

Internal
Audit
Report

Department of Facilities Management and Strategic Planning

**Facilities Construction and
Improvement: Change Orders Audit**

December 2023

BALTIMORE COUNTY PUBLIC SCHOOLS

**FACILITIES
MANAGEMENT**



FACILITIES CONSTRUCTION AND IMPROVEMENT



Baltimore County Public Schools (BCPS)
Office of Internal Audit

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Facilities Construction and Improvement: Change Orders Audit

Background

The Office of Facilities Construction and Improvement (OFCI) staff of professional engineers, licensed architects, construction managers, and inspectors, acts as consultant, design team, and manager for the school system on all capital improvement projects. Management of these projects includes the review and approval of construction change orders. Change orders are necessary to give the school system and contractors flexibility to alter original contracts for various reasons, such as change in scope, code changes, errors, or unforeseen conditions.

Objective

To determine if controls related to the construction change order process are in place and operating effectively.

Results in Brief

Controls related to the construction change order process are incomplete and not consistently applied:

1. Standard Operating Procedures (SOPs) for change orders are not updated.
2. The OFCI did not have written notification of potential change orders prior to initiation of the work by the contractor.
3. Internal change order procedures were not followed by OFCI staff.

Potential Risks

Inefficiencies in the construction process, including unauthorized change orders and additional costs.

Recommendations

1. Update SOPs for the change order process and document on the standard BCPS template.
2. Develop a procedure to expedite change order approvals for time critical contract changes.
3. Ensure that all required approvals and documentation are obtained for change orders.

Response

1. The OFCI will update the SOPs for change orders with the current process.
2. The Construction Change Directive (CCD) is the appropriate procedure for expediting change orders that are critical to the schedule. The CCD process was standardized and implemented during the auditing process. The OFCI will update the SOPs for the change order process to include the CCD process.
3. The Executive Director for the Department of Facilities Management and Strategic Planning will ensure that all office directors, within the department, review and sign the SOP for the Change Order Process and distribute it to all applicable departmental employees.

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BACKGROUND

<i>Responsibility</i>	The Office of Facilities Construction and Improvement (OFCI) staff of professional engineers, licensed architects, construction managers, and inspectors, manage all capital improvement projects for BCPS. Management of these projects includes the review and approval of construction change orders.
<i>Change Orders</i>	Change orders are necessary to give the school system and contractors flexibility to alter original contracts for various reasons, such as change in scope, code changes, errors, or unforeseen conditions. Change orders serve as a legal record of the agreement between parties as to the contract change and its associated cost/credit.
<i>Contingency</i>	BCPS typically includes an additional 10% of the original contract amount in a construction contract as a contingency to cover unanticipated costs that arise during construction. The contingency amount is reviewed and approved by the Board of Education (Board) as part of the total contract spending authority. If cumulative change order costs exceed the amount of the contingency at any time during construction, the Board must be notified to determine if an increase to the contingency amount is approved. Contingency amounts that remain once projects are complete are used for other approved projects.

COMMENDATIONS

<i>Contract Spending Authority</i>	The OFCI did not exceed the total contract spending authority, approved by the Board, for any of the change order packets tested.
<i>Approval Limits Not Circumvented</i>	The OFCI did not process multiple change orders to circumvent approval limits for any of the change order packets tested.
<i>Qualifications of Staff</i>	The OFCI team members involved in the change order review process are adequately qualified. Qualifications include a minimum of 28 years of construction and/or engineering experience, as well as education and certification commensurate with their job duties.

RESULTS

1. Standard Operating Procedures (SOPs) for change orders are not updated.

Criteria	Updated SOPs are an essential part of a complex office, division, or organization. SOPs provide guidance for day-to-day operations, assist in decision-making, can help streamline internal processes, and ensure compliance with laws and regulations.
Finding	Written procedures for the change order process were developed in 2009 but have not been updated to reflect changes in the process. Additionally, the procedures are not documented on the current BCPS SOP template.
Effect	The absence of updated SOPs can result in an inconsistent approach to processing change orders, which may lead to inefficiencies in the construction process, including unauthorized change orders and additional costs.
Recommendation	The OFCI should review and update the existing written process for change orders and document them on the standard BCPS SOP template. Processes to be documented should include change order proposals, documentation requirements and approvals.

Management's Corrective Action

The OFCI will update the SOPs for change orders with the current process.

Responsible Person(s) Director, OFCI

Anticipated Completion Date July 1, 2024

2. The OFCI did not have written notification of potential change orders prior to initiation of the work by the contractor.

Criteria	Internal procedures in use by the OFCI indicate that the construction manager or consultant must advise a BCPS project manager via a letter that there is a potential change order to their contract. BCPS will not consider any change orders without proper and timely notification.
Finding	For 11 of the 39 change orders tested, documentation reviewed indicates that the contractor began work to complete changes to the contract prior to providing written notification to BCPS and starting the approval process. The number of calendar days from start of work to written notification ranged from 42 to 796 and averaged 232 days. The amount related to these change orders ¹ totaled \$136,967.
Cause	<p>Changes to a contract may need to be made quickly to address safety concerns or maintain a project schedule². In these cases, the OFCI indicated that a change order may be unofficially approved in an email or at a construction progress meeting, prior to obtaining the required documentation and approvals. However, documentation to support the unofficial approval is not always maintained.</p> <p>The OFCI also indicated that contractors will at times assume the financial risk of initiating work on their own accord prior to approval by BCPS.</p>
Effect	A precedence is set when contractors are allowed to initiate work for change orders that are not officially communicated and approved. This could create a lack of legal defense if a contractor requests payment for additional work that is unauthorized and unnecessary. Additionally, as there is no documented criteria for when this informal process should be used, it may be used inappropriately and lead to unnecessary work and expense.
Recommendation	<p>The OFCI should develop and implement a procedure to expedite change order approvals for time critical contract changes:</p> <ol style="list-style-type: none">1. Determine when expedited change order approval is warranted.2. Identify the steps required to document that OFCI personnel are aware of, and agree with, the proposed changes prior to the start of work by the contractor.

¹ None of these change order exceeded the total contract spending authority approved by the Board.

² For the 11 exceptions noted in this finding: two were due to safety concerns, two were due to project scheduling, and four were due to risk assumption by the contractor. The reason(s) for the three remaining exceptions are unknown.

Contractors who fail to adhere to the BCPS change order process should be notified in writing of their non-compliance and reminded that failure to comply may result in non-payment for unauthorized work.

Management's Corrective Action

The Construction Change Directive (CCD) is the appropriate procedure for expediting change orders that are critical to the schedule. The CCD process was standardized and implemented during the auditing process. The OFCI will update the SOPs for the change order process to include the CCD process.

Responsible Person(s) Director, OFCI

Anticipated Completion Date July 1, 2024

3. Internal change order procedures were not followed by OFCI staff.

Criteria	Internal procedures in use by the OFCI require that: <ol style="list-style-type: none">1. All change orders are approved by an OFCI senior supervisor and project manager. If the change order is \$25,000 or more, approval by the Department of Facilities Management and Strategic Planning (DFMSP) Executive Director is also required. If the change order is \$50,000 or more, approval by the BCPS Superintendent must also be obtained.2. The BCPS project manager must prepare a justification letter stating why a change order is necessary.
Finding	The internal procedures in use by the OFCI were not followed for two of the 39 change orders tested: <ol style="list-style-type: none">1. The OFCI did not obtain approval from the DFMSPP Executive Director, and the BCPS Superintendent for a change order that exceeded \$50,000.2. The OFCI did not obtain a justification letter from the BCPS project manager for a \$49,500 change order.
Cause	The OFCI indicated that these findings are the result of an oversight.
Effect	Fraudulent or erroneous change orders may be processed if monitoring and approval controls are not consistently followed.
Recommendation	OFCI should ensure that all change orders are properly supported and approved.

Management's Corrective Action

The Executive Director for the Department of Facilities Management and Strategic Planning will ensure that all office directors, within the department, review and sign the SOP for the Change Order Process and distribute it to all applicable departmental employees.

Responsible Person(s) Director, OFCI

Anticipated Completion Date July 1, 2024

OBJECTIVE, SCOPE & METHODOLOGY

- Objective** To determine if controls related to the construction change order process are in place and operating effectively.
- Scope** Internal Audit tested a sample of construction change orders that received final approval during FY23.
- Methodology** To achieve the audit objectives, we performed the following:
- Reviewed OFCI internal procedures to process, review and approve construction change orders.
 - Reviewed the qualifications of all OFCI staff responsible for the review and approval of construction change orders.
 - Determined there was a total population of 234 change order packets approved in FY23, with an absolute value³ of \$7,647,813.09. Based on this population, we selected a random sample of 29 construction change orders packets⁴, with an absolute value of \$741,120.65, and tested them for proper supporting documentation and approval.
 - Ensured that the contract spending authority, approved by the Board, was not exceeded for the sample selected.
 - Ensured that construction change order transactions were not split to circumvent approval levels for the sample selected.

³ Absolute value was used because both positive and negative change orders require the same level of review and approval.

⁴ A change order packet may include more than one change order for the same project and vendor. There were 39 individual change orders accounted for in the 29 packets tested.