South Stadium Parking Structure
Construction Contract

May 2020       FY19 - #03

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Summary

Our audit of the South Stadium Parking Structure (SSPS) construction contract was included in our approved Fiscal Year (FY) 2019 Audit Plan. The University of Arizona contracted for construction of the SSPS with a construction phase Guaranteed Maximum Price (GMP) of $17.7 million. This construction project was part of the approved Campus Master Plan initiative within the Strategic Plan’s Institutional Excellence Pillar.

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 is provided by Planning, Design & Construction (PD&C). Since 2009, we have completed 17 audits of construction contracts administered by PD&C.

Background: The 282,000-gross-square-foot, five-level parking structure replaced surface parking that was lost due to recently constructed residence halls along 6th Street, a new campus recreation field, and the ENR2 building. The new parking structure provides 915 parking spaces and is located south of 6th Street near student housing and athletic facilities. The 6th St. & Warren Ave. intersection was redesigned to align with National Championship Drive to the north and includes a new traffic signal, sidewalks, and bike lanes that are expected to greatly improve traffic flow throughout the area and increase efficiency and safety.¹

The contractor was selected through the capital project selection committee process prescribed by the Arizona Board of Regents (ABOR) Procurement Code. McCarthy Building Companies, Inc. (McCarthy) was awarded the Design-Build (D-B) contract that included pre-construction design phase services as well as construction phase management.

At its November 2016 meeting, ABOR granted Project Approval for the SSPS at $22 million. The project was funded with Parking and Transportation Services funds and university cash reserves.

¹ PD&C Project Information web page.
Notices to Proceed were issued October 31, 2016, for initial mobilization and December 1, 2016, for the remaining construction work. The contract and subsequent change orders called for substantial completion by September 1, 2017. PD&C was satisfied with the quality of the work and issued a Certificate of Substantial Completion on September 1, 2017.

The SSPS project had an initial construction phase GMP of $893,682 plus one amendment totaling $15,634,531 and 12 change orders totaling $1,187,043, bringing the total construction phase final GMP to $17,715,256. See the chart below for details:

<table>
<thead>
<tr>
<th>GMP Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Pre-Construction/Design Phase Fee</td>
<td>$709,568</td>
</tr>
<tr>
<td>Amendments 1 through 6</td>
<td>1,401,756</td>
</tr>
<tr>
<td>Final Pre-Construction/Design Phase Fee</td>
<td>$2,111,324</td>
</tr>
<tr>
<td>Initial Construction Phase GMP</td>
<td>$893,682</td>
</tr>
<tr>
<td>Partial Construction Phase GMP (Amendment 5)</td>
<td>15,634,531</td>
</tr>
<tr>
<td>Change Orders 1 through 5 and 7 through 13(^2)</td>
<td>1,187,043</td>
</tr>
<tr>
<td>Final Construction Phase GMP</td>
<td>$17,715,256</td>
</tr>
<tr>
<td>Total Pre-Construction and Construction GMP</td>
<td>$19,826,580</td>
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</tbody>
</table>

**Audit Objectives:** Our audit objective was to determine whether financial transactions relating to construction activity complied with the terms of the contract. Based on our risk assessment of this contract, our audit objective included whether:

- contractor billings were adequately supported by actual costs;
- General Requirements and General Conditions (GR&GC) expenses, to include direct labor and equipment rental costs, were charged to the project in accordance with contract provisions;
- the GMP was paid in full and did not exceed the agreed upon GMP amount;
- bond and insurance coverage during construction was in compliance with the terms of the contract;
- change orders were priced according to the contract terms and were properly approved;
- change orders represented an actual change in scope;

\(^2\) Change Order 6 was for the separate, but related Parking Lot Improvements project.
• the D-B contractor provided the contracted scope of work, to include whether project alternates were accepted via contract incorporation or change order, allowances were adjusted to actual, and contingency funds were managed in accordance with contract requirements;
• subcontracts were competitively bid, subcontractor change orders were in accordance with contract documents, backcharges were appropriately handled, subcontractor lien waivers were on file, and subcontractors were properly licensed;
• project close out documents were complete and overhead, profit, and fees were applied as specified by the construction contract; and
• opportunities for process improvements exist.

Scope: Our audit of the SSPS project included all construction phase expenses paid to the D-B contractor from the start of the early construction phase in January 2016 through the final payment application processed in October 2018.

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 associated with the project that were not part of the D-B construction phase contract, including architectural fees or PD&C internal costs.

Methodology: Our audit objectives were accomplished using selected sections from the Arizona University System Standard Construction Audit Program which includes:
• preparing a control schedule of the initial and final GMP amounts, all change orders, and all construction phase payment applications to ensure payments to the D-B contractor did not exceed the approved total GMP;
• reconciling payments made to the contractor against a control schedule of contractor applications for payment;
• reviewing and comparing to supporting documentation 5 (29%) of 17 judgmentally selected (based on dollar amount) construction phase payment applications that represented 61% of the total $15.8M direct construction phase costs, for a total of $9,690,893;
• reconciling the job cost ledger against subcontractor invoices and D-B pay applications;
• verifying all bond and insurance requirements were maintained during the project;
• recalculating all 12 change orders totaling $1,187,043 to ensure accuracy;
• examining supporting documentation for 5 (42%) of 12 judgmentally selected sample change orders, totaling $999,332 and representing 84% of total change
order costs of $1,187,043, to ensure the amounts agreed to subcontract quotes, changes were reasonable and approved, and indirect costs were accurately calculated;
• reviewing the contract to determine if alternates and allowances were included in the contract and, if so, were adjusted to actual costs via change order;
• reviewing D-B contractor contingency fund expenditures to ensure that all uses of the contingency fund were made in accordance with the contract;
• reviewing subcontractor bids for the top five subcontractors (by total dollar amount) to ensure the bidding process was performed in compliance with contract terms;
• verifying subcontractor change orders to ensure accuracy and reasonableness;
• examining the D-B’s billing expenditure detail report to ensure backcharges were appropriately handled;
• reviewing pay applications to determine if subcontractor lien waivers were on file;
• researching the Arizona Registrar of Contractors to ensure subcontractors were licensed;
• examining project close-out documents for completeness; and
• discussing the project with representatives from PD&C and McCarthy.

Conclusions: Based on our audit work, we found that the financial transactions relating to construction activity generally complied with the terms of the contract. Contractor billings were supported and based on actual costs, GR&GC expenses were charged to the project in accordance with contract provisions, and the agreed upon $17.7 million GMP was paid in full. Additionally, change orders were accurately priced and represented actual changes in scope, bond and insurance coverage was maintained as required, contingency funds were adequately managed, and the subcontractor selection process and subcontractor documents were in compliance with the contract. Lastly, project closeout documents were complete, and overhead, profit, and fees were applied as specified by the contract.

Audit identified and discussed with PD&C staff the following process improvements that should further enhance their management of future construction contracts.

• Although the contractor prepared a comprehensive rent vs. buy analysis and tracked equipment rental throughout the project, equipment rental costs sometimes exceeded the 50% aggregate rental limit. Audit and PD&C agreed that, going forward, an amendment or change order could be executed to

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3 There were no alternates or allowances for this contract.
authorize and justify the need for equipment that exceeds the aggregate rental limit.

- Subcontractors did not consistently provide a detailed breakdown of change order costs. PD&C agreed that project managers would be reminded not to approve change orders over $1,000 without detailed backup support.

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 SSPS construction contract is on the following page.
<table>
<thead>
<tr>
<th>General Control Objectives</th>
<th>Control Environment</th>
<th>Audit Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement of the Organization’s Strategic Objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Strategic objectives were met by supporting the Campus Master Plan initiative within the Strategic Plan’s Institutional Excellence Pillar.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
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<tr>
<td>Reliability and Integrity of Financial and Operational Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Contractor billings were supported by actual costs incurred by the D-B contractor.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
</tr>
<tr>
<td>• GC&amp;GR expenses were charged in accordance with contract provisions.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
</tr>
<tr>
<td>• Change orders were priced and approved according to contract requirements.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
</tr>
<tr>
<td>Effectiveness and Efficiency of Operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Contingency funds were managed in accordance with contract requirements.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
</tr>
<tr>
<td>Safeguarding of Assets</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Compliance with Laws and Regulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Insurance and bond coverage during construction complied with the terms of the contract.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
</tr>
<tr>
<td>• The subcontractor selection process and subcontractor documents complied with the contract.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
</tr>
<tr>
<td>• Project close-out documents were complete.</td>
<td>Reasonable to Strong Controls in Place</td>
<td></td>
</tr>
</tbody>
</table>

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

/s/ ___________________________ /s/ ___________________________
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