

**UNIVERSITY OF CALIFORNIA, SAN FRANCISCO  
AUDIT AND ADVISORY SERVICES**

**Systemwide Construction Audit  
Project #16-016**

**April 2016**

University of California  
San Francisco



**Audit and Advisory Services**

April 13, 2016

**MICHAEL BADE**

Associate Vice Chancellor  
Capital Programs

**SUBJECT: Systemwide Construction Audit**

As a planned internal audit for Fiscal Year 2016, Audit and Advisory Services (“AAS”) conducted a review of selected construction processes. Our services were performed in accordance with the applicable International Standards for the Professional Practice of Internal Auditing as prescribed by the Institute of Internal Auditors (the “IIA Standards”).

Our review was completed in February 2016 and the preliminary draft report was provided to department management in March 2016. Management provided us with their final comments and responses to our observations in April 2016. The observations and corrective actions have been discussed and agreed upon with department management and it is management’s responsibility to implement the corrective actions stated in the report. In accordance with the University of California audit policy, AAS will periodically follow up to confirm that the agreed upon management corrective actions are completed within the dates specified in the final report.

This report is intended solely for the information and internal use of UCSF management and the Ethics, Compliance and Audit Board, and is not intended to be and should not be used by any other person or entity.

Sincerely,

A handwritten signature in black ink, appearing to read 'Irene McGlynn', with a horizontal line extending to the right.

Irene McGlynn  
Director  
UCSF Audit and Advisory Services

## EXECUTIVE SUMMARY

### I. BACKGROUND

At the request and direction of the Office of the President (UCOP), Audit and Advisory Services (AAS) completed a review of selected construction processes at the University of California, San Francisco (UCSF). This review was conducted as part of a systemwide construction audit performed at all 10 University of California (UC) campuses and the Lawrence Berkeley National Lab. The audit scope, construction project selection criteria and audit program are consistent at all locations and included the following key areas under review: bidding and contracting, construction insurance, change order management, and monitoring funding restrictions and requirements. Local campus audit departments had discretion in determining the sample selections for areas under review.

At UCSF, between Fiscal Years 2012-13 and 2014-15, there were nine major construction projects with total construction expense of \$932 million (6 campus projects totaling \$155 million and 3 medical center projects totaling \$777 million).<sup>1</sup>

UCSF construction projects are governed by the California Public Contract Code and the UC Facilities Manual that provide guidelines for planning, bidding, contracting, design, and construction administration. UCSF construction projects are primarily built using the following types of contracts: lump sum, design-build, and construction management at risk.

### II. AUDIT PURPOSE AND SCOPE

The purpose of this review was to assess the effectiveness of UCSF's construction management practices, internal controls and processes related to the administration of construction activities, specifically bidding and contracting, construction insurance, change order management and monitoring funding restrictions and requirements.

The scope of the review was limited to the selection and review of one active construction project between fiscal years 2012-13 and 2014-15. AAS judgmentally selected the Mission Hall project (UCSF Global Health & Clinical Sciences Building at Mission Bay) for detailed review using UCOP established criteria (an active construction project over \$60 million and funded by Proposition 1D).<sup>2</sup> Mission Hall provides office space for clinical faculty supporting the medical center as well as space for academic and research units. The building is approximately 264,000 square feet and was built for \$119 million using a design-build contract.

Procedures performed as part of the review included interviews of department personnel and walkthroughs to understand departmental processes; analysis of construction projects awarded in the past three years; confirmation of insurance enrollment; review of construction documents and a sample of change orders for compliance with university and campus policy. For more detailed steps, please refer to Appendix A.

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<sup>1</sup> Projects included in these figures had construction costs of \$5 million or more.

<sup>2</sup> Proposition 1D provided UC with \$690 million over a two year period to fund construction and renovation of its facilities. UCSF only had one construction project funded by Proposition 1D, which was completed and therefore not selected for this review.

Work performed was limited to the specific activities and procedures described above. As such, this report is not intended to, nor can it be relied upon to provide an assessment beyond those areas specifically reviewed. Fieldwork was completed in February 2016.

### III. **SUMMARY**

Based on work performed, the campus practices relating to bidding and contracting, construction insurance, change orders and funding restrictions were generally effective and complied with university policies. Processes to review and approve change orders and monitor compliance with funding restrictions appeared to be appropriate.

Opportunities to improve internal controls were identified for change order documentation where cost breakdowns were not always sufficiently detailed to support the reasonableness of the costs and demonstrate a legitimate change in the scope of work.

Additionally, during the course of the review, we identified two potential opportunities to enhance process efficiencies regarding change order tracking to increase management oversight, and communication of a capital project's funding restrictions and requirements among the various stakeholders could be improved.

**IV. OBSERVATION AND MANAGEMENT CORRECTIVE ACTION**

No.	Observation	Risk/Effect	Recommendation	MCA
1	<p><b><i>While change orders were reviewed and approved by Capital Projects management, cost breakdowns were not consistently detailed to support that the expenses were fair and reasonable and outside the original scope of the contract.</i></b></p> <p>Our review of 11 expenses<sup>3</sup> identified the following:</p> <ul style="list-style-type: none"> <li>• One change order contained an expense of \$570,960 for landscaping revisions that was not sufficiently detailed to support the reasonableness of the costs or demonstrate a change in the project scope.<sup>4</sup> Specifically, breakdowns and justification of the subcontractor’s costs were not documented.</li> <li>• One change order contained an expense of \$1 million for overtime to complete the building early that was not sufficiently detailed to support that the expense was fair and reasonable. Although appropriate justification was evidenced in the change order to support that the expense was outside the original scope of the project, a breakdown of overtime hours needed by position was not documented.<sup>5</sup></li> </ul> <p>Per the UC Facilities Manual, the cost of a change order may be determined by a lump sum agreed upon by the university and the contractor. However, the lump sum proposed must be determined to be fair and reasonable. Generally, the contractor is asked to provide an estimate with detailed backup using a cost proposal.</p>	<p>Without detailed documentation to support change orders, it is not possible to determine if they are fairly and reasonably priced and represent a legitimate change in the scope of the project.</p>	<p>Management should ensure that change orders are sufficiently detailed, including cost proposals and itemization where appropriate, to ensure a determination can be made as to the reasonableness of the costs and appropriateness of the change in the scope of work.</p>	<p>1. By June 30, 2016, Capital Projects (CP) will provide a training refresher of the change order process and policy to all project managers at their monthly training class.</p> <p>2. By September 30, 2016, CP will map the current change order process and capture the improved process in their Standard Operating Procedures format.</p> <p>3. By November 30, 2016, CP will incorporate item 2 into the new Primavera Unifier Business System being implemented as a template business process to assure compliance and standardization and improve audit ease and compliance validation.</p>

<sup>3</sup> There were a total of 21 change orders consisting of 181 expenses totaling \$8.1 million. The sample selected was 11 of the 181 expenses from 6 of the 21 change orders totaling \$2.7 million representing 33% of the \$8.1 million.

<sup>4</sup> Change Order #8, Item #8022 for \$570,960, South Landscape Revision.

<sup>5</sup> Change Order #20, Item #8169 for \$1 million, Overtime to Enclose Building Early. Items included in the change order consisted of costs for crane, crane operator, additional mobile crane, hoist operator, subcontractor overtime and contractor overtime.

**V. OPPORTUNITY FOR IMPROVEMENTS**

<b>No.</b>	<b><u>Observation</u></b>	<b><u>Recommendation</u></b>
1	<p><b><i>Capital Projects does not have standardized procedures to maintain a master change order log by project to facilitate the effective management and monitoring of change orders.</i></b></p> <p>Generally, change orders are aggregated to include multiple unrelated items in order to streamline the approval process. It is common to find anywhere between 20-30 or more change orders for a single construction project, each with 1-30 line items. A master log by project containing the expenses from all of the change orders is not consistently maintained to allow for the efficient monitoring and analysis of these expenses by origin, amount and description to ensure the accumulation of these expenses are appropriate and well managed.</p>	<p>Management should consider maintaining a detailed change order log, listing the itemized changes for all change orders related to a project.</p> <p>This log should be retained in the new Capital Programs Unifier business system being deployed in 2016.</p>
2	<p><b><i>Communication among the various groups responsible for monitoring compliance with funding restrictions and requirements for capital projects could be improved.</i></b></p> <p>Restrictions and requirements of the project funding plan are not always communicated to the Capital Projects personnel at the beginning of a project. This may result in additional work for the Project Manager (in Capital Projects) during the course of the construction project to reclassify expenses to the appropriate funding source.</p> <p>The Budget Office meets with the Capital Accounting group within the Controller’s Office monthly to manage the accounting of the construction funds; however, Capital Projects personnel are not always informed of the funding restrictions at the beginning of the project.</p>	<p>When the project funding plan and related restrictions are known to Capital Projects personnel at the beginning of the project, all accounting entries should be correctly posted initially. At the beginning of a project, management should thoroughly review the project funding plan with key stakeholders so that all personnel involved with ensuring compliance with funding requirements understand the restrictions of the various funding sources.</p> <p>Capital Programs is implementing the Unifier business system to automate and integrate their business processes. One of the benefits of the Unifier system will be to enable greater visibility into capital project data (including funding sources and their associated restrictions and requirements) across departments. This data will be fully available to help ensure that all stakeholders (including the Budget Office, Capital Programs and their customers) are aware of all project related funding restrictions and enhance compliance and transparency.</p>

**APPENDIX A**

To conduct our review the following procedures were performed for the areas in scope:

- Reviewed the University of California Facilities Manual to gain an understanding of the relevant bidding and construction administration policies and guidelines.
- Interviewed key department personnel in Contract Services, Capital Budgets and Capital Projects to gain an understanding of procedures and practices within those departments.
- Performed an analysis of contractors and subcontractors awarded construction projects over the past three years to identify trends that show a few contractors are receiving a significant percentage of the construction jobs.
- Reviewed construction documents for the selected project to verify that they are appropriately reviewed and approved.
- Reviewed bidding documentation for the selected project to verify that the awarding of the contract complied with the Facilities Manual.
- Confirmed with the University Controlled Insurance Program (UCIP) program administrator that the contractor and subcontractors were appropriately enrolled in the insurance program (NOTE: UCIP is a controlled insurance program for large construction projects established by the Regents of the University of California).
- Reviewed all change orders exceeding \$100,000 for the selected project to determine if there is appropriate justification for not soliciting bids for the work.
- Reviewed a sample of change orders for the selected project to determine if the costs were fair and reasonable, in accordance with the contract terms and conditions, approved appropriately, and represented a legitimate change in scope.
- Evaluated the adequacy of departmental procedures and practices to ensure compliance with funding restrictions and requirements for the selected construction project.