

**CONSTRUCTION**

**CALIFORNIA STATE UNIVERSITY,  
DOMINGUEZ HILLS**

**EDUCATIONAL RESOURCE CENTER ADDITION**

**Audit Report 10-17  
December 16, 2010**

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## **ABBREVIATIONS**

BOT	Board of Trustees
CPDC	Capital Planning, Design and Construction
CRB	Certification Review Board
CSU	California State University
CSUDH	California State University, Dominguez Hills
FPCM	Facilities Planning and Construction Management
Library Addition	Educational Resource Center Addition
EO	Executive Order
OUA	Office of the University Auditor
SUAM	State University Administrative Manual
VP	Vice President

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## **EXECUTIVE SUMMARY**

At its January 2010 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, Dominguez Hills campus and the offices of the general contractor and selected subcontractors from August 9, 2010, through August 27, 2010, and audited the Educational Resource Center Addition (Library Addition) 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 Addition 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.

### **CONSTRUCTION MANAGEMENT AND ACCOUNTING [6]**

Administration of general contractor monthly payment applications needed improvement.

### **CHANGE ORDER ADMINISTRATION [7]**

Change orders were not always approved according to authorized dollar thresholds. In addition, labor rate overcharges, erroneous labor burden, and inflated worker's compensation rates by two trade subcontractors inflated labor costs by \$13,956. Further, overhead and profit mark-ups applied by the general contractor erroneously included overcharges of \$2,727.

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## INTRODUCTION

### **BACKGROUND**

In June 2004, California State University, Dominguez Hills (CSUDH) executed an agreement with the architectural firm of Carrier Johnson to develop a conceptual design and schematic plans for the Educational Resource Center Addition (Library Addition). In January 2005, the Board of Trustees (BOT) approved schematic plans for the CSUDH Library Addition project at a project cost of \$39,925,000, with funding from California Proposition 55 Kindergarten-University Public Education Facilities Bond Act of 2004.

In June 2006, the campus solicited project bids but did not receive an acceptable bid. The lowest construction bid submitted was nearly 56 percent more than the estimated construction cost. The campus was granted additional appropriations for a total budgeted amount of \$59,158,000. In July 2007, the campus once again solicited project bids, and it selected S.J. Amoroso Construction Co. Inc. as the general contractor. The campus issued the notice to proceed on October 22, 2007, and executed an agreement with the general contractor at a construction cost of \$46,950,000. At the time of our audit, construction costs, including approved change orders, totaled \$49,337,395. The campus received beneficial occupancy for the building on April 28, 2010. As of the last date of audit fieldwork, the Notice of Completion was still pending.

The Library Addition is a five-story, 139,569-square-foot addition to the existing Leo F. Cain Educational Resource Center. The new structure connects to the existing building via an extension on the first floor and glass bridges on the second, third, and fourth levels. The addition and existing library space provide sufficient space for 12,000 students, as well as areas for three computer learning labs, state-of-the-art archival storage, and reading stations for 1,575 students. The north side of the new building is dominated by windows, along with pre-cast concrete panels, providing indirect lighting for the reading stations.

The CSUDH campus managed the Library Addition project, and it chose the Design-Bid-Build delivery method. 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 for various general contractors, who in turn bid out subcomponents 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 to campus presidents the authority to manage directly state and non-state funded capital outlay projects. The chancellor's office issues this delegated authority to the campus subject to its compliance with the capital outlay certification procedure. To comply, the campus submits

a request for Delegation of Capital Outlay Management Authority to the Certification Review Board (CRB) for review. Then the executive vice chancellor and chief financial officer in the chancellor's office must approve the request. The campus president is responsible for ensuring that he or she exercises delegated authority in compliance with applicable statutes, regulations, and policies of the BOT; the campus manages capital projects via a process consistent with the provisions of the State University Administrative Manual (SUAM); and the campus has in place appropriate internal controls and processes 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 that impact the plan. Certification is continuous unless a Capital Planning, Design and Construction (CPDC) post-project performance review determines that problems were caused by 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 California State University (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 Addition 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 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.

## **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, construction management firm, 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 Addition 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 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.
- ▶ Construction management and overall project cost accounting and reporting.
- ▶ Construction allowances and contingency balances.

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## **OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES**

### **CONSTRUCTION MANAGEMENT AND ACCOUNTING**

Administration of general contractor monthly payment applications needed improvement.

We reviewed 31 payment applications and found that 22 of them contained changes to the amount paid to the general contractor for inspection back-charges that had been written on the application by hand.

Public Contract Code §10853 (b) states that each payment request shall be reviewed by the Trustees as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request. Any payment request determined not to be a proper request suitable for payment shall be returned to the contractor as soon as practicable, but no later than seven days after receipt.

The construction manager of facilities planning and construction management (FPCM) stated that many of the changes on the payment requests were made to accommodate invoiced inspection back-charges and were written on the applications by the inspector of record prior to the release of payment. However, she further stated that when back-charges occurred, the contractor was provided with backup information substantiating the justification and cost of the back-charge prior to final signatures and the release of payment.

Inadequate administration of general contractor monthly payment applications may result in unwarranted changes and reconciliation issues between campus and general contractor project accounting records and increases the risk that errors and irregularities will not be detected.

#### **Recommendation 1**

We recommend that the campus reiterate to staff that handwritten changes on general contractor monthly payment applications should be minimal. If regular, repetitive changes must be made, the campus should modify the payment application form to include the recurring items causing the changes.

#### **Campus Response**

We concur. The campus has reiterated to staff that handwritten changes on general contractor monthly payment applications should be minimal, and if repetitive changes are needed, the campus will modify the payment application form to include the recurring items causing the changes.

Corrective action on this issue is complete.

## **CHANGE ORDER ADMINISTRATION**

### **APPROVAL**

Change orders were not always approved according to authorized dollar thresholds.

We reviewed 36 change orders and found that:

- ▶ In two instances, the vice president (VP) of administration and finance did not approve change orders in excess of \$100,000.
- ▶ In seven instances, the FPCM senior director did not approve change orders in excess of \$50,000.

The California State University *Construction Management Project Administration Reference Manual* §4.05c states that the construction administrator (associate director of planning and administration) 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 manager 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 construction manager 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 manager's signature authority, the construction manager must secure a signature from someone with a higher level of signature authority (i.e., the senior director of FPCM for changes between \$50,001 and \$100,000 and/or the VP of administration and finance for changes exceeding \$100,000).

The VP of administration and finance stated that the failure to obtain the proper approvals for the change orders over the construction manager's level of authorization was due to oversight.

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

### **Recommendation 2**

We recommend that the campus reiterate to staff that change orders must be approved according to authorized dollar thresholds.

### **Campus Response**

We concur. The campus has reiterated to staff that change orders must be approved according to authorized dollar thresholds.

Corrective action on this issue is complete.

## LABOR RATES AND BURDEN

Administration of trade subcontractor labor rates and the associated burden needed improvement.

We reviewed hourly labor rates and the associated labor burden charged by two trade subcontractors and noted variations between the hourly rate worksheets and the certified payroll records and other supporting documentation reviewed at the subcontractor's offices:

- ▶ The hourly labor rates for one trade subcontractor included inflated rates on worker's compensation, an "other" category that was unsupported, and erroneous labor burden calculations, including a burden percentage applied to the fringe benefit amounts. The inclusion of these components inflated the labor cost for this trade subcontractor by \$11,720.
- ▶ The hourly labor rates for another trade subcontractor included inflated rates for worker's compensation and general liability insurance. The inclusion of these inflated rates increased the labor cost for this trade subcontractor by \$2,236.

The *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (1) states that costs are allowed for the actual payroll costs to the contractor for labor, field supervision of changed work, and engineering or technical services directly required for the performance of the changed work. Costs include payments, assessments, or benefits required by lawful labor union collective bargaining agreements, compensation insurance payments, liability insurance premiums on labor only, contributions made to the state pursuant to the Unemployment Insurance Code, and for taxes paid to the federal government required by the Social Security Act.

The FPCM construction manager stated that the third-party, contracted construction management firm had performed a review that revealed no problems, and the failure to detect the inflated rates was due to oversight.

Failure to review hourly labor rates and the associated labor burden may result in increased project costs.

### Recommendation 3

We recommend that the campus:

- a. Pursue recovery of the \$13,956 in inflated labor costs resulting from various inflated rates charged by the trade subcontractors.
- b. Conduct staff training to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurate in accordance with §6.00, Changes in the Work, of the *Contract General Conditions for Design-Bid-Build Projects*.

## Campus Response

We concur.

- a. The campus will pursue recovery of the \$13,956 in inflated labor costs resulting from various inflated rates charged by the trade subcontractors.
- b. The staff will work closely with CPDC to implement a change in process to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurate in accordance with §6.00, Changes in the Work, of the *Contract General Conditions for Design-Bid-Build Projects*.

Expected completion date: March 2011

## MARK-UPS

Administration of general contractor and trade subcontractor overhead and profit mark-ups needed improvement.

We reviewed overhead and profit mark-ups applied by the general contractor and found overcharges totaling \$2,727. Specifically:

- ▶ In one instance, the general contractor marked up direct costs by 27 percent when only a 15 percent mark-up was allowable, creating an overcharge of \$1,000.
- ▶ In another instance, the general contractor mistakenly applied a 15 percent mark-up on a trade subcontractor's direct cost when the cost already included the allowable mark-up, creating an overcharge of \$1,727.

The *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (6) states, in part, that the contractor may add no more than a 15 percent mark-up to its direct cost when self-performing changed work on the first \$50,000 and 10 percent thereafter on the balance beyond \$50,000. Further, when changed/added work is performed by a subcontractor, the contractor may add no more than a 10 percent mark-up to the subcontractor's total direct cost estimate (excluding the subcontractor's mark-up) for such work on the first \$50,000; thereafter the mark-up is seven percent on the balance beyond \$50,000.

The FPCM construction manager stated that the failure to detect the general contractor's improper mark-ups was due to oversight.

Failure to detect errors in general contractor mark-ups increases the risk that errors and irregularities will not be detected and may result in increased project costs.

**Recommendation 4**

We recommend that the campus:

- a. Pursue recovery of the \$2,727 of overcharges.
- b. Conduct staff training to ensure that general contractor and trade subcontractor mark-ups are appropriate and accurate in accordance with *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (6).

**Campus Response**

We concur.

- a. The campus will pursue recovery of the \$2,727 of overcharges.
- b. The staff will discuss with CPDC how to ensure that general contractor and trade subcontractor mark-ups are appropriate and accurate in accordance with *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (6).

Expected completion date: March 2011

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**APPENDIX A:  
PERSONNEL CONTACTED**

**Name**

**Title**

Office of the Chancellor

Elvyra San Juan

Assistant Vice Chancellor,  
Capital Planning, Design and Construction

California State University, Dominguez Hills

Mildred Garcia

President

Mary Ann Rodriguez

Vice President, Administration and Finance

Randy Sharp

Senior Director, Facilities Planning and Construction Management

Adele Vanarsdale

Construction Manager, Facilities Planning  
and Construction Management

Karen Wall

Associate Vice President, Administration and Finance

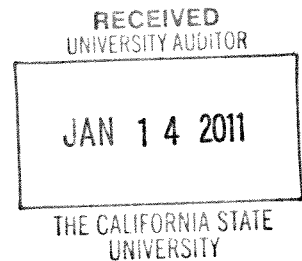


California State University  
**Dominguez Hills**

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**Office of the Vice President for Administration and Finance**  
1000 E. Victoria Street – WH B470 Carson, CA 90747 (310) 243-3750 FAX (310) 234-3869

January 14, 2011



Mr. Larry Mandel  
University Auditor  
The California State University  
401 Golden Shore, 4<sup>th</sup> Floor  
Long Beach, CA 90802-4210

Dear Mr. Mandel:

Enclosed, please find California State University, Dominguez Hills' responses to the Educational Resource Center Addition Audit Report 10-17, dated December 16, 2010. The campus is committed to addressing and resolving the issues identified in the audit report.

If you have any questions or would like additional information, please contact me.

Sincerely,

A handwritten signature in cursive that reads "MARodriguez".

Mary Ann Rodriguez  
Vice President, Administration and Finance

Enclosure (1)

c: Mildred García, President  
Karen Wall, Associate Vice President, Administration and Finance

**CONSTRUCTION**

**CALIFORNIA STATE UNIVERSITY,  
DOMINGUEZ HILLS**

**EDUCATIONAL RESOURCE CENTER ADDITION**

**Audit Report 10-17**

**CONSTRUCTION MANAGEMENT AND ACCOUNTING**

**Recommendation 1**

We recommend that the campus reiterate to staff that handwritten changes on general contractor monthly payment applications should be minimal. If regular, repetitive changes must be made, the campus should modify the payment application form to include the recurring items causing the changes.

**Campus Response**

We concur.

The campus has reiterated to staff that handwritten changes on general contractor monthly payment applications should be minimal, and if repetitive changes are needed, the campus will modify the payment application form to include the recurring items causing the changes.

Corrective action on this issue is complete.

**CHANGE ORDER ADMINISTRATION**

**APPROVAL**

**Recommendation 2**

We recommend that the campus reiterate to staff that change orders must be approved according to authorized dollar thresholds.

**Campus Response**

We concur.

The campus has reiterated to staff that change orders must be approved according to authorized dollar thresholds.

Corrective action on this issue is complete.

## LABOR RATES AND BURDEN

### Recommendation 3

We recommend that the campus:

- a. Pursue recovery of the \$13,956 in inflated labor costs resulting from various inflated rates charged by the trade subcontractors.
- b. Conduct staff training to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurate in accordance with §6.00, Changes in the Work, of the *Contract General Conditions for Design-Bid-Build Projects*.

### Campus Response

We concur.

- a. The campus will pursue recovery of the \$13,956 in inflated labor costs resulting from various inflated rates charged by the trade subcontractors.
- b. The staff will work closely with CPDC to implement a change in process to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurate in accordance with §6.00, Changes in the Work, of the *Contract General Conditions for Design-Bid-Build Projects*.

Expected completion date: March 2011

## MARK-UPS

### Recommendation 4

We recommend that the campus:

- a. Pursue recovery of the \$2,727 of overcharges.
- b. Conduct staff training to ensure that general contractor and trade subcontractor mark-ups are appropriate and accurate in accordance with *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (6).

### Campus Response

We concur.

- a. The campus will pursue recovery of the \$2,727 of overcharges.
- b. The staff will discuss with CPDC how to ensure that general contractor and trade subcontractor mark-ups are appropriate and accurate in accordance with *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (6).

Expected completion date: March 2011

THE CALIFORNIA STATE UNIVERSITY  
OFFICE OF THE CHANCELLOR

BAKERSFIELD

CHANNEL ISLANDS

January 31, 2011

CHICO

DOMINGUEZ HILLS

**MEMORANDUM**

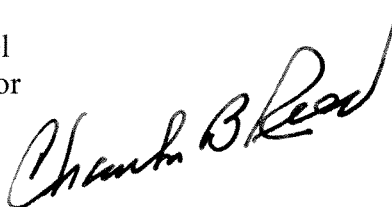
EAST BAY

TO: Mr. Larry Mandel  
University Auditor

FRESNO

FULLERTON

FROM: Charles B. Reed  
Chancellor



HUMBOLDT

SUBJECT: Draft Final Report 10-17 on the *Educational Resource Center Addition*, California State University, Dominguez Hills

LONG BEACH

LOS ANGELES

MARITIME ACADEMY

In response to your memorandum of January 31, 2011, I accept the response as submitted with the draft final report on the *Educational Resource Center Addition*, California State University, Dominguez Hills.

MONTEREY BAY

NORTHRIDGE

POMONA

CBR/amd

SACRAMENTO

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSÉ

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS