

Financial Management Practices Audit Report

Carroll County Public Schools

May 2018



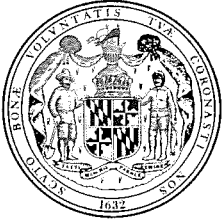
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MARYLAND GENERAL ASSEMBLY

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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

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May 16, 2018

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 Carroll 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 accountability and internal controls in several areas including payroll processing, student activity funds, and equipment inventory. For example, certain payroll adjustments that increased earnings, and which totaled approximately \$5.6 million during fiscal year 2016, were not subject to a documented independent review to ensure the propriety of the transactions.

Furthermore, our audit identified certain security and control risks pertaining to CCPS' computer systems and network. For example, intrusion prevention detection system protection did not exist for untrusted traffic entering the network, and the network was not sufficiently protected against malware. Furthermore, certain sensitive personally identifiable information was not properly protected.

We also found that CCPS needs to ensure that its methodology for determining payments to bus contractors results in the best value and that the basis for certain payment components is adequately documented. For example, we estimated that for the 97 new buses placed into service between

fiscal years 2013 and 2017, over the life of the buses, CCPS would pay out approximately \$4.15 million more than if a reasonable rate of return on investment had been used. In addition, CCPS had not documented its basis for determining reimbursements for bus maintenance costs. Additionally, CCPS paid more for bus contractor fuel costs than was necessary. Specifically, CCPS' payments did not exclude State motor fuel and federal fuel excise taxes, which the contractors are exempt from paying and may claim as credits on their income tax forms. During the 2016 - 2017 school year, we estimated that CCPS fuel payments were approximately \$450,000 higher than necessary.

CCPS did not verify that it had received energy savings guaranteed by a long-term contract with a third-party vendor that installed energy efficiency improvements at CCPS facilities. In addition, CCPS had not ensured the propriety of certain health care costs, including medical claims paid on its behalf by a third-party administrator and the receipt of its share of prescription drug rebates.

Finally, CCPS did not ensure that it obtained certain approvals to enable it to seek reimbursement for Medical Assistance services provided to eligible students, formally document its re-evaluation of its investment practices, or ensure that all financial disclosure forms were properly completed and reviewed.

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

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Background Information

Statistical Overview

According to student enrollment records compiled by the Maryland State Department of Education (MSDE), Carroll County Public Schools (CCPS) ranks 10th in student enrollment among the 24 public school systems in Maryland. Fiscal year 2016 full-time student enrollment was 25,551 students. CCPS has 40 schools, consisting of 22 elementary, 8 middle, 7 high schools, 2 special schools, and 1 career and technology center.

According to CCPS' audited financial statements, fiscal year 2016 revenues were \$357 million and expenditures were \$352 million. The largest expenditure category was salaries and wages, including benefits, which accounted for 75 percent of total expenditures during fiscal year 2016. According to MSDE records, during the 2015-2016 school year, CCPS had 3,301 full-time equivalent positions, which consisted of 2,397 instructional and 904 non-instructional employees.

Oversight

CCPS is governed by a local school board, consisting of five elected members and one non-voting student member. The vast majority of CCPS funding is provided by the State and the Carroll County government. 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. The Carroll County government exercises authority over CCPS, primarily through 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 and Single Audit reports for fiscal years 2015 and 2016, and examined the related work papers for the fiscal year 2016 audits, which were the latest work papers available at the time we performed our audit fieldwork.

There were similarities between the work of the independent certified public accounting firm that audited CCPS' financial statements and conducted the Single Audit, and the risks and scope of our audit in certain areas. As a result, we reduced the scope of our audit work related to State and local government revenues received via wire transfer, accounts receivable, and federal grant activity.

Status of Findings From Preceding Audit Report

Our audit included a review to determine the status of the 14 findings contained in our preceding audit report dated March 20, 2012. We determined that CCPS satisfactorily addressed 7 of these findings, with the remaining 7 findings repeated in this report.

Findings and Recommendations

Revenue and Billing Cycle

Background

Carroll County Public Schools (CCPS) revenues consist primarily of funds received from Carroll County, the State, and the federal government. According to the CCPS audited financial statements, revenues from all sources totaled \$357 million during fiscal year 2016. In addition to these revenue sources, schools also collect funds for various purposes, such as for 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 are 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 \$6.9 million and the June 30, 2016 balance was \$2.5 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 for 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.

Revenue and Billing Cycle

Finding 1

Individual schools did not always comply with established procedures governing school activity funds, and CCPS did not periodically audit certain schools with significant activity funds.

Analysis

Our review found that certain school activity fund transactions at two high schools were not processed as required by the CCPS *Procedures Manual for School Funds*, and CCPS did not periodically audit certain schools with significant activity funds.

School activity fund collections at the two high schools selected for testing totaled \$1.4 million in fiscal year 2016. Our test of 20 school activity fund receipts totaling \$101,000 disclosed certain deficiencies as follows:

- CCPS had not established adequate accountability over approximately \$50,000 of receipts, which were from ticket sales for drama and sports events. Although the *Manual* encouraged a second staff to be on hand to count receipts of school activity funds such as ticket sales, this was not always done. Specifically, the majority of the \$50,000 collected at these events was mostly cash, and CCPS allowed one employee to count the funds, prepare the related receipt document, and submit the funds to the school finance office without providing any support documentation for the amounts collected including accounting for the tickets sold. Due to the lack of accountability over ticket sales, CCPS could not ensure that they were depositing all ticket sales collections received.
- School personnel did not properly complete cash receipt documentation for four receipts (at one school) totaling \$26,500. Specifically, in one instance, the same employee prepared and signed the receipt document as verifying the total collected, and made the deposit, and for the other three instances, school finance office staff prepared the receipt document instead of the employee who initially collected the funds. The *Manual* requires that funds be verified by someone other than the person receiving the funds and that receipt documentation be completed by the employee initially receiving the funds. A similar condition was commented upon in our preceding audit report.

We also found that the CCPS staff did not periodically audit certain schools with significant activity funds. Although CCPS performed audits of individual school's compliance with cash receipts procedures and controls, audits of the funds at CCPS' seven high schools, which generally have more significant funds than elementary or middle schools, had not been performed for extended periods. According to CCPS records as of January 2017, audits were last performed at one high school in calendar year 2015; one high school in calendar year 2014; one high school in calendar year 2010; and two high schools in calendar year 2009. For the remaining two high schools there was no record of the last time an audit was performed. We did note that select procedures were applied over school activity funds by the CCPS' external auditor as part of the annual financial statement audit, but we determined that the scope of this work was not as comprehensive as the internal audits.

Recommendation 1

We recommend CCPS ensure that schools are properly administering school activity funds and comply with established requirements. Specifically, we recommend that CCPS

- a. ensure schools properly control cash receipts by implementing and enforcing accountability measures over cash receipts (repeat), and**
- b. ensure periodic audit coverage of schools with significant school activity funds.**

Federal Funds

Background

CCPS receives funds pertaining to federal government programs that are generally restricted for use for a specified 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 \$12.6 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 Audits of CCPS' federal grants for fiscal years 2015 and 2016 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 fiscal year 2015 and 2016 required Schedule of Expenditures of Federal Awards. The related report 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.

Finding 2

CCPS did not ensure that certain parental approval was obtained to enable billing for Medical Assistance services performed for eligible students.

Analysis

CCPS did not ensure that certain parental permission forms required for the billing of Medical Assistance services performed for eligible students were obtained. In this regard, although CCPS had a process to track the submission of the required documentation, which allows for the billing of Medicaid services for eligible students, CCPS staff did not adequately follow up with parents when such documentation was not obtained.

According to CCPS records, there were 382 potentially Medicaid-eligible students in fiscal year 2016 for which CCPS did not have a parental permission form on file and therefore Medicaid billings could not be submitted for these students. Our test of 10 of those students disclosed that nine were Medicaid-eligible, and based on our review of related student records, it appeared that Medicaid reimbursements valued at approximately \$12,000 could not be claimed by CCPS for these students.

According to federal regulations, the billing of special education services provided to Medicaid-eligible students requires signed permission forms from the parents. According to the fiscal year 2016 audited financial statements, reimbursement for Medicaid-subsidized services totaled \$1,135,609, and as of February 2017 according to CCPS records, approximately 1,589 students were potentially eligible to receive Medicaid-subsidized services.

Recommendation 2

We recommend that CCPS ensure that the necessary parental approvals for Medicaid billings are obtained and that all allowable Medicaid reimbursement is sought for eligible students.

Procurement and Disbursement Cycle**Background**

According to CCPS records, non-payroll disbursements totaled \$72.6 million during fiscal year 2016. Requisitions are manually created by the requesting department and must be approved by the department head. Approved requisitions are then converted to electronic purchase orders and approved by the Procurement Manager. CCPS written procurement policies require procurements over \$25,000 (with the exception of textbook purchases,

specialized materials and emergency items) be competitively bid and approved by the Board, including all contracts that are piggybacked from other public entities and/or cooperative purchasing organizations. Payments are processed by the finance department through an automated system that prints vendor checks and posts the payments to the financial records.

Appropriate Procurement and Disbursement Policies Were Established by CCPS

Policies and procedures adopted by CCPS provide safeguards to help ensure that the procurement of goods and services and the related disbursements were properly controlled and were only made for appropriate and properly authorized purposes. CCPS policies were also established to ensure that the procurement of goods and services promoted competition and ensured CCPS received the best value. Our testing of 11 contracts valued at \$4.6 million disclosed that procurements and related disbursements were generally performed in accordance with the established policies.

Corporate Purchasing Card Program

Our procedural review and related transaction testing generally indicated that appropriate controls were established over the CCPS corporate purchasing card (CPC) program and transactions were properly processed. During fiscal year 2016, CPC purchases totaled \$10.5 million. According to CCPS records, as of January 2017, there were 318 active purchasing cards.

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 \$265 million, or 75 percent of total expenditures. According to Maryland State Department of Education reports, during the 2015 - 2016 school year CCPS had 3,301 full-time equivalent positions, which consisted of 2,397 instructional and 904 non-instructional positions.

CCPS uses an automated integrated human resources and payroll system to maintain human resources information and process employee payrolls. The system automatically generates bi-weekly time records and any adjustments are processed by central payroll personnel. The system generates payroll checks and direct deposit advices.

Finding 3

Certain payroll adjustments processed by CCPS payroll staff were not subject to an independent review.

Analysis

Certain payroll adjustments for other earnings, such as substitute teacher pay, were not subject to an independent review. Specifically, the four payroll clerks and the payroll supervisor who were responsible for entering adjustments in the payroll system, were also responsible, on an alternating basis, for generating payroll variance reports for a given pay period that show payroll adjustments, and verifying the adjustments to supporting documentation. This review is not independent, as the verification clerk would be reviewing transactions they originally entered. As a result, improper payroll transactions could be processed without detection. The payroll adjustments related to this process totaled approximately \$5.6 million in fiscal year 2016.

Recommendation 3

We recommend that CCPS implement a process that provides for the independent review of payroll adjustments.

Inventory Control and Accountability**Background**

According to CCPS' audited financial statements, as of June 30, 2016, the undepreciated value of its capital equipment was \$44 million. CCPS uses a centralized fixed asset inventory system to track its capital (items with a cost of \$5,000 or more) and sensitive equipment. Sensitive equipment is defined as non-capital equipment with a unit cost between \$300 and \$4,999 and a useful life greater than one year, which is also transportable, easily concealable, or prone to theft. In addition, CCPS maintains a separate database of sensitive information technology equipment (such as all computers and laptops).

Finding 4

Physical inventories of certain sensitive equipment were not properly performed and documented, and detail records were not always accurate.

Analysis

Our review disclosed that CCPS did not ensure proper accountability and recordkeeping controls over sensitive non-technology equipment, which totaled \$5.2 million at June 30, 2016:

- CCPS did not maintain documentation to substantiate that each school conducted required annual physical inventories of sensitive non-technology equipment included in the detail inventory records. Although each school received an annual listing of all items assigned to that school according to the centralized inventory records, we were advised that the listing was used to facilitate reporting of disposals, transfers, and related activity and not necessarily to document the results of a physical inventory.

Our test of physical inventories of sensitive non-technology equipment for 10 schools disclosed that, as of May 2017, there was no recent record (in the last 4 years) of an inventory being performed for 8 schools, and for the remaining 2 schools, the most recent physical inventories were performed in 2014 and 2015.

- CCPS did not have a centralized process to monitor the completion of physical inventories by the schools, follow-up timely when inventories were not performed, verify the accuracy of the reported inventory results, or to investigate and resolve lost or missing items.
- The detail equipment records related to three schools tested were not always accurate. Specifically, we could not locate 7 of 30 sensitive non-technology equipment items selected from the detail records and 4 of the 15 sensitive equipment items sighted were not included in the detail equipment records.

Similar conditions were commented upon in our preceding audit report.

Recommendation 4

We recommend that CCPS

- a. ensure a physical inventory of school equipment items is periodically conducted as required and the results are reconciled with the centralized records (repeat);
- b. implement a process to periodically and independently verify the results of the physical inventories taken by the schools, at least on a test basis (repeat); and
- c. ensure that the equipment inventory records accurately include all equipment owned by CCPS (repeat).

Information Technology

Background

The CCPS Technology Services Department maintains and administers the CCPS computer network, computer operations, and student information and financial 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 remote connection service used by third-party support organizations and a perimeter network firewall used to protect the CCPS network resources.

Finding 5

CCPS had not established automated scanning procedures to identify all personally identifiable information maintained on its computer systems and ensure such data were protected.

Analysis

CCPS had not established automated scanning procedures to identify all personally identifiable information (PII) maintained on its computer systems and ensure such data were properly protected. Additionally, we identified PII that was not encrypted or otherwise properly protected.

CCPS had policies and procedures concerning confidential information, records retention and system owner responsibilities; however, these procedures did not address performing ongoing automated identification and protection of PII. Therefore, CCPS had not performed an automated scanning inventory of all of its systems in order to identify all PII needing protective measures.

We reviewed one application and determined that as of June 2017 one table within CCPS' main financial system database contained 18,648 unique social security numbers, with related names and addresses all stored in clear text. In addition, we were advised that this sensitive PII was not protected by substantial mitigating controls including data loss prevention and strict database change monitoring. CCPS relied upon the financial system's vendor for code maintenance and database configuration guidance and previously sought vendor assistance for performing database encryption, but the vendor had not yet certified the system to operate using encryption.

PII is commonly associated with identity theft. Accordingly, appropriate information system security controls need to exist to ensure that this information is safeguarded and not improperly disclosed. Best practices identified in the State of Maryland *Information Security Policy* state that confidential data should be protected using encryption and/or other substantial mitigating controls.

Recommendation 5

We recommend that CCPS

- a. perform a complete automated PII scanning inventory of its computer systems, identify all sensitive PII, and delete all unnecessary PII; and
- b. determine if all necessary PII is properly protected by encryption or other substantial mitigating controls, and use approved encryption methods to encrypt all sensitive PII not otherwise properly protected.

Finding 6

The monitoring of the student information system database's security-related events did not include all sensitive activities and appropriate documentation.

Analysis

The monitoring of the student information system database's security-related events did not include all sensitive activities and appropriate documentation. Specifically, we noted that such database monitoring did not include the identification and routine review of certain potentially risky activity. While certain necessary database logging was performed, most security and audit event change activity (for example, adding database users or roles) was not logged.

In addition, we were advised that, for events that were logged, logs were only reviewed on a periodic basis and that these reviews were not documented. The State of Maryland *Information Security Policy* requires that procedures must be developed to routinely review security-related records for indications

of unusual activity and to report findings to appropriate officials for prompt resolution. Similar conditions have been commented upon in our two preceding audit reports.

Recommendation 6

We recommend that CCPS log all critical security and audit events for the student information system database, review these logs on a regular basis with appropriate investigation of unusual activity, document all reviews, and retain the documentation for future reference (repeat).

Finding 7

Intrusion detection prevention system protection existed for internally originated network traffic, but was not applied to untrusted traffic entering the CCPS network, and certain affiliated third parties had unnecessary network-level access to the internal network.

Analysis

Intrusion detection prevention system (IDPS) protection existed for internally originated network traffic, but was not applied to untrusted traffic entering the network, and traffic from remote network connections by affiliated third parties was not filtered.

- While CCPS applied IDPS to internal network traffic, CCPS did not use a network-based IDPS to protect its network from external traffic (both encrypted and unencrypted), and did not use a host-based intrusion prevention system (HIPS) on its servers that processed encrypted traffic. A properly configured IDPS can aid significantly in the detection/prevention of, and response to, potential network security breaches and attacks. In addition, best practices identified in the aforementioned *Information Security Policy* require protection against malicious code and attacks by using IDPS to monitor system events, detect attacks, and identify unauthorized use of information systems and/or confidential information.
- Numerous affiliated third parties had unnecessary network-level access to the entire CCPS internal network via a remote connection service. Specifically, as of July 2017, we identified 37 active user accounts affiliated with third parties (for example IT vendors) that had improper network-level access to the entire CCPS internal network, including servers holding payroll, human resource, and student information, rather than being limited to only those network resources necessary to perform their respective responsibilities. Best practices, as identified in the *Information*

Security Policy require that entities' networks must ensure that only authorized individuals have access to confidential information and that such access is strictly controlled, audited, and that it supports the concepts of least possible privilege and need to know.

Similar conditions related to use of IDPS and restricting network-level access via remote user connections were commented on in our preceding audit report.

Recommendation 7

We recommend that CCPS

- a. implement IDPS protection coverage for untrusted traffic entering its internal network (repeat), and**
- b. restrict network-level access of third party connections into the CCPS network (repeat).**

Finding 8

Malware protection controls relative to assigning administrative rights and updating vulnerable software products did not sufficiently protect CCPS' network.

Analysis

Malware protection controls relative to assigning administrative rights and updating vulnerable software products did not sufficiently protect CCPS' network. Specifically, we noted the following conditions:

- Local administrative rights were not properly restricted. Our testing of 362 CCPS workstations in July 2017 identified 352 workstations whose users had unnecessary administrative rights over these workstations. None of these users were network or system administrators. CCPS personnel advised us that their historic policy had been to grant administrative rights to all faculty and staff employees, but that a project had started and was progressing to reduce administrative rights assignment.

Administrative rights are the highest permission level that can be granted to users and allow users to install software and change configuration settings. 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.

- Numerous CCPS workstations had not been updated with the latest releases for three software products that are known to have ongoing security-related vulnerabilities. Although the vendors for these software products frequently provide software patches to address these vulnerabilities, CCPS had not updated many workstations with these patches. For example, as of July 2017, we identified 4,836 workstations from an active population of approximately 6,400 workstations that had not been updated with the latest patches for one such software product; in some cases, the software had not been updated in excess of seven years.

Recommendation 8

We recommend that CCPS

- a. limit the assignment of administrative rights on workstations to system and network administrators and those users specifically allowed such rights, with any such assignments to non-IT administrators being justified, approved, documented, and regularly reviewed to determine whether such rights are still needed; and**
- b. ensure that all workstations are promptly updated with software patches issued by vendors for these software products to address known vulnerabilities.**

Facilities Construction, Renovation, and Maintenance

Background

CCPS employs a staff of 293 employees to maintain its 40 schools and other administrative and support facilities. According to the fiscal year 2018 Capital Improvement Plan, necessary construction, major renovations, and systemic improvements to CCPS facilities over the next six years were estimated to cost \$207 million.

CCPS Contracts and Expenditures for Capital Projects Tested Were Proper

Our review of five construction-related procurements during fiscal years 2015 and 2016 totaling \$10.6 million disclosed that CCPS had used appropriate processes to procure all five contracts, including obtaining Board approval. In addition, our test of payments totaling \$3.6 million for these contracts disclosed that CCPS properly reviewed and approved the invoices and the amounts invoiced were in accordance with the related contract terms.

Finding 9

CCPS had not implemented a process to verify the reported project benefits of its energy conservation contract.

Analysis

CCPS had not implemented a process to verify the accuracy of the reported amount of cost savings, and that the underlying methodology used to calculate the savings, was in accordance with its long-standing energy conservation contract. Beginning in October 2004, CCPS contracted with a third-party vendor to provide energy efficiency improvements and services as well as a system to monitor, measure, and aid in the achievement of related project benefits. The contract included costs of \$9.4 million for system improvements and \$7.1 million for system monitoring and reporting over the 15-year life of the contract, and with financing costs was expected to total \$19.5 million. The energy performance contract guaranteed costs savings to CCPS totaling \$10.8 million over the life of the contract. Cost savings (actually cost avoidance), by school, is to be reported annually to CCPS using a methodology stated in the contract. The contractor is required to submit a measurement and verification report that details the cost savings/avoidance and energy usage by the school.

CCPS had not implemented a process to independently ensure the accuracy of the reported cost savings. Based on the report received for contract year 2015-2016 (the most recent received by CCPS at the time of our review), the contractor indicated that actual cost avoidance from the beginning of the contract totaled \$8.5 million to date, which exceeded the guaranteed cost avoidance for the related period by \$2 million. A similar condition was commented upon in our preceding audit report.

Industry best practices state that, when a contractor is hired by a facility owner to make and report energy savings, the owner may need an independent verifier to review the savings reports. Independent verifiers are typically engineering consultants with experience and knowledge in energy performance contracting. CCPS management stated that although it does perform an annual review of the contractor's report, no independent verification of the reported data to justify the reported savings was performed, due in part to the expense of such a verification process that would reduce any actual cost avoidance. CCPS management also advised us that it will not replace the current energy performance contract upon its upcoming expiration.

Recommendation 9

We recommend that CCPS ensure that for future contracts with a cost savings or avoidance component that it establish an internal or independent process to verify the accuracy of results achieved, at least on a test basis, and retain any related documentation (repeat).

Transportation Services

Background

CCPS had approximately 25,000 students eligible to receive student transportation services during fiscal year 2016. These students were transported approximately 5.3 million route miles during the 2015-2016 school year using 265 contractor-owned buses (and 3 spare buses, for which contractors are paid a reduced annual fee). The Transportation Department is responsible for providing transportation service to schools, determining student transportation eligibility, and establishing school bus stops for each school. According to CCPS records for fiscal year 2016, transportation costs totaled \$20.3 million with 94 percent representing payments to contractors.

Generally, CCPS' bus contracts are for one-year terms with renewals being granted over the 12-year useful life of the bus, and with contractors being paid a per vehicle allotment (PVA) that repays the contractors the full acquisition cost of the bus over its life. The PVA also provides an additional annual payment as a return on investment (ROI) to the contractors, which is established when a bus is purchased and remains fixed over the life of the bus. Finally, bus contractors are paid for other operating costs, such as driver salaries, fuel use, maintenance costs, liability insurance, and certain administrative costs.

CCPS had Appropriate Practices in Place to Help Ensure Efficient Use of Regular Bus Routes

CCPS used a variety of practices in order to ensure efficient use of buses for regular bus routes. These practices included analysis of prior year's routes, projected enrollments, and use of routing software. The routing software, which provides the number and location of students, is updated periodically throughout the school year. In addition, CCPS reviews routes periodically during the year and updates routes as needed. We reviewed ridership data as of January 2017 to determine the efficiency of CCPS bus routes. Our analysis

and tests of CCPS ridership data disclosed that CCPS generally operated buses within capacity targets (that is, 75 percent of intended capacity¹).

Finding 10

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

Analysis

Certain elements used by CCPS to determine payment amounts to bus contractors did not reflect market conditions, were not properly documented, or did not consider available fuel credits. Our review of the contract terms disclosed the following conditions:

- CCPS could not substantiate the basis for the annual return on investment (ROI) rate used in the PVA payment formula of 8.67 percent for the 97 buses placed in service by contractors from fiscal years 2013 through 2017. This ROI rate is higher than the rate of return suggested by certain studies.² ROI provides a financial return for the contractor investing in a bus instead of another investment option over the 12-year life of the bus.

If CCPS would have used a ROI methodology based on the recommendation of a consultant hired by another Maryland school system, we estimated that its annual PVA payments for each of the 97 buses would have from \$3,358 to \$3,676 lower. Over the 12-year life of those buses, CCPS could have saved approximately \$4.15 million. The

¹ Like other local education agencies, CCPS uses a lower capacity rate than the manufacturer's stated bus capacities. For example, CCPS determined the capacity for high, middle, and elementary schools routes at 44, 51, and 58 passengers, respectively, based on 66 passenger buses (manufacturer stated capacity).

² The use of the prime interest rate only for ROI 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 businessperson would expect on a long-term investment, and not necessarily the prime rate. As of October 2016, current 10 and 30-year US Treasury Note rates, which could be reflective of a reasonable long-term investment option, were 1.8 and 2.5 percent, respectively. Finally, we noted during the financial management practices audit of another similarly sized Maryland school system that the system had hired a consultant to evaluate its transportation policies and that the consultant recommended that the ROI be the prime rate plus 2 percent. In the case of CCPS, this would result in a ROI of 5.25 to 5.75 percent for fiscal years 2013 to 2017. To be conservative we based our calculations on that method.

savings would have resulted from the difference between using the prime rate (which ranged from 3.25 percent to 3.75 percent) plus 2 percent, which was recommended by the consultant, instead of CCPS' ROI rate of 8.67 percent. This analysis does not include the effects of lost interest income that could have been earned.

- CCPS payments to contractors for bus maintenance costs were negotiated with the bus contractors and were not supported by industry standards or documented maintenance and other repair costs. For fiscal year 2016, CCPS paid a \$0.91 per-mile fee to reimburse the contractors for bus maintenance costs, which resulted in CCPS paying approximately \$4.8 million for maintenance costs.
- CCPS did not exclude federal fuel excise taxes and the State motor fuel taxes from fuel payments made to bus contractors. Under the applicable laws, the contractors are exempt from such taxes and can receive refunds for taxes paid. If CCPS had considered both the State and federal tax exemptions in its fuel cost calculation, payments to the contractors could have been lower by approximately \$447,000 based on projected mileage during the 2016-2017 school year.

According to federal law, CCPS contractors are exempt from the \$0.244 per gallon excise tax for diesel fuel and bus contractors are able to receive a credit for federal fuel taxes paid when the contractor files their income tax returns. 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 the payment of 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. The State motor fuel tax during fiscal year 2017 was \$0.3425 per gallon.

Recommendation 10

We recommend that CCPS ensure that all contractor payments have a documented and justified basis. Specifically, we recommend that CCPS

- a. use a reasonable market investment rates as a basis for establishing contractor rates for the annual PVA,**
- b. use actual bus operating costs or develop supportable cost estimates as the basis for establishing reasonable contractor rates for per mile maintenance costs, and**
- c. exclude fuel taxes from contractor payments.**

Food Services

Background

CCPS has a cooking cafeteria at 39 of its 40 schools. Food and related supplies are received and stored in each school. In fiscal year 2016, CCPS had 103 cafeteria positions (consisting of 100 cafeteria positions and 3 administrative positions). According to the fiscal year 2016 audited financial statements, food service operation revenues exceeded food service operation expenditures by approximately \$366,000.

Cash Handling Procedures for Cafeteria Sales Provided Sufficient Accountability

CCPS has implemented procedures and controls designed to ensure that cafeteria receipts were properly accounted for, processed, and deposited. Collections are independently reconciled against sales recorded in an automated point-of-sale system and deposited on a daily basis by the various schools. Subsequently, a food services central office employee independently verifies deposits to sales reports generated from the system.

School Board Operations

Background

CCPS' Board of Education 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 meets monthly for regular board meetings during the school year and schedules additional meetings as needed.

School Board Adopted Policies to Provide Appropriate Oversight

The CCPS Board of Education has adopted governance policies and procedures to provide mechanisms for it to independently assess CCPS operations. Policies as related to the financial management areas of operations reviewed during our audit appeared to promote accountability and control. The Board's approved policies are available on the CCPS website.

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

The Board has adopted a detailed ethics policy applicable to Board members and all CCPS employees that conforms to State law and includes provisions for conflicts of interest and financial disclosure. According to the ethics policy, annual financial disclosure statements are required to be filed by Board

members, candidates for the Board, the superintendent, assistant superintendents, and a number of other administrators (such as school principals and agency buyers) by April 30 of each year. In addition, CCPS established an ethics panel consisting of five members who are not subject to the authority of the Board of Education to interpret ethics policies and provide advice on policy implementation. It is the responsibility of the panel to review the annual financial disclosure statements for potential conflicts and rule on any reported complaints of ethics violations.

Finding 11

CCPS did not have a process in place to ensure that financial disclosure forms were properly completed and reviewed by its ethics panel.

Analysis

CCPS did not have a process in place to ensure that financial disclosure forms were properly completed and reviewed by the ethics panel, as required. Our test of 20 judgmentally selected employees and board members disclosed that while all 20 had submitted financial disclosure forms for filing year 2016, five of the forms were not properly completed, as four were not signed and the fifth was not the correct version (different versions exist for Board members and school system employees). In addition, the ethics panel was not documenting its review of submitted financial disclosure forms.

Recommendation 11

We recommend that CCPS ensure that all annual financial disclosure forms are properly completed and reviewed by the ethic panel, as required.

Other Financial Controls

Healthcare Background

CCPS is self-insured and utilizes a third-party administrator (TPA) to oversee and administer its employee and retiree healthcare plans. Specifically, for medical coverage, CCPS contracts with a vendor to provide administrative services, such as claims processing for participants' medical costs and for stop-loss coverage. Stop-loss coverage indemnifies CCPS against health insurance claim amounts that exceed a certain threshold for a member. CCPS has a separate prescription drug contract with the same vendor.

Medical providers submit claims to the TPA who pays them on behalf of CCPS. CCPS reimburses the TPA for the claims it reports as paid on behalf of CCPS and pays an administrative fee for these services. CCPS payments for

medical and prescription coverage during fiscal year 2016 totaled approximately \$50 million, including \$1.5 million for administrative fees and \$770,000 for stop-loss insurance.

Finding 12

CCPS did not ensure the propriety of certain claim payments for employee and retiree healthcare costs as well as prescription drug rebates. Sufficient documentation was not obtained to support dependents for healthcare.

Analysis

CCPS did not ensure the propriety of certain claim payments for employee and retiree healthcare costs and did not verify prescription drug rebates. Also, sufficient documentation was not obtained to support the eligibility of dependents for healthcare.

Propriety of Claim Payments

CCPS lacked procedures and controls to ensure that certain amounts paid to its TPA were proper. Specifically, CCPS did not audit the propriety of the claims paid on its behalf by the TPA to ensure that the services were actually provided, were covered by the health plans, and were appropriately priced. A similar condition regarding the need to ensure the propriety of healthcare costs was commented upon in our preceding audit report.

The State of Maryland Office of Personnel Services and Benefits (OPSB) contracts with a private firm to audit the third-party administrators of the State's health insurance, prescription drug, dental benefit, and mental health benefit plans, which includes conducting reviews to ensure the propriety of claims paid. These reviews, which are provided for in the State's contracts with the third-party administrators, allow for the statistical projection of error rates to total claims paid, allowing the State to recoup the projected amount of erroneous claims. According to OPSB, improper payments from these reviews have consistently exceeded the cost of the reviews.

Prescription Drug Rebates

Prescription drug rebates received by CCPS from its prescription drug TPA were not verified for propriety, even on a test basis. CCPS did not have a process to verify the rebates reported by the TPA by performing a comparison to supporting documentation. In fiscal year 2016, CCPS received prescription drug rebates totaling \$1.4 million from the TPA.

Dependency Verifications

Although CCPS has a process to verify the eligibility of a dependent added to a participant's policy, not all of the accepted documentation was appropriate for

the purpose. Specifically, CCPS' policy required supporting documentation to prove the relationship of dependents, but CCPS allowed employees and retirees to submit copies of federal tax returns as the sole evidence of eligibility. Since such documentation can be easily manipulated and self-prepared, tax returns should not be used for dependent verifications. Our test of the dependent verification process for 10 families disclosed that 7 of the 10 families used tax returns to evidence dependency. Other documentation to evidence dependency could include birth certificates, marriage licenses, and adoption papers.

Recommendation 12

We recommend that CCPS

- a. establish procedures to verify the propriety of healthcare claim amounts paid by the TPA, at least on a test basis (repeat);**
- b. establish procedures to verify prescription drug rebates, at least on a test basis; and**
- c. ensure that supporting documentation for employee and retiree dependent eligibility is appropriate and disallow the submission of tax returns for that purpose.**

Finding 13

CCPS did not formally reevaluate its current investment practices and consider investing a portion of its funds in other legally permitted investment options.

Analysis

CCPS did not formally reevaluate its current investment practices and consider investing a portion of its funds in other legally permitted investment options, such as the Maryland Local Government Investment Pool (MLGIP). In this regard, CCPS held large deposits in a checking account with low interest earnings rates, without considering other investment options. Although CCPS advised us that it evaluated its investment options monthly, this process was not documented, and no action had been taken to increase its investment return by using the MLGIP.

Specifically, the February 2017 interest earnings rate for its checking account was 0.23 percent while the interest rate for the same period for the MLGIP was approximately 0.60 percent. Based on an average of each month's end account balance during fiscal year 2016 (after considering the required reserve) and using the aforementioned two rates from February 2017, we estimated a potential difference of approximately \$71,000 in annual interest earnings by leaving the deposits in the checking account (approximately \$19

million) rather than investing in the MLGIP. A similar condition was commented upon in our preceding audit report.

Recommendation 13

We recommend that on a periodic basis, CCPS formally reevaluate its current investment practices and consider investing a portion of its funds in other legally permitted investment options such as the MLGIP (repeat).

Audit Scope, Objectives, and Methodology

We conducted a performance audit to evaluate the effectiveness and efficiency of the financial management practices of the Carroll 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 December 6, 2016 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. Our follow-up on the status of the findings in our preceding audit report on CCPS dated March 20, 2012, included 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. In addition, 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). 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, 2014 through November 30, 2016. 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 November 30, 2016 to June 29, 2017. The CCPS response to our findings and recommendations is included as an Appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise CCPS regarding the results of our review of its response.

APPENDIX



Building the Future

Carroll County Public Schools

125 N. Court Street | Westminster, MD 21157

410-751-3000

410-751-3034 TTY

410-751-3003 FAX

Stephen H. Guthrie
Superintendent

May 10, 2018

Mr. Thomas J. Barnickell III, CPA
Legislative Auditor
Department of Legislative Services
Office of Legislative Audits
301 West Preston Street, Room 1202
Baltimore, Maryland 21201

Dear Mr. Barnickell III,

Enclosed are the responses to recommendations made in the Financial Management Practices Audit Report for Carroll County Public Schools dated May 2018.

I would like to thank the legislative auditors for providing us feedback in several areas where we can become a more efficient organization.

Please do not hesitate to call me if you need any additional information regarding this submission.

Sincerely,

A handwritten signature in black ink, appearing to be 'Stephen H. Guthrie', written over a large, stylized circular flourish.

Stephen H. Guthrie
Superintendent of Schools

Enclosure

c: Chris Hartlove, Chief Financial Officer
Bob Lord, President, Board of Education
Dawn Czajkowski, Internal Auditor

**Carroll County Public Schools
Response to the
Draft Legislative Audit Report**

May 11, 2018

Revenue and Billing Cycle

Recommendation 1

We recommend CCPS ensure that schools are properly administering school activity funds and comply with established requirements. Specifically, we recommend that CCPS

- a. ensure schools properly control cash receipts by implementing and enforcing accountability measures over cash receipts (repeat), and
- b. ensure periodic audit coverage of schools with significant school activity funds.

CCPS Response

- a. We agree that the Procedures Manual for School Funds states that we **encourage** a second staff member to be present to count receipts of school activity funds, but that is not always possible at every event. We would like to note that in four cases where one person counted the funds, an administrator counted the funds. In addition, at least one CCPS paid off-duty police officer is present at each after school event. The off-duty police officer stays with the cash boxes. Also based on the administrator's experience, she estimates the attendance and then determines if total ticket sales are reasonable. Additionally, CCPS requires pre-numbered tickets for all events, such as plays, choral performances, and proms. We also have security cameras that are monitored which act as a deterrent. To establish an improved "best practices" for all high school events, we recently started reviewing cash handling at these events.

Appropriate action was taken with the employees who were responsible for the specific receipts noted in the analysis. A focused audit was completed at the school in violation and follow up will continue.

Also, CCPS requires all new principals, assistant principals, and financial secretaries to receive financial training. Financial secretaries receive one-on-one training and administrators receive group training. See attachment 1 for the Power Point presentation used for cash handling training. This is only one example of the training materials used. In addition to one-on-one and class training, the staff always has access to the school-based accountant and the Procedures Manual for School Funds. Annual financial training is provided to all financial secretaries.

- b. We agree with the recommendation. We will continue to explore methods to increase the frequency of school audits, with emphasis on schools with significant activity funds. We believe, given the current audit staff (one

internal auditor and one part-time clerical staff), we are maximizing the use of our staff to reduce the risk of or identify possible misappropriation of funds. The audit staffing level and additional responsibilities assigned restricts frequency; therefore, we have implemented multiple audit programs, each with a unique scope and goals, and instituted other monitoring and reporting processes to mitigate the risk. CCPS audit staff will continue to comply with the direction provided by the Board appointed audit committee as outlined in the committee's charter regarding the internal audit plan.

As outlined in CCPS Administrative Regulation CN, annually a work plan is submitted to the audit committee for approval. The plan includes, but is not limited to, comprehensive (larger scope, e.g. school, Board, and cafeteria funds, and 12 month audit period) and focused audits (limited to financial records for school funds activity for the most recent 3 month period), and safe audits. Subsequent to the comprehensive audits as noted in the Office of Legislative Audits analysis, follow up visits, and in some cases multiple follow-up visits to the same high schools, were completed. At that time, we noted improvement in compliance with procedures. Subsequent to the completion of the Office of Legislative Audits fieldwork, additional high school focused and safe audits were completed.

The selection of schools for audit is risk based. Risk includes materiality and length of time between audits. Other factors considered include, but are not limited to staffing changes, administrator requests, location of the school, percentage of school accounts that are not verified monthly, and any irregularities that may have been reported. Additionally, the internal auditor, at a minimum, consults weekly with the school-based accountant and discusses any concerns. To date 61 safe audits, 30 focused, and 10 comprehensive audits have been completed at elementary, middle, and high schools.

To mitigate the risk of misappropriated school funds, the Office of Internal Audit monitors the frequency that account managers (staff who are independent of bookkeeping responsibilities) verify the accuracy of school account transactions that post to their assigned school accounts. This verification is a reconciliation of the account. We report the results to the director at each level (i.e. elementary, middle, and high). As of June 27, 2017, we reported 92% of all school accounts were verified as accurate.

Annually, the Office of Internal Audit also requires the administrator for every school to submit a signed letter identifying any theft, fraudulent or unethical events and any irregularities.

Special projects are completed to address a specific type of school receipts that are in need of increased accountability, increased efficiency, and standardization. The projects completed included significant receipts and expenditures at the high schools. For example, the focus of two recent special projects was athletic fees and freshman, sophomore, junior, and senior class school accounts at each high school. County wide, during the 2015-2016 school year, \$518,444 was collected in athletic fees, and \$634,618 was collected for the “class of” high school accounts. All high schools were included in the special projects. Although the approved work plan did not include these projects, the audit committee approved the projects during the school year because of the potential risk. Because of these two special projects, internal controls over these funds improved and the risk of misappropriation was reduced.

Federal Funds

Recommendation 2

We recommend that CCPS ensure that the necessary parental approvals for Medicaid billings are obtained and that all allowable Medicaid reimbursement is sought for eligible students.

CCPS Response

CCPS has taken or will take the following strategic actions:

- For the 2017-2018 school year, Medical Assistance (MA) staffing was re-organized. A Supervisor of Special Education has been assigned the responsibility of monitoring and supporting Medical Assistance billing.
- During the Tuesday, August 29th, 2017 Supervisor-directed professional development day, which was attended by all special educators and related service providers, specific training was provided on MA procedures.
- The Director of Special Education and Supervisor of Special Education responsible for MA provided additional support to principals at each level at a monthly principal’s meeting during the first half of the 2017-2018 school year. The focus will be on improving the ability of principals to utilize the missed billing report.

- The Supervisor of Special Education responsible for MA and the Medicaid Reimbursement Technician will provide individualized support for administrators, teams, and teachers as requested during the 2017-2018 school year.

Human Resources and Payroll

Recommendation 3

We recommend that CCPS implement a process that provides for the independent review of payroll adjustments.

CCPS Response

CCPS does recognize that by chance a payroll associate could verify a timecard they entered. To further mitigate the risk associated with timecards entered and verified by the same payroll associate, CCPS has implemented a random selection of the payroll associate performing the edit.

Inventory Control and Accountability

Recommendation 4

We recommend that CCPS

- a. ensure a physical inventory of school equipment items is periodically conducted as required and the results are reconciled with the centralized records (repeat);**
- b. implement a process to periodically and independently verify the results the physical inventories taken by the schools, at least on a test basis (repeat); and**
- c. ensure that the equipment inventory records accurately include all equipment owned by CCPS (repeat).**

CCPS Response

We agree with the recommendations. CCPS continues to make progress in implementing this recommendation. Since the last audit, CCPS has researched two inventory software systems that would enable CCPS to track electronically inventory items in real time. Both systems have the controls necessary to help ensure the accuracy of our inventory records. However, given the cost of the systems and the low number of reported missing inventory items, we have not been able to justify procuring such a

system. CCPS will continue to research inventory software systems that will meet the needs of the inventory controls set forth, and result in a positive cost benefit analysis.

CCPS continues to update annually the sensitive items procedures as well as the list of sensitive items. CCPS continues to train financial secretaries on the annual updated inventory procedures and controls. In addition, CCPS now has a mechanism that enables employees to report lost or stolen items. To date CCPS has had minimal stolen or missing items reported through the Office School Security, Office of Internal Audit, Fraud Hotline, Technology Services, and Purchasing.

Information Technology

Recommendation 5

We recommend that CCPS

- a. perform a complete automated PII scanning inventory of its computer systems, identify all sensitive PII, and delete all unnecessary PII; and
- b. determine if all necessary PII is properly protected by encryption or other substantial mitigating controls, and use approved encryption methods to encrypt all sensitive PII not otherwise properly protected.

CCPS Response

CCPS generally accepts Finding 5 and agrees to Recommendation 5A. *NIST Special Publication 800-122 Guide to Protecting the Confidentiality of Personally Identifiable Information (PII)* notes that the use of “data loss prevention technologies (e.g. automated PII network monitoring tools)” is just one of many methods that can be used. While the use of such an automated tool is not directly required by the State of Maryland Information Security Policy, CCPS agrees that use of a PII Identification and Loss Prevention Tool may find and delete any rogue electronic data within our secured infrastructure and will be a good addition to the other mitigating controls in place. CCPS immediately researched the use of such tools and is in the process of creating a consortium of other Public School Systems in Maryland to procure and implement.

CCPS understands Recommendation 5B but acknowledges the risk since other mitigating controls beyond those noted are in place to protect the referenced data. Further, CCPS is unable to implement encryption in this one case as it is part of a third party product and not supported by the vendor. All other databases controlled by CCPS utilize encryption. It is not a matter of CCPS “relying” on the vendor but rather a requirement of the design of the vendor’s software that CCPS does not have the ability to control. The

referenced database is only accessible by authorized staff on the internal network via strong implemented access controls.

The vendor of the DBMS product in which this database is housed noted in their documentation, *“Encryption does not solve access control problems. Although encryption is a valuable tool to help ensure security, it should not be considered for all data or connections. When you are deciding whether to implement encryption, consider how users will access data. If users access data over a public network, data encryption might be required to increase security. However, if all access involves a secure intranet configuration, encryption might not be required.”*

We agree to continue to lobby the vendor in question to make the necessary changes in this nationally known and widely used product. Given a choice between lack of encryption with other mitigating controls in place versus losing full certification and support of the vendor, we agreed that maintaining full vendor support was a higher priority. We have an open ticket with the vendor that we shared with the auditors from July 2015 requesting their attention to this issue. Thus far, they have not updated the software to allow encryption

Therefore, we acknowledge this one instance of a lack of database encryption as an identified risk. The PII Identification and Loss Prevention Tool will be implemented to enhance the CCPS data loss prevention controls already in place.

Recommendation 6

We recommend that CCPS log all critical security and audit events for the student information system database, review these logs on a regular basis with appropriate investigation of unusual activity, document all reviews, and retain the documentation for future reference (repeat).

CCPS Response

We agree that Log and Event Monitoring is an area that is subject to continuous improvement. Specifically, we agreed to and implemented an enhancement to our documentation procedure to include all “clean” reviews. Previously, our procedure only documented specific incidents and those items requiring follow-up.

CCPS has a very robust Event Logging, Reporting, and Alerting System (LEM) that alerts appropriate staff on specific critical events for further categorization, review, and correlation. We agreed to further review and fine-tune our alert notifications. In addition to alerting, we do review certain logs

on a daily basis and others on a periodic basis to the extent we are able with the limited staffing resources available. In a perfect world, we would have the resources to provide the full spectrum of log review. However, in the reality of K12 Public Education, we do the very best we can with the allocated resources. Our goal is to strike the right balance between alerting on true issues and the other extreme of just creating too much noise (creating “the boy who cried wolf” scenario). In addition, we shared with the auditors that the events noted in the recommendation are controlled by a third party vendor’s product and we are unable to modify all of the referenced alerting.

In the past year, we have been working with other local and state partners with similar resource challenges to develop an economy of scale solution for the procurement and use of a comprehensive threat monitoring and detection service. This solution is dependent on available budget.

Recommendation 7

We recommend that CCPS

- a. implement IDPS protection coverage for untrusted traffic entering its internal network (repeat), and**
- b. restrict network-level access of third party connections into the CCPS network (repeat).**

CCPS Response

We accept the first portion of this finding and Recommendation 7A. On the day of the audit, IDPS was enabled except for inbound traffic to the DMZ. This was a mistake from recent vendor configuration updates. We acknowledged this mistake and immediately corrected. CCPS fully utilizes IDPS.

The SOW with the vendor that implemented the firewall states:

- *“Implement screen protection (IDS/IPS) functionality on all firewall interfaces to mitigate common DoS attacks.*
- *Vendor best practice configurations will be followed and will include advanced configurations including*
 - *Meeting internet access according to the CCPS policy requirements.*
 - *Meeting inbound secure access requirements, if applicable.”*

We have implemented some changes based on Recommendation 7B and subsequent conversations with the auditors. We do believe that third party access is adequately restricted based on confirmation from the vendor of the implemented technology. This vendor confirmed that the configuration meets their minimum best practice configuration. However, while the current

configuration is considered secure, they did suggest two optional additional steps to further enhance network layer security that we are implementing.

Recommendation 8

We recommend that CCPS

- a. **limit the assignment of administrative rights on workstations to system and network administrators and those users specifically allowed such rights, with any such assignments to non-IT administrators being justified, approved, documented, and regularly reviewed to determine whether such rights are still needed; and**
- b. **ensure that all workstations are promptly updated with software patches issued by vendors for these software products to address known vulnerabilities.**

CCPS Response

We generally accept the characterization of Finding 8 and had already implemented Recommendation 8A before the conclusion of the on-site portion of the audit. While we agree in principle with Recommendation 8B, we acknowledge this as a known risk with certain noted products.

CCPS had previously acknowledged local administrative rights as a known risk. Due to limited technical staff to install software, these rights were deemed necessary to allow staff to install software (students never had administrative rights). Approval to remove staff administrative rights was granted in December 2016 after CCPS implemented a self-service and automated software installation utility.

CCPS has a very robust patch management system in place. The K12 environment presents significant challenges related to the need to support some legacy software. System computers are utilized for many purposes and applications. Certain software, including mandatory testing platforms, require specific versions of the noted applications to function properly. It is simply a requirement to utilize various versions to enable functionality with legacy applications as well as (sadly) some of the newer educational software. This is simply beyond our ability to control. Any deviation from maintaining the latest patch version on all software is a requirement of our environment and acknowledged as a known risk.

Facilities Construction, Renovation, and Maintenance

Recommendation 9

We recommend that CCPS ensure that for future contracts with a cost savings or avoidance component that it establish an internal or independent process to verify the accuracy of results achieved, at least on a test basis, and retain any related documentation (repeat).

CCPS Response

CCPS will consider a third party process for verifying the accuracy of results for future energy performance contracts provided there isn't a significant impact to cost avoidance guarantees.

Transportation Services

Recommendation 10

We recommend that CCPS ensure that all contractor payments have a documented and justified basis. Specifically, we recommend that CCPS

- a. use a reasonable market investment rates as a basis for establishing contractor rates for the annual PVA,**
- b. use actual bus operating costs or develop supportable cost estimates as the basis for establishing reasonable contractor rates for per mile maintenance costs, and**
- c. exclude fuel taxes from contractor payments.**

CCPS Response

The CCPS Transportation Services Department (TSD) views the contractor reimbursement formula in terms of the total compensation it provides to contractors as related to cost competitiveness, cost effectiveness, and overall quality of service when compared to other Maryland counties. For the 2016-2017 school year, CCPS ranked 7th highest and 8th highest among the eighteen (18) Maryland counties using a contract reimbursement formula for a 5 hour and 80 mile and 5.75 hour and 80 mile theoretical bus route, respectively (see attachment 2). We also compare favorably against recent school bus route bid rates shared by a neighboring Maryland county. Comparisons with public-owned operations are more difficult in that the accounting for driver personnel costs (i.e., sick leave, pension and health benefits, sub drivers), supervisory personnel costs (i.e. route supervisors and depot managers), facility maintenance and utility costs, vehicle parts and maintenance costs, and the purchase cost of buses and related bond debt are not uniformly reported as part of the total cost of transportation. For a

contract system such as Carroll, all of the costs typically associated with a public- owned system are included in the overall formula for bus contractor reimbursement.

Auditor's Comment: The information on attachment 2, presented by CCPS to validate its costs in comparison with other school systems, was not audited by us. Furthermore, we have expressed concern about the transportation costs and related rate-setting methodologies in many other school systems' audit reports.

The CCPS believes that its bus contractor reimbursement formula adequately and appropriately compensates its bus contractors when compared to the cost of pupil transportation in other Maryland counties. While arguments can be made as to the justification for individual elements of the CCPS reimbursement formula, the total compensation afforded bus contractors by the entire reimbursement formula is, in our opinion, fair and appropriate compensation given the quality of service provided, geographic cost considerations, and when compared to other contractor counties' cost of transportation. We continue to believe that school bus service provided by local and private bus contractors using a reimbursement formula provides the best opportunity for Carroll County to receive high quality, cost effective service.

- a. For SY 2018-2019 beginning July 1, 2018, the TSD is recommending using the prime rate (as of October of each year) + 2% + depreciation (8.33%) as the factor to be multiplied by the average bus cost in determining the annual PVA payment.
- b. Bus contractors provide maintenance for their buses in different ways depending on the size of the fleet, available facilities and equipment on site, the mechanical and technical expertise of themselves and their employees, and the magnitude and complexity of needed repairs. Some contractors perform most of their maintenance on-site while others primarily use private outside vendors. The contractor reimbursement formula pays the same maintenance rate per miles traveled regardless of the actual maintenance/ repair experience of each bus in the fleet. The TSD has requested that contractors submit samples of their actual maintenance expenditures to document the per mile maintenance reimbursement rate.

It should also be pointed out that the bus contractors and the TSD view the maintenance portion of the reimbursement formula as part of the

- overall contractor compensation formula. While the salary and fuel components of the formula are considered “pass through” items, meaning that there is no additional compensation provided to the contractor over the actual salary rate/ hour + FICA and other personnel costs provided for the driver and assistant and the actual cost of fuel. Bus contractors and the TSD view the maintenance rate/ mile and PVA amounts as the portion of the compensation formula that provides some level of net income to these business owners.
- c. The TSD has provided guidance to bus contractors regarding the availability of federal and state fuel tax rebates now available to them. Many contractors have already applied and received state fuel tax rebates retroactive to July 1, 2016. Beginning July 1, 2018, the TSD will adjust the bi-weekly price per gallon price of diesel fuel used in determining the fuel reimbursement rate by deducting the applicable federal and state fuel taxes.

School Board Operations

Recommendation 11

We recommend that CCPS ensure that all annual financial disclosure forms are properly completed and reviewed by the ethics panel, as required.

CCPS Response

As outlined in Board Policy BC – Ethics, procedures are established that require annual financial disclosure for members of the Board and certain employees as outlined in section 4 of the policy. The Ethics Panel is charged with the responsibility to review, by April 1, all annual financial disclosure forms submitted pursuant to Board Policy BC. CCPS has documentation of the Panel’s review for prior years, but not for the 2016 filing year. The 2016 forms were submitted to the Panel, but in error, the policy was not followed. The Superintendent’s Office will confirm each year that a written response from the Ethics Panel is received, their concerns are appropriately addressed, and documentation is retained.

Other Financial Controls

Recommendation 12

We recommend that CCPS

- a. establish procedures to verify the propriety of healthcare claim amounts paid by the TPA, at least on a test basis (repeat);
- b. establish procedures to verify prescription drug rebates, at least on a test basis; and
- c. ensure that supporting documentation for employee and retiree dependent eligibility is appropriate and disallow the submission of tax returns for that purpose.

CCPS Response

- a.& b. CCPS is in discussion with a vendor to perform medical and prescription drug claim audits and prescription drug rebate audits. The vendor was competitively bid and chosen by the Maryland Association of Boards of Education (MABE) to offer any MABE member a reduced cost proposal for performing the audits.
- c. CCPS has modified the dependent audit documentation requirements to eliminate the use of tax returns for proof of a child's eligibility. For the spouse, a marriage certificate is now required along with one form of documentation proving joint tenancy (a tax return is one of the forms acceptable for the proof of joint tenancy only).

Recommendation 13

We recommend that on a periodic basis, CCPS formally reevaluate its current investment practices and consider investing a portion of its funds in other legally permitted investment options such as the MLGIP (repeat).

CCPS Response

We agree with the recommendation, and will formally document our review. Each month we evaluate our investment options as part of a review of our Account Analysis statement from our bank. Going forward we will document this process. As part of this process, we compare the bank rates to those offered by the Maryland Local Government Investment Pool (MLGIP). The OLA analysis uses the February 2017 MLGIP interest earnings rate of 0.60%; however, recent rate history shows that the interest earnings rate was as low as .21% in 2016. The MLGIP actual yield for the most recent 5-year period is as follows:

- 2012: 0.13%
- 2013: 0.08%
- 2014: 0.05%
- 2015: 0.08%
- 2016: 0.37%

Therefore, since our last legislative audit dated March 20, 2012, MLGIP rates have been less than those offered by our bank, and have not warranted transfer of any CCPS funds. Not until recently have the MLGIP interest rates increased to the point where they compare favorably to our bank's interest rates. As a result, we have begun investing available balances with MLGIP as of April 3, 2017.

Also in the spring, we began discussions with our bank to renegotiate interest rates. Renegotiated rates are as follows:

- Increase in our checking account rate floor from 0.23% to 0.51%.
- Utilization of an overnight sweep investment option, which pays 20 basis points below the US Treasury Money Market Rate currently at 0.69% (minus the 20 bps management fee would be 0.49%).
- Both of these rates would be for those funds not transferred to MLGIP.



Administrator Financial Training Cash Handling

October 10, 2017

Presenter: Joe Varrone
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1

Goal


- Understand cash handling procedures & safeguarding of assets.
- Know the forms associated with cash flows.

2

Directions for Completing the FUNDS COLLECTION RECORD

TO BE COMPLETED BY THE FUNDS SUBMITTER OR ACCOUNT MANAGER

- Include the name of the class, club, organization or grade level AND the event for which the money was collected.
- The date that the funds were collected.
- The individual(s) who counted the money. ONLY ONE SIGNATURE IS REQUIRED.
- Total amount of funds collected, written in script form.



TO BE COMPLETED BY OFFICE PERSONNEL RECEIVING THE FUNDS

- Signature of the individual in the office who accepted the money from the teacher/advisor.
- Date funds arrived in the office.

FOR DEPOSIT ONLY

Check received by: _____
 Date funds received: _____
 Vended by: _____
 * Amount of sales tax paid: _____
 Deposit date: _____
 Receipt number: _____

TO BE COMPLETED BY THE FINANCIAL SECRETARY

- Signature of the financial secretary, or the person that verified the amount of money submitted.
- Any sales tax collected in association with this collection.
- Date money is deposited at the bank.
- Number on tricolor receipt returned to appropriate parties.

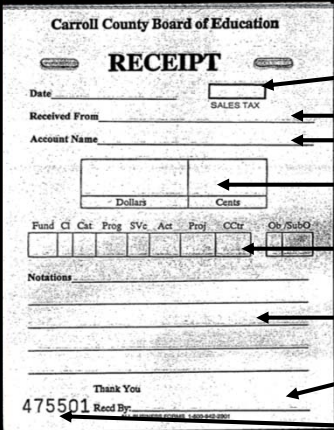
FUNDS SUBMITTER - Submit white and yellow copies with 1 - 4 completed to the office with money. Keep the blue copy and forward the pink copy to the account manager.
ACCOUNT MANAGER - Keep the pink copy until the white copy is returned with a numbered receipt ticket.
FINANCIAL SECRETARY - Return the white copy to teacher/advisor with 5-10 completed and the white numbered receipt ticket. The yellow copy should remain with the yellow receipt in the school's financial records.

3

Handling Cash at After School Events

- Typically there are at least two employees on site.
- We recommend that the two employees count the cash, then both sign the FCR where it say "Counted by".
- Then both prepare & initial a deposit slip.
- They put the cash & deposit slip into a secure bank bag.
- Then a security person & one of the two preparers goes to the bank.
- They keep one FCR copy & give the other to the Financial Secretary the next day.

4



RECEIPT

Date: _____

Received From: _____ SALES TAX

Account Name: _____

Dollars: _____ Cents: _____

Fund Cl Cat Prog Svc Act Proj CCU Obj Sub-O: _____

Notations: _____

Thank You
 475501 Read By: _____

Sales tax (a portion of the total you received)

Payer of the funds

For example Band Club

Total amount you received

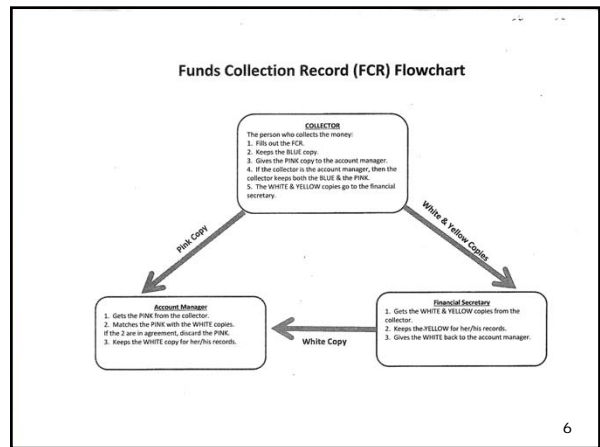
Financial code goes in this row

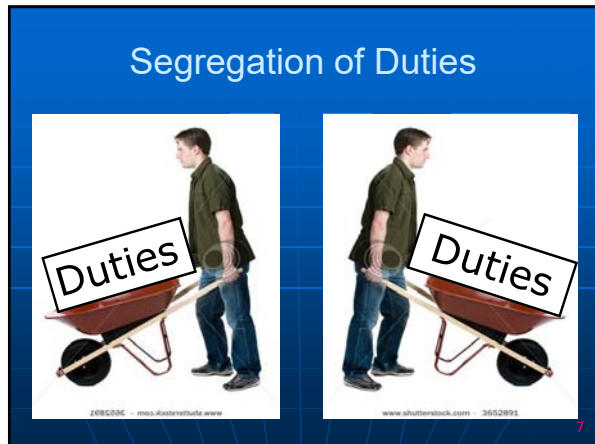
Description goes here (for example "Trip to Super Bowl")

Receiver of funds signs here

This is the receipt ticket #

5





Cash Handling – Safeguarding of Assets

- All cash & checks must be turned into the financial secretary daily with FCR.
- Bank deposits should be made once a week or \$1,000 collected, whichever comes first.
- All cash & checks held overnight must be placed in the school safe.
- Two initials should be on deposit slips to verify deposit item count & total cash.
- Monthly bank statements should be delivered to & opened by the principal.

8

Building the Future
CCPS
Carroll County Public Schools

Questions?
Comments?
Thank You

9

FY 2016- 2017
Formula Comparison – 10/5/2016

| <u>County</u> | <u>PVA</u> | <u>Driver Salary</u> | <u>Maintenance</u> | <u>Fuel</u> | <u>Total M & F</u> | <u>Admin. Fee Operations</u> | <u>Cost 5 Hours 80 Miles</u> | <u>Cost 5.75 Hours 80 Miles</u> | <u>Comments</u> |
|----------------|---------------|----------------------|--------------------|---------------|------------------------|--------------------------------|------------------------------|---------------------------------|---|
| Allegany | 14,313 | 19.23 | .8954 | .3162 | 1.2116 | 800 | 49,867 | 52,323 | 6.8 mpg (less .224 Fed. fuel tax) |
| Anne Arundel | 19,753 | 28.65 | .6172 | .3113 | 0.9285 | 0 | 64,065 | 64,065 | 7.5 mpg; 6 hr. min. |
| Baltimore Co. | | | | | 4.50/ 5.00 | 0 | 64,800 (4.50 rate/mile) | 72,000 (5.00 rate/mile) | Flat rate/ mile |
| Calvert | 12,056 | 24.07 | .9866 | .3462* | 1.3328 | 7,843*** | 60,754 | 64,003 | 5.75 hr. min; 11 Row Bus; Mid-range salary; 6.5 mpg |
| Caroline | 14,122 | 21.82 | .8300 | .3214* | 1.1514 | 2,824** | 53,164 | 56,110 | 7.0 mpg; |
| Carroll | 18,475 | 20.23 | .9181 | .3214* | 1.2395 | 1,100 | 55,631 | 58,362 | 7.0 mpg |
| Cecil | 17,331 | 19.79 | .8121 | .3214* | 1.1335 | 675 | 52,139 | 54,811 | 7.0 mpg |
| Charles | 18,986 | 22.60 | .8236 | .5123* | 1.3359 | 900 | 59,463 | 62,514 | 5.5 hr min |
| Dorchester | 18,700 | 19.20 | .8200 | .3750* | 1.1950 | 1,400 | 54,588 | 57,180 | 6.0 mpg |
| Garrett | 15,196 | 19.06 | 1.0200 | .3117* | 1.3317 | 1,030 | 52,556 | 55,129 | 6.5 mpg (less .224 Fed. fuel tax) |
| Harford | 18,689 | 20.50 | .8000 | .2533* | 1.0533 | 2,990 | 55,297 | 58,297 | 7.1 mpg (less Fed.&St. fuel tax) |
| Kent | 16,725 | 20.85 | .8300 | .2753* | 1.1053 | 0 | 51,406 | 54,221 | 7.3 mpg (less .224 Fed. fuel tax) |
| Queen Anne's | 18,200 | 19.78 | | See comment | 1.4500 | 450 | 57,332 | 60,002 | Changes to fuel prices +/- outside a \$2.25-\$3.00 range will be adjusted |
| Somerset | 17,200 | 18.25 | .7000 | .6500 | 1.3500 | 800 | 53,865 | 56,329 | 72 pass. Bus |
| St. Mary's | 13,643 | 20.55 | .7500 | .3000* | 1.0500 | 5,440 (includes \$700 stipend) | 54,548 | 55,472 | Mid-tier salary; 5.5 hr min; 7.5 mpg; Avg. PVA |
| Washington | 8,849 | 19.19 | .7517 | .2400* | 0.9917 | 6,337 | 46,737 | 49,328 | 7.0 mpg (less Fed &St.fuel tax) |
| Wicomico | 16,755 | 19.61 | .8340 | .4180 | 1.2520 | 1,560 | 53,993 | 56,640 | 7.3 mpg |
| Worchester | 18,952 | 21.07 | .8240 | .6700 | 1.4940 | 3,500 | 62,929 | 65,773 | |

*\$2.25 gallon fuel price (9/20/2016)

** Garage Fee

***includes \$2,488 Benefit Trust contribution

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