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# Internal Audit of Program Management FY 2020-2021 Q3

June 2021



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## TRANSMITTAL LETTER

June 25, 2021

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Pursuant to the approved internal audit scope of work, submitted February 11, 2021, we hereby submit our FY 2020-2021 Q3 internal audit report of the Program Management function. We presented this report to the Audit Committee on June 17, 2021.

Our report is organized in the following sections:

<b>Executive Summary</b>	This section provides a brief background and a summary of the observations related to our internal audit of the Program Management function.
<b>Current Period Observations</b>	This section presents descriptions of the observations noted during our internal audit, recommended actions, as well as responses from the Program Management team.
<b>Prior Observations Follow Up</b>	This section provides an update and current status of remediations related to prior noted findings.
<b>Objectives and Approach</b>	The objectives and approach of the internal audit are explained in this section.
<b>Appendix A</b>	This section presents a 12-month billing analysis of the CPCM's two (2) subconsultants.
<b>Appendix B – D</b>	This section includes supplemental documents related to the PM/OR's response to Observation #1.

We would like to thank all those involved for their assistance in connection with the FY 2020-2021 Q3 internal audit of the Program Management function at Broward County Public Schools.

Respectfully Submitted,

*RSM US LLP*



## EXECUTIVE SUMMARY

### Background, Objectives and Scope

RSM has provided various operational and construction auditing services through agreement with District's Office of the Chief Auditor ("OCA") since 2012. In March of 2017, RSM began providing quarterly evaluation reports of the District's Program Management team directly to the District's Office of Facilities and Construction ("OFC"). During our engagement we worked closely with OFC and members of the ATKINS, and CBRE-HEERY Program Management team to improve the District's design and construction control environment, and encourage transparency and accuracy in reporting. In November 2018, contractual oversight and management of our work shifted from OFC, back to the OCA. RSM works with OCA on a quarterly basis to define an audit plan for the upcoming quarter.

The objective of our engagement is to verify that the District's Cost and Program Controls Manager ("CPCM" - Atkins) and Program Manager - Owner's Representative ("PM/OR" - CBRE-HEERY & AECOM) are providing deliverables and services in conformance with the terms and conditions of their respective agreements / RFP / RFQ. Our procedures included testing of PM/OR compliance with District standard operating procedures and industry leading practices. Our scope included activities performed during the period of September 2020 – March 2021.

### Observations

The observations identified during our assessment are summarized on the pages that follow, and include management action plans with estimated completion dates.

During our testing, we identified that the PM/OR and the CPCM failed to produce various deliverables required by their contracts. We also noted Management and CPCM perceive a general lack of collaboration and transparency between the PM/OR and the District. We identified errors and missing support for labor included in PM/OR invoices, and identified e-Builder user access issues related to a terminated employee.

In follow-up, we noted project management is still struggling to incorporate approved changes into the project schedule.

### Approach

Our audit approach consisted of the following:

#### Cost and Program Controls Manager (Atkins)

- Conducted a labor analysis of Atkins' subconsultants, including a design assessment of processes and staffing, and analysis of billings by position
- Obtained and reviewed deliverables submitted in accordance with PM monthly reporting requirements derived from RFP Article 6.4.2.6
- Reviewed Atkins monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy
- Followed up on prior findings

#### Program Manager - Owner's Representative (CBRE-Heery & AECOM)

- Conducted a comparative analysis of AECOM's revised Milestone Baseline Schedule and CBRE-Heery's Milestone Baseline Schedule to assess impact of material changes to estimated project completion dates (in process as of Q3 2021)
- Obtained and reviewed deliverables submitted in accordance with PM monthly reporting requirements derived from its RFQ
- Reviewed AECOM monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy
- Reviewed CBRE-HEERY monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy
- Followed up on prior findings

#### Reporting

At the conclusion of our procedures, we summarized our findings into this report. We have reviewed the results of our testing with OCA, OFC, and the CPCM and PM/OR teams, and incorporated management's response herein.



## CURRENT PERIOD OBSERVATIONS



## DETAILED OBSERVATIONS

### INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3

#### OBSERVATION

#### 1. PM/OR Compliance with Reporting Requirements

#### DETAIL

RSM conducted detailed testing procedures related to the PM/OR's compliance with the monthly/quarterly deliverables as required by the RFQ. We noted that required monthly/quarterly reporting deliverables were not provided to OFC during our scope period (December 2020 – March 2021).

#### Monthly Reporting Requirements

The PM/OR's RFQ provides a summary of monthly deliverables that are required to be provided to the District by the PM/OR starting December 2020. Through discussions with OFC and the PM/OR, we noted that a completed monthly reporting package had not been submitted to OFC as of March 2021. However, the PM/OR submitted their first monthly reporting package for February 2021 on April 1, 2021, and the March package on April 28, 2021. The reports listed in the table below were identified as the agreed-upon monthly deliverables to be provided by the PM/OR. The table below summarizes the results of our testing:

AECOM Monthly Reporting Requirements (section 6.7 of the Owners Representative RFQ)	Provided Dec 2020?	Provided Jan 2021?	Provided Feb 2021?	Provided Mar 2021?
Develop Baseline Schedule	Yes	N/A	Yes <sup>1</sup>	N/A
Maintain Monthly Schedule Updates	N/A <sup>2</sup>	N/A <sup>2</sup>	Yes	Yes
Variance Analysis (Schedule / Budget) Slippage	No	No	No	Partial <sup>3</sup>
Evaluation of Pay Requisition (Consultants & Contractor)	No	No	No <sup>4</sup>	No <sup>4</sup>
Earned Value Project Management	No	No	No <sup>4</sup>	No <sup>4</sup>
Change Management - Report & Monitor Impact of Changes (Quality, Scope, Schedule & Budget)	No	No	Yes	Yes
Monthly Executive Summary of Program Performance	No	No	Partial <sup>4</sup>	Partial <sup>4</sup>
Monthly Executive Summary of Project Specific Performance	No	No	Partial <sup>4</sup>	Partial <sup>4</sup>

See the next page for notes referenced in the matrix above.



## DETAILED OBSERVATIONS

### INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3

#### OBSERVATION

#### 1. PM/OR Compliance with Reporting Requirements (continued)

#### DETAIL

**Note 1:** The PM/OR produced a baseline schedule in December 2020 and a revised baseline schedule in February 2021. RSM is currently conducting testing procedures to assess the PM/OR's December 2020 baseline schedule reset and the data included in the February 2021 revised baseline schedule. The results of our testing will be presented in the Q4 2021 Internal Audit Report.

**Note 2:** Monthly schedule updates could not be maintained until the PM/OR's baseline scheduled was set.

**Note 3:** The March 2021 monthly package includes a variance report that summarizes schedule changes by district, school, and project. However, we noted significant positive schedule variances that are likely attributable to advancement of projects as compared to the February 2021 baseline. As noted in Note 1, RSM is in the process of conducting testing related to the baseline schedule and variance reporting process. In addition, the monthly package does not include a report for budget slippage, as required by Section 6.7.1 of the RFQ.

**Note 4:** Several requirements outlined in Section 6.7 were not provided. For the current status of the PM/OR's monthly reporting requirements, reference Management Response #1.

#### Quarterly Reporting Requirements

The items listed in the table below were identified as the agreed-upon quarterly deliverables to be provided after the first three (3) months of the PM/OR's tenure. The table below summarizes the results of our testing:

AECOM Quarterly Reporting Requirements (section 6.7 of the Owners Representative RFQ)	Provided Q4 2020?	Provided Q1 2021?
Knowledge Management/Continuous Improvement at Program & Project Level (industry best practices & lessons learned)	Yes	No
Responsible, Accountable, Consulted, Informed (R. A. C. I.) Matrix	Yes	Yes

RSM held a meeting with the PM/OR on March 15, 2021 to discuss the current status of the required reporting deliverables. The PM/OR presented an outline of their proposed monthly report, but stated that a finalized monthly package had not been finalized or provided to Management.



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
DETAIL	<p>In addition to the required written deliverables highlighted above, the RFQ requires the PM/OR to establish open, collaborative, and free-flowing communication with program stakeholders:</p> <ul style="list-style-type: none"> <li> <b>6.2.2 Relationships with District Senior Management</b>  <i>“...the District expects the PMOR to perform these functions in a manner that supports and facilitates the District’s management operations as a collaborative team, and in particular as a team in which each of the members understands its role, and respects and appreciates the roles and contributions of other team members.”</i> </li> <li> <b>6.3.1 District Expectations of the PMOR’s Approach to Program Management</b>  <i>“...The District has decided to keep the Cost and Program Control function separate from its Program Manager-Owner’s Representative function. While this separation of duties creates a system of checks and balances, it also creates the need for functional relationships, collaboration, and communication to enable both types of Program Managers to successfully fulfill their responsibilities.”</i> </li> </ul> <p>During our procedures, interviewees cited a lack of transparency, limited production of written reports, and an environment lacking in collaboration between the PM/OR, the District, and the CPCM. The PM/OR has conducted numerous meetings with District staff and the CPCM to address both strategic and procedural issues, and has made progress in establishing mutual understanding on approaches to key issues related to historically challenging areas. The magnitude and complexity of the District’s program increases the risk of delays, overruns, and missed expectations if the three (3) primary process owners; District staff, PM/OR, and CPCM are not aligned.</p>
RECOMMENDATION	<p>We recommend the PM/OR provide monthly and quarterly deliverables as required by their RFQ to allow the District to more effectively monitor project and program performance. Further, open communication should be established between the PM/OR, District staff, and the CPCM to increase transparency and facilitate the sharing of information. As the Program Manager/Owner’s Representative, AECOM should seek to provide timely information and actively collaborate with District staff and the CPCM in an effort to collectively move the Program forward.</p>





## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response:</b> AECOM, the OCP, and the CPCM began a comprehensive review of the reporting requirements during the first 100 days of the AECOM contract. These reviews were as a result of conflicts, errors, and or duplication of reports on data that either was not included in the AECOM contract; or the data that was to be reported but would not be available until AECOM completed the e-Builder enhancements; or the reporting requirements were for the CPCM to report.</p> <p>The primary cause of the inability to live report and fulfil the reporting requirements within the RFQ is due to the structure of the PMIS/ e-Builder System. The current structure is inconsistent with industry standards in PMIS systems in comparative K12 capital programs.</p> <p>The contract required AECOM to perform a comprehensive review of program wide practices, including e-Builder. This work was completed within the first 90 days of the program. On or about November 19<sup>th</sup>, 2020, the AECOM team presented all elements of our required deliverables to include the recommendations for e-Builder to the OCP team. The AECOM team collaborated and coordinated our recommendations with the CPCM providing the CPCM, OCP and District leadership the opportunity to review and provide comments on AECOM's State of the Program presentation. Bridging the gap between <i>happened</i> and <i>happening</i> requiring the team to move the system toward timely, transparent, clear, automated, and up-to-date program data is and has been mission critical.</p> <p>AECOM understands the sensitivity and financial burden of bringing these challenges to the forefront at this point in the program. Our entire team has and will continue to work with complete transparency and coordination. District employees are the "end user" when it comes to implementing the updated e-Builder system at the workplace. We will continue to provide updates on our implementation plan, author user manuals, and provide training so that when the SMART program is complete District employees will use the system with complete confidence and competency.</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response (continued):</b></p> <p><u>Monthly Reporting Requirements</u></p> <p>As agreed with OCP, and CPCM, AECOM submitted a February 2021 monthly report on April 1, 2021 in a narrative format until the MPU Process in e-Builder was finalized, the MPU Process is now complete and MPU's were included in the March 2021 report submitted on April 30, 2021.</p> <p>The acceptance of the monthly reporting template occurred on March 18, 2021.</p> <p>6.52 PMOR Performance-based Evaluation Tool (attached), was due within the first 60 days of the contract, was submitted to the OCP team on October 17, 2020. The OCP team, the CPCM, the Facilities Task Force (FTF) subcommittee, the FTF committee at large, and AECOM have been working together to develop the final evaluation tool, reporting templates, categories, the frequency of category reporting, the basis of the evaluation tool, the reporting of the evaluation tool, and the subjective rubric reporting. AECOM received final approval of 85% of the performance-based evaluation tool from the OCP and the FTF on March 12, 2021. The results of the OCP / District review of the subjective rubric is outstanding and continues to be reviewed by District departments. Based upon the recommendation of OCP and the FTF these elements will be addressed during the second year of the AECOM contract.</p> <p>The following monthly reporting requirements were either adjusted, delayed or removed based on the final 6.5.2 PMOR Evaluation (attached).</p> <p><b>A. Schedule Adherence:</b> Develop Baseline Schedule, Maintain Monthly Schedule Updates, and Variance Analysis (Schedule/ Budget Slippage)</p> <p><b>SMART Program 2020-Re-set Schedule – Summary of Baseline &amp; Update Schedule Reporting</b></p> <p>AECOM's first submission of the official draft re-set schedule to OCP and through OCP to the CPCM, was on or about November 16, 2020 and November 17th, 2020. OCP and CPCM provided comments regarding the schedule, cost impacts of the schedule, ability to complete the program, and general comments on AECOM's schedule updates from November 2020 through February 2021.</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response (continued):</b></p> <p>AECOM continued the development of the schedule and submitted the final draft within the State of the Program presentation in December 2020. Following additional comments received from the OCP and SBBC, AECOM continued to further develop the 2020 re-set schedule during January 2021 and submitted an updated baseline at the February 9th, 2021, presentation as well as submitted the revised baseline update schedule to OCP within AECOM's February monthly report, submitted on April 1, 2021. AECOM will continue to provide the schedule and variance updates in our monthly reports.</p> <p>Variance Analysis Budget Slippage AECOM is building the e-Builder Process Cost Management these processes will provide the tools necessary for reporting.</p> <p>Estimated Completion: September 30, 2021</p> <p><b>6.7.9 Performance Evaluation at Program and Project Level – Monthly</b></p> <p>Program and project-level metrics have been consolidated into one list. Project-level metrics have been incorporated into program-level metrics as determined and agreed on by the FTF, OCP and AECOM.</p> <p><b><i>Program and Project Level Reporting – Monthly Evaluation of Pay Requisitions (Consultants &amp; Contractor), Earned Value Project Management, Change Management – Report in Monitor Impact of Changes (Quality, Scope, Schedule &amp; Budget), Monthly Executive Summary of Program Performance, and Monthly Executive Summary of Project Specific Performance:</i></b></p> <ul style="list-style-type: none"> <li>▪ <b>Monthly Evaluation of Pay Requisition</b> – Development of a targeted metric to measure process improvement plan to actual in progress – coordination with CPCM to finalize (see G. of Final Performance Evaluation).</li> </ul> <p><i>Current Status Pay Requisitions: As outlined in the AECOM e-Builder Current State Analysis, AECOM is building the e-Builder Process for Schedule of Values (SOV) and Invoicing these processes will provide the tools necessary for reporting.</i></p> <p><i>Estimated Completion: September 30, 2021.</i></p> <ul style="list-style-type: none"> <li>▪ <b>Earned Value Project Management</b> – Data is not available</li> <li>▪ <b>Change Management Report in Monitor Impact of Changes (Quality, Scope, Schedule &amp; Budget)</b> – re-configuration, activating e-Builder cost module and following the e-Builder best practices guide in development. As noted in the Evaluation Tool and agreed with OCP and FTF upon completion of the e-Builder improvements – further metrics will be developed.</li> </ul>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response (continued):</b></p> <p><u>Current Status Change Management:</u> As outlined in 6.5 Performance Evaluation, B. Budget vs. Actual Cost and the AECOM e-Builder Current State Analysis, AECOM is building the e-Builder Process Cost Management these processes will provide the tools necessary for reporting. As approved by the Board, SBBC needs to issue a Purchase Order to e-Builder to turn on the Forecasting module and create the internal process to allow the bundling of Potential Change Orders into a Change Order. AECOM is reliant on the e-Builder changes to complete the e-Builder Enhancements to the Cost Module.</p> <p>Estimated Completion: TBD, contingent on e-Builder script build completion by the District.</p> <p><b>Monthly Executive Summary of Program Performance, and Monthly Executive Summary of Project Specific Performance</b></p> <ul style="list-style-type: none"> <li>▪ <b>Budget vs Cost:</b> As outlined in 6.5 Performance Evaluation, B. Budget vs. Actual Cost and the AECOM e-Builder Current State Analysis, AECOM is building the e-Builder Process Cost Management these processes will provide the tools necessary for reporting. As approved by the Board, SBBC needs to issue a Purchase Order to e-Builder to turn on the Forecasting module and create the internal process to allow the bundling of Potential Change Orders into a Change Order. AECOM is reliant on the e-Builder changes to complete the e-Builder Enhancements to the Cost Module.</li> </ul> <p>Estimated Completion: TBD, contingent on e-Builder script build completion by the District.</p> <ul style="list-style-type: none"> <li>▪ <b>RFI Rates (Logs):</b> As outlined 6.5 Performance Evaluation, E. RFIs and the AECOM e-Builder Current State Analysis, AECOM is building the e-Builder Process for RFIs, this process will provide the tools necessary for reporting:</li> </ul> <p>Estimated Completion: June 17, 2021</p> <ul style="list-style-type: none"> <li>▪ <b>Change Order Rates (Logs):</b> See Budget vs Cost notes above.</li> <li>▪ <b>Vendor Performance Milestones:</b> These reports have been created, reviewed by BCPS and submitted in the Monthly Report.</li> </ul>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response (continued):</b></p> <ul style="list-style-type: none"> <li>▪ <b>Stakeholder Satisfaction:</b> As outlined in 6.5 Performance Evaluation, 6.7.9 (1)(F) Subjective rubric completed by management team needs further refinement and is target for year 2 implementation. <i>Estimated Completion: April 30, 2022.</i></li> <li>▪ <b>Project Quality Adherence:</b> As outlined in 6.5 Performance Evaluation, F. Quality Adherence, further discussion is needed surrounding measuring metrics related to project specific metrics. <i>Estimated Completion April 30, 2022. Lessons Learned reporting will be included in the March 2021 Monthly Report Submission.</i></li> <li>▪ <b>Contractor's Progress Payments:</b> See Budget vs Cost notes above.</li> <li>▪ <b>Responses to RFIs:</b> See RFI Rates (Logs) notes above.</li> <li>▪ <b>Field &amp; Change Order Root Causes:</b> see Budget vs. Cost notes above.</li> <li>▪ <b>Quality Deficiency &amp; Building Department Inspection Reports:</b> See Project Quality Adherence notes above.</li> <li>▪ <b>Safety Incidents:</b> See Project Quality Adherence notes above.</li> <li>▪ <b>Claims:</b> See Project Quality Adherence notes above.</li> <li>▪ <b>(EDDC) Compliance:</b> As outlined in 6.5 Performance Evaluation, H. EDDC Compliance, AECOM to follow up with SAP to BG2Now Integration and review EDDC requirements regarding MWBE subconsultant/subcontractor reporting.</li> <li>▪ <b>M/WBE Compliance:</b> See (EDDC) Compliance notes above.</li> <li>▪ <b>Material Testing Results:</b> See Project Quality Adherence notes above.</li> </ul> <p>Estimated completion date: 30 days after the last day of the previous month.</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response (continued):</b></p> <p><u>Quarterly Reporting Requirements</u></p> <p><b>AECOM Quarterly Reporting Requirements (section 6.7 of the Owners Representative RFQ)</b></p> <p><b>Knowledge Management/ Continuous Improvement at Program and Project Level (industry best practices &amp; lessons learned)</b></p> <p>As projects reach substantial completion a Lessons Learned log is developed by the PMOR team and will be reported and applied for continuous improvement</p> <p>Estimated completion date: Quarterly</p> <p><u>6.2.2 Relationships with District Senior Management and 6.3.1 Districts Expectation of the PMOR's Approach to Program Management</u></p> <p><b>Organizational Change &amp; Building District Relationships</b></p> <p>Organizations that seek to improve operational outcomes generally embrace business, structural, technological, and other organizational changes. However, change can often be met with resistance and even dislike by individuals that are impacted. In fact, organizational change can lead to employee and consultant opposition or dissension. Understanding that few organizations can survive without adapting to change, the commitment of leadership to remain steadfast, even when faced with resistance, is essential to achieving successful outcomes.</p> <p>It is with this mindset, based on broad industry experience, that AECOM has approached our charge to deliver the SMART General Obligation Bond (GOB) in the most effective and expedient manner possible. As such, the recommendations that AECOM has presented to the School Board of Broward County (SBBC), the Office of Capital Programs (OCP) and District staff (collectively The District) over the last five months have been based on a framework of collaboration, cooperation while implementing industry standards, and progressing the SMART program's changing needs as directed by SBBC, OCP, District staff and the AECOM contract.</p> <p>At the end of January AECOM proposed the development of an Organizational Change Management Committee to implement the processing of recommendations outlined in the November 17th, 2020 (internal to OCP), December 17, 2020 and February 9, 2021 presentations. The committee, as selected by the Executive Director of OCP, held our first meeting on February 10th, 2021, and have continued to meet weekly since that time to review, coordinate and collaborate on details of the policy and administrative change; development and changes to Standard Operating Procedures (SOP's); technology and e-Builder enhancements; reporting requirements and more.</p> <p>AECOM has worked to implement the recommendations as a coordinated effort to prepare, adopt and implement fundamental organizational business practices. These include but are not limited to culture, policies, procedures, and implementation strategies to improve the delivery of the SMART program and complete the program as effectively and efficiently as possible.</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response (continued):</b></p> <p>AECOM consistently engages and collaborates with all SBBC departments. We respect the professional relationships with our colleagues and rely upon the entire team to hold each other accountable for our roles and responsibilities. Our path forward is coordinated, well planned and continues to be executed with resilience.</p> <p>Estimated completion: On-going</p> <p><b><u>AECOM Collaboration and Interface Matrix</u></b></p> <p>Example of collaboration:</p> <p>AECOM has reviewed the structure for the Monthly Report and Bond Oversight Committee (BOC) Report with RSM, and Tax Watch to establish agreed upon structures for the monthly and BOC reports. We worked, collaborated and coordinated closely with all groups to ensure our newly developed e-Builder Monthly Project update (MPU) format for monthly project reporting included all data that each group would want included in the report. We received comments and incorporated those comments into the report templates.</p> <p><b>e-Builder Analysis</b></p> <p>AECOM was engaged in coordination and discovery meetings with CPCM and BCPS staff during the 30-60-90 period of startup of the contract. After that time, AECOM developed recommendation plans of where improvements could be made. These were reviewed and discussed with CPCM, BCPS staff in multiple departments, community groups, auditors and the Board in December of 2020. Per the direction from the Board Workshop between December 2020 and February 2021, AECOM developed a workplan to execute on those items that were within PMOR scope from the recommendations. This workplan considered best implementation practices and with the intent to minimize impact to day to day operations ongoing in e-Builder and the execution of the SMART Program. AECOM presented the workplan in February 2021 in a Board follow up discussion and received an executed Change Memo to proceed in March 2021.</p> <p><u>Current status:</u> Since March 2021, AECOM has been executing on that plan. The first step was to baseline all of the critical need processes in e-Builder using AECOM's certified e-Builder staff. The next phase of the workplan is to begin to receive feedback from PMOR leadership, CPCM, and BCPS staff on the baselined industry standards that have been built in e-Builder.</p> <p><b>Reoccurring Meetings</b></p> <p>Below [Appendix B] is a chart that outlines AECOM's reoccurring meetings that take place on a monthly basis in which AECOM interfaces/ collaborates with the District as a whole.</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	1. PM/OR Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response (continued):</b></p> <p><b>Coordination Meetings</b></p> <p>The below chart [Appendix C] is a general list of various meetings that we have held with OCP and CPCM over the past quarter on the PMOR Performance Evaluation Tool and the Monthly Reporting Template, both finalized and approved on March 18th, 2021.</p> <p>The chart does not reflect previous meetings/ discussions on this topic but aim to assist in showing the extensive collaboration that has gone into finalizing these two important documents, which outlines AECOM's reporting responsibilities.</p> <p><b>AECOM Community Meetings/Outreach</b></p> <p>The below chart [Appendix D] shows community meetings that AECOM has been part of over the past quarter.</p> <p>AECOM will continue to engage with the SBBC and CPCM, to further collaborate on the overall wellbeing of the SMART Program in a transparent, timely and efficient manner.</p>





## DETAILED OBSERVATIONS – CONTINUED

### INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3

#### OBSERVATION

#### 2. CPCM Compliance with Reporting Requirements

RSM conducted detailed testing procedures related to the CPCM team's compliance to the required monthly deliverables as required by the RFP. We noted the following required monthly/quarterly reporting deliverables were not provided to OFC during our scope period (November 2020 – February 2021):

- One (1) of seven (7) monthly reporting deliverables for December 2020
- Two (2) of seven (7) monthly reporting deliverables for January 2021
- Three (3) of seven (7) monthly reporting deliverables for February 2021

In section 6.4.2.6 of the CPCM RFP, a summary of deliverables with determined reporting frequencies are required to be provided to the school District by the CPCM.

The reports listed in the table below were identified as the agreed-upon package to be provided for the periods ending September 2018 and beyond. The table summarizes the results of our testing:

Atkins Monthly Reporting Requirements (section 6.4.2.6 of the Program Manager RFP)	Provided Nov 2020?	Provided Dec 2020?	Provided Jan 2021?	Provided Feb 2021?
Monthly report of schedule delays / slippage at both program and project level	Yes	Yes	No	No
Monthly cash flow report – actual vs projected	Yes	Yes	Yes	No
Monthly RFI aging and reporting by project	Yes	Yes	Yes	Yes
Monthly change order reporting – project & program level	Yes	Yes	Yes	Yes
Vendor performance monitoring reports	Yes	Yes	Yes	Yes
Post project completion reporting	Yes	Yes	Yes	Yes
Project quality reporting – design process revise & resubmits, inspection results	Yes	No	No	No

**Note:** Subsequent to our initial testing procedures, RSM obtained the required monthly reports for December 2020 and January 2021 from the CPCM, who provided the reports immediately following our request.

#### RECOMMENDATION

We recommend the CPCM provide monthly deliverables as required by their RFP to allow the District to effectively monitor project and program performance.



## DETAILED OBSERVATIONS – CONTINUED

### INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3

OBSERVATION	2. CPCM Compliance with Reporting Requirements (continued)
<b>MANAGEMENT'S RESPONSE</b>	<p><b>CPCM Response:</b> The CPCM commitment is to provide monthly reports within two weeks of the completion of the monthly schedule update by the PM/OR. Due to delays in the schedule updates in the December and January periods, the CPCM reports were split into two submittals to allow completion of non-schedule related reports in a timely manner. It is anticipated that this will no longer be necessary as the PM/OR schedule updates have fallen into a regular rhythm. The reports that were missing with the original submittal were subsequently provided to the District and the Auditors. An additional QC step has been added to ensure that none of the twenty or so elements of the report pack are left out in the future.</p> <p>The February reports were heavily impacted by the District's server shutdown caused by data locking ransomware which meant that the Oracle Primavera (P6) schedule updates could not be completed by the PM/OR nor could the schedule dependent reports be completed by the CPCM. Regular updates resumed for the March 2021 period.</p> <p><b>Estimated completion date:</b> Completed</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	3. e-Builder System Access
DETAIL	<p>Through our detailed testing and discussions with the CPCM, we noted that a terminated project manager (PM) from a PM/OR subconsultant had access to e-Builder, the District's Construction Management Software for nine (9) days after their termination date. The PM/OR's Document Control Manager informed the CPCM via email that the individual should have their access removed from e-Builder on March 22, 2021, but the access was not removed until March 31, 2021. Per inquiry with the CPCM, their team did not remove the Project Manager until they received project reassignment instructions from the PM/OR, as the removal of this employee without reassignment would result in e-Builder functionality issues with the open workflow items in the Project Manager's queue.</p> <p>RSM reviewed the seven (7) projects assigned to the Project Manager and noted there were open items in the PM's queue within the e-Builder workflow for three (3) projects. The following items were noted as outstanding items in the PM's queue for review and approval:</p> <ul style="list-style-type: none"> <li>• Vendor invoices</li> <li>• Change orders</li> <li>• Direct owner purchases</li> <li>• Project meeting minutes</li> </ul> <p>As the project was not staffed for nine (9) days, each respective workflow was further delayed as the Project Manager's responsibilities had not been reassigned and the position remained vacant. The PM/OR has processed twelve (12) project manager and assistant project manager terminations as of March 2021, representing a 27% turnover rate in project managers and assistant project managers. This is discussed in the follow-up for prior finding FY 2020-2021 Q1-Q2 (Observation #1) below.</p> <p>Personnel departures or terminations should result in immediate removal of e-Builder system access to reduce the risk of terminated personnel accessing proprietary information for inappropriate use. RSM noted that the twelve (12) terminated individuals were not District employees; as such, we understand that system access is related to e-Builder, and does not affect the District's ERP or financial systems.</p>
RECOMMENDATION	<p>The CPCM and PM/OR should consider evaluating the current procedures for removing e-Builder system access for terminated personnel. If an individual is terminated, a qualified secondary approver should have the ability to review and approve items in place of the terminated employee until the position is filled and a replacement is on-boarded.</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	3. CPCM Compliance with Reporting Requirements (continued)
MANAGEMENT'S RESPONSE	<p><b>CPCM Response:</b> The process is to remove the user immediately from e-Builder upon receipt of notification of termination. For most users this is a very simple process as there are no concerns about project workflows being left unattended. However, for Project Managers (PM) especially, it is important to have a “replacement” to assign the open processes to. This “replacement” could be temporary until a new PM is brought on board, but it would allow for the workflows such as those mentioned above (change orders, vendor invoices, etc) to be managed in the interim. To ensure the immediate removal of terminated employees’ access to e-Builder, the CPCM will continue to work closely with PM/OR to obtain timely notifications of date of departure and assign appropriate secondary approver or replacement. In addition, the CPCM will take immediate action to remove the user upon notification to ensure access is terminated immediately to increase security measures in accessing proprietary project information. It has been confirmed that the Project Manager highlighted in the observation did not log in to the system after his departure.</p> <p><b>Estimated completion date:</b> Effective Immediately</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	4. PM/OR Monthly Invoicing
DETAIL	<p>For the current period, RSM reviewed five (5) CBRE-Heery and four (4) AECOM PM/OR labor invoices for contractual compliance, proper supporting documentation, and mathematical accuracy. RSM detailed tested 100% of the \$9,076,647 in total labor invoiced by CBRE-Heery and AECOM. Through our testing, we identified the following exceptions related to the PM/OR monthly invoicing process:</p> <p><b>A. Miscalculation of invoiced labor (CBRE-Heery)</b> In one (1) of the five (5) CBRE-Heery labor invoices reviewed during the current period, we noted that invoiced amounts were incorrectly calculated for three (3) CBRE-Heery Technical Support employees. The invoiced rate applied to the number of hours billed for each employee did not recalculate to the total invoiced amount, resulting in an overbilling of \$218.</p> <p><b>B. Invoiced labor rates exceeded the rates specified in the staffing matrix provided with the invoice package (AECOM)</b> In three (3) of four (4) AECOM labor invoices reviewed during the current period, we noted that the invoiced labor rate for one (1) AECOM employee and one (1) AECOM subconsultant exceeded the labor rate specified in the staffing matrix provided with the monthly invoice package, resulting in an overbilling of \$2,107.</p> <p><b>C. An incorrect “hourly rate multiplier” was applied to invoiced labor rates (AECOM)</b> In two (2) of four (4) AECOM labor invoices reviewed during the current period, we noted that the “hourly rate multiplier” applied to base labor rates for three (3) AECOM employees exceeded the multiplier defined in Attachment A of the PM/OR Agreement, resulting in an overbilling of \$520.</p> <p><b>D. Missing supporting documentation for invoiced labor (AECOM)</b> Through our detailed testing of four (4) AECOM labor invoices reviewed during the current period, we noted inconsistency in the level of documentation that was provided to support amounts invoiced by the PM/OR. Specifically, we noted that 376 total labor hours related to seven (7) individual employees from three (3) PM/OR subconsultants were unsupported by timesheets within the provided PM/OR invoice package. In total, \$28,046 in labor costs were unsupported by timesheets.</p> <p><b>E. Employees billed were not included on the staffing matrix provided with the invoice package (AECOM)</b> Through our detailed testing of four (4) AECOM labor invoices reviewed during the current period, we noted seven (7) instances where an individual was billed to the project but was not included in the staffing matrix provided with the invoice package. The seven (7) instances involved five (5) different employees, two (2) of which were missing from the staffing matrix in two (2) separate invoices.</p>



## DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q3	
OBSERVATION	4. PM/OR Monthly Invoicing (continued)
RECOMMENDATION	<p>We recommend the District define responsibilities for PM/OR invoice reviews to validate that each employee billed is included in the staffing matrix, and that the correct labor rate and hourly rate multipliers are being applied to the invoiced labor. This may include Capital Payments and OFC personnel identifying specific review procedures for each reviewer in the workflow.</p> <p>We further recommend the PM/OR team develop an internal invoice review process to aid in the reduction of errors and omissions in the invoice preparation and submittal process.</p> <p>The District may consider also seeking a credit on subsequent PM/OR invoices to account for the exceptions identified above.</p>
MANAGEMENT'S RESPONSE	<p><b>PM/OR Response:</b></p> <p><b>A.</b> Heery</p> <p><b>B.</b> AECOM Payroll confirmed that Pedro Nunez's rate on the matrix reflected \$60 but his actual raw rate is \$64.39. Therefore, his bill rate should have been \$144.23. 40 hrs. x 144.23= \$5,769.20. A (\$173.20) credit will be applied to the next invoice.</p> <p><b>C.</b> AECOM agrees with the credit of (\$520.20) and this credit will be applied to the next invoice.</p> <p><b>D.</b> AECOM has an invoice protocol that was followed, and staff confirmed that all documentation was submitted appropriately.</p> <p><b>E.</b> AECOM has reviewed the internal invoice process and revised the internal invoicing procedure checklist to have the Staffing Matrix be reviewed earlier in the process to avoid these discrepancies in the future: "Review most recent staffing matrix and validate submitted invoices against it for staff charges and invoiced rates."</p>



## PRIOR OBSERVATIONS FOLLOW UP



## PRIOR OBSERVATIONS FOLLOW UP

### INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q1-Q2

#### OBSERVATION

#### FY 2020-2021 Q1-Q2 (Observation #1) AECOM Staffing Plan

#### DETAIL

In our detailed testing of the OR transition documentation, we noted the following:

- An AECOM staffing plan was submitted within the mobilization plan timeframe (as detailed in the Sections 6.3.2 and 6.7.7(1)(A) of RFP requirements); however, in further discussions on 12/10/20 (115 days after the notice to proceed) AECOM noted the project manager (PM) project assignments have not been finalized.
- In reporting derived from P6 scheduling data, which is maintained by AECOM and used to populate/update e-Builder reporting, 14 project managers were assigned 10 or more projects. See Table 1 below.
- AECOM project manager assignments did not change from CBRE-Heery project manager assignments for 144 of 228 projects (63%). See Table 2 below.

The following tables are excerpted from the OR Staffing Plan Analysis section below, where further data is provided. Table 1 below shows the current project assignment totals by project manager for instances where project assignments were greater than or equal to 10 as of the November 30, 2020 P6 schedule. Table 2 summarizes changes in project manager assignments:

Table 1	Vendor	Project manager status	Total projects assigned
	AECOM PM-1	New PM under AECOM	24
	BACH PM-1	PM under Heery & AECOM	16
	Corradino PM-1	PM under Heery & AECOM	15
	Garth PM-1	PM under Heery & AECOM	12
	BACH PM-2	PM under Heery & AECOM	12
	BACH PM-3	PM under Heery & AECOM	11
	AECOM PM-2	New PM under AECOM	11
	BACH PM-4	PM under Heery & AECOM	11
	Keith PM-1	PM under Heery & AECOM	11
	Keith PM-2	PM under Heery & AECOM	10
	Corradino PM-2	PM under Heery & AECOM	10
	AECOM PM-3	New PM under AECOM	10
	Keith PM-3	PM under Heery & AECOM	10
	AECOM PM-4	PM under Heery & AECOM	10

Table 2	Project manager status	Number of projects
	No Change in Project Manager	144
	New Project Manager	84
	<b>Project Total</b>	<b>228</b>





## PRIOR OBSERVATIONS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q1-Q2	
OBSERVATION	FY 2020-2021 Q1-Q2 (Observation #1) AECOM Staffing Plan
	<p>To stress the importance of a timely and efficient transition, the Mobilization Plan requirement detailed in Section 6.3.2 of the RFP required respondents to propose a mobilization plan with key activities detailed in a 30, 60, and 90 day timeline. The mobilization plan developed by AECOM included final adjustments to the OR team as an activity to be delivered with the first 60 days. Although a staffing plan was provided to the District, AECOM noted that project staffing was still being modified, and that P6 and e-Builder data related to project assignments would also require further updates.</p> <p>Currently, 10 or more projects have been assigned to 14 project managers. Considering the commitment required to effectively manage a project, when a PM has a significant assignment load, the individual projects within the PM's portfolio are at increased risk for additional project delays.</p> <p>While we understand that mobilization for a program of this size requires significant coordination and contains several complexities, we also note that assignment of projects to PMs is a critical early step in the mobilization process to allow for the continued advancement of projects during the onboarding timeline. Without timely reorganization and assignment of projects, the risk of further schedule delays is significantly increased.</p>
RECOMMENDATION	In conjunction with efforts to finalize the AECOM staffing assignments, we recommend the OR update P6 schedule and e-Builder data to reflect final project assignments. We further recommend the OR provide a plan detailing the methodology for project assignments to project managers, including how the plan will mitigate the risks of incurring project delays and overloading Project Managers.
MANAGEMENT'S RESPONSE	<p><b>Response:</b> As noted in the observation, "assignments of projects to PMs is a critical early step in the mobilization process to allow for the continued advancement of projects during the onboarding timeline".</p> <p>The OR-PM (AECOM) strongly agrees with and has acted with a sense of urgency. Beginning with August 1, 2020, the transition staffing schedule assignments were in place to support the preparations for the opening of school year 2020-2021.</p> <p>In order to support the turnover to AECOM, a parallel process of identifying, retaining or replacing PMs was conducted. At no time did a project under construction go without an assigned PM.</p> <p>As is noted in the recommendation, the interdependency of schedule and assignment was a consistent factor of the trend analysis, the 2020 re-set and support of the schedule via the necessary level of PM staffing.</p> <p>The re-set schedule was shared with the SBBC at the "State of the Program" on December 17th, 2020. As of that date, the leveling of the PMs to projects in construction was set at eight (8). In addition, since the re-set schedule was created, the OR-PM was directed to consider how to accelerate work and as such, this analysis is currently underway.</p>



## PRIOR OBSERVATIONS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-2021 Q1-Q2	
OBSERVATION	FY 2020-2021 Q1-Q2 (Observation #1) AECOM Staffing Plan
MANAGEMENT'S RESPONSE	<p>The OR-PM fully understands and agrees with the critically of managing staff resources at a level that supports the quality and flow of the work.</p> <p>The OR-PM wants to make sure it is understood that the assignment to schedule is constant. In fact, AECOM's contract states that the OR-PM "strive for flexibility through our capacity to engage professionals with specific expertise at appropriate points in the planning and implementation of projects and consistently evaluate the staffing assignments, and the organizational structure. This is cost-effective in that staffing is scalable according to the volume of work. Scalable staffing is of interest to the District as the capital needs and available funding varies from year to year."</p> <p>To that end, the schedule to staffing interdependency will be under constant review and revision. The prominent reason for this review is that the process is dynamic and must adjust to the variables that present themselves throughout the entire construction process.</p> <p>In summary, we have updated the P6 schedule and e-Builder data to reflect current PM assignments, and will continue to update on a quarterly basis. Regarding the plan to support projects through the applied staffing model will continue to be set at eight (8) projects in construction per PM at any one time. This of course can fluctuate to meet short term stresses, and will always include the capacity and skillsets of any singular PM. The staffing model coupled with the 2020 re-set schedule and a procurement cycle that supports the schedule is designed to manage prevention of delays due to over-loading of project managers. As such, the monthly monitoring and corrective course of action will continue to mitigate and prevent delay caused by insufficient PM staffing.</p> <p>A formal staffing will be in place by February 1, 2021.</p> <p><b>Estimated completion date:</b> February 1, 2021</p>
OBSERVATION STATUS	<p><b>Complete</b> – Acknowledging the constantly evolving nature of the resourcing needs related to a program of this size, the PM/OR was able to produce a staffing plan which addressed the needs of the program. We understand that the staffing model currently in place does not achieve the optimal PM to project ratio desired by the PM/OR, but that the District has accepted the plan as presented understanding there will be continuous improvement process to right-size the management team.</p> <p>As of March 2021, the PM/OR has processed twenty (20) total terminations/departures, including twelve (12) project managers and assistant project managers, representing a 27% turnover rate in project managers and assistant project managers. Turnover represents a risk to the program which should be monitored closely, and replacement resources should be identified and implemented with District approval expeditiously.</p>



## PRIOR OBSERVATIONS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2019 - 2020 Q2	
OBSERVATION	FY 2019-2020 Q2 (Observation #3) Contract time modifications and schedule updates
DETAIL	<p>Through our detailed testing of change orders, we noted a variance between additional days approved via change orders, and days added to the next corresponding project schedule update. We also noted instances where the final completion date listed in versions of project schedules, prior to approved changes, did not agree the final completion date listed in the Notice to Proceed (NTP).</p> <p>Project final completion dates are included in the contractor's NTP. Minor fluctuations to the daily/weekly schedule are expected, and should be reflected in the updated schedule provided by contractors each month (typically with the pay application package). Changes to the final completion date are only allowed with the District's approval through a change order, and should also be reflected in monthly schedule updates. We selected a sample of ten (10) change orders to validate that appropriate schedule updates were made, to reflect additions of time approved via the change order. We noted exceptions for 4 of our sample selections.</p>
RECOMMENDATION	We recommend the OR-PM review the process for updating the schedule included in the pay applications to ensure the accuracy of the project schedule.
MANAGEMENT'S RESPONSE	<p><b>Response:</b> Currently, the e-Builder workflow for GC Invoices, which went live in Q1 2019 includes a requirement for the raw schedule file which subsequently gets reviewed by the OR-Scheduler to ensure schedule integrity including validation of an approved change order in the subsequent payment application period. Additionally, OR-PM is currently updating the SOP to include that step in the pay application process to show how this is done. This will formalize and memorialize this process. Work is projected to be completed by end of March 2020.</p> <p><b>Q3 2020 Update:</b> SOP 12.20a-Construction Change Management-Construction Change Order has been revised incorporating this Observation in Step 5 of the SOP.</p> <p>OR-Scheduler and/or PC-Scheduler will review Pre-Impact and Impact Electronic Construction Schedules including required narrative for schedule integrity. Upon review the OR-PM has the option to revise and resubmit back to the GC or submit to the A/E, OR-Sch, and/or PC-Sch.</p> <p>SOP 12.20a was sent to the District for review. The District had comments. Those comments have been incorporated into the SOP and now the SOP 12.20a has been sent back to the District for their review.</p> <p>Also, SOP 11.20a-Contractor Pay Application Review Process-Hard Bid ITB and CSMP and 11.20b-Contractor Pay Application Review Process CMAR AND CC CMAR revisions have taken place incorporating this observation in Step #4 of the SOP and the SOPs are under review with the District.</p>



## PRIOR OBSERVATIONS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2019 - 2020 Q2	
OBSERVATION	FY 2019-2020 Q2 (Observation #3) Contract time modifications and schedule updates
MANAGEMENT'S RESPONSE	<p>The OR-Scheduler receives notification through e-Builder that an electronic Construction Schedule has been submitted to review in tandem with A/E and/or OR-PM for schedule integrity, i.e. if applicable, implemented approved Change Order(s). OR-Sch, A/E and/or OR-PM.</p> <p><b>Estimated Completion Date:</b> March 2020</p> <p><b>Revised Estimated Completion Date:</b> August 2020</p> <p><b>Q3 2021 Update:</b> AECOM has updated our procedure Board Approved Change Order Notification. A Board Approved Change Order Letter is sent to the Contractor notifying them of the Board approval and the requirement to submit an updated schedule, including the change order items and schedule of values prior to their next pay application submission. Once a Change Order has received Board Approval an action item is sent in e-Builder notifying the Project Manager, Team Leader and Invoice Reviewer (OR-PM Data Entry) to validate that it is included in the next application for payment. AECOM has updated the Standard Operating Procedure (SOP) and provided additional training to the General Contractors Project Managers, and Schedulers on the updated process.</p> <p><b>Revised Estimated Completion:</b> June 17, 2021</p>
OBSERVATION STATUS	<p><b>Partially Complete</b> – The PM/OR has updated the Change Management SOP to specifically include a schedule review/comparison procedure. RSM re-tested an additional sample of three (3) change orders to verify inclusion of change order time extensions/reductions, noting discrepancies between the scheduled final completion date noted in the contractor's schedule and the RSM calculated final completion date for two (2) of three (3) samples in the current period.</p> <p>A summary of RSM's testing related to change order time extensions/reductions is provided below:</p> <ul style="list-style-type: none"> <li>• <b>Q2 2020:</b> Three (3) of four (4) samples failed testing</li> <li>• <b>Q3 2020:</b> Four (4) of four (4) samples failed testing</li> <li>• <b>Q1 2021 (current period):</b> Two (2) of three (3) samples failed testing</li> </ul> <p>This observation will remain open, and RSM will select additional samples as they are available.</p>



## OBJECTIVES AND APPROACH

### Objectives

The objective of our work was to verify that the District's Program Management Consultant ("CPCM" - Atkins) and Owner's Representative ("PM/OR" - CBRE-HEERY & AECOM) are providing deliverables and services in conformance with the terms and conditions of their respective agreements / RFP. Further, our procedures included testing of PM/OR compliance with District standard operating procedures and industry leading practices.

### Approach

Our audit approach consisted of the following:

#### Cost and Program Controls Manager (Atkins)

- Conducted a labor analysis of Atkins' subconsultants, including a design assessment of processes and staffing, and analysis of billings by position
- Obtained and reviewed deliverables submitted in accordance with PM monthly reporting requirements derived from RFP Article 6.4.2.6 including:
  - Monthly schedule delays / slippage at both program and project level
  - Cash flow – actual vs projected
  - RFI aging and reporting by project
  - Change order reporting – project & program level
  - Vendor performance monitoring
  - Post project completion reporting
  - Project quality – design process revise & resubmits, inspection results
- Reviewed Atkins monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy
- Followed up on prior findings

#### Program Manager - Owner's Representative (CBRE-Heery & AECOM)

- Conducted a comparative analysis of AECOM's revised Milestone Baseline Schedule and CBRE-Heery's Milestone Baseline Schedule to assess impact of material changes to estimated project completion dates (in process as of Q3 2021)
- Obtained and reviewed deliverables submitted in accordance with PM monthly reporting requirements derived from its RFQ
- Reviewed AECOM monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy
- Reviewed CBRE-HEERY monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy
- Followed up on prior findings

### Reporting

At the conclusion of our procedures, we summarized our findings into this report. We have reviewed the results of our testing with OCA, OFC, and the CPCM and PM/OR teams, and incorporated management's response herein.



## APPENDIX A



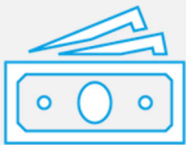
## APPENDIX A – CPCM SUBCONSULTANT ANALYSIS

### CPCM Subconsultant Billing Analysis

RSM performed a billing analysis of Atkins' two (2) subconsultants, Construction Management Services (CMS) and Absolute Civil Engineering Solutions (ACES) for the period of March 2020 through February 2021.

The data presented below is derived from the labor detail provided for each vendor in Atkins' monthly invoice.

#### Data Metrics (March 2020 – February 2021)



#### Total Labor by Vendor:

Atkins: \$ 1,442,122  
CMS: \$ 1,036,759  
ACES: \$ 152,445



#### Total Number of Employees Billed by Vendor:

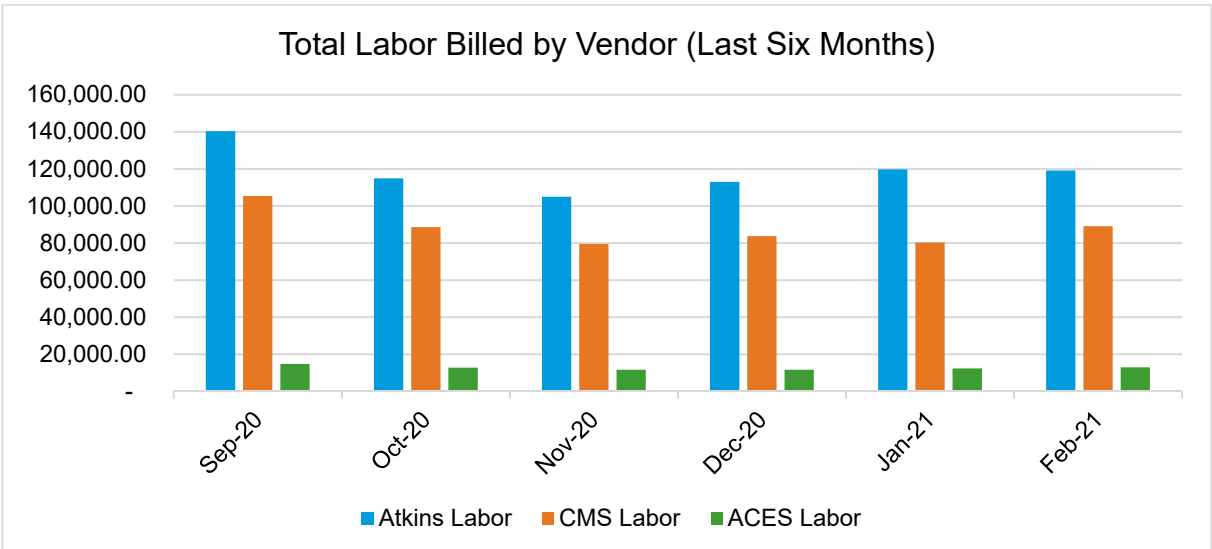
CMS: 8 employees  
ACES: 1 employee



#### Percentage of Total Labor in Atkins Invoices:

Atkins: 55%  
CMS: 39%  
ACES: 6%

The graphic below provides a 6-month summary of the total labor billed by Atkins and their subconsultants.



The table below lists all positions billed by CMS and ACES for the period of March 2020 - February 2021.

Position / Title	Vendor	Hours	Labor Total (\$)
Cost Estimator Lead	CMS	5,735	\$ 598,412
Senior Cost Estimator I	CMS	1,576	\$ 183,093
Chief Estimator	CMS	1,423	\$ 172,165
e-Builder Systems Support Specialist	ACES	1,948	\$ 152,445
Senior Cost Estimator	CMS	372	\$ 42,765
Cost Estimator	CMS	224	\$ 22,297
Senior Cost Estimator II	CMS	160	\$ 18,027
<b>Total</b>		<b>11,438</b>	<b>\$ 1,189,204</b>




## APPENDIX B





# **AECOM'S COLLABORATION AND INTERFACE MATRIX**

■ Project Phases  
■ Re-Occurring Meetings (counts based upon 1 month)  
■ Departments AECOM interacts with



Established 1915

**BROWARD**

County Public Schools

AECOM'S

**COLLABORATION AND**

**INTERFACE MATRIX**

Project Phases

Re-Occurring Meetings (counts based upon 1 month)

Departments AECOM interacts with

	<div> <div>BUILDING DEPARTMENT</div> <div>PHYSICAL PLANT OPERATIONS</div> <div>PROCUREMENT &amp; WAREHOUSE SERVICES</div> <div>FIRE DEPARTMENT</div> <div>ENVIRONMENTAL HEALTH &amp; SAFETY</div> <div>INFORMATION TECHNOLOGY</div> <div>LEGAL</div> <div>OCF EXECUTIVE DIRECTOR</div> <div>OCF PRE-CONSTRUCTION</div> <div>OCF FACILITIES &amp; CONSTRUCTION</div> <div>FACILITIES TASK FORCE</div> <div>ECONOMIC DEVELOPMENT &amp; DIVERSITY COMPLIANCE</div> <div>CAPITAL BUDGETS</div> <div>SCHOOL BOARD OF BROWARD COUNTY</div> <div>PORTFOLIO SERVICES</div> <div>RISK</div> <div>ATKINS</div> <div>ACADEMIC PROGRAMMING</div> <div>SECURITY</div> <div>FOOD SERVICES</div> <div>COMMUNICATIONS</div> <div>AUDITING</div> </div>																							
A/E Design - SVR																								
A/E Fee Adjustment/ Negotiations																								
APG (Agenda Preparation Group)																								
APMs/ Admins - eBuilder Process																								
Audit																								
BCPS-SMART Weekly Touch-Point																								
Board Meetings																								
Board Workshop																								
BOC																								
BOC Quarterly Meeting																								
Community Meetings																								
Contractor/ Designer Performance																								
CORP																								
Design Project																								
Design Review																								
Design Reviews with Pre-Con																								
E-Agenda																								
e-Builder																								
Facilities and Building Dept																								
Facilities and Capital Budget																								
FF&E																								
Forms and Document Control																								
FTF Meetings																								
Full Team Meeting																								
Hire Contractor/ Vendor																								
Hire Designer																								
Implement Improvements																								
Improvements Complete																								
Inter-Departmental																								
Kick-Off Meetings																								
Monthly One on One with Board																								
Non-Conforming of Design																								
One on with J. Marte																								
OAC - Pre-Construction meeting																								
PM Meetings																								
PM Prep for CORP																								
Process and Continuous																								
Procurement and Facilities																								
Project Charter Meeting																								
Project Planning																								
Quarterly Forms Meeting																								
School Board Operations Meeting																								
SOP Review and Preparation																								
Spot Cooler Review																								
Standards Committee Meeting																								
Team Leader's Meeting *																								
Virutal Audit Committee Meeting																								
	17	10	15	11	5	6	12	21	30	21	11	1	11	25	14	8	5	27	7	8	5	15	10	




## APPENDIX C

DATE	TIME	MEETING	ATTENDEES	TOPIC of DISCUSSION
		eBuilder Process Requirements for external document scanning companies (arc, GoGreen) to share/upload scanned documents		
4/19/2021	8:30 AM	to OCP.	Dave Archer, Naveed Syed, Colette Jones, Ashley Carpenter, Brian Samuelson, Martina St. Rose, Tammy Whipple	Agenda: Colette to capture necessary business requirements and Brian to refine it into technical requirements in order to build a prototype/ demo.
4/9/2021	8:00 AM	RSM AECOM Meeting	David Luker., Chris Gums, Luckie Kaufman, Kathleen Langan, Orlando Bryan, Dave Archer, Naveed Syed, Ashley Carpenter, Colette Jones, Martina St. Rose, Tammy Whipple	Discuss Milestone schedule
3/29/2021	2:30 PM	eBuilder Platform		Objective: to relegate the need for any physical media to either obtain or distribute information, instead leverage eBuilder platform.
3/18/2021	7:00 PM	PMOR Reporting FTF Subcommittee	Joanne Sterner, Ashley Carpenter, Stacy Grossman, Dave Norman Jr., Shelley Meloni, Nathalie Lynch-Walsh, Divine Amoah, Kathleen Langan, Stacy Grossman, Kenny Minchew, Linda Ferrara, plus 5 more.	PMOR Monthly Report template and examples of all the reports that it will include.
3/16/2021	8:00 AM	Monthly Reporting Presentation	Mike Bobby, Julia Bolte, Ashley Carpenter. Dave Archer. Naveed Syed, Tammy Whipple, Frank Girardi, Shelley Meloni, Phil Kaufold, Tricia Connolly, Stacy Grossman	Response to Dave Archer's inquiries on the presentation and to present the monthly report template and TOC
3/12/2021	8:00 AM	Evaluation Tool	Nathalie Lynch-Walsh, Kathleen Langan, Stacy Grossman	Making final edits to the Eval Tool to submit to the District
				Tonight we will review in detail AECOM's Monthly/Quarterly reporting per their scope of services/contract, and following up on the status of the metrics associated with their performance-based fee structure.
3/11/2021	7:00 PM	FTF Subcommittee Meeting	Stacy Grossman, Deniece Williams, Becky Blackwood, Dave Norman Jr., Kathleen Langan, Delvin King, Linda Ferrara, Julia Bolte, Nathalie Lynch-Walsh, Shari Francis, FTF Members and Stakeholders	I've attached the AECOM Monthly Reporting Template as well as the advertised PMOR Scope of Services for tonight's discussion.
3/11/2021	11:00 AM	Roofing Mentor-Protégé Program	Robert Ballou, Vincent Jones, Natacha St. Louis, Fadi Hardan, Kathleen Langan, Kayna Rosier, Roofing Contractors	Kick-off for the Mentor Protégé Program AECOM has put into place with collobaration from the EDDC and SWMBE
3/1/2021	11:15 AM	PMP	Dave Archer, Kathleen Langan, Frank Girardi, Shelley Meloni, Phil Kaufold, Stacy Grossman, Julia Bolte, Tammy Whipple	Project Management Plan
2/26/2021	4:00 PM	Evaluation Tool Discussion	Shelley Meloni, Frank Girardi, Dave Archer, Michael Bobby, Phil Kaufold, Julia Bolte, Kathleen Langan, Stacy Grossman	Presenting updates made in collaboration with the FTF to the OCP for review and discussion.
2/16/2021	9:00 AM	BCPS Building Department Needs	Julia Bolte, Tammy Whipple, Ron Morgan, Ashley Carpenter, Arron Rupp, Robb Lahs, Tiffany Guilliod	Review the needs of the BCPS Building Department and AECOM will provide some examples of previously completed work and potential opportunities that exist with the existing eBuilder environment
2/10/2021	9:30 AM	Monthly Reporting Meeting	Frank Girardi, Ashley Carpenter, Julia Bolte, Tammy Whipple, Stacy Grossman, Mike Bobby, Kathleen Langan, Shelley Meloni	Monthly Report Template and TOC discussion
				Capital Team to initiate email with SAP team pertaining to invoice # being used as a placeholder, which will be updated after a delay due to dimension cube update schedule. Additionally Rafiki to follow up on manual entry of invoice number format used to mark parked invoices. And come up with a new process how that can be streamlined to reduce errors on SAP data import. Atkins to write up on how eBuilder intergration will work with regards to workorders that flow to Maximo. Do we need to filter out work orders from eBuilder because Maximo sends them to SAP? AECOM to writeup eBuilder scenarios pertaining to needs of capital. Best way to make overages visible, we discussed it may handle via notifications as well as reoporting when errors crop up during import of SAP data. Optimal way to manage retainage in cost module.
1/25/2021	11:30 AM	SAP eBuilder	Dave Archer, Naveed Syed, Rafiki Brown, Julia Bolte, Jeffrey Whitney, Ashley Carpenter, Brian Samuelson, Tammy Whipple	
1/21/2021	10:00 AM	Evaluation Tool Review with FTF	Ashley Carpenter, Shelley Meloni, Julia Bolte, Nathalie Lynch-Walsh, Stacy Grossman, Kathleen Langan	This meeting is to review the Performance Evaluation Tool with Dr. Lynch-Walsh.
1/12/2021	12:30 PM	Evaluation Tool	Julia Bolte, Dave Archer, Ashley Carpenter, Mike Bobby, Stacy Grossman, Kathleen Langan	
1/11/2021	8:00 AM	P6 eBuilder Intergration	Dave Archer, Naveed Syed, Julia Bolte, Ashley Carpenter, Brian Samuelson, Tammy Whipple, Colette Jones, George Suarez	Goal - eBuilder to be reliable and dependable reference system for all facilities project schedules. It needs to accurately reflect what is in P6 and vise versa. Agenda: Atkins to present current state of eBuilder with regards to schedule module. AECOM to present on how they expect their PMs to be interacting with eBuilder.
4/21/2021		Brainstorming eBuilder Process requirements for sharing as-builts	AECOM and Atkins	
1/22/2021		P6 eBuilder intergration follow-up	AECOM, OCP and Atkins	
1/5/2021		Commitment Inconsistencies Future Intergration	AECOM, OCP and Atkins	



## APPENDIX D

DATE	MEETING	TOPIC of DISCUSSION
3/15/2021	Deerfield Beach High School Project Update Meeting	Project Update Meetings accompany every project and provides the school community with an overview of the scope, schedule, and responsibilities in order to set and manage expectations.
3/15/2021	City of Lauderhill Commission Meeting	Update to City of Lauderhill Commission about the status of SMART projects at the schools within the city.
3/11/2021	Marjory Stoneman Douglas High School Project Update Meeting	Project Update Meetings accompany every project and provides the school community with an overview of the scope, schedule, and responsibilities in order to set and manage expectations.
3/9/2021	Hollywood Hills Elementary School Project Update Meeting	Project Update Meetings accompany every project and provides the school community with an overview of the scope, schedule, and responsibilities in order to set and manage expectations.
3/8/2021	Northeast High School SAC Update Meeting	Meeting to update the school community on status of SMART projects at Northeast High School.
3/3/2021	City of Oakland Park Quarterly Update	Quarterly meeting to update the City of Oakland Park Commission about the status of schools that their residents attend, with a specific focus on Northeast High School.
2/19/2021	Margate Middle School Smart Update Meeting	Meeting requested by principal to provide an update on SMART projects at Margate Middle School.
2/17/2021	City of Dania Beach/Olsen Middle School Partnership Meeting	Meeting with City of Dania Parks and Recreation Department to discuss the future use of the adjacent site on the Olsen Middle campus where the old campus building were recently demolished.
2/10/2021	Stranahan High School Facilities Update Meeting	Meeting to update the school community on status of the Cafeteria Addition SMART project at Stranahan High School.
2/9/2021	Bond Oversight Committee (BOC) FY21 Q1 Quarterly Meeting	Bond Oversight Committee (BOC) FY21 Q1 Quarterly Meeting
2/9/2021	Bond Oversight Committee (BOC) FY21 Q1 Board Workshop	Update to Board on BOC FY21 Q1 quarterly report
2/8/2021	City of Lauderhill Commission Meeting	Update to City of Lauderhill Commission about the status of SMART projects at the schools within the city.
1/25/2021	Bond Oversight Committee (BOC) FY21 Q1 Quarterly Meeting	Quarterly presentation providing the status of all components of the SMART Program.
1/21/2021	Gulfstream Early Learning Center of Excellence Project Update Meeting	Project Update Meetings accompany every project and provides the school community with an overview of the scope, schedule, and responsibilities in order to set and manage expectations.
1/20/2021	Stranahan High School Facilities Update Meeting	Meeting to update the school community on status of SMART projects at Stranahan High School.



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