

March 11, 2014

VICE CHANCELLOR REESE

Subject: Audit Report No. M14A001
 Housing 4 and Student Services Building Construction Projects

Attached is the final report for Audit No. M14A001: Housing 4 and Student Services Building Construction Projects. With the issuance of this final report, please destroy any previous draft versions

I appreciate the assistance provided to us by the Design and Construction staff. If you should have any questions, please feel free to contact me.



Todd Kucker
Internal Audit Director
UC Merced Internal Audit Services

Attachment

cc: SVP Vacca
 Chancellor Leland
 Associate Vice Chancellor and Campus Architect Lollini
 Director Boyd
 Risk Manager Castillo

**UNIVERSITY OF CALIFORNIA, MERCED
INTERNAL AUDIT SERVICES**

**Housing 4 and Student Services Building Construction Projects
Report No. M14A001**

March 11, 2014

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Objectives and Scope

Internal Audit has completed an audit of two recent construction projects, which was a part of the fiscal year 2013-2014 audit plan. The primary purpose of this audit was to ensure that the construction projects were properly awarded and effectively managed. The audit objectives were:

- To confirm that construction project bids were in compliance with institutional policies
- To verify that construction projects were in compliance with applicable contract terms and conditions.

The scope of the review included all phases of the following two projects:

Project	Approved Budget for Project
Housing Phase 4: The Summits	\$54,296,000
Student Services Building	\$19,820,000

The Housing 4 project constructed the Summits dormitory for lower division students. Planning and construction of the building began during 2010 and the building was occupied in August 2013.

The Student Services Building provided classroom and office space. The building project began during 2011 and was occupied in two stages during August 2013 and January 2014.

To accomplish the audit objectives, the following steps were performed:

- Bidding: Review of construction project bid solicitation documents, bid submittals, bid tabulations, and bid award/rejection letters to ensure compliance with institutional policies.
- Contract Compliance: Review of construction payment applications including summaries and detailed support (labor, equipment, materials, expenses, suppliers, etc.) to ensure compliance with applicable terms and conditions of related construction contracts including exhibits, appendices and rate sheets.
- Change Orders: Review of construction change order logs, detailed support and approvals to ensure compliance with both institutional policies and contract requirements.
- Data Analysis: Review and analysis of construction contractor Job Cost Data and Payroll Data, where applicable, to ensure costs, including labor, are in line with billed costs.

Background

At UC Merced, Design and Construction is the department responsible for the design, development, and construction of buildings, infrastructure, and facilities. The department is part of the Business and Administrative Services division. The department's name and composition changed during fiscal year 2013 from "Physical Planning, Design, and Construction" when the Physical and Environmental Planning department moved to the Division of Planning and Budget.

Per Design and Construction's metrics, during 2006 through 2013, the department has delivered \$390 million in project value at approximately \$870,000 under approved budgets, with a smaller staff than other UC campuses.

Conclusion

Based upon the audit, we concluded that the Housing 4 and Student Services Building projects have been effectively managed by Design and Construction. We noted areas where documentation could be improved. Since these projects began, Design and Construction has added an archivist to their staff to organize and maintain construction documentation. We identified the following areas for improvement:

- Documentation which provides evidence of fair processes in the competitive selection of contractors and professional firms
- Review that contractors and professional firms have adequate insurance coverage
- Review of change order costs

Observations and Management Action Plans

The observations and management action plans have been organized based upon the areas reviewed: bidding and competitive selection, contract compliance, and change orders.

Bidding and competitive selection of contractors and firms

1. Improve control over documentation

Contractors submit bid packages to bid for work on the projects. After bids are reviewed, a summary sheet is put together which identifies the bid details received from different vendors.

Bid packages for the bidders not awarded the work could not be located for two trade packages for the Student Services Building. As a result, we could not verify the documentation on the bid summary sheets.

Maintaining bid documentation is important as bidders can challenge the bid results after work is awarded. The University is required to award work to the "lowest responsible bidder".

We recommend that bidding documentation be managed centrally by Design and Construction. Since the time that these bids were completed, Design and Construction has hired an archivist to manage the large amount of documentation maintained for construction projects.

Management Action Plan

During 2013, an archivist was added to the Design and Construction staff. The archivist maintains all of the construction documents in electronic form. Design and Construction have

updated workflows so documents are provided to the archivist after various stages throughout the building projects. This action plan was completed before this report was issued.

2. Improve the documentation related to the competitive selection of professional firms

The University is required to use competitive processes to select contractors and vendors when the goods or services will cost over \$100,000.

To award contracts to professional firms (architects, project managers, etc.), potential firms present their expertise and prices to Design and Construction employees. Based upon these formal presentations, employees evaluate potential firms and award the contracts. For the Housing 4 and Student Services Building projects, sufficient documentation to explain why particular professional firms were selected could not be located. This documentation is usually maintained by the project manager, but there has been turnover in this position since the beginning of these projects.

We recommend that when professional service firms are evaluated, written explanations for the selection of particular firms be compiled and maintained where Design and Construction employees can access the information.

Management Action Plan

After interviews with prospective professional firms, documentation for the basis of selecting particular firms will be compiled based upon feedback from the employees who participated in the selection process. This written documentation will be maintained by the department's archivist. This action plan will be completed for current and future projects. The new process was implemented before the report was issued.

Contract Compliance

3. Review that contractors have adequate insurance coverage

BUS-63 *Insurance Requirements and Certificates of Insurance* is the UC policy which outlines insurance requirements for contractors. A certificate of insurance is a document that provides evidence that the individual or entity has adequate insurance coverage in force to protect the interests of the University (and other parties when necessary).

During the audit, we reviewed a sample of certificates of insurance provided by contractors to determine whether Design and Construction obtained sufficient evidence of adequate insurance coverage (insurance requirements are listed in the UC Facilities Manual and in the contracts) from contractors. We identified instances where current certificates of insurance had not been obtained from some contractors and where insurance listed on the certificates was not in line

with contractual requirements. The University is at risk for loss if contractors do not obtain sufficient insurance coverage.

Per BUS-63, the campus risk services department is responsible for periodically reviewing certificates of insurance. We recommend Design and Construction work with Risk Services to implement a systematic process for reviewing certificates of insurance to verify that contractors are obtaining adequate insurance and to verify that updated certificates are obtained.

Management Action Plan

Design and Construction will work with the Risk Management Office to come up with a way to track insurance expirations so both groups can periodically review insurance information and procedures. The action plan will be completed by June 30, 2014.

Change orders

4. Review of change order costs

We reviewed change orders totaling \$918,747 (46%) of the \$2 million worth of change orders charged to the projects. During the testing, we noted instances where contractors overcharged the University for work completed which were not identified during the project team's review process. The following are examples of what we noted.

- The cost of supervision was incorrectly included in the cost of a change order, which resulted in a \$4,282 overcharge. The general conditions in the contract state that supervision costs are not allowed in the costs of extra work.
- A contractor incorrectly calculated the cost of insurance and bonds at a rate around 3.6%. The general conditions read: "The cost for Insurance and Bonds shall not exceed 2%." This would have resulted in an overcharge of \$4,509, but the project team had already negotiated a discount for this change order work.
- Subsistence costs were incorrectly charged by a subcontractor, which resulted in an overcharge of \$1,485.

The construction managers that are hired by Design and Construction review change orders details to verify that only allowable costs are included. A checklist to be used in reviewing costs charged to the University is included in the project manager's contract. There was not always evidence showing that the checklist had been utilized during the review of costs.

We recommend that the review of costs charged on change orders be consistently documented with the required review checklist.

Management Action Plan

In the future, Design and Construction will minimize the use of multiple prime construction projects. This will greatly reduce the number of contractors submitting change orders. Design and Construction staff or their construction management consultant will review all change orders for compliance with contract terms utilizing the change order review checklist. This action plan has already been implemented on current projects (Science and Engineering II) and will be continued for future construction projects.