

CONSTRUCTION

**CALIFORNIA STATE UNIVERSITY,
MONTEREY BAY**

TANIMURA & ANTLE FAMILY MEMORIAL LIBRARY

**Audit Report 09-22
July 27, 2009**

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THE CALIFORNIA STATE UNIVERSITY

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ABBREVIATIONS

A/E	Architect/Engineer
BOT	Board of Trustees
CPDC	Capital Planning, Design and Construction
CRB	Certification Review Board
CSU	California State University
EO	Executive Order
Library	Tanimura & Antle Family Memorial Library
OUA	Office of the University Auditor
SUAM	State University Administrative Manual

EXECUTIVE SUMMARY

At its January 2009 meeting, the Board of Trustees directed the Office of the University Auditor (OUA) to review construction activity. Construction auditing had been performed by KPMG since fiscal year 1997/98 with coordination from the OUA. In fiscal year 2008/09, OUA staff began performing construction audits.

We visited the California State University, Monterey Bay campus and the offices of the general contractor and selected subcontractors from March 2, 2009, through March 27, 2009, and audited the Tanimura & Antle Family Memorial Library (Library) project focusing on the construction management policies and procedures and internal controls and processes in effect at that time.

Our study and evaluation did not reveal any significant construction management or internal control problems or weaknesses that would be considered pervasive in their effects on construction activity controls. However, we did identify other reportable weaknesses that are described in the executive summary and body of this report. In our opinion, the operational and administrative controls in effect for the Library project were sufficient to meet the overall audit objective stated below.

As a result of changing conditions and the degree of compliance with procedures, the effectiveness of controls changes over time. Specific limitations that may hinder the effectiveness of an otherwise adequate system of controls include, but are not limited to, resource constraints, faulty judgments, unintentional errors, circumvention by collusion, and management overrides. Establishing controls that would prevent all these limitations would not be cost-effective; moreover, an audit may not always detect these limitations.

The following summary provides management with an overview of conditions requiring attention. Areas of review not mentioned in this section were found to be satisfactory. Numbers in brackets [] refer to page numbers in the report.

CHANGE ORDER ADMINISTRATION [7]

Change orders were not always properly approved. Further, labor and material costs submitted by the general contractor for two trade subcontractors exceeded actual costs by \$1,357 and \$5,328, respectively.

INTRODUCTION

BACKGROUND

In 2002, the California State University (CSU), Monterey Bay campus received funding appropriations and began planning for a new library. The funding plan for the project included general obligation bonds, lease revenue bonds, and campus donor funds. In July 2003, the campus executed a contract with the architectural firm of Esherick, Homsey, Dodge & Davis, Architects for \$3,236,000 to provide services related, and incidental to, design and construction; and in November 2003, the Board of Trustees (BOT) approved schematic plans for the CSU Monterey Bay Library at a construction cost of \$43,965,000. In May 2004, the BOT approved a resolution to name the new library, the Tanimura & Antle Family Memorial Library (Library) in recognition of donor funds provided by the Tanimura & Antle families.

In July 2005, the campus solicited project bids but did not receive an acceptable bid. The lowest construction bid submitted was nearly 20 percent more than the estimated cost. The campus redesigned portions of the project to reduce overall cost; and the State of California, Department of Finance approved the project redesign in February 2006. In June 2006, the campus once again solicited project bids and selected S.J. Amoroso Construction Co. Inc., as the general contractor. The campus issued the notice to proceed on September 5, 2006, and executed an agreement with the general contractor at a construction cost of \$54,697,000. At the time of our audit, construction costs, including approved change orders totaled \$56,790,879. The campus received beneficial occupancy for the building on November 24, 2008, and the Notice of Completion had not been filed as of the last day of audit fieldwork.

The Library is a three-story, 161,000 square foot building organized around an atrium that runs diagonally through the building. The Library sets the stage for this campus to evolve from the surrounding military environment to shape the intellectual heart of the campus as well as set the tone for future development. The building is of the appropriate scale and architectural quality to reflect its function as the cultural, social, and intellectual center of the campus. The Library contains space for up to 573,000 volumes of the campus' growing collection of books, periodicals, and other research materials. Programmatically, the building provides space for support staff, classrooms and auditoria, tutorial space, computer labs, and group study rooms.

The CSU Monterey Bay campus managed the Library project, and the Design-Bid-Build delivery method was chosen. In this method, the design and construction aspects are contracted for separately, and the project is usually awarded to the lowest bid by a qualified general contractor. The architect/engineer (A/E) develops a schematic design, works with other professionals to complete drawings and specifications, and coordinates the bid documents. The project is advertised and bids are requested from various general contractors, who in turn bid out sub-components of the project to multiple subcontractors and compile a complete bid for submission. The A/E participates in bid review and selection. During the construction phase, the A/E reviews work progress and issues site instructions, change orders, and other documentation necessary to the construction process; and the general contractor manages the construction process and daily activity on the construction site and often provides work with its own forces. The university remains responsible for project inspection and testing, and for generally administering the project.

Executive Order (EO) 672, *Delegation of Capital Outlay Management Authority and Responsibility*, dated July 25, 1997, delegates the authority to directly manage state and non-state funded capital outlay projects to campus presidents. This delegated authority is issued subject to compliance with the capital outlay certification procedure, whereby a request for Delegation of Capital Outlay Management Authority is submitted by the campus for review by the Certification Review Board (CRB) and approval by executive vice chancellor and chief financial officer in the chancellor's office. Further, the campus president is responsible for ensuring that delegated authority is exercised in compliance with applicable statutes, regulations, and policies of the BOT; the process for management of campus capital projects is consistent with the provisions of the State University Administrative Manual (SUAM); and appropriate internal controls and processes are in place to ensure that responsibilities are carried out in a manner consistent with the campus capital outlay management plan submitted with the request for delegated authority.

The certification procedure required by EO 672 includes submission of a capital outlay management plan, which defines the campus organizational and operational structure and expenditure authority, and serves as the campus policies and procedures for the administration of construction activities. Updated plans are to be submitted when campus operational structure changes are made which impact the plan. Certification is continuous unless a Capital Planning, Design and Construction (CPDC) post project performance review determines that problems existed due to campus negligence, in which case the CRB may recommend that the campus be placed on probation. The CRB may ultimately recommend that certification be withdrawn if identified operational/management deficiencies are not remedied.

For those campuses that are not certified, the chancellor's office may execute a Memorandum of Delegation for a capital outlay project, which delegates administration, including construction management, to the campus. The CPDC Construction Management unit may also perform construction administration and management.

EO 666, *Delegation of Professional Appointments Related to Capital Outlay Projects and Campus Physical Development*, dated March 7, 1997, delegates the authority to each campus president or designee to make all professional appointments relative to capital outlay projects and campus physical development. Further, the campus president or designee is responsible for ensuring compliance with all applicable statutes and regulations, BOT policies, and SUAM guidelines; and the use of systemwide standardized architectural, engineering, and other professional appointment contract forms.

The SUAM, in part, contains an overview of all CPDC policies and procedures associated with the capital outlay process. SUAM §9700 through §9843, *Construction Management for Public Works Contracts*, describe the requirements for preparing and administering public works contracts under the provisions of Public Contract Code §10700 *et seq.* SUAM §9200 through §9212, *Professional Services for Campus Development*, describe the requirements for developing and administering professional services agreements with service providers such as architects and engineers and for testing services and project-related studies.

The CSU *Construction Management Procedures Manual* contains the CSU construction management policies and procedures that apply to a project, and each construction administrator, project manager, inspector of record, campus representative, and design professional is required to use this manual as appropriate during the construction administration of a project.

PURPOSE

The overall audit objective was to ascertain the effectiveness of construction management policies and procedures and internal controls and processes related to the administration of construction activities and, specifically, the Library project.

Within the overall audit objective, specific goals included determining whether:

- ▶ Delegated authority to manage capital outlay projects exists, and the campus capital outlay management plan is current for campus-managed projects.
- ▶ Project development is in accordance with statutory and CSU policy requirements, including required BOT and CPDC approvals.
- ▶ Administration and management of the project provide effective internal controls and processes consistent with the campus capital outlay management plan and the SUAM.
- ▶ Professional appointments are in accordance with statutory requirements, BOT policy, and the SUAM; and systemwide standardized professional appointment contract forms are used, approved by the Office of General Counsel, and fully executed prior to performance of work.
- ▶ Extra services are appropriate, authorized, and separately tracked; and an evaluation is performed for each professional service provided.
- ▶ The bidding process for the general contractor or construction manager and trade subcontractors is rigidly controlled, performed in accordance with statutory requirements and the SUAM, and incorporates the contract documents maintained on the CPDC website.
- ▶ Contract documents are complete, routed to the Office of General Counsel as appropriate, and timely executed; required contract bonds and insurance are received; and a Notice to Proceed is issued.
- ▶ Subcontractors are adequately monitored, and requests for subcontractor substitutions are handled in accordance with statutory requirements and the SUAM.
- ▶ Operational and administrative controls ensure maintenance of financial accountability and completion of the project within the approved scope, schedule, and budget.
- ▶ Contract and service agreement payments are adequately supported, appropriately approved, and timely paid; and retention is handled in accordance with statutory requirements and the SUAM.

- ▶ Equipment is procured in the most economical method; purchased materials meet specifications required by construction documents and drawings; and all required inspections and tests are timely and properly performed and adequately documented.
- ▶ Change orders are appropriately approved, supported, accurately priced, and sufficiently tracked; and construction allowances and contingency balances are adequately administered and controlled.
- ▶ Project completion is adequately administered, including completion of pre-final/final inspections, punch list items, project closeout checklist, and Notice of Completion; preservation of project files, equipment manuals/warranties, and spare parts/materials; and resolution of any liquidated damages.

SCOPE AND METHODOLOGY

The scope of audit included, but was not limited to, the review of design budgets and costs; the bid and award process; invoice processing and payment; change orders; construction management, architectural, and engineering services; use of major equipment/materials; the closeout process; administration of liquidated damages; and overall project cost accounting and reporting. This included any transactions or activity performed by the campus, general contractor, and trade subcontractors.

Our study and evaluation were conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* issued by the Institute of Internal Auditors, and included the audit tests we considered necessary in determining that operational and administrative controls are in place and operative. This review emphasized, but was not limited to, compliance with state and federal laws, BOT policies, and Office of the Chancellor and campus policies, letters, and directives.

We focused primarily on the operational and administrative controls in effect for the Library project with an emphasis on compliance with the *CSU Construction Management Procedures Manual*, SUAM policies and procedures associated with the capital outlay process, the campus capital outlay management plan, and construction contract general conditions. We evaluated the effectiveness of construction management policies and procedures and adequacy of internal controls and processes, and sought opportunities for improvement to further the success of CSU's capital outlay program.

Specifically, we reviewed and tested:

- ▶ Delegation of construction management authority.
- ▶ Review and approval of project design, budget, and funding.
- ▶ Professional services agreements and any extra services changes.
- ▶ Administration of the construction manager and trade subcontractor bid and award process.
- ▶ Contract execution and required contract bonds and insurance.
- ▶ Subcontractors and subcontractor substitutions.
- ▶ Contract and service agreement payment processing.
- ▶ Procurement of major equipment and materials.
- ▶ Performance of required inspections and tests.
- ▶ Review, approval, and tracking of change orders.
- ▶ Direct labor and associated burden charged by the construction manager and trade subcontractors.

INTRODUCTION

- ▶ Construction management and overall project cost accounting and reporting.
- ▶ Construction allowances and contingency balances.
- ▶ Administration of the project closeout process and resolution of any liquidated damages.

OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

CHANGE ORDER ADMINISTRATION

APPROVAL

Change orders were not always properly approved.

We reviewed all project change orders and found that the vice president of administration and finance had not approved one change order with an individual change order proposal in excess of \$100,000.

The California State University *Construction Management Project Administration Reference Manual* §4.05c states that the construction administrator (director of the office of design and construction) shall review each contract change order for conformance to the approved change proposal(s) and review all attached backup for completeness and conformance to contract specification. The contract administrator shall sign all change orders not exceeding \$50,000 (per the campus capital outlay management plan). If there are multiple change items on a single change order, the contractor administrator may sign the change order only if the absolute value of each separate item listed on the change order does not exceed his/her authority. If one or more of the items exceeds the construction administrator's signature authority, the construction administrator must secure a signature from someone with a higher level of signature authority (i.e., the executive dean for changes between \$50,001 and \$100,000 and/or the vice president for administration and finance for changes exceeding \$100,000).

The associate vice president of campus planning and development stated that the change order was not signed by the vice president of administration and finance because the campus was in the process of revising signature authority levels in its operational plan when this change order was executed and it was mistakenly overlooked.

Inadequate approval of change orders increases the risk that errors and irregularities will not be detected in a timely manner and may result in excess charges and expenses.

Recommendation 1

We recommend that the campus reiterate to staff current procedures to ensure that change orders are properly approved.

Campus Response

We concur. The campus will reiterate to all affected staff the requisite signature authority levels to minimize the chances of inadvertent oversight regarding same for change order processing and approvals by November 30, 2009.

LABOR RATES AND BURDEN

Administration of project labor costs needed improvement.

We reviewed project labor costs charged by two trade subcontractors and found excess labor costs and hours. Specifically, we found that:

- ▶ One trade subcontractor included indirect general labor and site supervision within their approved labor rate. However, the trade subcontractor also directly billed the campus for general labor and site supervision when calculating the total labor hours needed to complete a task. The inclusion of double charging of general labor and site supervision inflated the labor costs for this trade subcontractor by \$1,062.
- ▶ Another trade subcontractor inflated the number of hours required to complete two change orders by 3.8 hours. The inclusion of the increased labor hours inflated labor costs for this trade subcontractor by \$295.

The *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (1) states that the construction manager and trade contractors shall submit a fully detailed breakdown of the cost of every labor classification to be utilized on a proposed change on the hourly labor rate worksheet. The unit cost of labor shall be an accurate accounting of actual costs being paid.

The lead construction manager stated that the labor rates submitted did agree to the approved hourly labor rate worksheets from the general contractor; however, they were unaware of the availability of other documents that showed the inflation of labor hours by the trade subcontractors.

Failure to review and to verify labor hours may result in increased project costs.

Recommendation 2

We recommend that the campus:

- a. Pursue recovery of the \$1,062 in inflated labor costs identified by the audit from this trade subcontractor and determine, as appropriate, if other change order work performed by this trade subcontractor had been cost inflated in a similar manner.
- b. Pursue the recovery of the \$295 in inflated labor costs submitted by the general contractor for the second trade subcontractor.

Campus Response

We concur. The campus will endeavor to recover the amounts identified by November 30, 2009. We request the specific information relative to these charges from the working papers of the audit manager to assist in the recovery process. Further evaluation is not possible since the library project is now closed.

MATERIAL COSTS

Administration of project material costs needed improvement.

We reviewed project material costs charged by two trade subcontractors and found discrepancies between source documents maintained within the trade subcontractors' job files and accounting systems and the amounts charged to the campus. Specifically, we found that:

- ▶ Accounting records at one trade subcontractor indicated that material costs submitted to the campus had been marked up twice for overhead, profit, and sales tax. Further, the same subcontractor marked up the cost of materials by a percentage for consumable materials, although several items directly charged to change orders appeared to be consumable materials. The inclusion of double charges for overhead, profit, sales tax, and consumable materials inflated the material costs for this trade subcontractor by \$4,540.
- ▶ Another trade subcontractor incorrectly applied sales tax to the cost of the materials after the 15 percent markup was included. The inclusion of sales tax after applying the markup inflated the material costs for this trade subcontractor by \$788.

The *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (2) states, in part, that contractor's costs are allowed for cost of the materials directly required for the performance of the changed work.

The lead construction manager stated that the general contractor did not submit the detailed material cost records to the campus, and therefore, they were unaware of the duplicate charges for overhead, profit, and sales tax.

Failure to adequately review material costs may result in increased project costs.

Recommendation 3

We recommend that the campus:

- a. Pursue recovery of the \$4,540 in inflated material costs identified by the audit from this trade subcontractor and determine, as appropriate, if other change order work performed by this trade subcontractor had been cost inflated in a similar manner.
- b. Pursue the recovery of the \$788 in inflated material costs submitted by the general contractor for the second trade subcontractor.

Campus Response

We concur. The campus will endeavor to recover the amounts identified by November 30, 2009. We request the specific information relative to these charges from the working papers of the audit manager to assist in the recovery process. Further evaluation is not possible since the library project is now closed.

APPENDIX A: PERSONNEL CONTACTED

<u>Name</u>	<u>Title</u>
<u>Office of the Chancellor</u>	
Warren Jacobs	University Architect
Jay Jefferson	Construction Manager
Tom Kennedy	Chief of Architecture and Engineering
Elvyra San Juan	Assistant Vice Chancellor, Capital Planning, Design and Construction
James Sowerbrower	Chief of Construction Management
<u>California State University, Monterey Bay</u>	
Dianne F. Harrison	President
Anthony Boles	Associate Vice President for Campus Planning and Development (At time of review)
James Conway	Campus Construction Inspector
Ron Deller	Lead Construction Manager
John Fitzgibbon	Associate Vice President for Finance
James Main	Vice President, Administration and Finance
John Marker	Interim Associate Vice President for Campus Planning and Development
Kathleen Ventimiglia	Director of Campus Planning and Development



RECEIVED
UNIVERSITY AUDITOR

SEP 3 2009

THE CALIFORNIA STATE
UNIVERSITY

September 2, 2009

University Auditor Larry Mandel
California State University
Office of the University Auditor
401 Golden Shore, 4th Floor
Long Beach, CA 90802

Subject: Tanimura & Antle Family Memorial Library Project Audit #09-22

Dear Larry:

Attached is the hard copy of CSU Monterey Bay's response to the recommendations regarding the subject audit. Electronic copy has been transmitted to your attention.

Please contact AVP John Fitzgibbon if you have any questions or comments.

-

Sincerely,

James Main
Vice President
Administration and Finance

Attachment

cc: Senior Director Schlack
Associate Vice President Marker
Associate Vice President Fitzgibbon

CONSTRUCTION

CALIFORNIA STATE UNIVERSITY, MONTEREY BAY

TANIMURA & ANTLE FAMILY MEMORIAL LIBRARY

Audit Report 09-22

CHANGE ORDER ADMINISTRATION

APPROVAL

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- b. Pursue the recovery of the \$788 in inflated material costs submitted by the general contractor for the second trade subcontractor.

Campus Response

We concur. The campus will endeavor to recover the amounts identified by November 30, 2009. We request the specific information relative to these charges from the working papers of the Audit Manager to assist in the recovery process. Further evaluation is not possible since the library project is now closed.

THE CALIFORNIA STATE UNIVERSITY
OFFICE OF THE CHANCELLOR

BAKERSFIELD

September 21, 2009

CHANNEL ISLANDS

CHICO

MEMORANDUM

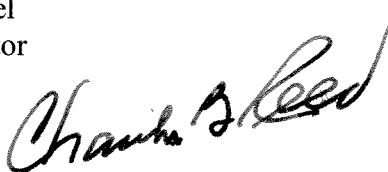
DOMINGUEZ HILLS

EAST BAY

TO: Mr. Larry Mandel
University Auditor

FRESNO

FROM: Charles B. Reed
Chancellor



FULLERTON

HUMBOLDT

SUBJECT: Draft Final Report 09-22 on the
Tanimura & Antle Family Memorial Library,
California State University, Monterey Bay

LONG BEACH

LOS ANGELES

MARITIME ACADEMY

In response to your memorandum of September 21, 2009, I accept the response as submitted with the draft final report on the *Tanimura & Antle Family Memorial Library*, California State University, Monterey Bay.

MONTEREY BAY

NORTHRIDGE

POMONA

CBR/amd

SACRAMENTO

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSÉ

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS