

## North Campus Infrastructure Construction Contract

**July 2020**

**FY19 - #04**

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# North Campus Infrastructure

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## Summary

Our audit of the North Campus Infrastructure (NCI) construction contract was included in our approved Fiscal Year (FY) 2019 Audit Plan. The University of Arizona contracted for construction of the NCI with a construction phase Guaranteed Maximum Price (GMP) of \$10.2 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 18 audits of construction contracts administered by PD&C.



**Background:** The North Campus Infrastructure was a multi-stage, multi-element project which expanded the University's existing infrastructure, including, but not limited to, mechanical; electrical; telecommunications utility distribution systems; central plant heating; chilled water and potable water production; sewer and surface drainage to support the new Bioscience Research Lab Building (BSRL), the proposed Applied

Sciences building; and future campus growth.<sup>1</sup> The utility/infrastructure improvements, which are primarily focused on the UA North Campus district north of Speedway Blvd., [were] required before any significant new buildings [could] be built in the North Campus area.<sup>2</sup>

The contractor was selected through the capital project selection committee process prescribed by the Arizona Board of Regents (ABOR) Procurement Code. Sundt Construction, Inc. (Sundt) was awarded the Construction Manager at Risk (CMAR) contract that included pre-construction phase services as well as construction phase management.

At its September 2014 meeting, ABOR granted Project Approval for the NCI project and the ENR2 Utility Infrastructure project (not covered by this audit) for a total budget of \$16 million.<sup>3</sup> The NCI and ENR2 projects were approved in conjunction with the BSRL

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<sup>1</sup> PD&C Project Information web page.

<sup>2</sup> ABOR Meeting Minutes, June 2012.

<sup>3</sup> \$10.4 million was allocated to NCI and \$5.6 million to ENR2.

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project as infrastructure augmentation components. The project was funded with System Revenue Bonds and Stimulus Plan for Economic and Educational Development (SPEED) bonds.

*Notice to Proceed* was issued January 30, 2015, for initial construction work. The contract and subsequent change orders called for substantial completion by May 27, 2016. PD&C was satisfied with the quality of the work and issued a *Certificate of Substantial Completion* on May 27, 2016.

The NCI project had an initial construction phase GMP of \$3,000,000 plus one amendment totaling \$7,152,849 and two change orders totaling \$70,805, bringing the total construction phase final GMP to \$10,223,654. See the chart below for details:

<b>GMP Description</b>	<b>Amount</b>
Initial Pre-Construction Phase Fee	\$110,259
<i>Amendments 1 and 8<sup>4</sup></i>	64,483
<b>Final Pre-Construction Phase Fee</b>	<b>\$174,742</b>
Initial Construction Phase GMP	\$3,000,000
<i>Amendment 11</i>	7,152,849
<i>Change Orders 8 and 10<sup>4</sup></i>	70,805
<b>Final Construction Phase GMP</b>	<b>\$10,223,654</b>
<b>Total Pre-Construction and Construction GMP</b>	<b>\$10,398,396</b>

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

- the GMP was paid in full and did not exceed the agreed upon GMP amount;
- General Requirements and General Conditions (GR&GC) expenses, to include direct labor, equipment rental, and job-owned equipment costs, were adequately supported and charged to the project in accordance with contract provisions;
- bond and insurance coverage during construction complied with the terms of the contract;

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<sup>4</sup> Gaps in numerical sequence pertain to the related ENR2 project's amendments and change orders.

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- change orders were priced according to the contract terms and were properly approved;
- change orders represented an actual change in scope;
- the CMAR 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;
- 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 NCI project included all construction phase expenses paid to the CMAR contractor from the start of the construction phase in February 2015 through the payment application processed in May 2018. A final pay application was executed in January 2021 after audit fieldwork was completed.

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 CMAR construction phase contract, including architectural fees or PD&C internal costs.

**Methodology:** Selected sections of the Arizona University System Standard Construction Audit Program were utilized to achieve our stated audit objectives and included:

- preparing a control schedule of the GMP amount, all change orders, and all construction phase payment applications to ensure payments to the CMAR contractor did not exceed the approved total GMP;
- reviewing GR&GC costs supporting documentation in 5 (26%) of 19 judgmentally selected (based on dollar amount) payment applications that represented \$452,270 (35%) of the total \$1.3M GR&GC expenses;
- verifying all bond and insurance requirements were maintained during the project;
- recalculating all three change orders totaling \$70,805 to ensure accuracy;
- examining supporting documentation for all change orders to ensure the amounts agreed to subcontractor 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;

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- reviewing CMAR contractor contingency fund expenditures to ensure that all uses of the contingency fund were made in accordance with the contract;
- examining project close-out documents for completeness; and
- discussing the project with representatives from PD&C and Sundt.

**Conclusions:** Based on our audit work, we found that the financial transactions relating to construction activity generally complied with the terms of the contract. As of May 2018, \$9,868,725 of the agreed upon \$10,223,654 GMP was paid to the contractor, leaving a savings of \$354,929 that was returned to the owner during final reconciliation. GR&GC expenses were charged to the project in accordance with contract provisions, bond and insurance coverage was maintained as required, and change orders were accurately priced and represented actual changes in scope. Additionally, the contracted scope of work included no alternates or allowances. Lastly, project closeout documents were complete, and overhead, profit, and fees were applied as specified by the contract.

We noted during the audit that, although contingency funds were efficiently managed, not all contingency line item expenditures were adequately supported. Based on prior audit results, PD&C improved contingency support procedures. PD&C noted that these procedures were implemented during the NCI project and that current projects are now instituting the process to assure costs are legitimate.

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 NCI construction contract is on the following page.

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General Control Objectives	Control Environment	Audit Result	
		No.	Page
<b>Achievement of the Organization's Strategic Objectives</b>			
<ul style="list-style-type: none"> <li>Strategic objectives were met by supporting the Campus Master Plan initiative within the Strategic Plan's Institutional Excellence Pillar.</li> </ul>	Reasonable to Strong Controls in Place		
<b>Reliability and Integrity of Financial and Operational Information</b>			
<ul style="list-style-type: none"> <li>The GMP was paid in full and did not exceed the agreed upon GMP amount.</li> </ul>	Reasonable to Strong Controls in Place		
<ul style="list-style-type: none"> <li>GC&amp;GR expenses were adequately supported and charged in accordance with contract provisions.</li> </ul>	Reasonable to Strong Controls in Place		
<ul style="list-style-type: none"> <li>Change orders were priced and approved according to contract requirements.</li> </ul>	Reasonable to Strong Controls in Place		
<b>Effectiveness and Efficiency of Operations</b>			
<ul style="list-style-type: none"> <li>Contingency funds were managed in accordance with contract requirements.</li> </ul>	Reasonable to Strong Controls in Place		
<b>Safeguarding of Assets</b>	Not Applicable		
<b>Compliance with Laws and Regulations</b>			
<ul style="list-style-type: none"> <li>Insurance and bond coverage during construction complied with the terms of the contract.</li> </ul>	Reasonable to Strong Controls in Place		
<ul style="list-style-type: none"> <li>Project close-out documents were complete.</li> </ul>	Reasonable to Strong Controls in Place		

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

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