

**CALIFORNIA STATE UNIVERSITY,  
LOS ANGELES**

**SCIENCE REPLACEMENT BUILDING, WING A**

Final Report

May 12, 2008

**CONSTRUCTION PROJECT EVALUATION**  
**CALIFORNIA STATE UNIVERSITY, LOS ANGELES**  
**SCIENCE REPLACEMENT BUILDING, WING A**

May 12, 2008

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*This report and all associated analysis contained herein are based upon information made available to KPMG LLP. KPMG LLP is not responsible for incomplete or inaccurate information provided during the preparation of this report. This report only presents and summarizes factual data and does not represent an opinion or attestation to the position, approach, or representation of information made by any other party involved with this evaluation.*

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## EXECUTIVE SUMMARY

### Summary of Findings

Based upon our evaluation, the Science Replacement Building, Wing A project (“the Project”) at California State University, Los Angeles (“CSULA”) was administered consistent with our expectations of a project of this size, scope, and complexity, but with certain areas in the contract administration process that could be improved.

Our observations, associated risks, and recommendations are summarized below. Examples of specific action steps are further detailed in the body of this report.

	<b>Observation</b>	<b>Risk</b>	<b>Recommendation</b>
1.	The initial amount authorized by the Architect/Engineer Agreement does not reconcile to the fee schedule in Exhibit B of the Agreement. As a result, it is not clear what phases are authorized by the Agreement and at what amounts.	Unclear contract authorizations may result in confusion over services to be provided and at what amounts, and may also result in overbillings to CSULA.	1a. On future Agreements, CSULA should clearly state what phases of the Agreement are authorized and at what amounts on the face of the Agreement. The amount should reconcile to Exhibit B for the Agreement.  1b. If discrepancies in contract documents inadvertently occur, CSULA should formally amend the contract documents to correct the discrepancies.  (Ownership: CSULA)
2.	Inappropriate contract vehicles were used to authorize phases of basic architectural services contrary to Rider A Section I.11 of the Architect/Engineer Agreement and SUAM 9210.02.	Using a non-standard method to formally contract for architectural services may put CSULA at an unnecessary contractual risk and could lead to disagreements over terms and conditions, including scope and fee.	In the future, CSULA should adhere to the guidance in SUAM 9210.02 and utilize a Phase Approval Authorization Letter when authorizing phases of basic architectural services for major capital projects.  (Ownership: CSULA)
3.	Basic architectural services were at times performed prior to the formal authorization of those services or before an agreement had been formally executed.	Work performed prior to a formal authorization of services or prior to the execution of an agreement exposes CSULA to unnecessary contractual risk in the event of a later dispute.	Contractual agreements or phase authorizations should be executed in accordance with SUAM.  (Ownership: CSULA)

EXECUTIVE SUMMARY

4.	Bernards issued subcontracts to unlisted subcontractors prior to obtaining CSULA approval for substitution in violation of Public Contract Code.	While not a violation on part of CSULA, problems could arise in the event of a protest to the substitution.	<p>4a. CSULA and should discuss the importance of proper subcontractor substitution with Bernards and consider performing additional periodic checks on future projects to ensure compliance.</p> <p>(Ownership: CSULA)</p> <p>4b. CPDC should revise SUAM to clarify procedures and penalty assessments related to the subcontractor substitution process and requirements stated in Public Contract Code.</p> <p>(Ownership: CPDC)</p>
5.	Errors and omissions by the architect resulted in additional costs to CSULA exceeding an acceptable level of care.	Excessive errors and omissions lead to increased costs and may impact the schedule for CSULA.	<p>CSULA should pursue recourse against AC Martin for any additional costs resulting from excessive errors and omissions and document the settlement with AC Martin.</p> <p>(Ownership: CSULA)</p>
6.	The Service Agreement for inspection services does not contain any language regarding reimbursable expenses.	The consultant may charge the full not-to-exceed fee for services provided and also charge reimbursable costs in addition to the fee, resulting in a potential unintended overbilling.	<p>CSULA should consider incorporating language on reimbursable expenses for Service Agreements on future Projects.</p> <p>(Ownership: CSULA)</p>

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## **INTRODUCTION**

### **Purpose**

KPMG LLP (“KPMG”) was retained by California State University’s (“CSU”) Office of the University Auditor on October 29, 2004 and subsequent amendment dated August 16, 2008 to perform an independent project evaluation of California State University, Los Angeles’ Science Replacement Building, Wing A project (“the Project”).

The overall objective of the construction evaluation was to assess construction management practices for the Project and to substantiate that it was managed in accordance with law, Trustee policy, generally accepted business practices, and industry practices.

To the extent they were uncovered as part of our work, this report provides conclusions and recommendations addressing necessary process improvement and recovery of project costs. Recommendations are listed and numbered sequentially throughout this report.

### **Scope**

While the basic scope of our work matches that required by CSU’s Request for Proposal (“RFP”) and that which KPMG has performed in prior years, we also included additional items that we believe may provide benefit to CSU. This includes assessing methodologies utilized in verifying reasonableness of contractor change requests, help ensuring that a meaningful submittal review procedures were followed, and a review of project accounting and cost reporting. KPMG identified specific areas within the scope listed below that present the potential for substantive loss or liability for the Project. The various scope categories are outlined in CSU’s RFP, dated July 14, 2004 and KPMG’s proposal, dated July 27, 2004 and contains the following sections:

- Project Background
- Design Cost
- Construction Bid Process
- Construction Change Orders
- Project Management or Inspection Services
- Major Equipment and Materials
- Close-Out Documentation
- Liquidated Damages
- Accounting

## Methodology

KPMG's approach to this engagement incorporates a work plan shared with the University Auditor's office as outlined in our agreement with CSU. During the course of our work, we expanded on tasks related to scope sections with the greatest potential risk exposure, in our opinion. The work performed by KPMG was conducted in accordance with our aforementioned methodology, but is not limited to, the following tasks:

- Examine financial records, reports, written CSU procedures, CSU contract documents and other material related to the Project and compare current practices and procedures with CSU requirements and best practices in the industry;
- Conduct a preliminary review to determine project emphasis;
- Interview key individuals involved in the Project;
- Identify significant deficiencies, if any;
- Recommend changes that may result in streamlining the design/construction process, assuring adequate project controls and reducing costs; and
- Prepare a written report of our findings and recommendations.

## Exclusions

The services, fees, and delivery schedule for this engagement are based upon the following assumptions, representations, or information supplied by CSU.

1. KPMG is not responsible for and will not make management decisions relating to this Project or any other aspect of CSU's business. CSU shall have responsibility for making all decisions with respect to the management and administration of its real estate and capital projects.
2. CSU management accepts responsibility for the substantive outcomes of this engagement and, therefore, has a responsibility to be in a position in fact and appearance to make an informed judgment on the results of this engagement.
3. Our work under this engagement did not include technical opinions related to engineering, operations, and maintenance.
4. KPMG's work under this engagement did not include a review, audit, or evaluation of financial statements, tax services, or other services of KPMG not listed in this Statement.
5. We have, and will continue to consider the effect of this engagement on the ongoing, planned, and future audits, as required by *Government Auditing Standards* and have determined that this engagement will not impair KPMG's independence.

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## PROJECT BACKGROUND

The California State University, Los Angeles (“CSULA”) Science Replacement Building, Wing A project (“the Project”) consisted of construction of a new 106,217 square foot, three-story science building with laboratory space. The building included a steel braced frame, concrete spread footings, and concrete over metal decking. Other elements included exterior cladding of metal stud framing, exterior sheathing and insulation, stone tiles, cement plaster, metal panels, HVAC, plumbing, electrical, site development, site utilities, and drainage. In addition to the building, the Project also included the relocation of athletic courts to a separate site and the construction of sidewalks, roadways, lighting, landscaping, and signage. The reconstruction of the athletic courts on its new site was performed by a second contractor.

From April 7 through April 11, 2008, KPMG conducted fieldwork at the CSULA campus. During fieldwork, KPMG reviewed records from the following entities involved with the Project:

Architect	AC Martin Partners, Inc.
General Contractor	Bernards Brothers, Inc.
Contractor (athletic courts)	Los Angeles Engineering
Inspector of Record	Twining Laboratories of Southern California, Inc.
Project Management and Administration	CSULA Office of Facilities Planning and Construction Services

Follow-up discussions to clarify issues and supplement supporting documentation were conducted through the completion of this report.

### Delivery Methodology

The Project was delivered using a design-bid-build, lump sum contracting methodology.

### Timeline

Preliminary design of the Project was initiated after an Agreement was executed between CSULA and AC Martin Partners, Inc. (“AC Martin”) on February 26, 2003.

On March 10, 2004, Los Angeles Engineering (“LA Engineering”) was selected through a competitive bid process as the contractor responsible for relocating the athletic courts on the site of the Project. The relocation began April 27, 2004 and was completed on February 11, 2005.

After the athletic courts were completed, Bernards Brothers, Inc. (“Bernards”) was awarded the construction contract for the building with a base bid of \$36,580,000 through a competitive bid process on March 24, 2005. Construction began July 20, 2005 with the

issuance of the Notice to Proceed. At the time, the Project was expected to be completed on October 18, 2007. Through the change order process, 131 extra days were added to the contract establishing February 26, 2008 as the new completion date. During our fieldwork, the Project was still under construction and CSULA had not yet obtained beneficial occupancy of the building.

**Project Costs**

In September 2003, the CSU Board of Trustees (“BOT”) approved the schematic plans for the Project in the amount of \$42,595,000. In March 2006, the amount of funding for equipment was increased from \$4,487,000 to \$4,635,000 and approved by the BOT, bringing the total Project budget to \$42,743,000.

It is the responsibility of the Chancellor’s Office to issue allocation orders to CSULA for the approved funding. An additional \$4,748,000 was allocated to the Project beyond the initial budgeted amount. The reason for this allocation could not be explained or reconciled by either the Chancellor’s Office or CSULA. However, SUAM 9903 allows for up to a 20% augmentation of the budget within certain guidelines. In total \$47,491,000 in funds were allocated to the Project. The funding process was not included with the scope of work of this audit.

In addition to the approved and appropriated budget amounts allocated to the Project, additional funding related construction was obtained from other CSULA funding sources in the amount of \$3,048,058. As a result, a total of \$50,744,058 in funds was available for Project construction.

At the time of our fieldwork, CSULA had \$47,549,166 in total commitments for the Project and incurred costs of \$43,214,292, which is \$3,195,086 less than the available funds for the Project. The following table summarizes the Project budget and costs:

Description	Budget (2-7) & Additional Funding	Commitments	Actual Costs	Variance (Budget - Commitments)
Construction	\$ 32,019,000	\$ 40,763,458	\$ 38,391,201	\$ (8,744,458)
Architect and Engineering	1,875,000	2,383,046	2,266,637	(508,046)
Contract Management	2,241,000	2,100,435	2,002,315	140,565
Contingency	1,601,000			1,601,000
Required Additional Services	372,000	178,496	178,196	193,504
Group II Equipment	4,635,000	2,123,730	375,942	2,511,270
<b>Subtotal</b>	<b>\$ 42,743,000</b>	<b>\$ 47,549,166</b>	<b>\$ 43,214,292</b>	<b>\$ (4,806,166)</b>
Additional Allocation Order	4,748,000			4,748,000
Additional CSULA Funds	3,253,252			3,253,252
<b>Total</b>	<b>\$ 50,744,252</b>	<b>\$ 47,549,166</b>	<b>\$ 43,214,292</b>	<b>\$ 3,195,086</b>

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## **DESIGN COSTS**

On February 26, 2003 a standard CSU Project Architect/Engineer Agreement was executed between CSULA and AC Martin for an authorized amount of \$794,000. This amount was intended to represent preliminary design services, program requirement and coordination, and specialty consulting services, according to the CSULA Purchase Requisition form for this contract. Neither the \$794,000 amount nor the description of these services reconcile to the Exhibit B of the contract, which follows the standard CSU format of basic services. Exhibit B shows a derivation of a fee of \$1,875,752 of which schematic design and design development is calculated at 34%, or \$638,436. AC Martin's proposal letter also contained a fee of \$1,875,752 for basic services and in addition contained a proposed \$163,000 for specialized laboratory consulting services for a total of \$2,038,752. AC Martin also proposed \$100,000 for program validation prior to commencing with design.

CSULA based its calculation of the design services on the \$2,038,752 amount instead of the \$1,875,752, as 34% of \$2,038,752 calculates to \$693,176. Add to this amount \$100,000 for the program validation and the result is \$793,172. CSULA rounded this amount to \$794,000. This calculation is manually annotated in the margin of the AC Martin proposal.

AC Martin brought the discrepancy between Exhibit B and the total amount authorized under the Agreement to CSULA's attention. AC Martin agreed in an informal email to CSULA to the revised \$693,176 for schematic design and design development services, which is higher than the \$638,436 shown in Exhibit B. The discrepancy was not corrected on any subsequent amendments. It is not clear if the discrepancy resulted in any overbillings, since we are unable to reconcile the contracted amounts.

### ***Observation:***

The initial amount authorized by the Architect/Engineer Agreement does not reconcile to the fee schedule in Exhibit B of the Agreement. As a result, it is not clear what phases are authorized by the Agreement and at what amounts.

### ***Risk:***

Unclear contract authorizations may result in confusion over services to be provided and at what amounts, and may also result in overbillings to CSULA.

### ***Recommendation:***

- 1a. On future Agreements, CSULA should clearly state what phases of the Agreement are authorized and at what amounts on the face of the Agreement. The amount should reconcile to Exhibit B for the Agreement.

1b. If discrepancies in contract documents inadvertently occur, CSULA should formally amend the contract documents to correct the discrepancies.

(Ownership: CSULA)

**Campus Response:**

1a. On future projects, CSULA will identify the phases in the agreement and reconcile these phases to Exhibit B.

1b. CSULA will formally amend the contract if there are discrepancies. Procedures will be updated to incorporate these changes.

Completion Date: June 30, 2008

Subsequent to the initial Architect/Engineer Agreement with AC Martin, additional contractual amounts were added through a Service Agreement and several Extra Service Authorizations (“ESA’s”). The total amounts are summarized in the table below:

Description	Date	Amount
Project Architect/Engineer Agreement	02/26/03	\$ 794,000
ESA 1 - Construction Admin, Record Drawings included above plus additional consultant	07/18/05	530,076
ESA 2 - Feasibility Study for the Central Plant Hot Water	01/04/06	1,650
ESA 3 - Accommodation of larger autoclave on 3rd floor	03/15/06	11,226
ESA 4 - MEP & Engineering to upsize emergency generator	04/21/06	6,547
ESA 5 - Ad de-ionized water return piping	05/11/06	4,157
ESA 6 - Restore value engineering items	11/06/06	31,604
ESA 7 - Pricing for Wing B telecom/data service relocation & addition of telecom and data outlets in Wing A	02/21/07	2,541
ESA 8 - Structural design for concrete slab in telecom room	10/19/07	2,064
ESA 9 - Add services related to resolving structural field errors & owner field changes	11/06/07	85,214
ESA 10 - Alternate designs for ground floor lobby	03/26/08	12,300
<b>Total A/E Agreement and ESA's</b>		<b>\$ 1,481,379</b>
Service Agreement 4903-0146	07/09/04	\$ 815,501
ESA 1 - Modify construction docs to allow additional bidder Conduct a wind analysis test	11/01/04	19,796
ESA 2 - Modify construction docs to prepare ded. alternate Convert Chem Stock Room to Control Area	01/25/05	8,836
ESA 3 - Program validation service on Wing B Services on Wing A re-bid effort	03/01/05	52,000
<b>Total Service Agreement and ESA's</b>		<b>\$ 2,475,026</b>
<b>Total A/E Agreement, Service Agreement and ESA's</b>		<b>\$ 3,956,405</b>

AC Martin was retained to perform basic design services including schematic design, preliminary design, construction documents, bidding, construction administration, and record drawings. Basic services for AC Martin were contracted using a variety of methods and were authorized at three different times. The following table provides an overview of all basic services authorized and the methods used to contract them:

Description	Date	Method used to Contract
Schematic Design	02/26/03	A/E Agreement
Design Development	02/26/03	A/E Agreement
Construction Documents	07/09/04	Service Agreement
Bidding	07/09/04	Service Agreement
Construction Administration	07/18/05	ESA #1 to A/E Agreement
Record Drawings	07/18/05	ESA #1 to A/E Agreement

Although Exhibit B of the original Architect/Engineer Agreement shows the amounts for each of the basic services phases, it is not necessary to authorize all services at the time the Agreement is executed.

Guidance provided in SUAM 9210.02 indicates a Phase Approval Authorization Letter is the appropriate method for authorizations by phase for professional agreements. Additionally, Rider A of the Project Architect/Engineer Agreement Section I.11 states that an Extra Service Authorization (“ESA”) is to authorize additional work beyond the basic services scope. As such, an ESA is not the appropriate vehicle for authorizing phases of basic services, as they are not considered extra services.

The Service Agreement used to authorize the construction documents and bidding phases of the basic architectural services did not reference the original Project Architect/Engineer Agreement. Additionally, it contained slightly different payment information than that included in Exhibit B to the initial Architect/Engineer Agreement as well as different requirements for errors and omissions insurance. When two sets of terms and conditions are presented it can create confusion between the parties, and should be avoided when possible. CSULA treated the Service Agreement as a separate second contract and issued a separate set of ESA’s to it. According to SUAM 9208 the CSU Service Agreement should be used for design services for minor capital projects and supporting services. It is not the appropriate vehicle to authorize basic architectural services.

**Observation:**

Inappropriate contract vehicles were used to authorize phases of basic architectural services contrary to Rider A Section I.11 of the Architect/Engineer Agreement and SUAM 9210.02.

**Risk:**

Using a non-standard method to formally contract for architectural services may put CSULA at an unnecessary contractual risk and could lead to disagreements over terms and conditions, including scope and fee.

**Recommendation:**

2. In the future, CSULA should adhere to the guidance in SUAM 9210.02 and utilize a Phase Approval Authorization Letter when authorizing phases of basic architectural services for major capital projects.

(Ownership: CSULA)

**Campus Response:**

2. Architectural services were properly authorized; however, standard forms were not used. The procurement department will review procedures and will ensure proper forms are used in the future to adhere with the guidance of SUAM 9210.02.

Completion Date: May 30, 2008

KPMG compared the Architect/Engineering Agreement, the Service Agreement and a sample of ESA's to the AC Martin invoices. According to the AC Martin invoices, architectural services were performed prior to the formal authorization of several of the basic services phases.

The following table summarizes the results:

Description	Authorization Date	Dates Services Performed	Perfomed Prior to Authorization
Project A/E Agreement - Program Requirements & Coordination of Wing A and B	02/26/03	1/9/03 to 2/26/03	\$ 33,000
Project A/E Agreement - Lab Consultant	02/26/03	1/9/03 to 2/26/03	18,564
Construction Documents	07/09/04	1/26/04 to 6/11/04	658,517
<b>Total</b>			<b>\$ 710,081</b>

**Observation:**

Basic architectural services were at times performed prior to the formal authorization of those services or before an agreement had been formally executed.

***Risk:***

Work performed prior to a formal authorization of services or prior to the execution of an agreement exposes CSULA to unnecessary contractual risk in the event of a later dispute.

***Recommendation:***

3. Contractual agreements or phase authorizations should be executed in accordance with SUAM.

(Ownership: CSULA)

***Campus Response:***

3. In the future, CSULA will ensure contractual agreements or phase authorizations are executed in accordance with SUAM. Procedures will be updated to incorporate these changes.

Completion Date: June 30, 2008

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## **CONSTRUCTION BID PROCESS**

This Project included two separate components to the construction: (1) the relocation of the existing athletic courts located on the Project site to a different location, and (2) the construction of the new science building. Two separate contractors were retained for these two components of the work. KPMG performed a review of the construction bid process for the selection of both contractors.

The construction bid process for the Project was administered through CSULA's Office of Facilities Planning and Construction Services following normal CSU procurement process with a pre-qualification requirement for prospective bidders.

Malibu Pacific Tennis Courts and Los Angeles Engineering submitted bids for the athletic courts relocation. An abstract of bids was created on March 10, 2004 and Los Angeles Engineering was awarded the contract with a low bid of \$1,221,000. KPMG did not find any non-compliance with the bid process for the athletic courts portion of the Project.

The bid process for the Science Replacement Building, Wing A construction began with a pre-qualification process in June 2004. In November, 2004 the bid process for qualified firms was initiated. At that time, the construction cost estimate was \$32 million. Two bids were received with the lowest bid, including all deductive alternates, exceeded this budget by nearly 20%. The base bid by itself was exceeded by nearly 25%. The bid overruns were explained by cost escalation and local bid climate changes at the time this Project was bid.

Due to the bids exceeding the budgeted construction cost estimate, CSULA decided to re-bid the Project. This decision was made in conjunction with Capital Planning, Design and Construction ("CPDC") at the Chancellor's Office.

SUAM 9774 permits the rejection of all bids if the low bid is grossly over the Trustee's estimate and refers to a Bid Overrun Analysis policy memo dated January 5, 1999 in Appendix D, which contains the procedures to follow in the event of a bid overrun.

CSULA was unaware of any Bid Overrun Analysis policy and as such did not complete the Bid Overrun Fact Sheets forms 1 and 2 that as required by the Policy. The forms are intended to communicate the facts of the situation so they can be quickly comprehended. CSULA followed the other requirements of Bid Overrun Analysis policy memo and as a result, complied with the content of forms 1 and 2.

After consultation with the CPDC, value engineering and the creation of bid alternates, the Project was re-bid at a revised construction budget of \$34,000,000.

A total of three contractors were pre-qualified to bid on the Project, and all three submitted a bid on or before the due date.

Bid opening was held on March 24, 2005, an abstract of bids was created. Bernards Brothers, Inc. (“Bernards”) was the lowest responsible and responsive bidder with a base bid of \$36,580,000. This amount was \$199,000 less than the next closest bidder.

KPMG reviewed CSULA’s bid files and bid process on a sample basis and found the Project administrative team in compliance with requirements related to pre-qualification of bidders, pre-bid meeting, advertising for bids, review of bid proposal package, issuing of addenda during bidding, re-advertising, and obtaining required documentation from the successful bidder.

***Recommendation:***

None

**Subcontractor Substitution**

A total of five subcontractor substitutions occurred on the Project. Substitutions of H.L. Moe for American Plumbers, Inc. to perform the plumbing scope of work and Salamander Fire Protection for ATT Fire Protection were executed in accordance with SUAM and Public Contract Code.

Although CSULA followed SUAM requirements for the other three substitutions, they were not performed in accordance with Public Contract Code requirements by Bernards. Public Contract Code states the prime contractor may not substitute a person as subcontractor in place of the subcontractor listed in the original bid unless the awarding authority consent to the substitution. KPMG found that Bernards executed a subcontract with the new subcontractor prior to CSULA granting approval for the substitution. The following table shows the date CSULA gave approval for the substitutions and the date on the subcontract between Bernards and the new subcontractor.

Original Subcontract	New Subcontractor	Change Requested	Notification to Subcontractor	Approval for Substitution	Subcontract Date
Weiss Sheetmetal	Monarth Fabrication	01/30/06	02/27/06	03/09/06	01/31/06
Carmel Architectural	Sashco	11/29/05	12/14/05	12/27/05	12/15/05
Crew, Inc.	Advantage Demolition	08/30/05	08/31/05	09/09/05	08/30/05

***Observation:***

Bernards issued subcontracts to unlisted subcontractors prior to obtaining CSULA approval for the substitution in violation of Public Contract Code.

***Risk:***

While not a violation on part of CSULA, problems could arise from an unauthorized subcontractor substitution in the event of a protest to the substitution.

***Recommendation:***

- 4a. CSULA and should discuss the importance of proper subcontractor substitution with Bernards and consider performing additional periodic checks on future projects to ensure compliance.

(Ownership: CSULA)

- 4b. CPDC should revise SUAM to clarify procedures and penalty assessments related to the subcontractor substitution process and requirements stated in Public Contract Code.

(Ownership: CPDC)

***Campus Response:***

- 4a. CSULA has discussed the importance of proper subcontractor substitution with Bernards and will with all future contractors. We will revise our procedures to include this topic in preconstruction meetings with contractors. We will also perform additional periodic checks to ensure compliance.

Completion Date: June 30, 2008

***Management Response:***

- 4b. We agree and have amended SUAM and posted it to our website.

## CONSTRUCTION CHANGE ORDERS

Thirty change orders totaling \$3,243,545 had been executed for the Project at the time of KPMG's fieldwork and an additional \$280,941 in change order were pending. The following table summarizes the executed change orders:

Change Order	Description	Date	Amount
1	Install sewer line to Athletic Restrooms per drawings	01/17/06	\$ 22,402
2	Excavation, slurring backfill and investigate below grade.	2/29/06	118,933
3	Rebar welding, additional curing compound and structural.	03/21/06	52,714
4	Multiple small projects.	05/01/06	3,753
5	Modification/correction of 300 series plumbing issues.	05/31/06	219,386
6	Wall backing works, re-size and re-frame steel roof.	07/10/06	36,970
7	750KW emergency generator and distribution board.	07/10/06	246,472
8	Modification of 200 series plumbing drawing issues	10/09/06	221,490
9	Domestic water site PRV station and abate transit duct bank.	10/09/06	37,985
10	Extra to revise and change light fixtures.	03/07/07	36,638
11	Material and labor to replac concrete panels.	04/11/07	4,407
12	Remove existing duct banks and conduits.	04/10/07	23,107
13	Add horizontal backing at the wall shelving. Change finish.	04/10/07	8,493
14	Provide additional duct mounted smoke detectors.	05/06/07	80,323
15	Provide turn key DI water purification system in room 149.	06/03/07	72,888
16	Provide alternate routing from manhole to building.	05/08/07	53,980
17	Put back lab casework, fume hoods and sliding white boards.	08/30/07	1,299,791
18	Provide insulated cold room doors and diffusers.	10/02/07	82,429
19	Install 5-way electrical medium voltage switch.	10/02/07	85,880
20	Modify electrical, mechanical, and dry walls.	10/02/07	72,030
21	Provide card reader at animal lab and substitute doors.	10/02/07	48,209
22	Re-route and extend chilled water lines.	10/02/07	125,000
23	To provide DI water drop in U-system and add a shut off.	10/02/07	91,428
24	Provide air regulators.	10/02/07	76,182
25	Modify plumbing and remove a transit pipe.	10/02/07	8,668
26	Modify plumbing, fire sprinkler, electrical, mechanical.	10/02/07	19,152
27	Provide 23 fume hood monitors and mech. Piping at AHU-2.	10/02/07	79,158
28	Disinfect D. I. Water System and acoustic ceiling.	12/05/07	65,046
29	Aluminum panel and work for entrance canopy.	12/06/07	54,032
30	Contractor agrees to pay for direct cost of project overrun.	12/11/07	(103,400)
<b>Total</b>			<b>\$ 3,243,545</b>

CSULA maintained signature authorization forms clearly indicating approval levels for various personnel. CSULA also maintained documentation during vacation periods indicating the individual responsible during somebody else's absence. Review of the signature authority for the 30 executed change orders indicated the signature authority was appropriately adhered to by CSULA.

Detail testing of a sample of change order line items revealed some insignificant errors. Re-calculation of the change order line item amount from the supporting documentation revealed three instances where there was a variance between the amount of the change order line item and the amount as re-calculated during KPMG's testing.

Sample	Change Order	Amount	Error
2	8	\$ 470,685	\$ 256
4	10	61,314	3,693
7	17	1,299,791	992
<b>Total</b>		<b>\$ 1,831,790</b>	<b>\$ 4,941</b>

Change order 8 contained a typographical error and mark-up was charged on mark-up in change orders 10 and 17. Otherwise, the change order amounts appear to have been calculated appropriately.

The change order documentation in general was very detailed and support was included for negotiated amounts tested and documentation showing the calculations to arrive at the extension of days and compensation were also available.

***Recommendation:***

None

**Change Order Report Analysis**

CSU has historically considered change order costs incurred due to errors and omissions by the architect of up to 3% of the initial award construction cost as falling within the architect's 'standard of care'. However, the agreement as executed does not contain any language defining 'standard of care', but states the architect shall secure and maintain appropriate errors and omissions insurance of no less than \$1,000,000 per occurrence, \$2,000,000 per annual aggregate. This language has been changed in a later version of the CSU standard agreement to define 'standard of care'.

CSULA provided a change order log reflecting the source of each change order. The table below provides a summary of the information provided:

Class	Type of Change	Amount	Percent of Total CO	Percent of Original Contract
4.1.1	Error in the contract documents	\$1,210,709	37.3%	3.3%
4.1.2	Omission from the contract documents	313,165	9.7%	0.9%
4.2	Unforeseeable job site condition	169,088	5.2%	0.5%
4.3	Change in the requirements of a regulatory agency	5,500	0.2%	0.0%
4.4	Change originated by the University	1,691,178	52.1%	4.7%
4.5	Changes in specified work due to the unavailability of specified materials	6,666	0.2%	0.0%
4.6	Other		0.0%	0.0%
<b>Total Change Orders</b>		<b>\$ 3,243,545</b>	100.0%	9.0%
Original Contract Amount		\$ 36,171,000		
<b>Total</b>		<b>\$ 39,414,545</b>		

Based on the information provided, the errors and omissions total \$1,523,874 and represent 4.2% of the original contract amount, which exceeds the 3% ‘standard of care’, discussed in SUAM 9236. SUAM 9236 also states that errors should be calculated at full weight and omissions should be calculated using 20% of the dollar value when calculating additional costs to CSULA. CSULA would have had to pay for an omission had it not been omitted from the original contract documents, but because the item is added through the change order process, CSULA typically pays a higher premium than if it was included in the initial bid. The following table shows the value the errors and omissions when weighted per SUAM 9236.

Description	Amount
Value of errors (full weight)	\$ 1,210,709
Value of omissions (20% weight)	62,633
<b>Total</b>	<b>\$ 1,273,342</b>
Percent of Original Contract	3.5%

Based on the information provided, the weighted value of the additional costs to CSULA resulting from errors and omissions total \$1,273,342 and represent 3.5% of the original contract amount. This still exceeds the 3% ‘standard of care’, discussed in SUAM 9236. CSULA indicated they have mentioned the excessive errors and omissions to the architect, and intend to pursue the issue at the completion of the Project when the total amount of errors and omissions can be calculated.

**Observation:**

Errors and omissions by the architect resulted in additional costs to CSULA exceeding an acceptable level of care.

***Risk:***

Excessive errors and omissions lead to increased costs and may impact the schedule for CSULA.

***Recommendation:***

5. CSULA should pursue recourse against AC Martin for any additional costs resulting from excessive errors and omissions and document the settlement with AC Martin.

(Ownership: CSULA)

***Campus Response:***

5. The construction project is still ongoing. At the completion of the project, CSULA will review any additional costs due to excessive errors and omissions and determine appropriate action in accordance with SUAM guidance.

Completion Date: First review will be performed by August 13, 2008

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## **INSPECTION SERVICES**

Two Service Agreements were executed between Twining Laboratories of Southern California, Inc. (“Twining”) and CSULA. The first was executed on August 3, 2004 in the amount of \$40,600 for Twining to provide special inspections during the athletic courts relocation. The second Service Agreement was executed a year later on August 3, 2005 in the amount of \$439,500 for Twining to serve as the Inspector of Record and provide engineering support for the new Science Building. The Agreements were executed using the standard CSU Service Agreement and were appropriately authorized.

KPMG found reimbursable charges billed on the invoices, but no mention of reimbursable expenses in the Service Agreements. The reimbursable charges were for an insignificant amount, but verbiage regarding the reimbursable expensed should be included in the contract documents for greater clarity.

KPMG found \$7,903 in services performed prior to the formal execution of Service Agreement 4903-0142 (Athletic Courts), and \$2,786 in services performed prior to the formal execution of Service Agreement 4905-0019 (Science Building) for a total of \$10,689 in services performed prior to the formal execution of a contractual agreement. These amounts are not considered significant by CPDC and as a result, do not constitute a finding.

### ***Recommendation:***

The Service Agreement for inspection services does not contain any language regarding reimbursable expenses.

### ***Risk:***

The consultant may charge the full not-to-exceed fee for services provided and also charge reimbursable costs in addition to the fee, resulting in a potential unintended overbilling.

### ***Recommendation:***

6. CSULA should consider incorporating language on reimbursable expenses for Service Agreements on future Projects.

(Ownership: CSULA)

### ***Campus Response:***

6. CSULA will incorporate language on reimbursable expenses for Service Agreements on the RFP for future Projects.

Completion Date: June 30, 2008

## MAJOR EQUIPMENT/MATERIALS REVIEW

KPMG selected and reviewed a sample of materials and equipment based on construction cost and accessibility to the installed items. The Project was nearing the end of construction at the time of KPMG's fieldwork and consideration was given to select equipment and materials that were fully installed.

CSULA allowed access to drawings, specifications, material samples, and submittals. The equipment and materials located in the field were compared to submittals approved by the architect and/or engineer and were verified against performance specifications, submittals, and drawings.

The following equipment items and specific model data were approved and visually confirmed as installed on the Project:

Division	Drawing No.	Brand	Model No./ Capacity	Description
15730	M-101	Energy Labs Inc.	AHU-1-286/300A/CFM: 76500	AHU-1 Air Handling Unit
5310	E-2	Verco Manufacturing Co.	ASTM A653	Metal Decking
8211	A-701	Eggers Industries	N1989-05-A/PL SL Cherry	Wood Doors
12345	QL-002	Custom	Plastic laminate Wilsonart's color #D318-60, Shadowblue/Countertop (black)	Lab Casework
14240	A-307	Mitsubishi	Hydraulic Jack/Capacity-4500# HP60	Elevator #1
16425	E-801	General Electric	1HA/400 Amp, 480Y/277V/1st Floor Closet	Switchboard
15100	C-01		Cast Iron Soil Pipe and Fittings	Storm Drain
7552	A-525	Soprema	Soprema System 2542/Elastophene Sanded/FRGR	Roofing
16496	(2.4)L	Kohler Power Systems/GE Zenith Controls	Kohler: 750REOZDC GE: 277/480V 3ph, 4w, 60Hz	Emergency Generator

The equipment and materials observed in the field conformed to the specified requirements, drawings, specifications and submittals, based on a visual inspection of equipment labeling, and comparison to physical materials samples provided and approved by the architect.

***Recommendation:***

None

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## **CLOSE-OUT PROCESS**

At the time of KPMG's fieldwork, the Project was not complete and was not far enough along in the close-out process for a meaningful evaluation. KPMG did note that CSULA had started collecting operation and maintenance manuals, certain specialty inspections (such as elevator inspections) had been performed, and an extensive punch list with input from architect and inspector of record had been prepared.

***Recommendation:***

None

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## **LIQUIDATED DAMAGES**

The Notice to Proceed issued to Bernards for construction established July 20, 2005 as the start of the Project, and the final completion date set at 821 consecutive calendar days later on October 18, 2007. Change orders 17 and 27 added a total of 57 days to the Project bringing the contracted completion date to December 14, 2007.

The Project continued beyond the December 14, 2007 contracted completion. As a result, CSULA negotiated a settlement for the delay impacts and extended the Project 74 days from December 15, 2007 to February 24, 2008 for \$103,400 in compensation and included on change order 30. CSULA calculated the delay impact based on its additional overhead costs, which was detailed in a fully supported calculation. KPMG determined the settlement was a reasonable and equitable method for extending the Project.

At the end of KPMG's fieldwork on April 11, 2008, the Project was still not complete and CSULA had not taken beneficial occupancy of the building. The completion date had not been changed from February 24, 2008, almost two months earlier.

CSULA is planning on pursuing compensation for the impact of the delay when the final global settlement change order is negotiated. Since the Project is not yet complete, liquidated damages cannot be accurately calculated at this time.

***Recommendation:***

None

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## ACCOUNTING

KPMG reviewed the accounting process for the Project, including invoice processing and accounts payable. CSULA maintained a shadow system that was reconciled to the PeopleSoft main frame accounting system on a monthly basis. The shadow system tracked the commitments and expenditures for each vendor as well as summarizing other Project costs.

The shadow system relies on comments to determine the funding source for any given transaction, and as a result determining the funding source of an expenditure would require a manual search on a payment by payment basis.

CSULA provided KPMG with a copy of the Project costs in summary form with detail for the architect, contractor and inspector of record. KPMG traced physical invoices and contractual obligations from the architect, contractor, and inspector of record to the entries in the Project cost detail information provided by CSULA and found no exceptions. A sample of invoices was tested for appropriate approvals prior to payment. No exceptions were noted.

***Recommendation:***

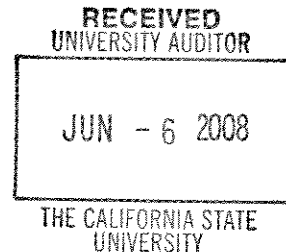
None



CALIFORNIA STATE UNIVERSITY, LOS ANGELES

OFFICE OF THE PRESIDENT

June 6, 2008



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

Re: *University's Response to Recommendations Contained in the Report of Construction Project Evaluation CSULA – Science Replacement Building, Wing A*

Dear Mr. Mandel:

Attached are the University's responses to the recommendations contained in the Report of Construction Project Evaluation CSULA – Science Replacement Building, Wing A.

Please contact Tanya Ho, University Internal Auditor, at (323) 343-5102, if you wish to discuss any matter contained herein.

Sincerely,

A handwritten signature in black ink, appearing to read "James M. Rosser".

James M. Rosser  
President

Attachment

cc: (with attachments)  
George Pardon, Vice-President for Administration and Chief Financial Officer  
Ali Izadian, Director of Facilities Planning and Construction  
Tanya Ho, University Internal Auditor

**CONSTRUCTION PROJECT EVALUATION**  
**CALIFORNIA STATE UNIVERSITY, LOS ANGELES**  
**SCIENCE REPLACEMENT BUILDING, WING A**

**DESIGN COSTS**

***Recommendation:***

- 1a. On future Agreements, CSULA should clearly state what phases of the Agreement are authorized and at what amounts on the face of the Agreement. The amount should reconcile to Exhibit B for the Agreement.
- 1b. If discrepancies in contract documents inadvertently occur, CSULA should formally amend the contract documents to correct the discrepancies.

(Ownership: CSULA)

***Campus Response:***

- 1a. On future projects, CSULA will identify the phases in the agreement and reconcile these phases to Exhibit B.
- 1b. CSULA will formally amend the contract if there are discrepancies. Procedures will be updated to incorporate these changes.

Completion Date: June 30, 2008.

***Recommendation:***

2. In the future, CSULA should adhere to the guidance in SUAM 9210.02 and utilize a Phase Approval Authorization Letter when authorizing phases of basic architectural services for major capital projects.

(Ownership: CSULA)

***Campus Response:***

2. Architectural services were properly authorized; however, standard forms were not used. Procurement Department will review procedures and will ensure proper forms are used in the future to adhere with the guidance of SUAM 9210.02.

Completion Date: May 30, 2008.

***Recommendation:***

3. Contractual agreements or phase authorizations should be executed in accordance with SUAM.

(Ownership: CSULA)

***Campus Response:***

3. In the future, CSULA will ensure contractual agreements or phase authorizations are executed in accordance with SUAM. Procedures will be updated to incorporate these changes.

Completion Date: June 30, 2008.

**CONSTRUCTION BID PROCESS**

***Recommendation:***

- 4a. CSULA should discuss the importance of proper subcontractor substitution with Bernards and consider performing additional periodic checks on future projects to ensure compliance.

(Ownership: CSULA)

***Campus Response:***

- 4a. CSULA has discussed the importance of proper subcontractor substitution with Bernards and will with all future contractors. We will revise our procedures to include this topic in preconstruction meetings with contractors. We will also perform additional periodic checks to ensure compliance.

Completion Date: June 30, 2008

**CONSTRUCTION CHANGE ORDERS**

***Recommendation:***

5. CSULA should pursue recourse against AC Martin for any additional costs resulting from excessive errors and omissions and document the settlement with AC Martin.

(Ownership: CSULA)

***Campus Response:***

5. The construction project is still ongoing. At the completion of the project, CSULA will review any additional costs due to excessive errors and omission and determine appropriate action in accordance with SUAM guidance.

Completion Date: First review will be performed by August 13, 2008.

**INSPECTION SERVICES**

***Recommendation:***

6. CSULA should consider incorporating language on reimbursable expenses for Service Agreements on future Projects.

(Ownership: CSULA)

***Campus Response:***

6. CSULA will incorporate language on reimbursable expenses for Service Agreements on the RFP for future projects.

Completion Date: June 30, 2008.



**Business and Finance**  
401 Golden Shore, 5th Floor  
Long Beach, CA 90802-4210

[www.calstate.edu](http://www.calstate.edu)

**Richard P. West**  
Executive Vice Chancellor/CFO

562-951-4600  
Fax 562-951-4970  
rwest@calstate.edu

**MEMORANDUM**

**Date:** June 24, 2008  
**To:** Larry Mandel  
University Auditor  
**From:** Richard P. West *[Signature]*  
Executive Vice Chancellor & Chief Financial Officer  
**Subject:** Audit Report  
Science Replacement Building, Wing A  
California State University, Los Angeles

RECEIVED  
UNIVERSITY AUDITOR  
JUN 27 2008  
THE CALIFORNIA STATE  
UNIVERSITY

I am pleased that the overall theme of this audit report continues in a positive vein and that it finds general compliance with established procedures. I have reviewed the report with my Capital Planning, Design and Construction (CPDC) staff, and have attached our response to the auditors' findings and recommendation to CPDC.

RPW:ESJ:bn

Attachment

cc: Ms. Elvyra F. San Juan  
Mr. Larry Piper  
Mr. Thomas M. Kennedy  
Mr. James Sowerbrower

CSU Campuses  
Bakersfield  
Channel Islands  
Chico  
Dominguez Hills  
East Bay

Fresno  
Fullerton  
Humboldt  
Long Beach  
Los Angeles  
Maritime Academy

Monterey Bay  
Northridge  
Pomona  
Sacramento  
San Bernardino  
San Diego

San Francisco  
San José  
San Luis Obispo  
San Marcos  
Sonoma  
Stanislaus

**CONSTRUCTION PROJECT EVALUATION**  
**CALIFORNIA STATE UNIVERSITY, LOS ANGELES**  
**SCIENCE REPLACEMENT BUILDING, WING A**

**CONSTRUCTION BID PROCESS**

***Recommendation:***

- 4b. CPDC should revise SUAM to clarify procedures and penalty assessments related to the subcontractor substitution process and requirements stated in Public Contract Code.

(Ownership: CPDC)

***Management Response:***

- 4b. We agree, and have amended SUAM, and posted it to our web site.

THE CALIFORNIA STATE UNIVERSITY  
OFFICE OF THE CHANCELLOR



BAKERSFIELD

July 3, 2008

CHANNEL ISLANDS

CHICO

**MEMORANDUM**

DOMINGUEZ HILLS

EAST BAY

TO: Mr. Larry Mandel  
University Auditor

FRESNO

FROM: Charles B. Reed  
Chancellor

A handwritten signature in black ink that reads "Charles B. Reed".

FULLERTON

HUMBOLDT

SUBJECT: KPMG Draft Final Report on the *Science Replacement Building, Wing A* Construction Project at California State University, Los Angeles

LONG BEACH

LOS ANGELES

In response to your memorandum of July 3, 2008, I accept the response as submitted with the draft final report on the *Science Replacement Building, Wing A* construction project at California State University, Los Angeles.

MARITIME ACADEMY

CBR/jt

MONTEREY BAY

Enclosure

NORTHRIDGE

POMONA

cc: Ms. Erika Alvord, KPMG  
Ms. Tanya Ho, University Internal Auditor, CSULA  
Ms. Colleen Nickles, Assistant Vice Chancellor, Financial Services  
Mr. George Pardon, Vice President, Administration and  
Chief Financial Officer, CSULA  
Dr. James M. Rosser, President, CSULA  
Ms. Elvyra San Juan, Assistant Vice Chancellor, CPDC  
Mr. Richard P. West, Executive Vice Chancellor and Chief Financial Officer

SACRAMENTO

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSÉ

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS