CHAPTER 9

# Office of the Chief Technology Officer


PAGE

**Office of the Chief Technology Officer** ..... 9-4

Division of Technology Support ..... 9-12

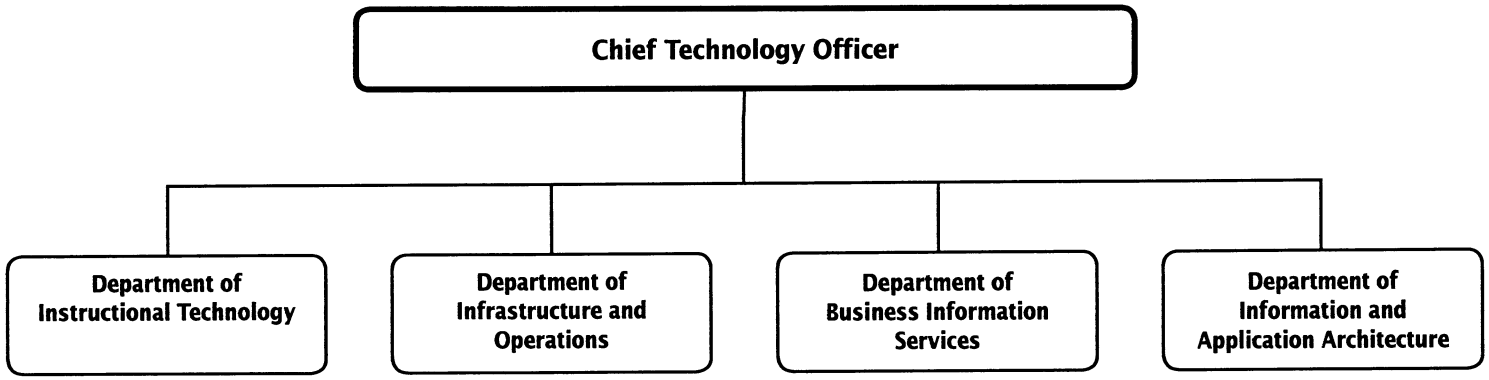
Division of Instructional and Informational Services ..... 9-18

- **Department of Instructional Technology** ..... 9-24
- **Department of Infrastructure and Operations** ..... 9-30
- **Department of Business Information Services** ..... 9-36
- **Department of Information and Application Architecture** ..... 9-41

# Office of the Chief Technology Officer
## Summary of Resources
## By Object of Expenditure

| OBJECT OF EXPENDITURE | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | FY 2014 BUDGET | FY 2014 CHANGE |
|---|---|---|---|---|---|
| **POSITIONS** | | | | | |
| Administrative | 15.000 | 15.000 | 15.000 | 14.000 | (1.000) |
| Business/Operations Admin. | 13.000 | 13.000 | 13.000 | 13.000 | |
| Professional | 20.200 | 20.200 | 20.200 | 20.200 | |
| Supporting Services | 110.800 | 110.800 | 110.800 | 109.800 | (1.000) |
| **TOTAL POSITIONS** | **159.000** | **159.000** | **159.000** | **157.000** | **(2.000)** |
| **01 SALARIES & WAGES** | | | | | |
| Administrative | $1,792,681 | $1,996,982 | $1,996,982 | $1,846,448 | ($150,534) |
| Business/Operations Admin. | 1,221,796 | 1,428,068 | 1,428,068 | 1,457,415 | 29,347 |
| Professional | 1,994,945 | 2,150,855 | 2,150,855 | 2,186,348 | 35,493 |
| Supporting Services | 8,693,959 | 9,149,950 | 9,149,950 | 9,004,812 | (145,138) |
| **TOTAL POSITION DOLLARS** | **13,703,381** | **14,725,855** | **14,725,855** | **14,495,023** | **(230,832)** |
| **OTHER SALARIES** | | | | | |
| Administrative | | | | | |
| Professional | 138 | | | 21,000 | 21,000 |
| Supporting Services | 228,786 | 385,754 | 385,754 | 310,760 | (74,994) |
| **TOTAL OTHER SALARIES** | **228,924** | **385,754** | **385,754** | **331,760** | **(53,994)** |
| **TOTAL SALARIES AND WAGES** | **13,932,305** | **15,111,609** | **15,111,609** | **14,826,783** | **(284,826)** |
| **02 CONTRACTUAL SERVICES** | **8,436,121** | **6,522,844** | **6,547,344** | **6,456,557** | **(90,787)** |
| **03 SUPPLIES & MATERIALS** | **421,134** | **394,881** | **394,881** | **394,881** | |
| **04 OTHER** | | | | | |
| Local/Other Travel | 54,632 | 84,232 | 84,232 | 83,971 | (261) |
| Insur & Employee Benefits | | | | | |
| Utilities | 3,416,261 | 3,036,955 | 3,036,955 | 3,036,955 | |
| Miscellaneous | 522,275 | 634,405 | 634,405 | 634,405 | |
| **TOTAL OTHER** | **3,993,168** | **3,755,592** | **3,755,592** | **3,755,331** | **(261)** |
| **05 EQUIPMENT** | **990,114** | **764,087** | **764,087** | **568,841** | **(195,246)** |
| **GRAND TOTAL AMOUNTS** | **$27,772,842** | **$26,549,013** | **$26,573,513** | **$26,002,393** | **($571,120)** |

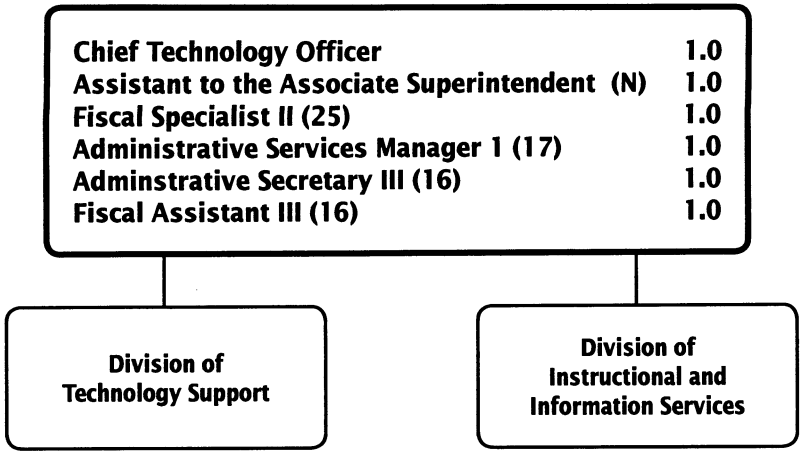
# Office of the Chief Technology Officer—Overview




F.T.E. Positions 157.0

(*In addition, there are 18.5 Capital Budget positions, and a 0.5 Retirement Fund position shown in Department of Information and Application Services chart on Page 9-21)

# Office of the Chief Technology Officer




F.T.E. Positions 6.0

## Office of the Chief Technology Officer—411

Sherwin Collette, Chief Technology Officer 301-279-3581

**Mission:** *The mission of the Office of the Chief Technology Officer (OCTO) is to provide high-quality technology systems and services essential to the success of every student. The office is committed to excellence in providing technology solutions to support teachers, engage students, and assist in the effective business operations of Montgomery County Public Schools (MCPS). These solutions are reflective of the requirements and priorities of our stakeholders, are developed following best practices for project management, and are implemented with continuous collaboration and communication.*

*The office is dedicated to creating an organizational culture of respect, where individuals are aware and understand the impact of their behavior and decisions on others and have an awareness, understanding, and tolerance of other interests, viewpoints, cultures, and backgrounds.*

### Major Functions

OCTO comprises four departments and two divisions—the Department of Information and Application Architecture (DIAA), which oversees the development and implementation of system architecture and ensures a stable and efficient environment; the Department of Infrastructure and Operations (DIO), which oversees and manages the implementation of a comprehensive, stable, and flexible learning network, in addition to providing technical enterprise configurations for information systems and operational support for administrative data and reports; the Department of Instructional Technology (DIT), which supports high-quality integration of technology in teaching and learning, facilitates collaborative learning communities that seamlessly infuse and are connected by technology solutions, supports operational excellence in using technology solutions through high-quality professional development, and manages the selection and purchase of future educational technology solutions; the Department of Business Information Services (DBIS) supports solutions related to operational functions of MCPS, working to create tools for automation to assist the work of various offices; the Division of Instructional and Informational Services (DIIS) manages student-related systems, such as the student information system and myMCPS, while also developing interfaces to provide timely and relevant data to various stakeholders; and the Division of Technology Support (DTS), which is responsible for the installation of technology solutions and for providing technical assistance and support to schools and offices. The office supports instruction and student achievement by designing and developing innovative approaches and strategic technologies in support of *Our Call To Action: Pursuit of Excellence*, the Strategic Plan for MCPS; the Maryland Educational Technology Plan for the New Millennium: 2007–2012; and the *No Child Left Behind Act of 2001* (NCLB). OCTO develops technology systems with a commitment to customer satisfaction and to the delivery of high-quality products and services. Staff is committed to providing support that is responsive to the needs of the MCPS user community.

The Department of Information and Application Architecture (DIAA) supports schools and offices by provisioning the management and administration of student systems. These systems allow offices to collect essential data; make decisions and plans based on data analysis; disseminate accurate, current, and timely information; and conduct efficient daily management and support operations. DIAA staff collaborates with other offices to develop and implement various system architectures to enhance services we provide to schools and students.

The Department of Infrastructure and Operations (DIO) is responsible for building, fortifying, and managing the enterprisewide technical systems and learning infrastructure across the school district. This department facilitates the implementation of effective, secure, and reliable hardware and software solutions for the entire school system. The DIO staff provides operational support for administrative data and reports. This department also manages the robust safety and security system for our network.

The Department of Instructional Technology (DIT) supports school improvement plans with technology strategies; designing, developing and delivering high-quality technology professional development on system-wide applications to support teaching and learning; using technology to facilitate and enhance professional learning communities, collaborating with MCPS offices and schools to identify needs for which technology solutions can be applied; and developing, distributing, and supporting interactive distance learning. The department provides leadership and program management for the implementation of new technologies in schools to increase teacher capacity by saving valuable time. The department manages the Center for Technology Innovation (CTI), which is the school system's primary technology training facility for all staff. The department supports the instructional implementation of the Educational Technology Policy in all schools and the Technology Modernization Program. The department consists of two units. The Integrating Technology with Instruction Unit provides professional development and coaching to teachers on the integration of technology with teaching and learning. The Technology Modernization Unit evaluates new technologies and plans for the ordering and distribution of these technologies.

The Department of Business Information Services (DBIS) supports many solutions used to manage operational functions throughout the district. Staff members

in DBIS manage and support systems that create automations and efficiencies in various business-related systems. This department works collaboratively with various offices to assist in developing systems that create operational efficiencies to support staff and schools.

The Division of Instructional and Informational Services (DIIS) staff manages student-related systems, including the Online Achievement and Reporting System comprising electronic grading and assessment systems, and reporting of assessments aligned to MCPS and Maryland State standards. DIIS administers and develops the myMCPS portal to deliver a personalized user experience based on users' roles and responsibilities in the school system. The portal facilitates team and peer group communication and collaboration; provides access to role-specific applications, data warehouse dashboards and reports; and offers information services, including the elementary integrated curriculum, teacher and student attendance data, and social networking features, such as wikis, discussion boards, and blogs.

The Division of Technology Support (DTS) provides on-site technical support to staff in schools and offices, Help Desk services, and customer relationship management. In addition, this division houses the field installation unit, which is responsible for the installation of new technologies and ensuring readiness for the start of school. The responsibility of DTS closely aligns with the Technology Modernization (Tech Mod) Program—funded through the Capital Improvements Program—that refreshes technology in schools and offices.

## Trends and Accomplishments

Responding to the demands for accountability and a rigorous instructional program, as set forth by the Board of Education and the NCLB legislation requires technology systems that are highly responsive to the need for actionable information to support continuous improvement in teaching and learning. *Our Call to Action: Pursuit of Excellence* calls for improvements in how the school system measures the performance of the organization and how educators analyze performance data to make decisions that will improve student success. Technology systems such as myMCPS save teachers time while providing access to comprehensive data to guide instruction. Innovative technologies, such as interactive white boards, student response systems, and expanded wireless capabilities, focus on engaging students while developing critical-thinking and problem-solving skills. The need for highly responsive access to network-based resources; the expectation that systems will be intuitive, user-friendly, and safe; and the ability to deploy new systems rapidly all have a major impact on OCTO and its priorities. New networked technology solutions are essential elements of the infrastructure needed to increase productivity and enhance learning by making use of anytime, anywhere access to electronic information and communication. Online and e-learning technologies offer increasing possibilities for delivering instruction and expanding student and staff learning opportunities. Initiatives such as electronic grade books, computer-based assessments, and information systems for parents illustrate the need for forward-thinking and rapid implementation of technology environments to support and sustain innovative instructional programs.

The growing school and office dependence on quality technology solutions requires the continuous improvement of automated information systems and the supporting infrastructure. The ever-increasing need for accurate and timely information that enhances school and office productivity requires MCPS staff to evaluate new strategies to deliver student and business technology solutions. As MCPS technology infrastructure grows in size and complexity, coordination and standardization of components become key concerns. Processes through which technology projects are designed and implemented are slated for continuous improvement.

OCTO accomplishments in FY 2012 focused on continued support of improved process management practices. The office's focus was on improving collaboration while listening and learning from stakeholders.

Efforts to continuously increase the quality of services provided to all MCPS technology users focused on expanding the ability to meet increasing customer requests accurately and in a timely manner.

In FY 2012, the office implemented innovative technology solutions for the 21st century classroom, provided leadership for the design and implementation of online curriculum delivery, and expanded project and process management practices in collaboration with district-wide initiatives.

The office supported the use of 21st century technologies to transform teaching and learning. Using the stimulus funding set aside for universal design for learning, interactive white boards, student response systems, and netbook mobile carts were installed in all classrooms in four elementary schools. The office also supported the administration of the Maryland Measures of Student, Teacher, and School Administrator Literacy Assessment to gather baseline data.

The Tech Mod Program, which replaces four-yea-old computers in schools, was delayed one year due to the fiscal crisis, creating a five-year replacement cycle through FY 2013. Tech Mod replaced 10,883 computers, 126 file servers, and 764 printers in 42 schools and one special education school. Included in the computer counts are 120 carts with 10 mobile devices equipped with wireless mobility within the school to support instruction and assessment. The 126 file servers use 34 percent less energy than those being replaced. Staff continued to refurbish and repair 9,007 computers in 39 schools that had been anticipating the replacement of their four-year-old computers in FY 2013. These

schools included 10 high schools, nine middle schools, 17 elementary schools, and three special schools.

Office staff supported the federal application processes for E-Rate telecommunication rebates totaling approximately $2.1 million for FY 2012.

Over the winter break in December 2011, the MCPS data center was relocated from the Carver Educational Services Center to 45 West Gude Drive in Rockville, Maryland. This move enabled MCPS to substantially strengthen access to data and computing systems by modernizing and integrating redundant infrastructure systems that are designed to support continued operations in the event of inclement weather and other emergencies. These major improvements include the integration of redundant uninterruptable power supplies (UPS), a high-capacity generator, dual fiber network pathways to the data center, and expanded disaster recovery site support.

The office completed an upgrade of the MCPS e-mail system to Exchange 2010 to take advantage of increased protection of data for security and to optimize our investment for future growth. This upgrade also provides more powerful web access so users can access documents in their work location from remote locations.

During FY 2011, more than half of the elementary schools were connected to the county's FiberNet system for faster and more reliable WAN and Internet connectivity. The remaining schools will be connected in FY 2014. Internet availability continued to be more than 99 percent overall.

In FY 2011, the implementation of myMCPS, an enterprise portal that provides MCPS staff with access to services based on their role, was a major step towards simplifying access to key information and applications that help staff work more effectively and efficiently. The myMCPS portal has been engineered as a social network to facilitate collaboration among staff, students, and parents to augment the continuum of teaching and learning at MCPS. By concentrating work efforts in a single tool that delivers rich, role-specific content to all members, based on best practices and a real-time input and feedback loop, myMCPS streamlines processes previously accomplished by accessing and mastering multiple systems and also accelerates the communication of ideas and results across groups, further extending the professional learning community beyond previous perceived boundaries.

In FY 2011, the elementary school (ES) Online Achievement and Reporting System (OARS) project had expanded to include Grades 4 and 5 in the 25 selected schools. For FY 2013, ES OARS was implemented in 103 elementary schools after a pilot in 25 elementary schools, allowing teachers from kindergarten through Grade 3 to utilize newly established measurement topics for grading and reporting in Curriculum 2.0. A new standards-based report card has been developed to reflect revised measurement topics in kindergarten through Grades 3. In addition, the electronic grade book has been piloted in middle schools to simplify the recording and reporting of daily attendance for local and state accountability.

New features within the Special Services module were introduced to enable school staff to request transportation for special needs students. Central services staff receives and routes these requests to appropriate offices for approval and scheduling. This enhanced feature provides monitoring capability for school-based staff, allowing them to know exactly where the request stands in the approval process. This enhancement has brought about a greater degree of efficiency to the process, drastically reducing the amount of time it takes for transportation requests to be processed and students to receive necessary services.

New financial management software will be implemented in schools for managing schools' Independent Activity Funds (IAF). The new integrated web-based system replaced multiple stand-alone systems used by schools and will provide real-time reporting and information. In addition, this secure online system will allow parents to view their students' financial account history and make electronic payments for school activity items such as field trips, tickets for school events, and obligations. The system also will help to effectively manage online credit and debit card payments for extracurricular activity (ECA) fees. Overall, the new system will improve the efficiency and effectiveness of financial operations at both the school and central services level while giving a new level of access and convenience for parents. In FY 2012, 101,758 requests for services and support were opened in the Unicenter Service Desk (USD) issue tracking system by MCPS staff in schools and offices compared with 98,502 in FY 2011. The number of requests opened in the USD issue tracking system increased by 6,256.

## Major Mandates

NCLB and the *Maryland's Bridge to Excellence in Public Schools Act of 2002* mandate data collection and distribution that require up-to-date infrastructure and equipment in all schools, as well as access to system information.

*Our Call to Action: Pursuit of Excellence* focuses on an accountability framework for measuring past performance and evaluating where continued change needs to be made, as well as requiring access to and use of a variety of technological applications and services that help provide an effective instructional program and create a positive work environment in a self-renewing organization.

NCLB requires the administration of state-mandated tests, including the Maryland School Assessment (MSA)

in Grades 3–8 and 10; the High School Assessments (HSAs); the Independence Mastery Assessment Program for students in the fundamental life skills curriculum; and the IDEA Proficiency Test for students in the English for Speakers of Other Languages program.

The Maryland Educational Technology Plan for the New Millennium: 2007–2012 presents technology objectives and targets in the areas of student learning, professional development, administrative productivity and efficiency, universal access, and research and evaluation. The Maryland Instructional Technology Advisory Council (MITAC) is working with the state to reframe the current plan, providing forward-thinking recommendations for Maryland's future direction for instructional technology. Investing in Instructional Technology: Accelerating Educational Reform in Maryland, June 2011, presents three areas of focus to advance the use of technology for teaching and learning across the state: Student Learning, Educator Proficiency, and Equitable Access.

The *Telecommunications Act of 1996* (Section 954h.B) and Federal Communications Commission Order 9-57 stipulate that requests for Universal Service Program discounts (E-Rate) must be based on an approved technology plan that includes clear goals and strategies for integrating telecommunications services and Internet access into the school district's educational program, a professional development strategy, a needs assessment, a sufficient budget for acquisition and maintenance, and a program evaluation.

NCLB requires that programs funded through Title II-D, Enhancing Education through Technology, must be based on an approved technology plan, must comply with state and federal laws and regulations, and must ensure timely and meaningful consultation with nonpublic school officials during the design and implementation of programs.

The *Children's Internet Protection Act* requires that school systems receiving NCLB Title II-D funding or E-Rate discounts for Internet services must have policies and use technology protection measures that address issues related to the safety and security of minors and adults while using the Internet and electronic communication.

Board of Education Policy IGS, *Educational Technology*, requires that MCPS staff and students be provided with easy, equitable access to technology tools.

Expectations of the Maryland Core Learning Goals and alignment with the Maryland High School Assessments and MSAs require a modern infrastructure for delivery of online tests and courses.

## Strategies

- Realign organizational structure to effectively support the district's priorities.
- Transform the organizational culture.
- Define and adopt a customer engagement and relationship model and process.
- Develop a next-generation information technology workforce by building staff capacity.
- Strengthen operational coherence and risk management through appropriate stakeholder governance.
- Build understanding and support for development of a teaching- and learning-networked community using Web 2.0 systems.
- Ensure students and staff can access, generate, and use data.
- Provide technologies that engage students and encourage critical-thinking and problem-solving skills in support of our rigorous curriculum.
- Provide strategic leadership for all technology initiatives being implemented throughout the school system.
- Create a multiyear technology road map, identifying strategic plans for school-based software and hardware technologies, telecommunications, network operating systems, and support systems firmly based in industry standards and instructional research.
- Provide support for system-wide initiatives by maintaining a technology infrastructure that provides a platform capable of supporting modern technological hardware and software tools.
- Support the development and implementation of integrated information technology systems to improve products, resources, and services; providing technical support and instruction to ensure that these systems are fully utilized and meet customer needs.
- Implement technologies to support expansion of anytime, anywhere professional development and student learning.
- Model effective implementation of the professional growth system for all OCTO staff to enhance their abilities to support program strategies and new technology skills.
- Collaborate with other offices and departments to understand their needs and to provide effective services to schools.
- Collaborate with private businesses and other school districts to gain knowledge of best practices.
- Consult with education, business, community, and government groups to ensure that programs and services are appropriate to prepare students for higher education and the workplace of the future.
- Use Baldrige and Six Sigma for performance excellence and assessment of results to guide organizational improvements.

- Build relationships that increase customer loyalty and satisfaction.
- Improve project management through implementation of effective strategies for chartering projects, team effectiveness, and organizational alignment.
- Improve all key work processes to optimize performance.
- Cultivate strategic partnerships with vendors that focus on improving product and service prices, quality, and on-time delivery.

## Budget Explanation
## Office of Chief Technology Officer—411

The current FY 2013 budget for this office is changed from the budget adopted by the Board of Education on June 14, 2012. The change is a result of a budget neutral reorganization within the Office of the Chief Technology Officer that is designed to better serve and support schools and offices. As a result of the reorganization, 7.0 positions and $677,833 are realigned from this office to other OCTO units.

The FY 2014 request for this office is $4,806,807, a decrease of $219,487 from the current FY 2013 budget. An explanation of this change follows.

***Continuing Salary Costs—$2,213***
There is an increase of $2,213 for continuing salary costs for current employees. This amount is the annualization of the salary step to be provided to eligible employees on May 4, 2013.

***Realignment—($14,307)***
Realignments are budgeted to address priority spending needs in this office. There is a realignment of $1,201 from office supplies to fund the increased cost for security software. Also, $14,307 for supporting services part-time salaries is realigned from this office's budget to the budget of the Department of Instructional Technology for training stipends.

***Program Efficiencies and Reductions—($207,393)***
There is reduction of a 1.0 supervisor position and $125,676. The supervisor responsibilities will be distributed to other staff members in the office. Also, there is a reduction of $53,994 for supporting services part-time salaries. Current staff will have to prioritize and create efficiencies to support additional service requests. In addition, there is a reduction of $27,723 for lease/purchase of equipment. The payment obligation for security equipment will be completed in FY 2013.

# Office of Chief Technology Officer - 411

## Sherwin Collette, Chief Technology Officer

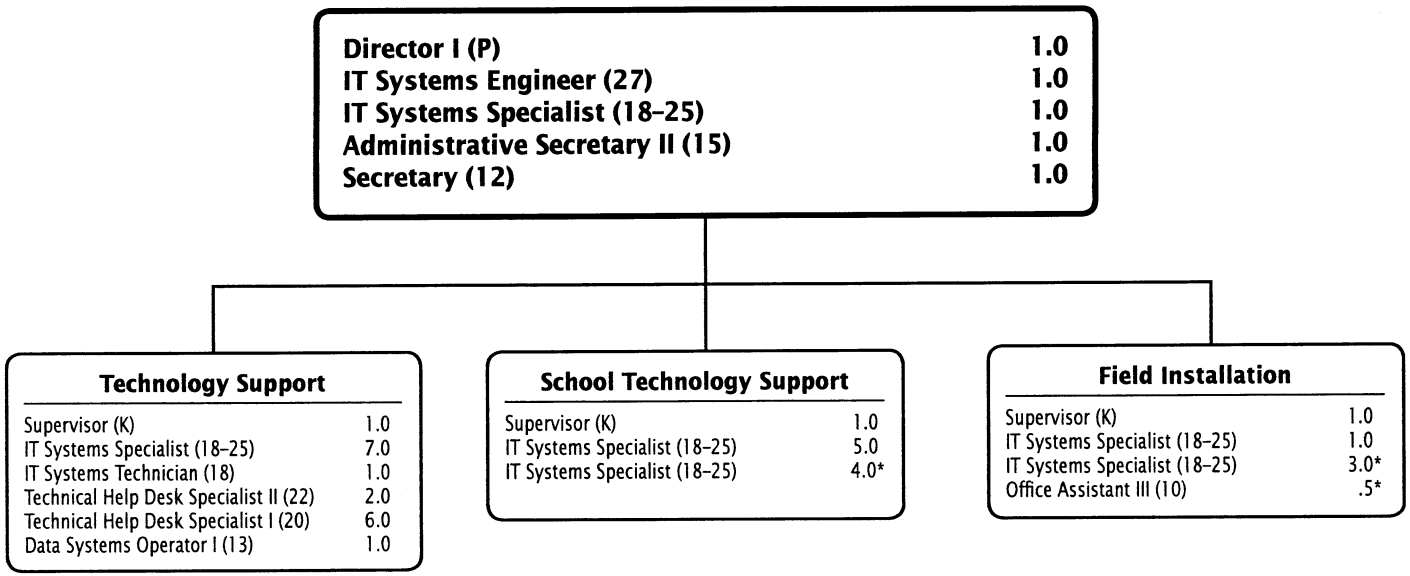
| Description | FY 2012 Actual | FY 2013 Budget | FY 2013 Current | **FY 2014 Request** | FY 2014 Change |
|---|---|---|---|---|---|
| **01 Salaries & Wages** | | | | | |
| Total Positions (FTE) | 15.000 | 14.000 | 7.000 | **6.000** | (1.000) |
| Position Salaries | $1,228,375 | $1,350,606 | $672,773 | **$546,160** | ($126,613) |
| **Other Salaries** | | | | | |
| Summer Employment | | | | | |
| Professional Substitutes | | | | | |
| Stipends | | | | | |
| Professional Part Time | | | | | |
| Supporting Services Part Time | | 68,301 | 68,301 | | (68,301) |
| Other | | | | | |
| Subtotal Other Salaries | 1,591 | 68,301 | 68,301 | | (68,301) |
| **Total Salaries & Wages** | 1,229,966 | 1,418,907 | 741,074 | **546,160** | (194,914) |
| **02 Contractual Services** | | | | | |
| Consultants | | | | | |
| Other Contractual | | 536,862 | 536,862 | **540,012** | 3,150 |
| **Total Contractual Services** | 1,923,132 | 536,862 | 536,862 | **540,012** | 3,150 |
| **03 Supplies & Materials** | | | | | |
| Textbooks | | | | | |
| Media | | | | | |
| Instructional Supplies & Materials | | | | | |
| Office | | 18,600 | 18,600 | **17,399** | (1,201) |
| Other Supplies & Materials | | 1,099 | 1,099 | **2,300** | 1,201 |
| **Total Supplies & Materials** | 37,587 | 19,699 | 19,699 | **19,699** | |
| **04 Other** | | | | | |
| Local/Other Travel | | 29,576 | 29,576 | **29,576** | |
| Insur & Employee Benefits | | | | | |
| Utilities | | 3,036,955 | 3,036,955 | **3,036,955** | |
| Miscellaneous | | 634,405 | 634,405 | **634,405** | |
| **Total Other** | 3,945,009 | 3,700,936 | 3,700,936 | **3,700,936** | |
| **05 Equipment** | | | | | |
| Leased Equipment | | 27,723 | 27,723 | | (27,723) |
| Other Equipment | | | | | |
| **Total Equipment** | 39,476 | 27,723 | 27,723 | | (27,723) |
| **Grand Total** | $7,175,170 | $5,704,127 | $5,026,294 | **$4,806,807** | ($219,487) |

# Office of Chief Technology Officer - 411

Sherwin Collette, Chief Technology Officer

| CAT | DESCRIPTION | 10 Mon | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | **FY 2014 REQUEST** | FY 2014 CHANGE |
|---|---|---|---|---|---|---|---|
| 1 | Chief Technology Officer | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 11 | O Supervisor | | 1.000 | 1.000 | 1.000 | | (1.000) |
| 1 | O Supervisor | | 1.000 | 1.000 | | | |
| 1 | N Asst. to Assoc Supt | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 3 | BD Instructional Specialist | | 2.000 | 2.000 | | | |
| 1 | 25 IT Systems Specialist | | 4.000 | 4.000 | | | |
| 1 | 25 Fiscal Specialist II | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 17 Admin Services Manager I | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 16 Administrative Secretary III | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 16 Fiscal Assistant III | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 12 Secretary | | 1.000 | | | | |
| | **Total Positions** | | **15.000** | **14.000** | **7.000** | **6.000** | **(1.000)** |

# Division of Technology Support




F.T.E. Positions 31.0

(*In addition, there are 7.5 Capital Budget positions shown on this chart)

## Division of Technology Support—422/423/424/434

Charles (Chuck) L. McGee, Director I 240-632-6970

**Mission:** *The mission of the Division of Technology Support (DTS) is to provide technical assistance to schools and offices, while maintaining the operational readiness of new and existing hardware and software.*

### Major Functions

The Division of Technology Support provides technical assistance to staff in all Montgomery County Public Schools (MCPS) facilities through the services of the School Technology Support team, Help Desk, Technical Services and Support team, the Customer Relationship manager, and the Field Installation Unit.

The School Technology Support (STS) team consists of three groups—first- and second-level information technology support specialists (ITSS), and certified computer repair staff. The ITSS group is responsible for network administration; server, workstation, and printer maintenance and repair; software installation and upgrades; as well as visitor management and school access control systems. The teams work assignment includes all elementary schools, 16 middle schools, and five special schools. This group routinely partners with administrators, teachers, media specialists, and central services staff to prepare for distance learning, online testing, and other events that require technical assistance. They also participate in project management in support of school initiatives. The certified hardware repair group is deployed to kindergarten through Grade 12 locations to troubleshoot, diagnose, and repair hardware that no longer is under warranty. The workload of the STS team is monitored through the Unicenter Service Desk (USD) issue tracking system, which allows the supervisors to adjust resource allocation needs more effectively. Although USD is the major source of requests for service and support, the team also receives communications through e-mail, telephone, routine and emergency site visits, and internal requests for more advanced help to resolve a problem. The STS team works proactively to identify industry best practices to improve customer service. The Help Desk team provides one central location for MCPS staff to seek information and immediate resolution to technical problems. Requests for service are received by telephone, e-mail, and the USD issue tracking system. The Help Desk supports a wide range of technology infrastructure, hardware, and more than 100 school- and office-based and enterprise-wide applications. Help Desk specialists attend ongoing training to prepare them to resolve basic network issues, support new application inquiries, and respond to software questions, including questions about the Microsoft Office Suite. This team also attends operations and applications training to ensure that the most current information available is shared with MCPS staff. The Help Desk team routinely researches and collaborates with other technologists in order to post useful information and timely solutions to frequently asked questions on the Help Desk website as well as to a self-service database, Knowledge Tools. The Help Desk collaborates with appropriate staff and departments to create services and operation-level agreements that specifically outline a comprehensive support plan for all MCPS enterprise applications.

The Technical Services and Support (TSS) team is responsible for computer software and hardware support in non-school-based offices. The TSS group also works with the school-based technical staff to maintain the closed-circuit security camera systems and access control systems for the Department of School Safety and Security. Support includes integration services, application deployment, network administration, computer image support, and on-site equipment repair and upgrades. They maintain a parts database and inventory for both warranty and non-warranty maintenance of supported equipment. The team sets up and provides technical support for computers and multimedia equipment used for MCPS meetings and activities. Audio visual (AV) equipment support includes maintaining an equipment pool for all of MCPS, collaborating with school and media center staff on establishing AV standards and addressing AV needs, and providing warranty repair of equipment purchased from the AV bid list. TSS staff also collaborates with the Office of Procurement and MCPS Television staff in reviewing and making recommendations on all multimedia equipment.

USD administration is provided by members of the TSS team as well as the STS team. This team is responsible for applying application upgrades and maintaining USD instances for the Employee and Retiree Service Center (ERSC), the offices of Shared Accountability, Curriculum and Instructional Programs, and the Chief Technology Officer (OCTO), and the Division of Family and Community Partnerships. This team also is responsible for extracting data from the USD issue tracking system to design customized reports for schools and central services requests for information.

The Field Installation Unit implements 21st century technologies in MCPS classrooms. To update technologies in schools through the Technology Modernization Program, staff in this unit works with school staff to install the technology and ensure readiness at the opening of the school year. Staff maximizes the technology investment by reassigning older technologies and equipment to single-purpose, less demanding yet important functions in the schools. Examples of reassignments include door card readers, achievement series scan stations, visitor management systems, Fluency and Automaticity through Systematic Teaching with Technology (FASTT) Math, and Read 180. Additionally, the unit collects online data for updating and maintaining the asset management system and software license compliance. This unit supports centralized distribution of software updates, service packs, license keys, and enterprise systems management.

## Trends and Accomplishments

The division tracks, manages, and resolves requests for support through the USD issue tracking system. In FY 2012, 101,758 requests for services and support were opened in USD by MCPS staff in schools and offices. This represents an increase of 6,256 requests, compared with 95,502 in FY 2011.

In FY 2012, of the 101,758 requests logged by the system, the MCPS Help Desk closed 24,110 requests at first contact. In addition, they processed another 38,534 tickets that were submitted by other MCPS staff via the web or e-mail and handled by the eight-member team. The team leaders of the Help Desk are proactive in using the issue tracking software to spot trends. They routinely use this information to provide first-level troubleshooting before escalating an issue to second-level support staff, usually resolving the customer's problem within the Help Desk without escalation. The Help Desk team works continuously to improve customer service by collaborating with other teams in OCTO and by incorporating user feedback into daily operations. They participate in the development of customized support plans and service and operation level agreements that are essential to the seamless delivery of service to our customers. This team meets with various project teams periodically to prepare training documents and assist in training designated staff on new enterprise applications. The Help Desk maintains the Help Desk website and provides users with timely solutions to frequently asked questions.

In FY 2012, STS staff resolved 41,268 reported problems. ITSS staffing is a team model with primary and backup assignments, based on geography and technology inventory for each school. The team established a "Lifeboat" system to rapidly deploy replacement servers to schools, restoring access to technology and minimizing downtime.

In FY 2012, the TSS team closed 998 emergency requests handling 70 percent within the 12-hour service-level agreement (SLA) performance measure. The TSS team also handled 3,185 normal priority calls, meeting the 3-day SLA performance measure 65 percent of the time. The total number of requests of all priorities for this time period was 4,257.

## Major Mandates

- *Our Call to Action: Pursuit of Excellence* identifies technology as a critical learning tool in schools. Access to and use of a variety of technological applications and services is essential to an effective instructional program and helps to create a positive work environment in a self-renewing organization. Specific strategies and initiatives include refreshing hardware and software and network infrastructure through the Technology Modernization Program and providing testing support of innovative technologies.
- The federal *No Child Left Behind Act of 2001* and the state's *Bridge to Excellence in Public Schools Act of 2002* require up-to-date infrastructure and equipment in all schools.
- The federal *No Child Left Behind Act of 2001* requires the administration of state-mandated tests, including the Maryland School Assessment (MSA), Independence Mastery Assessment Program (IMAP), and the IDEA Proficiency Test.
- Expectations of the Maryland Core Learning Goals and alignment with the Maryland High School Assessments and Maryland School Assessments require a modern infrastructure for delivery of online tests and courses.
- Board of Education Policy IGS, *Educational Technology*, requires that MCPS staff and students be provided with easy, equitable access to technology tools.

## Strategies

- Provide technology support for instructional programs and other system-wide initiatives by maintaining an infrastructure that provides a platform capable of supporting modern technological hardware and software tools.
- Participate in strategic planning for the creation of a multiyear technology road map, identifying strategic plans for school-based software and hardware technologies, telecommunications, network operating systems, and a support system based firmly in industry standards and instructional research.
- Support the Technology Modernization Program, providing access to high-capability computers with web connectivity in schools and the community.
- Support the development and implementation of integrated information technology systems to improve products, resources, and services; provide technical support and instruction to ensure that these systems are fully used and meet customer needs.
- Provide just-in-time support for the MSA, IMAP, Measures of Academic Progress—Reading, Measures of Academic Progress—Mathematics, High School Assessments, and the IDEA Proficiency Test.
- Develop management strategies and align resources and services to accomplish the OCTO strategic plan; involve customers and stakeholders in decisions on the use of resources.
- Work collaboratively with other OCTO teams to assess and respond to customer needs and provide ongoing technical and operational support to schools.
- Increase DTS staff involvement in strategic planning and continuous improvement efforts through timely communications and participation in cross-functional work groups in schools and offices.
- Support administrative and instructional computers and provide solutions to technical problems in a timely, efficient, and reliable manner.

- Respond to customer needs by monitoring performance, including the turnaround time for repairs and service, and the number and types of requests submitted to the Help Desk.
- Coordinate and provide computer integration services, software installation, and outreach to assess complex problems and address staff training needs.
- Increase user independence and skills in their ability to resolve and prevent technology-related problems through just-in-time help and expanded knowledge tools through self-help systems.
- Provide accurate and timely information to customers
- Support the development and implementation of new applications through ensuring access to reliable technology, assisting in training, and providing on-site and remote technical support.
- Ensure technical readiness in schools and non-school-based offices.

## Performance Measures

**Performance Measure:** Percentage of phone requests both opened and closed by the Help Desk staff on first customer contact (as measured by closure in USD issue tracking system within 2 hours).

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 72% | 72% | 75% |

**Explanation:** This measure is an indication of the timeliness of problem resolution by Help Desk staff within the SLA. NOTE: A change in Help Desk processes significantly reduced the number of duplicate requests for support. While this change resulted in better service for our end-users, it reduced the percentage of tickets "closed at the first contact."

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**Performance Measure:** Percentage of customers who are satisfied with the timelines of service received from an MCPS hardware technician.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 100% | 100% | 100% |

**Explanation:** This measure is an indication of the timeliness of problem resolution by the MCPS hardware staff servicing non-warranty equipment K–12.

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**Performance Measure:** Percentage of customers who indicate satisfaction with the level of knowledge demonstrated by their ITSS.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 96.2% | 97% | 98% |

**Explanation:** This measure reflects the level of customer satisfaction with the services provided by the assigned technologist.

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**Performance Measure:** Percentage of emergency tickets closed within the parameters of the SLA for non-school-based offices.

| FY 2011 Actual | FY 2012 Estimate | FY 2013 Recommended |
|---|---|---|
| 74% | 74% | 75% |

**Explanation:** This measure reflects the number of tickets closed within the same day as they were opened.

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## Budget Explanation Division of Technology Support—422/423/424/434

The current FY 2013 budget for this division is changed from the budget adopted by the Board of Education on June 14, 2012. The change is a result of a budget neutral reorganization within the Office of the Chief Technology Officer that is designed to better serve and support schools and offices. As a result, 3.0 positions and $224,784 are realigned from this division to other OCTO units.

The FY 2014 request for this division is $2,764,638, an increase of $8,259 from the current FY 2013 budget. An explanation of this change follows.

***Continuing Salary Costs—($12,438)***
There is a decrease of $12,438 for continuing salary costs for current employees. The annualization of the salary step to be provided to eligible employees on May 4, 2013 is offset by reductions for staff turnover.

***Realignment—$20,697***
Realignments are budgeted to address priority spending needs in this division. There is a decrease of $3,080 for office supplies and a corresponding increase for program supplies. In addition, $20,697 is realigned from the budget of the Department of Information and Application Architecture to fund the help desk call center software licensing fee in this division.

# Division of Technology Support - 422/423/424/434

## Charles McGee, Director I

| Description | FY 2012 Actual | FY 2013 Budget | FY 2013 Current | **FY 2014 Request** | FY 2014 Change |
|---|---|---|---|---|---|
| **01 Salaries & Wages** | | | | | |
| Total Positions (FTE) | 34.000 | 34.000 | 31.000 | **31.000** | |
| Position Salaries | $2,673,946 | $2,810,036 | $2,585,252 | **$2,572,814** | ($12,438) |
| **Other Salaries** | | | | | |
| Summer Employment | | | | | |
| Professional Substitutes | | | | | |
| Stipends | | | | | |
| Professional Part Time | | | | | |
| Supporting Services Part Time | | | | | |
| Other | | | | | |
| Subtotal Other Salaries | 1,309 | | | | |
| **Total Salaries & Wages** | 2,675,255 | 2,810,036 | 2,585,252 | **2,572,814** | (12,438) |
| **02 Contractual Services** | | | | | |
| Consultants | | | | | |
| Other Contractual | | 111,023 | 111,023 | **131,720** | 20,697 |
| **Total Contractual Services** | 35,076 | 111,023 | 111,023 | **131,720** | 20,697 |
| **03 Supplies & Materials** | | | | | |
| Textbooks | | | | | |
| Media | | | | | |
| Instructional Supplies & Materials | | | | | |
| Office | | 10,152 | 10,152 | **10,152** | |
| Other Supplies & Materials | | 22,923 | 22,923 | **22,923** | |
| **Total Supplies & Materials** | 28,710 | 33,075 | 33,075 | **33,075** | |
| **04 Other** | | | | | |
| Local/Other Travel | | 20,853 | 20,853 | **20,853** | |
| Insur & Employee Benefits | | | | | |
| Utilities | | | | | |
| Miscellaneous | | | | | |
| **Total Other** | 25,351 | 20,853 | 20,853 | **20,853** | |
| **05 Equipment** | | | | | |
| Leased Equipment | | 5,776 | 5,776 | **5,776** | |
| Other Equipment | | | | | |
| **Total Equipment** | 5,769 | 5,776 | 5,776 | **5,776** | |
| **Grand Total** | $2,770,161 | $2,980,763 | $2,755,979 | **$2,764,238** | $8,259 |

# Division of Technology Support - 422/423/424/434

Charles McGee, Director I

| CAT | DESCRIPTION | 10 Mon | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | **FY 2014 REQUEST** | FY 2014 CHANGE |
|---|---|---|---|---|---|---|---|
| | **422 Division of Technology Support** | | | | | | |
| 1 | P Director I | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 27 IT Systems Engineer | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 11 | 25 IT Systems Specialist | | 8.000 | 8.000 | 8.000 | **8.000** | |
| 11 | 18 IT Systems Technician | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 15 Administrative Secretary II | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 11 | 13 Data Systems Operator | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 12 Secretary | | 1.000 | 1.000 | 1.000 | **1.000** | |
| | **Subtotal** | | **14.000** | **14.000** | **14.000** | **14.000** | |
| | **423 Technology Support** | | | | | | |
| 11 | K Supervisor | | | | 1.000 | **1.000** | |
| 1 | 22 Technical Help Desk Spec II | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 3 | 22 Technical Help Desk Spec II | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 20 Technical Help Desk Spec I | | 2.000 | 2.000 | 2.000 | **2.000** | |
| 3 | 20 Technical Help Desk Spec I | | 4.000 | 4.000 | 4.000 | **4.000** | |
| | **Subtotal** | | **8.000** | **8.000** | **9.000** | **9.000** | |
| | **424 School Technology Support** | | | | | | |
| 11 | K Supervisor | | 2.000 | 2.000 | 1.000 | **1.000** | |
| 11 | 25 IT Systems Specialist | | 6.000 | 6.000 | 5.000 | **5.000** | |
| | **Subtotal** | | **8.000** | **8.000** | **6.000** | **6.000** | |
| | **434 Field Installation** | | | | | | |
| 3 | K Supervisor | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 25 IT Systems Specialist | | 3.000 | 3.000 | 1.000 | **1.000** | |
| | **Subtotal** | | **4.000** | **4.000** | **2.000** | **2.000** | |
| | **Total Positions** | | **34.000** | **34.000** | **31.000** | **31.000** | |

# Division of Instructional and Informational Services

| | |
|---|---|
| Director I (P) | 1.0 |
| Supervisor (O) | 3.0 |
| Supervisor (K) | 1.0 |
| Operations Development Manager (J) | 1.0 |
| Instructional Specialist (B–D) | 3.0 |
| Application Developer III (27) | 1.0 |
| Database Administrator III (27) | 1.0 |
| Application Developer II (25) | 7.0 |
| Technical Analyst (25) | 1.0 |
| Student Systems Specialist (24) | 1.0 |
| Applications Specialist I (23) | 1.0 |
| Administrative Secretary II (15) | 1.0 |
| Data Control Technician II (15) | 1.0 |
| Data Control Technician I (13) | 1.0 |
| Fiscal Assistant I (13) | .8 |



F.T.E. Positions 24.8

## Division of Instructional and Informational Services—442

Joel Smetanka, Director I 301-279-3690

**Mission:** *The mission of the Department of Instructional and Informational Services (DIIS) is to plan, implement, and support student applications, information systems, and solutions to execute the district's priorities in support of* Our Call to Action: Pursuit of Excellence.

### Major Functions

The Division of Instructional and Informational Services (DIIS) collaborates with offices, schools, and local government agencies to promote and support Montgomery County Public Schools (MCPS) and the initiatives of the Office of the Chief Technology Officer (OCTO) by developing, implementing, and continuously improving MCPS knowledge management solutions. Based on goals and priorities, the department develops, purchases, implements, and supports complex solutions for students, parents, schools, and offices. These solutions enable the collection and analysis of essential data; decision making and planning; dissemination of accurate and timely information; and operational effectiveness that streamlines and enhances the management of teaching and learning, as well as MCPS' compliance with state and federal regulations. DIIS focuses on provisioning and managing student systems that support greater accountability and sharing of knowledge among staff, students, and parents.

Staff within the Division of Instructional and Informational Services supports offices and schools by provisioning the management and administration of student systems. The Online Administrative Student Information Systems (OASIS) is the source system for managing all student administrative information, including enrollment, attendance, report cards and transcripts, scheduling, course management, and assessment information. OASIS consists of user-friendly applications that provide an easy and accurate method of collecting student administrative data. The OASIS Special Services (OSS) module is a component of OASIS that greatly increases the efficiency of managing the special education process for families, schools, and central services administrators and enables creation of the electronic Individualized Education Program (IEP). DIIS staff also manages the Online Achievement and Reporting System (OARS), comprising an electronic grade book and classroom-to-home communication solution, as well as electronic assessment systems to support timely delivery and reporting of assessments aligned with MCPS and Maryland state standards. The enterprise electronic grade book facilitates grading and reporting activities and policy alignment across the district and a classroom-to-home parent outreach component to securely communicate individual student achievement information from teachers to parents.

Information from the student systems and other information services is published in the *my*MCPS portal, which provides end users with the information they need in a single place. The *my*MCPS portal is designed to deliver a personalized user experience based on a user's roles and responsibilities in the school system. The portal facilitates team and peer-group communication and collaboration; provides access to role-specific applications, data warehouse dashboards, and reports; and offers information services, including the elementary integrated curriculum, teacher and student attendance data, and social networking features, such as wikis, discussion boards, and blogs.

### Trends and Accomplishments

To ensure that MCPS maintains its status as a world-class school system, DIIS must continue to expand and enhance the usefulness of key knowledge management solutions. This includes identifying, developing, and implementing industry-leading software solutions that best meet the requirements of schools and offices. The prevalence of social networking structures underpins important technology decisions as MCPS works to provide solutions that meet or exceed the expectations of 21st century learners and educators.

The enterprise portal, *my*MCPS, received a major upgrade that provides users with a dynamic, interactive, and customizable environment that enables school and office staff to contribute to and participate in social networking and professional development. The enhanced features empower staff to create and share instructional content with the MCPS 21st century professional learning community. Rich feature sets include video libraries, content personalization, and discussion boards to accelerate the communication of ideas across groups. The Online Achievement and Reporting System (OARS) has been integrated into *my*MCPS, further streamlining access to instructional resources and creating a unified learning community for staff, students, and parents. The *my*MCPS community is able— for the first time—to collaborate seamlessly in the process of student articulation. Student achievement data is combined with parent and student requests as well as teacher recommendations to ensure that students can receive the instructional services and classes best suited to their needs for the upcoming school year.

OASIS has received continuous upgrades to fulfill Board of Education (Board) policy, regulation, and procedural changes, as well as Maryland state and federal government-mandated changes. These upgrades included modifications to the Special Services module to comply with Maryland State Department of Education (MSDE)-mandated changes to the IEP. New student data reports were created in support of new state and federal compliance requirements, which are tied to MCPS funding levels and MSDE compliance regulations. Another major enhancement to the OSS module was the introduction

of the electronic Student Transportation Action Request (STAR) tool. This enhancement enables school staff members to request transportation for their special needs students electronically. When the STAR forms are submitted, central services personnel will route these requests to the appropriate offices for approval and scheduling. This upgrade also offers the added functionality that allows school staff to monitor the progress of each request. This enhancement dramatically reduces the amount of time it takes for transportation requests to be processed and for students to receive the services they require.

The initial phase of the student course scheduling system upgrade began at selected secondary schools. This upgrade enables those schools to plan and complete their master schedule, using a web-based interface that provided improved accessibility and transparency for all users. During subsequent phases, students will have the ability to enter their course requests, improving the accuracy and efficiency for master schedulers during articulation and master schedule development. Additionally, the upgrade enabled better management and definition of courses and control of their availability.

The electronic grade book has been adopted by the remaining 103 elementary schools in Kindergarten through Grade 3, in support of the implementation of standards-based teaching and learning. This allows all 131 elementary schools to take full advantage of Curriculum 2.0. All elementary students in these grades now will receive a standards-based report card, which will reflect more accurately the students' understanding of the concepts they are taught in each subject. Additionally, the use of the electronic gradebook to collect attendance in middle schools was piloted to simplify the recording and reporting of daily attendance for local and state accountability.

## Major Mandates

- The federal *No Child Left Behind Act of 2001* and the state's *Bridge to Excellence in Public Schools Act of 2002* mandate data collection and distribution.
- *Our Call to Action: Pursuit of Excellence* requires the continuous improvement of all school system processes and services and the provision of appropriate staff training.
- Board of Education Policy IGS, *Educational Technology*, requires that all staff have easy, equitable access to appropriate information and communication technologies.
- The Maryland Education Technology Plan for the New Millennium: 2007–2012 requires that administrative applications for management and support of schools be provided and maintained.
- *Our Call to Action: Pursuit of Excellence* requires the collection and reporting of data on student and school performance.
- The U.S. Department of Education Race to The Top project (#54/79) requires the Maryland State Department of Education to implement a statewide centralized student transcript system.

## Strategies

- Collaborate with other offices and units to continuously improve processes, services, and information technology systems.
- Collaborate with the Department of Instructional Technology, the Department of Business Information Services, and the Department of Information and Application Architecture to provide support for schools and offices utilizing administrative applications, including communication, staff training, and technical support.
- Collaborate with the Department of Infrastructure and Operations and the Division of Technology Support to assess capability and plan for infrastructure readiness.
- Enhance *my*MCPS capabilities to provide more information and collaboration services to staff, students, and parents.
- Enhance student system capabilities and the student database to meet end-user needs and the analysis and reporting requirements of *Our Call to Action: Pursuit of Excellence.*
- Support staff development opportunities to ensure that staff has the skills and knowledge to implement planned information technology systems.
- Assess and examine new and emerging technologies to determine appropriateness in meeting identified needs of the organization.
- Increase the availability of relevant information to users by implementing enhanced reporting tools.

## Performance Measures

**Performance Measure:** Percentage of users satisfied with the customer service provided by the department.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 92% | 95% | 97% |

**Explanation:** This is a measure of customer satisfaction with DIIS staff service, as measured by surveying stakeholders in work group sessions.

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**Performance Measure:** The percentage of software implemented without major defects.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 80% | 90% | 92% |

**Explanation:** This measure indicates the percentage of software implemented that performs without error, based on design specifications, as measured by source control work item management software.

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**Performance Measure:** The percentage of stakeholder-requested enhancements implemented for enterprise systems.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 90% | 92% | 94% |

**Explanation:** This measure indicates the percentage of user-requested enhancements that are implemented once approved by a recognized advisory group. This is measured by using project/work plans that itemize the work of the unit, including user-requested enhancements, and are used to monitor progress and completion of those items.

## Budget Explanation Division of Instructional and Informational Services—442

The current FY 2013 budget for this division is changed from the budget adopted by the Board of Education on June 14, 2012. The change is a result of a budget neutral reorganization within the Office of the Chief Technology Officer that is designed to better serve and support schools and offices. As a result, 14.8 positions and $1,544,840 are realigned from other OCTO units to this division.

The FY 2014 request for this division is $2,696,394, a decrease of $45,999 from the current FY 2013 budget. An explanation of this change follows.

***Continuing Salary Costs—($45,999)***
There is a decrease of $45,999 for continuing salary costs for current employees. The annualization of the salary step to be provided to eligible employees on May 4, 2013 is offset by reductions for staff turnover.

***Realignment—$0***
Realignments are budgeted to address priority spending needs in this division. There is a decrease of $2,000 for office supplies and a corresponding increase for program supplies.

# Div. of Instructional & Informational Services - 442

## Elton Stokes, Director II

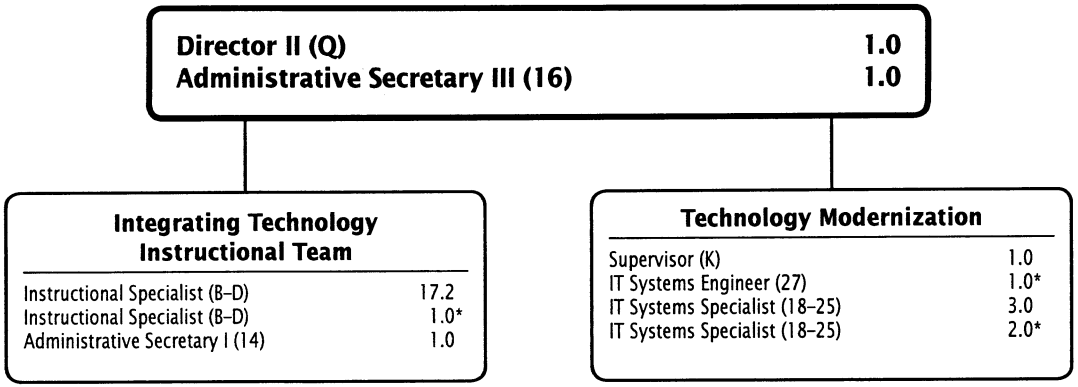
| Description | FY 2012 Actual | FY 2013 Budget | FY 2013 Current | **FY 2014 Request** | FY 2014 Change |
|---|---|---|---|---|---|
| **01 Salaries & Wages** | | | | | |
| Total Positions (FTE) | 10.000 | 10.000 | 24.800 | **24.800** | |
| Position Salaries | $875,845 | $900,247 | $2,445,087 | **$2,399,088** | ($45,999) |
| **Other Salaries** | | | | | |
| Summer Employment | | | | | |
| Professional Substitutes | | | | | |
| Stipends | | | | | |
| Professional Part Time | | | | | |
| Supporting Services Part Time | | 259,200 | 259,200 | **259,200** | |
| Other | | | | | |
| Subtotal Other Salaries | 163,749 | 259,200 | 259,200 | **259,200** | |
| **Total Salaries & Wages** | 1,039,594 | 1,159,447 | 2,704,287 | **2,658,288** | (45,999) |
| **02 Contractual Services** | | | | | |
| Consultants | | 31,006 | 31,006 | **31,006** | |
| Other Contractual | | | | | |
| **Total Contractual Services** | 19,350 | 31,006 | 31,006 | **31,006** | |
| **03 Supplies & Materials** | | | | | |
| Textbooks | | | | | |
| Media | | | | | |
| Instructional Supplies & Materials | | | | | |
| Office | | 2,000 | 2,000 | | (2,000) |
| Other Supplies & Materials | | 4,600 | 4,600 | **6,600** | 2,000 |
| **Total Supplies & Materials** | 3,290 | 6,600 | 6,600 | **6,600** | |
| **04 Other** | | | | | |
| Local/Other Travel | | 500 | 500 | **500** | |
| Insur & Employee Benefits | | | | | |
| Utilities | | | | | |
| Miscellaneous | | | | | |
| **Total Other** | 482 | 500 | 500 | **500** | |
| **05 Equipment** | | | | | |
| Leased Equipment | | | | | |
| Other Equipment | | | | | |
| **Total Equipment** | | | | | |
| **Grand Total** | $1,062,716 | $1,197,553 | $2,742,393 | **$2,696,394** | ($45,999) |

# Div. of Instructional & Informational Services - 442

Elton Stokes, Director II

| CAT | DESCRIPTION | 10 Mon | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | **FY 2014 REQUEST** | FY 2014 CHANGE |
|---|---|---|---|---|---|---|---|
| 1 | P Director I | | | | 1.000 | **1.000** | |
| 1 | O Supervisor | | | | 1.000 | **1.000** | |
| 2 | O Supervisor | | | | 2.000 | **2.000** | |
| 1 | K Supervisor | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | J Operations Development Manager | | | | 1.000 | **1.000** | |
| 2 | BD Instructional Specialist | | 1.000 | 1.000 | 3.000 | **3.000** | |
| 1 | 27 Applications Developer III | | | | 1.000 | **1.000** | |
| 2 | 27 Database Administrator III | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 25 Applications Developer II | | 2.000 | 2.000 | 6.000 | **6.000** | |
| 2 | 25 Applications Developer II | | | | 1.000 | **1.000** | |
| 2 | 25 ETL Analyst/Programmer | | 1.000 | 1.000 | | | |
| 1 | 25 Technical Analyst | | | | 1.000 | **1.000** | |
| 1 | 24 Student Systems Specialist | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 23 Applications Specialist I | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 15 Administrative Secretary II | | | | 1.000 | **1.000** | |
| 1 | 15 Data Control Technician II | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 13 Fiscal Assistant I | | | | .800 | **.800** | |
| 1 | 13 Data Control Technician I | | 1.000 | 1.000 | 1.000 | **1.000** | |
| | **Total Positions** | | **10.000** | **10.000** | **24.800** | **24.800** | |

# Department of Instructional Technology




F.T.E. Positions 24.2

(*In addition, there are 4.0 Capital Budget positions shown on this chart)

**Mission:** *The mission of the Department of Instructional Technology is to support excellence in teaching and learning, facilitate collaborative learning communities, and support operational excellence that enhances the management of the business of education. This is accomplished by building the capacity of administrative, instructional, and support services staff through high-quality, differentiated, and job-embedded professional development to support the implementation of new and existing technologies in schools and offices.*

## Major Functions

The department accomplishes its mission by working closely with school leadership to support school improvement plans with technology strategies; designing, developing and delivering high-quality technology professional development on system-wide applications to support teaching and learning; using technology to facilitate and enhance professional learning communities, collaborating with Montgomery County Public Schools (MCPS) offices and schools to identify needs for which technology solutions can be applied; and developing, distributing, and supporting interactive distance learning. The department provides leadership and program management for the implementation of new technologies in schools to increase teacher capacity by saving valuable time. The department manages the Center for Technology Innovation, which is the school system's primary technology training facility for all staff. The department supports the instructional implementation of the Educational Technology Policy in all schools and the Technology Modernization (Tech Mod) Program. The department consists of two units: the Integrating Technology with Instruction Unit provides professional development and coaching to teachers on the integration of technology with teaching and learning, and the Technology Support Unit evaluates new technologies and plans for the ordering and distribution of these technologies.

The Integrating Technology in Instruction Unit provides on-site, centralized, and Web-based professional development using the Analysis, Design, Development, Implementation, and Evaluation instructional system design model for school and office staff on skills and strategies needed for data-driven decision-making, and integrating technology into instructional and management practices. Professional development including *my*MCPS, assessment technologies, communications applications, curriculum and course management platforms, instructional applications, and electronic resources will enhance both instructional and managerial practices. Whenever feasible, the unit employs a job-embedded approach to professional development when working with school staff to increase technological pedagogical content knowledge as it relates to individual teacher's implementation of the curriculum. The use of webinar and collaboration site technologies facilitates professional learning communities that bring together job-alike professionals from across the county. The unit develops online training opportunities using best-practice technology solutions and methodologies, translates application functions into MCPS business practices, and researches and develops the latest instructional resources and software. This unit collaborates with school leadership and identifies targeted, exemplary technology integration practices. Staff also helps identify hardware, software, and electronic resources to support school improvement objectives, and provides support and training to administrators and instructional and support staff. This unit also supports the use of 21st century interactive classroom technologies to create and strengthen inclusive, diverse community-centered classrooms that foster a culture of inquiry, respect, and risk-taking so that all students are empowered to participate as full citizens in meaningful learning communities.

The Technology Support Unit continuously collaborates with schools and offices to understand interests and needs, gathering requirements from stakeholders. The unit cultivates strategic partnerships with vendors who focus on improving technology products, services, prices, quality, and on-time delivery. The unit oversees the testing of products and configurations prior to deployment to schools to ensure product reliability and effective ongoing operations in every school. Staff also keeps abreast of emerging technology trends and products and assesses their applicability in the educational environment. Educationally appropriate products are evaluated to determine if the product meets identified needs, and high-level tests are performed to assess compatibility with the MCPS technology infrastructure. The unit oversees a program to refurbish computers in schools where technology is four years old in response to the change from a four-year to a five-year replacement cycle that was put in place temporarily to address the fiscal crisis. Further, this unit oversees the planning and implementation of interactive whiteboard technology in connection with redefining 21st century learning spaces.

## Trends and Accomplishments

Educational technology has evolved from being viewed solely as a tool to support direct instruction and provide valuable resources to students, to providing a highly interactive, responsive, and dynamic platform for professional development including solutions to effectively provide meaningful information about student performance that guides instructional and school improvement decisions. With new technologies, such as myMCPS, it is possible to do the following:

- Assess student progress on a regular basis

- Efficiently score and report results in a timely manner to help teachers and administrators make real-time decisions
- Support efficient planning and provide a tailored instructional program to students
- Allocate human and capital resources quickly to achieve desired results

While there is a wide variety of technology solutions for many of the work-related tasks and functions required in a school system, it is imperative to continually receive feedback regarding the time-saving value and effectiveness of these solutions. The mission of the department has been crafted to meet the challenges of the dynamic nature of technology and the unique needs of MCPS.

Each school receives direct support from a team of instructional technology specialists to provide technology-based strategies and professional development on those technologies to support school improvement plan goals. The department provides project management on three assessment technologies: the MCPS Assessment Program—Primary Reading 3D; Measure of Academic Progress—Reading, Math, and Primary; and Achievement Series. Project management also is provided for Discovery Education Streaming, which provides schools with access to a vast on-demand video library to support instruction.

Students, teachers, and the community have an expectation that technology solutions will be available to meet their information and communication needs. The ability to deploy new systems rapidly and the expectation that systems will be user friendly and safe have a major impact on this department and its planning. The need to retool educational technology is accelerating, and customers rightly expect high-quality, reliable solutions. The demand for faster, better, and cheaper solutions that meet customer expectations requires exceptional skill in managing projects. The partnership of educational and technical experts to improve project outcomes requires the creation and use of a common language for the planning, execution, and delivery of projects. The challenge for the school system is how to use students' interest in technology to engage them in rigorous and relevant learning experiences. Innovative technologies—such as interactive white boards, student response systems, and expanded wireless capabilities—now focus on engaging students while developing critical thinking and problem-solving skills.

Other trends include managing relationships with the increasing number of vendors that are offering technology products and services and building strong partnerships to meet the school system's educational and business needs. In addition, while most vendors will agree to provide school districts with special discount rates, implementing the individualized payment schedules included in these agreements typically is a challenge for vendor billing departments. This increases the need for staff in this department to analyze technology and telecommunication invoices to make sure they reflect the agreed-upon pricing.

The Tech Mod Program, which replaces four-year-old computers in schools, was delayed one year due to the fiscal crisis, creating a five-year replacement cycle through Fiscal Year (FY) 2014. Tech Mod replaced 10,883 computers, 126 file servers, and 764 printers in 42 schools, and one special education school. The computer counts include 120 carts with 10 mobile devices in each cart that were chosen by schools to make use of wireless mobility within their school in support of instruction and assessment. The 126 file servers use 34 percent less energy than those being replaced. File servers were reduced from three to two in high schools because of improved networks, capacity, and design. Staff continued to refurbish and repair 9,007 computers in the 39 schools that had been anticipating the replacement of their four-year-old computers in FY 2013. These schools included ten high schools, nine middle schools, 17 elementary schools, and three special schools. The program supported the installation of technology in one modernized high school and one new elementary school.

## Major Mandates

The National Educational Technology Plan 2010 recommends the following actions:

Provide pre-service and in-service educators with preparation and professional learning experiences powered by technology that closes the gap between students' and educators' fluencies with technology and promote and enable technology use in ways that improve learning, assessment, and instructional practices

Transform the preparation and professional learning of educators and education leaders by leveraging technology to create career-long personal learning networks within and across schools, pre-service preparation and in-service educational institutions, and professional organizations

Use technology to provide access to the most effective teaching and learning resources, especially where they are not otherwise available and to provide more options for all learners at all levels

Title II Part D of the *No Child Left Behind Act of 2001* has as its primary goal to "improve student academic achievement through the use of technology in elementary schools and secondary schools" which includes the following:

- All students being technologically literate by the time they finish the 8th grade
- The effective integration of technology resources and systems with teacher training and curriculum development to establish

- research-based instructional methods

The Maryland Instructional Leadership Framework developed by the Maryland State Department of Education (MSDE) and adopted by the MSDE states in outcome 6 that school leadership will "use technology and multiple sources of data to improve classroom instruction."

## Strategies

- Ensure the successful integration of technologies that support teaching, learning, and workforce excellence by embedding instructional and achievement technologies within school improvement plan strategies and activities; and develop anywhere/anytime professional development materials
- Develop relationships with school-based and central services staff to facilitate the identification of needs that can be addressed through technology and formalize user feedback channels to application development/deployment teams

## Performance Measurements

**Performance Measure:** Mastery of Training Outcomes

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 90% | 93% | 96% |

**Explanation:** Percentage of attendees reporting mastery of all stated training session outcomes as indicated on post-training survey.

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**Performance Measure:** Center of Technology Innovation Satisfaction

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 87% | 90% | 93% |

**Explanation:** Percentage of guest instructors that rate their experience as excellent or very good as reported via online survey.

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## Budget Explanation
## Department of Instructional Technology—435/427/428

The current FY 2013 budget for this department is changed from the budget adopted by the Board of Education on June 14, 2012. The change is a result of a budget neutral reorganization within the Office of the Chief Technology Officer that is designed to better serve and support schools and offices. As a result, $74,463 is realigned from other OCTO units to this department.

The FY 2014 request for this division is $2,469,013, a decrease of $42,649 from the current FY 2013 budget. An explanation of this change follows.

***Continuing Salary Costs—$5,610***
There is an increase of $5,610 for continuing salary costs for current employees. This amount is the annualization of the salary step to be provided to eligible employees on May 4, 2013.

***Realignment—$14,307***
Realignments are budgeted to address priority spending needs in this department. There is a realignment of $3,080 from office supplies to fund program supplies. There is a decrease of $6,693 for supporting services part-time salaries and the funds are realigned to provide training stipends for the department. In addition, $14,307 is realigned from the Office of Chief Technology Officer's budget to this department's budget to fund training stipends.

***Program Efficiencies and Reductions—($62,566)***
There is reduction of a vacant 1.0 fiscal assistant III position and $62,566. The position provides support for the Technology Modernization budget and grant budget. The fiscal responsibilities will be distributed to other staff members in the department.

# Dept. of Instructional Technology - 435/427/428

## Dr. Trenkamp B. Kara, Acting Director II

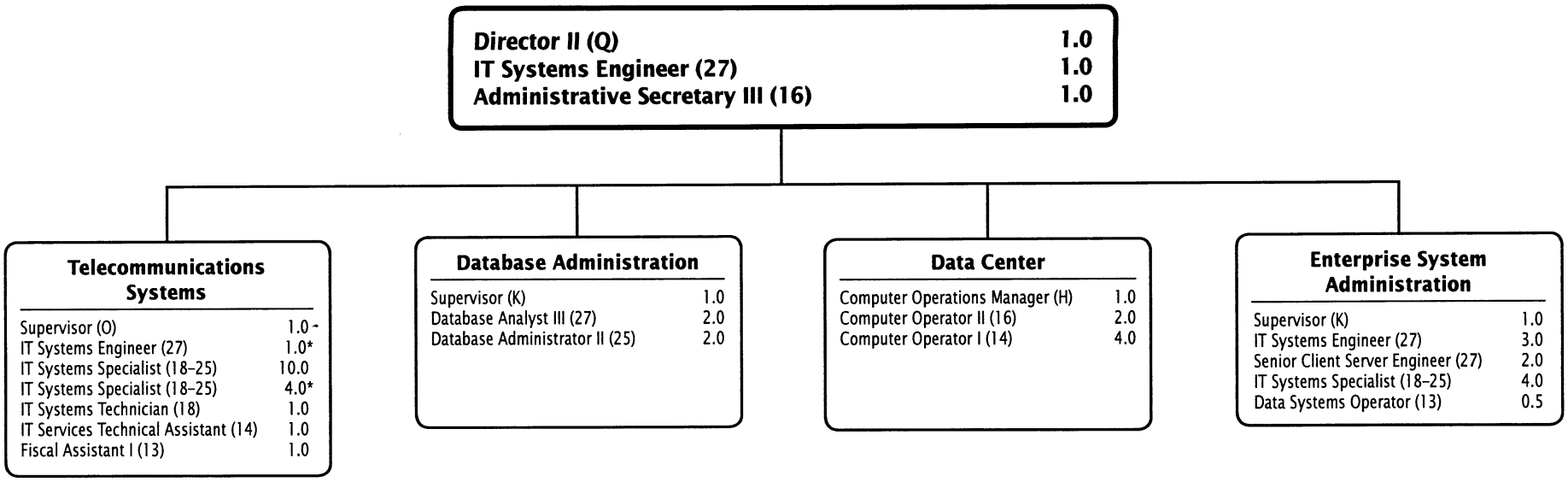
| Description | FY 2012 Actual | FY 2013 Budget | FY 2013 Current | **FY 2014 Request** | FY 2014 Change |
|---|---|---|---|---|---|
| **01 Salaries & Wages** | | | | | |
| Total Positions (FTE) | 24.200 | 25.200 | 25.200 | **24.200** | (1.000) |
| Position Salaries | $2,184,172 | $2,392,486 | $2,466,949 | **$2,409,993** | ($56,956) |
| **Other Salaries** | | | | | |
| Summer Employment | | | | | |
| Professional Substitutes | | | | | |
| Stipends | | | | **21,000** | 21,000 |
| Professional Part Time | | | | | |
| Supporting Services Part Time | | 6,693 | 6,693 | | (6,693) |
| Other | | | | | |
| Subtotal Other Salaries | | 6,693 | 6,693 | | 14,307 |
| **Total Salaries & Wages** | 2,184,310 | 2,399,179 | 2,473,642 | **2,430,993** | (42,649) |
| **02 Contractual Services** | | | | | |
| Consultants | | | | | |
| Other Contractual | | 3,407 | 3,407 | **3,407** | |
| **Total Contractual Services** | 4,549 | 3,407 | 3,407 | **3,407** | |
| **03 Supplies & Materials** | | | | | |
| Textbooks | | | | | |
| Media | | | | | |
| Instructional Supplies & Materials | | | | | |
| Office | | 15,080 | 15,080 | **12,000** | (3,080) |
| Other Supplies & Materials | | 3,000 | 3,000 | **6,080** | 3,080 |
| **Total Supplies & Materials** | 32,644 | 18,080 | 18,080 | **18,080** | |
| **04 Other** | | | | | |
| Local/Other Travel | | 16,533 | 16,533 | **16,533** | |
| Insur & Employee Benefits | | | | | |
| Utilities | | | | | |
| Miscellaneous | | | | | |
| **Total Other** | 16,325 | 16,533 | 16,533 | **16,533** | |
| **05 Equipment** | | | | | |
| Leased Equipment | | | | | |
| Other Equipment | | | | | |
| **Total Equipment** | | | | | |
| **Grand Total** | $2,237,828 | $2,437,199 | $2,511,662 | **$2,469,013** | ($42,649) |

# Dept. of Instructional Technology - 435/427/428

Dr. Trenkamp B. Kara, Acting Director II

| CAT | DESCRIPTION | 10 Mon | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | **FY 2014 REQUEST** | FY 2014 CHANGE |
|---|---|---|---|---|---|---|---|
| | **435 Dept. of Instructional Technology** | | | | | | |
| 1 | Q Director II | | 1.000 | | | | |
| 3 | Q Director II | | | 1.000 | 1.000 | **1.000** | |
| 3 | BD Instructional Specialist | | 15.200 | 15.200 | 17.200 | **17.200** | |
| 1 | 16 Administrative Secretary III | | 1.000 | | | | |
| 2 | 16 Administrative Secretary III | | | 1.000 | 1.000 | **1.000** | |
| 1 | 14 Administrative Secretary I | | 1.000 | | | | |
| 2 | 14 Administrative Secretary I | | | 1.000 | 1.000 | **1.000** | |
| | **Subtotal** | | **18.200** | **18.200** | **20.200** | **20.200** | |
| | **427 Integrating Technology Instructional Team** | | | | | | |
| 1 | 25 IT Systems Specialist | | 1.000 | 1.000 | | | |
| 11 | 18 IT Systems Technician | | 1.000 | | | | |
| 1 | 15 Fiscal Assistant II | | 1.000 | | | | |
| 11 | 13 Fiscal Assistant I | | 1.000 | | | | |
| | **Subtotal** | | **4.000** | **1.000** | | | |
| | **428 Innovative Technologies** | | | | | | |
| 1 | K Supervisor | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 25 IT Systems Specialist | | 1.000 | 1.000 | 3.000 | **3.000** | |
| 11 | 18 IT Systems Technician | | | 1.000 | | | |
| 1 | 15 Fiscal Assistant II | | | 1.000 | 1.000 | | (1.000) |
| 11 | 13 Fiscal Assistant I | | | 1.000 | | | |
| 1 | 12 Secretary | | | 1.000 | | | |
| | **Subtotal** | | **2.000** | **6.000** | **5.000** | **4.000** | **(1.000)** |
| | **Total Positions** | | **24.200** | **25.200** | **25.200** | **24.200** | **(1.000)** |

# Department of Infrastructure and Operations




F.T.E. Positions 39.5

(*In addition, there are 5.0 Capital Budget positions shown on this chart.)

**Mission:** *The mission of the Department of Infrastructure and Operations is to manage the enterprise-wide technical systems, including the data center, network connections, and telephones and to facilitate the implementation of effective, secure, and reliable hardware and software solutions. This department also is responsible for providing the operational support for administrative data and reports aligned with* Our Call to Action: Pursuit of Excellence.

## Major Functions

The Department of Infrastructure & Operations (DIO) accomplishes its mission through four units—Database Administration, Data Center, Telecommunication Services, and Enterprise Systems Administration. All four units work collaboratively to ensure that Montgomery County Public Schools (MCPS) technology systems are designed and operated in the most efficient manner possible. The director's office manages major projects within DIO and provides collaborative support to the other departments' project teams. To ensure that these services are provided in an effective, efficient, and systemic manner, the director's office coordinates the work efforts of the technical resources and subject-matter experts for department projects, following the shared project and process management methods that are common to all Office of the Chief Technology Officer project teams. The director's office ensures that project documentation is kept in an accessible place and that quality assurance processes are created, documented, and communicated for maximum efficiency.

The Database Administration Unit is responsible for creating, maintaining, backing up, recovering, and monitoring enterprise databases (Online Administrative Student Information System, online student look-up, period-by-period attendance, grading and reporting, financial management system, payroll, and retirement) for effective use in an operational environment. This includes all student and business systems.

The Data Center operates, monitors, and provides technical support for the MCPS central servers and related equipment (high-speed printers and scanners) to allow 24-hour access to essential student and administrative databases and to run applications, including payroll, student attendance and enrollment, retirement, asset management, financial management, report cards, and online materials ordering application systems. The unit is responsible for maintaining the data center facility with round-the-clock sensors for power, temperature, humidity, fire, and other mechanical functions.

The Telecommunication Services Unit designs, installs, and supports local- and wide-area networks (LAN/WAN) ,which include wired and wireless networks in schools, central services, and field offices. The unit maintains all telephone systems—wired, wireless, and cellular, including school and office voice mail systems, data transmission lines, and voice circuits. The Telecommunication Services Unit supports converged telephony, which combines voice, data, and video on data circuits. Telephony specialists evaluate current system needs while reviewing telecommunications trends. To improve MCPS telecommunications capabilities, staff is responsible for researching, planning, expanding, and modernizing existing systems as both technology and location needs evolve. The unit monitors and maintains the MCPS WAN, which is implemented by connections through several carriers, including the county's fiber-optic network (FiberNet). The connection to the Internet and county government, the security firewall, and the intrusion detection/prevention equipment—along with the data wiring at new and modernized construction projects, including the telephone and cable television distribution systems—also are the responsibility of this unit. This unit also applies for rebates for eligible telecommunications, internal connection, and Internet-related costs under the Schools and Libraries Universal Service E-Rate Program, funded under the *Telecommunications Act of 1996*. Staff carefully reviews telecommunication invoices, including wireless and data connection lines, to ensure accuracy of payment.

The Enterprise Systems Administration Unit designs systems architecture for new or upgraded applications and installs, manages, and supports enterprise servers that house the technology systems used by staff and students as well as parents. The unit is responsible for the efficient operation of the systems as well as preventive security measures. The Enterprise Systems Administration Unit also is responsible for system-wide user account management for the network and all application systems, such as the student data system, financial management, human resources systems, and the *my*MCPS portal, to enable appropriate access for MCPS users. In addition, the unit manages the operation of the MCPS e-mail system and is responsible for all e-mail system upgrades and implementations. Enterprise-wide data backup solutions are implemented and managed by this unit, including backing up central data as well as remotely backing up school data. The unit ensures that systems can be recovered quickly in the event of mechanical failure or disaster.

## Trends and Accomplishments

The continuing rapid advancement of technology requires staff to research new and emerging technologies, to work continuously with technology users in reassessing which technologies best meet instructional and administrative needs, and to plan how to modernize or replace aging and obsolete equipment and software. *Our Call to Action: Pursuit of Excellence* calls for the provision of a technology-rich environment that gives

instructional leaders powerful tools to determine priorities and to measure success.

Over the winter break in December 2011, the MCPS data center was relocated from the Carver Educational Services Center to 45 West Gude Drive, Rockville, Maryland. This move enabled MCPS to substantially strengthen access to data and computing systems by modernizing and integrating redundant infrastructure systems that are designed to support continued operations in the event of inclement weather and other emergencies. These major improvements include the integration of redundant uninterruptable power supplies (UPS), a high-capacity generator, dual fiber network pathways to the data center, and expanded disaster recovery site support.

In addition, the department also provided large-scale printing services for both student and business systems, including approximately 145,000 report cards, 19,000 related administrative reports and 30,000 interim reports per reporting period, as well as 1,500 employee paychecks and 22,000 timesheets per pay period (employee paystubs are available electronically via ePaystub, eliminating the need for paystub printing for employees using direct deposit). The Data Center staff collaborated with the Office of Shared Accountability's Testing Unit to print, fold, and seal 90,000 MSA and 60,000 HSA reports and with the Applied Research Unit to print, fold, and seal 210,000 school-based staff and parent surveys. The staff takes great pride in continuing to meet every deadline for all large printing jobs.

Continuing the server consolidation effort of the previous years, the Enterprise Systems Administration Unit expanded the virtual server environment to include more production and test servers of many applications, including myMCPS. The unit also implemented a new central Storage Area Network (SAN) to replace aging equipment and provide more data storage for use by all systems. This program seeks to reduce the number of disparate hardware servers by consolidating systems on more reliable and consistently managed hardware.

The department completed an upgrade of the MCPS e-mail system to Exchange 2010 to take advantage of increased protection of data for security and to optimize our investment for future growth. This upgrade also provides better integration with the MCPS portal, *my*MCPS. The department continued to modify the structure of the MCPS network (Active Directory) toward a single domain network design and consolidated domain controllers for a more efficiently run network.

In FY 2013, databases for the Financial Management System, student systems applications, the electronic grading system, and the *my*MCPS portal will be upgraded to the latest and most efficient versions that allow for faster access to data for students and staff.

During FY 2013, more than half of MCPS elementary schools will be connected to the county's FiberNet system for faster and more reliable WAN and Internet connectivity. The remaining schools will be connected in FY 2014. Internet availability continued to be over 99 percent overall.

New telephone systems were installed in five elementary schools and administrative offices using Voice-over-IP (VoIP) capable phone systems. These VoIP systems provide additional services to the users, such as caller ID and call forwarding, and significantly reduce the expenses of inside wiring by using either existing data lines or running one data line throughout a school, as opposed to a large number of voice lines per handset. We anticipated 4,900 work requests for moves, additions, and changes for schools and administrative offices will be completed in FY 2013. The Telecommunications Team continued its management of the cell phone and data device programs, refreshing phone equipment for emergency phones in portable classrooms and school emergency kits.

## Major Mandates

- The federal *No Child Left Behind Act of 2001* and the state's *Bridge to Excellence in Public Schools Act of 2002* mandate data collection and distribution that require up-to-date infrastructure and equipment in all schools, as well as access to system information.
- *Our Call to Action: Pursuit of Excellence* strategies require up-to-date infrastructure and central information technology services.
- Expectations of the Maryland Core Learning Goals and alignment with the Maryland High School Assessments and Maryland School Assessments require a modern infrastructure for delivery of online tests and courses.
- Board of Education Policy IGS, *Educational Technology*, requires that all students and staff members have easy, equitable access to information and communication technologies.
- The Maryland Educational Technology Plan for the New Millennium: 2007–2012 requires that schools be provided with networks, hardware/software, and technical services that support student and staff use of electronic information and communication resources in classrooms, media centers, and offices.

## Strategies

- Control and manage user access rights and implement user account provisioning/de-provisioning using the most cost-effective and efficient methods.
- Develop a converged telecommunications strategic plan based on industry standards to guide MCPS in the modernization and expansion of its telecommunications system, including telephony and data.
- Provide building-wide wireless access in all schools, while maintaining secure access controls.

- Collaborate with the county's FiberNet team to connect remaining elementary schools to the FiberNet system.
- Consistently evaluate database use and performance upgrading operating systems and hardware and software when necessary.
- Monitor performance of the WAN, school servers, and Internet connectivity and ensure staff or vendors respond promptly to any problems.
- Manage and maintain a sound virtual server testing environment for use by multiple systems.
- Migrate more physical servers to the virtual server production environment to more efficiently utilize servers for multiple applications.
- Streamline network design for more efficient operations by consolidating domain controllers.
- Monitor the reliability, timeliness, and accuracy of enterprise computer products and services.
- Maintain up-to-date recommended firmware and software release levels for security and performance for all servers.
- Expand/manage a more robust disaster-recovery site with MCPS network-connected database servers and back-up systems to provide efficient and faster recovery of data in case of emergency and/or disaster.
- Work with MCPS staff and consultants to identify, develop, and implement industry-accepted network management procedures, best practices, and technical solutions.
- Monitor, plan, and implement improvements for enterprise data storage systems to support the production server environment.
- Maintain consistent environmental controls in the Data Center.
- Adhere to systematic change control processes to ensure high-quality systems.
- Maintain communication with school staff regarding relocations and requirements for voice and data connections and computer setups.
- Provide excellent customer service to all technology users by assisting in data migration needs, providing efficient turnaround on user requests, and planning for the unexpected.
- Facilitate and support server configuration management for optimum performance.

## Performance Measures

**Performance Measure:** Percentage of uptime for the WAN.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 99.89% | 99.95% | 99.97% |

**Explanation:** This is a measure of availability of switches, routers, and vendor-supplied lines that provide access to schools, offices, and the ISP connection.

**Performance Measure:** Percentage of uptime for e-mail system.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 99.9% | 99.9% | 99.9% |

Explanation: This measure indicates the amount of time e-mail is available to end users, other than regularly scheduled maintenance hours.

## Budget Explanation Department of Infrastructure and Operations—446/431/433/447/448/451/453

The current FY 2013 budget for this department is changed from the budget adopted by the Board of Education on June 14, 2012. The change is a result of a budget neutral reorganization within the Office of the Chief Technology Officer that is designed to better serve and support schools and offices. As a result, 8.0 positions and $690,681 are realigned from other OCTO units to this department.

The FY 2014 request for this department is $6,287,537, a decrease of $289,280 from the current FY 2013 budget. An explanation of this change follows.

***Continuing Salary Costs—($79,781)***
There is a decrease of $79,781 for continuing salary costs for current employees. The annualization of the salary step to be provided to eligible employees on May 4, 2013 is offset by reductions for staff turnover.

***Realignment—$38,386***
Realignments are budgeted to address priority spending needs in this department. There are reductions of $32,937 for contractual maintenance and $9,559 for consultant services and the funds are realigned to provide additional resources for the lease/purchase agreement for systems backup and data recovery. There is a realignment of $4,000 from local travel mileage reimbursement to fund dues, registrations, and fees. In addition, $38,386 is realigned from the Department of Information and Application Architecture's budget to this department's budget for lease/purchase of equipment for systems backup and data recovery.

***Program Efficiencies and Reductions—($247,885)***
There is a reduction of $225,486 budgeted for the lease/purchase of equipment. The final payment obligation for storage servers will be satisfied in FY 2013. There is a reduction of $16,697 budgeted for contractual maintenance. Some equipment maintenance contract costs have been reduced due to renegotiation. Also, there is a reduction of $5,441 budgeted for consultant services due to the completion of upgrade for Exchange 2010 email system. In addition, $261 is reduced from the budget for dues, registrations, and fees based on prior year spending trends.

# Dept of Infrastructure & Ops - 446/431/433/447/448/451/452/453/918

## Cary Kuhar, Director II

| Description | FY 2012 Actual | FY 2013 Budget | FY 2013 Current | **FY 2014 Request** | FY 2014 Change |
|---|---|---|---|---|---|
| **01 Salaries & Wages** | | | | | |
| Total Positions (FTE) | 31.500 | 31.500 | 39.500 | **39.500** | |
| Position Salaries | $2,658,198 | $2,819,789 | $3,510,470 | **$3,430,689** | ($79,781) |
| **Other Salaries** | | | | | |
| Summer Employment | | | | | |
| Professional Substitutes | | | | | |
| Stipends | | | | | |
| Professional Part Time | | | | | |
| Supporting Services Part Time | | 29,729 | 29,729 | **29,729** | |
| Other | | 11,831 | 11,831 | **11,831** | |
| Subtotal Other Salaries | 52,121 | 41,560 | 41,560 | **41,560** | |
| **Total Salaries & Wages** | 2,710,319 | 2,861,349 | 3,552,030 | **3,472,249** | (79,781) |
| **02 Contractual Services** | | | | | |
| Consultants | | 76,500 | 76,500 | **61,500** | (15,000) |
| Other Contractual | | 1,686,913 | 1,686,913 | **1,637,279** | (49,634) |
| **Total Contractual Services** | 1,642,847 | 1,763,413 | 1,763,413 | **1,698,779** | (64,634) |
| **03 Supplies & Materials** | | | | | |
| Textbooks | | | | | |
| Media | | | | | |
| Instructional Supplies & Materials | | | | | |
| Office | | 3,400 | 3,400 | **3,400** | |
| Other Supplies & Materials | | 250,829 | 250,829 | **250,829** | |
| **Total Supplies & Materials** | 248,535 | 254,229 | 254,229 | **254,229** | |
| **04 Other** | | | | | |
| Local/Other Travel | | 10,196 | 10,196 | **9,935** | (261) |
| Insur & Employee Benefits | | | | | |
| Utilities | | | | | |
| Miscellaneous | | | | | |
| **Total Other** | 1,478 | 10,196 | 10,196 | **9,935** | (261) |
| **05 Equipment** | | | | | |
| Leased Equipment | | 707,669 | 707,669 | **563,065** | (144,604) |
| Other Equipment | | | | | |
| **Total Equipment** | 930,986 | 707,669 | 707,669 | **563,065** | (144,604) |
| **Grand Total** | $5,534,165 | $5,596,856 | $6,287,537 | **$5,998,257** | ($289,280) |

# Dept of Infrastructure & Ops - 446/431/433/447/448/451/452/453

Cary Kuhar, Director II

| CAT | DESCRIPTION | 10 Mon | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | **FY 2014 REQUEST** | FY 2014 CHANGE |
|---|---|---|---|---|---|---|---|
| | **446 Dept of Infrastructure & Operations** | | | | | | |
| 1 | Q Director II | | | | 1.000 | **1.000** | |
| 1 | Q Director Schl Support & Improv | | 1.000 | 1.000 | | | |
| 1 | 27 IT Systems Engineer | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 16 Administrative Secretary III | | 1.000 | 1.000 | 1.000 | **1.000** | |
| | **Subtotal** | | **3.000** | **3.000** | **3.000** | **3.000** | |
| | **433 Telecommunications Systems** | | | | | | |
| 1 | O Supervisor | | | | 1.000 | **1.000** | |
| 1 | 25 IT Systems Specialist | | 1.000 | 1.000 | 6.000 | **6.000** | |
| 11 | 25 IT Systems Specialist | | 4.000 | 4.000 | 4.000 | **4.000** | |
| 11 | 18 IT Systems Technician | | | | 1.000 | **1.000** | |
| 11 | 14 IT Services Technical Asst | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 11 | 13 Fiscal Assistant I | | | | 1.000 | **1.000** | |
| | **Subtotal** | | **6.000** | **6.000** | **14.000** | **14.000** | |
| | **447 Database Administration** | | | | | | |
| 1 | K Supervisor | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 27 Database Analyst III | | 2.000 | 2.000 | 2.000 | **2.000** | |
| 1 | 25 Database Administrator II | | 2.000 | 2.000 | 2.000 | **2.000** | |
| | **Subtotal** | | **5.000** | **5.000** | **5.000** | **5.000** | |
| | **448 Data Center** | | | | | | |
| 1 | H Computer Operations Mgr | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 16 Computer Operator II Shift 2 | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 16 Computer Operator II Shift 3 | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 14 Computer Operator I Shift 1 | | 2.000 | 2.000 | 2.000 | **2.000** | |
| 1 | 14 Computer Operator I Shift 2 | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 14 Computer Operator I Shift 3 | | 1.000 | 1.000 | 1.000 | **1.000** | |
| | **Subtotal** | | **7.000** | **7.000** | **7.000** | **7.000** | |
| | **451 Enterprise System Administration** | | | | | | |
| 1 | K Supervisor | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 27 Sr Client Server Engineer | | 2.000 | 2.000 | 2.000 | **2.000** | |
| 1 | 27 IT Systems Engineer | | 3.000 | 3.000 | 3.000 | **3.000** | |
| 1 | 25 IT Systems Specialist | | 2.000 | 2.000 | 2.000 | **2.000** | |
| 11 | 25 IT Systems Specialist | | 2.000 | 2.000 | 2.000 | **2.000** | |
| 1 | 13 Data Systems Operator | | .500 | .500 | .500 | **.500** | |
| | **Subtotal** | | **10.500** | **10.500** | **10.500** | **10.500** | |
| | **Total Positions** | | **31.500** | **31.500** | **39.500** | **39.500** | |

# Department of Business Information Services

| | |
|---|---|
| **Director II (Q)** | **1.0** |
| **Supervisor (K)** | **2.0** |
| **Application Developer III (27)** | **2.0** |
| **Development Project Manager (27)** | **3.5** |
| **Development Project Manager (27)** | **0.5*** |
| **Applications Developer II (25)** | **5.0** |
| **Technical Analyst (25)** | **1.0** |
| **IT Systems Specialist (18-25)** | **1.0** |
| **Administrative Secretary III (16)** | **1.0** |
| **Fiscal Assistant II (15)** | **1.0** |
| **Data Control Technician II (15)** | **1.0** |

F.T.E. Positions 18.5

(*In addition, there are 0.5 Trust Fund positions shown on this chart)

**Mission:** *The mission of the Department of Business Information Services (DBIS) is to plan, implement, and support quality business solutions to execute the district's priorities in support of* Our Call to Action: Pursuit of Excellence.

## Major Functions

The Department of Business Information Services (DBIS) collaborates with offices, schools, and local government agencies to promote and support Montgomery County Public Schools (MCPS) and the initiatives of the Office of the Chief Technology Officer (OCTO) by developing, implementing, and continuously improving business solutions. Based on goals and priorities, the department develops, purchases, implements, and supports complex solutions for the business of education. These solutions enable operational effectiveness that streamlines and enhances the management for all stakeholders. DBIS develops and supports solutions for business operations to ensure efficiency and productivity.

DBIS will implement and support many solutions used to manage operational and business functions throughout the district. The Human Resources Information System (HRIS) integrates personnel, time and attendance, leave management, payroll, and employee benefit functions that allow for effective management of information and resources. The Professional Development Online (PDO) system is used for managing and monitoring MCPS employee training. The Benefits Workstation is used to administer and manage employee pension benefits. MCPS Careers is a web-based solution that automates the hiring process for MCPS-based position vacancies. The Financial Management System integrates supply chain, finance, and budgeting functions. Connect-ED is used by schools and central services to effectively and efficiently communicate important information to students, staff, parents, and the community, such as student absences and school activities. The Transportation Information Management System supports the management of human and automotive resources utilized by MCPS. Fortis provides MCPS with an electronic document management tool that dramatically increases access to information previously only available on paper, such as personal and student records.

## Trends and Accomplishments

To ensure that MCPS maintains its status as a world-class school system, DBIS must continue to expand and enhance the usefulness of key operational management solutions. This includes identifying, developing, and implementing industry-leading software solutions that best meet the needs of schools and offices. The prevalence of web-based solutions underpins important technology decisions as MCPS works to provide solutions that meet or exceed the expectations of 21st century institutions.

The implementation of the Destiny library management system provides schools with a centralized K–12 resource management tool. This system will assist schools in working more efficiently, while creating an engaging and collaborative learning environment promoting and supporting student achievement. The implementation of Destiny will enable a stronger library media program and classroom connection and also will support the library media specialists' role in helping students develop 21st century learning skills. The school community be able to access Destiny from any place where they can access the Internet.

New financial management software will be implemented for schools to manage Independent Activity Funds (IAFs). The newly integrated Web-based system replaces multiple stand-alone systems used by schools and will provide real-time reporting and information. In addition, this secure online system will allow parents to view their students' financial account history and make electronic payments for school activity items such as field trips, tickets for school events, and obligations. The system also will help manage online credit and debit card payments for extracurricular activity (ECA) fees. Overall, the new system will improve the efficiency and effectiveness of financial operations at both the school and central services level, while offering a new level of access and convenience for parents.

The system that manages staff retirement benefits, Benefits Workstation, received a major upgrade. Among the enhanced functions of the upgraded system is the ability for staff members to calculate benefits on demand, including the ability to calculate future retirement benefits based on "what-if" scenarios. Staff members also will be able to print a retirement statement on demand, as opposed to on a yearly basis or by special request by the Employee and Retiree Service Center (ERSC).

## Major Mandates

- The federal *No Child Left Behind Act of 2001* and the state's B*ridge to Excellence in Public Schools Act of 2002* mandate data collection and distribution.
- *Our Call to Action: Pursuit of Excellence* requires the continuous improvement of all school system processes and services and the provision of appropriate staff training.
- Board of Education Policy IGS, *Educational Technology*, requires that all staff have easy, equitable access to appropriate information and communication technologies.
- The Maryland Education Technology Plan for the New Millennium: 2007–2012 requires that administrative applications for management and support of schools be provided and maintained.

- *Our Call to Action: Pursuit of Excellence* requires the collection and reporting of data on student and school performance.
- The U.S. Department of Education Race to The Top project (#54/79) requires the Maryland State Department of Education to implement a state-wide centralized student transcript system.

## Strategies

- Collaborate with other offices and units to continuously improve processes, services, and information technology systems.
- Collaborate with the Department of Instructional Technology, the Department of Information and Application Architecture, and the Division of Instructional and Informational Services to provide support for schools and offices utilizing administrative applications, including communication, staff training, and technical support.
- Collaborate with the Department of Infrastructure and Operations and the Division of Technology Support to assess capability and plan for infrastructure readiness.
- Enhance HRIS capabilities to meet analysis and reporting requirements of MCPS and external agencies and provide self-service capabilities in personnel, payroll, and benefits functions that give employees access to identified personal data.
- Enhance student system capabilities and the student database to meet end-user needs and the analysis and reporting requirements of *Our Call to Action: Pursuit of Excellence.*
- Support staff development opportunities to ensure that staff members have the skills and knowledge to implement planned information technology systems.
- Assess and examine new and emerging technologies to determine appropriateness in meeting identified needs of the organization.
- Increase the availability of relevant information to users by implementing enhanced reporting tools.

## Performance Measures

**Performance Measure:** Percentage of users satisfied with the customer service provided by the department.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 92% | 95% | 97% |

**Explanation:** This is a measure of customer satisfaction with DBIS staff service.

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**Performance Measure:** The percentage of software implemented without major defects.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 80% | 90% | 92% |

**Explanation:** This measure indicates the percentage of software implemented that performs without error, based on design specifications.

---

**Performance Measure:** The percentage of stakeholder-requested enhancements implemented for enterprise systems.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 90% | 92% | 94% |

**Explanation:** This measure indicates the percentage of user-requested enhancements that are implemented once approved by a recognized advisory group.

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## Budget Explanation Department of Business Information Services—421/425

The current FY 2013 budget for this department is changed from the budget adopted by the Board of Education on June 14, 2012. The change is a result of a budget neutral reorganization within the Office of the Chief Technology Officer that is designed to better serve and support schools and offices. As a result, 13.5 positions and $1,205,280 are realigned from other OCTO units to this department.

The FY 2014 request for this department is $1,724,772, an increase of $62,161 from the current FY 2013 budget. An explanation of this change follows.

***Continuing Salary Costs—$62,161***
There is an increase of $62,161 for continuing salary costs for current employees. This amount is the annualization of the salary step to be provided to eligible employees on May 4, 2013.

***Realignment—$0***
Realignments are budgeted to address priority spending needs in this division. There is a decrease of $3,374 for office supplies and a corresponding increase for program supplies.

# Dept. of Business Information Services - 421/425

## Doreen M. Heath, Director II

| Description | FY 2012 Actual | FY 2013 Budget | FY 2013 Current | **FY 2014 Request** | FY 2014 Change |
|---|---|---|---|---|---|
| **01 Salaries & Wages** | | | | | |
| Total Positions (FTE) | 5.000 | 5.000 | 18.500 | **18.500** | |
| Position Salaries | $488,708 | $506,100 | $1,711,380 | **$1,773,541** | $62,161 |
| **Other Salaries** | | | | | |
| Summer Employment | | | | | |
| Professional Substitutes | | | | | |
| Stipends | | | | | |
| Professional Part Time | | | | | |
| Supporting Services Part Time | | | | | |
| Other | | | | | |
| Subtotal Other Salaries | | | | | |
| **Total Salaries & Wages** | 488,708 | 506,100 | 1,711,380 | **1,773,541** | 62,161 |
| **02 Contractual Services** | | | | | |
| Consultants | | | | | |
| Other Contractual | | 420 | 420 | **420** | |
| **Total Contractual Services** | 17,594 | 420 | 420 | **420** | |
| **03 Supplies & Materials** | | | | | |
| Textbooks | | | | | |
| Media | | | | | |
| Instructional Supplies & Materials | | | | | |
| Office | | 3,374 | 3,374 | | (3,374) |
| Other Supplies & Materials | | 4,566 | 4,566 | **7,940** | 3,374 |
| **Total Supplies & Materials** | 18,665 | 7,940 | 7,940 | **7,940** | |
| **04 Other** | | | | | |
| Local/Other Travel | | 5,032 | 5,032 | **5,032** | |
| Insur & Employee Benefits | | | | | |
| Utilities | | | | | |
| Miscellaneous | | | | | |
| **Total Other** | 3,885 | 5,032 | 5,032 | **5,032** | |
| **05 Equipment** | | | | | |
| Leased Equipment | | | | | |
| Other Equipment | | | | | |
| **Total Equipment** | | | | | |
| **Grand Total** | $528,852 | $519,492 | $1,724,772 | **$1,786,933** | $62,161 |

# Dept. of Business Information Services - 421/425

Doreen M. Heath, Director II

| CAT | DESCRIPTION | 10 Mon | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | **FY 2014 REQUEST** | FY 2014 CHANGE |
|---|---|---|---|---|---|---|---|
| | **421 Dept of Business Info Services** | | | | | | |
| 1 | Q Director II | | | | 1.000 | **1.000** | |
| 1 | Q Director Schl Support & Improv | | 1.000 | 1.000 | | | |
| 1 | O Supervisor | | 1.000 | 1.000 | | | |
| 1 | K Supervisor | | | | 2.000 | **2.000** | |
| 1 | 27 Applications Developer III | | | | 2.000 | **2.000** | |
| 1 | 27 Development Proj Manager | | | | 3.500 | **3.500** | |
| 1 | 25 Applications Developer II | | | | 5.000 | **5.000** | |
| 1 | 25 IT Systems Specialist | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 25 Technical Analyst | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 16 Administrative Secretary III | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 15 Fiscal Assistant II | | | | 1.000 | **1.000** | |
| 1 | 15 Data Control Technician II | | | | 1.000 | **1.000** | |
| | **Subtotal** | | **5.000** | **5.000** | **18.500** | **18.500** | |
| | **Total Positions** | | **5.000** | **5.000** | **18.500** | **18.500** | |

# Department of Information and Application Architecture

| | |
|---|---|
| Director II (Q) | 1.0 |
| Supervisor (O) | 2.0 |
| Supervisor (K) | 2.0 |
| Database Administrator III (27) | 2.0 |
| ETL Analyst/Programmer (25) | 2.0 |
| Technical Analyst (25) | 1.0 |
| Application Developer I (23) | 1.0 |
| IT Systems Specialist (18-25) | 1.0 |
| Administrative Secretary III (16) | 1.0 |



F.T.E. Positions 13.0

## Department of Information and Application Architecture—445/426/443

Elton Stokes, Director II 301-279-3577

**Mission:** *The mission of the Department of Information and Application Architecture (DIAA) is to manage the database architecture and to support and implement quality technology solutions that support the district's priorities in support of* Our Call to Action: Pursuit of Excellence.

### Major Functions

The Department of Information and Application Architecture (DIAA) collaborates with offices, schools, and local government agencies to promote and support Montgomery County Public Schools (MCPS) and the initiatives of the Office of the Chief Technology Officer (OCTO) by developing, implementing, and continuously improving MCPS knowledge management solutions. Based on goals and priorities, the department develops, purchases, implements, and supports complex solutions for students, parents, schools, and offices. These solutions enable the collection and analysis of essential data; decision making and planning; dissemination of accurate and timely information; and operational effectiveness that streamlines and enhances the management of teaching and learning, as well as MCPS compliance with state and federal regulations.

DIAA oversees and manages the database architecture and reporting solutions and also implements quality assurance practices across the office. This department generates real-time, accurate, and comprehensive data solutions to staff within the district as well as to the Maryland State Department of Education (MSDE). The MCPS reporting solutions provide a breadth of current and historical reports to support both detail and summary-level analysis for strategic data-driven decision making.

In addition, this department adds value to the overall operations within OCTO through the implementation of quality assurance processes across all departments. This department provides leadership in the use of quality assurance best practices focused on meeting commitments for high-quality products and services that satisfy customer needs and perform reliably when delivered. Quality assurance practices encompass the entire software development process, including requirements, change management, configuration management, testing, and release. Quality assurance tools and techniques provide for tracking the effective use of development processes with measurement and verification throughout the development life cycle to final readiness review. Through the disciplines of technology testing and quality assurance, staff guides the planning and implementation of test protocols for products and services to verify their accuracy, performance, and usability in support of high-quality solutions. Additionally, staff creates user materials, including quick reference cards, frequently asked questions, and user guides to provide staff with guidance that supports a successful experience with the use of technology products and services.

### Trends and Accomplishments

To ensure that MCPS maintains its status as a world-class school system, DIAA must continue to expand and enhance the usefulness of key data management solutions. This includes identifying, developing, and implementing industry-leading database solutions that best meet the needs of schools and offices. The prevalence of data-driven applications and reporting underpins important technology as MCPS works to provide solutions that meet or exceed the expectations of 21st century learners and educators.

Schools with students applying for any University System of Maryland (USM) school will now have a far more efficient way to transmit official transcripts. A new electronic transcript management system will allow schools to generate, verify, and transmit transcripts directly to any school that is part of the USM consortium. This process significantly reduces the amount of time it has traditionally taken for students' official transcripts to be generated and transmitted by MCPS central services and received and processed by USM consortia schools by allowing MCPS school administrators to transmit transcripts directly to the USM system in real time. Once submitted, school officials receive an electronic receipt that the transcript was transmitted and received within moments of the transmission. Other institutions not using the new system will continue to receive transcripts via electronic transmission using the eDocs feature of the Naviance system in use by all high schools, or by U.S. mail where applicable.

### Major Mandates

- The federal *No Child Left Behind Act of 2001* and the state's *Bridge to Excellence in Public Schools Act of 2002* mandate data collection and distribution.
- *Our Call to Action: Pursuit of Excellence* requires the continuous improvement of all school system processes and services and the provision of appropriate staff training.
- Board of Education Policy IGS, *Educational Technology*, requires that all staff have easy, equitable access to appropriate information and communication technologies.
- The Maryland Education Technology Plan for the New Millennium: 2007–2012 requires that administrative applications for management and support of schools be provided and maintained.
- *Our Call to Action: Pursuit of Excellence* requires the collection and reporting of data on student and school performance.
- The U.S. Department of Education Race to The Top project #54/79 requires the Maryland State Department of Education to implement a statewide centralized student transcript system.

## Strategies

- Collaborate with other offices and units to continuously improve processes, services, and information technology systems.
- Collaborate with the Department of Instructional Technology, Department of Business Information Services, and Division of Instruction and Informational Services to provide support for schools and offices utilizing administrative applications, including communication, staff training, and technical support.
- Collaborate with the Department of Infrastructure and Operations and the Division of Technology Support to assess capability and plan for infrastructure readiness.
- Enhance myMCPS capabilities to provide more information and collaboration services to staff, students, and parents.
- Enhance the Human Resources Information System capabilities to meet analysis and reporting requirements of MCPS and external agencies and provide self-service capabilities in personnel, payroll, and benefits functions that give employees access to identified personal data.
- Enhance student system capabilities and the student database to meet end-user needs and the analysis and reporting requirements of *Our Call to Action: Pursuit of Excellence.*
- Support staff development opportunities to ensure that staff members have the skills and knowledge to implement planned information technology systems.
- Assess and examine new and emerging technologies to determine appropriateness in meeting identified needs of the organization.
- Increase the availability of relevant information to users by implementing enhanced reporting tools.

## Performance Measures

Performance Measure: Percentage of users satisfied with the customer service provided by the department.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 92% | 95% | 97% |

**Explanation:** This is a measure of customer satisfaction with DIAA staff service.

---

**Performance Measure:** The percentage of software implemented without major defects.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 80% | 90% | 92% |

**Explanation:** This measure indicates the percentage of software implemented that performs without error, based on design specifications.

---

**Performance Measure:** The percentage of stakeholder-requested enhancements implemented for enterprise systems.

| FY 2012 Actual | FY 2013 Estimate | FY 2014 Recommended |
|---|---|---|
| 90% | 92% | 94% |

**Explanation:** This measure indicates the percentage of user-requested enhancements that are implemented once approved by a recognized advisory group.

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## Budget Explanation Department of Information and Application Architecture—445/426/443

The current FY 2013 budget for this department is changed from the budget adopted by the Board of Education on June 14, 2012. The change is a result of a budget neutral reorganization within the Office of the Chief Technology Officer that is designed to better serve and support schools and offices. As a result, 26.3 positions and $2,588,147 are realigned from this office to other OCTO units.

The FY 2014 request for this department is $5,480,751, a decrease of $44,125 from the current FY 2013 budget. An explanation of this change follows.

***Continuing Salary Costs—$28,794***
There is an increase of $28,794 for continuing salary costs for current employees. This amount is the annualization of the salary step to be provided to eligible employees on May 4, 2013.

***Realignment—($59,083)***
There are a number of realignments budgeted to address priority spending needs within this department. There is a decrease of $376,453 for consultant services and a corresponding increase for contractual services to pay for additional Northwest Evaluation Association's MAP assessments, college preparation services, and the student grade-books. Also, there is a decrease of $32,421 for consultant services to fund contractual maintenance to pay for the substitute teacher calling system maintenance and the transportation information management system upgrade. In addition, $50,000 for consultant services and $9,083 for lease/purchase of equipment are realigned from this department's budget to the budget of the Department of Infrastructure and Operations and the budget of the Division of Technology Support.

***Program Efficiencies and Reductions—($13,836)***
There is a reduction of $13,836 budgeted for the lease/purchase of equipment. The final payment obligation for server equipment will be satisfied in FY 2013.

# Dept of Information & Application Architecture - 445/426/443

## Elton Stokes, Director II

| Description | FY 2012 Actual | FY 2013 Budget | FY 2013 Current | **FY 2014 Request** | FY 2014 Change |
|---|---|---|---|---|---|
| **01 Salaries & Wages** | | | | | |
| Total Positions (FTE) | 39.300 | 39.300 | 13.000 | **13.000** | |
| Position Salaries | $3,594,137 | $3,946,591 | $1,333,944 | **$1,362,738** | $28,794 |
| **Other Salaries** | | | | | |
| Summer Employment | | | | | |
| Professional Substitutes | | | | | |
| Stipends | | | | | |
| Professional Part Time | | | | | |
| Supporting Services Part Time | | 10,000 | 10,000 | **10,000** | |
| Other | | | | | |
| Subtotal Other Salaries | 10,016 | 10,000 | 10,000 | **10,000** | |
| **Total Salaries & Wages** | 3,604,153 | 3,956,591 | 1,343,944 | **1,372,738** | 28,794 |
| **02 Contractual Services** | | | | | |
| Consultants | | 999,890 | 999,890 | **541,016** | (458,874) |
| Other Contractual | | 3,076,823 | 3,101,323 | **3,510,197** | 408,874 |
| **Total Contractual Services** | 4,793,573 | 4,076,713 | 4,101,213 | **4,051,213** | (50,000) |
| **03 Supplies & Materials** | | | | | |
| Textbooks | | | | | |
| Media | | | | | |
| Instructional Supplies & Materials | | | | | |
| Office | | 10,296 | 10,296 | **10,296** | |
| Other Supplies & Materials | | 44,962 | 44,962 | **44,962** | |
| **Total Supplies & Materials** | 51,703 | 55,258 | 55,258 | **55,258** | |
| **04 Other** | | | | | |
| Local/Other Travel | | 1,542 | 1,542 | **1,542** | |
| Insur & Employee Benefits | | | | | |
| Utilities | | | | | |
| Miscellaneous | | | | | |
| **Total Other** | 638 | 1,542 | 1,542 | **1,542** | |
| **05 Equipment** | | | | | |
| Leased Equipment | | 22,919 | 22,919 | | (22,919) |
| Other Equipment | | | | | |
| **Total Equipment** | 13,883 | 22,919 | 22,919 | | (22,919) |
| **Grand Total** | $8,463,950 | $8,113,023 | $5,524,876 | **$5,480,751** | ($44,125) |

# Dept of Information & Application Architecture - 445/426/443

Elton Stokes, Director II

| CAT | DESCRIPTION | 10 Mon | FY 2012 ACTUAL | FY 2013 BUDGET | FY 2013 CURRENT | **FY 2014 REQUEST** | FY 2014 CHANGE |
|---|---|---|---|---|---|---|---|
| | **445 Dept of Information & Application Architecture** | | | | | | |
| 1 | Q Director II | | | | 1.000 | **1.000** | |
| 1 | Q Director Schl Support & Improv | | 1.000 | 1.000 | | | |
| 1 | O Supervisor | | 1.000 | 1.000 | 2.000 | **2.000** | |
| 1 | K Supervisor | | 1.000 | 1.000 | 2.000 | **2.000** | |
| 1 | 27 Applications Developer III | | 1.000 | 1.000 | | | |
| 2 | 27 Database Administrator III | | 1.000 | 1.000 | 2.000 | **2.000** | |
| 1 | 27 Development Proj Manager | | 1.000 | 1.000 | | | |
| 1 | 25 Applications Developer II | | 3.000 | 3.000 | | | |
| 1 | 25 IT Systems Specialist | | | | 1.000 | **1.000** | |
| 2 | 25 ETL Analyst/Programmer | | | | 2.000 | **2.000** | |
| 1 | 25 Technical Analyst | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 23 Applications Developer I | | 1.000 | 1.000 | 1.000 | **1.000** | |
| 1 | 16 Administrative Secretary III | | | 1.000 | 1.000 | **1.000** | |
| 2 | 16 Administrative Secretary III | | 1.000 | | | | |
| 1 | 13 Fiscal Assistant I | | .800 | .800 | | | |
| | **Subtotal** | | **12.800** | **12.800** | **13.000** | **13.000** | |
| | **426 Instructional Technology Application Services** | | | | | | |
| 1 | O Supervisor | | 2.000 | | | | |
| 2 | O Supervisor | | | 2.000 | | | |
| 2 | BD Instructional Specialist | | 2.000 | 2.000 | | | |
| 1 | 27 Database Administrator III | | 1.000 | | | | |
| 2 | 27 Database Administrator III | | | 1.000 | | | |
| 2 | 25 Applications Developer II | | 1.000 | 1.000 | | | |
| 2 | 25 ETL Analyst/Programmer | | 1.000 | 1.000 | | | |
| | **Subtotal** | | **7.000** | **7.000** | | | |
| | **443 Business Information Services** | | | | | | |
| 1 | O Supervisor | | 2.000 | 2.000 | | | |
| 1 | K Supervisor | | 3.000 | 3.000 | | | |
| 1 | J Operations Development Manager | | 1.000 | 1.000 | | | |
| 1 | 27 Applications Developer III | | 2.000 | 2.000 | | | |
| 1 | 27 Development Proj Manager | | 2.500 | 2.500 | | | |
| 1 | 25 Applications Developer II | | 6.000 | 6.000 | | | |
| 1 | 25 Technical Analyst | | 1.000 | 1.000 | | | |
| 1 | 15 Fiscal Assistant II | | 1.000 | 1.000 | | | |
| 1 | 15 Data Control Technician II | | 1.000 | 1.000 | | | |
| | **Subtotal** | | **19.500** | **19.500** | | | |
| | **Total Positions** | | **39.300** | **39.300** | **13.000** | **13.000** | |