



**Seattle Public Schools  
The Office of Internal Audit**

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**Capital Internal Audit Report  
Historic Horace Mann School Construction**

Issue Date: June 16, 2015



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# Capital Internal Audit Report Historic Horace Mann School Construction

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## Executive Summary

### Introduction and Background

This report contains the results of our construction audit of the Historic Horace Mann School addition and renovation project. Construction audits are designed to provide additional financial controls and accountability over the District's capital project expenditures.

The Horace Mann Building opened in 1903 and was closed as an elementary school in 1968. Since 1970, it has housed alternative programs. The scope of the Horace Mann project consisted of renovation of a 33,000 square foot historic building, including exterior siding replacement; window refurbishment; service kitchen installation; structural, mechanical, electrical, and plumbing upgrades; ADA, health, building, and fire code upgrades; and construction of a 15,000 square foot classroom addition. The 366-seat capacity school will serve as the permanent home of the Nova program.

The cost of construction was \$9.3 million, which included 27 change orders totaling \$1.3 million. The original notice to proceed date was September 3, 2013, and planned substantial completion was July 1, 2014. Due to the contractor's inability to access the site, the start of construction was delayed by 76 days and substantial completion was revised to September 15, 2014. Subsequent change orders added another 46 days to the project and ultimately changed the substantial completion date to October 31, 2014.

In late October 2014 the District began expressing concerns to the contractor that the October 31 deadline would not be met and that the District intended to assess liquidated damages. When substantial completion was not reached by the contractual date, the contractor requested an equitable adjustment of additional compensation and 105-days of extra time for what the contractor believes are owner-caused delays. Equitable adjustments are changes that are necessitated by some modification of the contract effort. The contract general conditions describe the circumstances under which the contractor's request for equitable adjustment may be granted.

*If the Contractor's cost and/or time of performance is changed as a result of the fault or negligence of Owner, its agents, employees or contractors, such action shall be treated as a Change hereunder. Contractor shall be entitled to an equitable adjustment of the Contract Sum and/or Time to the extent such Change is caused by the Owner, its agents, employees and contractors, provided Contractor notifies Owner of such fault or negligence as set forth below. No equitable adjustment shall be allowed to the extent Contractor's changed cost of performance (a) is due to the fault or negligence of Contractor or anyone for whose acts Contractor is responsible; or (b) is concurrently caused by Contractor and Owner.*

*Any change in the Contract Time covered by a Change Order, or based on a request for any equitable adjustment in the Contract Time, shall be limited to the change in the critical path of Contractor's schedule attributable to the change of Work or event(s) giving rise to the request for equitable adjustment. Any Change Order Proposal or request for adjustment in the Contract Time shall demonstrate the impact on the critical path of the schedule. Contractor shall be required to establish clearly that the change or event (1) had a specific impact on the critical path (2) was the sole cause of such impact (except in the case of concurrent delay) and (3) could not have been avoided or mitigated by resequencing of the Work or other reasonable alternatives.*



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The project was substantially completed on February 13, 2015. On February 19, 2015, the District denied the contractor's request for additional time and compensation. On May 6, 2015, the contractor filed a formal delay claim. A claim is the contractor's exclusive remedy for resolving disputes with the owner regarding the terms of a change order or a request for equitable adjustment. The contract defines the procedures that must be followed when a claim is filed. The District has retained legal counsel to assist with its defense.

As of today, the District has not granted an extension of time, paid additional compensation, or assessed liquidated damages. Final completion has not been reached, and the contractor is unable to predict when it will occur.

### **Audit Objectives**

- To evaluate the methods and processes used by the District to manage the construction delays on the Horace Mann project.
- To identify factors that could contribute to project delays in general and provide recommendations to mitigate this risk.
- To determine the impact of the project's changes and delays on overall project costs, contingency use, and the District's compliance with competitive procurement requirements.

### **Audit Approach and Methodology**

To accomplish the objectives, we performed the following procedures:

- Reviewed contract provisions applicable to all audit topics.
- Verified construction costs as they pertained to the audit objectives.
- Examined evidence related to the contractor's request for equitable adjustment.
- Interviewed the prime contractor and District personnel from various departments.
- Identified best practices and relevant criteria for construction scheduling, delays, liquidated damages, and claims.
- Reviewed permitting processes, correspondence, and payment documentation.
- Analyzed and aged contractor requests for information.
- Examined Mann project change orders and change order logs.
- Reviewed relevant District procurement policies and procedures.



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### Conclusion

Based on our findings, the District could improve upon the methods used to manage the Horace Mann project delays. The audit identified other risks that could potentially contribute to delays on District projects. Therefore, this report contains recommendations that may assist in mitigating those risks. It is not evident that the Horace Mann project delays significantly impacted its overall construction budget. As it pertains to the audit objectives, we found that the District complied with competitive procurement requirements.

*Kimberly A. Fry*

Kimberly A. Fry, CPA, CGMA  
Auditor in Charge

*Andrew Medina*

Andrew Medina, CPA, CFE  
Director, Office of Internal Audit



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### Findings and Recommendations

#### 1) Construction Delay Costs

We identified \$98,000 in costs to the District for the 76-day delay in the start of construction on the Horace Mann project. The District incurred additional costs during construction for legal advice and expert analysis of the contractor's schedules and request for equitable adjustment. The analysis of the schedules and request for equitable adjustment was provided by one of the District's construction managers through two modifications to the construction manager's contract.

We found that the hourly rate the District paid under the modifications exceeded the rate for other District projects managed by the construction manager, even though the services provided were similar. The rate also exceeded the rate for the same services rendered before construction commenced on the Mann project. Even though the value of the modifications was below the competition threshold, the District should have been more cognizant of price when procuring these added services.

#### Recommendation

For projects managed in-house, we recommend the District adequately review cost proposals and ensure it is receiving the best value for services that will be provided by the construction manager. Alternatively, the District could negotiate rates for in-house projects when procuring the construction management contract.



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### **2) Construction Progress Schedules**

The project schedule allows the owner and contractor to properly coordinate the work and resources that are needed to timely complete a project. During construction, monthly updated schedules indicating the status of each activity are critical in understanding delays and what events are impacting the substantial completion date. An analysis of the schedule can assist in calculating time extensions, compensability, concurrency, liquidated damages, and actual damages.

The District requires two commonly used scheduling methods from its construction contractors, bar chart and critical path method (CPM). Bar chart schedules primarily indicate when activities start, their duration, and finish date. CPM schedules, however, show interrelationships between activities, making it more conducive to assessing delay impacts. The Horace Mann project required monthly bar chart schedule updates from the contractor. When the project fell behind, the District, as allowed by the contract, requested CPM schedules in order to analyze the delays claimed by the contractor.

### **Recommendation**

CPM schedules have become a standard tool for project control and assigning responsibility for delays. We recommend the District require CPM schedules for all BEX projects.



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### 3) Permitting Delays

The Horace Mann contract contained an alternate for the addition of a serving kitchen and associated labor and equipment. The permit granting authority has to review the plans and specifications for the operation to ensure it will have all the necessary facilities and equipment. In December 2014 the contractor attempted to schedule a pre-operational inspection of the school kitchen with King County Public Health. At that time, it was discovered that the county never received plans and specifications for kitchen construction. The District's original building permit application and plans for school renovation and classroom additions were reviewed by the county in June 2013. Due to an oversight by the District, the kitchen was not part of that plan review.

A separate permit for the kitchen ventilation hood was not issued until mid-May, which has been one contributor to the delay in final completion of the Mann project. Final completion should have occurred 14 days after substantial completion.

#### Recommendation

We recommend the District maintain a log to track the status of all required permits, which authority will issue each permit, the permit fee, which party will apply for and which party will pay for the permit, the date the permit was applied for, and the date it is expected to be received. We also suggest the District use the charge accounts set up with the county and the city to pay permitting fees.



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### 4) Calculation and Assessment of Liquidated Damages

Liquidated damages provide a method of cost recovery to a project owner if the contractor fails to complete the work by the substantial completion date. The owner estimates the daily cost of a potential delay and includes this amount in the bid documents and the contract. For each project, the liquidated damages estimate should be a reasonable approximation of the losses the District would incur. The District should maintain a record of the anticipated administrative costs, temporary facilities costs, additional designer fees, etc. that comprise the liquidated damages calculation. The District could not demonstrate that it maintains documentation that supports the reasonableness of liquidated damages calculations.

Additionally, we noted that in late October 2014, the District notified the contractor of the intent to impose liquidated damages, but the District never collected damages. We found that the District also issued change orders and change directives for additional work after the contractual substantial date.

### Recommendation

We recommend the District create a template for liquidated damages estimates and maintain documentation that supports the amount and explains the basis for the calculation.

We also recommend the District:

- Provide written notice that reserves the right to impose liquidated damages when it first appears substantial completion will not be timely achieved.
- Specify a date by which liquidated damages will be imposed.
- Modify the language on any change orders issued after the substantial completion date to reserve the District's right to claim liquidated damages for any delays that occurred prior to the change order.





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### **5) Responses to Requests for Information**

A request for information (RFI) is a written request by the contractor or a subcontractor asking the designer to provide additional information to clarify an item in the drawings or specifications, or to address problems that have arisen under field conditions.

RFIs can lead to change orders and should be effectively managed to keep the project on schedule. The architect should answer questions from the job site promptly and in writing to avoid delays. Contracts often define the period of time that the architect has to respond to an RFI.

We reviewed how RFIs were tracked, whether all RFIs received responses, and how timely the responses were. In the absence of specific contract requirements, we examined RFI response times for reasonableness. We found no evidence of outstanding RFI's, but we noted that some responses were received by the contractor after the date needed and more than 20 days after they were submitted.

#### **Recommendation**

Best practices indicate RFI response times should be defined and documented. Therefore, we advise the District to establish and document a reasonable response time for RFIs.



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### **6) Change Order Processing**

A determination of whether the contractor is entitled to additional time is an essential component of change order negotiations. Changes to work that impact the critical path of the contractor's schedule or that cause another activity to become critical should be evaluated for a change in contract time. If additional time is needed, it is appropriate to include it in the approved change order. This is important because, unless otherwise noted, the price and time adjustments in the change order constitute full settlement.

We found that many of the contractor's proposals stated that time could not be established and attempted to reserve the right to request additional time at a later date. The final, approved change orders, however, contained no indication that time was considered, nor did they grant a reservation of rights to the contractor.

#### **Recommendation**

The District should consider the time component in all change order negotiations, document that consideration, and when an entitlement to additional time is appropriate, incorporate it into the change order. If the contractor is unable to establish the additional days needed, adjustments to time should be estimated. Best practices suggest all change orders should contain some type of change statement.



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### Management Response

#### **Construction Delay Costs**

*Agreed. Project managers should confirm personnel pricing is consistent with contract documents and should be similar to pricing for other projects when the same or similar scope of work is being proposed. Review contract documents prior to approving contract modifications to confirm proposed hourly rates are consistent with the contract documents.*

#### **Construction Progress Schedules**

*Agreed. Critical Path Method (CPM) schedules will be required for all BEX and BTA projects in excess of \$5,000,000 and exceeding six months in duration.*

#### **Permitting Delays**

*Agreed. Project Master Use Permits (MUP) and building permits will be tracked. Representatives from Seattle Public Schools and City of Seattle Department of Planning and Development are now meeting on a monthly basis to identify project required permits and discuss status. Meeting agendas are prepared prior to the meeting and minutes issued following the meeting. Charge accounts are set-up for paying City of Seattle permit fees.*

#### **Calculation and Assessment of Liquidated Damages**

*Agreed. Capital Projects Staff will work with the Business Office to calculate financial loss per day if project is delayed and delivered late. This calculated amount will be project specific and notated in the bid and contract documents.*

#### **Responses to Requests for Information**

*Agreed. Project Managers will review with project architects and engineers time allowed responding to a Request for Information (RFI). RFI response duration is noted in the project General Conditions for the construction contract.*

#### **Change Order Processing**

*Agreed. SPS will address time delay in all change orders and include a narrative in the record of negotiations with the contractor that the time delay was discussed and is either resolved or a 30-day period was reserved to allow contractor to determine the impact of the changed condition.*