

Old Main Renovation Construction Contract

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Summary

Our audit of the Old Main (OM) Renovation construction contract was included in our approved Fiscal Year (FY) 2016 Audit Plan. The University of Arizona (UA) contracted for the OM renovation project with a construction phase Guaranteed Maximum Price (GMP) of \$9.8 million. Construction projects have been identified as strategic, high-risk areas for the universities. Charges to the project may not comply with the negotiated contract, resulting in overcharges and cost overruns.

Construction administration and project monitoring for UA is provided by Planning, Design and Construction (PD&C). Since 2009, we have completed ten audits of construction contracts administered by PD&C.



Background: Old Main is the UA's oldest building, built in 1891, and is on the National Register of Historic Places. After 122 years of use, the building's structure, verandas, and second floor had seriously deteriorated due to age and weather penetration. This project repaired and reconstructed the iconic

building, significantly extending its useful life while maintaining the historic character of the original building.¹

Old Main now houses administrative offices and serves in the recruitment of prospective students who take part in orientation and admissions activities within the building. On the second floor, rooms are available for meetings and social events. The second floor also showcases permanent displays of artwork and artifacts provided by the Arizona State Museum, the UA Museum of Art, the Center for Creative Photography, the Mineral Museum, and UA Special Collections.

Old Main received the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver Certification, indicating that the renovated building was designed to have lower operating costs, reduce waste, conserve energy and water, and to create healthy and productive work environments. In addition to LEED certification, the OM renovation project received the following awards:

- ♦ 2015 Governor's Heritage Preservation Grand Award;
- ♦ 2015 Governor's Heritage Preservation Honor Award;
- ♦ Tucson-Pima County Historical Commission's Historic Preservation Award;
- ♦ Design-Build Institute of America's Western Pacific Region Merit Award;
- ♦ 2015 Design-Build National Award of Merit;
- ♦ Arizona Forward Environmental Excellence Award;

¹ Minutes of the Arizona Board of Regents, Business and Finance Committee, June 13, 2012.

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- ♦ Metropolitan Pima Alliance Common Ground Award; and
- ♦ National Award of Merit in Rehabilitation, Renovation and/or Restoration from the Design-Build Institute of America.

At its June 2013 meeting, the ABOR Business and Finance Committee granted Project Approval of the OM project at a total cost of \$13.5 million. The approved funding plan included a \$5 million commitment from the UA Foundation and \$8.5 million from UA funds.

A request for qualifications (RFQ) was issued, and six responses were received. The contract was awarded to Sundt Construction, Inc. (Sundt) utilizing the Design-Build (D-B) project delivery method. The D-B contractor was selected through the capital project selection committee process prescribed by the Arizona Board of Regents (ABOR) procurement code policy. The contract with Sundt included design and pre-construction services as well as construction phase management, including coordinating all subcontracted work.

The OM Renovation D-B agreement was divided into two parts; Part 1 was executed for the Design and Pre-Construction Phases, and Part 2 was for the Construction Phase. The Part 1 agreement was for a stipulated sum of \$836,678, with subsequent amendments and change orders totaling \$725,245, for a final total Part 1 amount of \$1,561,923.

The Part 2 agreement, covered by this audit, consisted of three separate GMP documents to accommodate the continuum of design and construction and availability of funds. The GMPs were as follows: GMP 1 - \$964,000; GMP 2 - \$711,287; and GMP 3 - \$8,024,713. Nine change orders with a net total of \$107,298 brought the total Part 2 cost to \$9,807,298. See the following chart for details:

GMP Description	Amount
Initial Design and Pre-Construction Phase Fee	\$ 836,678
<i>Amendments 2 through 4²</i>	682,245
<i>Change Orders 4, 6, 7, and 11</i>	43,000
Final Design and Pre-Construction Phase Fee	\$1,561,923
Initial Construction Phase GMP 1	\$ 964,000
<i>Amendment 3 – GMP 2</i>	711,287
<i>Amendment 4 – GMP 3</i>	8,024,713
<i>Change Orders 1-3, 5, 8-10, and 12-13</i>	107,298
Final Construction Phase GMP	\$9,807,298
Total Design, Pre-Construction, and Construction GMP	\$11,369,221

² Amendment 1 pertained to the Bear Down Gymnasium Addition and Renovation that was subsequently put on hold and, therefore, not included in this audit.

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The GMP 1 *Notice to Proceed* was issued February 15, 2013, and construction work began immediately. The GMP 2 *Notice to Proceed* was issued July 1, 2013, and the GMP 3 *Notice to Proceed* was issued September 16, 2013. PD&C was satisfied with the quality of the work and issued a *Certificate of Substantial Completion* on July 1, 2014.

In accordance with Paragraph 3-804.B.3 of the *University Procurement Code*, the subcontractor selection process was based on qualifications or a combination of qualifications and price. Subcontractors were selected based on competitive bidding from an approved list of at least three pre-qualified firms.

The following table lists the top five subcontractors by subcontract dollar amount.

Trades Description	Subcontractor	Final GMP Amount
Mechanical	Sun Mechanical	\$1,459,556
Electrical	Sturgeon Electric	\$931,027
Roofing	Kovach	\$839,721
Carpentry	LeBlanc Building	\$690,019
Woods & Plastics	Sierra Woodworks	\$354,278

Audit Objectives: To determine whether financial transactions relating to construction activity for the OM project complied with the terms of the contract, including whether:

- contractor billings were adequately supported by actual costs, plus overhead, profit, and fees as specified by the construction contract;
- general conditions and requirements expenses were charged to the project in accordance with contract provisions;
- contingency funds were managed in accordance with contract requirements;
- change orders were priced according to the contract terms and were properly approved;
- the D-B provided the contracted scope of work;
- insurance coverage during construction was in compliance with the terms of the contract;
- quality assurance and control procedures were implemented in accordance with the contract terms; and
- opportunities for process improvements exist.

Scope: Our audit of the OM project included all construction-phase expenses incurred by Sundt from the start of the contract in February 2013 through June 2015, the last pay application processed prior to commencement of the audit.

We relied on PD&C's expertise for the construction technical aspects and, therefore, our scope of work did not include any on-site inspections to assess construction methods, materials, or compliance with design specifications. We also did not include any costs

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associated with the project that were not part of the D-B contract, such as PD&C internal costs.

Methodology: Our audit objectives were accomplished using the current Arizona University System Standard Construction Audit program, which includes:

- preparing a control schedule of the initial GMP, internal adjustments, and payment applications to ensure payments to the D-B did not exceed the approved final GMP;
- reviewing a combination of random and judgmentally selected sample of 6 (25%) of 24 construction phase payment applications and comparing the information in the payment applications to the subcontractors' supporting invoices or payment applications;
- recalculating the fee, bonds and insurance, and taxes applied against the GMP to verify accuracy of indirect construction costs;
- reconciling the job cost ledger against invoices and pay applications;
- reviewing general conditions and requirements line items and supporting documentation to ensure accuracy of items billed and that general conditions and requirements expenses such as job-owned equipment and rental equipment were in compliance with contract requirements;
- reviewing UA payments to vendors other than Sundt to ensure the expenses were not included in the D-B contracted scope of work;
- reviewing quality control processes, issues, and resolutions;
- verifying all required insurance coverage and bonds were maintained during the project;
- examining all nine change orders and supporting documentation to ensure the amounts agreed to subcontractor quotes and that the changes were reasonable and approved;
- reviewing contingency expenditures to ensure that all uses of the contingency fund were made in accordance with the contract;
- ensuring the subcontractor bidding process was performed in compliance with contract terms;
- reviewing subcontracts and bid documents for the five largest (by final contract dollar amount) subcontractors to ensure the contract terms were consistent and in compliance with the contract;
- examining project close-out documents to ensure punch list items were resolved and a substantial completion certificate was issued in a timely manner; and
- discussing the project with representatives from PD&C, UA Risk Management Services, and Sundt to obtain additional information and clarification.

Conclusions: Based on our audit work, the financial transactions relating to construction activity, by both Sundt and PD&C, complied with the terms of the contract. Specifically, the Schedule of Value (SoV) line items were based on actual costs and supported with back-up documentation. Additionally, the D-B contractor provided the contracted scope of work;

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insurance coverage during construction was in compliance with the terms of the contract; quality assurance and control procedures were implemented in accordance with the contract terms; change orders were priced in accordance with the intent of the contract terms; and close-out documents completed to date were in order.³

The audit identified the following opportunities for improvement that were discussed with PD&C staff. After discussing the results, we expect PD&C to further enhance their management of future construction contracts. Those issues included:

- The D-B contractor purchased additional Builder's Risk insurance for the existing OM building that was already covered by state risk insurance. Although the additional insurance was ultimately deemed beneficial, audit suggests that, going forward, PD&C consult UA's Risk Management Services prior to incurring additional insurance expense to ensure it is appropriate and prudent.
- The issue of change order markup fees was identified in previous audits, and based on our recommendation, the Tri-University contract committee revised the contract to increase the markup fee cap to 27%. However, three of the nine OM change orders still exceeded the cap due to the higher D-B fee. The Tri-University contract committee should consider revising the standard construction contract language regarding the markup fee cap to ensure compliance with the executed contract.

According to the Institute of Internal Auditors International Professional Practices Framework, an organization is expected to establish and maintain effective risk management and control processes. These control processes are expected to ensure, among other things, that:

- the organization's strategic objectives are achieved;
- financial and operational information is reliable and possesses integrity;
- operations are performed efficiently and achieve established objectives;
- assets are safeguarded; and
- actions and decisions of the organization are in compliance with laws, regulations, and contracts.

Our assessment of these control objectives as they relate to the OM Renovation construction contract is on the following page.

³ A contractor evaluation had not been completed since the project was not yet finalized.

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General Control Objectives	Control Environment	Recommendation	
		No.	Page
Achievement of the Organization's Strategic Objectives			
<ul style="list-style-type: none"> Strategic objectives were met by providing a renovated historic facility to assist with recruitment and retention by enhancing the aesthetics of the campus, and serving as a symbol of academic achievement in Southern Arizona. 	Reasonable to Strong Controls in Place		
Reliability and Integrity of Financial and Operational Information			
<ul style="list-style-type: none"> Contractor billings were adequately supported by actual costs incurred by the D-B contractor. 	Reasonable to Strong Controls in Place		
<ul style="list-style-type: none"> General conditions and requirements were charged to the project in accordance with contract provisions. 	Reasonable to Strong Controls in Place		
<ul style="list-style-type: none"> Contingency funds were managed efficiently and effectively. 	Reasonable to Strong Controls in Place		
<ul style="list-style-type: none"> Change orders were priced and approved according to contract requirements. 	Reasonable to Strong Controls in Place		
Effectiveness and Efficiency of Operations			
<ul style="list-style-type: none"> Quality control procedures were effective in ensuring compliance with the contract. 	Reasonable to Strong Controls in Place		
Safeguarding of Assets			
<ul style="list-style-type: none"> The D-B contractor provided the contracted scope of work. 	Reasonable to Strong Controls in Place		
Compliance with Laws and Regulations			
<ul style="list-style-type: none"> Insurance coverage was in compliance with the terms of the contract. 	Reasonable to Strong Controls in Place		
<ul style="list-style-type: none"> The contract was managed to ensure the D-B contractor complied with all terms of the contract. 	Reasonable to Strong Controls in Place		

We appreciate the assistance of both PD&C and Sundt representatives during the audit.

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