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# Internal Audit of Program Management FY 2020-21 Q4

January 2022



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## TRANSMITTAL LETTER

January 13, 2022

Joris Jabouin, Chief Auditor  
Broward County Public Schools  
600 SE 3rd Avenue, 8th Floor  
Fort Lauderdale, Florida 33301

Pursuant to the approved internal audit scope of work, dated July 28, 2021, we hereby submit our FY 2020-21 Q4 internal audit report of the Program Management function. We will present this report to the Audit Committee on January 20, 2022.

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.

We would like to thank all those involved for their assistance in connection with the FY 2020-21 Q4 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 procedures is to verify that the District's Cost and Program Controls Manager ("CPCM" - Atkins) and Program Manager - Owner's Representative ("PM/OR" - AECOM) are providing deliverables and services in conformance with the terms and conditions of their respective agreements / RFP / RFQ. Generally, our procedures include tests of compliance with contracts (CPCM and PM/OR), tests to confirm adherence to District standard operating procedures, and evaluations of alignment with industry leading practices.

### 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 noted instances of non-compliance with standard operating procedures for change management, including exceptions related to change order supporting documentation, mathematical accuracy, retention, and independent cost estimates.

Four (4) follow-up items remain open, including observations related to the incorporation of contract time modifications in project schedules, PM/OR monthly deliverables, e-Builder system access, and PM/OR invoicing.

### Approach

Our audit approach consisted of the following:

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

- 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 supporting documentation for changes in estimated project completion dates.
- Selected a sample of project invoices and performed detailed testing for compliance with District Standard Operating Procedure and best practices
- Selected a sample of change orders and performed detailed testing for compliance with District Standard Operating Procedure and best practices
- 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 responses herein.



## CURRENT PERIOD OBSERVATIONS



## DETAILED OBSERVATIONS

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-21 Q4	
OBSERVATION	1. Change Order Review and Adherence to SOP for Change Management
DETAIL	<p>Through our detailed testing of change orders, we identified exceptions related to missing supporting documentation, mathematical accuracy, and non-compliance with Standard Operating Procedure (“SOP”) for two (2) of five (5) change order samples. Specifically, we noted the following exceptions related to James S. Rickards Middle School Change Order #1:</p> <p><u>Missing Supporting Documentation:</u></p> <ul style="list-style-type: none"> <li>Change Order #1, Item #1: Supporting documentation was not provided for \$2,302 of the \$10,891 in material costs included in the Contractor’s change order request for one (1) of five (5) change orders.</li> <li>Change Order #1, Item #1: Partial or no documentation was provided to support equipment costs included in the Contractor’s change order request for one (1) of five (5) change orders. We noted three (3) instances where equipment usage was not supported by the daily reports submitted by the Contractor.</li> <li>Change Order #1, Item #2: Supporting documentation was not provided for \$15,850 of the \$78,340 in labor costs included in the Contractor’s change order request for one (1) of five (5) change orders.</li> <li>Change Order #1, Item #2: Supporting documentation was not provided for \$15,000 of the \$156,334 in subcontractor costs included in the Contractor’s change order request for one (1) of five (5) change orders.</li> </ul> <p><u>Mathematical Accuracy:</u></p> <ul style="list-style-type: none"> <li>Change Order #1, Item #1: The labor breakdown provided by the Contractor was not mathematically accurate for one (1) of five (5) change order samples. As a result of our recalculation, we noted eighteen (18) instances where the product of the invoiced rate and the total hours billed for the period did not equal the total amount invoiced by the Contractor, resulting in a potential overbilling of \$2,531.</li> </ul> <p><u>Independent Cost Estimates:</u></p> <ul style="list-style-type: none"> <li>Change Order #1, Item #2: An independent cost estimate (“ICE”) was not performed for one (1) of two (2) change items for James S. Rickards Middle School Change Order #1. SOP 12.20 for Construction Change Management requires that an ICE be performed by the PC Cost Estimator for all requested changes greater than \$25,000. An independent cost estimate was not performed for Change Item #2 (\$270,835), which included the time, labor, and material costs incurred by the Contractor to secure Building #1 at James S. Rickards Middle School following the collapse of the media center roof on March 5, 2021.</li> </ul> <p>Through our review of the e-Builder workflow, and further inquiry with the CPCM, we noted several steps in the workflow were bypassed or overridden for Change Item #2 due to the urgent nature of the changes and exigent circumstances of the change item, including the independent cost estimate by the PC Cost Estimator.</p>



## DETAILED OBSERVATIONS

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-21 Q4	
OBSERVATION	1. Change Order Review and Adherence to SOP for Change Management (continued)
RECOMMENDATION	<p>We recommend the District obtain sufficient evidence to determine the actual cost incurred by the Contractor for change orders for work previously completed. Prior to submitting the change order to the Change Order Review Panel (“CORP”), the Owner’s Representative Project Manager (“OR-PM”) should perform a detailed review of the Contractor’s change order request to validate that each cost item is mathematically accurate and supported by the appropriate documentation.</p> <p>Further, we recommend the District consider modifying SOP 12.20 to address alternative procedures and workflow overrides in the event of an emergency.</p>
MANAGEMENT’S RESPONSE	<p>ATKINS is in agreement that an SOP 12.20 modification is required to address workflow overrides in the case of an emergency. However, in the case of Change Order #1, Item #2, the workflow overrides in this case were due to the fact that Architect of Record on the project was put in a supporting role not directly involved in the plan to investigate the collapse, support and secure the building. Therefore, the normal AE steps in the e-Builder workflow had to be skipped.</p> <p>In the current process, Senior Managers (Team Leaders) are not included in the review and approval process, the process was limited to the project manager and CORP. In the upgrades developed for the e-Builder process Team Leaders will now be required to review and sign off on each change order. Another improvement includes an official sign off from the estimator assigned to the project. These steps will provide for additional accountability and scrutiny within the upgraded processes. As outlined and updated in our AECOM monthly report the Team has finalized the building of the cost module improvements in e-Builder, testing is currently on-going. Once testing is complete data migration will commence. We will then move into a comprehensive training phase to ensure that all team members are aligned with the new process. We believe these improvements exceed the recommendations provided in Observation 3 of the RSM report.</p> <p>AECOM understands that all changes under \$25,000 require AECOM to perform an independent estimate and all changes over \$25,000 require ATKINS to perform an independent cost estimate. In the case of Change Order #1, Item #2, an independent cost estimate was performed for this scope prior to the issuance of the Construction Change Directive (CCD), but was overlooked and not performed after the actual costs were submitted. As noted above in the improved e-Builder process estimators will be required to officially sign off on change orders. The value of the change will dictate which firm’s estimator will sign off in e-Builder. Additionally, a check list is included in the new e-Builder process for CORP requirements to ensure that each item has been appropriately reviewed.</p> <p><b>Estimated Completion Date:</b> January 2022</p>



## DETAILED OBSERVATIONS

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-21 Q4	
OBSERVATION	2. Change Order Retention in e-Builder (Repeat Finding)
DETAIL	<p>We previously reported a finding related to change order retention in e-Builder in the FY 2019-2020 Q2 report. In the current quarter, we noted several exceptions related to the retention of signed change order forms in e-Builder. Specifically, we noted the following:</p> <ul style="list-style-type: none"> <li>For two (2) of the five (5) change orders, a Contractor signature was not included on the 1250b form (Change Order Request / Proposal) retained in e-Builder</li> <li>For one (1) of the five (5) change orders, a Contractor signature was not included on the 1250e form (Construction Change Directive) retained in e-Builder</li> <li>For one (1) of the five (5) change orders, an Architect/Engineer (“A/E”) signature was not included on the 1250e form (Construction Change Directive) retained in e-Builder; however, a signed copy was provided upon further request.</li> <li>For (1) of the five (5) change orders, an Owner’s Representative Project Manager (“OR-PM”) signature was not included on the 1250g (Construction Change Order) form retained in e-Builder; however, a signed copy was provided upon further request.</li> </ul> <p>The standard operating procedures for Construction Change Management (SOP 12.20) require that the A/E, Contractor, and OR-PM sign and date the applicable change order documents following CORP’s approval of the change order. The use of e-Builder and the change order workflow reduces the risk of processing change orders without the proper approvals. However, each of the documents noted above are key components of the change order review process, and executed (signed) copies of the documents should be retained in e-Builder. Further, as e-Builder is the District’s central document repository, all relevant project and program documents should be uploaded in a timely manner.</p>
RECOMMENDATION	We recommend the OR-PM confirm that all required forms are signed and included in the final change order package within e-Builder upon receipt of all fully executed documentation.
MANAGEMENT’S RESPONSE	<p>Currently the standard operating procedure for Construction Change Management (SOP 12.20) is a manual process and requires team members to email or hand carry documents to parties for signature with no accountability incorporated into the process. As described in previous management responses the cost module for improvements in e-Builder are complete. As also previously described we have added Team Leaders to review and sign off on each change order making sure that the appropriate forms are executed. This will significantly improve the e-Builder process by requiring all approvals and signatures be completed prior to moving to the next step.</p> <p>Regarding required forms, the 1250g (or 1250h Contingency Use Directive (CUD) is the most important form in the change order package as it is the form signed by the AE, PM and GC which goes to the Board for approval. The District’s General Counsel has stated that a CCD (1250e) does not have to be signed by the Contractor (GC) in order for it is be issued officially from the District and the GC still has to comply with the CCD.</p> <p style="text-align: right;"><i>(continued on next page)</i></p>





## DETAILED OBSERVATIONS

### INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-21 Q4

#### OBSERVATION

#### 2. Change Order Retention in e-Builder (continued)

#### MANAGEMENT'S RESPONSE

The 1250b is the form that summarizes the Contractor's proposal for the work being requested. This form has been deemed redundant by the Team and will not be included as a mandatory item in the new change order workflows being prepared for rollout.

**Estimated Completion Date:** January 2022



## DETAILED OBSERVATIONS

### INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-21 Q4

#### OBSERVATION

#### 3. Independent Cost Estimates and the Negotiation of Change Orders

#### DETAIL

For two (2) of the five (5) change orders tested in the current period, we noted that the Contractor's change order request/proposal was accepted by the District despite exceeding the independent cost estimate by 5% or greater. The Contractor's change order request/proposal was accepted despite the findings detailed by the PC Cost Estimator, which included variances related to labor and materials costs, sales tax calculations, and Contractor mark-ups.

The table below compares the total amount of the Contractor's change order proposal to the independent cost estimate performed for our five (5) samples.

Project Name	Project #	Change Order #	Contractor Proposal Amount	ICE Amount	Total Difference	Percentage Difference
James S. Rickards MS	P.001743	CO #1, Item #1	\$ 121,710	\$ 121,616	\$ 94	0.08%
		CO #1, Item #2	\$ 270,835	N/A <sup>A</sup>	N/A	N/A
Cypress Bay HS	P.001774	CO #3, Item #1	\$ 54,410	\$ 49,862	\$ 4,548	8.36%
		CO #3, Item #2	\$ 45,596	\$ 41,567	\$ 4,029	8.84%
Embassy Creek ES	P.001897	CO #2, Item #2	\$ 58,959	\$ 57,249	\$ 1,710	2.90%

<sup>A</sup> Independent cost estimate not performed. Refer to Observation #1 for additional information.

For changes over \$25,000, the CPCM's subconsultant performs an independent cost estimate of the items included in the Contractor's change order proposal. The subconsultant utilizes RSMeans, a construction estimating database to compare the Contractor's proposed costs to the cost data generated by the software. The PC Cost Estimator performs a line-by-line comparison of the labor, equipment, materials, and other project costs to determine the total cost of the change order. If applicable, a variance or delta is calculated, and a revised change order amount is provided by the PC Cost Estimator.

After the independent cost estimate is performed, the change order package is submitted to CORP for approval. Through our review of SOP 12.20 and inquiry with the CPCM, we noted that a threshold does not currently exist for the negotiation or acceptance of the Contractor's change order proposal. According to the CPCM, CORP historically accepts change orders with a delta up to 5% but may require additional explanation or supporting documentation from the Contractor prior to approval.

We understand the effort required to hold negotiations with the Contractor may exceed the potential benefit in certain instances; however, these potential cost savings may have a significant impact over the course of the program's duration.



## DETAILED OBSERVATIONS

INTERNAL AUDIT – PROGRAM MANAGEMENT FY 2020-21 Q4	
OBSERVATION	3. Independent Cost Estimates and the Negotiation of Change Orders (continued)
RECOMMENDATION	We recommend the District consider implementing an additional step in the standard operating procedures for Construction Change Management to require that further negotiations be held for change order proposals that exceed the independent cost estimate by a certain threshold. For example, the District may require that an additional meeting be held with the Contractor if the difference between the Contractor's proposal and the independent cost estimate exceeds 5% of the proposed change order value. Further, the District may also consider incorporating additional language to require the PM/OR provide justification if the contractor's original proposal exceeds the ICE and is still accepted.
MANAGEMENT'S RESPONSE	In the improved e-Builder cost module the team will add a 5% cap to the process such that if the value of the change order is more than 5% over the cost estimate the system will not allow the user to move to the next step until a justification memo authored by the estimator assigned be provided by the contractor to explain deltas or a negotiation meeting needs to occur to resolve the differences.  <b>Estimated Completion Date:</b> January 2022



## PRIOR OBSERVATIONS FOLLOW UP



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT		
1. Contract time modifications and schedule updates		February 2020
PRIOR OBSERVATION 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> <p>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.</p>	
CURRENT OBSERVATION STATUS	<p>RSM re-tested an additional sample of three (3) change orders with time modifications to verify inclusion of change order time extensions/reductions in the Contractor's project schedule. Through our detailed testing, we noted discrepancies between the scheduled final completion date noted in the Contractor's schedule and the RSM calculated final completion date for three (3) of three (3) projects sampled in the current period. 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>Q3 2021:</b> Two (2) of three (3) samples failed testing</li> <li>• <b>Q4 2021 (current period):</b> Three (3) 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>	
MANAGEMENT'S RESPONSE	<p><b>Q4 2021 Update:</b> AECOM had added a check for invoice approvals not to allow an invoice to be processed if a Change Order had included time and was approved by the Board. Because some contractors fail to invoice monthly, the workflow override failed to identify the lack of schedule update. Going forward an additional check will be added to the process to verify the contractual requirement to submit invoices monthly. The project manager will issue a notice of contract default for failure to submit an updated schedule. A deductive change order from general conditions and fee will be issued to the contractor each month for the lack of contractual schedule submission requirements.</p> <p><i>(continued on next page)</i></p>	



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT		
1. Contract time modifications and schedule updates (continued)		February 2020
MANAGEMENT'S RESPONSE	Open	
	<p><b>Q4 2021 Update (continued):</b> P.001974 Bright Horizon Center – SMART Program Renovations: The contractor has not submitted an invoice since the Change Order (CO) was Board approved on August 17, 2020. The contractor has been notified to submit an updated schedule. If the schedule is not submitted for the next reporting period, the notice of default and back charge will be issued.</p> <p>P.001839 Fort Lauderdale HS – SMART Program Renovations: The CO was included in the updated schedule with the incorrect amount of time added. The project manager has requested the updated schedule from the contractor with the correct amount of time added for the approved CO.</p> <p>P.001822 Gulfstream Academy of Hallandale Beach K-8: SMART Program Renovations: The contractor has not worked on site and has not submitted an invoice since the Change Order was Board approved on March 10, 2021. The contractor has been notified to submit an updated schedule. If the schedule is not submitted for the next reporting period, the notice of default and back charge will be issued.</p> <p><b>Revised Estimated Completion Date:</b> December 2021</p>	



## PRIOR OBSERVATIONS FOLLOW UP

### INTERNAL AUDIT – PROGRAM MANAGEMENT

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

June 2021

Partially Complete

##### PRIOR OBSERVATION 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. The PM/OR submitted their first monthly reporting package for February 2021 in April 2021. Through our testing of the February and March 2021 reports, we noted certain monthly deliverables were not provided, including deliverables related to the following RFQ requirements:

- Variance Analysis (Schedule / Budget) Slippage
- Evaluation of Pay Requisition (Consultants & Contractor)
- Earned Value Project Management
- Monthly Executive Summary of Program Performance
- Monthly Executive Summary of Program Performance

##### 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

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. 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.



## PRIOR OBSERVATIONS FOLLOW UP

### INTERNAL AUDIT – PROGRAM MANAGEMENT

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

June 2021

Partially Complete

#### CURRENT OBSERVATION STATUS

As part of our quarterly and follow-up testing procedures, RSM conducted detailed testing related to the PM/OR's compliance with the monthly/quarterly deliverables as required by the RFQ. We noted that certain required monthly deliverables were not provided to the District during our scope period. All required quarterly deliverables were produced by the PM/OR and included in the June 2021 monthly report.

#### Monthly Reporting Requirements

RSM obtained the monthly reporting packages provided to the District for the period of April 2021 through August 2021 and tested for compliance with the requirements of the RFQ. The table below summarizes the results of our testing:

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

**Note 1:** During our scope period, the PM/OR produced variance reports detailing the various delays and advancements incurred at the project and District-level. However, the monthly packages did not include a report for budget slippage, as required by Section 6.7.1 of the RFQ.





## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT									
2. PM/OR Compliance with Reporting Requirements (continued)		June 2021	Partially Complete						
CURRENT OBSERVATION STATUS	<b>Note 2:</b> Several requirements outlined in Section 6.7.9.1 <i>Monthly Executive Summary of Program Performance</i> were not provided, including deliverables related to:								
	<ul style="list-style-type: none"><li>RFI Rates</li><li>Stakeholder Satisfaction</li><li>Project Quality Adherence</li></ul>								
	<b>Note 3:</b> Several requirements outlined in Section 6.7.9.2 <i>Monthly Executive Summary of Project Specific Performance</i> were not provided, including deliverables related to:								
	<ul style="list-style-type: none"><li>Contractor’s Progress Payments</li><li>Field &amp; Change Order Root Causes</li><li>Claims</li><li>M/WBE Compliance</li><li>Responses to RFI’s</li><li>Quality Deficiency &amp; Building Dept. Inspection Reports</li><li>(EDDC) Compliance</li><li>Material Testing Results</li></ul>								
	Since the date of our last report, the PM/OR has made significant progress in developing the infrastructure necessary to provide the monthly deliverables required by the RFQ. Several new e-Builder modules are currently being developed (i.e. e-Builder Cost Module), which are scheduled to be completed in the next quarter.								
	<b><u>Quarterly Reporting Requirements</u></b>								
	Through our review of the June 2021 monthly reporting package, we noted that the PM/OR provided an updated R.A.C.I matrix to satisfy quarterly reporting requirements. In addition, the PM/OR has incorporated Knowledge Management reporting into their Monthly Project Update (MPU) process and e-Builder workflow as of their April 2021 monthly report. The table below summarizes the results of our testing:								
	<table><tr><th>AECOM Quarterly Reporting Requirements (section 6.7 of the Owners Representative RFQ)</th><th>Provided Q2 2021?</th></tr><tr><td>Knowledge Management/Continuous Improvement at Program &amp; Project Level (industry best practices &amp; lessons learned)</td><td>Yes</td></tr><tr><td>Responsible, Accountable, Consulted, Informed (R. A. C. I.) Matrix</td><td>Yes</td></tr></table>			AECOM Quarterly Reporting Requirements (section 6.7 of the Owners Representative RFQ)	Provided Q2 2021?	Knowledge Management/Continuous Improvement at Program & Project Level (industry best practices & lessons learned)	Yes	Responsible, Accountable, Consulted, Informed (R. A. C. I.) Matrix	Yes
AECOM Quarterly Reporting Requirements (section 6.7 of the Owners Representative RFQ)	Provided Q2 2021?								
Knowledge Management/Continuous Improvement at Program & Project Level (industry best practices & lessons learned)	Yes								
Responsible, Accountable, Consulted, Informed (R. A. C. I.) Matrix	Yes								
	This observation will remain open, and RSM will continue to test PM/OR compliance with reporting requirements on a quarterly basis.								



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT		
2. PM/OR Compliance with Reporting Requirements (continued)		June 2021
MANAGEMENT'S RESPONSE		Partially Complete
<p><b>Q4 2021 Update:</b> AECOM recommends and continues to work with the District to define the reporting requirements, due to the inability to come to closure on what to report on, we recommend strike through the reporting requirements bullets that AECOM cannot accomplish based on the limitations of the program.</p> <p>Due to the limitations of the current e-Builder system, AECOM has now finalized the Cost module e-Builder processes which will allow us to report on the following reporting requirements in January 2022:</p> <ul style="list-style-type: none"> <li>• Contractor's Progress Payments</li> <li>• Variance Analysis Budget Slippage</li> <li>• Evaluations of Pay Requisitions (Consultants and Contractors)</li> <li>• Field and Change Order Root Causes</li> </ul> <p><b>Revised Estimated Completion Date:</b> January 2022</p> <p>AECOM continues to work on e-Builder process to allow for the reporting on the following reporting requirements:</p> <ul style="list-style-type: none"> <li>• RFI Rates</li> <li>• Stakeholder Satisfaction</li> <li>• Claims</li> <li>• Quality Assurance</li> </ul> <p><b>Revised Estimated Completion Date:</b> March 2022</p> <p>Recommendation of the removal of the following reporting requirements that will not be able to be met due to the limitations of the program:</p> <ul style="list-style-type: none"> <li>• Earned Value Project Management</li> <li>• Quality Deficiency &amp; Building Department Inspection Reports</li> <li>• Material Testing</li> </ul>		



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT																				
3. CPCM Compliance with Reporting Requirements			June 2021	Closed																
PRIOR OBSERVATION DETAIL	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):																			
	<ul style="list-style-type: none"><li>One (1) of seven (7) monthly reporting deliverables for December 2020</li><li>Two (2) of seven (7) monthly reporting deliverables for January 2021</li><li>Three (3) of seven (7) monthly reporting deliverables for February 2021</li></ul>																			
	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 District by the CPCM. The reports listed in the table below were not provided as part of the CPCM’s monthly reporting package:																			
	<table><tr><th>Atkins Monthly Reporting Requirements</th><th>Provided Dec. 2020?</th><th>Provided Jan. 2021?</th><th>Provided Feb. 2021?</th></tr><tr><td>Monthly report of schedule delays / slippage at both program and project level</td><td>Yes</td><td>No</td><td>No</td></tr><tr><td>Monthly cash flow report – actual vs projected</td><td>Yes</td><td>Yes</td><td>No</td></tr><tr><td>Project quality reporting – design process revise &amp; resubmits, inspection results</td><td>No</td><td>No</td><td>No</td></tr></table>				Atkins Monthly Reporting Requirements	Provided Dec. 2020?	Provided Jan. 2021?	Provided Feb. 2021?	Monthly report of schedule delays / slippage at both program and project level	Yes	No	No	Monthly cash flow report – actual vs projected	Yes	Yes	No	Project quality reporting – design process revise & resubmits, inspection results	No	No	No
	Atkins Monthly Reporting Requirements	Provided Dec. 2020?	Provided Jan. 2021?	Provided Feb. 2021?																
	Monthly report of schedule delays / slippage at both program and project level	Yes	No	No																
Monthly cash flow report – actual vs projected	Yes	Yes	No																	
Project quality reporting – design process revise & resubmits, inspection results	No	No	No																	
We recommend the CPCM provide monthly deliverables as required by their RFP to allow the District to effectively monitor project and program performance.																				
CURRENT OBSERVATION STATUS	As part of our quarterly and follow-up testing procedures, RSM reviewed the CPCM’s monthly deliverables for compliance with the requirements set forth in the RFP. Through our detailed testing of the CPCM’s <i>SMART Program Monthly Reports</i> , we noted that all monthly reporting deliverables were provided to the District for the period of March 2021 through August 2021. As a result, we note this observation as closed.																			
	RSM will continue to test CPCM compliance with reporting requirements on a quarterly basis and report as applicable.																			



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT		
4. e-Builder System Access		June 2021
PRIOR OBSERVATION 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>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>	Open
CURRENT OBSERVATION STATUS	<p>As part of our follow-up procedures, RSM obtained a listing of PM/OR personnel departures/terminations for the current period. To confirm that the individuals included in the listing were removed from e-Builder in a timely manner, we compared the exit dates (the last date of employment) included in the listing to a report provided by the CPCM detailing all users removed from e-Builder during our scope period. Through our comparison of the listings, we noted that five (5) of the nineteen (19) individuals terminated during our scope period were removed from e-Builder between seven (7) and twelve (12) days after their official exit date.</p> <p>Upon receiving notice of a personnel departure, the PM/OR should immediately notify the CPCM and provide the individual's anticipated exit date. The CPCM should then schedule to remove the user's access within one (1) day of their official exit date. We recommend the CPCM, in conjunction with the PM/OR develop formal procedures for the removal of e-Builder system access for terminated personnel.</p> <p>This observation will remain open pending further testing of e-Builder system access.</p>	
MANAGEMENT'S RESPONSE	<p><b>Q4 2021 Update:</b> AECOM has developed an Onboarding SOP and is in the process of finalizing a new Exit Interview SOP that will include the removal of access to all BCPS systems. Atkins is in the process of creating a new process to notify the exit of a team member for the removal from the BCPS systems. During this process, we noted that BCPS doesn't remove email accounts after team members leave, this new process will include the notification from removal to IT. It has been confirmed that the highlighted users did not access the system after completion.</p> <p><b>Revised Estimated Completion Date:</b> December 2021</p>	



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT		
5. PM/OR Monthly Invoicing		June 2021
Partially Complete		
<b>PRIOR OBSERVATION DETAIL</b>	<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> <ul style="list-style-type: none"> <li>• Miscalculation of invoiced labor (CBRE-Heery)</li> <li>• Invoiced labor rates exceeded the rates specified in the staffing matrix provided with the invoice package (AECOM)</li> <li>• An incorrect “hourly rate multiplier” was applied to invoiced labor rates (AECOM)</li> <li>• Missing supporting documentation for invoiced labor (AECOM)</li> <li>• Employees billed were not included on the staffing matrix provided with the invoice package (AECOM)</li> </ul> <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>	
<b>CURRENT OBSERVATION STATUS</b>	<p>RSM performed detailed testing of twelve (12) AECOM labor invoices, five (5) AECOM expense invoices, three (3) CBRE-Heery labor invoices, and six (6) CBRE-Heery expense invoices as part of our quarterly and follow-up testing procedures for the current period.</p> <p>Through our review of the PM/OR monthly invoices, we noted several exceptions related to the items detailed in Prior Observation #4 (FY 2020-21 Q3), as detailed on the following pages. In addition, the credits detailed in the PM/OR’s response above (Items B and C) were not reflected in the subsequent invoices tested during the current period.</p> <p>Through our review of PM/OR monthly invoices, we noted the following:</p> <p><b>A. Miscalculation of invoiced labor (CBRE-Heery)</b></p> <p>During our detailed testing of three (3) CBRE-Heery labor invoices, we did not identify mathematical inaccuracies within the invoices provided.</p> <p style="text-align: right;"><i>(continued on next page)</i></p>	



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT		
5. PM/OR Monthly Invoicing (continued)		June 2021
CURRENT OBSERVATION STATUS	Partially Complete	
	<p><b>B. Invoiced labor rates exceeded the rates specified in the staffing matrix provided with the invoice package (AECOM)</b> In four (4) of twelve (12) AECOM labor invoices reviewed during the current period, we noted ten (10) instances where the invoiced labor rate for four (4) AECOM subconsultants exceeded the labor rate specified in the staffing matrix provided with the monthly invoice package, resulting in a potential overbilling of \$6,626. In addition, the PM/OR did not apply a credit in subsequent invoices for the overbilling identified in Prior Observation #4 (FY 2020-21 Q3), as detailed in their prior management's response.</p> <p><b>C. An incorrect "hourly rate multiplier" was applied to invoiced labor rates (AECOM)</b> RSM reviewed the staffing matrix provided with each monthly labor invoice and confirmed that the "hourly rate multiplier" was adjusted to reflect the specified multiplier defined in Attachment A of the PM/OR Agreement. However, the PM/OR did not apply a credit in subsequent invoices for the overbilling identified in Prior Observation #4 (FY 2020-21 Q3), as detailed in their prior management's response.</p> <p><b>D. Missing supporting documentation for invoiced labor (AECOM)</b> Through our detailed testing of twelve (12) AECOM labor invoices, we noted that forty (40) total labor hours related to one (1) PM/OR subconsultant were unsupported by timesheets within the provided PM/OR invoice package. In total, \$4,127 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 twelve (12) AECOM labor invoices, we noted two (2) instances where one (1) PM/OR employee and one (1) PM/OR subconsultant were billed to the project but were not included in the staffing matrix provided with the invoice.</p> <p>Further, through our detailed testing of five (5) AECOM monthly expense invoices, we noted additional exceptions related to the mathematical accuracy of invoiced expense amounts, and missing supporting documentation for travel expenses:</p> <ul style="list-style-type: none"> <li>For one (1) of the five (5) invoices, we noted that the amount invoiced by one (1) PM/OR subconsultant was incorrect based on our recalculation of the items listed in the expense cost breakdown, resulting in a potential overbilling of \$441.</li> <li>For one (1) of the five (5) invoices, we noted that the total amount billed for a subconsultant by the PM/OR is not mathematically accurate, resulting in a potential overbilling of \$180.</li> <li>For one (1) of the five (5) invoices, we noted that supporting documentation was not provided for one (1) PM/OR subconsultant's mileage reimbursement. We recommend that the PM/OR and District obtain expense reports, mileage logs, and/or route maps for all mileage charges prior to approval. In total, \$630 was unsupported by backup documentation.</li> </ul> <p>This observation will remain open, and RSM will continue to test PM/OR invoices on a quarterly basis.</p>	



## PRIOR OBSERVATIONS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT		
5. PM/OR Monthly Invoicing (continued)		June 2021
MANAGEMENT'S RESPONSE	Partially Complete	
	<p><b>Q4 2021 Update:</b> As part of our Year One Contract closeout, AECOM has conducted an internal review and audit our practices and procedures as it relates to our management of the SMART Program.</p> <p>One of the areas of focus in our audit was our invoicing practices. For the period between August 2020 and July 2021, we identified errors in our billables submitted to the District. Those errors include instances of over and under billing and in some cases errors in the updating of ours staffing matrix.</p> <p>Since the completion of our audit, we have worked closely not only with AECOM internal billers, but also with our Consulting Partners to create changes we intend to put into practice for Year Two.</p> <p>Some of those changes include (a) designating a staff member to review and revise monthly, the staffing matrix submitted with the AECOM invoices; (b) instituting a triple layer review of each invoice before submission to the District; numbering all invoices before hand-delivery to ensure proper tracking, as well as electronic delivery of every invoice submitted to the District; instituting AECOM's new cell phone reimbursement policy in an effort to reduce such expense to the District; and conducting quarterly audits of the new changes to monitor their success.</p> <p>The Program Director will closely monitor these new processes to the integrity of AECOM's invoicing practices is safeguarded.</p> <p><b>Revised Estimated Completion Date:</b> November 2021</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 / RFQ. 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)

- 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 whether material changes in estimated project completion dates have occurred. Procedures included, but were not limited to the following:
  - Tested sampled projects for milestone accuracy and project completion
  - Completed interviews with project managers to gain an understanding of the current status of sampled projects
- Selected a sample of project invoices and performed detailed testing for compliance with District Standard Operating Procedure and best practices
- Selected a sample of change orders and performed detailed testing for compliance with District Standard Operating Procedure and best practices
- 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






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## OBJECTIVES AND APPROACH – CONTINUED

### 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.



RSM US LLP  
100 NE 3<sup>rd</sup> Avenue, Suite 300  
Fort Lauderdale, FL 33301  
954.462.6351  
[www.rsmus.com](http://www.rsmus.com)

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