

# COMPREHENSIVE MAINTENANCE PLAN

FISCAL YEAR 2024



**MONTGOMERY COUNTY PUBLIC SCHOOLS**  
**OFFICE OF THE CHIEF OPERATING OFFICER**  
**OFFICE OF FACILITIES MANAGEMENT**





## **Board of Education**

Karla Silvestre, President  
Shebra L. Evans, Vice President  
Lynne Harris  
Grace Rivera-Oven  
Rebecca Smondrowski  
Julie Yang  
Brenda Wolff  
Sami Saeed, Student Member

## **Superintendent of Schools**

Monifa B. McKnight, Ed.D.

## **Office of the Chief Operating Officer**

M. Brian Hull, Chief Operating Officer  
Heather Dublinske, Executive Director

## **Office of Facilities Management**

Seth P. Adams, Associate Superintendent  
Shiho C. Shibasaki, Assistant Director

## **Division of Maintenance and Operations**

**Veronica Hill, Director**

**Michal E. Murray Dyson, Assistant Project Manager**

**Katherine N. Manzanares, Administrative Secretary**

**Samantha M. Harris, Senior Manager**

**Lorraine Breining, Operations Facilities Manager**

**Jose Luis Guardado, Operations Assistant Facilities Manager**

**James Duffy, Maintenance Facilities Manager**

**Brian Rice, Maintenance Assistant Facilities Manager**

**Ana J. Rivas, Fiscal Specialist**

**Samuel L. Ward, Staff Development Specialist**

**Tiona E. Rodgers, Staff Development Specialist**

**Isaac Darpoh, IT Systems Specialist**

**Benedict Parakuo-Naiterra, IT Systems Specialist**

**Kathleen L. Dodson, Data Support Specialist**

**Melissa Laureano, Data Support Specialist**

**Sean Yarup, Senior Manager**

**Douglas Jones, Maintenance Facilities Manager**

**John Horton, Maintenance Assistant Facilities Manager**

**Richard Dorsey, Operations Facilities Manager**

**Rosa Monterroso, Operations Assistant Facilities Manager**

**Roger L. Jenkins, Senior Manager**

**Jose Damaia, Maintenance Facilities Manager**

**Mark Sipple, Maintenance Assistant Facilities Manager**

**Yakubu Agbonselobho, Operations Facilities Manager**

**Cordell Garrett Jr., Operations Assistant Facilities Manager**

**Joseph I. Likambi, Senior Manager**

**Kenneth Hagins, Maintenance Facilities Manager**

**Wayne Gregg, Maintenance Assistant Facilities Manager**

**Elizabeth Hillard, Operations Facilities Manager**

**Perry Young, Operations Assistant Facilities Manager**

**OFFICE OF FACILITIES MANAGEMENT**



**DIVISION OF  
MAINTENANCE & OPERATIONS**

**BETTER TOGETHER**



**MONTGOMERY COUNTY PUBLIC SCHOOLS**

8301 Turkey Thicket Drive, Building A, First Floor, Gaithersburg, MD 20879

**Contact Us**

**240-740-2490**

**[DMO@mcpsmd.org](mailto:DMO@mcpsmd.org)**



# TABLE OF CONTENTS

Executive Summary.....	1
Maintenance/Operations Services Overview.....	2
A. Introduction and Supporting Information.....	4
A.1. Guiding Principles.....	4
A.2. Vision.....	5
A.3. Mission.....	5
A.4. Interrelationships.....	6
A.5. Long-Term, Strategic Focus.....	8
A.6. Near-Term Focus.....	12
A.7. Computerized Maintenance Management System (CMMS).....	14
A.8. Facilities-Assessment Process.....	16
B. Facility Outcomes.....	17
B.1. Facility Usability.....	17
B.2. Maintenance.....	18
B.3. Custodial.....	18
C. Resources and Inputs.....	19
C.1. Maintenance Staffing and Organization.....	19
C.2. Summary of Current Staffing against Industry Standards.....	23
C.3. Funding, Budgets, and Spending.....	24
D. Planned Actions.....	26
D.1. Changes.....	26
D.2. Planned Improvements.....	27
D.3. Planned Capital Projects.....	29
D.4. Professional Development.....	31
E. Summary of Obstacles and Missing Resources.....	33
Appendix A - Current and Future PLAR Projects.....	35
Appendix B - PLAR Projects Previous Year.....	39
Appendix C - Capital Improvements Summary Table.....	40
Appendix D - Training Schedules.....	44



# EXECUTIVE SUMMARY

A well-designed facilities maintenance program is a vital component of Montgomery County Public School System (MCPS). Maintaining our facilities is not only critical to ensure a safe learning environment for students and staff, but also supports optimal academic performance and achievement. MCPS comprises 210 schools that total more than 26 million square feet, including over 500 relocatable classrooms, and 24 support facilities. The current enrollment of more than 160,000 students is projected to continue to increase for the foreseeable future.

The Division of Maintenance and Operations (DMO) was formed in 2020 when the Department of Facilities Management, now called Office of Facilities Management (OFM), underwent a significant reorganization. Two of the largest divisions within OFM, Maintenance and School Plant Operations, were merged into one division, DMO. The division functions collaboratively to support student success by providing general maintenance (HVAC, plumbing, carpentry, electrical, grounds care and waste removal), repair of our facilities and the equipment located therein, preventive maintenance of systems, training for site-based building services teams, and support for the operational needs of our schools.

In this Comprehensive Maintenance Plan (CMP), DMO provides an overview of MCPS' facilities maintenance program and its delivery of facilities that are safe, secure, accessible, well illuminated, well-ventilated, and aesthetically pleasing. In addition to answering the specific questions posed by the Interagency Commission on School Construction (IAC), this plan details the school system's organizational structure, services provided, operational procedures, future initiatives, and a list of facilities.



# MAINTENANCE AND OPERATIONS SERVICES OVERVIEW

DMO comprises collaborative teams, based out of three regional service centers (referred to as Upcounty, Downcounty, and Midcounty) and one additional service center (referred to as Central). Each service center works together to ensure that MCPS facilities function as safe, productive, working environments for students, teachers, administrators, and building service support staff.

Our centers are located regionally because Montgomery County covers more than 500 square miles. This helps to facilitate a faster response time and eliminate resources being wasted in travel and traffic, especially considering that each center serves an average of 75 facilities.

Our Central M&O Service Center (Central) houses the specialty trade shops that provide services for all facilities. Central is located in Gaithersburg, where the division is headquartered, and serves as the centralized place where leadership and regional meetings, trainings, skills testing, interviewing, and other activities are held.

The **CARPENTRY SHOP** is responsible for an assortment of maintenance activities. These include windows, glass, floor coverings, lockers, doors, locks and keys, painting, roofing, handrails, ramps, and special-cut ceiling tiles.

The **ELECTRICIANS** install and service breakers, panels, switches, outlets, electric cook stoves, emergency lights, generators, and parking lot lights.



**HVAC-R SHOP** technicians repair boilers, chillers, cooling towers, circulation pumps, heat pumps, window air conditioners, refrigerators, and ice makers.

**PLUMBING SHOP** technicians repair drains, drinking fountains, gas-fired stoves, toilets, showers, and more.

**ELECTRONIC SHOP** technicians repair fire alarms, security alarms, school bell systems, public address systems, two-way radios, and audiovisual equipment.

The **FACILITIES IMPROVEMENT TEAM (FIT)** specializes in mold remediation and other HVAC-related issues. FIT will be expanded to include technicians from the various trades to work at schools after hours performing tasks that cannot be done while the facility is occupied.

**HEAVY EQUIPMENT SHOP** technicians maintain and repair tractors, lawn mowers, trimmers, snow-blowers, and other pieces of equipment. This team also provides hillside mowing services for the schools.

**INDUSTRIAL EQUIPMENT REPAIR** technicians work on kilns, rebuild motors, repair printing presses and trash compactors, and perform in-kind replacements. This team also performs line painting in parking lots.

**MATERIALS FABRICATION AND RIGGING SHOP** technicians maintain and repair projection screens, stage curtains, upholstery, window blinds, ceramic tiles, and even masonry.

The **GENERAL MAINTENANCE SHOP** excavates, provides hauling and trash removal services, repairs asphalt and concrete, maintains playgrounds, mows fields, trims trees and bushes, and plows the snow.



# A. Introduction and Supporting Information

## A.1. GUIDING PRINCIPALS AND VALUES

The core values and guiding principles of MCPS shape everything that is done throughout the school system. This includes how students are taught, how colleagues work together, and how the facility's maintenance and improvement activities are planned and implemented. Those core values and principles are learning, relationships, respect, excellence, and equity,

**LEARNING:** We believe that we must engage every student, every day; learning is achieved by cultivating curiosity and encouraging determination, focus, and hard work; and adult learning and engagement are key to student learning.

**RELATIONSHIPS:** We believe that meaningful collaboration is vital to our success; strong partnerships are built on trust and open and honest communication; and building relationships with our diverse community requires us to understand the perspectives and experiences of others.



**RESPECT:** We believe that each individual's contributions add value to our learning community; fair treatment, honesty, openness, and integrity are essential; and the diversity of our culture, interests, skills, and backgrounds is an asset that makes us stronger.

**EXCELLENCE:** We believe that raising the bar and setting high standards is necessary to ensure that all students graduate ready for college and career; we have to expect the best to get the best from everyone, every day; and create intellectual excitement and supporting personal growth inspires us all toward excellence.

**EQUITY:** We believe that each and every student matters; outcomes should not be predictable by race, ethnicity, or socioeconomic status; equity demands the elimination of all gaps; and creating and maximizing future opportunities for students and staff is necessary.





## A.2. VISION STATEMENT

DMO's vision is to be a model of excellence, continuous improvement, and innovation - a model that is nationally recognized as a leader in K-12 maintenance and operations services.

## A.3. MISSION DEFINITION AND NARRATIVE

The mission of MCPS is to ensure that every student will have the academic, creative problem solving, and social emotional skills to be successful in college and career.

The mission of DMO is to support the MCPS mission. We aim to provide a full range of maintenance and operations services that exceed customer expectations, and establish a highly skilled workforce and continue to foster long-term relationships with MCPS administrators.

Additionally, as DMO enters into FY2024, we will focus our efforts to accomplish the initiatives of the Office of Facilities Management. We also intend to improve this division's **tools, technology, and training** as we operate under budgetary constraints. More information regarding the 3T initiative is located within the "Long-term, Strategic Focus" section of this CMP.

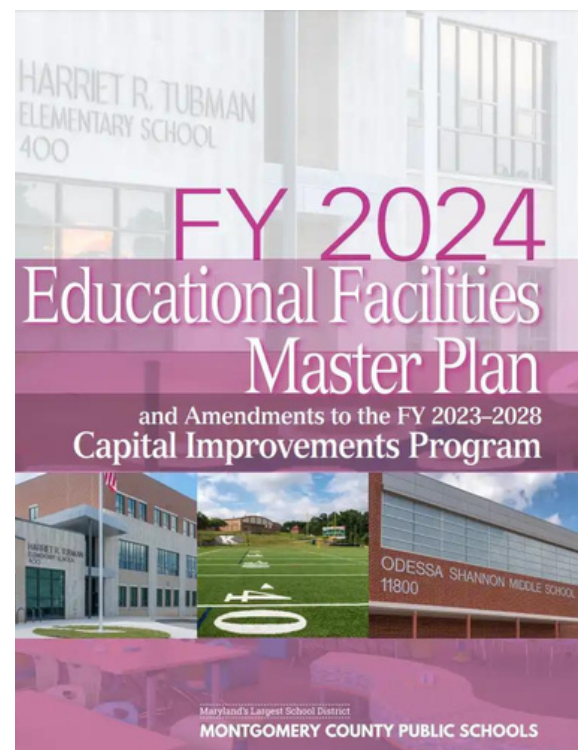
## A.4. INRERRELATIONSHIPS (FACILITIES MANAGEMENT DOCUMENTS)

All four divisions within MCPS' Office of Facilities Management (Maintenance and Operations, Design and Construction, Capital Planning and Real Estate, and Sustainability and Compliance) collaborate to ensure that construction, maintenance, and other functions are performed in alignment with state regulations. We also work together to create documents which provide various government agencies, the Board of Education, and Montgomery County community members with information, updates, and plans for MCPS facilities. These documents include The Educational Facilities Master Plan, the Capital Improvements Program, and the Comprehensive Maintenance Plan.

Both the Educational Facilities Master Plan (EFMP) and the Capital Improvements Program (CIP) are compiled by the MCPS Division of Capital Planning and Real Estate. The FY2024 EFMP reflects the amended FY2023 - 2028 CIP, approved by the Montgomery County Council in May 2023.

The EFMP sets forth the agenda for future facilities planning and provides information that the community and the Board of Education need as they work toward resolving facilities-related issues and setting school system priorities.

According to IAC guidelines, the EFMP must include the school district's educational goals, standards, and guidelines; community analysis; an inventory and evaluation of existing school buildings; current and projected enrollment data; analysis of future school facility needs; policies for co-location, shared use, and shared cost of existing and planned school facilities; policies to address school capacity needs in planned growth areas or to address adequate public facilities ordinance requirements; and policies addressing current and planned transportation for students, administrators, and teachers per school.



The CIP is the superintendent's recommendation and identifies construction and renovation projects recommended for planning and/or construction funding. It also identifies upcoming systemic renovation projects, relocatable placements, and countywide projects that address many of our facilities throughout the school system.

DMO assists the Division of Capital Planning and Real Estate by identifying and prioritizing systemic projects (i.e. HVAC system replacements) for inclusion in the CIP. However, we are primarily responsible for annually updating the Comprehensive Maintenance Plan (CMP).

The relevant information within the CMP must be compliant and compatible with the Educational Facilities Master Plan (EFMP) and the CIP. The purpose of the CMP is to provide our stakeholders with information to make fiscally responsible decisions as they conduct future facility planning.

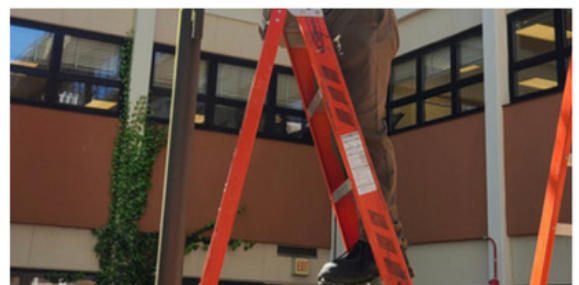
At DMO, we understand that effective school facility maintenance planning can significantly contribute to an organization's instructional effectiveness and financial well-being by Improving the cleanliness, orderliness, and safety of an organization's facilities; reducing the operational costs and the overall life-cycle cost of a building; helping staff identify facility needs and priorities proactively rather than reactively; extending the useful life of buildings; and Increasing energy efficiency and lowering the carbon footprint of the organization.

# COMPREHENSIVE MAINTENANCE PLAN

FISCAL YEAR 2024



MONTGOMERY COUNTY PUBLIC SCHOOLS  
OFFICE OF FACILITIES MANAGEMENT



## A.5. LONG-TERM STRATEGIC FOCUS

Every four years, the Montgomery County Board of Education (BOE) establishes a strategic plan to guide the work of MCPS. The objectives, targets, and strategies in the plan are organized into the three priority areas:

- Academic Excellence
- Well-being and Family Engagement
- **Professional and Operational Excellence**

According to this plan, professional and operational excellence is vital because student success is only possible by hiring and maintaining a highly qualified, diverse and culturally proficient workforce.

MCPS' commitment to effective operations across the district allows schools to maintain their focus on student success. This includes direct support to schools and students' equal access to resources, stable financial practices, and a commitment to environmental protection. The professional and operational goals most relevant to facilities maintenance include—

- increasing districtwide, culturally relevant professional learning for all staff to support equity;
- improving the strategic recruitment strategy in order to increase high-quality workforce diversity;
- increasing connectivity and satisfaction with MCPS technology;
- connecting the district's financial plan to the strategic plan with the goal of aligning all district resources and increase transparency; and
- continuing to provide and maintain safe and clean facilities that ensure accessibility and support the learning environment.

It is important to connect the strategic plan developed by MCPS to facilities maintenance-related long-term strategic plans; however, the language used to outline MCPS objectives, targets, and strategies in this area are very specific to student, administration, and curriculum success.

Only a few of DMO's strategic plans for FY 2024 align perfectly with the professional and operational excellence goals delineated within the MCPS Strategic Plan FY 2022-2025. To supplement, we have long-term plans exclusively related to the maintenance of MCPS facilities.



DMO's initiatives requiring long-term strategic focus include—

- increasing professional learning for all DMO staff and increasing workforce capacity;
- improving the strategic recruitment strategy to hire highly qualified, diverse staff;
- streamlining processes innovatively and making operational improvements; and
- continuing to maintain safe and clean facilities that ensure accessibility and support the learning environment.

## **INCREASING PROFESSIONAL LEARNING AND WORKFORCE CAPACITY**

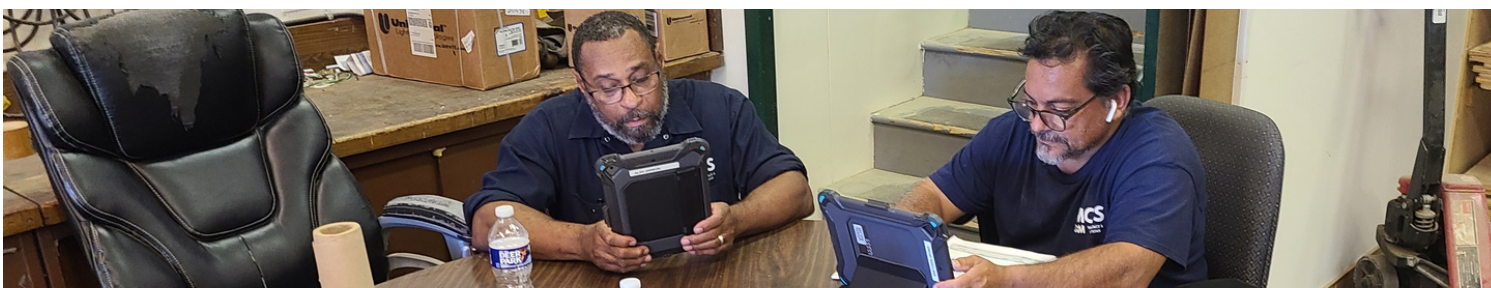
DMO has developed several training programs to support and improve our workforce capacity. These training sessions occur throughout the year. For example, in our Basic Skills Trainings, building services staff are taught how to use equipment safely and properly, strip floors, wax floors, perform minor repairs, how to work quickly and efficiently, how to conduct themselves in a learning environment and much more. Another important training program is Preventative Maintenance (PM) University. This initiative has been vital to our improvement as a division and it requires long-term strategic focus.

### Background

Prior to 2021, some of the largest challenges DMO faced arose from issues with our HVAC systems. The assumption was made that our HVAC systems were being properly cleaned and maintained by plant equipment operators (PEOs); however, because none of the PEOs were tasked solely with preventive, scheduled, or routine maintenance duties, important PM work was not being done efficiently. Consistent problems were being addressed reactively instead of proactively as routine preventive maintenance tasks.

Additionally, due to budgetary constraints, gaps in skill set, and lack of task management and supervision, the PEOs were often overworked. Many of them handled the air filters incorrectly and maintained the equipment poorly, decreasing the already strained life expectancy of some of the systems. These circumstances revealed the critical need for us to restructure.

**To meet our commitment to operational excellence and the continuous improvement of our processes, DMO committed to developing a Centralized Preventative Maintenance (PM) Plan. This initiative was created to ensure that all MCPS schools are provided with the same high levels of support, regardless of limited resources.**





## Fiscal Years 2023-2024:

In 2021, DMO officially launched the PM program. Between FY 2022 and FY 2023, to support the PM Program, PM University was created. Officially launched in January 2023, PM University has allowed us to provide hands-on training and support to our newly established PM teams. Although the PM technicians are not trade technicians, they are trained to identify the PM work needed based on trade (HVAC, Electrical, Carpentry, and Plumbing). For example, these teams complete preventative maintenance tasks, such as—

- replace air filters in air supply units;
- check plumbing fixtures and water coolers for leaks;
- report condensate leaks from chilled water piping and HVAC equipment; and
- report damaged rooftop exhaust fan covers and vent obstructions.



The tasks of each PM team vary based on the age and condition of the facility; however, all tasks are designed to properly maintain all systems to keep our schools operational for MCPS students. Student learning is important to DMO and ensuring that students have safe and comfortable environments to learn drives us to restructure, despite many challenges. In addition, through the implementation of our PM strategy, MCPS has been able to proactively maintain and troubleshoot critical assets.

DMO's long-term plans for the PM Program are simple. We hope to receive long-term support and funding to continue the program. Training the PM teams require tools, materials, and time. Ideally, we can continue to provide the resources for this training program, especially as we seek to find creative solutions to combat continuous trade technician vacancies.

## **IMPROVING THE STRATEGIC RECRUITMENT STRATEGY TO HIRE HIGHLY QUALIFIED, DIVERSE STAFF**

As explained in more detail within section D.4. of this CMP, DMO currently has 63 vacant maintenance and trade positions. This number of vacancies is high, yet we will continue to ensure safe learning environments. Despite the demand for skilled tradespeople, adverse labor markets make filling these positions difficult. Qualified tradespeople often decide to work for private sector companies because they offer more competitive salaries. We also have several trade technicians who retire each year. In an effort to fill these positions, DMO intends to implement more aggressive long-term hiring strategies, beginning FY 2024.

One of our main recruitment strategies is to host and attend more hiring fairs. At these hiring fairs, DMO offers on-site interviews for building service positions, and hands-on maintenance skills testing, and we assist potential candidates to create candidate profiles in our system so they can easily apply for jobs with MCPS. Since FY 2023, we have hosted trade-specific hiring fairs where we partner with trade schools and county agencies. Our goal for FY 2024 is to either host or attend hiring fairs on a quarterly basis, at minimum.

### **STREAMLINING PROCESSES INNOVATIVELY, MAKING OPERATIONAL IMPROVEMENTS, AND CONTINUING TO MAINTAIN SAFE AND CLEAN FACILITIES**

DMO's long-term strategic plans for facilities maintenance also consist of various corrective maintenance and preventative maintenance projects, along with large-scale capital improvement projects to optimize the operation and lifecycle of building assets. Additional long-term projects requiring strategic focus include the following:

#### [Building DMO's Distribution Center](#)

In order to streamline our distribution process, increase the availability of supplies, and conserve funds, DMO operations managers are developing the plan for a single inventory management system. Once operational, it will function as DMO's distribution center, ensuring prompt delivery of HVAC and filter parts and systems to schools. The warehouse facility will house our most commonly used parts, ready for distribution where needed. These parts will be managed in Asset Essentials (AE). A centralized warehouse also will reduce inbound costs, lower minimum stock levels, and avoid overstocking. When banking larger inventories, DMO will also lower shipping and transportation costs. Not only will customer service be more consistent, but centralized storage will free up much-needed space in schools to meet their operational needs.

#### [Chiller and HVAC CIP](#)

Because schools built or modernized since 1985 are generally of higher construction quality than schools built prior to that year, it is possible to extend the useful life of equipment and systems through a high level of maintenance and replacement of building systems. In the coming years, we hope that more funds will be directed to major chillers and HVAC systemic projects that sustain and upgrade facilities in good condition for longer periods than has been feasible in the past. According to our records, we have a list of schools that need major system repairs. This cost of all repairs will cost nearly \$2.5 million, which we do not currently have within our budget for FY 2024.

## Centralized Mowing

The scope of this plan is to ensure that all MCPS school lawns are well-maintained throughout the academic year. All facilities could be mowed approximately twice a month, with an average of five locations mowed each day depending on the facility's acreage. We are currently considering creating a Second Shift Grounds Team; however, it would put a significant strain on existing staff. We are currently in the process of solidifying a plan that would meet everyone's needs given current staff and resource limitations.

## **A.6. NEAR-TERM FOCUS**

### Setting up Preventative Maintenance Work Orders in Asset Essentials

We understand the importance of having our Preventative Maintenance (PM) work orders and PM tasks documented, accessible, and trackable within Asset Essentials (AE), our CMMS. Ideally, AE also will be configured to show that our PM work orders are closed within 30 days. To enter the required information (PM orders, PM tasks, etc.) into AE, we are working with Brightly, our CMMS provider. These updates should be implemented by January 2024.

It is important to note that, MCPS has just completed its first year with the Asset Essential CMMS system. As we move forward with AE, DMO will continue to make updates to the system to help provide the best possible customer service to all stakeholders and increase the longevity of our equipment.

### New Custodial Supplies Allocation Formula

DMO will implement the use of a new formula to calculate custodial supply fund allocations for FY 2024. For the last 15 years, custodial supply funds have been allocated primarily based on each facility's square footage. Although the current formula worked well for previous years, it no longer meets the changing needs of our schools, students, and staff. The current formula does not account for key variables such as enrollment, student characteristics, inflation, facility characteristics, or facility type.

In an effort to align ourselves with industry guidelines and best practices and meet the needs of all MCPS students and staff more equitably, we have created a new custodial supplies allocation formula and a system for building service managers (BSM) and their principals to track the accounts.



### New Allocation Formula for Building Service Staff

DMO plans to implement the use of a new building service staff allocation formula. This formula is being developed to ensure that DMO can support all school facilities equitably. It is important that we assign the appropriate number of staff to each school in order to avoid any school facility being underserved.

### Transition from Barcodes to QR Codes

In FY 2024, DMO will begin to identify equipment and assets using QR codes instead of barcodes. QR code technology provides real-time insight into asset location, status, and condition. The QR code transition will improve inventory tracking.



### Small-scale Capital Projects

In FY 2024, the Division of Design and Construction will continue to identify and coordinate the completion of smaller-scale projects such as roofing, flooring, ceilings, lighting, windows/doors, life safety systems, and restrooms.

### Unlocking Leadership

The purpose of Unlocking Leadership is to provide additional tools and support to DMO managers in an effort to unlock their leadership skills and to increase their managerial efficiency. Upon completion of this two-part initiative, each of the managers should feel toiled, capable, and ready to implement positive lasting change at their respective service centers.



## A.7. COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM (CMMS)

Utilizing the same software as most of the LEAs within the state of Maryland, MCPS recently completed its first year using Brightly's Asset Essentials (AE) as its computerized maintenance management system (CMMS) for DMO.

By using the Asset Essentials module, DMO has implemented a dedicated work order management system that allows us to create, assign, track, and prioritize work orders. It also enables us to generate reports, monitor progress, and maintain a centralized database of all work orders.

From the transition to AE, DMO has realized an improved workflow to manage and complete work orders. The use of mobile tablet devices in this process also has increased our efficiency and effectiveness as we complete work orders.

AE implementation and use has significantly improved customer satisfaction through improved effective and corrective maintenance activities. We have reduced the overall lifecycle costs of our assets and resources.

DMO has implemented key performance indicators (KPIs) through AE Analytics to make data-driven decisions for ongoing enhancements in work order management and the prioritization of outstanding work. The types of volume and efficiency KPIs used to get a snapshot of our operations and chart our progress toward achieving desired goals include the following:

- Volume KPIs
  - Total # of work orders/ broken out by month and year (at each school or service center)
  - Total # of work orders by source type of asset (i.e., HVAC unit, boiler, chiller)
  - Hours spent on work orders
- Efficiency KPIs
  - Work—order completion rate
  - # of days to complete work orders
  - % of work completed on time
  - PM to RM ratio: Comparing % of Preventive vs. Reactive (e.g., corrective) maintenance work orders



Since the implementation of AE in August of 2022, MCPS has made significant progress in several areas:

- Completing over 80,000 work orders
- Creating approximately 6,000 PMs/PDMs including—
  - 218 Filter Change Plans
  - 266 Annual Roof Inspections
  - 173 Elevator inspections

In addition, the following school-based and maintenance staff have completed Asset Essentials training:

- BSMs/BSAMs
- SBAs/School administrators
- Maintenance technicians

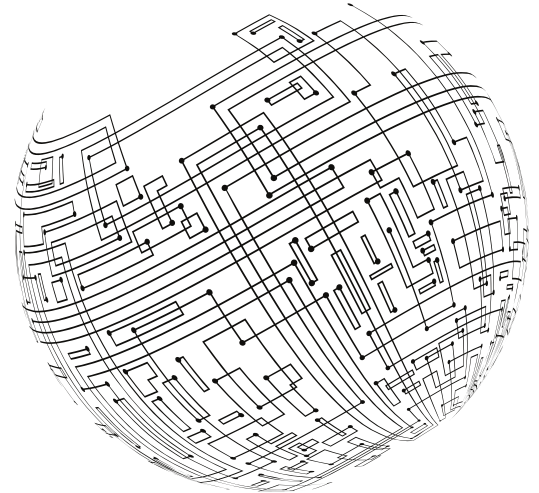
Currently, a comprehensive asset inventory project is in progress to be completed in November 2023 integrating AE with the asset inventory management system.

A parts inventory warehouse project also is in progress to store commonly used parts at a warehouse facility for distribution where needed. These parts will be managed in Asset Essentials and will help DMO accurately track inventory and costs.

DMO fully staffed a Call Center to manage incoming work order requests and assign them to the appropriate shop in AE. The Call Center has streamlined the work order distribution process and improved overall customer service to all stakeholders. Through AE, shop supervisors manage and track contractor hours and costs.

The percentage of preventive-maintenance work orders that are generated automatically within the CMMS pursuant to PM schedules entered into the CMMS is 98.78 percent.

Approximately 97 percent of our 239 facilities' major building systems and components are tagged and entered into the asset inventory within AE. We have several new and renovated schools that will be inventoried this fall to bring this to 100 percent. In the spring of 2023, we launched a full inventory project to replace the current asset barcodes with QR codes on all major building systems and components. The expected completion date is fall 2023.



## A.8. FACILITIES-ASSESSMENT PROCESS

To maintain high-quality educational facilities, an educational facilities planning process is required to determine when maintenance is no longer viable and systemic replacement is necessary to keep current with educational programming. To make this determination, MCPS evaluates the IAC's statewide school facilities assessments and utilizes outside contractors to assess facility conditions.

DMO uses the annual IAC maintenance assessments as a snapshot of the overall maintenance and operational facility conditions and uses those results to perform additional corrective maintenance on our facilities.

In addition to the IAC Assessments, MCPS' Division of Design and Construction (DDC) contracts with an external consultant to assess facility conditions through site visits as well as plan and document review. These initial assessments were conducted in the summer and fall of 2018 and collected baseline facility condition and building characteristic key facility indicator (KFI) data for all MCPS facilities.

Infrastructure elements were assessed according to industry standards, including anticipated life span, replacement cost, maintenance cost, space requirements, and functionality. Assessment of facility, infrastructure, and building data is ongoing. Specific elements are reassessed based on life span, age, and other individual considerations.

Reassessment sequences will be developed as appropriate to each category of infrastructure and the age and condition of the facility. As part of an ongoing scheduling cycle, 40 facilities were reassessed by an outside contractor in FY 2023.

The results in each category indicate the relative condition of each facility component according to the industry standard for that component. The MCPS Design and Construction website presents the cumulative condition of the school in that category relative to other MCPS schools. Individual reports for each school are available on the DDC website and updated as new reassessments are conducted.



KFIs are facility characteristics that influence the learning experience and serve as a framework to provide a basis to prioritize options responsive to changing facility needs. The key facility indicator data gathered through these assessments will help us better sustain the operation of our school buildings.

## B. Facility Outcomes

DMO strives to keep all MCPS facilities operational to support the delivery of educational services throughout the entire year. During the FY 2023 school year, there were a total of five days where one or more of our facilities were unable to provide full-day educational services to our students.

One day, all MCPS facilities were closed due to widespread power outages caused by a plane crash in Gaithersburg, MD. There was another day when Westland Middle School lost a full day of educational services due to a damaged sprinkler that caused significant water issues in the facility. There were three other days when four schools (Great Seneca ES, Northwest HS, Neelsville MS, and Clopper Mill ES) had to close early due to external water main breaks.

Whenever there is an emergency, DMO reacts quickly to ensure our facilities are restored to full functionality so we can provide full educational services to our all of students.

**Reference the following table for B.1. through B.3.**





## B) Facility Outcomes

	Previous FY23 Actual	Current FY24 Goal *	Notes**
<b>1) Facility Usability - QA team</b>			
For each active or holding PK-12 school facility, the number of facility days during which the facility could not support the delivery of the educational programs and services assigned to that facility and that are normally delivered in that facility.	5	0	-
<b>2) Maintenance (on an LEA-wide basis) - ITSS team</b>			
<b>Preventive Maintenance (PM)</b>			
The total number of PM WOs opened.	4,866	5840	-
The percentage of PM WOs closed within 30 days.	34%	45	-
The total number of staff hours spent on PM work.	5,760	6912	-
The total number of contractor hours spent on PM work.	-	-	1
The total dollars spent on PM work completed by staff.	227,865	273,439	3
The total dollars spent on PM work completed by contractors.	1,454,049	1,163,239	2
The percentage of all maintenance work hours spent on preventive maintenance.	-	-	1
<b>Corrective Maintenance (CM)</b>			
The total number of CM WOs opened.	72,685	58,148	-
The percentage of CM WOs closed within 30 days.	65%	78%	-
The percentage of CM WOs marked as Emergency or High Priority WOs.	11%	9%	-
The total number of staff hours spent on CM work.	247,219	197,775	-
The total number of contractor hours spent on CM work.	-	-	1
The total dollars spent on CM work completed by staff.	16,133,700	12,906,960	3
The total dollars spent on CM work completed by contractors.	3,977,159	3,181,727	2
The mean time to repair the items for which a CM WO was opened.	3.4 Hours	2.7 Hours	-
The percentage of CM WOs entered by central administration or non-building-level staff.	MCPS is in the process of configuring our CMMS system to gather this data for FY25		
The percentage of CM WOs entered by building-level staff.	MCPS is in the process of configuring our CMMS system to gather this data for FY25		
<b>3) Custodial - Training Team</b>			
The percentage of custodians trained on the LEA's Custodial Scope of Work during the last two fiscal years.	100	100	-
The percentage of custodial duties completed adequately (as assessed through the LEA's selected method of assessment and against the LEA's selected standard).	-	-	4

**Notes:**

\*FY24 goals are  $\pm 20\%$  depending on the facility outcomes.

\*\* FY23 goals are not listed on this table since we did not include them in last year's Comprehensive Maintenance Plan.

1 DMO is not currently tracking this data in our CMMS system but will be in FY25..

2 The dollar amount was sourced from the fiscal team.

3 Includes labor and parts.

4 Data is not available. Currently, the school system's selected method of assessment is for school administration to evaluate the adequacy of custodial duties.

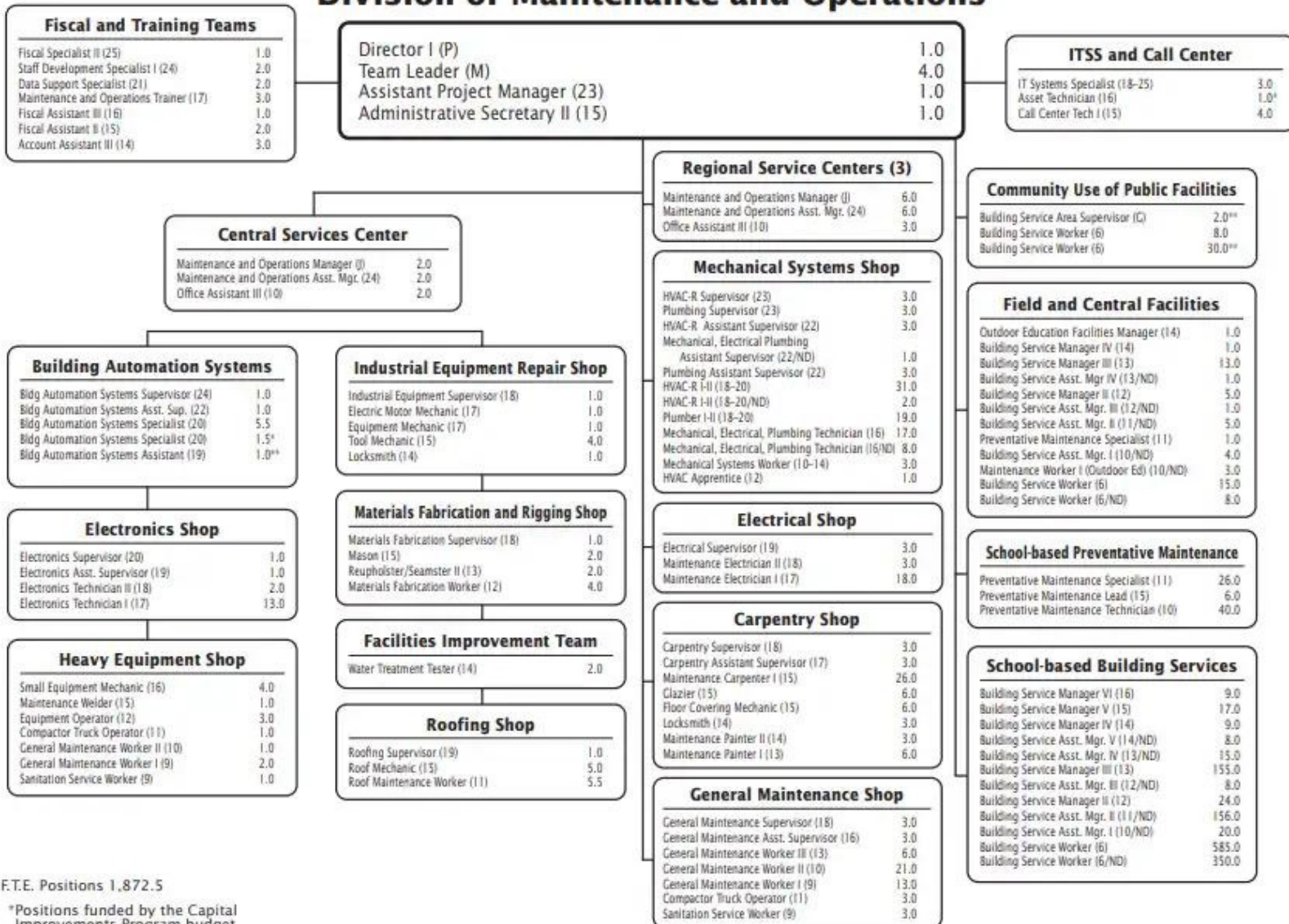




# C. Resources and Inputs

## C.1. PART 1: ORGANIZATION

### Division of Maintenance and Operations



F.T.E. Positions 1,872.5

\*Positions funded by the Capital Improvements Program budget

\*\*Positions funded by ICB

Night Differential (ND) = Shift 2

FY 2024 OPERATING BUDGET



## C.1. PART 2: STAFFING

### Staffing Data for Positions in Maintenance

Location	Position	Total Filled	Total Vacant FTE
Maintenance	Building Automation System Supervisor	1.0	
Maintenance	Building Automation Systems Specialist	4.5	
Maintenance	Building Automation Systems Specialist	0.5	1.0
Maintenance	Building Automation System Assistant	1.0	
Maintenance	Energy Mgmt Tech Adm (Building Automation Systems Assistant Supervisor)	1.0	
Maintenance	Outdoor Ed Maintenance wkr	2.0	
Maintenance	Outdoor Ed Facilities Manager	1.0	
Maintenance	Preventive Maintenance Specialist (Formerly PEO II)	24.0	3.0
Maintenance	Preventive Maintenance Technician (Formerly PEO I)	36.0	4.0
Maintenance	Preventive Maintenance Lead	6.0	
Maintenance	Facilities Asset Technician	1.0	
Maintenance	Building Service Worker shft 1	18.5	
Maintenance	Building Service Worker shft 1 (2 @ 0.5)	1.0	
Maintenance	Building Service Worker shft 2	3.0	
Maintenance	Building Service Worker shft 2	8.0	1.0
Maintenance	Building Service Worker ICB	19.0	
Maintenance	Bldng Svc Asst Mgr II shft 2	4.0	4.0
Maintenance	Bldng Svc Asst Mgr II shft 2	1.0	
Maintenance	Bldng Svc Asst Mgr I shft 2	1.0	1.0
Maintenance	Bldng Svc Asst Mgr I shft 2	4.0	
Maintenance	Bldng Svc Asst Mgr	2.0	
Maintenance	Bldng Svc Asst Mgr III shft 2	1.0	
Maintenance	Bldng Svc Mgr II	1.0	2.0
Maintenance	Bldng Svc Mgr II	2.0	2.0
Maintenance	Bldng Svc Mgr III	1.0	
Maintenance	Bldng Svc Mgr III	9.0	4.0
Maintenance	Bldng Svc Mgr IV	1.0	
Maintenance	Bldng Svc Mgr V (SSI/Sligo)	0.0	
Maintenance	Gen Maint Wkr I	15.0	
Maintenance	Gen Maint Wkr II	19.0	4.0
Maintenance	Equipment Operator	1.0	2.0
Maintenance	Mechanical Electrical Plumbing Technician (MEP)	12.0	6.0
Maintenance	Mechanical Electrical Plumbing Technician Sh 2 (MEP)	6.0	2.0
Maintenance	Mechanical Electrical Plumbing Asst Sup	1.0	
Maintenance	Gen. Maint Wkr III	6.0	
Maintenance	Maint Carpenter I	25.0	1.0
Maintenance	Carpentry Area Asst. Supv.	3.0	
Maintenance	Floor Covering Mech	6.0	
Maintenance	Roof Maint Worker	5.0	0.5
Maintenance	Roof Mechanic	4.0	1.0
Maintenance	Roofing Shop Supv	1.0	
Maintenance	Mech Sys Wkr Sh 1	3.0	
Maintenance	Maint Carpentry Area Supv	3.0	
Maintenance	Glazier	6.0	
Maintenance	HVAC-R I/II Sh 2	1.0	1.0
Maintenance	HVAC-R 1/II	23.0	9.0

## Staffing Data for Positions in Maintenance Cont.

Location	Position	Total Filled	Total Vacant FTE
Maintenance	HVAC-R Asst Sup	2.0	1.0
Maintenance	HVAC-R Supervisor	2.0	1.0
Maintenance	Plumber I/II	16.0	1.0
Maintenance	Plumber Asst Sup	2.0	1.0
Maintenance	Plumber Supervisor	3.0	
Maintenance	Gen Maint Area Supv	3.0	
Maintenance	General Maint. Area Asst Supervisor	2.0	2.0
Maintenance	Locksmith	4.0	
Maintenance	Tool Mechanic	2.0	
Maintenance	Tool Mechanic	2.0	
Maintenance	Maintenance Electrician I	16.0	2.0
Maintenance	Electrician Area Supv	3.0	
Maintenance	Maint Electrician II	2.0	1.0
Maintenance	Electric Motor Mechanic	1.0	
Maintenance	Material Fabr Wkr I	4.0	
Maintenance	Material Fabr Supv	1.0	
Maintenance	Reupholsterer/Seamstress II	2.0	
Maintenance	Electronic Tech I	12.0	2.0
Maintenance	Electronic Tech II	2.0	
Maintenance	Electronic Tech Asst Supv	0.0	1.0
Maintenance	Electronic Tech Supv	1.0	
Maintenance	Maintenance Painter I	6.0	
Maintenance	Maintenance Painter II	3.0	
Maintenance	Industrial Equip Supv	0.0	1.0
Maintenance	Equipment Mechanic	1.0	
Maintenance	Water Treatment Tester	2.0	
Maintenance	Small Equipment Mechanic	4.0	
Maintenance	Maintenance Welder	1.0	
Maintenance	Mason	1.0	1.0
Maintenance	HVAC Apprentice	1.0	
Maintenance	Compactor Truck Oper	4.0	
Maintenance	Sanitation Srv Worker (formerly Trash Service Worker)	3.0	1.0
Maintenance	Plumber I/II Sh 2		
Maintenance	Electrician Sh 2		
	<b>Totals</b>	<b>402.5</b>	<b>63.5</b>

## Staffing Data for Positions in Operations

Location	Position	Total Filled	Total Vacant FTE
Operations	Building Service Assistant Manager II Sh 2	162.0	22.0
Operations	Building Service Assistant Manager III Sh 2	9.0	
Operations	Building Service Assistant Manager IV Sh 2	15.0	1.0
Operations	Building Service Assistant Manager V Sh 2	8.0	
Operations	Building Service Manager II	25.0	5.0
Operations	Building Service Manager III	153.0	5.0
Operations	Building Service Manager IV	8.0	
Operations	Building Service Manager V	15.0	
Operations	Building Service Manager VI	8.0	1.0
Operations	Building Service Worker Sh 1	581.0	28.5
Operations	Building Service Worker Sh 2	343.5	15.0
	<b>Totals</b>	<b>1355.5</b>	<b>86.5</b>





## C.2. SUMMARY OF CURRENT STAFFING AGAINST INDUSTRY STANDARDS

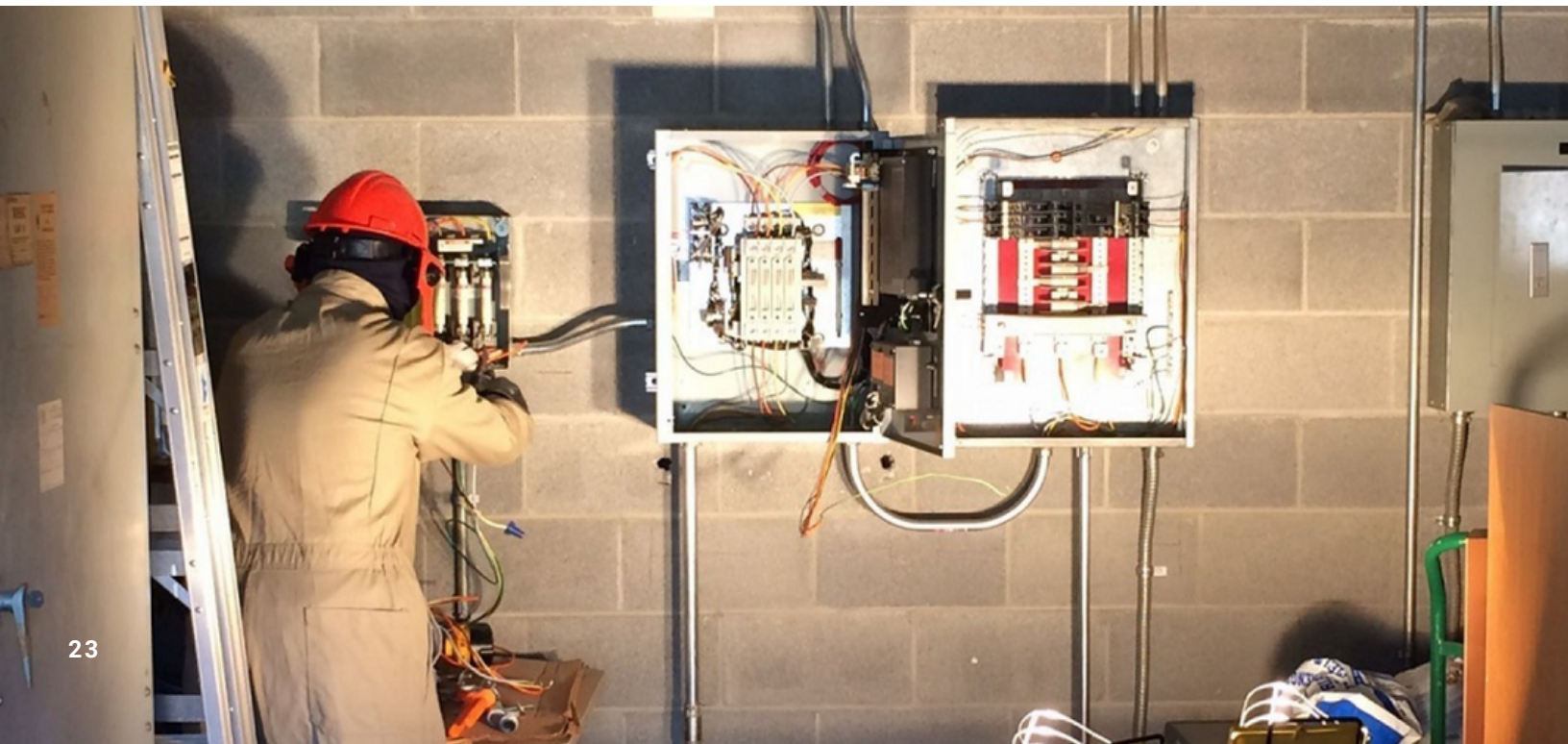
Metric	Industry Standard	Previous FY23 Budgeted	Previous FY23 Actual	Current FY24 Budgeted
a) Maintenance Staffing <sup>1</sup> (FTEs for Total GSF)	APPA Level 2 (Comprehensive Stewardship): 394 FTEs for 26,584,552, Total GSF*	391.0 FTE	386 FTE	411.0 FTE
b) Maintenance Load (GSF per FTE)*	APPA Level 2 (Comprehensive Stewardship): 67,456 GSF per FTE	67,696 per person	68,872 per person	70,330 per person
c) Percent of Maint. staff delivering bldg. Services **	N/A	91.82% (359 of 391)	88.73% (342.5 of 386)	91.97% (378 of 411)
d) Custodial Staffing (FTEs for Total GSF) <sup>3</sup>	APPA Level 2 (Ordinary Tidiness): 1592 FTEs for 26,584,552 Total GSF*	1,387.50	1,411.50	1,422.00
e) Custodial Load (GSF per FTE)	APPA Level 2 (Ordinary Tidiness): 16,700 GSF per FTE	19,077 per person	18,834 per person	18,695 per person

<sup>1</sup> Maintenance staffing includes all personnel for whom, on average, 75% or more of their time is devoted to implementing or managing the LEA's maintenance activities, including those performed on grounds.

<sup>2</sup> This is the percentage of "boots-on-the-ground" maintenance staffers who actually perform services on PK-12 school facilities as opposed to performing administrative/managerial functions.

<sup>3</sup> Custodial staffing includes all personnel for whom, on average, 75% or more of their time is devoted to implementing or managing the LEA's custodial activities, including those performed on grounds.\*Calculations based on square footage of 26,84,552 for FY23 Actuals & FY24 Budgeted

\*\* All maintenance supervisors are considered "working" supervisors and are expected to deliver services to schools. The same rule applies to building service managers who provide custodial services.



### C.3. FUNDING, BUDGETS, AND SPENDING

#### Budget Narrative

Because many of our schools were built before 1950, the systems have exceeded their recommended lifespan. The facilities' infrastructure, including sanitary and storm lines, are over 50 years old and have continuous issues that affect the school sites. The age of the buildings, antiquated systems, and infrastructure play a large role in what our technicians can do to keep them in working condition.

Since DMO has operated in a budget deficit for several years, we request sufficient funds to continue to provide the students and community with efficient operating systems and superior customer service, given the status of our aging systems as explained above. In FY 2023, our overall budget was approximately \$105M and for FY 2024 we have been approved for \$119M. The majority of our budget is salary-based and this only allows for limited funding to be utilized for operating expenses. In FY 2023, our operating budget was approximately \$17M and for FY24 we have been approved for \$20M.

Another fiscal challenge we face is the lack of sustainable funding for state-mandated initiatives. For example, in FY 2023 the state mandated that schools install menstrual hygiene product dispensers in all schools. The state provided initial funding for the dispenser installations; however, additional funding will need to be provided to pay for the yearly product inventory costs or any maintenance repairs related to the operation of the dispensers.

Finally, about 60 percent of our current vehicle fleet needs to be updated to more reliable vehicles due to safety concerns. We are unable to update our equipment and vehicles at the rate it is recommended as we do not have sufficient funding to do so.





## Fiscal Summary

	Industry Standard	Previous FY23 Goal/Budget	Previous FY23 Goal/Budget per GSF	Previous FY23 Actual	Previous FY23 Actual per GSF	Current FY24 Goal/Budget	Current FY24 Goal/Budget per GSF
Spending							
Preventive Maintenance	N/A	\$ 972,048.00	\$ 27.35	\$ 1,454,049.29	\$ 18.28	\$ 1,184,663.00	\$ 22.44
Corrective Maintenance	N/A	\$ 2,988,460.00	\$ 8.90	\$ 3,977,159.19	\$ 6.68	\$ 3,411,540.00	\$ 7.79
Deferred Maintenance (if applicable)	N/A	\$ 408,741.00	\$ 65.04	\$ 408,741.00	\$ 65.04	\$ 2,000,000.00	\$ 13.29
All Maintenance*	\$ 365,271,744 (CRV*.03)	-	-	-	-	-	-
All Maintenance, per GSF	N/A	\$ 4,369,249.00	\$ 101.28	\$ 5,839,949.48	\$ 90.01	\$ 6,596,203.00	\$ 43.53
Operations*	\$ 121,757,248 (CRV*.01)	-	-	-	-	-	-
Operations, per GSF	N/A	\$ 4,026,024.00	\$ 0.15	\$ 3,351,635.03	\$ 7.93	\$ 4,126,680.00	\$ 6.44
M&O Combined	\$ 487,028,993 (CRV*.04)	-	-	-	-	-	-
M&O Combined, per GSF*	N/A	\$ 8,395,273.00	\$ 101.43	\$ 9,191,584.51	\$ 97.94	\$ 10,722,883.00	\$ 49.97

**Notes:**

\*Current Replacement Value (CRV) was calculated using the current cost of \$458 per square foot and MCPS total square footage of 26,84,552. Division of Maintenance of Operations does not budget for CRV.

The regional/cluster/grade-band/school-type levels data is currently not available. Our funding is expended by all Service Centers from the same account number. In FY24, we will be pursuing ways to break down this information to provide it on future comprehensive maintenance plans.





# D. Planned Actions

## D.1. CHANGES TO PLANNED APPROACH

Below are descriptions of planned approaches to our maintenance activities, which differ from the previous fiscal year.

- DMO will implement a second shift expansion that will complement the Facilities Improvement Team (FIT). The goal of the second shift expansion is to enhance the FIT's ability to address preventative maintenance work orders from a holistic perspective. This expansion will include technicians from the electrical, plumbing, carpentry, and HVAC trades.
- As mentioned previously in the CMP, DMO has created a practical training program, titled PM University. Training sessions have been offered monthly to the PM team in the following areas: HVAC, electrical, and plumbing. This training is designed to enhance employees' current skills and allow them to effectively complete preventative maintenance task work orders in AE.
- DMO leadership will ensure that all division employees are properly trained and ready to succeed. In addition to all of the in-person professional growth opportunities, DMO provides supply/equipment training and safety-related videos on the Facilities Employee Resource Network (FERN) website. These videos offer refresher and awareness-level training to staff on job-related duties.



## **D.2. LIST OF PLANNED IMPROVEMENTS STRUCTURES/SYSTEMS AND PROCESSES**

### Workforce Development Improvements

The Staff Development & Training Team has revised its organizational structure to enhance its capabilities and expand its reach within DMO. In FY 2023, the training team added an additional maintenance trainer. In FY 2024, they will add a senior trainer and a data support specialist to assist the staff development specialists with maintenance and operations training and employee data tracking. Focusing on the Director's 3-T initiative for training, the primary goals are to develop staff potential and stimulate opportunities for career advancement.

Some of the new initiatives involve the creation of a peer coaching program for building services and maintenance trades, additional safety protocols, professional development, leadership training for maintenance trades, and the expansion of the PM Lead Professional Development Program and PM University training.

Other initiatives targeted for improvement include updates to the hands-on skills testing for each maintenance trade (introduction of PM H.O.S.T), an evaluation of Building Systems Operations (BSOs) coursework for building services, and miscellaneous course offerings to build capacity among central office staff.

### Roof Inspection Process Improvement

In FY 2023, DMO ceased hiring outside contractors to perform roof inspections. Instead we have in-house staff conduct them. Asset Essentials is programmed to generate annual preventative maintenance work orders for roof inspections at all MCPS facilities. These inspections will be conducted throughout the year and will help identify minor issues promptly and extend the useful lifespan of the roof.

### A Standard DMO Communication Management Plan

A communication management plan is being developed to include DMO objectives, involved parties, tactics, tasks, and schedules for relaying project-related updates.



### Standard Operating Procedures, A Process Improvement Initiative

In FY 2023, DMO launched a Standard Operating Procedures (SOPs) initiative. By developing and documenting DMO's SOPs, our goal is to ensure consistency in best practices between the four service centers.

The SOP initiative began with standardizing PM tasks, performed by our PM Teams, to ensure plant systems' integrity. Since its inception, DMO has expanded the SOP initiative to include other jobs within DMO.

Most recently, SOPs were developed for DMO's office assistants to ensure that all administrative tasks performed in the service centers are consistent and reflective of industry best practices. Presently, we are in the process of standardizing best practices for service center managers and administrative staff. Identifying areas that need process improvement and documentation has led to increased training and professional growth, which will strengthen our teams and increases our productivity.

SOPs are also currently being developed for the General Maintenance teams. This is significant work because SOPs will help to ensure the equipment needed to perform the tasks run safely and consistently and administrative processes are managed uniformly. As the SOPs Initiative continues, DMO employees will have a greater understanding of their roles and feel more connected to the work they do to provide safe and healthy learning environments for children.

### Implementation of Claim Filing Protocols

In 2023, DMO's Quality Assurance team developed a protocol for filing insurance claims. These step-by-step instructions serve as guidelines for filing claims that involved property loss, workers' compensation, and vehicle accidents. Through the use of this protocol, claims should be processed more consistently and completely. See, chart on the following page.





### PROPERTY LOSS

The incident is reported to the appropriate regional Maintenance and Operations (M&O) service center management team.

M&O manager completes the Property Damage/Loss Claim Form (MCPS Form 525-7) and emails it to Risk Management (RM) at RiskManagement@mcpsmd.org.

For flood-related events, the M&O manager contacts (240-740-2520) and follows-up with the Indoor Air Quality (IAQ) team.

M&O manager emails related invoices to RM and DMO's fiscal specialist.

M&O manager provides updates to RM regarding work progress.



### WORKERS' COMPENSATION

The supervisor is notified about the injury sustained by the employee.

Supervisor completes a First Notice of Loss form\* and reports the injury to the Montgomery County Self-Insurance Program via their website ([www.mcslip.org](http://www.mcslip.org)) or by phone (1-888-606-2562).

Supervisor calls ERSC (301-517-8100) to report the Workers' Comp case information.

The supervisor completes the appropriate Supervisor's Incident Investigation Report form that can be found on FERN.\*\*

Supervisor follows up on any safety-related recommendations.



### VEHICULAR ACCIDENTS

The employee contacts their supervisor and calls 911 for a police report.

Supervisor and/or employee completes a Vehicle Accident Report (MCPS Form 215-49).

Supervisor emails the completed MCPS Vehicle Accident Report and relevant photographs to RM (RiskManagement@mcpsmd.org) within 24 hours of the accident.

RM reports the claim to the CorVel Corporation (1-800-234-5003).

CorVel contacts the driver for a recorded statement.

Supervisor emails vehicle repair estimates and invoices to RM.

## D.3. PLANNED CAPITAL PROJECTS

DMO works collaboratively with other divisions within the Office of Facilities Management to identify major maintenance and repair projects. Once projects have been identified, we prioritize the timeline for completion. Setting priorities is crucial given the ongoing fiscal challenges. The CIP includes funding for capital projects in all priority areas and represents a balanced approach to addressing the many needs of MCPS. A brief description of the type of projects included in each priority area follows:

### Capital Improvement Priorities

1. Compliance Projects
2. Capital Maintenance Projects
3. Capacity Projects
4. Major Capital Projects
5. System Infrastructure Projects
6. Technology Modernization Project



### Priority #1—Compliance Projects

This includes funding to address mandates, including the *Americans with Disabilities Act* (ADA), asbestos abatement, fire safety upgrades, stormwater discharge, water quality management, and Washington Suburban Sanitary Commission (WSSC) requirements. These projects must be completed in a timely fashion to comply with laws and regulations.

### Priority #2—Capital Maintenance

This includes funding countywide projects that maintain school facilities in good condition so that they are safe, secure, and comfortable learning environments. In addition, capital projects in this area preserve school assets and can prevent more costly repairs or replacements in the future.



SEE, Appendixes A-C for lists of planned maintenance improvements and planned capital projects.

### Priority #3—Capacity Projects

This includes funding for new schools and additions so facilities can operate within capacity.

### Priority #4—Major Capital Projects

Funding in this area is important to sustain and upgrade building systems and address programmatic and capacity needs in schools.

### Priority #5—System Infrastructure

Funding in this area provides for facilities important to the operation of schools, including transportation depots, maintenance depots, warehouses, and the upgrading of food services equipment.

### Priority #6—Technology Modernization

Funding in this area enables periodic upgrades to computers and technology that support student learning with up-to-date technologies.

## D.4. PROFESSIONAL DEVELOPMENT

### Accomplishments:

- DMO created a new career pathway for building service managers called the Building Services Professional Growth Roadmap. The roadmap is designed to help building service staff members experience a successful career at MCPS and aid in their navigation as they strive toward building service management. Those interested in professional development are required to complete coursework consecutively. The prerequisite classes that must be taken before being eligible to take the Building Service Management Test include Basic Skills, Building Systems Operation, and Supervisory Skills for DMO Employees.
- As mentioned, PM University is a new training program developed to enhance employee skills and give them the knowledge to complete their preventive maintenance tasks at a high level.
- With the launch of AE in the summer of 2022, the staff development training team created and delivered AE training to operations, maintenance, and school administration staff throughout MCPS. This training helped to ensure that all staff members were comfortable properly using the new system.
- In 2021, DMO started the process of reviewing the current HVAC shop structure. After the review process was completed, MCPS approved the restructuring of the HVAC shop into two separate shops, HVAC and plumbing. An important part of this restructuring was to require employees to have the appropriate certification in the content area. In 2022, DMO provided the classes needed for the newly required certifications to help current employees meet the new standards. Having well-qualified staff is critical for optimal care of MCPS facilities and to provide excellent customer service to our stakeholders. DMO has created two new career paths for employees in the Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC-R) Shop and Plumbing Shop. In both shops career advancement begins at the Apprentice I-II levels and proceeds to the HVAC-R and Plumbing Technician I and II levels once journey licenses are acquired. Assistant supervisors and supervisors in the HVAC and plumbing shops typically have a master's license and experience in a supervisory role.



SEE, Appendix D  
for a copy of the  
Professional  
Building Service  
Cert. Program  
document

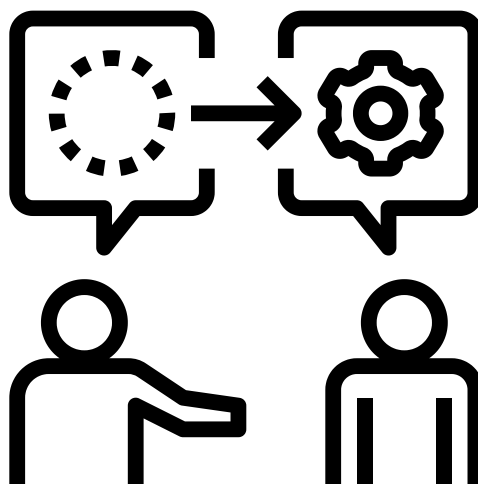


## Challenges:

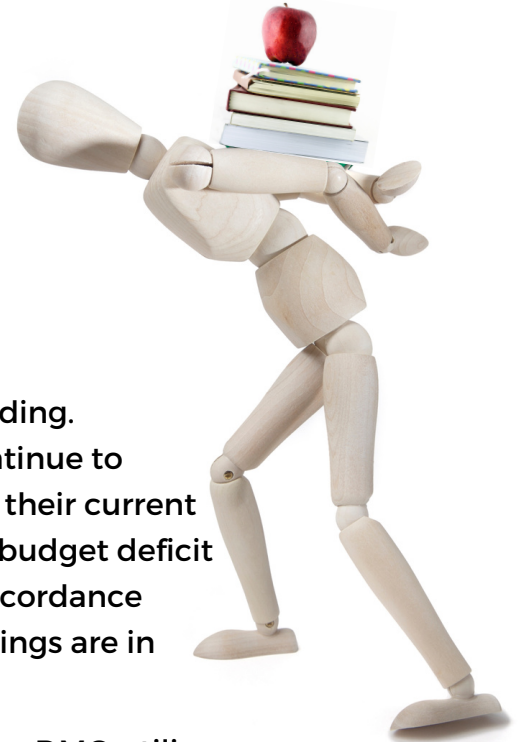
- Providing the custodial and maintenance service levels expected by stakeholders is a challenge when operating under a fixed budget. This is especially the case when new schools are built (i.e., Harriet R. Tubman Elementary School - FY 2023) and there is an immediate need to staff the building accordingly.
  - According to the National Center for Education and U.S. Department of Education, custodians are staffed based on the industrywide standard of 20,000 to 22,000 square feet per custodian, with adjustments made to account for specific building use considerations.
- To meet the increased workload, MCPS must overcome this obstacle to attract and hire enough staff to satisfy national square footage standards.
  - Faced with an aging workforce and an increase in retirements, DMO struggles to compete with other employers to attract qualified candidates to fill vacant positions.

## Key components:

- DMO encourages and provides career pathways for professional development for maintenance and operations staff. As part of the director's 3 T initiative, DMO will focus on staff professional development through various training programs and we will encourage employees to obtain certifications in their specialty areas. In FY2024, the staff development team will provide leadership training for managers and supervisors.



# E. Summary of Obstacles and Missing Resources



The most relevant and impactful obstacle is inadequate funding. Budgetary constraints and other interconnected factors continue to impact our ability to meet the needs of all MCPS facilities in their current state. As previously mentioned, DMO has operated within a budget deficit for over a decade. Despite being in a prolonged deficit, in accordance with state inspection guidelines, the majority of MCPS buildings are in adequate condition.

To achieve adequate facility inspection ratings from the state, DMO utilizes solution-oriented strategic planning and innovation to temporarily address facility needs. However, the deferment and delay of facility renovations and system upgrades continues to pose challenges as we sustain the lifecycles of these facility systems.

Temporary solutions avoid system failures, but temporary solutions are not designed to be permanent solutions. We have exceeded the life expectancy of facility equipment for many years. Some repairs can no longer be made due to obsolete equipment. This approach to facility management has allowed DMO to sustain older facility systems; however, this approach is ultimately unsustainable. We will continue to ensure that students are learning in a clean, safe and comfortable environment. Increased financial support would positively impact our ability to keep doing so. Furthermore, these three obstacles are also core causes of our greatest challenges: inflation, supply chain issues, labor shortages, and insufficient funding.

- Inflation has increased the costs of building maintenance materials, contracted services, tools, supplies, and equipment.
- Supply chain issues have been causing longer delivery times for necessary items such as HVAC air filters.
- Labor shortage has impacted DMO's ability to fill vacant positions designed for workers who clean and maintain facilities.

Labor shortages are of particular concern. The complexity of our systems require skilled journeymen-level technicians. While we champion and encourage our current apprentices, we require skilled technicians with years of trade experience to properly maintain and repair systems.

Operating with high vacancies has financial repercussions. Overtime costs eat into our budget, yet we have no other viable alternatives given an increase in total MCPS facility square footage. As total facilities' square footage increases, the associated maintenance costs increase. As square footage increases, we also need more technicians. Since 2018, a total of 551,614 square feet have been added to several MCPS facilities.

We have worked diligently to extend the life of these aging systems; however, they will become inoperative soon. When they expire, for example as more chiller overhauls are needed, new systems must replace the old. Costs associated with new systems must be considered. Newer facility systems are more complex because they must adhere to IECC and IGCC regulated code requirements. The newer equipment is more expensive to maintain and they have a higher repair cost due to their complexity. For example, chiller overhauls on older equipment cost approximately \$60k; however, common repair for a modern chiller is approximately \$54k. With every new system, the total cost of ownership increases. Yearly budget allotments must also consider the total cost of ownership. We could benefit from funds to cover those costs. Ultimately, if budgets are not increased to make necessary repairs and upgrades and hire skilled technicians, our deficit will increase.

Overall, we are thankful for the financial resources from both the state and county governments and our commitment to MCPS staff and students will continue. We will always utilize solution-oriented strategic planning and innovation to address facility needs, regardless of any obstacles and missing resources.



# Appendix A

## FY24 - FY25 Planned Life-cycle Asset Replacement (PLAR) Projects

	FACILITY NAME	PROJECT TYPE
1	Argyle MS	Floor Covering
2	Baker, John T. MS	BMPI - Change of Use, Windows
3	Banneker, Benjamin MS	Asphalt, Gym Divider, Serving Lines
4	Barnsley, Lucy V. ES	Generator
5	Beall ES	Restroom
6	Belmont ES	FPR, Gym, Paint
7	Bethesda ES	Shed, Waterproofing
8	Bethesda-Chevy Chase HS	Wall EFIS Repairs
9	Blair, Montgomery HS	Light Fixtures (Compact Florescent) Locker bays, Light Fixtures (Exterior Building), Re-roofing Phases 1 and 2, Tennis Courts
10	Blake, James Hubert HS	Auditorium Sound System, Paint
11	Brooke Grove ES	Playground and ADA, fence
12	Brookhaven ES	Elevator, HVAC
13	Burning Tree ES	Playground, Serving Line
14	Burnt Mills ES	Replacement
15	Burtonsville ES	BMPI - Classroom Conversion, Playground
16	Cabin John MS	Digital Sign
17	Candlewood ES	BMPI - Other Program
18	Carson, Rachel ES	Relocatables-Removal
19	Cashell ES	Playground
20	Cedar Grove ES	BMPI - Change of Use, Paint, Relocatables-Removal
21	Chevy Chase ES	Paint
22	Churchill, Winston HS	FPR, Tennis Courts
23	Clarksburg ES	Generator
24	Clarksburg ES #9	New
25	Clarksburg HS	Sewer connection, Stage Floor
26	Clearspring ES	Playground shade structure
27	Clopper Mill ES	Playground shade structure
28	Cold Spring ES	Doors, Serving Line
29	Daly, Capt. James E. ES	Doors, Relocatables-Removal
30	Damascus ES	Serving Line, Walk-in-Refridgerator
31	Diamond ES	Relocatables-Removal
32	Drew, Dr. Charles R. ES	Gas Pipe Removal
33	DuFief ES	Gym Floor Synthetic to Wood, Masonry Walls EFIS, Paint (Exterior and Interior), Suspended Ceiling and Lights Phase 1
34	East Silver Spring ES	BMPI - Other Program
35	Eastern MS	Restroom
36	Edison, Thomas HS	BMPI - Other Program
37	Einstein, Albert HS	BMPI - Change of Use, Emergency Generator, Relocatables-Placement

	FACILITY NAME	PROJECT TYPE
38	Farmland ES	BMPI - Other Program
39	Farquhar, William H. MS	Tennis Courts
40	Fields Road ES	Playground project, Windows (Courts yard)
41	Flower Hill ES	Restroom, Sound System (Café/stage)
42	Flower Valley ES	Relocatables-Placement
43	Forest Oak MS	Paint, Re-roofing
44	Fox Chapel ES	Light Fixtures (Exterior Building)
45	Gaithersburg ES	Concrete Sidewalks around building, Playground, Restroom
46	Gaithersburg HS	Tennis Courts
47	Gaithersburg MS	Concrete at Loading dock, Floor, FPR
48	Georgian Forest ES	Gym Floor Refinishing
49	Germantown ES	Masonry Wall Repair
50	Glen Haven ES	Playground
51	Goshen ES	Doors (Exterior), Relocatables-Removal
52	Greenwood ES	Doors (Interior)
53	Grosvenor Center	ADA improvements and ramps, FPR Widen entrance
54	Harmony Hills ES	Relocatables-Removal
55	Highland ES	Doors (Exterior), Floor Covering, Restroom, Sewer Line
56	Highland View ES	BMPI - Classroom Conversion, Gym Floor Synthetic to Wood
57	Jackson Road ES	ADA Lift
58	Johnson, Walter HS	Operable Wall
59	Jones Lane ES	Doors (Exterior)
60	Kemp Mill ES	Playground
61	Kennedy, John F. HS	Addition, Running Track
62	King, Dr. Martin Luther, Jr. MS	Floor Covering
63	Knolls, Stephen Center	Replacement of Federal Pacific Switchgear Equipment ( Including Panels)
64	Lake Seneca ES	Emergency Generator, Foundation repairs, Masonry Repairs Front Entrance, Paint (Exterior and Interior), Playground, Restroom
65	Laytonsville ES	Groundwater Study, Windows
66	Leleck, JoAnn ES at Broad Ac	Playground
67	Loiederman, A. Mario MS	Carpet Replacement (IMC & Main Office), Serving Lines
68	Marshall, Thurgood ES	Floor Covering
69	Maryvale ES/Carl Sandburg	Playground shade structure
70	Matsunaga, Spark M. ES	Relocatables-Removal
71	McAuliffe, S. Christa ES	Floor covering (IMC), Ramp at Kindergarten Entrance, landscaping

	FACILITY NAME	PROJECT TYPE
72	McNair, Dr. Ronald E. ES	Addition, HVAC/ W/ADDITION, Playground, Relocatables-Removal
73	Meadow Hall ES	FPR, HVAC entire
74	Mill Creek Towne ES	Paint (Exterior and Interior), Serving Line
75	Monocacy ES	BMPI - Classroom Conversion, Walk-in-Boxes (Refridgerator and Freezer)
76	Montgomery Knolls ES	Playground repair sinkhole
77	Neelsville MS	Replacement
78	New Hampshire Estates ES	Elevator, Playground
79	Newport Mill MS	Emergency Generator
80	North Bethesda MS	Re-roofing
81	North Lake Center	Windows and Doors
82	Northwest HS	BMPI - Other Program, Walk-in-Freezer (Only)
83	Oakland Terrace ES	Fire Access, Relocatables-Removal & Placement, Security Systems
84	Oakview ES	Floor Covering
85	Olney ES	ADA Lift
86	Page, William Tyler ES	Addition, Relocatables-Removal
87	Paint Branch HS	Relocatables-Placement
88	Parkland MS	Addition, Relocatables-Removal
89	Parks, Rosa M. MS	Light Fixtures (Exterior Building)
90	Poolesville ES	Doors (Exterior), Playground Equipment's, Serving Line
91	Poolesville HS	Reno/ Major Additions, Running Track
92	Pyle, Thomas W. MS	ADA Lift
93	Quince Orchard HS	BMPI - Change of Use, BMPI - Other Program, Doors Exterior Phase 1, HVAC Phase 4, Relocatables-Placement
94	Redland MS	Floor Covering, Serving Lines
95	Resnik, Judith A. ES	BMPI - Classroom Conversion, Gym Basketball Back boards, Relocatables-Removal
96	Ridgeview MS	Paint (Exterior and Interior)
97	Ritchie Park ES	ADA improvements
98	Rock Creek Valley ES	Playground, Relocatables-Removal
99	Rocking Horse Road Center	FPR
100	Rockview ES	Gym Floor Refinishing
101	Rockwell, Lois P. ES	BMPI - Classroom Conversion, Suspended Ceiling and lights
102	Rocky Hill MS	Gym Door Cover
103	Rolling Terrace ES	BMPI - Other Program, Windows (2 fogged up round windows)
104	Rollingwood School Center	Relocatables-Removal
105	Rosemont ES	Gym Light



	FACILITY NAME	PROJECT TYPE
106	Sequoyah ES	BMPI - Special Education, Gym Floor Refinishing, Serving Line
107	Shady Grove MS	Lighting Gym
108	Shannon, Odessa MS	Replacement
109	Sherwood ES	Federal Pacific Electrical equipment, Playground improvements
110	Shriver, Sargent ES	Playground, Relocatables-Removal, Serving Line
111	Silver Creek MS	BMPI - Special Education
112	Silver Spring International MS	Addition, Serving Lines
113	Sligo MS	Restroom
114	Smith Center	Lighting & Acoustical Improvement
115	South Lake ES	Replacement
116	Springbrook HS	ADA Lift, Asphalt (Parking Areas and Driveways) phase 1
117	Stedwick ES	Playground
118	Stone Mill ES	FPR, Play Equipment
119	Stonegate ES	Replacement
120	Strathmore ES	Cabinets and Sinks
121	Strawberry Knoll ES	Relocatables-Removal
122	Summit Hall ES	Playground shade structure, Restroom
123	Takoma Park ES	Restroom
124	Travilah ES	Boiler Replacement
125	Twinbrook ES	Asphalt (Parking and Driveways), Floor Covering (Carpet) Rms. 107, 119 & 300, FPR, Paint (Exterior and Interior), Relocatables-Removal, Roof Overlay
126	Viers Mill ES	Playground
127	Waters Landing ES	Elevator, Gym Floor Refinishing
128	Watkins Mill ES	Relocatables-Removal, Windows (Court yard)
129	Watkins Mill HS	BMPI - Other Program, Gym Floor Refinishing (Aux), Serving Lines
130	Westbrook ES	Interior Fitout
131	Westland MS	Gym
132	Wheaton Woods ES	BMPI - Special Education, Fence at playground
133	Whetstone ES	Cabinets, Ceiling Tiles and Lighting, FPR, Relocatables-Removal, Restroom
134	White Oak MS	BMPI - Other Program
135	Whitman, Walt HS	Gas pipe removal
136	Woodfield ES	Restroom
137	Woodlin ES	Replacement
138	Woodward, Charles W. HS	Phase 1 Building, Phase 1 Site
139	Wootton, Thomas S. HS	ADA improvements, Addition, Phase I - ADA Site Improvement, BMPI - Change of Use, Relocatables-Removal

# Appendix B

## Planned Life-cycle Asset Replacement (PLAR) Projects Completed Summer 2022

	Facility	Project Scope
1	Arcola ES	Fencing
2	Arcola ES	Stair Repairs & Site Improvements
3	Argyle MS	Gym Floor (Refinish)
4	Argyle MS	Serving Line
5	John T. Baker MS	Exterior Doors
6	John T. Baker MS	Paint (Interior & Exterior)
7	Benjamin Banneker MS	Bleacher Wheel Replacement
8	Benjamin Banneker MS	Federal Pacific Equipment Replacement Phase 2
9	Bethesda Chevy Chase HS	Floor Covering Replacement
10	Bethesda ES	Paint (Interior & Exterior)
11	Montgomery Blair HS	Insulated Glass Replacement
12	Montgomery Blair HS	Master Key System
13	Montgomery Blair HS	Window Replacement (Phase 1)
14	Burtonsville ES	Light Fixture Replacement
15	Burtonsville ES	Asphalt Replacement
16	Cedar Grove ES	ADA Chair Lift
17	Cedar Grove ES	Basketball Backstops Replacement
18	Cedar Grove ES	Gym Floor (Refinishing)
19	Chevy Chase ES	Fire Alarm Replacement
20	Clarksburg ES	Concrete (Sidewalks)
21	Clarksburg ES	Light Fixtures (Exterior Wall Pack)
22	Cold Spring ES	Paint (Interior & Exterior)
23	Capt. James E. Daly ES	Basketball Backstops Replacement
24	Capt. James E. Daly ES	Gym Floor (Refinishing)
25	Capt. James E. Daly ES	Metal Stairs to Boiler Room
25	Capt. James E. Daly ES	Power Supply to Basketball Backboard Winches
26	Damascus ES	Basketball Backstops Replacement
27	Damascus ES	Canopy Repairs
28	Damascus ES	Gym Floor (Synthetic to Wood)
29	Dr. Charles R. Drew ES	Emergency Generator (New)
30	DuFief ES	Relocate Playground Equipment
31	Emory Grove Center	Ceiling & Light Replacement (Phase 1 of 2)
32	Fallsmead ES	Ceiling & Light Replacement (Phase 2 of 2)
33	Fallsmead ES	Gym Floor (Synthetic to Wood)
34	Fallsmead ES	Walk-In Boxes
35	Fallsmead ES	Sprinkler Piping
36	Flower Hill ES	Doors (Exterior)
37	Food Services	Flooring Improvements
38	Gaithersburg ES	Flooring Replacement
39	Gaithersburg ES	Install Relocated PGE
40	Gaithersburg ES	LED Light Fixtures (Main Gym)
41	Gaithersburg HS	Lockers
42	Gaithersburg MS	Elevator Replacement
43	Georgian Forest ES	Ceiling Repairs
44	Germantown ES	Asphalt (Play Area)
45	Greencastle ES	Kitchen Storeroom
46	Greencastle ES	Light Fixtures (Exterior Bldg)
47	Grosvenor Center	Generator Relocation
48	Harmony Hills ES	Paint (Interior & Exterior)
49	Harmony Hills ES	Fire Alarm Replacement
50	Herbert Hoover MS	Tennis Court Refurbishment
51	Walter Johnson HS	ADA Chair Lift (Stage)
52	Kemp Mill ES	Asphalt & Concrete Replacement
53	Kemp Mill ES	Line Painting (Parking Lots)

	Facility	Project Scope
54	Lake Seneca ES	Flooring Replacement
55	Lakewood ES	Basketball Court (Asphalt)
56	Laytonville ES	Paint (Interior & Exterior)
57	JoAnn Leleck at Broad Acres ES	Master Key System
58	A. Mario Loiederman MS	Asphalt Replacement
59	A. Mario Loiederman MS	Gym Lighting Replacement (LED)
60	Col. Zadok Magruder HS	Counter Tops
61	Monocacy ES	Emergency Generator (New)
63	Montgomery Village MS	Asphalt Replacement
64	Newport Mill MS	Gym Floor (Refinishing)
65	Newport Mill MS	Paint (Interior & Exterior)
66	Newport Mill MS	Main Gym Lighting Replacement (LED)
67	North Lake Center	Ceiling & Light Replacement (Phase 1)
68	North Lake Center	Windows and Doors (Phase 1)
69	Northwest HS	Paint (Interior & Exterior)
70	Northwest HS	Tennis Court Repairs
71	Paint Branch HS	Tennis Court Repairs
72	Parkland MS	Floor Covering (Main Office & IMC)
73	Parkland MS	Gym Lighting Replacement (LED)
74	Piney Branch ES	Pool Filter Room Repairs
75	Poolesville ES	Exterior Wall Repairs
76	Thomas W. Pyle MS	Asphalt Replacement
77	Quince Orchard HS	Door Holders at All Stairwell Doors
78	Redland MS	Stage Floor (Refinishing)
79	Redland MS	Tennis & Basketball Court Refurb, Track Lining
80	Judith A. Resnik ES	Exterior Wall Repairs
81	Judith A. Resnik ES	Gym
82	Judith A. Resnik ES	Basketball Backstops Replacement
83	Rocky Hill MS	Exterior Wall
84	Rosemary Hills ES	Fire Alarm Replacement
85	Sequoyah ES	Asphalt (Play Area)
86	Seven Locks ES	Courtyard Sealing
87	Seven Locks ES	Floor Covering
88	Seven Locks ES	Grease Interceptor Vestibule
89	Sherwood ES	Ceiling & Light Replacement
90	Sherwood ES	Paint (Interior & Exterior)
91	Sherwood HS	Serving Line
92	Silver Spring Intl MS	Masonry Wall Repairs
93	Springbrook HS	Auditorium Light Retrofit
94	Springbrook HS	Serving Line
95	Stone Mill ES	Playground Equipment
96	Strawberry Knoll ES	Asphalt (Driveway, Parking Lot)
97	Summit Hall ES	Emergency Generator (New)
98	Takoma Park ES	Paint (Interior & Exterior)
99	Washington Grove ES	Asphalt Replacement
100	Washington Grove ES	Basketball Hoops (Outdoor)
101	Waters Landing ES	Masonry Repairs
102	Westland MS	Master Key System & Rekeying
103	Westover ES	Paint (Interior & Exterior)
104	Whetstone ES	Exterior Wall Repairs
105	Whetstone ES	LED Light Fixtures (Main Gym)
106	White Oak MS	ADA Chair Lift
107	Walt Whitman HS	ADA Chair Lift
108	Walt Whitman HS	Emergency Generator (New)
109	Woodfield ES	Paint (Interior & Exterior)
110	Wyngate ES	Paint (Original Section Interior)

# Appendix C

## County Council Adopted FY 2024 Capital Budget and Amendments to the FY 2023–2028 Capital Improvements Program Summary Table<sup>1</sup>

Individual Projects	Board of Education Request	County Council Action May 2023	Anticipated Completion Date
<b>Bethesda-Chevy Chase Cluster</b>			
Bethesda-Chevy Chase/Walter Johnson Cluster ES			TBD
<b>Winston Churchill</b>			
<b>Clarksburg Cluster</b>			
Clarksburg Cluster ES #9 (New)			8/23
<b>Damascus Cluster</b>			
Damascus HS—Major Capital Project	Request FY 2024 appropriation for construction funds.	Approved FY 2024 appropriation for construction funds.	8/26
<b>Downcounty Consortium</b>			
Northwood HS Addition/Facility Upgrade	Request FY 2024 appropriation for construction funds and construction cost increases.	Approved FY 2024 appropriation for construction funds and construction cost increases.	8/26
Charles W. Woodward HS Reopening	Request FY 2024 appropriation for construction cost increases.	Approved FY 2024 appropriation for construction cost increases.	8/24 8/26
Eastern MS—Major Capital Project			TBD
Parkland MS Addition			8/23
Silver Spring International MS Addition	Request FY 2024 appropriation for construction cost increases.	Approved FY 2024 appropriation for construction cost increases.	8/25
Highland View ES Addition			8/27
Piney Branch ES—Major Capital Project			TBD
Woodlin ES—Major Capital Project	Request six-month construction delay.	Approved six-month construction delay.	1/24
<b>Gaithersburg Cluster</b>			
Crown HS (New)	Request FY 2024 appropriation for construction funds and construction cost increases.	Approved FY 2024 appropriation for construction funds and construction cost increases.	8/27
<b>Walter Johnson Cluster</b>			
Charles W. Woodward HS Reopening	Request FY 2024 appropriation for construction cost increases.	Approved FY 2024 appropriation for construction cost increases.	8/24 8/26
Bethesda-Chevy Chase/Walter Johnson Cluster ES			TBD
<b>Col. Zadok Magruder Cluster</b>			
Col. Zadok Magruder HS—Major Capital Project			8/29
<b>Richard Montgomery Cluster</b>			
Crown HS (New)	Request FY 2024 appropriation for construction funds and construction cost increases.	Approved FY 2024 appropriation for construction funds and construction cost increases.	8/27

<sup>1</sup> Bold indicates an amendment to the adopted CIP. Blank indicates no change from the approved project.



Individual Projects	Board of Education Request	County Council Action May 2023	Anticipated Completion Date
<b>Northeast Consortium</b>			
Burnt Mills ES—Major Capital Project			8/23
Burtonsville ES Replacement	Request additional funding to construct a new elementary school.	Approved additional funding to construct a new elementary school.	8/27
Greencastle ES Addition	Request FY 2024 appropriation for construction funds.	Approved FY 2024 appropriation for construction funds.	8/25
JoAnn Leleck ES at Broad Acres ES Replacement	Request FY 2024 appropriation for construction cost increases.	Approved FY 2024 appropriation for construction cost increases.	8/25
William Tyler Page ES Addition			8/23
Stonegate ES—Major Capital Project			8/23
<b>Northwest Cluster</b>			
Crown HS (New)	Request FY 2024 appropriation for construction funds and construction cost increases.	Approved FY 2024 appropriation for construction funds and construction cost increases.	8/27
Dr. Ronald E. McNair ES Addition			8/23
<b>Poolesville Cluster</b>			
Poolesville HS—Major Capital Project	Request FY 2024 appropriation for construction cost increases.	Approved FY 2024 appropriation for construction cost increases.	8/24
<b>Quince Orchard Cluster</b>			
Crown HS (New)	Request FY 2024 appropriation for construction funds and construction cost increases.	Approved FY 2024 appropriation for construction funds and construction cost increases.	8/27
<b>Rockville Cluster</b>			
<b>Seneca Valley Cluster</b>			
Neelsville MS—Major Capital Project			8/24
Clarksburg Cluster ES #9 (New)			8/23
<b>Sherwood Cluster</b>			
<b>Watkins Mill Cluster</b>			
Neelsville MS—Major Capital Project			8/24
South Lake ES—Major Capital Project			8/23
<b>Walt Whitman Cluster</b>			
<b>Thomas S. Wootton Cluster</b>			
Crown HS (New)	Request FY 2024 appropriation for construction funds and construction cost increases.	Approved FY 2024 appropriation for construction funds and construction cost increases.	8/27
Thomas S. Wootton HS—Major Capital Projects			8/29
<b>Other Educational Facilities</b>			

<sup>1</sup> Bold indicates an amendment to the adopted CIP. Blank indicates no change from the approved project.

**County Council Adopted FY 2024 Capital Budget  
and Amendments to the FY 2023–2028 Capital Improvements Program  
Summary Table<sup>1</sup>**

Countywide Projects	Board of Education Request	County Council Action May 2023	Anticipated Completion Date
ADA Compliance	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
Asbestos Abatement and Hazardous Materials Remediation	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
<b>Building Modifications and Program Improvements</b>	<b>Request FY 2024 appropriation, beyond approved level, to continue this project.</b>	<b>Approved FY 2024 appropriation, beyond approved level, to continue this project.</b>	Ongoing
Design and Construction Management	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
Early Childhood Centers	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
Emergency Replacement of Major Building Components	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
Facility Planning			Ongoing
Fire Safety Code Upgrades	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
<b>HVAC Replacement/IAQ Projects</b>	<b>Request FY 2024 appropriation, beyond approved level, to continue this project.</b>	<b>Approved FY 2024 appropriation, beyond approved level, to continue this project.</b>	Ongoing
Improved (SAFE) Access to Schools	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
Major Capital Projects—Elementary			Ongoing
<b>Major Capital Projects—Secondary</b>	<b>Request FY 2024 appropriation, beyond approved level, to continue this project.</b>	<b>Approved FY 2024 appropriation, beyond approved level, to continue this project.</b>	Ongoing
<b>Materials Mangement Building Relocation</b>	<b>Request FY 2024 appropriation for planning funds.</b>	<b>Approved FY 2024 appropriation for planning funds.</b>	TBD
Outdoor Play Space Maintenance Project	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
Planned Life Cycle Asset Replacement (PLAR)	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
<b>Relocatable Classrooms</b>	<b>Request FY 2024 appropriation, beyond approved level, to continue this project.</b>	<b>Approved FY 2024 appropriation, beyond approved level, to continue this project.</b>	Ongoing
Restroom Renovations	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing
Roof Replacement/Moisture Protection Projects	Request FY 2024 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing

<sup>1</sup> Bold indicates an amendment to the adopted CIP. Blank indicates no change from the approved project.

Countywide Projects	Board of Education Request	County Council Action May 2023	Anticipated Completion Date
School Security	Approved FY 2023 appropriation to continue this project.	Approved FY 2024 appropriation, beyond approved level, to continue this project.	Ongoing
Stomwater Discharge and Water Quality Management	Approved FY 2023 appropriation to continue this project.	Approved FY 2024 appropriation, beyond approved level, to continue this project.	Ongoing
Sustainability Initiatives	Approved FY 2023 appropriation to continue this project	Approved FY 2024 appropriation, however \$2.5M less than the request.	Ongoing
Technology Modernization	Approved FY 2023 appropriation to continue this project.	Approved FY 2024 appropriation to continue this project.	Ongoing

<sup>1</sup> Bold indicates an amendment to the adopted CIP. Blank indicates no change from the approved project.



# Appendix D



## DIVISION OF MAINTENANCE AND OPERATIONS Professional Building Service Certification Program FY 2024

### Basic Skills for Building Service Worker – 24 Course Hours

#### Course 1 (8 hours) Classroom Presentation 6:30 a.m. to 3:00 p.m.

- Building Service Overview - discuss how building services support student success, customer service, and required mandatory training.
- Safety Training – discuss proper use of PPE, ladders, and chemicals
- Electrostatic Sprayer Training – teach participants how to safely and properly use the Victory Electrostatic Sprayer
- Interior Cleaning – overview of proper MCPS cleaning procedures, and overview of interior equipment.
- Exterior Grounds Care – overview of proper MCPS exterior grounds care responsibilities and outdoor equipment.

#### Course 2 (8 hours) Hands-on Interior Cleaning 6:30 a.m. to 3:00 p.m.

- Restroom cleaning - discuss proper restroom cleaning procedures and allow participants to practice and demonstrate learned skills.
- Classroom cleaning – discuss proper classroom cleaning procedures and allow participants to practice and demonstrate learned skills.
- Floor care – discuss safe usage of floor care machines (stripper, carpet extractor, carpet bonnet, and vacuum) and allow participants to practice and demonstrate proper use of interior equipment.
- Hallway and staircase cleaning – provide an overview of routine/detailed cleaning of hallways and stairwells, and allow participants to practice and demonstrate learned skills.

#### Course 3 (8 hours) Hands-on Exterior Grounds Care & Final Test 6:30 a.m. to 3:00 p.m.

- Building Security – discuss proper lock-up and security procedures. Participants will walk around the building to check for security issues.
- Playground Inspections – discuss proper care of playground equipment and surfaces (mulch, check equipment for damage, and asphalt).
- Equipment Overview – discuss safe usage of exterior grounds equipment (lawnmowers, backpack blowers, walk-behinds, weed eaters, push blowers, etc.)

- Hands-on use of outdoor equipment – allows participants to practice and demonstrate proper use of all outdoor equipment.
- Basic Skills test – participants take the final cumulative test (50 multiple choice and T/F) and must pass this test with an 80%.

### **Building Systems Operations – 40 Course Hours**

**Course 1 (4 hours) Overview of Building Systems 7:00 a.m. to 11:00 a.m.:** This course provides an overview of the building systems operations course including the basic principles of boiler operations and boiler fittings.

**Course 2 (4 hours) Hot Water Heating Systems 7:00 a.m. to 11:00 a.m.:** This course explores the basics of hot water heating systems and helps participants to gain an understanding of safely operating hot water systems and the basics of general boiler operations safety.

**Course 3 (4 hours) Hands-on Hot Water Heating Systems Training 7:00 a.m. to 11:00 a.m.:** In this course, participants will receive hands-on training to allow them to understand and experience for themselves all the aspects of operating and maintaining a hot water heating system.

**Course 4 (4 hours) Cooling Systems 7:00 a.m. to 11:00 a.m.:** In this course participants will learn to recognize and use equipment that makes up a cooling system. They will also learn about indoor air quality and mold prevention.

**Course 5 (4 hours) Hands-on Cooling System 7:00 a.m. to 11:00 a.m.:** In this course, participants will get hands-on experience using the equipment that makes up a cooling system; including hand-on experience identifying all cooling system components.

**Course 6 (4 hours) Operation of Air Handlers, Unit Ventilators, Energy Recovery Units, and Roof Units 7:00 a.m. to 11:00 a.m.:** In this course, participants will learn the basic principles of air handling systems including their operation and maintenance, the components of the systems, proper filter use, and maintenance, and maintaining belts and pulley systems

**Course 7 (4 hours) Hands-on Air Handlers and Unit Ventilators 7:00 a.m. to 11:00 a.m.:** In this course participants will get hands-on experience opening, cleaning, changing filters, and lubricating air handlers, energy recovery units, and rooftop equipment.

**Course 8 (4 hours) Hands-on Energy Recovery Units, Rooftop Equipment & Drains 7:00 a.m. to 11:00 a.m.:** In this course participants will get hands-on experience opening, cleaning, changing filters, and lubricating air handlers, energy recovery units, and rooftop equipment. They will also learn how to clean and service the roof drains and all other school drainage systems. Attendees will also learn how to clean and service the roof and all other school drainage systems.

**Course 9 (4 hours) Geothermal Heating and Cooling 7:00 a.m. to 11:00 a.m.:** In this course, participants will learn the basics of Geothermal heating and cooling systems including how to locate, clean, and change filters used in a geothermal system.

**Course 10 (4 hours) Plumbing, Electrical, and Carpentry for Building Services 7:00 a.m. to 11:00 a.m.:** In this course, participants will learn the basic responsibilities of operating generators. Learn to realize the importance of identifying the location of the annunciator panel, how to test and reset the fire alarm, other essential safety information needed for building service operations, and the basics of portable classrooms on campus.

**Course 11 Final Review and Testing for Certification: 7:00 a.m. to 11:00 a.m.** This is a review of the course covering sections 6 - 15 and the administration of the final test.

**Supervisory Skills for DMO Employees – 32 Course Hours** This course will prepare employees seeking to become building service assistant managers, support existing building service assistant managers and building service assistant managers within the Division of Maintenance and Operations by enhancing their skills and abilities. Additionally, employees have an opportunity to grow professionally and become successful as a DMO employee. In this 4-session course, MCPS employees will have the opportunity to learn the skills they need to supervise, manage, and lead their employees to ensure the successful building operation of their school. Each full-day session will be taught by the DMO training team members and MCPS content experts. Successful completion of all four sessions of this course is required for employees applying for the building service manager or the building services assistant manager position. This course may also be used as refresher training for managers who want to hone their skill set or require training in one or more specific areas.

**Course 1 (8 hours) DMO Supervisory Skills Introductions 6:30 a.m. to 3:00 p.m.:** This session will provide an overview of a supervisor's duties, professional responsibilities, and the seven core competencies. Topics explored include Facilities Employees Resource Network (FERN), Safety & Proper Protective Equipment (PPE), Employee Training, Timesheets & Leave requests, creating a schedule, Using, Budgets, Ordering Supplies, and Using the CMMS work order system.

Competencies covered in this session: Knowledge of Job and Professionalism

**Course 2 (8 hours) Effective Communication and Managing Communication Barriers 6:30 a.m. to 3:00 p.m.**

In this session, participants will explore communication methods and how they impact staff and stakeholders; Identify three types of communication; Examine barriers to effective communication; Discuss three dimensions to any communication; Explain the importance of active listening in the communication process; Learn how to use constructive feedback and properly use email as a communication tool. Learn how the MCPS Evaluation process works and what a supervisor's role is in the process. Learn how to observe employees and use proper documentation to help employees learn and grow.

Competencies covered in this session: Interpersonal and Communication

**Course 3 (8 hours): Additional Resources 6:30 a.m. to 3:00 p.m.**

In this session, participants gained additional understanding of how the building operations team interacts and works with other areas in the organization, including the Division of Materials Management, Community Use/ICB, Air Quality and Mold Prevention, and Compliance and Sustainability as it relates to SERT and Asbestos Awareness.

Competencies covered in this session: Commitment to Students and Problem Solving





**Course 4 (8 hours): Leadership and Team Building 6:30 a.m. to 3:00 p.m.**

In this session, participants will learn the leadership and organizational skills needed to build a professional team. During this session participants will look at what motivates employees and gain tools and tips to manage and encourage employees to be successful. Participants will explore how to work through conflict, think and plan collaboratively, and learn how to work together to achieve goals. Participants will hear from successful managers how they organize and lead their teams.

Competencies covered in this session: Professionalism and Organization

**Asset Essentials Power Requestor Training for Administrators or Designee 10:00 a.m. to 12 noon—2 Hours**

In this 2-hour course administrators or designee will be able to report issues, request service, make Facility Project Requests, and look up work order details for their location.

**Asset Essentials Power Requestor Training for School Business Administrators (SBA) 10:00 a.m.—2 Hours**

In this 2-hour course school business administrators will be able to report issues, request service, make Facility Project Requests, and look up work orders details for their location.

**Asset Essentials (AE) Training for Building Service Managers and Assistant Managers 9:30 a.m. 11:30 a.m. -2 Hours**


In this 2-hour course, designed specifically for Building Service Managers (BSM's) and Building Service Assistant Managers (BSAM's), participants will learn how to request, submit service requests and search for work orders using Asset Essentials, MCPS 'new work order system. \*\*Note that this system replaced Maximo in August 2022. This course is required for all BSM's and BSAM's. Credentials for submitting work orders will be issued to participants after successful completion of this course.

**Asset Essentials (AE) Training for Maintenance Technicians 12 noon to 2:00 p.m. -2 Hours**

During this 2-hour course, maintenance technicians will learn how to provide Asset Essentials (AE) support to schools and facilities using technology devices to support work order requests. \*\*Note that this system replaced Maximo in August 2022. This course is required for maintenance technicians that service work orders. Credentials will be issued after participant's successful completion of this course.

**Progressive Leadership for Managers 9:00 a.m. to 12 noon (3 sessions)**

During this three-day 9-hour course (3 hours each session) participants will receive additional leadership skills that focus on understanding how the building service manager position contributes to student and team success. Participants will gain additional knowledge about current and new practices and methods to support managerial job responsibilities focused on the seven core competencies and equitable best practices. Participants will engage in activities focused on giving and receiving feedback through proactive responses and doing so when handling situations in a professional and confidential manner.



During this training, participants will also receive additional leadership skills that focus on communicating responsibly so that managing conflict is handled correctly. Participants will gain new best practices in stages and develop paramount practices step by step to support the building service team and school staff job regarding relationship building using the seven core competencies as a guide. Participants will also engage in activities focused on creative ways to manage time, how to develop effective assignment schedules for building service staff, ways to maintain attractive grounds care and curb appeal, constant school and facility emergency preparedness, manage staff leave request, refined Asset Essentials (AE) refresher information, giving and receiving feedback through proactive responses and doing so when handling situations in a professional and confidential manner. Participants will also learn techniques designed to support completing managerial duties in a timely manner and exploring beyond the obvious when solving problems. Participants will also revisit effective ways to manage teams, through sharing best practices, through an open forum. Participants will receive best practices focused on next steps regarding technology and embracing the understanding that technology is your ally (AE, HUB, Evaluation Preparedness, and Inspections) along with additional coaching skills for excellence. This training is interactive and hands-on along with role playing activities to enhance real life school/facility situations. This training is mandatory and competency based.

**Preventative Maintenance (PM) University Achiever Series 6:00 a.m. to 8:00 a.m. and 9:00 a.m. to 11:00 a.m.**

During these series preventative maintenance (PM) employees will receive best practices on **HVAC equipment, plumbing look fors, ceiling tile special cuts training, carpentry support, and electrical tools and tips** to support the preventative maintenance university program.


These classes will take place monthly, with the focus on providing professional development and building capacity. These learning opportunities will take place monthly.

**Preventative Maintenance (PM) Lead Training 9:00 a.m. to 12 noon:** During this training PM Leads will gain an enhanced understanding of their role and responsibilities to support preventative maintenance employees. The PM Leads will receive additional information and training centered on Asset Essentials (AE) usage to help support the AE process and their role in data collection.

This AE training along with additional PM Lead training will be given periodically throughout the year.

**“Who are we” overview: 1:00 p.m. to 2:30 p.m.**

This 60 minute overview to AP 1’s and AP 2’s will provide administrators with additional information of the role that the DMO training team provides administrators, in addition to training and resources available to support building services staff and to support administrative teams. This overview will be given periodically throughout the year.



**2024 Regionals 8:30 a.m. to 12 noon**

During this session building service managers will participate and continue to learn about the 4 C's which are Communication, Collaboration, Cooperation, and Comply. Additionally, participants will also learn about the 3 T's (Team, Technology, and Training). These components continue to help support building service managers understand the importance of using the 4 C's and 3 T's to build relationships, communicate responsibly, team build through trust, understand accountable outcomes, and embrace, acknowledge and recognize accomplishments.

**Evaluator Training for Service Center- based Managers and Supervisors 9:00 a.m. to 12:00 noon**

This 2 hour training is designed to help managers and supervisors gain an increased understanding of their role as evaluators. During this training managers and supervisors will learn how to write performance feedback paragraphs, identify documentation used to write evaluations, give and receive feedback, collect documentation and how to support employees that are underperforming.

**A penny for your thoughts round table series 9:00 a.m. to 11:00 a.m.**

This periodic DMO series focuses on DMO employees meeting, sharing, collaborating, and celebrating accomplishments with their peers. This series also focuses on the importance of building a healthy working relationship within the DMO community. This series is competency based.



Office of Facilities Management  
Montgomery County Public Schools