



Established 1915

BROWARD
County Public Schools

Internal Audit of Program Management FY19 Q4

October 3, 2019



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TRANSMITTAL LETTER

October 3, 2019

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Pursuant to the approved internal audit scope, as agreed with the Office of the Chief Auditor on May 14, 2019, we hereby submit our FY19 Q4 internal audit report of the Program Management function. We will be presenting this report to the Audit Committee at the next scheduled meeting on October 10, 2019.

Our report is organized in the following sections:

Executive Summary	This section provides a brief background and a summary of the observations related to our internal audit of the Program Management function.
Detailed Observations	This section presents descriptions of the observations noted during our internal audit, recommended actions, as well as responses from the Program Management team.
Prior Findings Follow Up	This section provides an update and current status of remediations related to prior noted findings.
Objectives and Approach	The objectives and approach of the internal audit are explained in this section.
Appendix	This section includes an analysis of data derived from the Building Department's plan review tracking software (ISS), in support of our observations.

We would like to thank all those involved for their assistance in connection with the FY19 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, RSM was notified that the District intended to shift the contractual oversight and management of our work from OFC, back to the OCA. In January 2019, RSM worked with OCA to define an audit plan for the calendar year 2019, and began conducting fieldwork shortly thereafter.

The objective of our current engagement is to verify that the District's Program Management Consultant ("PM" - Atkins) and Owner's Representative ("OR" - CBRE-HEERY) are providing deliverables and services in conformance with the terms and conditions of their respective agreements / RFP. 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 April – June 2019.

Observations

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

During our work, we noted instances of non-compliance with the standard operating procedures for Construction Services Minor Projects (CSMP).

Further, in our testing of CMAR invoices, we noted missing supporting documentation related to subcontractor's billings.

Lastly, we identified gaps in the PM/OR design review process, and in project management effectiveness during the Building Official's plan review process.

Approach

Our audit approach consisted of the following:

Program 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

Owner's Representative (CBRE-Heery)

- Obtained and reviewed deliverables submitted in accordance with PM monthly reporting requirements derived from RFP Article 6.4.3.10.
- Selected a sample of project(s) for control assessment and testing
- Tested the sample projects for compliance with District Standard Operating Procedure and best practices. In-Scope processes for this period included:
 - Construction procurement
 - Construction Invoice - CMAR
- Reviewed CBRE-HEERY monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy

Reporting

At the conclusion of our procedures, we summarized our findings related to the Contract Administration process. We have reviewed the results of our testing with OCA, OFC, the PM/OR team, and incorporated management's response into our report.



EXECUTIVE SUMMARY - CONTINUED

Summary of Observations

Following is a summary of observations that were identified during our work. Further details of each item are included within the Detailed Observations section of this report.

Observations

1. PM/OR Adherence to SOP for Construction Services Minor Projects (CSMP)

Through our detailed testing of the Construction Procurement Standard Operating Procedure (“SOP”), we noted non-compliance with the procurement process for Construction Services Minor Projects. The SOP inferred the SBBC’s Procurement Department was to select vendors from the contract log, but in practice the OR-PM was performing this process. Additionally, there is no evidence of reasoning or justification for the selection of the each vendor to support any variances in equitable distribution.

2. Construction Invoice CMAR Supporting Documentation

Through our detailed testing, we noted non-compliance with contract agreements and SOPs related to supporting documentation to be included with each CMAR pay application. Missing documentation included:

- General Contractor and Subcontractor lien releases
- Subcontractor pay applications and schedule of values

3. Ineffective interim plan reviews & lapses in project management during the Building Department review process

Through our detailed analysis related to the 100% design review process, we noted significant delays from Designers when resubmitting plans to the Building Department after the first round submission. Furthermore, although the CBRE/Heery design review team was providing reviews at the applicable interim milestones, we noted a substantial amount of comments and errors were identified by the Building Department during their review.



DETAILED OBSERVATIONS

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q4

OBSERVATION	1. PM/OR Adherence to SOP for Construction Services Minor Projects (CSMP)
<p>DETAIL</p>	<p>Through our detailed testing, we noted non-compliance with the Standard Operating Procedure (“SOP”) related to the Construction Procurement for CSMP (Construction Services Minor Projects). SOP 10.80, as effective during the construction procurement phase of our sampled project, details the following collaboration between Procurement and Warehouse Services (“PWS”) and the OR-PM for rotation in vendor selection/assignment:</p> <ul style="list-style-type: none"> • (Step 3) The OR-PM consults the current CSMP Contract Log maintained by the OR-PD to identify the next available contractor in the CSMP contract rotation. • (Step 4) Procurement and Warehouse Services (using Ariba system) selects the next available contractor in the CSMP contract rotation. Notifies the OR-PM. <p>As written, the SOP is designed to involve PWS in the selection process in conjunction with the Ariba software, to create and document an independent review of vendor assignment and promote equitable distribution. During our testing the OR-PM noted that current process does not align with the procedures outlined in the SOP. The OR-PM has been maintaining their own CSMP vendor contract log, and selects “the best available contractor” for each project without involvement from PWS. We obtained the OR-PM’s contract log, and noted that the log does not include evidence of justification for each project’s vendor selection. Although the OR-PM was unable to provide documentation supporting reasons for each selection, brief narratives of justifications were provided which included:</p> <ul style="list-style-type: none"> • Specialization of vendors, specific to scope of project • Non-selection due to prior poor performance • Waiver of projects by vendors due to limited vendor capacity for multiple projects <p>The OR-PM also indicated that for projects over \$30,000, an estimate is performed by the PC-Estimator for comparison to the vendor’s proposal. While this may help mitigate the risk of unreasonable vendor proposals, the review by the PC-Estimator does not include assessment of prior contract distribution among vendors. In addition to the non-compliance with the SOP as noted, above, the process of selecting vendors for CSMPs without involvement from PWS and without documented justifications of selections, increases the risk of favoritism, whether actual or perceived, in the CSMP vendor selection process.</p>
<p>RECOMMENDATION</p>	<p>We understand the OR-PM is providing resources to supplement Procurement and Warehouse Services staff in order to process the large volume of contracts necessary for the Program. As such, we recommend the OR-PM note reasoning and maintain documentation for the justification of vendor selection for each CSMP contract assigned, as contemplated by the PWS role in the SOP. We further recommend OFC and the PM-OR update relevant portions of SOP 10.80 to reflect the current process.</p>



DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q4

OBSERVATION

1. PM/OR Adherence to SOP for Construction Services Minor Projects (CSMP)

MANAGEMENT'S RESPONSE

(Refer to Appendix E for updated SOP)

Response: The recommendations for SOP 10.80 have been reviewed and modifications have been made accordingly. These changes have been highlighted (See Appendix E)

The CSMP Contract Log has been under modification. The recommendations were already under consideration and will be implemented into the Log for documentation purposes.

The prior refinement to SOP 10.80 step # 4, was to remove Procurement from the action of assigning specific CSMP contractor. It is important to understand that this change reflects what has been the practice throughout the SMART Program.

The involvement of Procurement, while not present in the assignment of work, is clearly and undoubtedly present through-out the CSMP process. The process begins with the solicitation of CSMP contractors. Procurement is directly responsible for this part of the process which includes analyzing potential CSMP contractors, assessing qualifications, ranking contractors, and ultimately presenting a contract award recommendation for SBBC review and approval. Once solicitation, selection, and approval is completed, the end-users (SMART Program/Facilities/Physical Plant Operations) become responsible for the assignment of work. Once the assignment is recognized, the actual contractual obligation again shifts to Procurement. Procurement is responsible for compliance, issuing the Purchase Order, executing final signature on the Notice to Proceed (NTP) and finally, mailing documents such as the Purchase Order and NTP to the contractor.

In summary Procurement is involved and responsible from the beginning of the process with the solicitation for the pool of qualified firms and later through the issuance of the NTP and Purchase Order. Strategic conversation has been on-going with Procurement and from those discussions, it is clear the District intends to continue to consider the development and use of an automated, digital tool to enhance the assignment process.

The goal in the selection of a Continuing Contractor is to provide an equitable opportunity for work through the term of the contract. A determining factor in the selection process is based upon the percentage of current commitments. If a Contractor with the lowest percentage declines the project, then Staff will proceed to the next Contractor with the lowest percentage of awarded projects. In addition, the time since last award is a factor in the selection process. If multiple contractors have equal lowest percentages of work awarded to date, then the selection will be based on a weighted criteria which includes evaluations and input from Procurement.

Estimated completion date: October 2019



DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q4

OBSERVATION

2. Construction Invoice CMAR Supporting Documentation

DETAIL

During our testing of Construction Manager at Risk (“CMAR”) invoicing, we noted insufficient supporting detail was provided for the sample of invoices tested from the three (3) active CMAR projects. The CMAR agreements for each sampled project require supporting documentation to be attached with each pay application. Sufficient supporting documentation includes full subcontractor pay applications, and lien releases from the CMAR and all subcontractors for work performed during the period. Our sampled projects included the Blanch Ely HS, Stranahan HS, and Charles Flanagan HS projects. Excerpts from each agreement are included below for reference:

Per the Charles Flanagan HS Contract Agreement, required supporting documentation is explicitly defined:

Article 8.5 “Applications for Payment shall be notarized and supported by such data substantiating Construction Manager’s right to payment as Owner may reasonably require. This shall include, but not be limited to invoices, subcontractor pay applications, subcontractor releases of lien, buyout savings reconciliation, allowance usage log, contingency usage log, and other documents as required by Owner.”

Per the Blanche Ely HS and Stranahan HS Contract Agreements, subcontract costs are defined as direct cost items, and payment applications should include supporting documentation:

Article 26.2.01 “Payments due to subcontractors from the Construction Manager or made by the Construction Manager to subcontractors for their work performed pursuant to contract under this Agreement.”

Article 8.5 “Applications for Payment shall be notarized and supported by such data substantiating Construction Manager’s right to payment as Owner may reasonably require.”

Although required supporting documentation is explicitly defined in two of the three contracts, we noted that all three agreements are considered cost-plus contracts, with the subcontractors classified as a direct cost. As such, we would expect to applicable support to include that as referenced in the Charles Flanagan HS agreement Article 8.5.

For each project, we selected two pay applications for testing. The following instances of insufficient support were noted:

- For 2 of 5 applicable invoices, subcontractor pay applications were not included in supporting documents
- For 1 of 3 applicable invoices, a cover was provided, but no corresponding schedule of values was provided with the subcontractor pay applications
- For 1 of 5 invoices, no lien releases were provided for either the prime contractor or subcontractors
- For 2 of 5 invoices, the prime contractor’s lien release did not agree to the pay application
- For 1 of 4 applicable invoices, signed subcontractors lien releases for \$10 were provided as supporting documentation, although no related subcontractor costs were invoiced

By not requiring contractors to provide appropriate supporting documentation with pay applications, the District is at risk of incurring overbillings from contractors, and/or incurring charges that are not in compliance with the terms of the construction agreement.



DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q4

OBSERVATION	2. Construction Invoice CMAR Supporting Documentation
RECOMMENDATION	<p>We recommend the OR-PM enforce the supporting documentation requirements of the CMAR agreements, and require contractors to provide subcontractor invoices, and all related lien releases with each application for payment. Invoices should not be approved or processed for payment prior to receipt of all appropriate supporting documentation. To aid in the completeness of review a checklist should be utilized by the OR-PM, and all reviewers to document receipt and review of all applicable supporting documents.</p> <p>Further, we recommend for the projects where this support has not been provided, a retrospective audit be performed to ensure the District has not been overbilled for tradework actually performed.</p>
MANAGEMENT'S RESPONSE	<p>Response: A checklist is used and submitted with every pay application. The checklist is referenced in SOP 11.20 Contractor Pay Application Review Process.</p> <p>A cross-referencing of the checklist with payment procedures found in General Conditions 00700 and 001290 will be conducted to review and revise for alignment of all such documents.</p> <p>The Checklist will be updated accordingly. Refresher training in the use of the checklist and supporting documents in the pay application process will be conducted by the end of October 2019.</p> <p>Estimated completion date: October 2019</p>



DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q4

OBSERVATION

3. Ineffective interim plan reviews & lapses in project management during the Building Department review process

DETAIL

(Refer to Appendix A for 7 sampled project tables)

During our Q3 testing, we identified instances of significant variance between the design phase timeline, as stated in the design Authorization to Proceed, versus actual deliverable submission. As we understood that additional delays were also present during Building Department review and permit issuance, we noted in our recommendation that we would interview the Building Department and perform additional analysis to identify the full review timeline, and more clearly define the root cause(s) of noted delays.

We obtained access to the Building Department's plan review tracking software (ISS) to obtain the detailed population and timing of review comments from the Building Department and responses/resubmissions from the designers for all 9 disciplines. The table below summarizes the average number of review rounds, and days in review queue for the Building Department and the Designer for seven sampled projects (full detail of each sampled school is shown in appendix A).

ISS Plan Review (100% for permit)							
	Total (Average)			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Average Total Days	Average Days Per Round	Average Total Days	Average Days Per Round
Site Utilities	2.67	8.33	114.00	23.67	8.72	90.33	34.67
Building	3.71	13.57	152.43	29.57	7.54	122.86	33.45
Plumbing	2.71	8.14	128.43	22.43	8.98	106.00	37.45
Mechanical	3.57	18.00	142.29	14.00	4.32	128.29	36.42
Electrical	3.57	33.00	146.29	21.86	9.67	124.43	35.47
Fire Safety	2.86	11.86	132.29	36.00	14.42	96.29	32.53
Fire Alarm	3.17	19.17	123.33	31.00	13.75	92.33	29.79
Fire Protection	3.50	8.25	160.00	40.50	19.88	119.50	39.06
Roofing	4.43	33.43	177.71	53.00	15.39	124.71	29.64
AVERAGE	3.35	17.08	141.86	30.22	8.99	111.64	34.28

The analysis above reveals that on average, the Building Department must perform 3.35 rounds of review, with 17.08 comments requiring action, prior to issuance of a permit. The data above further shows that the Building Department performs a review within 8.99 days, and that Designers require 34.28 days to submit revised plan documents.



DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q4

OBSERVATION	3. Ineffective interim plan reviews & lapses in project management during the Building Department review process
<p>DETAIL <i>(Refer to Appendix A for 7 sampled project tables)</i></p>	<p>As noted in our prior report, the PM-OR team performs review of documents during all interim phases of design (Scope Validation, Schematic Design, Design Development, 50%, and 100%). The table above represents efforts required to obtain an approved set of 100% design documents, after those reviews conducted by the PM-OR team during the design phase.</p> <p>The significant effort and time required to obtain an approved design may suggest the review conducted by the PM-OR design review team is not effective in identifying issues prior to submission to the Building Department. Conversely, if issues are identified by the PM-OR design team, Designers are not held accountable to address comments appropriately prior to submission to the Building Department. Some recurring/consistent comments noted during the Building Department's review included :</p> <ul style="list-style-type: none"> • Electrical – design changes/revisions related to the refrigerant vapor detection and alarm system (for 4 of 7 projects) • Roofing – design note changes regarding notice of approval for roofing system and roofing assemblies (for 3 of 7 projects) • Building – missing asbestos surveys (for 4 of 7 projects) <p>Additionally, the extended delay from Designers in responding to Building Department comments suggests insufficient project management over Design professionals, to require more timely resubmissions.</p>
<p>RECOMMENDATION</p>	<p>We recommend the OFC, OR-PM, and Building Department meet to evaluate the efficacy and necessity of the OR-PM design review process. To quantify the effectiveness, we recommend the teams co-develop Key Performance Indicators (“KPI”), for use in continuing evaluations of the review process.</p> <p>If the OR-PM design review process is ultimately deemed ineffective, the District may consider modifying requirements of the agreement, to re-deploy the OR-PM resources used for the design review to other areas of greater need.</p>
<p>MANAGEMENT'S RESPONSE</p>	<p>Response: Management is in agreement with the ongoing task to evaluate the alignment of the design review process. To that end, a design summit was held involving the Building Department, OFC and the CBRE Heery Design Review Team.</p> <p>As a result, common understanding of what the Building Department prioritizes was further developed. Ongoing analysis of the Building Department comments will be part of the CBRE Heery Design review teams work.</p> <p>The goal will continue to be the delivery of Construction Documents that require less review time by the Building Department in order to obtain an LOR.</p>



DETAILED OBSERVATIONS – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q4

OBSERVATION	3. Ineffective interim plan reviews & lapses in project management during the Building Department review process
<p>MANAGEMENT'S RESPONSE</p> <p><i>(Refer to Appendix B for referenced attachments)</i></p>	<p>A comprehensive review of comments and concerns was completed by the CBRE Heery Design Review Team. A twelve (12) page document was produced and shared with all designers on 7/31/2018.</p> <p>A second major effort focused on design review improvement was held as the Design Review Conference (Summit) on 3/21-22 2019. As a result of this conference the following actions were taken:</p> <ol style="list-style-type: none"> 1) New Building Department comments not included in the 7/31/18 document are communicated directly to the design consultants by the CBRE Heery Design Review Team. The 7/31/18 document will be re-issued to reinforce the use of this constitutional knowledge. Due Date: 10/15/19 2) CBRE Heery Design Review Team was given increased access to the Building Department Design Review software platform (I.S.S.). 3) All CBRE Heery comments will/are closed before submitting CD's to the Building Department at 100% design for review. (See attached "Change of Practice" in Appendix B) 4) The Design Review Team is to produce a letter to go with the 100% submittal to the Building Department. This was not used. Instead an internal checklist has been created and is applied as a check point before CD's are submitted to the Building Department. (See Appendix B) 5) The CBRE Heery Design Review Team is currently gathering information from reviews of years 3-5 projects. Once this is complete and compiled, the information will be shared with design consultants (Q1-2020). <p>Subsequent to the Conference/Summit, meetings have been held with design consultants. Included in these meeting (see agenda and related documents attached in Appendix B) besides dealing with Non-Conforming Design Documents, was information was shared to continue to assist in providing and/or clarifying the direction and responses needed from the design consultants in the preparation of Design Documents. This focus continues to work toward improvement of timely deliverables and great output.</p> <p>The chart in Appendix B illustrates a positive trend of reducing the number of revisions as well as time to receive the L.O.R.</p> <p>Estimated completion date: October 15, 2019</p>



PRIOR FINDINGS FOLLOW UP

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q3

OBSERVATION	1. PM/OR Compliance with Reporting Requirements
DETAIL	We noted exceptions to reporting requirements. In January 2019, the RFI aging report was not provided and as of February 2019 the post project completion reporting had not been provided.
RECOMMENDATION	<p>To comply with section 6.4.2.6 of the Program Manager RFP, we recommend the Program Manager report on post project stakeholder satisfaction. If stakeholder satisfaction assessments are not currently solicited, we recommend OFC and Atkins co-develop a survey for distribution to stakeholders as part of the project closeout process.</p> <p>In addition, we recommend OFC issue an addendum, memorandum of understanding, or similar to the CBRE-Heery contract specifying that reporting requirements have been modified to include project specific schedule reporting, as a replacement to the program level reporting specified in section 6.4.3.10 of the Owner’s Representative RFP.</p>
MANAGEMENT’S RESPONSE	<p>Response: The post project completion report has been drafted by CPCM for review by OFC and the ORPM. Upon approval the report will be submitted in the CPCM monthly reporting. The January 2019 RFI report has since been provided to OFC and the office of the Chief Auditor.</p> <p>The group of stakeholders has been selected with some questions customized to each stakeholder. Consensus on the stakeholder questions should be reached on 9/13 Interdepartmental Meeting.</p> <p>Estimated completion date: July 2019</p>
OBSERVATION STATUS	Partially Complete – RSM has noted the inclusion of a Financial Closeout report as part of the post project completion reporting in monthly packets from March 2019 - present. However, we also note that stakeholder satisfaction was included as a reporting component in the Program Manager RFP. As stakeholder satisfaction reporting is still under development, this observation remains open.



PRIOR FINDINGS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q3

OBSERVATION	2. Delay in Execution of the Authorization to Proceed
DETAIL	We noted non-compliance with the Design Procurement SOP for 5 of the 5 projects sampled, with significant delays in the execution of the consultant’s Authorization to Proceed (ATP) for 4 out of 5 projects sampled. In further discussions, the OR noted that Project Managers are often not assigned to projects until after Board approval of the PSA. As such, the ATP is not completed until after the PSA is executed, and then must route through the various OR and OFC approvals prior to execution.
RECOMMENDATION	We recommend the OFC and PM/OR team review the SOP to determine whether the timeline established for execution of the ATP is practical and reasonable. If the analysis reveals that the timeline should be modified, we recommend the SOP be updated to reflect an attainable schedule. If the timeline is reasonable as currently written, we recommend the OR assign project managers prior to the Board meeting date for approval of the PSA, and work to complete ATPs in accordance with the timeline specified in the SOP.
MANAGEMENT’S RESPONSE	<p>Response: Based upon the SMART Project assignment of A/Es being nearly complete, the future issuance of ATPs is limited to eleven (11) projects. It is the OR-PM and CPCM recommendation not to change the SOP 10.25 since that practice is sound. In addition, the assignment of PMs to the projects have also now been completed. Going forward assignment of PMs prior to A/E selection continues to be best practice. As a practical application, PMs were not always assigned ahead of time due to the manner in which PM staffing was increased during the course of the project. Until this year, PMs were not always in place prior to the inception of RFQ process.</p> <p>There were eight (8) year (5) projects where designers had been selected and given approved PSAs. At that time, a conscious effort was made to smooth out the number of projects in the work flow, (design-bid-build). In the case of the three (3) designers involved in these eight (8) projects, all had an existing work load with prior year projects.</p> <p>This purposeful delay was aimed at effecting the following:</p> <ul style="list-style-type: none"> • Reduce a log jam of design and design review • Focus on Year 1-2-3 projects • Recognize that year 4 and year 5 projects are being managed on schedule and with the new milestone schedule this delay smooths out the curve from design through cash flow. (The designers included in this group are Laura M. Perez and Assoc., DLFC Architectural, CES Consultants.) <p>Estimated completion date: N/A</p>
OBSERVATION STATUS	Closed – As noted in Management’s Response, only eleven projects pending issuance of the ATP remain, and all eleven projects have been assigned a Project Manager. As Management further indicated that delays in issuance of the ATPs were purposeful for the reasons noted above, and that no additional projects will require a design ATP, we understand Management’s decision to forego updates to the SOP.



PRIOR FINDINGS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q3

OBSERVATION	3. PM/OR Adherence to Design Phase Timeline
DETAIL	<p>We noted instances of non-compliance related to the Design Phase SOP. The OR team did not track or maintain evidence of compliance with the timeline detailed in the SOP. The procedures noted in SOP 3.3 related to design review milestones (Scope Validation, 30%, 50%, 90% and 100%) were not followed for all 5 sample selections. Additionally, the architect did not submit responses prior to the design meeting as required in the SOP for 21 of 24 milestones reviewed.</p>
RECOMMENDATIONS & NEXT STEPS	<p>Given the design delays identified for the 5 projects we sampled, we recommend the PM/OR develop an approach to identifying and addressing design phase schedule delays as they arise.</p> <p>In addition, we noted that for 5 of 5 projects sampled, the PSA contained an option for the District to pursue damages for unexcused delay caused by the design consultant. As such, we further recommend the OFC analyze each project within the program to determine whether (1) damages for delay were included in each PSA, and (2) whether delays from the established design schedule existed. For variances noted between the timeline established in the PSA and/or accompanying NTP, the District should perform an analysis to identify the cause(s) of delay, and whether pursuit of damages is warranted.</p> <p>Considering the Building Department’s review of 100% documents occurs after the OR Atlanta Team’s review, RSM intends to interview the Building Department during our next quarter’s audit procedures in an effort to identify the full review timeline, and more clearly define the root cause(s) of noted delays.</p>
MANAGEMENT’S RESPONSE <i>(Refer to Appendix C for Common Issues Document)</i> <i>(Refer to Appendix D for fee calculation)</i>	<p>Response: Regarding the monitoring of deliverables, every design phase project is managed by the PM per deliverable. We will now be utilizing the language of the PSA to assess delay charges at \$100/day. Notice was given to the consultants initially in December 2018.</p> <p>In addition, the PSA language allows for assessment of damages on plan reviews past (2) cycles. This will be enacted and these charges will go back to January 1, 2019 and be assessed going forward.</p> <p>We have reports that are used to track the status of Revise/Re-submit cycles which the PM will use to initiate notice of assessment.</p> <p>Regarding analysis of delay causes, there is on-going review of delay cause action. There has been a significant learning curve for all parties. The OR-PM team is working closely with the OFC and the Building Department to continually identify issues and determine subsequent improvements.</p> <p>As an example, a study of common issues that were surfacing during design reviews resulted in a document that was shared with all designers in December 2018 in order to pre-empt repetitive mistakes.</p>



PRIOR FINDINGS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q3

OBSERVATION

3. PM/OR Adherence to Design Phase Timeline (continued)

MANAGEMENT'S RESPONSE

As a result of issuing charges to Design Consultants, a reduction in the Design Consultants purchase order is to be completed which reduces the Basic Design Fee in their Professional Service Agreement (PSA) accordingly. There is a written process that is followed and executed by the Project Manager that is used to reduce the purchase order. The close-out of charges from the first round of issued charges is in progress. Once complete, copies of the Purchase Order Reduction Memo can be provided.

Estimated completion date: November 2019

OBSERVATION STATUS

OPEN – Refer to Appendix C of this report, which contains the correspondence from the OR-PM to designers regarding the study of common review issues noted. Also, refer to Observation #3 in the FY2019 Q4 report herein, with additional detail concerning the result of reviews conducted by the Building Department.

Through further discussion with the PM/OR team, we noted that efforts are underway to assess causes of delays noted during the revise/resubmit process, and impose penalties from January 2019 forward. Refer to Appendix D of this report, which contains spreadsheets provided by the OR-PM displaying calculations of penalties to designers for revise and resubmit fees. As penalties are currently pending assessment, this observation remains open.

The OR-PM has not applied the design delay fees retroactively but going forward will utilize the \$100/day delay fee for current and future projects.



PRIOR FINDINGS FOLLOW UP – CONTINUED

INTERNAL AUDIT – PROGRAM MANAGEMENT FY19 Q3

OBSERVATION	4. e-Builder Workflow Implementation & Document Retention
DETAIL	<p>We noted that e-Builder workflows were not yet widely utilized. “Go-live” dates were agreed upon in January 2019. However a directive was not issued to Project Managers, instructing them to utilize e-Builder workflows for all invoicing and RFIs. Through our detailed SOP testing, we noted several supporting documents were not uploaded to e-Builder. All documentation was provided and uploaded to the appropriate location after our document request.</p>
RECOMMENDATION	<p>We recommend the OR team begin utilizing the established workflows for all invoicing and RFIs going forward. Vendors should also be informed that invoicing submitted outside of e-Builder will not be processed unless a corresponding invoice issued through the workflow has also been generated. We further recommend the PM/OR team establish a process to verify that all documents are uploaded to e-Builder in accordance with the established SOP.</p>
MANAGEMENT’S RESPONSE	<p>Response: A letter has been prepared for District approval instructing external vendors to utilize electronic workflows as of a certain cut off date. With regards to the timeline for issuance of the e-Builder utilization letter, as there are still some contracts to amend with e-Builder language, the issuance of the letter has been postponed to the end of June.</p> <p>With respect to a tool that is to be used to ensure that all pertinent project documents are archived in e-Builder, a template has been created by project. This template will be used once fully vetted to track and record documentation to be loaded and placed into eBuilder. By virtue of this tool, project by project monitoring will be able to be accomplished through the OR-PM Document Control staff.</p> <p>The archival template is already being used by Document Control. The first phase is to retro-actively review and ensure that closed-out, projects have all archives of project records in e-Builder. The Template is being vetted and will be finalized for full roll-out by mid-June 2019. Internal training of PM’s/APM’s/Admins will occur (by July 1st) relative to use of the Template. The next level of review once completed projects have been reconciled, will begin in July with the oldest projects in construction being the first area of focus.</p> <p>Regarding the Design Review Logs, the Atlanta Design Review team has now completed loading all past reviews to e-Builder. They will be responsible for this task throughout all remaining design phases.</p> <p><u>Added Staff:</u> A Coordinator is to be hired by July 1st whose job will include daily monitoring of progress of archival in e-Builder according to the template. The next major checkpoint should be September 2019 to determine the gap in records in e-Builder and an action plan to reconcile the same.</p> <p>Estimated completion date: September 2019</p>
OBSERVATION STATUS	<p>Closed – Obtained evidence of audits conducted by CBRE-Heery to verify that appropriate documentation was uploaded to e-Builder. RSM also performed additional testing on a separate sample of schools to verify completeness of e-Builder documentaiotn uploaded. No exceptions were noted during our follow-up testing.</p>



OBJECTIVES AND APPROACH

Objectives

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

Approach

Our audit approach consisted of the following:

Program 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, including eBuilder utilization and workflow rollout

Owner's Representative (CBRE-Heery)

- Obtained and reviewed deliverables submitted in accordance with PM monthly reporting requirements derived from RFP Article 6.4.3.10 including:
 - Updated project schedules – all projects
 - 6 phases report
- Selected a sample of project(s) for control assessment and testing
- Tested the sample projects for compliance with District Standard Operating Procedure and best practices. In-Scope processes for this period included:
 - Construction procurement
 - Construction invoice review - CMAR
- Reviewed CBRE-HEERY monthly invoicing for contractual compliance, proper supporting documentation, and mathematical accuracy

Reporting

At the conclusion of our procedures, we summarized our findings related to the Contract Administration process. We have reviewed the results of our testing with Internal Audit, OFC, the PM/OR team, and incorporated management's response into our report.



APPENDIX A



Nova High School - SMART Program Renovations (P.001817) (ISS#5962)							
	Total			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Total Days	Average Days Per Round	Total Days	Average Days Per Round
Site Utilities	3.00	11.00	133.00	40.00	13.33	93.00	31.00
Building	3.00	10.00	133.00	43.00	14.33	90.00	30.00
Plumbing	3.00	10.00	133.00	37.00	12.33	96.00	32.00
Mechanical	3.00	14.00	133.00	12.00	4.00	121.00	40.33
Electrical	3.00	52.00	133.00	33.00	11.00	100.00	33.33
Fire Safety	3.00	7.00	133.00	48.00	16.00	85.00	28.33
Fire Alarm	3.00	39.00	133.00	48.00	16.00	85.00	28.33
Fire Protection	3.00	4.00	106.00	30.00	15.00	76.00	38.00
Roofing	4.00	24.00	141.00	56.00	16.00	85.00	28.33

Hollywood Hills High School - SMART Program Renovations (P.001806) (ISS#6030)							
	Total			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Total Days	Average Days Per Round	Total Days	Average Days Per Round
Site Utilities	3.00	9.00	112.00	16.00	5.33	96.00	32.00
Building	3.00	37.00	112.00	14.00	4.67	98.00	32.67
Plumbing	3.00	21.00	112.00	17.00	5.67	95.00	31.67
Mechanical	3.00	1.00	112.00	6.00	2.00	106.00	35.33
Electrical	3.00	20.00	112.00	17.00	5.67	95.00	31.67
Fire Safety	3.00	9.00	112.00	34.00	11.33	78.00	26.00
Fire Alarm	3.00	22.00	112.00	34.00	11.33	78.00	26.00
Fire Protection	3.00	5.00	96.00	25.00	12.50	71.00	35.50
Roofing	4.00	35.00	120.00	33.00	8.25	87.00	29.00



Sawgrass Springs Middle School - SMART Program Renovations (P.001841) (ISS#5344)							
	Total			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Total Days	Average Days Per Round	Total Days	Average Days Per Round
Site Utilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Building	5.00	7.00	324.00	49.00	9.80	275.00	55.00
Plumbing	4.00	6.00	273.00	27.00	6.75	246.00	61.50
Mechanical	5.00	30.00	296.00	16.00	3.20	280.00	56.00
Electrical	5.00	19.00	318.00	39.00	7.80	279.00	55.80
Fire Safety	5.00	54.00	324.00	77.00	15.40	247.00	49.40
Fire Alarm	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fire Protection	4.00	16.00	279.00	49.00	12.25	230.00	57.50
Roofing	5.00	58.00	324.00	66.00	13.20	258.00	51.60

N/A – The Discipline was not applicable for this project. No information was available on ISS.

Forest Glen Middle School - SMART Program Renovations (P.001865) (ISS#5442)							
	Total			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Total Days	Average Days Per Round	Total Days	Average Days Per Round
Site Utilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Building	3.00	7.00	92.00	18.00	6.00	74.00	37.00
Plumbing	1.00	0.00	40.00	6.00	6.00	34.00	34.00
Mechanical	3.00	13.00	93.00	15.00	5.00	78.00	39.00
Electrical	3.00	5.00	93.00	8.00	2.67	85.00	42.50
Fire Safety	3.00	0.00	41.00	6.00	3.00	35.00	35.00
Fire Alarm	2.00	3.00	91.00	9.00	4.50	82.00	41.00
Fire Protection	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roofing	5.00	55.00	233.00	67.00	13.40	166.00	33.20



Gulfstream Academy of Hallandale Beach K-8 - SMART Program Renovations (P.001822) (ISS#5806)							
	Total			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Total Days	Average Days Per Round	Total Days	Average Days Per Round
Site Utilities	2.00	5.00	97.00	15.00	7.50	82.00	41.00
Building	4.00	22.00	160.00	52.00	13.00	108.00	27.00
Plumbing	3.00	11.00	140.00	36.00	12.00	104.00	34.67
Mechanical	4.00	3.00	143.00	19.00	4.75	124.00	31.00
Electrical	4.00	86.00	150.00	38.00	9.50	112.00	28.00
Fire Safety	4.00	10.00	161.00	59.00	14.75	102.00	25.50
Fire Alarm	4.00	13.00	161.00	60.00	15.00	101.00	25.25
Fire Protection	4.00	8.00	159.00	58.00	14.50	101.00	25.25
Roofing	4.00	12.00	173.00	85.00	21.25	88.00	22.00

Silver Trail Middle School - GOB Renovations (P.001406) (ISS#4841)							
	Total			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Total Days	Average Days Per Round	Total Days	Average Days Per Round
Site Utilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Building	5.00	4.00	153.00	9.00	1.80	144.00	28.80
Plumbing	3.00	8.00	113.00	22.00	7.33	91.00	30.33
Mechanical	4.00	8.00	127.00	10.00	2.50	117.00	29.25
Electrical	4.00	16.00	126.00	10.00	2.50	116.00	29.00
Fire Safety	2.00	1.00	67.00	14.00	7.00	53.00	26.50
Fire Alarm	4.00	9.00	149.00	15.00	3.75	134.00	33.50
Fire Protection	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roofing	6.00	43.00	159.00	41.00	6.83	118.00	19.67



Eagle Ridge Elementary School - GOB Renovations (P.001722) (ISS#4465)							
	Total			Building Department		Consultant (Designer)	
	Rounds	Total Comments	Total Days	Total Days	Average Days Per Round	Total Days	Average Days Per Round
Site Utilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Building	3.00	8.00	93.00	22.00	7.33	71.00	23.67
Plumbing	2.00	1.00	88.00	12.00	6.00	76.00	38.00
Mechanical	3.00	57.00	92.00	20.00	6.67	72.00	24.00
Electrical	3.00	33.00	92.00	8.00	2.67	84.00	28.00
Fire Safety	2.00	2.00	88.00	14.00	7.00	74.00	37.00
Fire Alarm	3.00	29.00	94.00	20.00	6.67	74.00	24.67
Fire Protection	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roofing	3.00	7.00	94.00	23.00	7.67	71.00	23.67



APPENDIX B

Years	Avg # of Permits	Days to Permit
1	4.4	241
2	4.4	265
3	4.0	199
4	3.5	145
5	3.1	90
Grand Total	4	202

Date: _____ Facility/Location #: _____ ISS # _____
 Project Name: _____ Project No.: _____

PRE-REQUISITE: In order to submit 100% Construction Documents to the Building department, the Project Manager must have sign-off from the following district department services: [If unable to receive sign-off, indicate the date, method of communication and why unable to receive sign-off. Attach evidence of communication – Email, Notes, e-Builder etc.]

		Print Name	Sign	Date
1	BCPS Environmental Health & Safety:			
	Checklist of EHS concerns Roger Riddlemoser or Alison Witoshynsky or Designee			
2	Physical Plant Operations (PPO):			
	Mechanical Eloy Quesada or Designee			
	Fire Alarm Shawn Dwarika or Designee			
3	Information Technology (IT):			
	Cabling/Terminator/Log-Out Brenda Akins or Designee			
	Voice/Video/Data Brenda Akins/Jeune Tilus or Designee			
	Intercom Teresa Macri or Designee			
	Antennas/Surveillance Cameras Becon-Justin Hanlon/Ed Kessler or Designee			
4	Program Areas:			
	Media Center Neena Grosvenor or Designee			
	Stem Labs Dr. Marilyn Johnson or Designee			
	Art Donna Haynes or Designee			
	Music Joseph Luechauer or Designee			
5	Roof Reality Check Complete:			

6	All Comments from 100% DRT back-check closed			
---	--	--	--	--

Note: It is possible that the Scope of Work does not include an area(s) of review, therefore, the appropriate designation would be "Not Applicable".

The intent of these sign-offs is to ensure that the appropriate stakeholders have been involved in reviewing the project per their area of interest. This is not a design review, but instead is intended to determine that BCPS educational and curriculum standards pertinent to their area of responsibility have been recommended in the project.

Note for PM: Direction given at Lessons Learned Session on September 30, 2019, actual signatures are not required. The signature of the PM can be substituted. By signing for any or all areas, this indicated that all due diligence for design.

Project: **SMART PROGRAM RENOVATIONS**
Project No: HII-1509700
Date: June 20, 2019
Meeting: Project Consultants and Engineers (A/E's)
Location: Rock Island Professional Center, Portable 1203

A G E N D A

<i>Item No.</i>	<i>Item</i>	
1.	Non-Conforming Design Documents	Mike Bobby
2.	Review Direction, Multiple Topics	Mike Bobby

A/E Meeting and e-Builder Communication

1. IT design as applied to Media Center, STEM Labs, Art, Music Spaces
(Draft from ID 5/16)
2. FA System Design and Spec. Change 9/25/18 Memo
3. Meet Applicable Building Codes
Ex: ADA Restrooms Margate MS, South Broward HS
4. Application of Div. 17 Voice/Video/Data and Div. 16 16320 PA/Comm. Does not include all low voltage such as EMS, Surveillance Cameras (ITV) or PA Systems, Security, Fire Alarms. Be sure to properly indicate in contract v. not in contract or not in contract by owner. Typical room layout data and power.
5. IT Review of Construction Documents (CDs) – Need consistent legends and symbols
 - Need existing and new (ex: outlets)
6. Final A/C in location of Fire Panel – A/C is required for new fire panel location. A/E to look for options that include A/C without having to add A/C. Fire inspectors will be involved in determining the location. A/E's check with BASS (BCPS vendor) to specify correct device through which to connect to monitoring service.
7. Test and Balance and HVAC Component Directive (Once Final)
8. Do Pre-Construction Functional testing on duct sensors (Life Safety). New not required if in place and working. Remove, protect, reinstall properly.
9. Proper way to show deletion of scope – use C. Robert Markham as an example. Get from PM
10. Media Centers, STEM Labs, Art and Music Spaces
 - Renovation of finishes v. Renovation v. Remodel
 - If renovation of finishes - no life safety or code upgrade required
11. FA Voice Activation
 - Old Spec v. New Spec

- If under construction with old spec do change order
 - If pre-bid, use add alternate. If pre LOR, modify design (final direction after 6/5/19)
12. A/E's – Provide (half-size) sets at 90% design to PM for issuance to PPO
13. Conduit termination on Roof – A/E to use notes on CDs to show where a conduit terminates to determine the function of the conduit. Remaining conduits must be 18" above finished roof. Mounting must be able to receive flashing.
14. Wet Signature v. Electronic Signature – Use Wet Signature at all times until further notice
15. Windows – Unless MAPPS requires full replacement and deficiency is minor in nature, remove the scope from the project – must include minor repairs such as caulking.
16. Occupancy of Buildings on Multi-building Campus (e.g. Stranahan HS)
- Occupancy is given on a building by building basis using Certificate of Completion and possibly an OEF 110b. Final OEF209 will occur only after full campus project is complete.
17. Use of Surface Mounted Conduit – Generally on hard walls. Must paint conduit. On case by case basis. Review with Pre-Construction and Building Department before including design.
18. Rusted Out Roof – Top Equipment
- Stands/supports – A/E must identify condition. If warranted, include replacement. Build new to new specification.

Date: April 22, 2019
To: Information & Technology and Building Department from ID Meeting 4/18/19
From: Mike Bobby
Subject: re: Media Centers/Art/Music/STEM Labs)

MEMORANDUM

Background

Over the course of the last several months, discussions about what can and should be included in the designs for remodeling and renovations of Media Centers, STEMS Labs, Art and Music spaces were on-going and with input from district IT staff certain directions were identified. A "Draft" communication was written based upon that input with the intent that once vetted, it would provide direction to the consultants and OR-PM.

Statement of Problems

The directions in the "Draft" are in conflict with existing Design Criteria. In discussion with all parties representing the Building Department, Pre-Construction Services and IT will identified the following existing conditions:

1. The Design Criteria does not include the use of power poles, however, it does not state that power poles may not be used.
2. Design Criteria as created is intended for use in NEW buildings including additions.
3. Design Criteria has not been updated.
4. There are no specifications written for power poles.
5. There are no educational specifications for STEM Labs.
6. Designers are not always following design criteria.
7. OR-PM's are not always managing the design process in working between the Designer and District stakeholders.
8. Hard wiring data is still required based upon specific programmatic and functional requirements.

Discussion

Given these conditions the following represents points of discussion:

1. Budget Driven Decisions – The decisions being made are driven by an effort to maximize the result for the Building. Less expensive options and avoiding costly work such as trenching existing concrete floors and using floor mounted on outlets are being avoided.
2. Any changes to the Design Criteria must be made through the Standards Committee.

3. The Designers should be directed to design the space to avoid requirements for power and data other than along the perimeter of the space. Any power/data should extend out from the perimeter and must go through FF&E.
4. The Designer should not be adding any power poles unless there are absolutely no other viable solutions.
5. Any variation from design criteria must be reviewed on a case by case basis during the design phase prior to LOR.

Action to be taken to resolve the Problem

1. There will be no added power poles without approval by Pre-Construction Services. Any addition of power poles must be accompanied by a specification for material and installations.
2. Existing power poles may remain and existing power poles can be removed.
3. No directive will be sent out to the Designer professionals.
4. These Design directions will be processed thru the OR-PM.
5. A report will be provided by Atkins to identify all projects with scope including Media Centers, STEM Labs, Art or Music spaces and the status of design/construction. (Complete)
6. Using this report and priority of projects by status the OR-PM will be given direction to:
 - a. Make sure IT, BCPS District Department Resource and Building Resource Staff have been involve in review of proposed design(s). If not, remedy ASAP.
 - b. Make sure A/E responds to comments quickly and in detail.
7. **Action:** A written statement from Pre-Construction Services is required by the Building Department if a variance from design criteria is to be included in the design.



Date: September 25, 2018
To: All Architects/Engineers (Consultants) under contract with the Broward County Public Schools (BCPS)
From: On behalf of CBRE | Heery, BCPS, the Director, Pre-Constructor Shelley Meloni, District Chief Fire Official MaryAnn May
Subject: Notice of Fire Alarm System Design and Specification Changes
Effective Date: Immediately

MEMORANDUM

Effective immediately a new specification section 13845 has been approved and instituted. It is to be used in all projects either under construction, in design or what will be in design where the scope of project includes fire alarm system improvements.

Action by Phase of Project

1. **Construction** – If in construction, the consultant will initiate an RFI. Once it is determined at what level a change is required in the permitted construction documents, a change order will be processed accordingly. A plan change will also needed to be executed through the BCPS Building Department.
2. **Bidding and Advertisement Period** – If the project is in the advertisement phase of bidding and the design changes can be made through an addendum without delaying the opening of bids the consultant will process accordingly. If this is not possible a change order will be issued post bid award as discussed in item #1.
3. **Construction Documents under 100% Review by BCPS Building Department** – If construction documents are under 100% Review in the BCPS Building Department, the consultant will initiate work to modify the design as needed to meet the new requirements. However, the designer will not modify the construction drawings in any way that will delay receiving the Letter of Intent (LOI) to permit. If the drawings are not able to be changed prior to receiving the LOI, the Consultant will issue an addendum during the bidding advertisement period for the project.
4. **Projects under Design** – The consultant shall modify the design in order to meet the new requirements. The construction documents will meet these requirements prior to going into the Building Department for 100% review. Regardless of the present phase of design, these changes shall be made immediately.
5. **Future Projects for Design** – The new requirements for Fire Alarm Systems will be included in Construction Documents.

Note for Consultants

Consultants are advised to carefully review the capability and condition of the existing system. If the system is addressable capable, the use of the existing system may be able to be incorporated all, or in part and still be able to meet the new requirements. If there is a need for a determination in this regard, the OR-PM assigned to the project must be notified immediately. Upon such notice, OR-PM will facilitate a meeting with Chief May (BCPS Chief Fire Official) as soon as possible in order to yield direction to the consultant.

References

The specifications are now in the district web-site and can be accessed by going to:

<http://www.broward.k12.fl.us/constructioncontracts/DivisiononeDesignStandards.html>

Attachments

- Specification 13845 Fire Alarm System
- Letter from Chief May to Mr. Robert Corbin regarding transition to new Fire Alarm Standard/Specifications.



2301 NW 26th Street
Building 7
Oakland Park, Florida 33311

+1 754 321 4850 Tel
www.heery.com

Date

[Mr./Ms. First and Last Name]
[Firm Name]
[Firm Address]
[City, State Zip Code]

Project Name:
Project Number:
Delay Notice: P.O. # _____ - D# _____

Re: Delay - Start

Dear [Mr./Ms. Last Name]:

This letter shall serve as written notice of the The School Board of Broward County, Florida's (the "SBBC") enforcement of the terms of your Professional Service Agreement (PSA) addressing the design schedule.

Pursuant Art. 10.1.3 of the PSA, "if [Firm Name] fails to comply with the schedule set forth in the fully-executed Authorization to Proceed (ATP), the SBBC shall deduct and withhold \$100.00, for each calendar day of unexcused delay, from payments due and owing to the Project Consultant."

[Firm Name] failed to submit a complete deliverable for [fill in description of required submittal] on [fill in due date] as required by its design schedule. Accordingly, the SBBC shall immediately deduct and withhold delay charges in the amount of \$100.00 per calendar day starting on [fill in date]. These delay charges will continue to accrue until such time as [Firm Name] has submitted a complete deliverable as defined in [fill in PSA reference]. The SBBC shall continue to hold delay charges equivalent to the total delay to the overall design schedule until issuance of the Letter of Recommendation for Permit (LOR).

Delay Cost Tracking Table

[Firm Name] must submit the attached Delay Cost Tracking Table to each of your subsequent invoices. Invoices shall be adjusted in the Basic Service Column for the number of days delayed and related cost by number of calendar days from the start date of the Delay (as stated in this letter) through date of invoice submitted (date on invoice).

NOTE: A final reconciliation of delay charges shall be made upon issuance of the Letter of Recommendation for Permit (LOR) for this project.

Sincerely,

Danny Jardine
Program Director
CBRE | Heery

Michael Bobby
Deputy Program Director
CBRE | Heery

Frank Girardi
Task Assigned,
Executive Director,
Capital Programs

Shelley Meloni
Director,
Pre-Construction

cc: A/E Representative
OR-PM



DELAY COST TRACKING TABLE

Delay Notice:	
Start Date/Current Date/End Date:	
Total # of Days:	
Total Delay Changes:	
Delay Notice:	
Start Date/Current Date/End Date:	
Total # of Days:	
Total Delay Changes:	
Delay Notice:	
Start Date/Current Date/End Date:	
Total # of Days:	
Total Delay Changes:	
Delay Notice:	
Start Date/Current Date/End Date:	
Total # of Days:	
Total Delay Changes:	
Total of Delay Changes:	

Note: End Date is the date at which point the delayed deliverable was approved and accepted by the reviewing authority.



PSA Attachment 6
The School Board of Broward County, Florida
Office of Facilities & Construction
2301 N.W. 26th Street
Fort Lauderdale, Florida 33311

(754) 321-1500

Consultant's Authorization To Proceed (Continued)

Project No. & P. ##### Professional Fees
 Location No.: ##### Project Title: **GOB SCOPE NAME**

Facility Name: NAME OF SCHOOL
 Project Consultant: NAME OF VENDOR A/E

ATP #3

Delay Change Adjustment

*insent
low*

Phase	Original Basic Fee	Fee Authorized by ATP	Fee Previously Paid	Fee Balance			
I - Schematic Design (30% CDs)	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
II - Design Development (60% CDs)	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
III - 90% CDs	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
III - 100% CDs	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
IV - Bid Phase (GMP)	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
V - Construction Administration	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
VI - Warranty	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
Allowance - Document Reproduction	#####.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
Allowance - Specific Purpose Survey & GPR	\$0.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
Allowance - Geotechnical	\$0.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
Allowance - Non-Destructive / Destructive Testing	\$20,000.00	#####	100.0%	\$0.00	0.0%	\$0.00	0.0%
Allowance - Pre-Design Testing	\$0.00	\$0.00	100.0%	\$0.00	0.0%	\$0.00	0.0%
Supplemental Services	\$0.00	\$0.00	100.0%				
Total:	#####.00 <i>400,600</i>	#####.00 <i>398,000</i>	100.0%	\$0.00	0.0%	\$0.00	0.0%

Payment for these services shall be made in accordance with the provisions of the Professional Services Agreement.

Approved By Consultant				Certified By SBBC			
Name:				Name: Shelley N. Meloni			
Title:				Title: Director, Pre-Construction			
Signature:	_____	Date:	_____	Signature:	_____	Date:	_____
Recommended By SBBC				Approval by SBBC			
Name:				Name:			
Title: Project Manager / Program Director				Title:			
Signature:	_____ / _____	Date:	_____	Signature:	_____	Date:	_____

This document is part of the Professional Services Agreement between The School Board of Broward County, Florida (Owner) and the Project Consultant and is incorporated by reference into the terms and conditions of that agreement.



The School Board of Broward County, Florida
 Florida Facilities and Construction Management Department
 2301 NW 26th Street Fort Lauderdale, FL 33311(754) 321-1500

Design Professional
 (Name)

Date:

Project No:

Facility Name:

Invoice No:

Project Title:

SBBC PO No.

Design Professional's

ATP No.

Remit to address:

Invoice From:

Delay Change Adjustment
 Project Manager

Original Basic Fee	\$
Current basic fee	\$

INVOICE TOTALS:

Summary	Current Fee	Previously Billed	This Invoice	Balance
Basic Services	\$	\$	\$	\$
Reimbursable	\$	\$	\$	\$
Total:	\$	\$	\$	\$

BASIC FEE TOTALS:

Period	Fee	Previously Billed	This Invoice	Balance
<i>I 3/12</i> From to dates	\$	\$	% \$	% \$
<i>II DD</i>	\$	\$	% \$	% \$
<i>III 50/90</i>	\$	\$	% \$	% \$
<i>IV 100</i>	\$	\$	% \$	% \$
<i>V</i>	\$	\$	% \$	% \$
<i>VI CA</i> Other Services	\$ <i>30,000</i>	\$	% \$ <i>(3,000)</i>	% \$ <i>27,000</i> <i>100</i> %
Total Previously Billed:		\$		
Total Amount This Invoice:			\$	
Total Balance:				\$

Submitted By: Name: Title: Date: (Signature)	Certified By: Name: Title: Project Manager Date: (Signature)	Recommended By: Name: Title: Date: (Signature)	Approved By: Name: Title: Date: (Signature)
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Date: April 16, 2019
To: Project Managers
From: Michael Bobby
Subject: How To Treat Comments from Atlanta at 100% Back-check Review

MEMORANDUM

This notice is intended to clarify the manner in which comments coming from the Atlanta Design Review Team (DRT) are to be handled at the 100% Back-check phase.

Change of Practice

Past: There has been a direction that supported sending the 100% CD's to the Building Department for review without closing comments received from the Atlanta DRT emanating from their 100% CD Back-check.

Practice Forward: All comments generated by the D.R.T. must be closed prior to sending 100% CD's to the Building Department for plan review.

Once comments have been closed, the D.R.T. will issue notice through e-Builder that the CD's are ready to be submitted to the Building Department.



APPENDIX C

July 31, 2018

Recurring Design Issues Delaying Permitting
A letter to Design Firms doing work with the School Board of Broward County

On behalf of the District and serving in the capacity of Owner's Representative, CBRE | Heery has completed a review of recent Construction documents submitted to the Broward County Public Schools Building Department, herein after referred to as the Building Department, and comments made by the Building Department. At the current time, approximately 70% of the SMART Program projects are in the design phase. Roughly 50% of these are at or near the point where they will be submitted to the Building Department for permit review.

It is important for everyone involved in the success of the SMART Program to be aware that design is a critical phase. As professional in this industry we all know this to be mission critical. If the design and permitting of the SMART Program projects was performed in any fashion that damages the standard of care required of professionals, the impact on the project, both financially and in time, would be exponentially greater than delays during the design phase. For that reason, both the Building Department and CBRE | Heery have worked to produce the information in this letter to better communicate lessons learned along with recommendations to better align the design firms with the Building Department requirements. The outcome that we all need to continue to strive for is the highest quality of design that meets with BCPS design guidelines, educational specifications and all applicable building codes and regulations which are inherent to the BCPS Building Department permitting process.

As such, CBRE | Heery would like to inform you of changes in procedure between the Project Management Team and the Building Department.

1. Moving forward, the Project Management Team will be holding standing meetings with the Building Department on a weekly basis. We urge you to communicate with your Project Managers to have any issues addressed in these meetings at the earliest convenient time. Communication and needed clarifications with the Project Managers and Building Department should not be an excuse for delays in the design process. It is the responsibility of all of us to make sure that is not the case.
2. Additional meetings will be encouraged between the Design professionals, Project Managers, and Building Department to resolve misunderstanding of comments and interpretations between the parties. It is emphasized that these meetings should not be entered into lightly. The sheer scope and size of the SMART Program prevents meetings like this to be conducted adhoc when other means of resolution are available. However, if resolution of issues and differing interpretations are not successful then these meetings will be made available at the request of either party.
3. Increased monitoring of the design phase during the permitting process and increased communication by Management: You can expect to have a more direct line of communication with the Management team of the SMART Program to avoid unforeseen delays in the design and permitting process.
4. An increased scrutiny of submissions prior to 100% Construction Document submissions to the Building Department for permitting: It has been identified that the comments by the design review teams have not been properly addressed and closed out. To avoid time delays with the submission for permit to the Building Department, these same learned lessons that are being shared with you will also be priority to the design review team. Improper addressing of these issues and comments will result in an expedited rejection of document submission at the appropriate phases.

2301 NW 26th Street
Building 7
Fort Lauderdale, Florida 33311

+ 1 754 321 4850 Tel

In addition, this review of the recent submissions of Construction Documents has identified recurring design practices that are deemed not acceptable by the Building Department. The Building Department and CBRE | Heery are jointly providing you with the attached:

1. Process Overview of Design Submission and Letter of Recommendation to Permit Process.
2. List of issues identified in the preliminary design review by CBRE | Heery and recurring Building Department permit submission comments.

We would like to thank you for your involvement and professionalism with The School Board of Broward County Florida. The professionalism we all show in this process can help to align everyone involved to a better understanding of the quality and integrity of the Facilities that the District is striving for. We are excited to be in business with your firm and look forward to a successful relationship as we continue to improve the learning environment for our students. We urge you to not hesitate to reach out to us as your comments and feedback are important. Our focus is on the success of everyone involved in the SMART Program.

Sincerely,



Nicholas Fila
Senior Assoc., Design Manager, CBRE | Heery
Nick.Fila@cbre.com



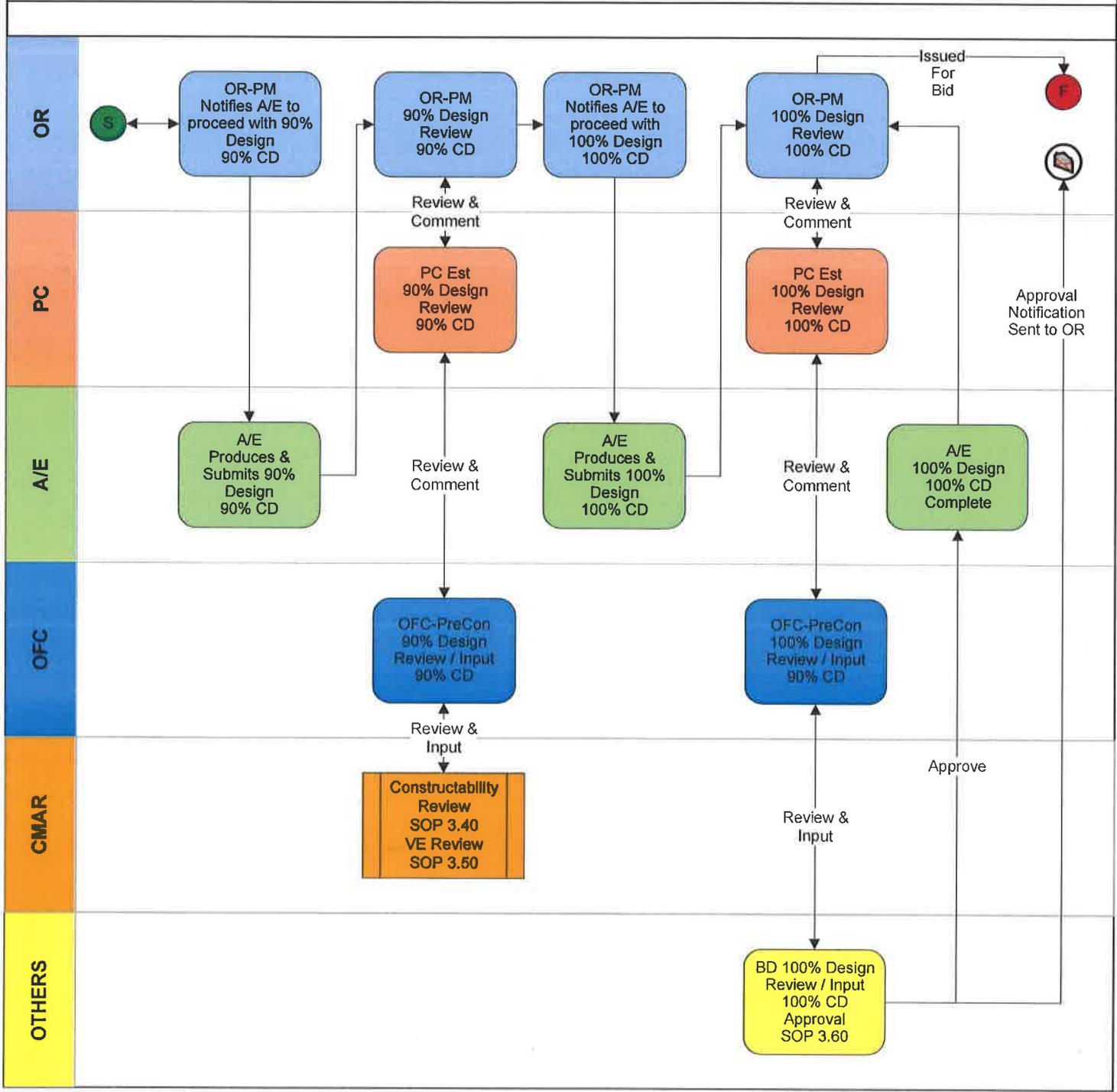
Robert Hamberger
Chief Building Official, Broward County Public Schools



Shelley Meloni
Director of Pre-Construction, Office of Facilities and Construction

cc: Frank Girardi, Director of Construction, Office of Facilities and Construction
Rob Chomiak, Senior Managing Director, CBRE | Heery
Rob Corbin, Program Director, CBRE | Heery

Recurring Design Issues Delaying Permitting
 Attachment 1) Process Overview of Design Submission and Letter of Recommendation to Permit Process.



= Start
 = Finish

OR = Owner's Rep (Heery)
 OR-PD = Program Director
 OR-DPM = Deputy Program Manager
 OR-PM = Project Manager
 OR-DC = Document Control
 OR-BC = Board Document Specialist
 OR-CxA = Commissioning Agent

PC = Program Controls (Atkins)
 PC-PD = Program Director
 PC-PCD = Program Director
 PC-Est = Program Estimator
 PC-Sch = Program Scheduler
 PC-EB = E-Builder Technician

OFC = Office of Facilities & Construction
 OFC-CFO = Chief Facilities Officer
 OFC-PD = Pre Construction Director
 OFC-CD = Director of Construction
 OFC-DC = Document Control
 OFC-PM = Manager of Projects

SBBC = School Board of Broward County
 OSBR = Official School Board Records
 SUPT = Superintendent of Schools
 PPO = Physical Plant Operations
 PPO-D = Physical Plant Operations Director
 RM = Risk Management
 CP = Capital Payments
 PCM = Program Controls Manager

BCPS = Broward County Public Schools
 OTHER = Other BCPS Departments
 PS = Procurement Services
 CPA = Construction Purchasing Agent
 A/E = Architect/Engineer
 CMAR = Construction Manager at Risk
 CMAR-PM = Project Manager
 Contractor/GC = CSMP or DBB Contractor

Recurring Design Issues Delaying Permitting
Attachment 2) Process Overview of Design Submission and Permitting Process

This list of issues and learned lessons is structured by professional discipline. Statements found here are both issues identified by the CBRE|HEERY design review team, and comments provided by the Building Department during submissions for permit. For additional clarification of these comments, please reach out to Nicholas Fila, CBRE|HEERY.

General

1. All references to FBC shall be 2017 edition.
2. Table of Contents and List of Drawings is consistently inaccurate.
3. Notification and Asbestos survey requirements, Applications for Building Permits for the demolition and/or renovation of an existing structures must contain a copy of the Broward County Environmental Protection Department (EPD) "Statement of Responsibilities Regarding Asbestos". Also, the 100% Permit review submittal must include a signed statement from the BCPS Coordinator, LEA of Environmental Health & Safety Department that a "Asbestos Survey" has been completed for the area or scope of work At least (10) working days prior to the initiation of work for and asbestos removal project, a building demolition project, the owner, operator, or contractor shall prepare and submit to EPGMD a completed Statement of Responsibilities Regarding Asbestos, using the form provided by EPGMD. The EH&S Asbestos Designated Person will schedule an Asbestos Pre-Renovation/Demolition inspection of the facility. Upon completion of the inspection the EH&S Asbestos Designated Person will return your ACBM/LBP inspection form to you indicating if an asbestos abatement is requirement prior to starting construction activities. A copy of this form signed by the EH&S Asbestos Designated Person must be submitted to the SBBC Building Department as proof that an asbestos survey of the work area has been completed. At this time any asbestos abatement that may be required prior to construction activities at the site will be scheduled. No Permit will be issued until it has been submitted to Broward county Environmental protection and Growth Management Dept. at least ten working days prior to the proposed demolition Project. After submission and receipt to Building Dept. before Permit is issued.
4. The list of designated rooms or areas to be renovated must occur at the 50/60% document stage to allow the LEA of the Environmental Safety and Health department to perform a survey to determine necessary abatement. This action will provide the contractor with the necessary scope of work to submit a proposal in a timely fashion.
5. Documents or major portions are omitted making it impossible to review and subsequently permit.
6. If drawings and specifications contain 3 volumes of documents, sometimes only 2 spec books or 2 sets of drawings are provided for review, making the submittal incomplete and thereby delaying the review.
7. Not all comments are responded to across some or all disciplines.
8. Hardware or hollow metal submittals are sent to the Building department bypassing the PPO review.
9. **Asbestos Abatement** - Asbestos reports missing at 90% submission.
10. **STEM Lab and other Vocational Labs:**
 1. Program and space design not complete at 90% and 100% submissions.
 2. Program and space scope not included at 50% submission, resulting in Building Department rejection due to added scope. All scope must be provided at the 50% submission to the Building Department in order to be accepted as complete at the 100% submission.
 3. In lieu of leaving the space blank due to missing information, the existing MEP, Building and Fire conditions must be shown. Should any of the disciplines become provided later through a plan change to the permitted set, there will be established lighting, power, mechanical and fire aspects to draw from to perform required calculations to be able to approve the plan changes.

If there are additional vocational labs or media centers, the same logic used for STEM Labs would apply for those areas.

Architectural/Building/Roofing

1. Proposed roofing details not complying with existing roof compositions.
2. Scope of mechanical equipment not identified on roof plans; Mechanical roof systems cross references are missing. Specifically, drawings do not clarify what is new and existing to remain or clarify curb extensions for mechanical equipment clearly.
3. Roofing Specs: Missing Specification sections.
 - a. Masonry Removals/Repair Spec.
 - b. Concrete Removals/Repair Spec.
 - c. Wood Treatment Spec.
 - d. Remedial Painting Spec.
 - e. Roof Curbs Spec.
 - f. Torch Applied Spec vs Other Spec. Not used by the District.
 - g. Roofing Specs often do not relate to specific roof composition.
4. Drainage Calculations:
 - a. Pipe sizing missing.
 - b. Drainage calculations per new code must be zoned; Define by ridge to ridge or expansion joint to expansion joint not. Not total roof area.
5. Navigation issues with respect to cross-referencing details to roof plan or missing details and or details not matching exact roofing locations.
6. No structural repairs shown on roofing plan or cross-referenced to structural drawings.
7. Re-roof basis of design verification missing.
8. Provide details and pertinent information on proposed Roof plan with annotation of proposed deck slope $\frac{1}{4}'' = 1'-0''$, perimeter dimension, roof perimeter edge at mechanical room, canopy, new roof hatch that comply with the latest FBC 17 6Th ed. Sect. 107.2.1, DMS, SMACNA, NRCA, OSHA, Manufacturer's specifications and industry standards. • Building 1: new installation of fan on roof will require a repair detail to be included on contract documents. • provide structural details for equipment guard protection, to be included attachment to structure and clearance from roof drip edge. • Provide Florida registered engineer signed and sealed submittal for roof designed wind load uplift zone pressures. • Designer to confirm that Liquid applied roofing have a 20-year system per BCPS D M&S • Roof vent for ventilation is not allowed per PCBS D &MS, Machinal equipment shall have 18-inches minimum clearance from low/parapet wall. • Parapet membrane flashing (smooth, granular cap) shall have minimum of 6-inches overlap beyond metal Cant on roof. • Roof details annotation are not legible to read content. • Electrical engineer to provide detail for existing / new fan /curb installation which shall have direct electrical connection below roof deck. • Remove/Replace gravity and power driven fan dampers.
9. Provide details that comply with the latest FBC, DMS, SMACNA, NRCA, OSHA, Manufacturer's specifications and industry standards reflecting the most stringent requirements, with practical allowances that work in the field. Identify method, type, material and spacing for all attachments required to meet uplift pressures on roof covering components inclusive of accessories and/or equipment in the field, (FBC 14, Section 1512, Section 1514-7, Section 1620) • Existing taller Antenna on roof shall be removed from roof and be relocated to another location. Designer to coordinate with PM for new location. Smaller antenna can be relocated to exterior parapet side and attachment to substrate shall resist design wind load uplift pressure. • Conduit pipe support shall attached to structure to resist wind load uplift as specified, a gooseneck or u -shape metal pipe flashing shall be provided at top pipe support w/ clamp connection.

10. Provide detail for support and flashing of Electrical conduit, mechanical piping or any other service lines running on the roof shall be raised not less than 8 inches (BCPS requires 18 inches) above the finished roof surface. (FBC17 Sect. 1522.3.4) (cable on roof shall be run along exterior side of parapet wall below coping).
11. Designer to provide submittal document that existing lightweight to meet requirements of standard procedures for roof moisture survey per FBC HVHZ 2014 (TAS) 126-95.
12. Roof drain pipe, overflow scupper opening size (WxH) from drainage schedule to be identified on proposed roof plan (FBC17 6TH. Ed. Sect.107.2.1, FBCP17 6th.Ed Chap. 11) • Designer to re-evaluate drainage calculation. Overflow scupper shall be calculated per roof zone. • Provide detail for overflow scupper flashing termination through mansard roof. and device required to be equipped with bird screen closure. • East side of roof which has three roof drains however, one at middle is missing an overflow. • Secondary (emergency) roof drains or scuppers shall be provided where the roof perimeter Construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. (FBC14 Sect. 1107) • Provide detail for plumbing vent pipe extension using S.S. coupling with no hub. To be concealed below proposed finished level. • Overflow Scupper flashing to protrude a minimum of 3-inch passed the wall surface and scupper flashing to protrude 1-inch. • Show overflow pipe outline on proposed roof plan and termination discharge shall be detailed with roof condition (show partial elevation for location of overflow scupper). • Gutter width size to be minimum 2-inches wider than downspout size. • Metal drip edge to overlap gutter profile minimum 1-1/2" to 2 -inches.
13. Lightweight insulating concrete shall not be applied over an existing roofing system unless the existing roofing assembly is verified to be adequate to accept the new lightweight insulating concrete and is in compliance with the testing required herein. (FBC17 6th. Ed. Sect. 1521.20)
14. (If applicable) Clothes dryer exhaust duct(s) that penetrate roof shall terminate with a non-screened curb mounted appliance equipped with a backdraft damper in accordance with 2014 FMC, Section 504.4.
15. Applications for Building Permits for the demolition and/or renovation of an existing structures must contain a completed copy of the Broward County Environmental Protection and Growth Management Department (EPD) "Statement of Responsibilities Regarding Asbestos" form and a "Notice of Demolition or Asbestos Renovation" form. Also, the 100% Permit review submittal must include a signed statement from the BCPS Coordinator, LEA of Environmental Health & Safety Department that a "Asbestos Survey" has been completed for the area or scope of work.
16. Accurate identification of existing deck composition.
17. Incorrect citing of existing slope.
18. Lack of coordination with all disciplines regarding existing and proposed roof conditions.
19. Lack of all appurtenant information to evaluate a roof plan on the same plan, ie; wind pressure zones, legend, etc
20. Lack of accurate disposition of existing accessories/ equipment conditions.
21. Incomplete assessment of all-encompassing features of a roof, ie; horizontal canopies over doors, tie-in to other canopies, mansards, etc.
22. Lack of understanding key features of our D&MS as are: ARBS vs wood blocking, torch membrane application, lightweight installation, etc.
23. Lack of understanding for the applications of a "temporary roof" on different types of deck.
24. Identifying all roofing components in a quantifiable way that require to be replaced, repaired or new.
25. Lack of understanding roofing warranties, to tackle critical issues such as corrosion or other contaminants that may void a warranty.
26. Depicting information on plans from "As Built" drawings without field verification.

27. Lack of basic details addressing each particular substrate found on project.
28. Providing good resolution photographs of existing roof conditions to help the reviewers depict missed or erroneous assertions on drawings.
29. Meaningless or repetitive notes as are those related to isolating the removal of all flashing components both metal and membrane, instead of simply stating the removal is to metal deck or lightweight, etc.
30. Lack of legibility, clarity in the contract drawings by not using different line weight, size of symbols and characters, etc.
31. Persistent comments and detailing parapets, borne out of a lack of understanding; parapets may become edges without the need to add more cost and ineffective use of resources.
32. Difficulty, even when given reference details, to adapt to project specific conditions.

Site Utilities

Preliminary Site Engineering Design Development Requirements

1. Verify and show all existing underground utility locations for conflicts.
2. Consultant's shall conduct school site visit to evaluate the scope and assess the proposed elements of project for any discrepancies or conflicts. The report of the field inspection shall be communicated with all district's project management group.
3. Coordinate and Conduct all pertinent Tests and Calculations for the proposed design requirements to include Paving, Grading, Storm Drainage, Water Distribution, Fire Mains, Sanitary Sewer System.
4. Coordinate and identify all demolition requirements and work scope with contractor's construction staging area needs and temporary utilities connections.
5. Identify existing underground improvements in conflict with the proposed construction and specify limits of the proposed work scope with appropriate scope legend.
6. Verify and show site grading and elevations within the limits of the construction and consider general site grading and storm water management features for collection and treatment.
7. Evaluate preliminary fire protection work scope according to state of Florida Fire Prevention Code and NFPA-72 and design of fire assemblies and fire protection systems.
8. Research and provide existing and updated Storm Drainage Permit status for the required modification of Five-Year License Certification from local Drainage District.
9. Coordinate and verify that all Site Engineering and Utilities scope of work related to jurisdictional permits and approvals are properly identified and noted on the proposed plans.
10. For all proposed off-site Fire main taps, coordinate with the local City or B.C. Utilities, Engineering and Fire Marshal and submit copies of the required jurisdictional permits for the Site Engineering scope of work.
11. Coordinate with the proposed Roofing plan and show locations of all storm drain structures and services with connection invert and elevations.
12. Dimension location of the proposed fire mains and service extensions from a referenced point and verify and indicate size, type and length of service assemblies.

13. Provide complete details for the proposed scope of work to include paving, signage, marking, storm drainage, water distribution, sanitary sewer system, pump stations, fencing and landscape irrigation according to local jurisdictional or Broward County standards and specifications as required.
14. Coordinate and verify all identified proposed work scope for the Fire System installations. Evaluate and verify FBC and NFPA 72 and 14 code requirements for the proposed extension of the new Fire Main Taps, Fire Hydrants, FDCs and services. coordinate and verify the design requirements for new Fire System installations.
15. Provide key site map and legend for the limits of proposed construction and demolition work.
16. Please provide a copy of all applied jurisdictional permits and approvals to the Broward County Public Schools Building department.

Mechanical/HVAC

1. Variable Volume vs. Constant Volume system design does not match District standards with respect to classroom and assembly spaces.
2. Make-up air has now increased in requirements per the new 2017 Building Code. AHU units now need to be increased in size according to code. Many make-up air vs closed system issues exist.
3. Heat load calculations are not provided in 90% submittals.
4. Outdoor air ventilation calculations are not shown in 90% submittals.
5. Commission issues: Controls data need to be fully provided.
6. Commissioning specifications not included in the 90% submittals.
7. Equipment ID must be noted per District Standards.
8. AHU's have to be sized per heat load calculations and ventilation calculations.
9. Chiller and pump sizing is not according to load calculations. Sizing is based on existing data which is outdated.
10. Return air and Outdoor air is not ducted per District Standards.
11. Existing rooms cannot support the new equipment and clearances in accordance with District Standards and The Florida Building Code.
12. Roof mounted ductwork must be of round profile and aluminum per District Standards.
13. Design must conform to District approved manufacturer/vendor list.
14. Attachments for roof mounted equipment must be detailed on mechanical drawings per District Standards and Building Department requirements.
15. Per FBC Energy Conservation 2017 section C403.2.2 Equipment and system sizing. The output capacity of heating and cooling equipment and systems shall not exceed the loads calculated in accordance with section C403.2.1
16. SBBC 2A-6A Mechanical Design Criteria, C(5). In either CAV or VAV designed systems, only internally lined double wall insulated galvanized steel ducts shall be provided on all mechanical room supply and return air ducts for a distance of 20 feet to and from the AHU discharge and return air openings.
17. Double wall duct not properly identified on plans.
18. Additional missing items:

- a. Energy Compliance Report
 - b. Provide building pressurization charts
 - c. Wind load calculations for mechanical equipment
 - d. Control sequence of operations and diagrams in accordance with 2017 Florida Energy Conservation Code
 - e. Refrigerant detectors in machinery room shall be provided as required by the Florida Fire Prevention Code, NFPA 1-53.2.3.1.
 - f. A complete updated set of remodeled or renovated plans for areas within the scope-of-work shall be provided and shall include room FISH numbers, room names and all new mechanical equipment such as AHUs, ductwork sizes, supply and return air CFM values for T+B purposes.
19. Mechanical Rooms located on the building perimeter shall be provided with a supply air diffuser supplying a minimum of 100 – 150 CFM as per SBBC 2A-6 Mechanical Design Criteria, Section B.
 20. Provide a means to comply with 2017 FMC, Sections 307.2.3 and/or 307.2.3.1 for condensate overflow. Please indicate means to comply on plan(s).

Electrical

1. All references to NEC shall be 2014 edition All references to FBC are the 2017 edition Installation shall be in compliance with, FBC, NEC, BCPS Design and Material Standards including sections 13, 16 and 17 and all other relevant sections. FEC Sections C405 thru C408, 2017; ANSI/ASHRAE/IESNA 90.1 2013.
2. Disconnecting and re-wiring the roof equipment being removed for the roof replacement is the responsibility of the Electrical Contractor per FSS 489.
3. Ground mounted A/C equipment such as DX condenser units shall be installed on a concrete pad and enclosed within a 6-foot-high chain link fence enclosure 6A-6, SREF 453 10.1.1 FBC 2704.1. Metal likely to become energized shall be bonded. Bond the fence with #6 as per 250.52 with suitable lugs or clamps, wire-to-ground rod shall be cadwelded. Comply with BCPS 16060 3.3(C) provide detail.
4. Provide GFCI receptacles in all mechanical rooms as required by FBC 453.17.8 and NEC 210.8(B) A GFCI Receptacle for ground mounted Mechanical Equipment NEC 210.63.
5. Provide a remote duct detector indicators/test stations in accordance with BCPS 13845 3.1 (5) for all new and replacement air handlers. Mounted inside the adjacent to the mechanical room door opening hardware. Uniformly surface mounted on the wall between 48 and 54 inches above the floor. For duct detectors that are above a ceiling or on a roof, flush mount the remote indicators on the ceiling or nearest wall below the unit such that the unit is not above 80 inches from the highest floor level.
6. AHU's, FCU's and exhaust fans shall be interfaced with EMS & Fire Alarm. All new and existing fans shall shut down upon activation of the fire alarm system. Comply with BCPS 13845 2.2(A), NFPA 90A
7. Roof replacement: FBC 107.2.1: Electrical Plans must be coordinated with Mechanical and Structural Drawings. Scope requiring the removal and re-installation of Exhaust Fan equipment for Roof Replacement shall include proper noting for the safe removal and re-installation of all roof top equipment included but not limited to electrical panels and locations, and branch circuit numbers' Notation shall state the responsibility of the Electrical Contractor to assure reconnection to fans and other roof top equipment to existing conduit and wire are acceptable (adequate) and being free from hazards and code compliant. NEC 90.1(B)
8. Fire Alarm Control Panel - All New Fire Alarm Control Panels shall be fed by emergency generator power circuit and label as per NEC 760.41(B) and BCPS 13845 2.7(M) Provide engraved label at all fire alarm control panels indicating source location, panel and circuit number, ETC. Comply with NEC 760.41(B), BCPS 16231 1.1 C.
9. Provide speaker/strobes in all Classrooms and Group Toilets.
10. Provide smoker detectors in Group Toilets.

11. Additional consistently missing items when applicable:
 - a. Commissioning plan with automated lighting controls.
 - b. Existing emergency panel and circuit #'s.
 - c. Fire alarm panel details are consistently lacking for 90% submissions.
 - d. FPL coordination to determine present load conditions (maximum demands) and confirmation of AIC rating. Submission of FPL letter indicating max available fault current at the FPL transformer in vaults.
 - e. Lighting fixture schedules on a consistent basis.
 - f. Means of egress emergency lighting with average of 1 foot candle at egress walking surface with photometrics.
12. Installation shall be in compliance with (2017)FBC, (2014)NEC, (2013)NFPA 72, (2015)NFPA 101, (2017)Florida Fire Prevention Code, BCPS Design and Material Standards including sections 2A-7, 2A-8, 13, 16 and 17 and all other relevant codes and sections.
13. Minimum Plan Review Criteria for Electrical – The examination of the electrical documents shall include all of the relevant criteria; electrical wiring, services, feeders and branch circuits, overcurrent protection, fault current calculations, grounding, wiring methods and materials, GFCI's, equipment, special occupancies, emergency systems, communications systems, low voltage, load calculations, etc. Comply with FBC 107.3.5
14. For existing facilities, the consultant shall visit the site, determine the present load conditions (max. demand) and provide detailed information on the existing service including voltage/phases, switchgear, number of conductors, conduit size, etc. Comply with BCPS 2A-7(A)
15. Commissioning Plan: FBC C408.3 Lighting system functional testing. Controls for automatic lighting systems shall comply with this section. FBC C408.3.1 Functional testing. Prior to passing final inspection, the registered design professional shall provide evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition in accordance with the construction documents and manufacturer's instructions. Functional testing shall be in accordance with Sections FBC C408.3.1.1 and FBC C408.3.1.2 for the applicable control type.
16. Automatic Receptacle Control – The following shall be automatically controlled: At least 50% of all 125-volt 15 and 20 amp receptacles in all private offices, conference rooms, printing/copying rooms, break rooms, classrooms and individual work stations. At least 25% of branch circuit feeders installed for modular furniture. Comply with FBC C405.6.1 and ASHRAE 90.1-2013 8.4.2
17. Re-Roofing projects – Coordinate electrical penetrations, equipment disconnects and enclosure support details with Architectural/Structural support details to ensure BCPS approved typical detail is being consistently incorporated. (Coordinate with Roofing Plan Reviewer) All electrical equipment shall be mounted a minimum of 18" above the new finished roof surface. Refer to BCPS 16132.3.2.D(1). Provide detail illustrating procedure to be followed to raise and support all existing electrical conduits and enclosures a minimum of 18" above the new roof deck. Comply with BCPS 16132 3.2(D) and NEC 314.15 and 314.23. Demo plans shall include details regarding the removal and re installation of rooftop mechanical/electrical equipment and electrical contractor scope of work necessary for the roof replacement.
18. Review and verify all relevant BCPS Design and Material Standards (DMS) specification sections related to the entire scope of the electrical work have been provided. Consultants and Engineers shall not eliminate or modify BCPS sections of specifications, unless the portion(s) removed or modified is NOT related to the scope of work included in this project.
19. All new or renovated electrical switchgear and panelboards shall be provided with surge protection devices (SPD'S) in accordance with BCPS 16415 and NEC 285. A listed SPD shall be installed in or on all emergency systems switchboards and panelboards. Comply with (2014) NEC 700.8
20. Electric Equipment rated 800 amps or more - personnel doors intended for entrance and egress from the working space less than 25 feet from nearest edge of the working space, the door shall open in the direction of egress and be equipped with Listed panic hardware. (2014) Comply with NEC 110.26(C)(3)

21. New and replacement Switchgear and Panelboards. Provide short circuit study to determine the maximum available fault current at each overcurrent device and electrical equipment. Comply with NEC 110.9 and 110.10. Provide equipment evaluation schedule to ensure proper interrupting ratings of all new overcurrent protective devices and proper short-circuit current ratings(SCCR) at point of application.
22. Provide Panel Schedules for all electrical panels affected by the scope of this project. Panel schedules shall provide detail for ALL new loads and equipment to be installed including panel brand name, type, mounting, main breaker, amperage, capacity, panel/equipment locations, conduit size, wire size, breaker size, load calculations, voltage drop calculations, AIC ratings, etc.
23. Coordinate all new/replaced electrical equipment panel/circuit numbers indicated on the floor plans with the Panel Schedules provided. Verify consistency of panels and circuits provided. Every circuit and circuit modification shall be legibly identified as to its clear, evident and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others. Comply with NEC 408.4(A)
24. Electrical Panels shall be provided with updated typewritten circuit directories indicating location (Building, Room #) and specific equipment being fed and shall have an engraved label indicating the equipment where the Electrical Panel power supply originates. Majority of panel schedules provided indicate "EXISTING LOAD" circuit descriptions. Not acceptable. NEC 408.4 A&B
25. When modifications to the electrical installation occur that affect the maximum available fault current at the service, the maximum available fault current shall be verified or recalculated as necessary to ensure the new and existing service equipment ratings are sufficient for the maximum available fault current at the line terminals of the equipment. Comply with NEC 110.24(B)
26. Provide GFCI receptacles in all mechanical, boiler and electrical rooms, corridors, vestibules, stairwells, and as required by FBC 453.17.8 and NEC 210.8(B) Provide readily accessible GFCI breaker for new drinking fountain(s). Provide source panel/circuit number. NEC 210.8
27. Electrical plans shall include the electrical power connection to ALL of the new HVAC DDC Control Panels throughout the campus. Provide source panel, circuit numbers and panel schedules/locations.
28. Provide/indicate electrical conduit, wiring, equipment for a fully functional Refrigerant vapor detection and alarm system; Provide electrical plans indicating the required conduit and wiring for the power and supervision interface with the building fire alarm system as required by NFPA 72 and the 2014 Florida Mechanical Code section 1105.3 and 2014 Florida Fire Prevention Code, NFPA 1, section 53.2.3.1.6
29. Refrigerant vapor detection and alarm system; The Refrigerant vapor detection, alarm system and emergency exhaust fan shall be connected to a secondary source of power to automatically supply electrical power in the event of loss of power from the power the primary source. Comply with NFPA 1, 53.2.3.4.4.
30. NEC 422.31(B) - Hand dryers rated over 300 volt-amps and/or 1/8 hp or lower shall have a disconnecting means within sight from the appliance or a breaker lock shall be provided in accordance with NEC 110.25. The breaker shall be capable of being locked in the open position. The provisions for locking must be an integral part of the enclosure and shall remain in place with or without the lock installed. Hand dryers RATED OVER 1/8 hp shall comply with NEC 422.31(C)(1)or(2)
31. Replacement, disconnection and re-connection of rooftop HVAC equipment, including exhaust fans. Provide engraved label at each SERVICE DISCONNECT indicating power source Bldg/Room/Panel/Circuit number. Comply with BCPS 16010 3.2
32. Computer circuits - Provide one (1) dedicated electrical panel. Provide dedicated Transient Voltage Surge Protector (TVSS) for the electrical panel. Provide one (1) 20A-125V circuit for every two (2) quadruplex of power provided. Each circuit must consist of one (1) phase conductor, one (1) neutral and one (1) grounding conductor. Connect the grounding conductor to the ground bar in the computer panel. Computer circuits and non-computer circuits shall not occupy the same conduit. Comply with BCPS 2A-8(V)

33. Installer Qualifications: Cabling installer must have on staff personnel certified by BICSI. 1.Layout Responsibility: Preparation of Shop Drawings and Cabling Administration Drawings, and field testing program development by a Registered Communications Distribution Designer(RCDD). 2.Installation Supervision: Installation shall be under the direct supervision of a BICSI Certified or equivalent Registered Technician, who shall be present at all times when Work of this Section is performed at Project site. Comply with BCPS 17000 1.7
34. Provide fixture support detail for new or re-installed lighting fixtures. Specification Section BCPS 16510 3.2(E) and 09510 3.2(E) indicates Light Fixtures shall be supported independently of suspension system. The Electrical Contractor is to provide 4 wire hangers, or chains, for each fixture; one hanger at each fixture corner. Install hangers plumb to structure above. Provide 4 chains or #9 ceiling wire for each fixture. Provide approved detail for support of lightweight LED fixtures. Comply with NEC 410.36(B) and ASTM C 636M
35. Provide photometric calculation for the normal and emergency lighting to verify foot-candle requirements per SBBC Electrical Design Criteria BCPS 2A-7(D) and specifications.
36. Provide lighting fixture schedule including description, quantities, manufacturer, catalog number, voltage, LED, type, mounting heights, etc. Details shall include a lighting fixture schedule with wattage and control narrative. Comply with (2017)FBC/EC C103.2(10)
37. Proposed new canopy/covered walkway light fixtures shall be LED, UL listed for wet location, lensed, vandal resistant, vapor proof, with tamper proof screws in compliance with BCPS 10532 2.5(A), 16510 and (2017)FBC/EC C405. Preferable fixture type: Sylvania, "VAPOR" model, Listed to UL 1598 Standards for wet locations, IP65 rated, or equivalent.
38. Verify electrical panels supplying power to new LED light fixtures are provided with a suitable surge protection device in accordance with BCPS 16415 and NEC 285. A listed SPD shall be installed in or on all emergency systems switchboards and panelboards. Comply with (2014) NEC 700.8
39. ADD clarification Note: The existing fire alarm system shall remain 100% operational at all times during this renovation/replacement project. The new system shall be installed, operational, tested and certified prior to disconnecting and demolishing the old fire alarm system, panels, conduits, boxes, etc. The contractor shall provide a fire watch at their expense for any period of time any portion of the existing system is not operational while the building is occupied.
40. New fire alarm control panel shall be provided with a wireless communicator, AES-Intelligent monitoring system in compliance with BCPS 13845 2.7(U).
41. Fire Alarm Control Panel - All fire alarm control panels power supply shall derive from the building emergency power source and be labeled in accordance with NEC 760.41(B) and BCPS 13845 2.7(M)
42. Where fire sprinklers are installed in hoistways, machine rooms, or machinery spaces, a means must be provided to automatically disconnect the main line power supply to the affected elevators prior to the application of water. See section 21.4 of NFPA 72 - 2010, ASME A17.1-2007 and NEC 620.51 for additional requirements.

Plumbing

1. Condensate drainage accurately designed and shown on plumbing drawings and properly referenced on mechanical drawings.
2. Plumbing sanitary vent details require extension to meet 8" minimum requirement.
3. Proper roof drainage calculation and design in accordance with District Standards and Building Department Plumbing and Roofing requirements.
4. Scope Of Work Add - All Work To Be In Accordance w/ FPC (2017), FBC/ADA (2017), SREF (2014), BCPS Design Criteria, Material Standards & Specifications.

5. Provide On Plg Plans/ Civil Plans All Primary Storm Drainage Systems To Be Connected Directly To UG Storm Drains Below Grade. The Use Of Splash Blocks Is Prohibited. BCPS Mech Design Criteria Sec 2A-6 N. 12., Arch Design Criteria Sec 2A-2 D. 1. h. i. & BCPS Spec 15105 3.2 BB. & CC.
6. The primary roof drain system shall be sized for a rainfall intensity of 4.5 inches per hour for a 100-year rainfall in accordance with the currently approved FBC 14 –Plumbing Chapter 11, Figure 1106.6, downspout drain piping shall not be less than 4” in size.
7. BCPS measurements must follow STANDARDS FOR PLUMBING FIXTURES AND ACCESSORIES. Coordinate all information with Section 15410 – PLUMBING FIXTURES (latest revision) of the BCPS design and material standards.
8. Hose Bibb Schedule Section 15410 (2.66) install narrow wall hydrant in group toilets at 30 inches above finished floor on grade. In toilets, install on an open accessible wall adjacent or the plumbing fixtures.
9. The use of PVC piping is limited to underground sanitary, grease waste and storm drain system. The use of PVC piping for above grade installation in the building interior is PROHIBITED.
10. Floor drains design and material standards Section 15430 Part 2, (2.9) floor drain (A), (B) and (C) only shows 3 inches floor drains.
11. FPC 405.3.1 Water closets, urinals, lavatories and bidets. A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches from its center to any side wall, partition, vanity or other obstruction, or closer than 30 inches center to center between adjacent fixtures. There shall be not less than 21 inch clearance in front of the water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartment shall be not less than 30 inches in width and not less than 60 inches in depth for floor-mounted water closets and not less than 30 inches in width and 56 inches in depth for wall-hung water closets.
12. FPC 405.3.5 Urinal partitions. Note that where partitions are used, the distance from the center of the urinal to the face of the partition must be at least 15 inches to be in compliance with Section 405.3.1. The thickness of partitions cannot encroach into the required spaces for fixtures.
13. Standard for Plumbing Fixtures and Accessories for (K – 5)Water closet centerline grades (K – 5) to be 16 inches from side wall . Standard 15 inch bowl.
14. (K – 5) Water closets in elementary schools in student applications ,are to be 10 inch rough fixtures roughed in at 12 inches.
15. (K – 5) ADA lavatory 31 inches above finish floor (top of rim) 24 inches apron / knee clearance.
16. (K – 5) Grab bar 25 inches to centerline.
17. Urinals (k-5) 14 inches top of rim.
18. Design and material standards Section 15410 Narrow wall hydrant- cold water only (WH-3) (group toilets, ese toilets and interior walls) ASSE 1052, ASSE 1019-B, dual check, vandal-proof cast bronze, recessed stainless steel box, mild-climate wall hydrant with satin face, self-opening locking cover removable key, ¼ inch HPT outlet, integral vacuum breaker, backflow preventer. NOTE: Install narrow wall hydrant in group toilets at 30 inches above finished floor on grade. In toilets, install on an open accessible wall adjacent or the plumbing fixtures.
19. FBC sixth edition (2017) Accessibility Section 213.3.1 Toilet Compartments. Where toilet compartments are provided, at least one toilet compartment shall comply with 604.8.1. In addition to the compartment require to comply with 604.8.1, at least one compartment shall comply with 604.8.2 where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.

20. Design and Material Standards Section 15430 Part 3, 3.2 (N) n all floor P-traps equipped with trap primers, connect the primer to the water closet flush valve in order to prevent evaporation of the trap seals. In areas where water closet flush valves are not available, make connection to lavatories or domestic water piping.
21. Provide accurate and complete information for roof drainage and pattern proposed plan, base Prior to commencement of installation of roofing cap, flood test the deck to insure positive slope and drainage. If there is any ponding water, it sh FBC 1503.7, Protection against decoy termites. Condensate lines and roof downspouts shall discharge at least 1 foot away from the structure sidewall. Whether by underground piping, tail extensions, or splash blocks. Gutters with downspouts are require on all buildings with eaves of less than 6 inches horizontal projection except for gable end rakes or on a roof above roof.
22. Provide adjustable condensate line support with stainless steel components and straps for attachment of pipe to support. Insulate all drainage condensate pipes to avoid condensation on to roof covering system. (2017 FBC, Section 453.1; D&MS, Section 07600).
23. Provide proper disposal of rainwater from roofs by roof drains, scuppers, overflow scuppers, gutters, and downspouts complying with the Florida Building Code, SREF and the Florida Plumbing Code requirements.
24. Condensate piping and discharge location must be shown on the plans. Condensate drywells shall be provided for all units of 2 ½ tons or larger. For units of 2 tons or smaller, condensate discharge onto the ground is approved.
25. Provide adjustable condensate line support with stainless steel components and straps for attachment of pipe to support. Insulate all drainage condensate pipes to avoid condensation un to roof covering system. (FBC 2017,Section 453.1, D&MS, Section 07600).
26. FBC - 1503.7. Protection against decoy termites. Condensate lines and roof downspouts shall discharge at least 1 foot away from the structure sidewall. Whether by underground piping, tail extensions, or splash blocks. Gutters with downspouts are require on all buildings with eaves of less than 6 inches horizontal projection except for gable end rakes or on a roof above roof.

Fire Protection/Fire Sprinklers

1. Civil drawings are missing to address fire loop scope and/or access to fire hydrants and water source requirements.
2. Sprinkler installation must be noted as fully supervised.
3. Provide UL listed pipe penetration details.
4. Identify and provide details for all site signage required by NFPA.

Fire Alarm / Fire Sprinklers / Fire Safety

1. Missing indication of fire alarm system scope in early submissions. Fire Alarm system scope identified late in the design process.
2. Fire Alarm components and design are often not per District Standards.
3. Provide remote duct detector indicators in locations as required per SBBC Spec. Section 13845.3.1(A) 2. (a-c).
4. Fire Alarm system shall be Voice/tone type evacuation system. All horn/strobes shall be changed to speaker/strobes.
5. If kindergarten rooms have designated sleeping areas smoke detectors will be required (normally 2 detectors will provide the required coverage)
6. Missing Fire and Life Safety Plans as required per District Standards and Building Department requirements.

7. Sprinkler risers should be located in a mechanical room.
8. Note if the existing fire main lines are dedicated fire water or if they are combined with domestic water.
9. Note type of building construction.
10. Plan should show building square footage with fish numbers.
11. Show exit travel distances/path of travel for all modified areas.
12. Verify there are no dead-end corridors.
13. Show current fire ratings of affected areas.
14. Show all required life safety features new and existing.



APPENDIX D

LOR Issued	Yes
Letters Issued	Yes

Design Review Fee - Letters (Sent)	Calculated Charge	Final Charge
ACAI Associates, Inc.	\$1,283.00	
Deerfield Beach ES SMART Program Renovations	\$606.00	TBD
Hollywood Hills HS SMART Program Renovations (CMAR)	\$144.00	TBD
Mirror Lake ES SMART Program Renovations (CC-A)	\$102.00	\$102.00
Nova HS SMART Program Renovations (CMAR)	\$144.00	\$0.00
Westwood Heights ES SMART Program Renovations (CC-A)	\$287.00	\$0.00
BRPH Architects/Engineers, Inc.	\$2,637.00	
Sawgrass Springs MS SMART Program Renovations	\$2,637.00	\$2,637.00
CES Engineering Services, LLC	\$649.00	
Panther Run ES SMART Program Renovations	\$72.00	\$72.00
Park Ridge ES SMART Program Renovations	\$129.00	\$129.00
Ramblewood MS SMART Program Renovations	\$448.00	\$448.00
Crain Atlantis Engineering	\$215.00	
Sea Castle ES SMART Program Renovations	\$215.00	\$0.00
CSA Group	\$4,473.00	
Hollywood Park ES SMART Program Renovations	\$2,807.00	\$2,807.00
Lauderdale Manors ELC SMART Program Renovations	\$1,666.00	\$1,666.00
Florida International Consulting Engineers Design	\$2,280.00	
Sunrise MS SMART Program Renovations	\$849.00	\$849.00
Westchester ES SMART Program Renovations	\$1,431.00	\$1,431.00
GLE Associates, Inc.	\$2,357.00	
Attucks MS Phase 2 SMART Program Renovations (CC-A)	\$842.00	\$0.00
Chapel Trail ES SMART Program Renovations (CC-A)	\$732.00	\$0.00
North Lauderdale PK8 SMART Program Renovations (CC-A)	\$783.00	\$0.00
Jorge A. Gutierrez Architect, LLC	\$2,202.00	
North Fork ES SMART Program Renovations (CC-A)	\$1,755.00	\$1,755.00
Oakland Park ES SMART Program Renovations	\$447.00	\$0.00
Laura M. Perez & Associates	\$742.00	
Pines Lakes ES SMART Program Renovations	\$670.00	\$670.00
Riverland ES SMART Program Renovations	\$72.00	\$72.00
M.C. Harry & Associates	\$144.00	
Maplewood ES SMART Program Renovations	\$144.00	TBD
Nyarko Architectural Group	\$1,448.00	
Country Isles ES SMART Program Renovations	\$201.00	\$201.00
Fairway ES SMART Program Renovations	\$348.00	\$348.00
Floranada ES SMART Program Renovations	\$698.00	\$698.00
Virginia Shuman Young Montessori SMART Program Renovations	\$201.00	\$201.00
RGD & Associates, Inc. dba RGD Consulting Engineers	\$144.00	
Watkins ES SMART Program Renovations	\$144.00	\$144.00

Design Review Fee - Letters (Sent)	Calculated Charge	Final Charge
Rodriguez Architects Inc.	\$1,029.00	
Deerfield Park ES SMART Program Renovations	\$813.00	\$813.00
Lakeside ES SMART Program Renovations	\$216.00	\$0.00
SGM Engineering, Inc.	\$1,065.00	
Colbert Museum Magnet (fka Colbert ES) SMART Program Renovations (CC-A)	\$215.00	\$215.00
Sunland Park Academy SMART Program Renovations (CC-A)	\$563.00	\$563.00
Walker ES SMART Program Renovations (CC-A)	\$287.00	\$0.00
Sol-ARCH Inc.	\$2,491.00	
Dillard 6-12 SMART Program Renovations	\$624.00	\$624.00
Fort Lauderdale HS SMART Program Renovations	\$994.00	\$0.00
Hawkes Bluff ES SMART Program Renovations	\$427.00	\$427.00
Plantation MS SMART Program Renovations	\$446.00	\$446.00
Song & Associates, Inc.	\$2,559.00	
Bright Horizons Center SMART Program Renovations (CC-A)	\$491.00	\$491.00
Dillard ES SMART Program Renovations	\$274.00	\$274.00
Maplewood ES Media Center (Bundled bid with P.001639)	\$61.00	\$61.00
Olsen MS SMART Program Renovations	\$455.00	\$455.00
Park Lakes ES SMART Program Renovations	\$129.00	\$129.00
Park Trails ES SMART Program Renovations	\$273.00	\$273.00
Pinewood ES SMART Program Renovations (CC-A)	\$441.00	\$441.00
Westpine MS SMART Program Renovations	\$435.00	\$435.00
Tamara Peacock Company	\$2,443.00	
Dave Thomas EC East SMART Program Renovations	\$420.00	\$420.00
Everglades HS SMART Program Renovations	\$777.00	\$777.00
Hollywood Central ES SMART Program Renovations	\$344.00	\$344.00
Silver Ridge ES SMART Program Renovations	\$301.00	\$301.00
Sunset Lakes ES SMART Program Renovations	\$601.00	\$0.00
Via Design Studio	\$2,384.00	
Forest Glen MS SMART Program Renovations	\$616.00	TBD
Fox Trail ES SMART Program Renovations	\$144.00	\$0.00
Gator Run ES SMART Program Renovations	\$724.00	\$306.00
Glades MS SMART Program Renovations	\$72.00	\$0.00
Riverglades ES SMART Program Renovations	\$828.00	\$285.00
Williamson Dacar Associates, Inc.	\$5,121.00	
James S. Rickards MS SMART Program Renovations	\$4,154.00	\$4,154.00
Pioneer MS SMART Program Renovations	\$967.00	\$967.00
Wolfberg Alvarez & Partners	\$1,570.00	
Davie ES SMART Program Renovations	\$149.00	\$149.00
Embassy Creek ES SMART Program Renovations	\$246.00	\$246.00
Nova MS SMART Program Renovations	\$1,175.00	\$1,175.00
Zyscovich, Inc.	\$1,058.00	
Cypress Bay HS SMART Program Renovations (CMAR)(Ph 2 - Classroom Addition)	\$565.00	\$565.00
Marjory Stoneman Douglas HS Building Replacement (CMAR)	\$493.00	\$493.00

LOR Issued	Yes
Letters Issued	No

Design Review Fee - Letterts (Pending)	Calculated Charge
Carty Architecture, LLC	\$1,223.00
C. Robert Markham ES SMART Program Renovations (CMAR)	\$1,223.00
CES Engineering Services, LLC	\$1,469.00
Larkdale ES SMART Program Renovations (CC-CMAR)	\$301.00
Lauderhill-Paul Turner ES SMART Program Renovations	\$969.00
Winston Park ES SMART Program Renovations	\$199.00
Crain Atlantis Engineering	\$1,372.00
New River MS SMART Program Renovations	\$731.00
Pembroke Lakes ES SMART Program Renovations	\$641.00
GLE Associates, Inc.	\$1,855.00
Collins ES SMART Program Renovations (CC-A)(CC-CMAR)	\$699.00
Stirling ES SMART Program Renovations (CC-A)	\$1,156.00
Jorge A. Gutierrez Architect, LLC	\$2,062.00
Royal Palm STEM Museum Magnet (fka Royal Palm ES) SMART Program Renovations	\$566.00
William E. Dandy MS SMART Program Renovations	\$1,496.00
LIVS Associates	\$2,187.00
Driftwood MS SMART Program Renovations	\$1,274.00
South Broward HS SMART Program Renovations	\$913.00
RGD & Associates, Inc. dba RGD Consulting Engineers	\$488.00
Harbordale ES SMART Program Renovations (CC-CMAR)	\$488.00
Rodriguez Architects Inc.	\$172.00
Boulevard Heights ES SMART Program Renovations	\$172.00
Sol-ARCH Inc.	\$2,014.00
Tedder ES SMART Program Renovations	\$566.00
Wingate Oaks Center SMART Program Renovations	\$1,448.00
Song & Associates, Inc.	\$2,885.00
Bair MS SMART Program Renovations	\$946.00
Broward Estates ES SMART Program Renovations	\$729.00
Challenger ES SMART Program Renovations	\$375.00
Horizon ES SMART Program Renovations	\$693.00
Stephen Foster ES SMART Program Renovations	\$142.00
Tamara Peacock Company	\$1,183.00
Norcrest ES SMART Program Renovations	\$824.00
Thurgood Marshall ES SMART Program Renovations	\$359.00
Williamson Dacar Associates, Inc.	\$545.00
Eagle Point ES SMART Program Renovations	\$545.00
Zyscovich, Inc.	\$3,542.00
Falcon Cove MS SMART Program Renovations (CMAR)	\$3,542.00



APPENDIX E

STANDARD OPERATING PROCEDURES

Document Number:	10.80	Revision No.:	009
SOP Name:	Construction Services Minor Projects (CSMP)		
Latest Revision Date:	September 13, 2019	Revised by:	Deputy Program Manager Michael Bobby
		<i>Michael Bobby</i>	Approved by: Program Director Daniel Jardine
Revised items summary:	Step #4 Revised.		
BCPS Approval by:		BCPS Approval Date:	

1. PURPOSE

The purpose of this section is to provide guidance for the use and application of the District's Construction Services Minor Projects (CSMP) delivery method. This procedure helps identify the actions and requirements for:

- A. Soliciting construction proposals from the Construction Services Minor Projects (CSMP) pool of prequalified contractors.
- B. Evaluating the Contractors proposals and required documentation.
- C. Generating, processing for approval, and issuing the Notice to Proceed.
- D. Obtaining a Purchase Order number.

2. SCOPE

This procedure includes all CSMP contracts up to the CSMP cap of \$2,000,000.

3. DEFINITIONS

See section 1.20 and 1.30 for Definitions and Abbreviations.

4. PROCESS MAP

See Attachment 10.80-1 – Update under development

5. PROCEDURE

STEP	ACTION	RESPONSIBLE
1.	As a CSMP need is identified, the scope, budget, and desired schedule is developed. A CSMP may be identified by other BCPS departments (i.e. PPO) and must be coordinated with the OR-PM to facilitate an	OR-PM

STANDARD OPERATING PROCEDURES

	accurate record of the CSMP contract value issue to date.	
2.	The PC-PD determines the FLCC for the project	PC-PD
3.	The OR-PM informs the OR-ContMgr, who maintains the CSMP contract log, of the need to select a CSMP contractor.	OR-PM OR-ContMgr
4.	Together the OR-PM, OR-ContMgr and the OR-PD identify the next available contractor in the CSMP contract rotation.	OR-PM OR-ContMgr OR-PD
5.	A Proposal Request (Estimating Order Form – Document 00800a) is prepared by the OR-PM and routed for approval to the OFC-CD	OR-PM
6.	The Proposal Request (Document 00800a) is reviewed, sign, and returned	OFC-CD
7.	Once approved, the OR-PM sends the Proposal Request (Document 00800a) to the Contractor via e-Builder. If CSMP Contractor declines the Proposal Request, return to Step #4.	OR-PM
8.	The Contractor assembles their proposal and submits via email to the OR-PM, along with the following documents: <ul style="list-style-type: none"> • Estimating Order (Document 00800a) • Estimating Recap Form (Document 00800b) • Contractor Proposal • Schedule of Values (Document 00435) • Project Specific Certificate of Insurance • Project Schedule • Statement of Intent to Perform as an S/M/WBE Subcontractor (Document 00470) • S/M/WBE Subcontractor Participation Schedule (Document 00475), or • S/M/WBE Good Faith Effort Form (Document 00480) 	GC
9.	Reviews the Proposal Package for compliance, completeness, and responsiveness. If revisions and/or negotiations are necessary to reach an agreement, the OR-PM shall record for the file any such discussions. If appropriate, a site visit may be schedule to assist in the preparation of the Contractor’s Proposal. The OR-PM will verify that the Contractor is registered with the Building Department.	OR-PM

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10.	BCPS Office of Supplier Diversity and Outreach Program (SDOP) reviews verifies the SMWBE documents listed in step 8 and notifies the OR-PM with written confirmation of approval.	SDOP
11.	For projects over \$30k, the OR-PM forwards a copy of the proposal package to the PC-Est	OR-PM
12.	The PC-Est prepares an estimate of the work based on RS Means cost information and applies the Contractor's multiplier as per their approved bid/contract. The PC-Est. provides any additional commentary.	PC-EST
13.	The PC-PD reviews the Contractor's Proposal package and the PC-Est's estimate to confirm compliance with the budget. If this cannot be confirmed the package is returned to the OR-PM for further revisions/discussions with the Contractor. If agreement cannot be reached, then return to Step #4.	PC-PD
14.	If the CSMP Contractor's Proposal package is accepted, the OR-PM prepares the NTP (Document 00550)	OR-PM
15.	Sends an original NTP to the Contractor for their signature	OR-PM
16.	Reviews the NTP and returns an original, signed copy to the PM. (blue ink only)	GC
17.	Signs the original NTP (blue ink only)	OR-PM
18.	The OR-PD or OR-DPM reviews and initial the NTP package	OR-PD or DPM
19.	Forwards the completed Proposal Package, along with the partially executed NTP, to the OFC for processing & distribution.	OR-DC
20.	Routes a copy of the Proposal Package with the Certificate of Insurance and an original copy of the partially executed NTP to RM.	OFC-DC
21.	The RM reviews/approves Contractor's insurance documentation and signs the original NTP (in blue ink) and returns it to OFC along with the Insurance approval letter. If revisions are necessary the package is returned to the OR-PM for revision.	RM
22.	The OFC-DC logs and routes the NTP package to the OFC-PM	OFC-DC
23.	The OFC-PM reviews and initials the NTP package	OFC-PM
24.	Routes a copy of the complete Proposal package to the Construction Purchasing Agent.	OFC-DC

STANDARD OPERATING PROCEDURES

25.	CPA signs the original NTP (in blue ink) and returns it to OFC.	CPA
26.	Prepares a Request for Requisition memo, and sends it to Capital Payments, along with a complete copy of the entire proposal.	OFC-DC
27.	CP Bookkeeper reviews and performs a budget analysis. The CP Bookkeeper enter into SAP and generates a requisition.	CP
28.	Purchasing issues PO. Notification is sent to OFC, OR and the Contractor. Procurement inserts the construction start date of seven (7) days Procurement approval)	PWS
29.	Receives PO Number from Construction Purchasing Agent and adds the PO Number to the NTP.	OFC-DC
30.	OFC-DC signs the original NTP (blue ink only).	OFC-CD
31.	Forwards the fully executed NTP to the OR-PM for distribution to the Contractor, Capital Payments and project file.	OFC-DC
32.	Distributes fully executed NTP to Contractor, Capital Payments and project file.	OR-PM
33.	The OR-PM conducts a Pre-Construction Conference in accordance with SOP 4.15	OR-PM
34.	Mobilizes Contractor's Team for design and/or construction.	GC

STANDARD OPERATING PROCEDURES

6. REFERENCES / RESOURCES / ATTACHMENTS

References:

4.15 Pre-Construction Conference

Attachments:

10.80-1 CSMP Projects Process Map (Full size)

10.80-2 Estimating Order (Doc. 00800a)

[P.Docs\19-CSMP](#)

10.80-3 Estimating Recap Form (Doc. 00800b)

[P.Docs\19-CSMP](#)

10.80-4 Notice to Proceed (Construction CSMP) (Doc. 00550)

[P.Docs\02-NTP-ATP](#) and <http://www.broward.k12.fl.us/constructioncontracts/D0docs.html>

10.80-5 Schedule of Values (Doc. 00435) = 10 pages

<http://www.broward.k12.fl.us/constructioncontracts/D0docs.html>

10.80-6 Statement of Intent to Perform as an S/M/WBE Subcontractor (Doc. 00470) = 1 pg

<http://www.broward.k12.fl.us/constructioncontracts/D0docs.html>

10.80-7 S/M/WBE Subcontractor Participation Schedule (Doc. 00475) = 1 pg

<http://www.broward.k12.fl.us/constructioncontracts/D0docs.html>

10.80-8 S/M/WBE Participation: Good Faith Effort Form (Doc. 00480) = 5 pgs

<http://www.broward.k12.fl.us/constructioncontracts/D0docs.html>

10.80-9 Post-Award Vendor Subcontracting Waiver Request Form (Doc. 00490) = 2 pgs

<http://www.broward.k12.fl.us/constructioncontracts/D0docs.html>



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