



Review of the Physical Plant Operations Program of the Broward County Public Schools

Robert W. Runcie, Superintendent of the Broward County Public Schools, requested that the Council of the Great City Schools (CGCS) provide a high-level management review of the school district's physical plant operations (PPO) program.¹ Specifically, he requested that the Council --

- Review and evaluate the department's organizational structure and business processes, and provide comparisons, metrics, and other benchmarking data on how the department spends its funds.
- Develop recommendations that would assist the department in achieving greater operational efficiency, effectiveness, and enhance its service delivery and strategic value to the district.

In response to this request, the Council assembled a Strategic Support Team (the team) of senior managers with extensive experience in facilities and business operations from other major city school systems across the country. The team was composed of the following individuals. (Attachment A provides brief biographical sketches of team members.)

Robert Carlson, Project Director
Director, Management Services
Council of the Great City Schools (Washington, D.C.)

David Palmer, Principal Investigator
Deputy Director (Retired)
Los Angeles Unified School District (California)

Alex Belanger
Assistant Superintendent, Facilities Management
Fresno Unified School District (California)

¹ The Council has conducted over 300 organizational, instructional, management, and operational reviews in over 60 big city school districts over the last 20 years. The reports generated by these reviews are often critical, but they also have been the foundation for improving the operations, organization, instruction, and management of many urban school systems nationally. In other cases, the reports are complimentary and form the basis for identifying "best practices" for other urban school systems to replicate. (Attachment E lists the reviews that the Council has conducted.)

Rickey Bevilacqua
Manager, Facilities Construction
Pinellas County Schools (Florida)

Christos Chrysiliou
Director of Architectural and Engineering Services
Los Angeles Unified School District (California)

John Dufay
Executive Director, Maintenance & Operations
Albuquerque Public Schools (New Mexico)

Scott Layne
Deputy Superintendent of Operations
Dallas Independent School District (Texas)

Trena A. Marsal (Deane)
Executive Director, Facility Management
Denver Public Schools (Colorado)

Stacey Marshall
Director, Facilities Services
School District of Palm Beach County (Florida)

John Shea
Chief Executive Officer, Division of School Facilities
New York City Department of Education (New York)

The team reviewed documents provided by the district prior to a four-day site visit to Broward County, Florida, on May 18-21, 2019. The general schedule for the site visit is described below, and the complete working agenda is presented in Attachment B.

The team met with Superintendent Runcie, Chief Financial Officer Judith Marte, and Chief Strategy & Operations Officer Maurice Woods during the evening of the first day of the site visit to discuss expectations and objectives for the review and make final adjustments to the work schedule. The team used the second and third days to conduct interviews with key staff members (a list of individuals interviewed is included in Attachment C), and examine additional documents and data (a complete list of documents reviewed is included in Attachment D).² The final day of the visit was devoted to synthesizing and refining the team's findings and recommendations and preparing a briefing for selected staff on the team's preliminary findings.

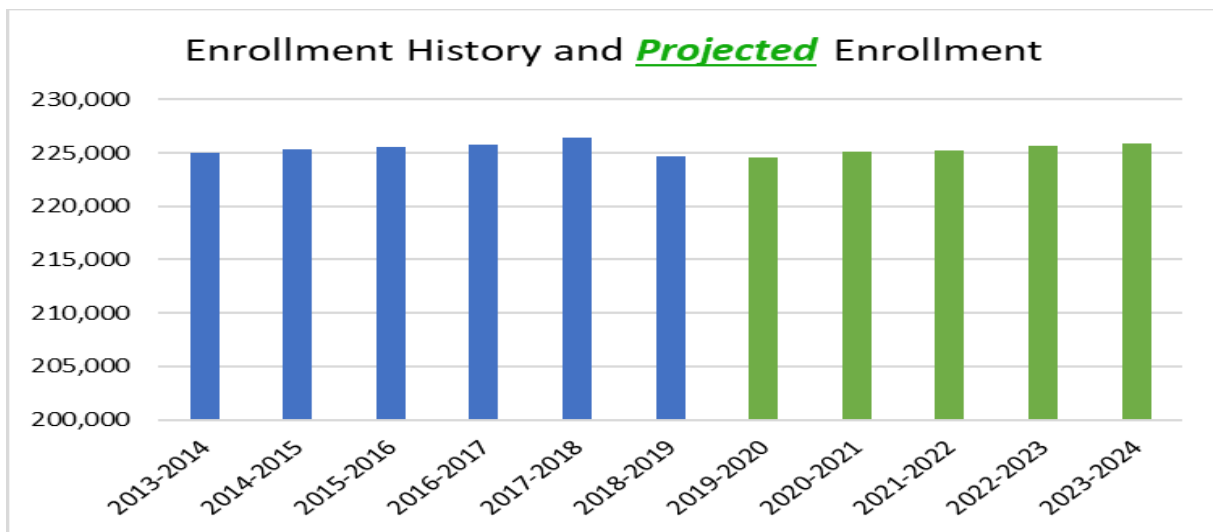
² The Council's reports are based on interviews with district staff and others, a review of documents, observations of operations, and professional judgment. The team conducting the interviews must rely on the willingness of those interviewed to be truthful and forthcoming, but it cannot always judge the accuracy of statements made by interviewees.

The Council sent the draft of this document to team members for their review to affirm the accuracy of the report and obtain their concurrence with the final recommendations. This management letter contains the findings, comparative data, and recommendations that have been designed by the team to help improve the operational efficiencies, effectiveness, and service delivery of the Broward County Public Schools Physical Plant Operations program.

Broward County Public Schools

Broward County Public Schools (BCPS), the sixth largest school district in the nation and the second largest district in the state of Florida, educates more than 224,600 pre-kindergarten through twelve grade students³ in 234 schools, centers, technical colleges, and 88 charter schools. The district serves a diverse student population from 204 different countries and 191 different languages, all supported by 36,375 district employees.⁴ Exhibit 1 below shows six years of past enrollment trends and enrollment projections through 2023-2024.⁵

Exhibit 1. Broward County Public Schools Enrollment History and Projections



Source: CGCS, Using Data Provided by Broward County Public Schools

The School Board of Broward County governs the system and is responsible for policymaking and oversight of the Broward County Public Schools. The Board is a nine-member elected body, seven of whom are elected from geographic districts and two of whom are elected “at-large.” The Board oversees a general operating budget, which is funded through a combination of state and federal resources (53 percent of the total general operating fund revenue) and local resources (47 percent of the total general operating fund revenue).⁶

³ Does not include approximately 45,000 charter and 175,000 adult education students.

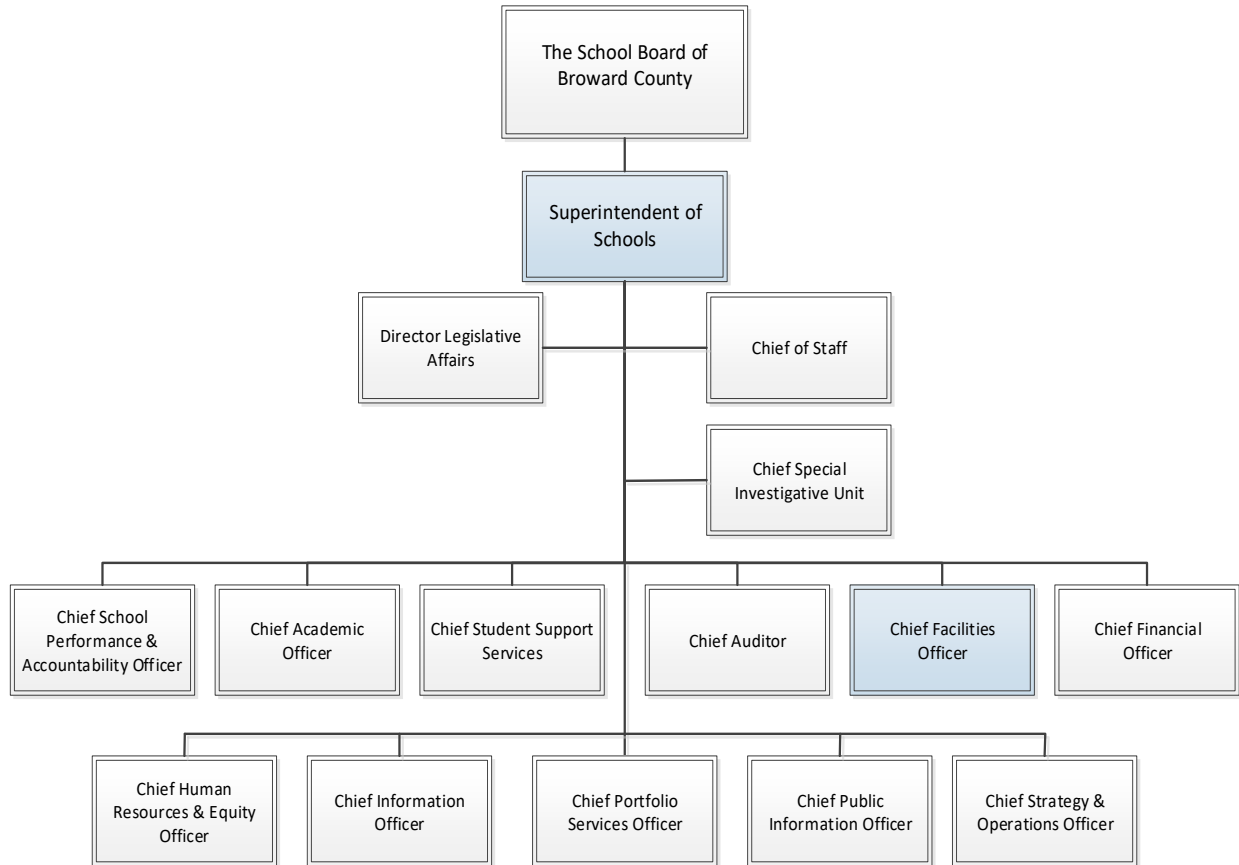
⁴ Source: <https://www.browardschools.com/domain/13954>.

⁵ Source: Letter to the Board, dated October 17, 2018.

⁶ *Ibid.*

The Superintendent, who is appointed by the Board, is responsible for the management and operation of the school system and its resources. Exhibit 2 below shows the organizational structure of the Office of the Superintendent, which has eleven line positions that manage the operational functions of the district and three staff positions that provide specialized expertise and support to the Superintendent and his line staff.⁷

Exhibit 2. Office of the Superintendent Organizational Chart (2018-2019)



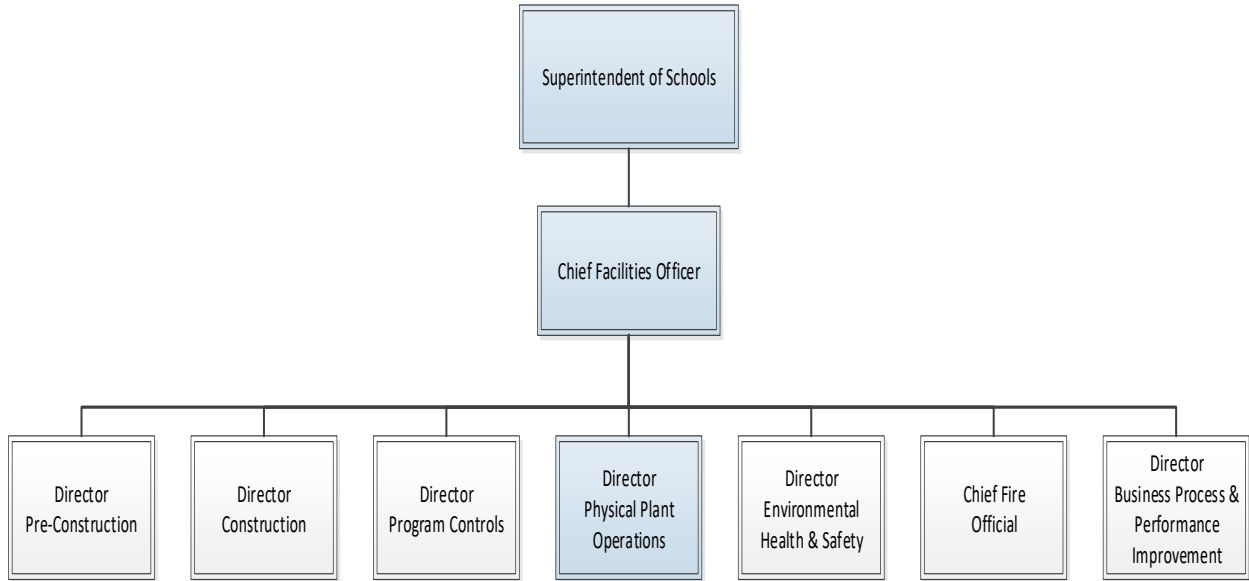
Source: CGCS, Using Data Provided by Broward County Public Schools

The Chief Facilities Officer,⁸ who is a direct report to the Superintendent, has responsibility for Pre-Construction, Construction, Program Controls, Physical Plant Operations, Environmental Health and Safety, Chief Fire Official, and Business Process and Performance Improvement. The Chief Facilities Officer’s organization is shown below in Exhibit 3.

⁷ A line function or position has authority and responsibility for achieving the major goals of the organization. A staff function or position is a position whose primary purpose is providing specialized expertise, assistance, or support to line positions.

⁸ At the time of the team visit, the Chief Facilities Officer position was led by an interim.

Exhibit 3. Chief Facilities Officer’s Organizational Chart

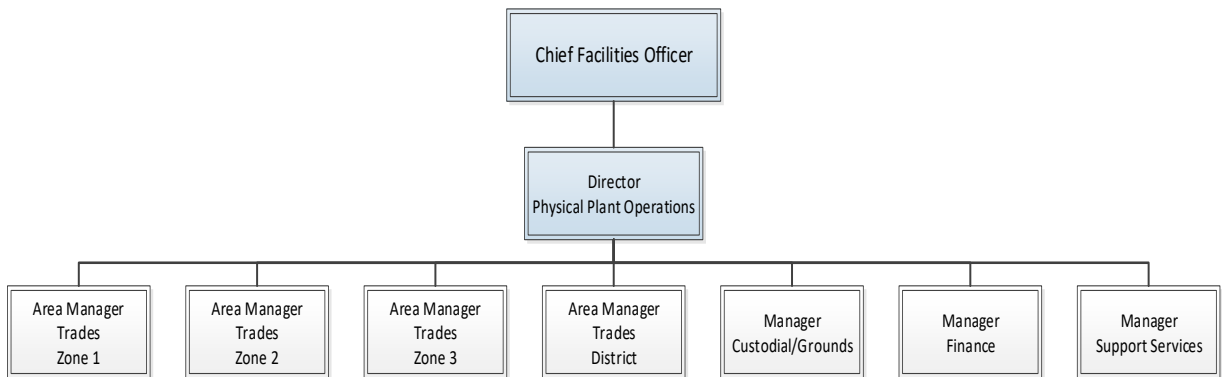


Source: CGCS, Using Data Provided by Broward County Public Schools

Physical Plant Operations

The Director of Physical Plant Operations (PPO), who is a direct report to the Chief Facilities Officer, has seven line positions reporting directly to him. Exhibit 4 below shows the department’s organizational structure.

Exhibit 4. Physical Plant Operations Organizational Chart



Source: CGCS, Using Data Provided by Broward County Public Schools

The PPO department is responsible for planning, organizing, and implementing a comprehensive maintenance program for all school buildings, portable classrooms, the district’s administrative/support facilities, grounds, and athletic fields. Department responsibilities also include the coordination of maintenance and minor capital projects; minor, major, and emergency building and grounds repairs; building-code compliance; the successful implementation of a

preventive maintenance program, and reducing the district’s deferred maintenance backlog.⁹ Exhibit 5 below highlights the scope of assets that the PPO Department is responsible for maintaining.

Exhibit 5. Physical Plant Operations Responsibilities¹⁰

Broward County Public Schools - Physical Plant Operations	
Number of Sites	255
Total Number of Acres	4,006
Total Number of Square Feet - Excluding Portables	35,865,013
Total Number of Square Feet - Including Portables	37,046,711
Oldest Building	1924
Newest Building	2016
Oldest Portable	1958
Newest Portable	2005
Average Age of all Buildings	39 yrs.
Average Age of all Portables	52 yrs.
Total Number of Unused Portables	142

Source: CGCS, Using Data Provided by Broward County Public Schools

The Director of Physical Plant Operations is responsible for departmental staffing and budget. The department is staffed with approximately 700 FTE positions, of which about 600 are skilled trades positions.¹¹ The FY19 combined¹² department budget was \$89.3 million, which was 3.68 percent of the district’s general fund budget. Exhibit 6 below shows PPO budgets since 2008 and compares its portion of the district’s general fund budget.¹³

⁹ Deferred maintenance is a measure of preventive and regular maintenance, minor and capital repairs, and capital system and component replacements that are needed to extend the life of the facility to achieve its projected life expectancy but that has been postponed to a future date beyond the recommended service interval or breakdown. Deferred maintenance results in a) increased overall costs of managing and operating facilities; b) increased incidence of unplanned and more costly urgent and emergency repairs; c) increased incidence of disruptions to delivering instructional programs; d) increased risk of defaults on warranties of equipment and building components; and e) premature failure of buildings and equipment, requiring significant and often unbudgeted capital expenditures and their accompanying debt-service costs. (Source: Council of the Great City Schools publication, *Reversing the Cycle of Deterioration in the Nation’s Public School Buildings*, October 2014.)

¹⁰ The department reported that all unused portables are in “unsatisfactory condition.”

¹¹ Trades include carpenters, electricians, glazers, heating/ventilation/air conditioning technicians, low voltage technicians, masons. Mechanics, painters, plumbers, roofers, sheet metal technicians, welders, and others with specialized skills.

¹² Includes \$68.1M general fund, and \$21.2M from the capital budget.

¹³ Notes for Exhibits 6, 7, and 8: Includes budget for Stockroom Staff & Inventory purchases transferred to Procurement Dept FY 2014; includes special allocation for hurricane Irma in FY18 and FY19; includes budgets posted to Departments 9604, 9607, 9608 and 9616 only, including clearing accounts; includes Capital Budget Carryovers; excludes billings to other Department budgets (such as Food Service Program); and includes clearing accounts for Purchase Services and Inventory Purchase.

Exhibit 6. Physical Plant Operations Budget History

YEAR	PPO General Fund Only Budget	PPO Capital Only Budget	PPO Combined General Fund and Capital Budget	Adopted District General Fund Budget	PPO Budget as % of BCPS General Fund Budget
2008	\$ 84,703,481	\$ 72,570,006	\$ 157,273,487	\$ 2,250,263,695	6.99%
2009	87,404,076	35,787,462	123,191,538	2,120,429,945	5.81%
2010	87,034,919	25,125,230	112,160,149	1,933,819,307	5.80%
2011	80,684,726	37,775,568	118,460,294	1,984,461,146	5.97%
2012	78,596,788	25,922,879	104,519,666	1,911,760,862	5.47%
2013	68,439,518	23,720,111	92,159,629	1,959,387,262	4.70%
2014	58,033,007	22,051,295	80,084,302	2,039,267,108	3.93%
2015	59,867,279	17,180,223	77,047,502	2,197,678,645	3.51%
2016	58,574,142	13,941,142	72,515,284	2,272,057,691	3.19%
2017	59,802,065	12,673,139	72,475,204	2,350,535,976	3.08%
2018	63,613,565	30,464,974	94,078,539	2,424,429,023	3.88%
2019	68,145,064	21,180,691	89,325,755	2,427,300,733	3.68%

Source: CGCS, Using Data Provided by Broward County Public Schools - PPO Department

Findings

The findings of the Council’s Strategic Support Team are organized into four general areas: Commendations, Leadership and Management, Organization, and Operations. These findings¹⁴ are followed by a set of related recommendations.

Commendations

- The PPO Department has a dedicated and competent staff that articulated a “can do” problem-solving attitude when describing their roles, responsibilities, and challenges.
- All contractor personnel who might encounter students were vetted and approved before they could enter school campuses.
- The PPO Director provided logistical support and essential background information throughout the site visit that helped the team understand the department’s organization, function, and operating procedures and processes.
- School-site administrators who were interviewed during the site visit showed high regard for the services the department provides to their schools and students.

¹⁴ Review teams often identify areas of concern that may go beyond the intended scope of the project. As a service to our member districts, any concern that rises to a high-level is included in the report.

- The team observed or were told about several “best practices,” including --
 - The development of department mission and vision statements;
 - Weekly team meetings that take place with the director and his reporting managers;
 - Managers, in turn, conduct weekly team meetings with their staff members;
 - Detailed written process flow charts and standard operating procedures; and
 - Performance assessments or evaluations that all department employees receive annually.
- The team acknowledged and sincerely appreciated the outstanding hospitality provided by the principal, staff, and students of the Atlantic Technical College.

Leadership and Management

- Over the past ten years, the department has experienced a 55 percent funding reduction and a 35 percent reduction in department staffing.¹⁵ These reductions were due, in part, to state actions that reduced the capital millage rate from 2.0 mills to 1.75 mills in 2008, and a further reduction in the millage rate from 1.75 mills to 1.5 mills in 2009.¹⁶

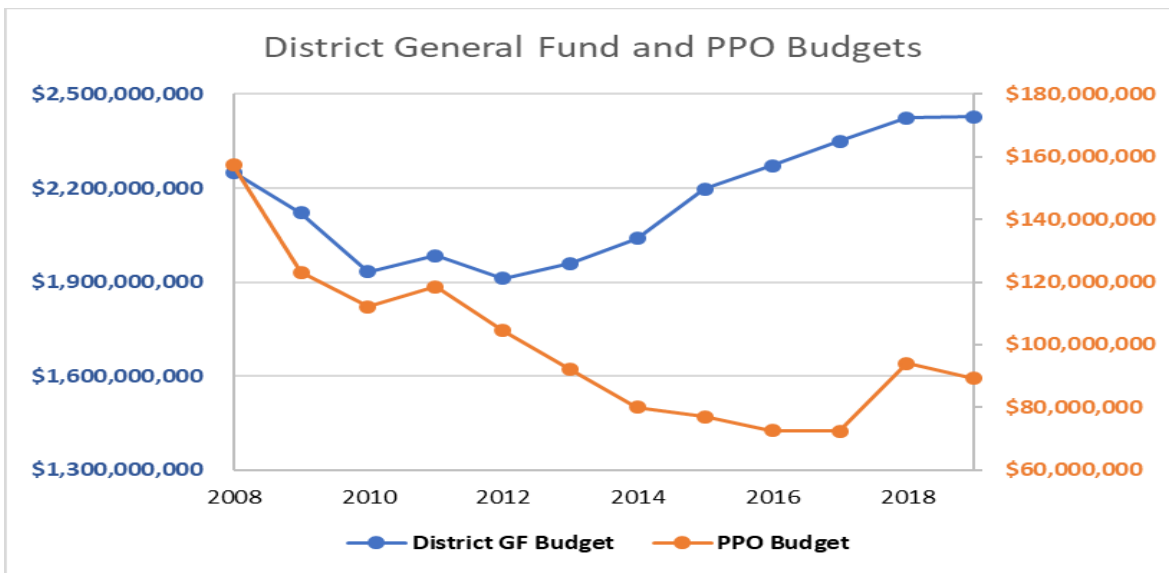
After experiencing budget decreases starting in 2008, however, data indicated that beginning in 2012 to the present, the district’s general fund budget has more than fully recovered, while the PPO budget is still substantially behind where it might otherwise be. Exhibit 7 compares the district’s general fund budget to the PPO department budget from 2008 to 2019.¹⁷

¹⁵ Includes budget for Stockroom Staff & Inventory purchases transferred to Procurement Department FY 2014.

¹⁶ A mill is equivalent to \$100 per \$100,000 of taxable valuation.

¹⁷ See footnote 15.

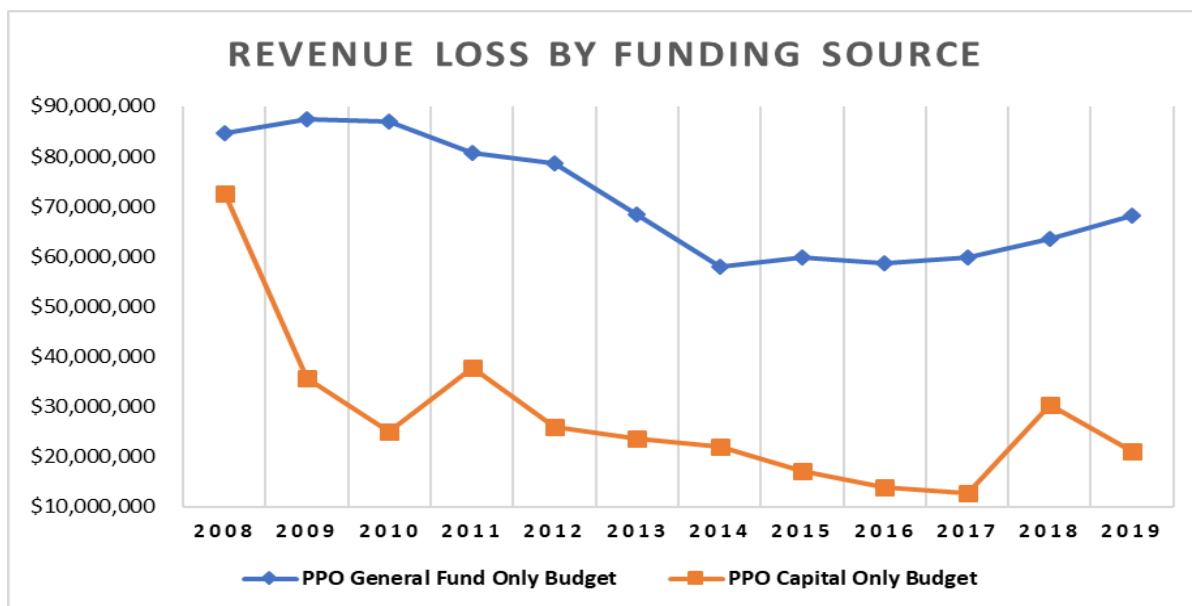
Exhibit 7. District General Fund and Physical Plant Operations Yearly Budgets



Source: CGCS, Using Data Provided by Broward County Public Schools - PPO Department

- In addition to reductions caused by state action that reduced the district’s capital millage, the PPO department’s budget was also affected by significant reductions from the district’s capital budget. This loss of funding is illustrated in Exhibit 8 below.¹⁸

Exhibit 8. General Fund and Capital Budget Reductions



Source: CGCS, Using Data Provided by Broward County Public Schools - PPO Department

¹⁸ *Ibid.*

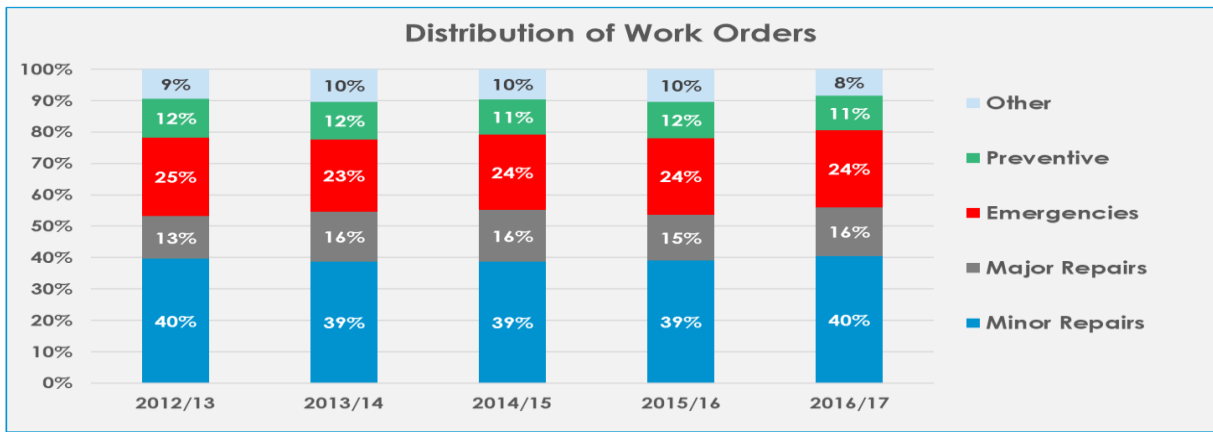
- There did not appear to be a clear division-wide leadership vision or integrated structure in place to manage defined responsibilities and accountabilities across major departments in the Facilities Division. This may be due, in part, to the lack of a permanent Chief Facilities Officer. As a result--
 - Communications, consistency, and coordination of effort between facilities construction and PPO was scattered;
 - Representatives from PPO were not always at the table when the SMART Bond program¹⁹ and other construction projects were being discussed and decided;
 - Strategic direction and long-range *coordinated* goal setting were jeopardized;
 - Business analytical tools and techniques, return on investment (ROI) analysis, total cost of ownership (TCO) analysis, equipment longevity and life cycle analysis, cost-benefit analysis, activity-based costing, risk analysis, repair vs. replace analysis, and business case justifications with rationales used to drive decision making, increase effectiveness, or achieve greater efficiencies were not fully leveraged;
 - Decisions appeared to be financially driven vs. strategically driven, which led to critical issues not being addressed as evidenced by a reported 5-year roof leak and exterior paint cycles being increased from five to six-year intervals to 12-14-year intervals; and
 - The team found little evidence of a formally executed funding plan for predictive, preventive, or routine²⁰ maintenance programs, which caused a large and growing deferred maintenance backlog. As a result --
 - The deferred maintenance backlog was estimated to be over \$3 billion, which equated to approximately \$13,000 per student;
 - When facility systems (e.g., roof, HVAC, life-safety, security, etc.) are not maintained, these systems follow an accelerated deterioration curve and fail prematurely, sometimes years *before* their designed life expectancy;
 - Deferring maintenance substantially magnifies the costs of maintaining a school facility; and
 - Minor repairs orders and emergency calls from schools became the drivers or determinants of maintenance activity, resulting in the maintenance department not able to be engaged in proactive activities to ensure that major equipment and

¹⁹ SMART was a \$800 million General Obligation Bond program of \$800 million to be used for capital improvements for Safety, Music, Arts, Renovations and Technology and was secured with landslide support on November 4, 2014.

²⁰ Routine maintenance includes repairs that regularly occur in the on-going care and upkeep of building features and systems. Examples of "routine" repairs would include painting a classroom, fixing a leaking pipe, roof patches, and/or replacing an HVAC part or component. This would not include major maintenance, renovations or construction projects.

systems are maintained to maximize lifetime effectiveness. Exhibit 9 below shows work order distribution, by type, during the past five years, which verifies that only 11-12 percent of total work performed was dedicated to preventive maintenance;²¹

Exhibit 9. Work Order Distribution History, by Type



Source: Broward County Public Schools – Physical Plant Operations Department

- There was no formal process that identified, prioritized, or funded deferred maintenance projects. There was no replacement cycle plan for school-site mechanical equipment or site needs, such as interior painting; and
- There appeared to be no long-term strategic plan to transition to green schools or the use of smart technology to drive cost savings, such as water sensors, time clocks, controls, and LED lighting.
- The team found no evidence of a current long-term facilities maintenance plan, including a facilities condition assessment (FCA), a current facilities condition index (FCI) with deficiencies categorized by priority,²² space utilization plans, educational specifications, design guidelines, asset tracking, and cyclic planning. As a result –
 - There was no updated design guide and master specifications to support consistency between facilities construction and building maintenance requirements; and
 - Decisions regarding the disposition of assets were burdened by the lack of an active asset tracking and management system.²³

²¹ Source: PowerPoint presentation to the Superintendent’s Cabinet on June 25, 2018.

²² Facilities Condition Assessment (FCA) provides objective, quantifiable facilities data, resulting in a Facilities Condition Index (FCI) that allows the district to 1) objectively prioritize and rank facilities projects according to need; 2) plan and schedule projects according to an objectively ranked priority; and 3) promulgate such rankings, plans and schedules to district stakeholders and the community at large. Systemic FCA and FCI informs stakeholders about their place in the repair/replacement queue; helps to manage expectations of stakeholders; and increases the district’s reliance on cost-effective and data-driven prioritization of work. The last FCI was performed over four years ago.

²³ This condition may improve as the quality of data in the new CMMS system becomes more reliable.

- For many years, the department started and operated the fiscal year with a deficit (underfunded) budget. As a result --
 - The annual structural deficit of \$10 million to \$20 million caused PPO to act as a “contractor” to other district departments to lessen the impact of the shortfall;
 - Fulfilling “side work” – instead of maintenance – on small capital and school requested projects exacerbated the lack of critical routine and preventive maintenance work performed; and
 - The fact that maintenance staff was performing capital work further supports the presumption that the department is underfunded.
- The Council team found it difficult to access or receive data to account for classroom counts and usage. The team heard differing numbers of unused classrooms in the district. What was clear, however, was that maintenance department staff, grounds staff, and custodial staff were maintaining and conditioning unused and unneeded classrooms, which negatively affected department resources, the PPO budget, and utility budgets.
- The recruiting, onboarding, and retaining of skilled trades personnel was an ongoing challenge. The team was told that --
 - There were currently 31²⁴ skilled-trade positions unfilled, which equates to a 4.86 percent vacancy rate;
 - All new employees to the department, regardless of experience, must start at the bottom of the pay scale for that position;
 - While PPO acknowledged they enjoyed an experienced but aging workforce, there was no bench strength in place and no succession plan for trades personnel and supervisors in the very competitive South Florida labor market. On average, there were approximately 35 retirements of trades personnel each year;
 - The district was not leveraging the opportunity to create a pipeline of BCPS students who could be prepared and certified to assume trade positions in PPO upon high school or trade school graduation;
 - The district lacked an automated, online application process for maintenance (trades) positions;
 - As a test, Council team members went online to the district’s “Careers” webpage and found --
 - No vacant (non-substitute) trade positions were open for filing; and

²⁴ This number varied considerably in interviews. The team requested and was provided an updated spreadsheet count, which is reflected in this management letter.

- Based on FY18 comparisons with other large school districts in Florida, the team found the district’s maintenance spending levels on *cost per square foot* and *cost per student* comparable to other large Florida school districts with an enrollment greater than 100,000 students, but considerably higher than the Florida state average of all districts combined. Exhibit 11 below compares large Florida districts.²⁷

Exhibit 11. FY18 Spending Comparisons

School District	Florida Inventory of School Houses Gross Square Feet	Capital Outlay Full Time Equivalent Students	Operation of Plant Function 7900	Maintenance of Plant Function 8100	Cost per Gross Square Foot			Cost per Capital Outlay Full Time Equivalent		
					Operations	Maintenance	Total	Operations	Maintenance	Total
MIAMI-DADE	48,621,476	272,610	\$273,750,230	\$102,726,644	\$5.63	\$2.11	\$7.74	\$1,004.18	\$376.83	\$1,381.01
BROWARD	39,368,962	220,079	\$179,924,014	\$66,528,443	\$4.57	\$1.69	\$6.26	\$817.54	\$302.29	\$1,119.83
HILLSBOROUGH	29,362,615	189,903	\$118,018,651	\$26,875,630	\$4.02	\$0.92	\$4.94	\$621.47	\$141.52	\$762.99
ORANGE	33,989,067	184,633	\$126,270,782	\$41,012,616	\$3.72	\$1.21	\$4.93	\$683.90	\$222.13	\$906.03
PALM BEACH	31,372,273	169,779	\$135,256,094	\$79,333,279	\$4.31	\$2.53	\$6.84	\$796.66	\$467.27	\$1,263.93
DUVAL	18,011,150	110,146	\$66,859,900	\$29,105,969	\$3.71	\$1.62	\$5.33	\$607.01	\$264.25	\$871.26
State Total	461,500,613	2,441,498	\$1,824,566,035	\$666,526,489						
Average for Districts Selected Above (Districts with > 100,000 FTE Students)					\$4.33	\$1.68	\$6.01	\$755.13	\$295.72	\$1,050.84
Florida State Average (All Districts)					\$3.95	\$1.44	\$5.39	\$747.31	\$273.00	\$1,020.31

Source: Florida Department of Education.

- Although there were attempts to measure employee productivity and distinguish productive work time vs. non-productive time (i.e., time spent traveling to/from job sites, rest breaks, waiting for or picking up parts and materials, vehicle breakdowns, and other non-productive time activity), the absence of GPS technology in department vehicles and limited implementation of the new CMMS²⁸ mobility feature, significantly reduced the department’s capacity to accurately track productive vs. non-productive time and take corrective action where needed.
- Additional studies and reviews are not going to fix or solve the increasing deferred maintenance crisis. To reinforce--
 - The team analyzed previous consultant reports and internal reviews, all of which reached the same conclusion, i.e., the Broward County Public Schools facilities maintenance effort required substantial and sustained infusions of funds to reverse the cycle of deterioration currently affecting its schools.²⁹

²⁷ Source: Florida Department of Education at: <http://www.fldoe.org/finance/edual-facilities/annual-energy-maintenance-operations-r.stml>.

²⁸ CMMS are preventive maintenance software modules that represent various capabilities in a facilities maintenance management system. Typically, the base module is a work order management system, which performs all preventive maintenance functions as work orders.

²⁹ The review team unanimously concurred with this finding and noted that the district’s aging infrastructures and building equipment could no longer wait; delaying would simply increase costs to the level of unsustainability.

Organization

- The team was told that some material and safety testing, which is a function of the Office of Environmental Health and Safety, had been or will be transferred to the Risk Management Office, which is a misalignment of responsibilities and use of expertise.
- Energy management falls under the Environmental Health and Safety unit, which limits opportunities to reinvest energy savings back into the PPO budget.
- Job descriptions were outdated and required a cumbersome process to update current responsibilities and reporting lines. For example --
 - The job description for Area Manager, Trades, was last updated in August 2004, and was listed as a direct report to the Director, Maintenance Operations, a title that no longer exists;³⁰
 - The job description for Grounds Manager was last updated in June 2006;
 - The job description for Supervisor I, Electrical and Supervisor I, Mechanical Equipment was last updated in December 2003; and
 - The job description for Assistant Area Supervisor, Maintenance, was last updated in November 2006.

Operations

- The newly acquired computerized maintenance management software (CMMS) system had not been fully implemented, integrated, or deployed to field staff and schools because there was --
 - Insufficient governance, oversight, and program management at the enterprise level;
 - Contractor mismanagement and embedded silos at department levels, which resulted in--
 - Limiting management's ability to measure and drive employee productivity; and
 - Negatively affecting anticipated efficiencies, increasing productivity, and enhancing potential cost savings, which could have been reinvested;
 - Confusion by all staff members interviewed as to who was currently the executive sponsor and who was currently the project manager overseeing the transition to and implementation of the new system;

³⁰ Multiple job descriptions reference reporting to the Director, Maintenance Operations.

- A lack of training for affected staff to fully understand and successfully implement the new system;
 - Little consideration to upgrading older (and outdated) desktop computer hardware to improve productivity;
 - Delays in reaching key rollout milestones, and no clear understanding of what the next implementation phases consist of;
 - Significant rollout issues due, in part, to the lack of a robust pilot testing phase and the lack of critical system and bandwidth stress-testing before cutover; and
 - The possible lack of due diligence by district staff in the selection of a consulting firm that reportedly had no previous K-12 implementation experience with the newly acquired CMMS system.
- There was a general sense by staff from PPO, and other departments, that an alternative CMMS application would have better served the needs of the district and the department.
 - Multiple CMMS implementation issues were still not resolved when the team visited, including --
 - The lack of seamless integration with critical district legacy systems;
 - Departments developing “work-arounds” using third-party software to accomplish work because the CMMS was not able to process data as designed or needed;
 - The district’s fuel dispensing system not being able to interface with the new CMMS system;
 - Warehouse cycle counts were not taking place as designed;
 - HVAC and possibly other systems unnecessarily being repaired in-house as warranty tracking was lacking;
 - “Canned”³¹ reports required significant customization to become useful to the department. For example --
 - The Council team requested the total number of work orders generated/entered for FY19, but was told that it took several days to produce a “clean” report that staff felt confident was accurate;³²
 - A reduction of efficiency and productivity due to the lack of remote access at school sites and the mobility feature coming online;

³¹ A canned report is a report that has been pre-formatted or built by the developer.

³² The team acknowledges that the new CMMS software went “live” in February 2019.

- Migration to the latest version of the CMMS software; and
- A full cost accounting of the indirect and unintended costs associated with implementation.
- The team was told of inconsistent service-levels, resource distribution, and the perception of inequity in balancing the maintenance needs of all schools in the district, regardless of location.
- Principals interviewed rated their overall maintenance services as a 7.75 score on a scale of 1 to 10, with ten being high. Principals indicated a firm preference for services provided by district employed trades personnel. Principals also indicated that--
 - They were not satisfied with the capital program work that was contracted out,³³ which principals described as a “nightmare;”
 - That timelines for capital projects were rarely adhered to;
 - There was preferential treatment provided to schools in a particular “side” of town, and “newer” schools appeared to receive more attention than “older” schools;
 - Roofs still leak, air quality in some classrooms was poor, mold was present at some sites, and flooding and pooling of water exist, which created safety concerns for students and staff;
 - General contractors performing construction work “can’t get it right;” and
 - Significant delays seem to be occurring on starting bond-related work. These delays caused cost increases as the bond was approved by the voters several years prior, and construction costs have increased considerably.³⁴
- The ceiling for item purchases and the gross volume of purchases gives one pause about the potential for fraud and abuse.
- There was little use of alternative procurement methods (e.g., bench, job order contracting, draw down POs) to address single trade projects for a larger level or scope of work.
- The team identified an imbalance within each maintenance zone on the number and age of schools served, and the number of maintenance resources (personnel) available within each zone.

³³ See news article at: <https://www.sun-sentinel.com/local/schools/fl-ne-northeast-high-school-contract-terminated-delays-continue-20190628-jju35fzuobe3pgykga6ruxvmoe-story.html>.

³⁴ *Ibid.*

- There appeared to be minimal advanced scheduling of routine maintenance work since 80 percent of the current maintenance work was emergency, minor, or major repair work. Scheduling or dispatching decisions were not data-driven, but *ad hoc* in nature. Also --
 - The current department practice was to perform maintenance work that fell into the categories of *safe, cool, and dry*; and
 - The current practice of having call center personnel prioritizing work requests may not be effective, since call center staff may lack the expertise to diagnose and appropriately rank service call needs.
- The \$7,500 cap on work orders can cause a three-week delay due to additional approvals required at the director's level, and in some cases even higher levels.
- There was little evidence or business cases identified to support the current department practice of --
 - Repairing items when repairing was determined to be more expensive than replacing the asset;
 - Using one central maintenance warehouse with staging areas in each zone vs. the current practice of using multiple warehouse locations;
 - Currently assigning 76 percent of maintenance staff ³⁵ to day shift and 24 percent to swing/night shift vs. 50/50 or 25/75 levels that could achieve greater efficiencies; and
 - Having 70 percent of work performed in-house and 30 percent contracted out vs. other ratios, which might prove more economical, effective, and timely over the long run.
- For the safety of district students, PPO repaired city/county sidewalks around schools. Although this effort was commendable, the team questioned whether the district should assume the responsibility and liability of making these types of repairs.
- The team was told differing numbers of work orders created on a weekly, monthly, or annual basis. With time, the new CMMS system may add reliability to the work order reporting and tracking process. Additional issues about work orders included --
 - Thousands of work orders remained open for years because they did not meet the approval criteria. There was no process in place advising the requester of the denial; suggesting resubmittal if approval criteria changed, and then closing, cancelling, or voiding the work order. Exhibit 12 below displays the number of work orders created each fiscal year for the past four years;³⁶

³⁵ Excludes grounds personnel.

³⁶ The team felt that for a district this size, annual work order totals should far exceed what was reported.

Exhibit 12. Work Orders Created, By Fiscal Year

Fiscal Year	Work Orders Created
FY16	82,794
FY17	80,045
FY18	82,805
FY19	80,819

Source: CGCS, Using Data Provided by Broward County Public Schools

- No electronic process for tracking work order materials exists. Material(s) picked up by employees at their maintenance zone or supply houses were tracked with paper tickets and manually entered into the new CMMS system. Procurement staff shared they had to retrieve these data from the new CMMS system and manually enter it into the district’s ERP program. Manual paper processes waste staff time and incur a high risk of error; and
- A similar duplication of effort occurred with time reporting. Time from one system (the departments automated time tracking system) must be manually entered into the new CMMS system.
- Several internal systems, controls, and processes were lacking or needed strengthening. For example --
 - There appeared to be a lack of a robust bar-coded inventory control asset management system in place to capture acquisition history and repairs with dates and costs. This failure could be attributed to the poor CMMS rollout;
 - There was a reliance on the building department for school site inspections, but these inspections primarily checked building code and district standards compliance vs. inspecting for maintenance standards, needs, and related issues;
 - A quality control issue was identified when substandard paint was used by contractors on a SMART program project, and district staff appeared to have limited control or input into contract specifications;
 - The team heard that a division was contracting out work without procurement department knowledge or required bidding; and
 - No replacement program or funding was in place for the department’s service (white fleet) vehicles.

- Exhibit 13 below compares BCPS self-reported maintenance and custodial operations KPI data with CGCS member districts' median scores and with median scores on Florida's CGCS reporting districts.³⁷ BCPS's KPI comparative data indicate that --
 - Multiple *Grounds Work* related KPI costs were extremely high, compared to both national and Florida state medians;
 - *Major Maintenance - Staff Ratio - Field Worker per Office Staff* was extremely high, compared to both national and Florida state medians;
 - *Routine Maintenance - Cost per Work Order* was comparable to the national median, but very high compared to the Florida state median;
 - *Routine Maintenance - Cost per Work Order, Contractor-Operated* was very high, compared to the national median and extremely high, compared to the Florida state median;
 - *Routine Maintenance - Cost per Work Order, District-Operated* was somewhat higher than the national median, but extremely high compared to the Florida state median;
 - *Utility Usage - Electricity Usage per Square Foot (KWh)* was very high, compared to the national median and somewhat higher than the Florida state median;
 - *Work Order Completion Time (Days)* was high, compared to both national and Florida state medians;
 - *Utility usage - Water (Non-Irrigation) Usage per Square Foot (gal.)* was extremely high, compared to both the national and Florida state medians; and
 - *Work Order Cancel/Void Rate* was significantly higher than the national median and somewhat higher than the Florida state median.

³⁷ Florida districts include the following counties: Broward, Duval, Hillsborough, Miami-Dade, Orange, Pinellas, and Palm Beach. Further, the team was advised that the water cost per square foot includes sewerage costs. Sewage costs are captured in a separate KPI.

Exhibit 13. Key Performance Indicator Comparison

2017-2018 Key Performance Indicators Maintenance and Operations	Broward County Schools	CGCS National Median	CGCS Florida Only Median	Note
Building Square Footage by Ownership - Percent Leased	0.0364%	0.3669%	0.2811%	
Building Square Footage by Type - Percent Modular	1.1300%	0.9134%	0.8149%	
Building Square Footage by Type - Percent Portable	3.23%	1.85%	1.85%	
Building Square Footage by Type - Percent Site-Built	95.64%	98.07%	97.39%	
Building Square Footage by Type - Percent Academic	96.39%	95.29%	96.76%	
Building Square Footage by Usage - Percent Non-Academic	3.61%	5.28%	3.43%	
Custodial Supply Cost per Square Foot	\$0.08	\$0.11	\$0.08	Lower is Better
Custodial Work - Cost per Square Foot	\$1.70	\$1.60	\$1.83	Lower is Better
Custodial Work - Cost per Square Foot, District-Operated	\$1.70	\$1.78	\$1.81	Lower is Better
Custodial Work - Cost per Student	\$277.62	\$277.17	\$269.50	Lower is Better
Custodial Workload	26,277	26,356	23,471	Higher is Better
Custodial Work - Staff Ratio - Field Workers per Office Staff	156.667	77.7143	160.171	
Green Buildings - Buildings Green Certified	0.00%	1.65%	0.4698%	Higher is Better
Green Buildings - Buildings Green Certified or Equivalent	4.86%	5.17%	4.86%	Higher is Better
Green Building - Buildings With Energy Star Certificate	0.00%	14.93%	5.52%	Higher is Better
Grounds Work - Cost per Acre	\$3,757.65	\$1,203.29	\$1,137.36	Lower is Better
Grounds Work - Cost per Acre, Contractor-Operated	\$6,189.74	\$1,352.55	\$694.41	Lower is Better
Grounds Work - Cost per Acre, District-Operated	\$3,125.87	\$1,807.52	\$1,915.50	Lower is Better
Grounds Work - Cost per Student	\$51.91	\$33.76	\$26.77	Lower is Better
Grounds Work - Proportion Contractor-Operated	20.62%	40.08%	49.05%	
Grounds Work - Staff Ratio - Field Workers per Office Staff	15.286	15.333	15.2857	
M&O Cost per Student	\$782.0	\$1,000.43	\$783.05	Lower is Better
M&O Costs Ratio to District Operating Budget	8.22%	7.07%	6.97%	
M&O Staff - Field Staff as Percent of All Staff	94.83%	94.95%	94.83%	
M&O Staff - Non-Exempt Workers as Percent of Field Staff	100.00%	97.78%	98.26%	
Major Maintenance - Cost per Student	\$103.82	\$103.82	\$103.82	Lower is Better
Major Maintenance - Delivered Construction Costs as % of Total Costs	92.90%	89.47%	92.14%	
Major Maintenance - Supervisor/Support Staff Costs as % of Total Costs	6.96%	8.89%	6.96%	Lower is Better
Major Maintenance - Delivered Construction Costs as % of Total Costs	92.90%	89.47%	92.14%	
Major Maintenance - Staff Ratio - Field Worker Per Office Staff	6.24	2.35	2.03	
New Construction - Cost per Student	\$14.02	\$268.59	\$87.83	
New Construction - Delivered Construction Costs as % of Total Costs	70.13%	90.34%	82.86%	
New Construction - Design to Construction Cost Ratio	36.57%	14.72%	16.61%	
New Construction - Supervisor/Support Staff Costs as % of Total Costs	4.22%	2.30%	3.50%	
Renovations - Cost per Student	\$178.36	\$168.19	\$145.67	
Renovations - Supervisor/Support Staff Costs as Percent of Total Costs	3.29%	3.15%	3.29%	
Routine Maintenance - Cost per Square Foot	\$0.93	\$1.17	\$1.06	Lower is Better
Routine Maintenance - Cost per Student	\$152.84	\$217.63	\$153.20	Lower is Better
Routine Maintenance - Cost per Work Order	\$421.24	\$426.06	\$339.33	Lower is Better
Routine Maintenance - Cost per Work Order, Contractor-Operated	\$1,521.59	\$1,059.80	\$754.61	Lower is Better
Routine Maintenance - Cost per Work Order, District-Operated	\$468.33	\$401.14	\$244.02	Lower is Better
Routine Maintenance - Proportion Contractor-Operated, By Work Orders	3.98%	3.98%	7.74%	
Routine Maintenance - Ratio of Field Workers to Office Staff	6.2826	11.14	7.7431	
Utility Costs - Cost per Square Foot	\$1.06	\$1.34	\$1.16	Lower is Better
Utility Costs - Electricity Cost per Square Foot	\$1.05	\$1.04	\$1.08	
Utility Usage - Electricity Usage per Square Foot (KWh)	13.787	9.489	12.892	Lower is Better
Work Order Completion Time (Days)	25	16.73	21.52	Lower is Better
Work Order Cancel/Void Rate	6.74%	1.60%	4.74%	FY17 data
Utility Costs - Water Cost Per Square Foot	\$0.28	\$0.09	\$0.08	FY17 data
Utility Usage - Water (Non-Irrigation) Usage Per Square Foot (Gal.) (FY17 Data)	37.57	13.01	15.16	Lower is Better
Utility Usage - Water Usage For Irrigation	2.48%	14.53%	21.26%	FY17 data

Source: CGCS KPI Project.

Recommendations

The CGCS Strategic Support Team has developed the following recommendations³⁸ to help improve the effectiveness and efficiency of the Broward County Public Schools Physical Plant Operations program.

1. Permanently fill the Chief Facilities Officer's position with a proven facilities executive who has compelling credentials and experience in the k12 environment. Elevate Physical Plant Operations to an Executive Director's position that, once removed from day-to-day activities, can in tandem with the Executive Director of Capital Programs, develop and execute a formalized predictive, preventive, and routine maintenance program that addresses the large and growing deferred maintenance backload; allows buildings to be properly maintained; and safeguards the public's capital investment in these facilities.
2. Implement and maintain the industry best practice of funding capital maintenance at the two percent level of current plant replacement value (CPRV) of district facilities. Funding at this level will allow buildings and grounds to be properly maintained and will safeguard the public's capital investment in these facilities.³⁹
3. Increase total PPO department staffing to, at a minimum, the levels and ratios suggested by the Florida Department of Education.⁴⁰ In addition--
 - a. Initiate a comprehensive staffing study of all department units to ensure all functions are staffed appropriately to mirror industry standards, and require that day-to-day activities are performed in a timely, effective, and efficient manner; and
 - b. Evaluate current organizational structures and workflows to determine if staff could be repurposed to achieve greater operational efficiencies and effectiveness.
4. Develop business case justifications that include return on investment, accurate costs, cost-benefit analysis, the total cost of ownership, business-case justifications, reasonable implementation timelines, risk assessment, and other analytical tools for the following activities, at a minimum--
 - a. Estimating the fiscal impact of building closures, and removing portable classrooms that are unused or in unsatisfactory condition;
 - b. Developing a proposed five-year capital maintenance project program that identifies the capital funds required to proactively replace or modernize major systems, including roofs, HVAC, restrooms, kitchens, pavements, etc. to industry standards;

³⁸ Recommendations are not listed in any specific order or priority.

³⁹ The Council of the Great City Schools' authoritative document, *Reversing the Cycle of Deterioration in the Nation's Public School Buildings* recommends the two percent funding level as a best practice.

⁴⁰ See: http://www.fldoe.org/core/fileparse.php/5599/urlt/0075330-6_0.pdf, p.94.

- c. Prioritizing, quantifying, and costing existing deferred maintenance projects to assist the department and the district in securing needed funds;
- d. Utilizing one central maintenance warehouse with staging areas in each zone vs. the current practice of employing multiple warehouse locations;
- e. Evaluating staffing ratios for day vs. swing shift personnel to determine what benefits could be enjoyed by increasing the swing shift work force ratio of maintenance personnel performing job functions when school is not in session and students are not on campus;
- f. Introducing alternative procurement methods, including master agreements (bench),⁴¹ job order contracting, and draw down purchase orders to address single trade projects for a larger level or scope of work. Solicitation, with an emphasis on *Minority/Women Business Enterprise* (M/WBE) participation, should be made for locally licensed trade mechanics and technicians to perform work that supports the mission of the department. Require district/contractor cost comparisons be made with fully loaded costs for providing the services in-house, such as salaries, benefits, overhead or indirect costs, materials, and supplies. Projects for these types of solicitations could include --
 - i. Annual routine service and preventive maintenance agreements for HVAC, roofing, and other systems and equipment as appropriate,
 - ii. Crisis and triage responses,
 - iii. Routine maintenance,
 - iv. Special projects requested by school administrators currently assigned to PPO maintenance staff, and
 - v. SMART and other construction projects currently assigned to PPO maintenance staff.
- g. Implementing and funding a department vehicle replacement program;
- h. Procuring maintenance parts of higher quality to increase life cycle time and ensuring bids are in place for all commodity needs; and
- i. Developing and enforcing clear repair vs. replace criteria.

⁴¹ A “bench” of firms is a group of pre-qualified contractors who have been issued master contracts/agreements (“bench contracts”) for various kinds of professional services. An often-employed feature of bench contracts is that each contract may be of no dollar value. Instead, “Task Orders” are issued to a bench firm for services based on the bench contract pricing schedule, as the result of a mini solicitation among similar bench firms. Master agreements are indefinite quantity type contracts, awarded to multiple firms for the same type services. Bench contracts (also known as Continuous Service Contracts) provide the district with greater flexibility and efficiency in awarding required services for the district. These contract awards are procured through a Request for Proposal (RFP) process. Once a firm qualifies and is placed on the district’s bench list, individual tasks/work orders are competed among the bench participants.

5. Pursue all opportunities to garner support from the Broward County community and all other districts in Florida to encourage and lobby the state to raise millage to pre-2008 levels.
6. Convene a meeting with the CEO of the CMMS implementation consulting company to discuss the CMMS failures the district is experiencing. This meeting should include BCPS legal staff, procurement and contract administration staff, information and technology staff, PPO staff, and other affected departments. The purpose of this meeting should be to--
 - a. Determine why the new CMMS implementation has failed to serve the district and its students appropriately;
 - b. Identify all inadequacies that the implementation has encountered to determine if they are related to implementation, training, or both;
 - c. Determine whether the vendor is committed to dedicating all needed resources to ensuring it is successfully meeting all BCPS needs and timelines as required in the contract;
 - d. Establish an agreed upon timeline that will specify when corrective action will be completed, and what the consequences for failure to complete all corrective action will be; and
 - e. Determine if BCPS should continue to use that vendor.
7. Invest in implementing critical industry best practices into BCPS facility activities by --
 - a. Creating or updating a Long-Range Facilities Master Plan (LRFMP), that includes --
 - i. A current facilities condition assessment (FCA) and index (FCI) for developing cost-effective, data-driven prioritization of long and short-range facilities-use and maintenance decisions; and
 - ii. A multi-year facilities usage and maintenance plan.
 - b. Delivering a predictive and preventive maintenance approach to ensuring that critical equipment and systems are maintained to maximize lifetime effectiveness;
 - c. Bar coding physical assets and inventory, including warehouse inventories, for greater control and cost tracking; and
 - d. Introducing and aggressively pursuing smart technology, energy conservation, and other sustainability projects.
8. Partner with the Department of Human Resources, and together --
 - a. Monitor turnover rates, establish or review exit interview protocols for department employees who voluntarily separate from BCPS, and identify and track the causes for staff's leaving in order to identify opportunities to make or recommend changes in policy;

- b. Study the successes of peer districts' onboarding methods for maintenance personnel, and identify and adopt processes that can be implemented in BCPS;
- c. Invite the BCPS Office of the Chief Information Officer to plan and staff ongoing recruitment opportunities and job fairs by leveraging mass communication and social media approaches;
- d. Create a flowchart and realistic timeline that reduces the number of steps and time required from recruitment to onboarding. Redundancies should be identified and eliminated, the number of "hands" involved in the process should be reduced, and opportunities for "fast-tracking" should be implemented;⁴²
- e. Review and revise job descriptions to reflect actual duties that need to be performed and reporting lines reviewed and updated as necessary;
- f. Conduct ongoing employee classification and compensation studies that analyze duties, salaries, and benefit structures in comparable organizations so BCPS can take the necessary steps to better compete for and retain employees;
- g. Ensure all department vacancies are posted in a timely way, applications are being accepted, reviewed, and processed quickly, and prompt feedback is provided to applicants;
- h. Create a pipeline for "hard to fill" trade positions by developing or expanding apprentice and intern programs. Design strategies to encourage age appropriate BCPS students, adult and trade school students, and interested members of the community to enter these programs;
- i. Invest in making BCPS a more attractive employer by --
 - i. Using a special training rate to compensate, whenever possible, apprentice and intern trainees for a portion of their training;⁴³
 - ii. Adding maintenance trades positions to the current practice of applying for previous work experience credit at the time of onboarding, while monitoring the effect of salary compression on existing employees; and
 - iii. Evaluate the benefit of BCPS's covering candidate upfront costs of fingerprinting and background checks, and possibly other requirements such as physicals. Recover this cost only from applicants that are hired during their first 120 (or 180) days of employment through payroll deductions.
- j. Track all costs associated with recruiting, training, and onboarding as part of future budgeting justifications.

⁴² For example, determine if fingerprinting and similar requirements can be conducted much earlier in the process.

⁴³ May require a "commitment" letter to protect the district's investment.

9. Clarify with the appropriate municipal or county jurisdiction their responsibilities to maintain public sidewalks around the district's schools. Develop a formal process to promptly notify (and track) the appropriate city/county department of any safety and liability issues that exist.
10. Implement programs to measure customer satisfaction, including the use of customer surveys and focus groups, to identify service concerns and establish future priorities. At a minimum, input from students, parents, school site administrative, teaching, and support staff should be solicited. Additionally, develop a web-based client satisfaction report where principals can provide the Chief Facilities Officer with a monthly assessment of maintenance, grounds, and other services provided to their schools.
11. Establish a system of fiscal accountability where area managers are held responsible for their budgets, timely approvals, and execution of work. To facilitate this effort --
 - a. Conduct training on the district's budget system and the facilities management software utilized by the department to ensure all relevant budget data are readily available;
 - b. Implement systems to track budgets, and actual expenses of planned and unplanned facilities work in a predictable, reliable, and reportable fashion; and
 - c. Incorporate the use of GPS technology to track productive time and non-productive time to reduce non-productive time to the greatest extent possible.
12. Develop succession planning and cross-training within the department to ensure knowledge transfer and orderly transition of responsibilities.
13. Establish clear expectations about intra and interdepartmental communications and cooperation to resolve misunderstandings, increase the capacity of each department to perform its responsibilities, and build knowledge and appreciation among all departments. Develop or hire leaders who will lead by example to champion knowledge sharing and collaboration. Ensure that all department employees know --
 - a. District, division, and department goals and objectives and how they will be achieved;
 - b. That interdepartmental collaboration is taking place with all appropriate departments and stakeholders at the table;
 - c. How personnel will be held accountable and evaluated using performance-monitoring metrics;
 - d. Why changes are being made that may impact the team along with expected outcomes;
 - e. That managers and supervisors are held accountable to ensure that information and feedback is disseminated up-and-down, and side-to-side within and between departments; and

- f. That employee feedback and suggestions are welcomed and considered, so team members know there is an ongoing departmental process-improvement program to encourage innovation and improvement.
14. Create a comprehensive staff development plan to benefit employee retention and provide opportunities for employees at all levels to enhance their skills and learn industry best practices through--
 - a. Participation in professional organizations,
 - b. In-depth new-employee orientation,
 - c. Cross-functional training, including within trades, and
 - d. Visiting peer districts to gather performance, safety, customer service, and technology leveraging strategies.
15. Identify root causes and develop corrective action plans to reduce the number of KPIs identified in this management letter that are very high, extremely high, or significantly higher, when compared to peer districts nationally and within Florida.
16. Analyze and monitor at the department level--
 - a. Current maintenance zone configurations for workload consistency between maintenance zones, accounting for the numbers and types of schools, age of schools, enrollment, number of used and unused classrooms and portables, deferred maintenance backlog, and other considerations;
 - b. The number and skill set types of maintenance personnel for resource consistency, dependent upon the anticipated needs of each zone; and
 - c. Service level consistency, response time consistency, and resource deployment consistency to ensure a service-level balance between all geographic areas of the district.
17. Expand annual PPO inspections of district facilities to incorporate critical maintenance systems and equipment. This process should include--
 - a. Forming a committee of department managers to review the current assessment form to determine what additional maintenance systems and equipment should be assessed;
 - b. Identifying potential deficiencies to be inspected for and corrective action to be taken;
 - c. Providing training to inspectors of added systems and equipment to be inspected;
 - d. Initiating work orders for corrective action; and
 - e. Verifying corrective action has taken place, and the work order was closed.

ATTACHMENT A. STRATEGIC SUPPORT TEAM

Robert Carlson

Robert Carlson is Director of Management Services for the Council of the Great City Schools. In that capacity, he provides Strategic Support Teams and manages operational reviews for superintendents and senior managers; convenes annual meetings of Chief Financial Officers, Chief Operating Officers, Transportation Directors, and Chief Information Officers and Technology Directors; fields hundreds of requests for management information; and has developed and maintains a Web-based management library. Prior to joining the Council, Dr. Carlson was an executive assistant in the Office of the Superintendent of the District of Columbia Public Schools. He holds doctoral and master's degrees in administration from The Catholic University of America; a B.A. degree in political science from Ohio Wesleyan University; and has done advanced graduate work in political science at Syracuse University and the State Universities of New York.

David M. Palmer

David Palmer, Deputy Director (retired), Los Angeles Unified School District, is a forty-year veteran of school business operations administration. Mr. Palmer's executive responsibilities included the management and oversight of division operations, strategic planning and execution, budget development and oversight, and contract administration. Mr. Palmer oversaw the design and implementation of performance standards, benchmarks and accountabilities for staff and advised the Council of Great City Schools on the *Key Performance Indicator* project. Mr. Palmer was also an instructor in the School Business Management Certificate Program at the University of Southern California. Mr. Palmer currently provides consulting services for school districts and other governmental agencies and is a very active member of the Council's Strategic Support Team.

Alex Belanger

Alex Belanger is the Assistant Superintendent of Facilities Management and Planning at Fresno Unified School District (FUSD), the fourth largest school district in California. FUSD is comprised of 3,862 Classrooms located at 99 schools with 12 non-instructional sites totaling, 8.26 M square feet on 1,277.66 acres with 74,000 students enrolled. Mr. Belanger has over 26 years of experience in general contracting and recovery of major public/private construction projects, public/commercial maintenance and operations services, construction management and public and private design/sustainability program management. He has successfully managed and recovered projects for Department of Defense, Department of Transpiration, healthcare, hospitality and educational K-12 / community college / universities, commercial/retail facilities. His background is further diversified with his experience in developing and managing projects/programs in the oilfield/mining industry on the North Slope of AK in sensitive tundra wetland areas. As a private consultant he managed projects/programs in the Arctic Circle for NANA Regional Corporation, Pedro Bay Village Corporation and Ilimina Village corporation from inception to closeout establishing/developing opportunities for community economic development. Commercially he managed NMS (NANA/Sodexo partnership) facilities Management department one of the largest privately held M&O companies in Alaska. Prior to being recruited to Fresno Unified School

District Alex was hired as Assistant Director of Maintenance and Operations as a recovery specialty to address and improve maintenance and operations related to safety, productivity, and quality control at ASD. Mr. Belanger is a Licensed General Contractor in the state of Alaska, holds a PM Certification from Parsons Brinckerhoff/Harvard online, qualified at a GS-11 Principal Supervising Construction Coordinator for DOD and a Journeyman Carpenter. Alex also serves on the committee overseeing West Fresno Steering Committee, Fresno City Parks/Trails revitalization. He is an acting board member on West Fresno Community Economic Development Corporation and Central Unified School District Bond Oversight committee. He is a member of CMAA Construction Manager Association of America. His most recent recognitions are ACSA Classified Leader of the Year Region IX and was part of a team that received the AIA Design *Award of Merit* for Philip J. Patino School of Entrepreneurship.

Rickey A. Bevilacqua

Rickey Bevilacqua is the Manager of Facilities Construction for the Facilities Design and Construction Department with Pinellas County Schools (PCS). Mr. Bevilacqua leads a team of project managers and engineers to oversee over 100 construction projects with a value of construction over two hundred million dollars per year. He assists the school board architect with design criteria standards for the construction documents. With over 35 years of educational experience in construction he is an expert in his field. Experience includes planning, budgeting, design, and construction of K-12, vocational, and exceptional schools including three schools achieving LEED gold certification. Included in his experience, working on joint ventures with private schools, municipalities, and the County's Health Department. Mr. Bevilacqua has 40 years of experience in the construction industry with 35 years of educational construction. He is a high school and vocational graduate and is a State Licensed Building Contractor, Plans Examiner, and Inspector.

Christos Chrysiliou

Christos Chrysiliou is the Director of Architectural and Engineering (A&E) Services for the Facilities Services Division of the Los Angeles Unified School District (LAUSD). LAUSD is the 2nd largest School District in the Nation with 13,500 buildings located at 1,270 schools and centers across 6,478 acres of land educating a population of approximately 700,000 students. Mr. Chrysiliou has over thirty years of experience in architectural planning, development, design, project management, sustainability and construction, enabling him to work with a strategic mindset to bring innovative ideas and solutions to solve complex issues. He has successfully managed projects for educational facilities, hospitality and commercial/retail facilities from inception to closeout with an emphasis on planning and design. As the Director of A&E Services, he is responsible for Design, Architecture, Engineering, Sustainability Initiatives and Energy Management for the District. During his eighteen years of experience at LAUSD, he has worked within the three major facility branches: Construction, Asset Management, and Maintenance & Operations where he has gained effective leadership skills and provided responsible management for capital improvement programs. Mr. Chrysiliou earned a Bachelor of Architecture and Minor in Business Degree from Woodbury University in Burbank, California and an Associate of Arts Degree in Interior Design from the Fashion Institute of Design and Merchandising (FIDM) in Los Angeles, California. He is a Registered Architect in the State of California and has served several

Boards including the AIA SFV Chapter and Collaborative for High Performance Schools. He holds several professional certifications including: Certified Construction Manager (CCM), Parsons Project Manager Certification (PPMC), LEED Building Design & Construction (LEED AP BD+C), and Facility Management Professional (IFMA). He is a member of the American Institute of Architects, Construction Management Association of America, US Green Building Council. He also serves on several advisory councils for local utility service providers and outside agencies, analyzing new technologies and possible implementation for maximizing energy efficiency and is a constant figure in state and national sustainability forums such as the U.S. Department of Energy's Better Buildings Challenge, New Buildings Institute, and NREL. His most recent recognitions include the *Best of Green Schools Ambassador Award* by the Center for Green Schools and the *Walk the Walk Award Portfolio* by the Better Buildings Challenge LA Chapter. Mr. Chrysiliou's vision is to develop balanced educational environments that utilize sustainable systems that protect and restore our natural resources and enhance the educational experience and overall well-being of our communities.

John Dufay

John Dufay is the Executive Director of Maintenance and Support Operations for Albuquerque Public Schools which contains 15.2 million square feet in 2,100 buildings. The M&O Division is comprised of 267 skilled technicians representing seven service departments and a financial/accounting office. As a 1976 graduate of the University of New Mexico, College of Architecture, he commenced his professional career with a local design firm, initially focusing on high end custom homes and small commercial and multi-housing projects and later expanding into environmental issues and assessments. In 1985, Mr. Dufay accepted a staff architect position at Los Alamos National Laboratory where he worked on ADA accessibility, energy projects, renovation and major upgrade projects. He returned to the University of New Mexico, graduating with a M.S. in Environmental Science in 1992. In 1988 — in response to the Federal law for managing asbestos in schools (AHERA) Mr. Dufay was hired as the first environmental management planner charged with creating the only in-house environmental management program. In the 1990s, he designed a new technology third generation type of constructed wetlands for waste-water treatment and recycling which was extremely effective and efficient. A patent was filed on the technology in 1997 and in December 2000 the U.S. Federal Patent and Trademark Office issue Utility Patent #6159371 for Constructed Wetlands Remediation System, Sub- surface Nitrification/Denitrification of Waste-Water.

Scott Layne

Scott Layne serves as Deputy Superintendent for Operations for the Dallas Independent School District. His main responsibilities include maintenance, grounds, energy management, regulatory compliance, custodial services, fleet management, transportation, food service, construction, safety/security and police, and technology. His career in public education began in the Katy Independent School District in 1982. He worked as an architectural draftsman involved in the design and construction of renovations and additions to existing school facilities. In 1988, he accepted a position with the Midland Independent School District, eventually serving as Director of School Plant Services. In 1991, he went to the Irving Independent School District and has served as Assistant Director of Maintenance and Operations, Director of Maintenance and

Operations, Executive Director of Facilities, and Assistant Superintendent for Support Services. In August 2016, Mr. Layne accepted the position of Chief Operating Officer with the Dallas Independent School District. In May 2017, he took on additional responsibilities and his title was changed to Deputy Superintendent for Operations. Mr. Layne is a member of the Texas Association of School Administrators (TASA), Texas Association of School Business Officials (TASBO), the North Texas Facilities Services Association (NTFSA), and the Association for Learning Environments (A4LE). He has served as Chairman of the TASBO Maintenance and Operations Research Committee, President of the North Texas Facilities Services Association, President of the Council of Educational Facility Planners, International (DFW Chapter), President of the Council of Educational Facility Planners, International (Southern Region), and Chairman of the Board for A4LE. He has also served as President of the Irving Sunrise Rotary Club. Mr. Layne earned a Bachelor of Science Degree in Architectural Studies from the University of Illinois at Urbana-Champaign and an Associate of Fine and Applied Sciences Degree from Illinois Central College.

Trena A. Marsal (Deane)

Trena A. Marsal (Deane) is the Executive Director of Facility Management for Denver Public Schools (DPS). Facility Management is responsible and accountable for over 16 million square feet of facilities which includes 230 school programs located in 226 DPS owned facilities and 7 leased facilities. As the second largest landowner in Denver and the largest school district in Colorado the District educates a population of over 93,000 students and is growing. Facility Management employs over 900 employees within Custodial Operations, Maintenance, Real Estate, and Sustainability, Professional Development, Safety and Community Use Divisions. Mrs. Marsal's career has spanned 20 years with DPS and during this time she has served as the Chief of Maintenance Engineering, Director of Operations and Maintenance and her current assignment as the Executive Director of Facility Management. Mrs. Marsal holds a Bachelor of Science Degree in Occupational Safety, Master of Management and MBA Degrees in Human Resources. Mrs. Marsal serves on the Mayor's Developers Advisory Council, is co-chair of the African American Equity Task Force and Wisdom Team, Denver Parks and Recreation Board and has served on various committees across the District to support student achievement and the mission of the District.

Stacey Marshall

Stacey Marshall began her career as a plumber in the private sector and came to the Maintenance Department for the School District of Palm Beach County in May 2000. She worked her way from Senior Mechanical Technician for mechanical vendor services, to Facilities Management Coordinator managing the Mechanical Section, and to the position of Facilities Management Administrator. As the Facilities Administrator she managed Central Services for the District, which included mechanical, lock and window, generators, fire alarm, intercom, grounds, sheet metal, pest control, and general trade repairs. In 2017, Ms. Marshall became the General Manager of Maintenance and Plant Operations and has recently accepted the position of Director of Facilities Services, which maintains more than 200 facilities for the School District of Palm Beach County. Ms. Marshall was part of the School District of Palm Beach County's recovery efforts for Hurricanes' Frances, Jeanne, Wilma, and Irma. In addition, as part of her job responsibilities,

Ms. Marshall coordinated the District's Emergency Response Center during Hurricane Irma and is currently coordinating the District's recovery efforts through FEMA.

John T. Shea

John Shea has been the CEO of the New York City Department of Education, Division of School Facilities (DSF) since August 2008. The New York City Department of Education is the largest K-12 school district in the United States, with 1.1 million students, universal pre-kindergarten, and a portfolio of 1,405 buildings with a total of 135M square feet of managed space. To successfully oversee this enterprise, DSF relies on an outstanding team of 250 professional staff in the areas of Facility Management, Engineering, Contracts, Project Management, Sustainability, Environmental Health and Safety, Finance, Emergency Preparedness, IT, and Maintenance Management, as well as 450 professional trades staff, 860 Custodian Engineers, 1100 Building Engineers, and 6500 Cleaners. Before arriving at the NYC DOE John spent twelve years as the Executive Director of Facilities for the Nassau County Board of Cooperative Educational Services (BOCES), the largest regional school district in New York State. Prior to BOCES, he was a Technical Manager for the Aramark Corporation in their Educational Services division. John started his career in the maritime industry as an engineer, supervising ship repair and construction both domestically and internationally. He has a BS in Marine Engineering from the United States Merchant Marine Academy, from where he graduated in 1989, and is a former officer in the United States Naval Reserve.

ATTACHMENT B. WORKING AGENDA

**Strategic Support/Technical Assistance Team
Facilities Review
Broward County Public Schools
June 18-21, 2019**

**Working Agenda
Subject to Change as Required**

Tuesday, June 18

Team Arrival

6:15 p.m.

Team to Meet in Hotel Lobby
Marriott North
6650 N. Andrews Ave.
Fort Lauderdale
954.771.0440

6:30 p.m.

Dinner Meeting
15th Street Fisheries
1900 SE 15th Street

Robert Runcie
Superintendent
Judith Marte
Chief Financial Officer
Maurice Woods
Chief Strategy & Operations Officer
Others (TBD)

Wednesday, June 19

7:00 – 7:45 a.m.

Team Continental Breakfast
District Maintenance Office
3810 NW Tenth Avenue

Requirements
Internet Connectivity
LCD Projector & Power Strips
White Board/Flip Charts

8:00 – 9:00 a.m.

Team Interview

Sam Bays
Director, Physical Plant Operations

9:15 – 10:00 a.m.

Team Interview

Dale Schmidt
Director, Performance Management
Office of Strategic Initiative

Management

10:15 – 11:00 a.m.

Team Interview

Robert Maloney
Manager, Facilities Support Services

11:15 – 12:00 Noon

Team Interview

Pamela Norwood
Manager, PPO Finance

12:15 – 1:15 p.m. Working Luncheon

1:30 – 2:15 p.m.

Team Interview

Eric M. Chisem

		Director, Talent Acquisition &
Operations		
2:30 – 3:15 p.m.	Team Interviews	<u>Ed Hinline</u> Director, Business Applications, Information 3& Technology Department
		<u>Jeff Whitney</u> Assistant Director, Capital Budget Department
		<u>Greg Neiman</u> Work Flow Process: CMMS Lead
		<u>William Robinson</u> CMMS Administrator
3:30 – 4:15 p.m.	Team Interview	<u>Eloy Quesada</u> District Trades Manager (Capital Installations)
4:30 – 4:45 p.m.	Team Discussion of Work Plan for Balance of Site Visit	

Thursday, June 20

7:00 – 7:45 a.m.	Continental Breakfast	
8:00 – 8:45 a.m.	Team Interview	<u>Ron DiCurcio</u> <u>Dale Spear</u> Area Managers (2 of 3) (Routine Maintenance)
9:00 – 9:45 a.m.	Team Interview	<u>Ron Eggenberger</u> Grounds Manager <u>Roy Norton</u> Manager, Custodial/Grounds & Special Projects
10:00 – 10:45 a.m.	Team Interview	<u>Omar Shim</u> Director, Capital Budget (PPO Liaison)
11:00 – 11:45 a.m.	Team Interview	<u>Michael Solley</u> <u>Kevin Jackson</u> <u>Clara Knowles</u> Zone/Trade Supervisors
12:00 – 1:00 p.m.	Working Luncheon	
1:15 – 2:00 p.m.	Team Interview	<u>Mary Coker & Paul Molnar</u> Material Handling
		<u>Richard Ellis</u> Supervisor, Equipment Repair

		<u>Tommy Fitzpatrick</u> Fleet Maintenance
2:15 – 3:00 p.m.	Team Interview	<u>Dr. MaryAnn May</u> Fire Chief <u>Brian Katz</u> Chief of Safety, Security & Emergency Preparedness <u>Roger Riddlemosser</u> Director, Environmental Health & Safety
3:15 – 4:00 p.m.	Team Interview	<u>Mary Coker</u> Director, Procurement & Warehouse Services <u>Danielle Mamede</u> Assistant Director, Procurement & Warehouse Services <u>Cenira Infante</u> <u>Marissa Smith</u> <u>Maurice Stradiotti</u> <u>Deeana Lowe-Chin</u> Senior Process Analysts
4:15 – 5:00 p.m.	Team Interview	<u>Principals</u> Randomly Selected Across Grade Levels

Team Discussion of Work Plan for Balance of Site Visit

Friday, June 21

7:00 – 7:45 a.m.	Continental Breakfast	
8:00 – 12:00 Noon	Team Meeting	Discussion of Findings & Recommendations
12:00 – 1:00 p.m.	Working Luncheon & Debriefing	<u>Robert Runcie</u> Superintendent <u>Maurice Woods</u> Chief Strategy & Operations
Officer		<u>Judith Marte</u> Chief Financial Officer Others (TBD)
	Adjournment & Departures	

ATTACHMENT C. DISTRICT PERSONNEL INTERVIEWED

- Robert Runcie, Superintendent
- Judith Marte, Chief Financial Officer
- Maurice Woods, Chief Strategy & Operations Officer
- Mary-Ann May, Acting Chief Facilities Officer
- Sam Bays, Director, Physical Plant Operations
- Dale Schmidt, Director, Performance Management
- Robert Maloney, Manager, Facilities Support Services
- Pamela Norwood, Manager, Physical Plant Operations Finance
- Eric M. Chisem, Director, Talent Acquisition and Operations
- Ed Hinline, Director, Business Applications
- Jeff Whitney, Assistant Director, Capital Budget
- Greg Neiman, Work Flow Process: CMMS Lead
- William Robinson, CMMS Administrator
- Eloy Quesada, District Trades Manager (Capital Installations)
- Ron Dicurcio, Area Manager Zone 2 (Routine Maintenance)
- Dale Spear, Area Manager Zone 3 (Routine Maintenance)
- Ron Eggenberger, Grounds Manager 2
- Jerry Vevio, Supervisor II
- Omar Shim, Director, Capital Budget
- Kevin Jackson, Zone/Trade Supervisor
- Clare Knowles, Zone/Trade Supervisor
- Mary C. Coker, Director, Procurement and Warehousing
- Paul Molnar, Stock Room Assistant - Material Logistics
- Reginal Moncrief, Supervisor Logistics and Relocations
- Richard Ellis, Supervisor, Grounds
- Tommy Fitzpatrick, Manager, Vehicle Maintenance
- Craig Kowalski, Chief, School Police
- Roger Middlemosser, Director, Environmental Health & Safety
- Danielle Mamede, Assistant Director, Procurement & Warehouse Services
- Cenira Infante, Senior Process Analyst
- Marissa Smith, Senior Process Analyst
- Maurice Stradiotti, Senior Process Analyst
- Deena Lowe-Chin, Senior Process Analyst
- Al Shelton, Senior Process Analyst
- Principals:
 - Jocelyn M. Reid, Deerfield Park Elementary
 - Jimmy Arrojo, Western High
 - Juan Alejo, Boulevard Heights Elementary
 - Cory Smith, Ramble Wood Middle
 - Robert Pappas, Gulfstream Academy
 - Anthony Valachovic, Northeast High

- Parinaz Bristol, Plantation High
- Michael Walker, Sunrise Middle
- Bob Crawford, Atlantic Technical College
- Bardetta Haygood, Henry D. Perry Education Center
- Christopher McGuire, Broward Virtual School
- Ricardo Santana, Glades Middle

ATTACHMENT D. DOCUMENTS REVIEWED

- Budget:
 - Comprehensive Annual Financial Reports for
 - Fiscal Year Ended June 30, 2016
 - Fiscal Year Ended June 30, 2017
 - Fiscal Year Ended June 30, 2018
 - Physical Plant Operations (PPO) Expenses vs. General Fund, FY 2015 to 2019, Final June 17, 2019
- Florida School District Annual Plant Maintenance and Operations Cost Information, 2017-2018
- Demographics and Student Assignments Department, Benchmark Day Enrollment Count, September 11, 2018, Appendix D: School Enrollment by Grade Level
- Organizational Charts:
 - District Organizational Charts, 2018-2019, approved May 22, 2018
 - Facilities Division Organization Charts 2019, dated April 25, 2019
- Job Descriptions:
 - Director, Physical Plant Operations, adopted as amended July 28, 2015
 - Area Manager, Trades, updated August 24, 2004
 - Manager, Facilities Support Services, reporting change July 25, 2011
 - Manager, Physical Plant Operations (PPO) Finance, Board approved October 18, 2016
 - Manager, Custodial/Grounds, adopted as amended July 28, 2015
 - Grounds Manager, board adopted June 20, 2006
 - Area Supervisor I, Maintenance, revised December 19, 2014
 - Supervisor I, Electrical, board adopted December 16, 2003
 - Supervisor I, Heating, Ventilation and Air Conditioning, revised January 27, 2015
 - Supervisor I, Mechanical Equipment, Board adopted December 16, 2003
 - Supervisor I, Roofing, revised December 19, 2014
 - Assistant Area Supervisor, Maintenance (4), revised November 29, 2006
 - Project Coordinator, Information & Technology, Board adopted February 19, 2014
 - Supervisor II, Grounds, revised December 19, 2014
- Department Strategic Plans:
 - Division Facilities:
 - Department Under Review: PPO, dated March 31, 2014
 - Performance Management 3.0 Review: dated PPO, June 25, 2018
 - Performance Management 2.0, PPO
 - Department Under Review: PPO, Version 1.5, dated May 6, 2014
 - Status of Progress on Strategic Initiatives, dated June 24, 2019
- PPO Work Orders Costs Summary 2
- Internal/External Audits:

- Procurement and Warehousing Services' Purchasing Card (P-Card) Services for Period from July 1, 2015 through September 30, 2015, Audit Committee on November 17, 2016, by Office of the Chief Auditor
- Termite Extermination Contracts No. 15-109T and No. 28-137T, Audit Committee on March 10, 2016, by Office of the Chief Auditor
- Broward County Public Schools Maintenance Review, Portolan Performance Index, June 2018, by Portolan Group, dated May 30, 2019
- Presentation, PPO's Path Forward, A Discussion of the SOP's, Business Plan, and KPI's of PPO, 4th Quarter Fiscal Year 2017
- Standard Operating Procedure and Index, last revision January 20, 2017
- Vendor Contracts, PPO Bid List as of May 21, 2019
- PPO Work Plans:
 - 120-Day Work Group Schedules:
 - Zone 1
 - Zone 3
 - District Trades, 2019 Summer Projects, dated May 31, 2019
 - District Trades, Air Cooled Chillers PM (Annual), revised May 31, 2019
 - District Trades, South Area Boilers PM (Monthly)
 - District Trades, Cooling Tower PM (Quarterly), dated March 1, 2018
 - District Trades, Fire Hydrant PM (Annual)
 - District Trades, Generator PM (Quarterly)
 - District Trades, HVAC Projects
 - District Trades, Lift Station PM (Monthly)
 - District Trades, Compactor PM (Semi-Annual)
 - District Trades, Somat PM (Semi-Annual)
 - District Trades, Water Cooled Chillers PM (Annual), revised May 31, 2019
 - 2009-2010 – Work Plan, dated November 30, 2009
 - Fire Alarm Inspections 2018-2019
 - Fire Pump Inspections (Annual) 2019-2020
 - Fire Sprinkler Inspections (4th quarter) 2018-2019
 - Kitchen Hood Inspections 2018-2019 (2nd half)
- Procedure for Requesting Projects not Funded in the Adopted District Educational Facilities Plan, dated December 03, 2007, Bulletin No: A-468
- Composite Costs, 2016-2017
- Agenda Request Form, The School Board of Broward County, Florida, Item No. EE-4; Computer Maintenance Management System, Meeting date January 18, 2017
- CMMS Agreement, Agreement with Electronic Data, Inc.
- Product Requirements Document, CMMS 7.6 eSAM, Prepared by Consultant., Version 3.1, dated September 1, 2017
- Space Types, Space Inventory, dated January 7, 2019
- MAPPS Financials by School, dated June 20, 2019
- Florida Classrooms (Florida Department of Education)

- 21st Annual Customer Survey Results, 2014-2015, dated June 24, 2016
- Facilities Service Schedule and Evaluation Form
- Grounds Equipment Repair Department Handout
- Facilities Assessment Form Sample with Pictures
- Copy of the 2017-2018 BCPS Facility KPI Data Entered into the CGCS Online Repository
- Facilities Analysis Data from the National Center for Education Statistics
- Public Schools Facilities Element Support Document – 2016/17 (Part of Volume 4 of the Broward County Comprehensive Plan)
- Consulting Contract for New CMMS Implementation, dated September 1, 2017
- Board Agenda Item for Consulting Contract re: New CMMS Implementation, dated January 18, 2017

ATTACHMENT E. COUNCIL REVIEWS

The **Council of the Great City Schools** is a coalition of 75 of the nation's largest urban public-school systems.⁴⁴ The organization's Board of Directors is composed of the superintendent, CEO, or chancellor of schools and one school board member from each member city. An executive committee of 24 individuals, equally divided between superintendents and school board members, provides regular oversight of the 501(c)(3) organization. The composition of the organization makes it the only independent national group representing the governing and administrative leadership of urban education and the only association whose sole purpose revolves around urban schooling.

The mission of the Council is to advocate for urban public education and to assist its members in to improve and reform. The Council provides services to its members in the areas of legislation, research, communications, curriculum and instruction, and management. The group also convenes two major conferences each year; conducts studies of urban school conditions and trends; and operates ongoing networks of senior school district managers with responsibilities for areas such as federal programs, operations, finance, personnel, communications, instruction, research, and technology. Finally, the organization informs the nation's policymakers, the media, and the public of the successes and challenges of schools in the nation's Great Cities. Urban school leaders from across the country use the organization as a source of information and an umbrella for their joint activities and concerns.

The Council was founded in 1956 and incorporated in 1961 and has its headquarters in Washington, DC. Since the organization's founding, geographic, ethnic, language, and cultural diversity has typified the Council's membership and staff.

⁴⁴ Albuquerque, Anchorage, Atlanta, Austin, Baltimore, Birmingham, Boston, Broward County (Ft. Lauderdale), Buffalo, Caddo Parish (Shreveport), Charleston County, Charlotte-Mecklenburg, Chicago, Buffalo, Clark County (Las Vegas), Cleveland, Columbus, Dallas, Dayton, Denver, Des Moines, Detroit, Duval County (Jacksonville), East Baton Rouge, Fort Worth, Fresno, Guilford County (Greensboro, N.C.), Hillsborough County (Tampa), Houston, Indianapolis, Jackson, Jefferson County (Louisville), Kansas City, Little Rock School District, Long Beach, Los Angeles, Memphis, Miami-Dade County, Milwaukee, Minneapolis, Nashville, Newark, New Orleans, New York City, Norfolk, Sacramento, Oklahoma City, Omaha, Orange County (Orlando), Palm Beach County, Philadelphia, Pittsburgh, Portland, Providence, Richmond, Rochester, Sacramento, Salt Lake City, San Diego, San Francisco, Seattle, Stockton, St. Louis, St. Paul, Toledo, Toronto, CA, Washington, D.C., and Wichita

History of Strategic Support Teams of the Council of the Great City Schools

The following is a history of the Strategic Support Teams provided by the Council of the Great City Schools to its member urban school districts over the last 20 years.

City	Area	Year
Albuquerque	Facilities and Roofing	2003
	Human Resources	2003
	Information Technology	2003
	Special Education	2005 & 2018-9
	Legal Services	2005
	Safety and Security	2007
	Research	2013
	Human Resources	2016
	Anchorage	Finance
Communications		2008
Math Instruction		2010
Food Services		2011
Organizational Structure		2012
Facilities Operations		2015
Special Education		2015
Human Resources		2016
Atlanta	Facilities	2009
	Transportation	2010
Austin	Special Education	2010
Baltimore	Information Technology	2011
Birmingham	Organizational Structure	2007
	Operations	2008
	Facilities	2010
	Human Resources	2014
	Financial Operations	2015
Boston	Special Education	2009
	Curriculum & Instruction	2014
	Food Service	2014
	Facilities	2016
Bridgeport	Transportation	2012
Broward County (FL)	Information Technology	2000
	Food Services	2009
	Transportation	2009

	Information Technology	2012
	Information Technology	2018
	Facilities Operations	2019
Buffalo		
	Superintendent Support	2000
	Organizational Structure	2000
	Curriculum and Instruction	2000
	Personnel	2000
	Facilities and Operations	2000
	Communications	2000
	Finance	2000
	Finance II	2003
	Bilingual Education	2009
	Special Education	2014
	Facilities Operations	2019
Caddo Parish (LA)		
	Facilities	2004
Charleston		
	Special Education	2005
	Transportation	2014
Charlotte-Mecklenburg		
	Human Resources	2007
	Organizational Structure	2012
	Transportation	2013
Cincinnati		
	Curriculum and Instruction	2004
	Curriculum and Instruction	2009
	Special Education	2013
Chicago		
	Warehouse Operations	2010
	Special Education I	2011
	Special Education II	2012
	Bilingual Education	2014
Christina (DE)		
	Curriculum and Instruction	2007
Cleveland		
	Student Assignments	1999, 2000
	Transportation	2000
	Safety and Security	2000
	Facilities Financing	2000
	Facilities Operations	2000
	Transportation	2004
	Curriculum and Instruction	2005
	Safety and Security	2007
	Safety and Security	2008
	Theme Schools	2009
	Special Education	2017
Columbus		

	Superintendent Support	2001
	Human Resources	2001
	Facilities Financing	2002
	Finance and Treasury	2003
	Budget	2003
	Curriculum and Instruction	2005
	Information Technology	2007
	Food Services	2007
	Transportation	2009
Dallas		
	Procurement	2007
	Staffing Levels	2009
	Staffing Levels	2016
Dayton		
	Superintendent Support	2001
	Curriculum and Instruction	2001
	Finance	2001
	Communications	2002
	Curriculum and Instruction	2005
	Budget	2005
	Curriculum and Instruction	2008
	Organizational Structure	2017
Denver		
	Superintendent Support	2001
	Personnel	2001
	Curriculum and Instruction	2005
	Bilingual Education	2006
	Curriculum and Instruction	2008
	Common Core Implementation	2014
Des Moines		
	Budget and Finance	2003
	Staffing Levels	2012
	Human Resources	2012
	Special Education	2015
	Bilingual Education	2015
Detroit		
	Curriculum and Instruction	2002
	Assessment	2002
	Communications	2002
	Curriculum and Assessment	2003
	Communications	2003
	Textbook Procurement	2004
	Food Services	2007
	Curriculum and Instruction	2008
	Facilities	2008
	Finance and Budget	2008
	Information Technology	2008
	Stimulus planning	2009

	Human Resources	2009
	Special Education	2018
Fresno		
	Curriculum and Instruction	2012
	Special Education	2018
Guilford County		
	Bilingual Education	2002
	Information Technology	2003
	Special Education	2003
	Facilities	2004
	Human Resources	2007
	Transportation	2017
Hillsborough County		
	Transportation	2005
	Procurement	2005
	Special Education	2012
	Transportation	2015
Houston		
	Facilities Operations	2010
	Capitol Program	2010
	Information Technology	2011
	Procurement	2011
Indianapolis		
	Transportation	2007
	Information Technology	2010
	Finance and Budget	2013
	Finance	2018
Jackson (MS)		
	Bond Referendum	2006
	Communications	2009
	Curriculum and Instruction	2017
Jacksonville		
	Organization and Management	2002
	Operations	2002
	Human Resources	2002
	Finance	2002
	Information Technology	2002
	Finance	2006
	Facilities operations	2015
	Budget and finance	2015
Kansas City		
	Human Resources	2005
	Information Technology	2005
	Finance	2005
	Operations	2005
	Purchasing	2006
	Curriculum and Instruction	2006
	Program Implementation	2007

	Stimulus Planning	2009
	Human Resources	2016
	Transportation	2016
	Finance	2016
	Facilities	2016
	Curriculum and Instruction	2016
Little Rock		
	Curriculum and Instruction	2010
Los Angeles		
	Budget and Finance	2002
	Organizational Structure	2005
	Finance	2005
	Information Technology	2005
	Human Resources	2005
	Business Services	2005
Louisville		
	Management Information	2005
	Staffing Levels	2009
	Organizational Structure	2018
Memphis		
	Information Technology	2007
	Special Education	2015
	Food Services	2016
	Procurement	2016
Miami-Dade County		
	Construction Management	2003
	Food Services	2009
	Transportation	2009
	Maintenance & Operations	2009
	Capital Projects	2009
	Information Technology	2013
Milwaukee		
	Research and Testing	1999
	Safety and Security	2000
	School Board Support	1999
	Curriculum and Instruction	2006
	Alternative Education	2007
	Human Resources	2009
	Human Resources	2013
	Information Technology	2013
	Human Resources	2019
Minneapolis		
	Curriculum and Instruction	2004
	Finance	2004
	Federal Programs	2004
	Transportation	2016
	Organizational Structure	2016
Nashville		

Review of the Physical Plant Operations Program of the Broward County Public Schools

	Food Service	2010
	Bilingual Education	2014
	Curriculum and Instruction	2016
Newark		
	Curriculum and Instruction	2007
	Food Service	2008
New Orleans		
	Personnel	2001
	Transportation	2002
	Information Technology	2003
	Hurricane Damage Assessment	2005
	Curriculum and Instruction	2006
New York City		
	Special Education	2008
Norfolk		
	Testing and Assessment	2003
	Curriculum and Instruction	2012
	Transportation	2018
	Finance	2018
	Facilities Operations	2018
Omaha		
	Buildings and Grounds Operations	2015
	Transportation	2016
Orange County		
	Information Technology	2010
Palm Beach County		
	Transportation	2015
	Safety & Security	2018
Philadelphia		
	Curriculum and Instruction	2003
	Federal Programs	2003
	Food Service	2003
	Facilities	2003
	Transportation	2003
	Human Resources	2004
	Budget	2008
	Human Resource	2009
	Special Education	2009
	Transportation	2014
Pittsburgh		
	Curriculum and Instruction	2005
	Technology	2006
	Finance	2006
	Special Education	2009
	Organizational Structure	2016
	Business Services and Finance	2016
	Curriculum and Instruction	2016
	Research	2016

Review of the Physical Plant Operations Program of the Broward County Public Schools

	Human Resources	2018
	Information Technology	2018
	Facilities Operations	2018
Portland		
	Finance and Budget	2010
	Procurement	2010
	Operations	2010
Prince George's County		
	Transportation	2012
Providence		
	Business Operations	2001
	MIS and Technology	2001
	Personnel	2001
	Human Resources	2007
	Special Education	2011
	Bilingual Education	2012
	Bilingual Education	2019
Puerto Rico		
	Hurricane Damage Assessment	2017
	Bilingual Education	2019
Reno		
	Facilities Management	2013
	Food Services	2013
	Purchasing	2013
	School Police	2013
	Transportation	2013
	Information Technology	2013
Richmond		
	Transportation	2003
	Curriculum and Instruction	2003
	Federal Programs	2003
	Special Education	2003
	Human Resources	2014
	Financial Operations	2018
Rochester		
	Finance and Technology	2003
	Transportation	2004
	Food Services	2004
	Special Education	2008
Sacramento		
	Special Education	2016
San Antonio		
	Facilities Operations	2017
	IT Operations	2017
	Transportation	2017
	Food Services	2017
	Human Resource	2018
San Diego		

Review of the Physical Plant Operations Program of the Broward County Public Schools

	Finance	2006
	Food Service	2006
	Transportation	2007
	Procurement	2007
San Francisco		
	Technology	2001
St. Louis		
	Special Education	2003
	Curriculum and Instruction	2004
	Federal Programs	2004
	Textbook Procurement	2004
	Human Resources	2005
St. Paul		
	Special Education	2011
	Transportation	2011
	Organizational Structure	2017
Seattle		
	Human Resources	2008
	Budget and Finance	2008
	Information Technology	2008
	Bilingual Education	2008
	Transportation	2008
	Capital Projects	2008
	Maintenance and Operations	2008
	Procurement	2008
	Food Services	2008
	Capital Projects	2013
	Transportation	2019
Toledo		
	Curriculum and Instruction	2005
Washington, D.C.		
	Finance and Procurement	1998
	Personnel	1998
	Communications	1998
	Transportation	1998
	Facilities Management	1998
	Special Education	1998
	Legal and General Counsel	1998
	MIS and Technology	1998
	Curriculum and Instruction	2003
	Budget and Finance	2005
	Transportation	2005
	Curriculum and Instruction	2007
	Common Core Implementation	2011
Wichita		
	Transportation	2009
	Information Technology	2017