school, and alternative school.

According to CCPS' audited financial statements, fiscal year 2016 revenues were \$222 million and expenditures were \$219 million. The largest expenditure category was salaries and wages, including benefits, which accounted for 72 percent of total expenditures during fiscal year 2016. According to MSDE records, during the 2014-2015 school year, CCPS had 2,071 full-time equivalent positions, which consisted of 1,496 instructional and 575 non-instructional employees.

## Oversight

CCPS is governed by a local school board, consisting of five elected voting members and one non-voting student member. The State and the Cecil County government provide the vast majority of CCPS funding. In addition, MSDE exercises considerable oversight through the establishment and monitoring of various financial and academic policies and regulations, in accordance with certain provisions of the Annotated Code of Maryland. MSDE also works with CCPS to comply with the requirements and mandates of federal law. Cecil County government exercises authority over the CCPS primarily through the review and approval of CCPS' annual operating and capital budgets.

## External Audits

CCPS engages a certified public accounting firm to independently audit its annual financial statements. Additionally, the auditor conducts what is referred to as a Single Audit of CCPS federal grant programs (as required by federal regulations). We reviewed the resulting financial statement audits and Single Audit reports for fiscal years 2014, 2015, and 2016, and examined the related work papers for fiscal year 2015, which were the latest available at the time we performed our audit field work.



Due to similarities between the work of the independent certified public accounting firm that audited the CCPS' financial statements and conducted the Single Audit of federal grants, and the risks and scope of our audit in certain areas, we relied on the results of the independent audits to reduce the scope of our audit work related to certain revenues, accounts receivable, federal grant activity, and food service inventory.

### **Status of Findings From Preceding Audit Report**

Based on our current audit assessment of significance and risk to our audit objectives, our audit included a review to determine the status of 14 of the 26 findings contained in our preceding audit report dated September 10, 2009. We determined that CCPS satisfactorily addressed 6 of those findings, with the remaining 8 findings repeated in this report.

# Findings and Recommendations

## Revenue and Billing Cycle

### Background

Cecil County Public Schools (CCPS) revenues consist primarily of funds received from Cecil County, the State, and the federal government. According to the CCPS audited financial statements, revenues from all sources totaled \$222 million during fiscal year 2016. In addition, schools collect funds for other purposes such as student activities, clubs, and school publications. Because they are not considered school revenue, these school activity funds are accounted for separately by each school and reported in summary in the audited financial statements. Although this revenue is raised through student-related activities, CCPS has a fiduciary duty to safeguard these funds. For fiscal year 2016, school activity fund collections totaled \$2.5 million and the June 30, 2016 balance was \$1.6 million.

### External Audits

There were similarities between the work of the independent certified public accounting firm that audited the CCPS financial statements and the objectives of our audit of certain revenue activities. As a result, we reduced the scope of our audit work related to State and local government revenues received via wire transfer and accounts receivable, for which the auditor's procedural review and testing disclosed no material weaknesses or significant deficiencies.

### Reviews of School Activity Funds

CCPS' finance staff reviews reconciliations of school activity funds that are prepared by the schools on a monthly basis. The finance staff also visits each school annually and performs on-sight review procedures to assess compliance with CCPS' policies over school activity funds (SAF). In addition, the independent certified public accounting firm contracted by CCPS to perform its annual financial statement audit also conducts an agreed upon procedures review of the SAF. These reviews consist primarily of tests of SAF bank reconciliations, and receipt and disbursement transactions at selected schools. Our review of the firm's findings for fiscal year 2015 did not disclose any improprieties or prevalent violations of CCPS policy.

## Revenues and Receivables

### **Finding 1**

**There was no independent verification that all recorded collections were subsequently deposited.**

### **Analysis**

CCPS did not perform independent verifications that recorded collections per the daily receipts log were subsequently deposited. According to CCPS records, collections totaled \$13.1 million during fiscal year 2016 and consisted primarily of checks received through the mail. Checks received represent bond proceeds for construction projects among other sources. Our test of collections of \$3.9 million received during fiscal year 2016 did not disclose any receipts that were not subsequently deposited. A similar condition regarding the failure to perform an independent verification that recorded collections were subsequently deposited was commented upon in our preceding audit report.

### **Recommendation 1**

**We recommend that CCPS**

- a. **independently verify that all receipts per the daily receipts log were subsequently deposited (repeat), and**
- b. **document that the verifications are completed.**

## Federal Funds

### **Background**

CCPS receives funds pertaining to federal government programs that are generally restricted in use for a specific program (such as the School Lunch Program or Special Education). According to the audited Schedule of Expenditures of Federal Awards, fiscal year 2016 expenditures totaled \$12 million, not including federally funded fee-for-service programs such as Medicaid reimbursement for special education services.

### **Single Audit Report Disclosed No Reportable Conditions Regarding Federal Grant Management**

Due to work performed by the independent certified public accounting firm that conducted the Single Audit of CCPS' federal grants and the objectives of our audit in this area, we reduced the scope of our audit work related to federal grants. Besides expressing an opinion on CCPS' compliance with the terms of several grant programs, the auditor also considered the existing

internal control structure's impact on compliance and audited the required Schedule of Federal Awards (which includes claimed and reported grant expenditures) for fiscal years 2014, 2015, and 2016. The related reports stated that CCPS complied, in all material respects, with the requirements applicable to its major federal programs. With respect to internal controls over compliance with, and the operation of, major federal programs, the auditors did not identify any material weaknesses or significant deficiencies.

### **Medicaid Funds Were Requested for Eligible Services**

CCPS has established a procedure to identify children eligible for Medicaid-subsidized services. Medicaid is an entitlement program for which certain service costs can be reimbursed to CCPS. Medicaid activity is not covered by the Single Audit of federal grants. Our test of 10 students disclosed that reimbursements were generally obtained for Medicaid-subsidized services. According to agency records, fiscal year 2016 reimbursement for Medicaid-subsidized services totaled approximately \$1.6 million.

## **Procurement and Disbursement Cycle**

### **Background**

According to the audited financial statements and CCPS records, non-payroll disbursements totaled \$62.1 million during fiscal year 2016. Requisitions were entered by departments and were subject to departmental and purchasing office approvals. Purchase orders, contracts, solicitations, and bids were handled by the purchasing office. Purchase orders are created electronically in the CCPS procurement and accounts payable system and can require various levels of electronic approvals, depending on the nature of the order. All purchase orders require final approval by the Purchasing Manager before the order is printed and sent to the vendor.

CCPS procurement policies require that purchases over \$25,000 be formally bid, and approved by the Board. The policies also require solicitation of written or oral quotes for purchases of \$5,000 or greater. The receipt of goods and services are recorded in the automated system by the receiving school or department, which approves the invoice for payment, and the payments are then processed by the finance office using the automated system.

**Finding 2**

**CCPS had not established adequate internal controls over its automated accounts payable functions.**

**Analysis**

CCPS had not establish adequate internal controls over its automated purchasing and accounts payable system by restricting users' capabilities to prevent unnecessary or incompatible capabilities. Additionally, the system does not provide a transaction history file that would identify transactions initiated and processed by users with those capabilities. Finally, certain payments through the system were authorized without prior verification to approved supporting documentation.

- Twenty individuals could perform critical system payment functions, such as adding vendors and general ledger accounts, that were not needed to perform their assigned job duties. Ten of these individuals (including four no longer employed by CCPS) could also perform critical incompatible functions, such as adding new accounts to the general ledger, entering invoices, and making payments to vendors. Furthermore, CCPS did not periodically reassess the appropriateness of employee access for unnecessary or incompatible capabilities. Finally, the system does not generate a transaction history file, that would identify specific transactions unilaterally processed by the above individuals.
- CCPS did not perform a comparison of the dollar amounts included on the accounts payable register of vendor payments to be made by electronic transfer to supporting approved invoice documentation to ensure that all amounts on the register represent valid payables prior to authorizing the bank to release the payments.

As a result, unauthorized disbursements could be processed without detection, although our testing found no evidence of inappropriate transactions. Similar conditions regarding the failure to restrict access to critical system functions, segregate incompatible duties, and perform independent reviews of payments to supporting documentation were commented upon in our preceding audit report.

**Recommendation 2**

**We recommend that CCPS strengthen its controls over the automated procurement and accounts payable system and processes by**

- a. restricting users' capabilities to those needed to perform their job duties, and eliminating the ability of users to perform incompatible duties (repeat);**

- b. removing users' access to automated systems immediately upon separation from service;
- c. performing a periodic documented independent review of purchasing and accounts payable user capabilities to ensure access is properly granted; and
- d. performing independent verifications of payable transactions to supporting documentation prior to making payments (repeat).

### **Finding 3**

**CCPS did not use the methodology described in the request for proposal when evaluating the bids for certain professional services.**

### **Analysis**

CCPS did not use the weighting criteria stated in the request for proposals (RFP) when evaluating bids for speech-language, occupational, and physical therapy services contracts for the period July 1, 2012 through June 30, 2013 (with three one-year renewals, which were subsequently exercised). Specifically, the CCPS employees who evaluated the 25 bids received from vendors had assigned point values to 4 of the 5 evaluation criterion for all bids and then if the combined point value exceeded a certain total, assigned a point value for the fifth criteria, but did not weigh any of those values as stated in the RFP. The weighting assigned to each criterion ranged from 10 percent to 25 percent. This resulted in 10 vendors who were awarded contracts valued at approximately \$1.1 million annually by virtue of having received the highest point total based on the equal weighting of the criterion. The extent to which the failure to use the correct evaluation methodology impacted the award decisions could not be readily determined.

### **Recommendation 3**

**We recommend that CCPS adhere to the award criteria specified in the request for proposals.**

**Finding 4**

**CCPS did not assess the benefits of using intergovernmental cooperative purchasing agreements (ICPA) as required by State law, nor in most cases did it establish that the ICPA's were awarded through a competitive procurement process.**

**Analysis**

CCPS advised that it does not document the benefits of using ICPAs, as required by State law. Based upon a review of Board records, we identified at least 28 contracts, presented to and approved by the Board during fiscal year 2016 as being based on ICPAs, with estimated values totaling \$6.5 million for which a written determination of the benefits of using an ICPA should have been prepared, as required by State law. We also noted that CCPS had developed specific forms to document this requirement, but they were not present in the records examined. This law, which legal counsel to the Maryland General Assembly advised us is applicable to local education agencies, allows the use of cooperative purchasing arrangements only after the using entity has determined in writing that the use of such arrangements will provide cost benefits, promote administrative efficiencies, or promote intergovernmental cooperation.<sup>1</sup> Additionally, for those contracts for goods and commodities, CCPS did not obtain evidence that the originating agency awarded the contracts through competitive bidding procedures.

Furthermore, from a further test of 12 additional contracts, one contract was reported to and approved by the Board in August 2011 as an ICPA for the leasing of copiers. However, CCPS could not document that the underlying contract that had been previously awarded by a local jurisdiction in another state was current at the time CCPS entered into its contract with the applicable vendor. Based on existing documentation it appears that the ICPA contract in question had expired in 2006, but had been renewed for several years by CCPS. CCPS ultimately made payments totaling \$1,359,000 during fiscal years 2012 through 2016 for this leasing contract. Finally, CCPS could not find an executed copy of its contract with the vendor leasing the copiers.

---

<sup>1</sup> Section 13-110 of the State Finance and Procurement Article, of the Annotated Code of Maryland in part, defines an intergovernmental cooperative purchasing agreement as a contract that is entered into by at least one governmental entity in a manner consistent with the purposes set forth in Section 11-201 of the Article, that is available for use by the governmental entity entering the contract and at least one additional governmental entity, and that is intended to promote efficiency and savings that can result from intergovernmental cooperative purchasing. The aforementioned law applies to all ICPAs regardless of the services, goods, or commodities purchased. In addition, Section 5-112(a)(3) of the Education Article, of the Annotated Code of Maryland provides that local education agencies do not need to conduct competitive procurements for goods and commodities if they use a contract awarded by public agencies or intergovernmental purchasing organizations and the lead procuring agency followed public bidding procedures.

#### Recommendation 4

We recommend that CCPS

- a. comply with State law and ensure that a written determination of the benefits of using ICPA for services is prepared,
- b. obtain evidence that the ICPA contract for goods and commodities was competitively procured by the originating entity,
- c. ensure that the underlying contract used for an ICPA is current before entering into the agreement and presenting it to the Board, and
- d. ensure that copies of all contract documents are retained.

### Human Resources and Payroll

#### Background

Payroll expense represents the largest single cost component in the CCPS budget. According to CCPS records, fiscal year 2016 salary, wage, and benefit costs totaled \$157.1 million, or 72 percent of the \$219.2 million total operating expenditures. According to Maryland State Department of Education reports, during the 2014 – 2015 school year, CCPS had 2,071 full-time positions, which consisted of 1,496 instructional positions and 575 non-instructional positions.

CCPS uses automated systems to maintain human resources (HR) information, record employee time, track leave usage, and to process and record payroll transactions. The systems automatically generate semi-monthly time records, and any adjustments are processed by central payroll personnel. The system also generates payroll checks and direct deposit advices. Payroll processing involves both automated processes (such as compiling leave and running edit reports) and manual processes (such as data entry of new employee information).

#### **Finding 5**

**HR and payroll system user capabilities were not adequately monitored and restricted. In addition, independent reviews of personnel and payroll transactions were not performed.**

#### **Analysis**

Capabilities assigned to users that allowed them to perform critical HR and payroll system functions were not adequately monitored and restricted. In addition, independent reviews of certain personnel and payroll transactions were not performed.



- We identified eight user accounts that had been assigned incompatible HR and payroll system access capabilities, such as adding employees and changing employee salary and direct deposit information, or were assigned capabilities that were not needed to perform their job duties. Specifically, three payroll department employees could add employees or change employee salaries (including their own) within the HR position control system, which in conjunction with their authorized payroll system access capabilities, would allow them to process unauthorized salary payments that might go undetected. One information technology (IT) employee, who performed payroll system administrator functions, and one Business Services employee, who had no HR or payroll job responsibilities, had unlimited access capabilities that enabled them to perform all HR and payroll functions without any independent oversight. Additionally, another Business Services employee had been granted payroll transaction processing capabilities not required for their job duties, along with two former employees (one deceased 8 months, the other retired for 4.5 years) whose user accounts remained active. Furthermore, CCPS did not periodically reassess the appropriateness of employee access for unnecessary or incompatible capabilities. Finally, no reports of transactions processed by employees with incompatible or unnecessary access were generated for review by independent personnel.
- Personnel data forms (PDF) generated by the HR position control system to add new hires and salary changes to the payroll system were not always reviewed and approved by HR management personnel prior to processing by payroll personnel due to the volume of PDF generated at the beginning of the school year. When PDF were reviewed, the employee who performed the reviews was not independent because that individual had system update access capabilities.

Employee salary changes made to the payroll system based on the PDF were not subject to independent review. Verifications of salary changes (such as additional pay and leave payouts), which were manually calculated and entered into the payroll system based on PDF received from HR, were performed by a payroll employee who also had system update access. In addition, overtime or leave adjustments were verified by the same employee who entered the transaction. During fiscal year 2015, additional pay and leave payouts totaled \$5.4 million and overtime totaled \$93,000.

As a result, there was a lack of assurance that all HR and payroll transactions were authorized and appropriate. Our test of HR and payroll transactions and adjustments did not disclose any unauthorized transactions. Similar

conditions regarding inappropriate access to critical system functions and the lack of an independent review of payroll transactions were commented upon in our preceding audit report.

#### **Recommendation 5**

**We recommend that CCPS**

- a. perform a periodic documented independent review of HR and payroll user capabilities to ensure access to critical functions is appropriate and limited to those employees who require such capabilities to perform their assigned job duties (repeat),**
- b. eliminate the aforementioned unnecessary access and incompatible HR and payroll system functions, and**
- c. perform documented independent reviews of critical personnel and payroll transactions processed to supporting documentation (repeat).**

### **Inventory Control and Accountability**

#### **Background**

According to CCPS audited financial statements, the undepreciated value of its capital equipment inventory totaled \$22 million as of June 30, 2016. CCPS uses a database system to capitalize inventory with a cost of \$5,000 or more for financial statement purposes. Sensitive equipment, defined as equipment items subject to theft (such as computers), is also recorded on the database system. In addition, CCPS had established written policies for the acquisition, capitalization, physical inventory, and disposal of its capital and sensitive equipment.

#### **Finding 6**

**CCPS had not established adequate controls over its automated equipment inventory records as system entries were not independently verified and access to the records was not adequately restricted.**

#### **Analysis**

CCPS had not established adequate controls over its equipment automated inventory records as system entries were not independently verified and access to the records was not adequately restricted.

- One employee was primarily responsible for recording additions, disposals, and adjustments for both capital and sensitive equipment on the database system, and the entries were not independently verified to supporting documents by supervisory personnel. Specifically, although CCPS policies required that specified forms be prepared and approved by

supervisory personnel for each type of equipment transaction (such as adjustments), available system transaction reports were not periodically generated and independently verified to those forms.

- Certain critical database access capabilities, such as those allowing the addition, deletion, or modification of the equipment inventory records, were not adequately restricted or periodically reviewed for appropriateness. Our review disclosed that as of June 13, 2016, ten of the eleven CCPS users that had been assigned certain of these capabilities even though they were not required to perform their job responsibilities. Four of these users could be restricted to read only access, while two user identifications were associated with employees that had transferred to other departments and two were associated with former employees. Two IT employees who performed system application or database functions could process inventory transactions without supervisory oversight. A similar condition regarding inappropriate access to system functions was commented upon in our preceding audit report.

#### **Recommendation 6**

**We recommend that CCPS establish adequate controls over its equipment records, and that such controls require**

- a. that inventory transactions recorded on the system, such as adjustments, be verified to supporting approved transaction forms by an independent employee, at least on a test basis; and**
- b. that critical system access capabilities be periodically assessed for appropriateness and limited to those employees who require such capabilities to perform their assigned job duties (repeat).**

## **Information Technology**

### **Background**

The CCPS Technology Services Office maintains and administers the CCPS computer network, computer operations and instructional information system applications. CCPS operates a wide area network, with Internet connectivity, which connects the individual schools' local networks to the computer resources located at the CCPS headquarters. The CCPS network includes a perimeter firewall to protect the CCPS network and CCPS operates several significant administrative and academic related applications including the finance application and the student information application. The finance application includes modules for payroll, human resources, accounts payable, and purchasing.

**Finding 7**

**Database and server controls were not sufficient, as security activity was not logged.**

**Analysis**

Database and server controls were not sufficient, as security activity was not logged. Specifically, the student information database software did not permit the logging of any database security activity including privileged operations and the server hosting the financial application was not configured to log security events or changes to critical files. A similar situation regarding the failure to configure the server hosting the financial application to log security events was commented upon in our preceding audit report.

Best practices identified in the State of Maryland *Information Security Policy* require that information systems must generate audit records for all security-relevant events, including all security and system administrator accesses and that procedures must be developed to routinely (for example, daily or weekly) review audit records for indications of unusual activities, suspicious activities or suspected violations, and report findings to appropriate officials for prompt resolution.

**Recommendation 7**

**We recommend that CCPS**

- a. take appropriate action to ensure that the student information database logs all critical security related events,**
- b. set the server hosting the financial application to log all critical security related events and changes to critical files (repeat), and**
- c. regularly review these logs and retain review documentation for future reference.**

**Finding 8**

**CCPS did not have a Disaster Recovery Plan for recovering computer operations.**

**Analysis**

CCPS did not have an information technology (IT) Disaster Recovery Plan (DRP) for recovering computer operations from disaster scenarios (for example, a fire). The State of Maryland *IT Disaster Recovery Guidelines* provide best practices on the minimum required elements needed for a DRP, such as identification of an alternate site for computer operations in the event of a disaster and applications prioritized for recovery. Without a complete and tested DRP, a disaster could cause significant delays (for an undetermined

period) in restoring information systems operations above and beyond the expected delays that would exist in a planned recovery scenario. This same situation was commented upon in our preceding audit report.

#### **Recommendation 8**

**We recommend that CCPS develop and implement a comprehensive DRP that is in accordance with the aforementioned *IT Disaster Recovery Guidelines* and periodically test the DRP, document the testing, and retain the documentation for future reference (repeat).**

#### **Finding 9**

**The CCPS computer network was not adequately secured, as the internal network could be exposed to attack from external sources and reports of attacks from the CCPS intrusion detection prevention system were either not generated or when generated not reviewed.**

#### **Analysis**

The CCPS computer network was not sufficiently secured.

- Eight publicly accessible servers were located in the CCPS internal network segment rather than isolating those servers in a separate protected network zone. These eight servers, if compromised, could expose the internal network to attack from external sources. Recommended security procedures, per the National Institute of Standards and Technology *Guidelines on Firewalls and Firewall Policy*, include placing publicly accessible servers in an external protected zone to protect those servers as well as the entity's internal network.
- The CCPS' intrusion detection prevention system (IDPS) was not configured to properly protect the CCPS network. CCPS used a network based IDPS to protect its entire network from external traffic; however, the IDPS was configured to report high priority attacks and to disregard medium and low priority attacks rather than block high priority attacks and report medium and low priority attacks identified by the system. Furthermore, although the system generated reports of high priority attacks, we were advised by CCPS personnel that these reports were not reviewed. Therefore, although CCPS had an IDPS, it was ineffectively employed to aid in the detection/prevention of, and response to, potential network security breaches and attacks. Best practices contained in the State of Maryland *Information Security Policy* specify that intrusion detection prevention tools and techniques must be employed to monitor

system events, detect attacks, and identify unauthorized use of information systems and/or confidential information.

- All CCPS students had unrestricted wireless network level access to the CCPS data center that housed the servers hosting critical CCPS systems rather than being confined to devices needed for their education. In addition, all middle and elementary schools wireless networks were configured to operate without any form of authentication and connected users were placed on the CCPS internal network, so anyone in the vicinity of these middle and elementary schools could gain network level access to the CCPS data center, including all critical systems.

#### **Recommendation 9**

**We recommend that CCPS**

- a. relocate all publicly accessible servers to a separate neutral network zone,**
- b. reconfigure the IDPS coverage to properly secure its network, and**
- c. secure its internal network by authenticating users of the wireless network and properly restricting access to authorized users to only those devices related to their respective needs and responsibilities.**

#### **Finding 10**

**Workstations and servers were not sufficiently protected against malware.**

#### **Analysis**

CCPS workstations and servers were not sufficiently protected against malware.

- Numerous workstations were configured with users having administrative rights. Administrative rights should be provided only to network administrators and select others since these rights are the highest permission level that can be granted to users and it allows users to install software and change configuration settings. Our test of workstations assigned to faculty and staff disclosed that the users of 61 of 71 workstations tested had unnecessarily been provided administrative rights on their workstation. We were advised by CCPS personnel that the primary reason was to provide added convenience for those employees with workstations using specialized software. We were also advised that administrative rights were given to laptop users as well. As a result, if these workstations were infected with malware, the malware would run with administrative rights and expose these workstations to a greater risk of compromise than if the workstations' user accounts operated with only

user rights. In addition, users with administrative rights could disable the malware protection software on their workstations.

- CCPS did not have enterprise-wide management tools to monitor and ensure that the malware protection software installed on its 5,273 workstations and servers was operational, up-to-date, and using the most current malware prevention signature files. Without the use of enterprise-wide management tools, CCPS lacked assurance that its workstations and servers were properly protected with up-to-date, operational malware protection software.

Best practices as prescribed by the State of Maryland *Information Security Policy* state that agencies, at a minimum, must “protect against malicious code (viruses, worms, Trojan horses) by implementing (antivirus, antimalware) solutions that, to the extent possible, include a capability for automatic updates.”

#### **Recommendation 10**

**We recommend that CCPS**

- a. ensure that administrative rights on workstations are restricted to network administrators and other select users requiring such rights; and**
- b. obtain and use enterprise-wide management tools to ensure that all workstations and servers are configured with malware protection software that is operating properly, up-to-date, and has current signature files.**

## **Facilities Construction, Renovation, and Maintenance**

### **Background**

CCPS employed a staff of 168 employees to maintain its 30 schools and 3 administrative and support facilities. According to the fiscal year 2017 Capital Improvement Plan, necessary construction, major renovations, and systemic improvements to CCPS facilities over the next six years were estimated to cost \$59.1 million.

### **CCPS Contracts Were Properly Procured and Expenditures for Capital Projects Were Properly Supported**

Our review of five construction-related procurements during fiscal years 2013 to 2015 totaling \$25 million, disclosed that they were all properly procured and approved by the Board. In addition, our test of 10 invoices totaling \$4.1 million for these contracts disclosed the invoices were properly reviewed and approved and the amounts invoiced were in accordance with the related contract terms.

### **Processes are in Place to Minimize Energy Costs**

CCPS has processes in place to minimize energy costs. For example, CCPS utilizes an energy management system to monitor heating and air conditioning systems from a central location to control temperature settings and turn off lights when not needed, with seventeen of its buildings having automated settings. In addition, CCPS has written policies that encourage both students and employees to be aware of and limit their energy use. Furthermore, CCPS participates in a consortium with other Eastern Shore entities to purchase energy at the best possible terms for the members of the consortium. According to documents provided by CCPS from the consortium (which we did not audit), CCPS saved over \$2.5 million through energy cost avoidance from fiscal year 2001 through fiscal year 2015.

#### **Finding 11**

**CCPS executed three 20-year power-purchasing agreements with a solar provider without a competitive process or a formal financial analysis, and without evidence it had fully resolved the risk concerns of its legal counsel.**

#### **Analysis**

CCPS executed three power-purchasing agreements (PPA) with a solar provider that included 20-year escalating rate schedules with a combined estimated total cost of \$14.1 million without using a competitive process. In addition, CCPS did not prepare a formal analysis to ensure that it had received the most favorable financial terms nor adequately resolve a number of concerns expressed by its legal counsel regarding the contracts' terms and conditions.

In an effort to reduce electricity supply costs, CCPS executed one PPA in 2014 and two PPAs in 2015, that according to the solar provider, could collectively save CCPS approximately \$6.1 to \$8.9 million in reduced electricity bills over the 20-year life of the PPAs. Subsequently, the contractor installed fields of solar panels at three CCPS locations in exchange for a 20-year guarantee that CCPS would purchase all the electricity generated by those solar panel systems, which would supply about 30 percent of CCPS' needs, from the contractor at pre-established rates. The contractor retained ownership of all equipment and the PPAs also allowed the solar provider to retain all environmental credits, financial incentives, and tax benefits associated with the systems. Under the terms of the PPAs, CCPS was simply making a commitment to purchase electricity for a set period for defined rates, with an option to purchase the equipment at the end of the 20-year period.

CCPS did not conduct a competitive solicitation for the PPAs, rather it was approached by the solar provider seeking to install solar equipment on CCPS



property and sell CCPS the electricity generated by the same. CCPS entered into exclusive negotiations with the provider, resulting in the aforementioned agreements. CCPS' legal counsel stated that since CCPS was not purchasing solar *equipment* it did not appear that CCPS was required to competitively procure the PPAs. We were advised by legal counsel to the Maryland General Assembly that a public school solar project funded under a PPA likely would be subject to the Board of Public Works' school construction regulations and that those regulations establish a preference for competitive sealed bidding.

Further, CCPS did not conduct a formal assessment to determine if it obtained the most favorable terms under the PPAs. There appears to be great variability in rates, between CCPS' own PPAs and the rates paid by other local Maryland school systems for solar generated electricity, which indicates the potential for flexibility in rate setting in the negotiation process. There were other Maryland school systems on the Eastern Shore that negotiated PPAs during the same time-period with similar arrangements regarding credits, tax benefits and equipment ownership; however, those systems had certain financial terms that were more favorable than CCPS'. For example, one school system executed a PPA in March 2014 that had a fiscal year 2016 rate that was thirty-four percent lower than the CCPS rate from the 2014 PPA for fiscal year 2016. Another school system executed a PPA in January 2015 that had a fiscal year 2016 rate was thirty-two percent lower than the aforementioned CCPS PPA. More significantly, this latter PPA did not have a rate escalation factor. In comparison, the two percent rate escalation factor in the original CCPS PPA accounted for \$1 million of its total estimated cost of \$5.7 million for its 20-year life.

Furthermore, CCPS legal counsel, who reviewed the general conditions document of the 2014 PPA, expressed "serious reservations" with the Board entering into a 20-year contract under the terms proposed. Specifically, counsel pointed out:

- that the solar provider had excluded all warranties regarding the useful life of the system and the economic viability of the deal;
- the risks associated with a long-term deal with no escape clause other than the early termination fee, noting that the technology could become obsolete or result in higher electric costs instead of savings; and
- that the contract should contain specific provisions permitting CCPS to terminate the contract without penalty in the event that CCPS' total cost for electricity under the contract exceeded the cost of electricity available from conventional suppliers, or absent that, establish a

nominal early termination fee after five years<sup>2</sup> or insist on a shorter contract term.

There was no evidence that substantive action had been taken to address the above concerns. Although there was some communication within CCPS and with the contractor about those concerns, there was no formal explanation why they were not addressed in the agreements. In our opinion some of the concerns raised by counsel were significant, and we have found that other local school system's PPA's do address some of them. For example, a PPA executed in March 2014 by another local school system acknowledged that solar equipment deteriorated with age and included a provision that guaranteed a minimum kilowatt output, measured in five-year segments, over the life of the system. This provision also provided for monetary reimbursement to the school system for any shortfall in output. These provisions were absent from CCPS' PPAs.

#### **Recommendation 11**

**We recommend that CCPS**

- a. ensure that a competitive procurement is used for all future PPAs and that the award is given to the bid resulting in the best financial terms for CCPS, and**
- b. ensure that the proper consideration be given to risks identified and the resolution of those risks be documented.**

## **Transportation Services**

### **Background**

CCPS has approximately 14,750 students eligible to receive student transportation services. These students were transported on 151 buses of which 142 were owned and operated by contractors and the remaining 9 were owned by CCPS. According to CCPS audited financial statements, fiscal year 2015 transportation costs totaled \$9.5 million, with \$8.1 million (85 percent) representing payments for contracted bus services. CCPS reported that 2.4 million route miles were traveled to transport students for the 2014-2015 school year.

Monthly payments to bus contractors consist of a per vehicle allotment (PVA), which includes repayment to the contractors of the full acquisition cost of a bus and an additional annual payment as a rate for return on investment

---

<sup>2</sup> Under the terms of the current PPAs, if the deal becomes undesirable, CCPS would pay the provider an early termination fee after 5 or 10 years of \$13.6 million or \$10.5 million, respectively.

(ROI). In addition, such payments include funds for operational costs, such as hourly reimbursements for drivers and attendants, a per mile maintenance fee, and fuel costs. CCPS' bus contracts are for a one-year term and renew automatically over the 12-year useful life of the bus unless terminated by either party by giving 30-day written notice.

**Finding 12**

**CCPS did not establish comprehensive bus routing procedures and did not periodically perform a system-wide analysis of bus routes and related bus capacities to maximize the efficiency of its bus routes and address bus routes operating below ridership capacity goals.**

**Analysis**

CCPS bus routing procedures were not comprehensive, as they did not address the planning, reviewing, and changing of existing routes and they did not specify ridership goals and student ride time limits. In addition, CCPS did not periodically perform a system-wide analysis, with the assistance of its automated bus routing software, of bus routes and related bus ridership to maximize efficiency and to address bus routes operating below ridership goals (CCPS has a goal of 90 percent of bus capacity).

Our analysis of student ridership disclosed that ridership was significantly less than bus capacity limits. Specifically, our review of the 282 regular routes (131 buses) for the 2014-2015 school year disclosed that 168 routes (61 percent) were below 75 percent of bus capacities based on bus sizes<sup>3</sup>. Of the 282 routes, 31 (11 percent) had student ridership of less than 50 percent. Further, 39 buses (30 percent) had no routes that had ridership above 75 percent.

CCPS routing software has been primarily used to map out the bus routes and bus stop locations and while CCPS utilized an informal student ridership goal (90 percent of capacity) in planning individual routes, it was not recorded in the automated routing system. In addition, there were no available system reports, such as number of students per route and ridership for individual buses to use to assess the efficiency of bus routes. In practice, CCPS uses existing routes and makes modifications to accommodate students' school assignments without periodically reviewing all routes for efficiency on a system-wide basis.

---

<sup>3</sup> School bus capacities are lower than manufacturer stated capacities and differ depending on the school level. For example, the capacity for high school, middle/high school, middle, and elementary school routes is 44, 48, 52, and 60 students, respectively, based on 66-passenger buses (manufacturer stated capacity).

## Recommendation 12

We recommend that CCPS take steps to increase bus utilization efficiency. Specifically, we recommend that CCPS

- a. develop formal, comprehensive written procedures that include specific target bus ridership percentages and student ride times; and
- b. fully utilize the capabilities of its automated routing software (such as performing a periodic system-wide bus route analysis) to maximize the ridership on its bus routes.

## Finding 13

Certain elements used to determine payments to bus contractors did not reflect market conditions, use actual costs, or consider available fuel credits, resulting in higher payments than necessary for student transportation services.

## Analysis

Certain elements used to determine payment amounts to bus contractors did not reflect market conditions, use actual costs, or consider available fuel credits. Our review of the contract payments disclosed the following conditions:

- CCPS based its contractor payments in part on a negotiated bus purchase price reached with the bus contractors, rather than actual price quotes from bus vendors. We have found that some local education agencies solely use manufacturer sale prices in calculating the bus cost to contractors (see description of bus cost in setting PVA in the following bullet), which provides an objective means to determine cost. CCPS however, obtains price quotes, but then conducts negotiations with contractors to set a price.
- CCPS overpaid bus contractors for bus cost. Prior to 2011, CCPS calculated the PVA reimbursement component as if a bus would be in operation for only 8 years, but paid the PVA over a 12-year period (the actual useful life of the bus). Thus, bus contractors would have been paid 150 percent of the bus cost over the life of each bus (12.5 percent of the cost for 8 years, plus an additional 12.5 percent for the final 4 years of the bus life). Coupled with a ROI of 7 percent, the effective PVA rate for the life of the bus was 19.5 percent (12.5 percent plus 7 percent). In 2011, CCPS corrected its PVA formula by spreading the actual bus cost reimbursement over the 12-year life of the bus (using a factor of 8.33 percent per year), and changed the ROI in 2011 to 9.5 percent, which

resulted in an overall PVA rate of 17.83 percent. However, CCPS did not have any support for the ROI rates used prior to or after 2011.

To estimate the financial impact of CCPS paying the PVA over the incorrect number of years for buses purchased prior to 2011 and not ensuring that its ROI provided a reasonable rate of return, we recalculated the PVA for the 142 buses used to transport students during fiscal year 2016 (as of September 2015), which included buses placed into service dating back to 2005<sup>4</sup>. Using the prime interest rate<sup>5</sup> (which ranged from 3.25 to 8.25) for the ROI and the 12-year estimated useful life in the standard PVA formula, we compared our PVA results to the CCPS PVA payments. This comparison showed that the CCPS' annual PVA payments per bus were \$2,244 to \$7,516 higher than the payments would have been had a 12-year useful life been used for all service years and the prevailing prime rate been used in the calculation. The effect is that, over the 12-year life of these 142 buses that were in service during fiscal year 2016, CCPS would pay out approximately \$7.8 million more than if the proper useful life (prior to 2011) and a reasonable ROI had been used (\$4.3 million having already been paid and \$3.5 million to be paid over the remaining useful life). This analysis does not include the effects of the lost interest income that could have been earned. A similar condition regarding the appropriateness of the PVA calculations was commented upon in our preceding audit report.

- Payments to bus contractors for maintenance costs were negotiated with the contractors and were not supported by industry studies or documented maintenance and other repair costs. For fiscal year 2016, CCPS paid a \$0.8041 per-mile fee to reimburse the contractors for bus maintenance costs, which resulted in CCPS paying approximately \$1.8 million for maintenance costs.

---

<sup>4</sup> We did not include in our calculation buses older than 2005 but still in service or substitute buses.

<sup>5</sup> The use of the prime interest rate was recommended in a November 1999 study commissioned by another Maryland school system. Also, in 1975 an MSDE study recommended the prime rate as a reasonable ROI interest rate. The prime rate is actually a lending rate that nearly always exceeds the available market investment rate; therefore, it is deemed to be reasonable for the ROI calculation. However, a May 2010 MSDE PVA Workgroup commented that the profit (or ROI) to be included in the PVA should reflect what a reasonable investor or business person would expect on a long-term investment, and not necessarily the prime rate. As of January 2017, current 10 and 30 year US Treasury Note rates, which could be reflective of a reasonable long-term investment option were 2.4 and 3.0 percent, respectively.

- CCPS did not exclude federal fuel excise taxes from payments to bus contractors.<sup>6</sup> CCPS pays contractors for fuel usage using a monthly average of diesel fuel prices, including taxes, and dividing by a miles per gallon rate established by CCPS. However, according to federal law, CCPS contractors are exempt from the \$0.244 per gallon excise tax on diesel fuel and are able to receive a credit for federal fuel taxes paid when they file their income tax returns. If CCPS had considered the \$0.244 exemption amount in its calculation, payments to the contractors would have been lower by \$379,000 for fiscal years 2011 through 2015.

### **Recommendation 13**

**We recommend that CCPS**

- calculate the annual PVA amount based on the average of the bus cost quotes received from bus manufacturers,**
- use market investment rates as a basis for establishing contractor rates for the annual PVA (repeat),**
- use actual bus operating costs as a basis for establishing contractor rates for per mile maintenance costs or otherwise develop supportable cost estimates as the basis for per mile maintenance costs, and**
- exclude fuel excise taxes from contractor payments.**

### **Finding 14**

**There was no documented independent review and approval of the monthly payments for contractor bus operating costs, and user access to the automated system used to calculate bus payments was not adequately restricted.**

### **Analysis**

Monthly calculations of bus contractor payments for operating costs were not subject to documented independent review and approval within the Transportation Department prior to submission to the CCPS Finance Office for payment processing. Furthermore, user access to the Department's automated payment system used to calculate bus payments was not adequately restricted. A number of Department employees were involved in the calculation and review of such payments, which were originally based on certain data, including route miles, times, PVA, and fuel information, that was

---

<sup>6</sup> Subsequent to the completion of our audit fieldwork, Chapter 397, Laws of Maryland 2016, effective July 1, 2016, exempted a county board of education or a school bus operator under contract with a county board of education, from State motor fuel taxes. In addition, the law authorized county boards of education and a school bus operator to claim refund of State motor fuel taxes paid. Consequently, this exemption should be factored into future payments.

entered into the automated system. However, all five Department employees involved in the process, including the supervisory employees who review the calculations for correctness prior to submission to the Finance Office have update access to the automated system. Consequently, payment amounts could be subject to modification without detection. Finally, the reviews of the payment calculations were not documented. A similar condition regarding restricting access to the automated system was commented upon in our preceding audit report.

Our review also disclosed that, in addition to the five employees, three other transportation employees had the same level of unrestricted access to the system, which allowed them enter and change data, make pay adjustments, and initiate the payment process. We were advised the system had limited capabilities and could only grant either unlimited update or read only access. Furthermore, CCPS did not periodically reassess the appropriateness of employee access for these eight employees in accordance with their assigned duties and responsibilities. Finally, available user transaction reports were not generated for independent review. These conditions resulted in a lack of assurance that payments are proper and accurate, but our limited test of these payments did not disclose any errors.

#### **Recommendation 14**

**We recommend that CCPS establish adequate controls over payments to bus contractors. Specifically, we recommend that**

- a. Department supervisors perform documented reviews of bus payment reports immediately prior to submission to the Finance Office based on a review of related supporting documentation including system generated transaction reports;**
- b. critical system access capabilities be periodically assessed for appropriateness and limited to those employees who require such capabilities to perform their assigned job duties; and**
- c. supervisors responsible for reviewing payments be given “read only” access, thereby eliminating their ability to make changes in the automated system (repeat).**

## **Food Services**

### **Background**

CCPS has 18 cooking cafeterias and 10 finishing cafeterias that serve 30 schools. Food and related supplies are received and stored at a warehouse and are delivered to the schools as needed. In fiscal year 2016, CCPS had 143 food service positions (consisting of 137 cafeteria positions and 6

administrative positions). According to the audited financial statements, food service operating expenditures (\$6,756,062) exceeded revenues (\$6,710,857) for fiscal year 2016. Food service revenues exceed operating expenditures for two of the last four years. We performed a review of cash handling and food sale procedures at a limited number of locations and noted several opportunities for improvement that were communicated to CCPS but did not warrant mention in this report. Further, we tested food service commodity procurements and determined they were properly procured by CCPS.

## **School Board Operations**

### **Background**

The Board of Education of Cecil County is composed of five elected members and one non-voting student representative. In its oversight responsibilities, the Board contracted with a certified public accounting firm for independent audits of the CCPS financial statements and federal programs. The Board has not established any special committees.

### **CCPS Adopted an Ethics Policy that Met the Requirements of State Law**

In February 2012, the Board adopted a revised detailed ethics policy in regulation that conforms to State Law and includes provisions for conflicts of interest and financial disclosure and was approved by the State Ethics Commission. Provisions of this policy are applicable to Board members and school officials as well as all CCPS employees. CCPS established an Ethics Panel consisting of three members appointed by the President of the Board to provide advisory opinions regarding the applicability of the regulations. The Panel also reviews and rules on any reported complaints of ethics violations. According to the ethics regulations, annual financial disclosure statements and conflict of interest statements are required to be filed by Board members, candidates for the Board, the Superintendent, and a number of other administrators (such as school principals and department heads) by April 30th of each year. Our test of the records for 5 Board members and 10 employees required to submit financial disclosure and conflict of interest forms for calendar year 2015 disclosed that forms were submitted as required.



## Other Financial Controls

### Healthcare Background

CCPS is self-insured for healthcare costs for its employee, retiree, and eligible dependents up to a designated stop-loss limit. For fiscal year 2016, CCPS healthcare expenditures totaled \$17.6 million, which we were advised included administrative fees and stop-loss insurance premiums of \$1.1 million. CCPS contracts with two medical insurance carriers (one preferred provider organization and one health maintenance organization) to provide administrative services that include the processing of claims for participants' medical, dental, vision and prescription costs, and a third insurance carrier for stop-loss coverage.<sup>7</sup> CCPS has instituted a number of practices to control healthcare costs.

- CCPS bids out its health care services on a periodic basis, with the assistance of a consultant in developing a solicitation for its health service plans and stop-loss insurance coverage and analyzing and evaluating vendor bids received. The next planned solicitation for both plans will be for the plan year starting September 1, 2017.
- Subsequent to 2009, CCPS instituted a process to verify the eligibility of employee dependents prior to enrollment in the health care plans.
- CCPS verifies the propriety of administrative fee billings by comparing the number of plan participants per its benefit system with those per the administrative fee billings each period for accuracy, and verifies the rates charged to the related contracts on file.
- CCPS has claims reviews of the two plans performed every five years of the claims paid for the previous two years. CCPS advised that if the claims reviews were to disclose significant problems, consideration would be given to reviewing the claims for the remaining three years. The most recent reviews were completed in April 2016 and sampled claims that were paid during the period of July 2013 through June 2015. Collectively, the results did not identify any significant claims payment errors that had not been resolved during the period under review.

---

<sup>7</sup> Stop-loss coverage indemnifies CCPS against health insurance claim amounts that exceed a specified threshold for a covered member, which was \$225,000 for plan year 2016.

## Audit Scope, Objectives, and Methodology

We conducted a performance audit to evaluate the effectiveness and efficiency of the financial management practices of the Cecil County Public Schools (CCPS). We conducted this audit under the authority of the State Government Article, Section 2-1220(e) of the Annotated Code of Maryland, and performed it 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.

We had two broad audit objectives:

1. Evaluate whether the CCPS procedures and controls were effective in accounting for and safeguarding its assets.
2. Evaluate whether the CCPS policies provided for the efficient use of financial resources.

In planning and conducting our audit of CCPS, we focused on 11 major financial-related areas of operations as approved on September 14, 2004 by the Joint Audit Committee of the Maryland General Assembly in accordance with the enabling legislation. The scope of the work performed in each of these areas was based on our assessments of significance and risk. Therefore, our follow-up on the status of findings included in our preceding audit report on CCPS dated September 10, 2009, was limited to those findings that were applicable to the current audit scope for each of the 11 areas.

The audit objectives excluded reviewing and assessing student achievement, curriculum, teacher performance, and other academic-related areas and functions. Also, we did not evaluate the CCPS Comprehensive Education Master Plan or related updates, and we did not review the activities, financial or other, of any parent teacher association, group, or funds not under the local board of education's direct control or management.

To accomplish our objectives, we reviewed applicable State laws and regulations pertaining to public elementary and secondary education, as well as policies and procedures issued and established by CCPS. We also interviewed personnel at CCPS and the Maryland State Department of Education (MSDE), and staff at other local school systems in Maryland (as

appropriate).<sup>8</sup> Our audit procedures included inspections of documents and records, and observations of CCPS operations. We also tested transactions and performed other auditing procedures that we considered necessary to achieve our objectives, generally for the period from July 1, 2010 through June 30, 2015. 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. For certain areas within the scope of the audit, we relied on the work performed by the independent accounting firm that annually audits CCPS' financial statements and conducts the federal Single Audit.

We used certain statistical data—including financial and operational—compiled by MSDE from various informational reports submitted by the Maryland local school systems. This information was used in this audit report for background or informational purposes, and was deemed reasonable.

We also extracted data from the CCPS automated financial management system for the purpose of testing expenditure and payroll transactions. We performed various audit procedures on the relevant data and determined the data were sufficiently reliable for the purposes the data were used during the audit.

CCPS' 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. In addition to the conditions included in this report, other findings were communicated to CCPS that were not deemed significant and, consequently, did not warrant inclusion in this report.

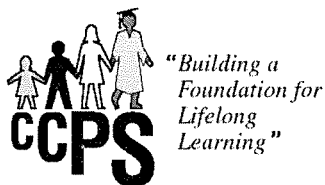
We conducted our fieldwork from February 2016 to November 2016. The CCPS response to our findings and recommendations is included as an

---

<sup>8</sup> During the course of the audit, it was necessary to contact other systems to identify policies or practices for comparative purposes and analysis.

Appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise CCPS regarding the results of our review of its response.

## APPENDIX



**CECIL COUNTY PUBLIC SCHOOLS**  
DEPARTMENT OF BUSINESS SERVICES  
GEORGE WASHINGTON CARVER EDUCATION LEADERSHIP CENTER  
201 Booth Street • Elkton, MD 21921  
410-996-5497 • FAX 410-996-5137 • [www.ccps.org](http://www.ccps.org)

D'Ette W. Devine, Ed.D.  
*Superintendent of Schools*

Dawn K. Branch  
*President, Board of Education*

July 24, 2017

Mr. Thomas J. Barnickel III, CPA,  
Legislative Auditor  
Department of Legislative Services  
Maryland General Assembly  
301 West Preston Street, Room 1202  
Baltimore, MD 21201

Dear Mr. Barnickel:

Enclosed please find Cecil County Public Schools' responses to the draft audit report recommendations.

This audit was conducted during the period a majority of our senior staff was involved in implementation of a new Finance, Payroll, and Human Resources System. This system replaces our twenty year old legacy system which resulted in several of the findings in this report.

For many years we have recognized the need to upgrade this system, but were unable to because of competing budgetary priorities. Through years of planning and budgetary control, we were finally in a position to make a \$1.7 million investment in a new ERP system.

I would like to thank you and your staff for assisting us to identify areas where we can improve our system's performance and efficiency. The relevant recommendation contained in this report will certainly be considered as we continue the system implementation process.

Please do not hesitate to contact me if you have any questions or require any additional information.

Sincerely,

D'Ette W. Devine, Ed.D.  
Superintendent

cc: Board of Education Members  
Thomas Kappa, CFO

## Revenues and Receivables

### Finding 1

There was no independent verification that all recorded collections were subsequently deposited.

### Recommendation 1

We recommend that CCPS

- a. independently verify that all receipts per the daily receipts log were subsequently deposited (repeat), and
- b. document that the verifications are completed.

### CCPS Response 1:

- a. AGREE: Corrective action was implemented after the 2009 audit to verify collections recorded on the daily receipts log were subsequently deposited. In addition, the deposit slip is verified by a third individual to the actual amount deposited in the bank account via an on-line inquiry. However, the verification document was not signed or initialed by the reviewer.
- b. AGREE: The independent log (reference a.) is now printed daily and compared with, and attached to the daily deposit slip. A separate employee verifies the deposit slip and log against the online account and initials documentation.

## Federal Funds (no findings)

### Single Audit Report Disclosed No Reportable Conditions Regarding Federal Grant Management

Medicaid Funds Were Requested for Eligible Services

## Procurement and Disbursement Cycle

### Finding 2

CCPS had not established adequate internal controls over its automated accounts payable functions.

### Recommendation 2

We recommend that CCPS strengthen its controls over the automated procurement and accounts payable system and processes by

- a. restricting users' capabilities to those needed to perform their job duties, and eliminating the ability of users to perform incompatible duties (repeat);
- b. removing users' access to automated systems immediately upon separation from service;
- c. performing a periodic documented independent review of purchasing and accounts payable user capabilities to ensure access is properly granted; and
- d. performing independent verifications of payable transactions to supporting documentation prior to making payments (repeat).

### CCPS Response 2

- a. AGREE: It was recognized six years ago that the limitations in the legacy system (20 years old) were preventing us from limiting access to various financial system functions. Efforts were redirected into acquiring and implementing a new financial system with more granular security capabilities. Conversion began in February 2016 and will be complete January 2018. The total seven year cost of the system is \$1.7 million.
- b. AGREE: User access will be removed from systems immediately after separation.
- c. AGREE: New system functionality allows for establishing process, data access and workflow rules by job type (workgroup). Individuals will be granted access based on their workgroup membership.
- d. AGREE: Independent verification of amounts on the accounts payable register to supporting approved invoices prior to authorizing the bank to release payments will be documented.

### **Finding 3**

**CCPS did not use the methodology described in the request for proposal when evaluating the bids for certain professional services.**

### **Recommendation 3**

**We recommend that CCPS adhere to the award criteria specified in the request for proposals.**

#### CCPS Response 3

AGREE: CCPS will adhere to the award criteria specified in the request for proposals. This specific RFP was reissued in April 2016 and the evaluation criteria specified in the RFP was used.

### **Finding 4**

**CCPS did not assess the benefits of using intergovernmental cooperative purchasing agreements (ICPA) as required by State law, nor in most cases did it establish that the ICPA's were awarded through a competitive procurement process.**

### **Recommendation 4**

**We recommend that CCPS**

- a. **comply with State law and ensure that a written determination of the benefits of using ICPA for services is prepared,**
- b. **obtain evidence that the ICPA contract for goods and commodities was competitively procured by the originating entity,**
- c. **ensure that the underlying contract used for an ICPA is current before entering into the agreement and presenting it to the Board, and**
- d. **ensure that copies of all contract documents are retained.**

#### CCPS Response 4

- a-d. AGREE: A written determination of the benefits of using ICPA for services is now being prepared. This includes evidence that the ICPA contract for all goods and commodities was competitively procured and is current. A copy of the contract will be retained in the bid file.



## Human Resources and Payroll

### Finding 5

HR and payroll system user capabilities were not adequately monitored and restricted. In addition, independent reviews of personnel and payroll transactions were not performed.

### Recommendation 5

We recommend that CCPS

- a. perform a periodic documented independent review of HR and payroll user capabilities to ensure access to critical functions is appropriate and limited to those employees who require such capabilities to perform their assigned job duties (repeat),
- b. eliminate the aforementioned unnecessary access and incompatible HR and payroll system functions, and
- c. perform documented independent reviews of critical personnel and payroll transactions processed to supporting documentation (repeat).

### CCPS Response 5

- a. AGREE: CCPS assigns rights and system access based on job function, which is very well defined by Human Resources job descriptions. We will perform a periodic documented independent review of HR and payroll user capabilities to ensure access to critical functions is appropriate based on their assigned job duties.
- b. AGREE: The legacy system did not have the functionality to separate duties to the field level. There were data elements on an employee's record that periodically require Payroll personnel to change. By implementing a new system, some of these overlaps will be eliminated as process duties are separated.
- c. AGREE: As part of the migration to the Tyler Munis Payroll/ HR System, CCPS is performing reviews of HR and Payroll user capabilities to better separate duties.

## Inventory Control and Accountability

### Finding 6

CCPS had not established adequate controls over its automated equipment inventory records as system entries were not independently verified and access to the records was not adequately restricted.

### Recommendation 6

We recommend that CCPS establish adequate controls over its equipment records, and that such controls require

- a. that inventory transactions recorded on the system, such as adjustments, be verified to supporting approved transaction forms by an independent employee, at least on a test basis; and
- b. that critical system access capabilities be periodically assessed for appropriateness and limited to those employees who require such capabilities to perform their assigned job duties (repeat).

### CCPS Response 6

- a. AGREE: The legacy system's inventory records have been imported into the Tyler-Munis fixed asset module. Transactions will now require verification and/or approval by another person electronically. We will also continue the practice of conducting a periodic physical inventory to verify the accuracy of the fixed asset records.
- b. AGREE: CCPS will periodically assess the appropriateness and limit access to only those employees who require such capabilities to perform their job duties.

## Information Technology

### Finding 7

Database and server controls were not sufficient, as security activity was not logged.

### Recommendation 7

We recommend that CCPS

- a. take appropriate action to ensure that the student information database logs all critical security related events,
- b. set the server hosting the financial application to log all critical security related events and changes to critical files (repeat), and
- c. regularly review these logs and retain review documentation for future reference.

### CCPS Response 7

- a. AGREE: CCPS will work with the student information system vendor to achieve this recommendation.
- b. AGREE: CCPS will work with the financial application vendor to achieve this recommendation.
- c. AGREE: CCPS will work within resources and staffing limitations to regularly review the security logs generated by our systems.

### Finding 8

CCPS did not have a Disaster Recovery Plan for recovering computer operations.

### Recommendation 8

We recommend that CCPS develop and implement a comprehensive DRP that is in accordance with the aforementioned *IT Disaster Recovery Guidelines* and periodically test the DRP, document the testing, and retain the documentation for future reference (repeat).

### CCPS Response 8

AGREE: We conduct a review meeting with key individuals to gather concerns and review decisions. Staffing limitations have prevented CCPS from beginning a full Business Risk analysis but there have been efforts to move critical systems offsite, or back systems up offsite, in order to mitigate some risk.

#### **Finding 9**

The CCPS computer network was not adequately secured, as the internal network could be exposed to attack from external sources and reports of attacks from the CCPS intrusion detection prevention system were either not generated or when generated not reviewed.

#### **Recommendation 9**

We recommend that CCPS

- a. relocate all publicly accessible servers to a separate neutral network zone,
- b. reconfigure the IDPS coverage to properly secure its network, and
- c. secure its internal network by authenticating users of the wireless network and properly restricting access to authorized users to only those devices related to their respective needs and responsibilities.

#### CCPS Response 9

a-c. AGREE: CCPS is currently working to separate publicly accessible servers into a neutral zone and is currently implementing a new security solution for better network protection. CCPS will have this completed by December 2017.

#### **Finding 10**

Workstations and servers were not sufficiently protected against malware.

#### **Recommendation 10**

We recommend that CCPS

- a. ensure that administrative rights on workstations are restricted to network administrators and other select users requiring such rights; and
- b. obtain and use enterprise-wide management tools to ensure that all workstations and servers are configured with malware protection software that is operating properly, up-to-date, and has current signature files.

#### CCPS Response 10

- a. AGREE: CCPS will be working on this recommendation over the course of the 2017 and 2018 calendar years.
- b. AGREE: CCPS will propose additional resources and staffing to procure and implement an enterprise-management solution.

## Facilities Construction, Renovation, and Maintenance

### Processes are in Place to Minimize Energy Costs

#### **Finding 11**

CCPS executed three 20-year power-purchasing agreements with a solar provider without a competitive process or a formal financial analysis, and without evidence it had fully resolved the risk concerns of its legal counsel.

#### **Recommendation 11**

We recommend that CCPS

- a. ensure that a competitive procurement is used for all future PPAs and that the award is given to the bid resulting in the best financial terms for CCPS, and
- b. ensure that the proper consideration be given to risks identified and the resolution of those risks be documented.

#### CCPS Response 11

- a. AGREE: CCPS will ensure that a competitive procurement process is used in all future PPAs. We will consider the technical score of each proposal along with price, as low bid should not be the only criteria for selecting a provider.
- b. AGREE: CCPS will more formally document the proper consideration and resolution to risks in the future.

#### ADDITIONAL COMMENTS

PPAs are unique arrangements and involve a long-term commitment. We understood the economic viability of the deal. Final acceptance of the negotiated terms was based on the fact that the negotiated fixed price with escalation in twenty years was not more than the current price of conventional electric at that time. Terminating this contract "without penalty" is not an option. The general terms and conditions are generally standard for these contracts. We were not interested in negotiating other "perceived benefits" that have no impact on the primary objective of these arrangements, that being, to provide a relatively stable, environmentally friendly source of energy at a fixed price for the long-term.

## Transportation Services

### Finding 12

CCPS did not establish comprehensive bus routing procedures and did not periodically perform a system-wide analysis of bus routes and related bus capacities to maximize the efficiency of its bus routes and address bus routes operating below ridership capacity goals.

### Recommendation 12

We recommend that CCPS take steps to increase bus utilization efficiency. Specifically, we recommend that CCPS

- a. develop formal, comprehensive written procedures that include specific target bus ridership percentages and student ride times; and
- b. fully utilize the capabilities of its automated routing software (such as performing a periodic system-wide bus route analysis) to maximize the ridership on its bus routes.

### CCPS Response 12

- a. AGREE: CCPS will develop a comprehensive written procedure to determine routing efficiency, based on current practice while ensuring that reserved capacity is available, while utilizing buses on multiple routes when time and space permits. Procedures will address:
- b. AGREE: CCPS will perform a periodic system-wide bus route analysis to more fully utilize the automated routing software to maximize ridership.

### Finding 13

Certain elements used to determine payments to bus contractors did not reflect market conditions, use actual costs, or consider available fuel credits, resulting in higher payments than necessary for student transportation services.

### Recommendation 13

We recommend that CCPS

- a. calculate the annual PVA amount based on the average of the bus cost quotes received from bus manufacturers,
- b. use market investment rates as a basis for establishing contractor rates for the annual PVA (repeat),
- c. use actual bus operating costs as a basis for establishing contractor rates for per mile maintenance costs or otherwise develop supportable cost estimates as the basis for per mile maintenance costs, and
- d. exclude fuel excise taxes from contractor payments.

### CCPS Response 13

- a. AGREE: CCPS will base the initial annual PVA amount on the average of the bus cost quotes received from bus manufacturers. However, the final negotiated price could be lower.
- b. DISAGREE: Prime is not a valid measure for a reasonable ROI.
- c. DISAGREE: Operating our own fleet of eight buses provides data to make a determination as to the cost effectiveness of our contracted fleet. This includes consideration of capital outlay costs of purchasing new buses, labor, cost of parts, and maintaining and operating maintenance facilities.
- d. DISAGREE: The fuel reimbursement rate is only one of several pay elements to contractors.

### ADDITIONAL COMMENTS

All elements, including the reimbursement for labor, mileage, fuel, maintenance, and administrative costs must be evaluated as a whole. We evaluate these elements and negotiate payment terms with our contractors on an annual basis.

According to the MSDE Fact Book for the 2014-15 school year CCPS ranks third lowest in the State with a cost per student of \$642. Transportation cost per student for the school year 2008-09 was \$636 (\$6/student, less than 1 percent increase).

In addition, Md. EDUCATION Code Ann. § 7-804 was amended in 2013 to add Cecil County to the list of LEAs approved to operate buses for 15 years. Finally, the "Per Vehicle Allowance Workgroup Report" released by the Maryland Department of Education (MSDE) in 2010, concluded that there is "no single approach to how an LEA should determine its PVA" and that the determination of how to fairly and equitably determine compensation to school bus contractors is a choice of the local jurisdiction as each best knows its own unique transportation needs.

**Auditor's Comment:** The evaluation of the various cost components collectively as put forth by CCPS does not preclude the identification and quantification of actual costs to determine the reasonableness of negotiated terms. Our findings focus on the fact that certain components, when evaluated on an individual basis, used assumptions that were not supported by current economic factors or actual cost analyses.

As noted in the finding, our suggested ROI is not solely the Prime Rate, but a rate necessary to provide a return consistent with long-

term investments, as recommended by a MSDE PVA Workgroup. Regarding maintenance costs, although CCPS's own operating experience could provide a basis for cost determinations, CCPS has not documented any supportable cost basis. Finally, fuel excise taxes do not represent a supportable or necessary cost element, as bus contractors and CCPS are exempt from those taxes.

#### **Finding 14**

**There was no documented independent review and approval of the monthly payments for contractor bus operating costs, and user access to the automated system used to calculate bus payments was not adequately restricted.**

#### **Recommendation 14**

**We recommend that CCPS establish adequate controls over payments to bus contractors. Specifically, we recommend that**

- a. Department supervisors perform documented reviews of bus payment reports immediately prior to submission to the Finance Office based on a review of related supporting documentation including system generated transaction reports;**
- b. critical system access capabilities be periodically assessed for appropriateness and limited to those employees who require such capabilities to perform their assigned job duties; and**
- c. supervisors responsible for reviewing payments be given "read only" access, thereby eliminating their ability to make changes in the automated system (repeat).**

#### **CCPS Response 14**

- a. AGREE: Edit functionality has been removed from the supervisor so that a documented review of payment reports can be conducted.**
- b. AGREE: As job assignments and tasks are changed, a documented review of system capabilities and access will be conducted.**
- c. AGREE: Same as a.**

#### **Food Services (no findings)**

#### **School Board Operations**

#### **CCPS Adopted an Ethics Policy that Met the Requirements of State Law**



## Other Financial Controls

### Healthcare Background

CCPS is self-insured for healthcare costs for its employee, retiree, and eligible dependents up to a designated stop-loss limit. For fiscal year 2016, CCPS healthcare expenditures totaled \$17.6 million, which we were advised included administrative fees and stop-loss insurance premiums of \$1.1 million. CCPS contracts with two medical insurance carriers (one preferred provider organization and one health maintenance organization) to provide administrative services that include the processing of claims for participants' medical, dental, vision and prescription costs, and a third insurance carrier for stop-loss coverage. CCPS has instituted a number of practices to control healthcare costs.

- CCPS bids out its health care services on a periodic basis, with the assistance of a consultant in developing a solicitation for its health service plans and stop-loss insurance coverage and analyzing and evaluating vendor bids received. The next planned solicitation for both plans will be for the plan year starting September 1, 2017.
- Subsequent to 2009, CCPS instituted a process to verify the eligibility of employee dependents prior to enrollment in the health care plans.
- CCPS verifies the propriety of administrative fee billings by comparing the number of plan participants per its benefit system with those per the administrative fee billings each period for accuracy, and verifies the rates charged to the related contracts on file.
- CCPS has claims reviews of the two plans performed every five years of the claims paid for the previous two years. CCPS advised that if the claims reviews were to disclose significant problems, consideration would be given to reviewing the claims for the remaining three years. The most recent reviews were completed in April 2016 and sampled claims that were paid during the period of July 2013 through June 2015. Collectively, the results did not identify any significant claims payment errors that had not been resolved during the period under review.

### CCPS Response

Thank you for acknowledging our efforts to control and reduce healthcare costs. Because of the above initiatives and several plan design changes, including a High Deductible CDHP, the Board cost of healthcare has remained relatively flat for five years.

AUDIT TEAM

**Raymond G. Burton Jr., CPA, CFE**  
Audit Manager

**Richard L. Carter, CISA**  
Information Systems Audit Manager

**Robert W. Lembach, CPA**  
Senior Auditor

**Edward O. Kendall**  
**Matthew D. Walbert, CISA**  
Information Systems Senior Auditors

**Mindy R. Garrett**  
**Matthew P. Henry**  
**Maryia Kuzina**  
Staff Auditors