CALIFORNIA STATE UNIVERSITY,
MONTEREY BAY

CHAPMAN SCIENCE ACADEMIC CENTER

Final Report

June 9, 2004
PROJECT OVERVIEW

KPMG was retained by the California State University’s (CSU) Office of the University Auditor to perform a review of CSU – Monterey Bay’s (CSUMB or the University) Chapman Science Academic Center. The project consisted of the construction of a Science Academic Center totaling approximately 68,000 square feet.

The building provides space for three general areas of use: a wing housing science teaching laboratories; another wing housing computer classroom space; and a central connection housing faculty offices. The project also included the extension of telecommunication/data and electrical service to the site, finish grading, site hardscaping, irrigation, and landscaping. The new structure is built upon a steel frame with a combination of masonry, wood and metal siding exterior skin.

This was the University’s first campus-managed project. We found their records in excellent order and found the staff to be both well informed and helpful. CPDC Chancellor’s Office (CPDC CO) initiated the project and it was under construction at the time it was delegated to the University. CSUMB’s Capital Planning and Design (CPD) group provided “in-house” construction project management services and inspection services.

KPMG reviewed project records from the following firms involved in the project’s development and execution:

Contractor: Mauldin-Dorfmeier Construction, Inc (MDC)
Architect/Engineer (A/E): Anshen & Allen
Project Management (PM)/IOR: CSU-San Bernardino Campus Planning & Development (CPD)
DESIGN COSTS

Anshen & Allen, Inc. was awarded the design contract by CPDC-Chancellor’s Office (CPDC-CO), which executed the agreement on November 15, 1999, in the amount of $1,401,221. Two additional service agreements were subsequently authorized by the University and totaled $50,042.

<table>
<thead>
<tr>
<th>Contract</th>
<th>Program</th>
<th>Schematic</th>
<th>Prelim</th>
<th>WD’s</th>
<th>Bid</th>
<th>Const Adm</th>
<th>ESA’s</th>
<th>Total Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESA #1</td>
<td>$51,000</td>
<td>$290,883</td>
<td>$211,383</td>
<td>$489,394</td>
<td>$49,314</td>
<td>$309,246</td>
<td></td>
<td>$1,401,220</td>
</tr>
<tr>
<td>ESA #2</td>
<td>22,950</td>
<td>22,950</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$51,000</td>
<td>$290,883</td>
<td>$211,383</td>
<td>$489,394</td>
<td>$49,314</td>
<td>$309,246</td>
<td>$50,042</td>
<td>$1,451,262</td>
</tr>
</tbody>
</table>

| Paid to Date | $51,000  | $290,883  | $211,383 | $489,394 | $49,314  | $309,246  | $50,042| $1,451,262   |

CSU Monterey Bay was responsible for managing the A/E agreement once the project was delegated to the campus. We performed a review of the campus records and tracked all payments to authorized amounts. The University properly processed the design invoices for payment.

**Recommendation:**

None
CONSTRUCTION BID PROCESS

The project was constructed under the standard CSU design/bid/build approach. Prior to bid, four Addendum were issued:

- Addendum #1 – Issued June 1, 2001, extended the bid date to June 14, 2001.
- Addendum #2 – Issued June 5, 2001, modified the specifications.
- Addendum #3 – Issued June 12, 2001, modified the specifications.

Anshen & Allen estimated the project cost at $16,638,000. The Abstract of Bids listed five responsive bidders with a low base-bid of $19,190,000 submitted by Mauldin-Dorfmeier Construction, Inc. The initial specifications listed two deductive alternates as follows:

- Alternate 1 – Delete landscaping shown on specified drawings.
- Alternate 2 – In lieu of using ground face block at South and East Wings of the Building, use split face block full height.

Alternate 2 was incorporated into the construction contract, which was awarded to Mauldin-Dorfmeier (MDC) for $18,885,000 on June 28, 2001. Subsequently, Change Order No. 1 voided the inclusion of Bid Alternate 2 in the amount of $15,000.

During our review, we also noted the following:

- The Abstract of Bids was appropriately completed and signed.
- MDC furnished an appropriate Payment and Performance Bond in the original contract amount as required.
- MDC is a California Corporation.
- The original construction period was to cover 600 calendar days.
- Liquidated damages were stated to be $3,000 per day.
- Notice to Proceed was given on July 24, 2001, with a start date of August 13, 2001.
- Original completion was established as April 5, 2003.
- Change Order No. 9 granted a three-day time extension for the addition of drains at eyewash stations and extended the completion date to April 8, 2003.
- Beneficial Occupancy occurred on June 26, 2003, seventy-nine days late, however, no extension was granted at that time.
- An extension of 108 days was included in the final change order that extended the final completion date to July 25, 2003. (This was thirteen days short of the actual completion date of August 7, 2003).
Notice of Completion was recorded as August 7, 2003, (121 days after the contractual completion date).

**Recommendation:**

None
CONTRACTOR COMPLIANCE - SUBCONTRACTING PRACTICES

For this project, the "List of Proposed Subcontractors" (CM Form 701.04) and the "Expanded List of Subcontractors" (CM Form 701.04 A) identified twenty-two separate work divisions and subcontractors. Additionally, the following subcontractors were substituted:

- Otis Elevator was listed as the elevator subcontractor. Mauldin-Dorfmeier (MDC) claimed a clerical error occurred when MDC lowered their bid price to include the elevator quote from Western Pacific, but failed to change the listing form. The Contractor submitted affidavits from both subcontractors and the University, appropriately, approved the substitution.
- Quantum Plumbing and Heating was substituted for the listed plumbing subcontractor, Cesena Plumbing. Cesena refused to execute a contract with Mauldin-Dorfmeier. The University appropriately approved the substitution.
- Dolan Concrete was listed as the concrete subcontractor. Mauldin-Dorfmeier (MDC) claimed a clerical error occurred when MDC lowered their bid price to include the concrete quote from Marina Concrete, but failed to change the listing form. The Contractor submitted affidavits from both subcontractors and the University, appropriately, approved the substitution.

All subcontractors with contract amounts in excess of ½ of 1% of the construction contract amount were listed as required by Public Contract Code 4100.

As part of the bid process review, Mauldin-Dorfmeier provided worksheets and copies of bids received from subcontractors. We found the bid practices employed on the project to be appropriate and in conformance with industry standards. The following trade bids were examined in detail:

- **Glazing and Curtain Walls:** Two bids were received in the amounts of $689,903 and $1,227,966. The low bidder, San Joaquin Glass Co., Inc., was issued a subcontract in the amount of $689,903.
- **Plaster/Drywall:** Four bids were received ranging from $1,021,940 to $1,206,678. The low bidder was not found to be responsive and a subcontract was issued to the second low bidder, Apex Partitions, Inc., in the amount of $1,025,000.
- **Roofing:** Four bids were received, ranging from $148,250 to $273,030. Alcal Roofing, the low bidder, was issued a subcontract in the amount of $148,250.
- **Electrical:** Four bids were received ranging from $2,300,000 to $2,902,675. Edward Scott Electric Co., the low bidder, was issued a subcontract in the amount of $2,300,000.
Recommendation:

None
CONSTRUCTION CHANGE ORDERS

At the time of our review, thirty project Change Orders totaling $1,055,657 were incorporated into the project based on approximately 160 individual Proposed Change Orders (PCO’s). At the time of our review, the University was in the process of executing final change orders to cover a minor clerical error and a credit for an overpayment to MDC for mark-up on subcontractor mark-ups, bond costs and insurance that was inadvertently added to change orders. After the final change orders are executed, the revised total changes - $1,030,426 - will have increased the original contract amount of $18,885,000 by 5.46%.

The majority of the changes were attributable to A/E Errors and Omissions, which totaled 4.56% of the construction cost and is outside of the range of industry standards (typically 2% to 3%). During our fieldwork, the University prepared an analysis of the Errors and Omission change orders following the guidelines suggested in SUAM Section 9236. The revised Errors and Omission change orders totaled 2.29% of construction costs when using the value of 20% of the omission costs and 100% of the error change order costs.

As part of the Change Order review process, we found that the University allowed MDC a 10% fee on the subcontractor’s 15% mark-up and a 7% fee on the subcontractor’s 10% markup. As stated in the General Conditions, Paragraph 6.01.c (4), “no mark-up on mark-up is permitted”, that is, markups should be calculated on the subcontractor’s direct costs only. In our 78% sample of total change orders, we found that approximately $11,000 had been overpaid to MDC in mark-ups. Applying the same overcharge percentage to the total changes, we estimated the total overcharge at approximately $13,500. The overcharge for bond premiums totaled $10,710 and builder’s risk totaled $1,505. Bond premiums and insurance are included in the Contractor’s fee and not permitted as add-ons to change orders.

Subsequent to our fieldwork, the University provided KPMG with copies of two final change orders. Change Order No. 32 corrected a clerical error of $540 and provided a credit to the University for $13,556 for the contractor charging “mark up on mark up” on change orders, which is precluded by Section 6.01 (4) of the General Conditions. Change Order No. 33 provided a credit to the University totaling $12,215 for bond premium and insurance charges on change orders, which is also precluded by section 6.01 (4) of the General Conditions.

Recommendation:

1. The University should confirm that MDC approves the final change order for the overpayment on change orders. On future projects, the University should ensure that markups are calculated and paid in accordance with contract requirements. This can be accomplished by utilizing the Change Order Request (Form 703.34) included on the Chancellor’s Office CPDC website.
Campus Response:

1. The University and Mauldin-Dorfmeier Construction, Inc. have executed Change Order 32. This change order addresses the overpayment by the University for “Mark up on Mark up,” Course of Construction Insurance and Bonds as found in the Audit Report. Additionally, as a part of Change Order 32, we included the Global Settlement Language as presented on the CPDC Website.

As part of our review we evaluated change orders and traced subcontractor estimates to the actual subcontractor change orders. The Contractor furnished all subcontract files. In the review, 100% of all subcontractor quotes and backup to change orders issued were traced and confirmed at the Contractor level.

Labor Fringe & Burden

From our sample of detailed change orders, MDC self-performed less than 2% of the work with subcontractors performing over 98% of the work. As a result, labor burden and fringe cost reviews were not performed.

Change Order Report Analysis

The University provided a change order log that accurately reflected the initiating source of each Change Order. The following table summarizes that report:

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>C.O. Totals</th>
<th>% of CO</th>
<th>% of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Errors/Omissions from the Contract Documents</td>
<td>$ 861,766</td>
<td>83.63%</td>
<td>4.56%</td>
</tr>
<tr>
<td>4.2 Unforeseeable job site conditions</td>
<td>16,279</td>
<td>1.58%</td>
<td>0.09%</td>
</tr>
<tr>
<td>4.3 Regulatory agency, bldg. code, safety, health</td>
<td>33,993</td>
<td>3.30%</td>
<td>0.18%</td>
</tr>
<tr>
<td>4.4 Originated by the University</td>
<td>105,533</td>
<td>10.24%</td>
<td>0.56%</td>
</tr>
<tr>
<td>4.5 Unavailability of specified materials</td>
<td>12,855</td>
<td>1.25%</td>
<td>0.07%</td>
</tr>
<tr>
<td>4.6 Other</td>
<td>0</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total Change Orders</strong></td>
<td><strong>$ 1,030,426</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>5.46%</strong></td>
</tr>
</tbody>
</table>

Original Contract Amount
18,885,000

Total
$ 19,915,426

Recommendation:

None
PROJECT MANAGEMENT/INSPECTION SERVICES

The University provided in-house project management and inspection services for the project, supplemented by an outside firm that provided additional inspection services. The University provided a schedule that detailed employee cost allocations to the project as follows:

<table>
<thead>
<tr>
<th>CSUMB Management</th>
<th>FY 1999 Total</th>
<th>FY 2000 Total</th>
<th>FY 2001 Total</th>
<th>FY 2002 Total</th>
<th>FY 2003 Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project manager</td>
<td>$21,239</td>
<td>$70,116</td>
<td>$24,649</td>
<td>$116,004</td>
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</tr>
<tr>
<td>Project manager</td>
<td>19,768</td>
<td>55,809</td>
<td>48,342</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>123,919</td>
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<tr>
<td>Inspector</td>
<td></td>
<td>59,232</td>
<td>47,619</td>
<td>106,851</td>
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<tr>
<td>Assistant</td>
<td></td>
<td>4,070</td>
<td>45,562</td>
<td>16,988</td>
<td></td>
<td>66,620</td>
</tr>
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<td>Total</td>
<td></td>
<td></td>
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<td>$413,394</td>
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</table>

Outside Inspector: Albert McCarthy

<table>
<thead>
<tr>
<th>Outside Inspector</th>
<th>FY 2000 Total</th>
<th>FY 2001 Total</th>
<th>FY 2002 Total</th>
<th>FY 2003 Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albert McCarthy</td>
<td>21,800</td>
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<td></td>
<td></td>
<td>21,800</td>
</tr>
</tbody>
</table>

TOTAL PM/IOR COST

<table>
<thead>
<tr>
<th>TOTAL PM/ior COST</th>
<th>FY 2000 Total</th>
<th>FY 2001 Total</th>
<th>FY 2002 Total</th>
<th>FY 2003 Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$435,194</td>
</tr>
</tbody>
</table>

Total fees paid for in-house project management, inspection, scheduling and cost consulting services totaled $435,194 or 2.2% of total construction costs, which is lower than industry standards of 2.5% to 3.5%.

Recommendation:

None
ACCOUNTING

As part of our work, KPMG reviewed CSUMB’s cost accounting reporting system and invoice processing practices. The University provided detailed spreadsheets prepared by Campus Planning and Development. The reporting system is comparable to what we have seen at other campuses and appears to be adequate to meet the needs of the University.

Recommendation:

None
LIQUIDATED DAMAGES

The University authorized a 3-day time extension to furnish and install fifteen (15) floor drains and associated plumbing in Change Order No. 9. The University also authorized a 108-day time extension in Change Order No. 30 as part of a settlement of Cost Request Bulletin (CRB) 5R2 which impacted concrete, metal deck, and rough plumbing on three floors. The original completion date was adjusted from April 5, 2003, to July 25, 2003, by these two changes. The Notice of Completion recorded final acceptance as of August 7, 2003, 13 days after the revised completion date of July 25, 2003. The University has since corrected the mathematical error for the thirteen days in Change Order No. 32.

The University accepted limited beneficial occupancy of the building on June 26, 2003, appropriately documented by Change Order No. 28. This was seventy-nine days beyond the original completion and the 3-day extension. At the time of this change order, the University elected to not grant a time extension even though they recognized that MDC was entitled to one. Rather, management opted to attempt to keep the Contractor diligent with punch list work that was in process. The University did recognize a 121-day extension (108 + 13) due to CRB 5R2 that occurred in late 2001 and was not settled until March 2002. Subsequent to our fieldwork, the University provided a memo that documents this issue. The extension was addressed in Change Order Nos. 30 and 32 as part of a full settlement. Liquidated damages were not warranted.

Recommendation:

2. For future global settlements, the University should make it a formal requirement to clearly document all delays and liquidated damages and make the settlement document part of project files.

Campus Response:

2. As part of our annual resubmission of the Operational Plan for Delegation – I Capital Outlay Management Authority, the University shall include language requiring that the settlement document and detailed documentation of all delays and liquidated damages become part of the project files. The University proposes that this language be included in our February 2005 resubmission.
MAJOR EQUIPMENT REVIEW

The initial review of Contract Documents and Specification was performed at the University. KPMG was furnished a Submittal Log from which a sample was selected. Submittal records were provided and reviewed.

Of the submittals reviewed, all were traced from Project Specifications through submittal data and final acceptance. The equipment specified in Project Specifications was supported with required acceptance documentation. A project walk-through was conducted with representatives from campus personnel in order to verify that specified and approved equipment had been provided and installed by the Contractor.

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

<table>
<thead>
<tr>
<th>Division #</th>
<th>Brand</th>
<th>Model #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15060</td>
<td>Tuthill</td>
<td>451</td>
<td>Fill-Rite Diaphragm Pump</td>
</tr>
<tr>
<td>15060</td>
<td>Raychem</td>
<td>TTA-1-UL/CSA</td>
<td>TraceTek Alarm Module</td>
</tr>
<tr>
<td>15450</td>
<td>Reco</td>
<td>R25-498</td>
<td>250 Gallon Water Heater</td>
</tr>
<tr>
<td>15550</td>
<td>Parker</td>
<td>T2970</td>
<td>Direct Fired Hot Water Boiler</td>
</tr>
<tr>
<td>15550</td>
<td>Parker</td>
<td>Parker-Lite</td>
<td>Sequence Indicator</td>
</tr>
<tr>
<td>15550</td>
<td>Honeywell</td>
<td>S7800A</td>
<td>Keyboard Display Module</td>
</tr>
<tr>
<td>16000</td>
<td>Liebert - Series 300</td>
<td>UDC63015C25RT03</td>
<td>Three-Phase Power Supply</td>
</tr>
<tr>
<td>16310</td>
<td>General Electric</td>
<td>12470</td>
<td>3-Phase Pad Mounted Transformer</td>
</tr>
<tr>
<td>16400</td>
<td>General Electric</td>
<td>RMS-9</td>
<td>Power Break Circuit Breakers</td>
</tr>
<tr>
<td>16620</td>
<td>Spectrum</td>
<td>150DSEJ</td>
<td>Diesel Generator Set</td>
</tr>
</tbody>
</table>

**Recommendation:**

None
August 19, 2004

Mr. Larry Mandel  
University Auditor  
California State University  
401 Golden Shore, 4th Floor  
Long Beach, California 90802

Subject: KPMG Audit of Construction Project No. MB-406, Chapman Science Academic Center

Dear Larry,

I am submitting CSUMB’s responses to the subject audit. The response template showing the two recommendations and our responses to those recommendations is attached.

Please advise if you have any questions and let us know the disposition of these items as appropriate.

Sincerely,

Dan Johnson  
Vice President for Administration and Finance

Attachment

cc: Peter Smith  
Niraj Dangoria  
John Fitzgibbon
CONSTRUCTION CHANGE ORDERS

Recommendation:

1 The University should confirm that MDC approves the final change order for the overpayment on change orders. On future projects, the University should ensure that markups are calculated and paid in accordance with contract requirements. This can be accomplished by utilizing the Change Order Request (Form 703.34) included on the Chancellor’s Office CPDC website.

Campus Response:

The University and Mauldin-Dorfmeier Construction, Inc. have executed Change Order 32. This change order addresses the overpayment by the University for “Mark up on Mark up”, Course of Construction Insurance and Bonds as found in the Audit Report. Additionally, as a part of Change Order 32, we included the Global Settlement Language as presented on the CPDC Website.

LIQUIDATED DAMAGES

Recommendation:

2 For future global settlements, the University should make it a formal requirement to clearly document all delays and liquidated damages and make the settlement document part of project files.

Campus Response:

As part of our annual resubmission of the Operational Plan for Delegation—Capital Outlay Management Authority, the University shall include language requiring that the settlement document and detailed documentation of all delays and liquidated damages become part of the project files. The University proposes that this language be included in our February 2005 resubmission.
August 27, 2004

MEMORANDUM

TO: Mr. Larry Mandel
   University Auditor

FROM: Charles B. Reed
       Chancellor

SUBJECT: KPMG Draft Final Report on the Chapman Science Academic Center Project (No. MB-406) at California State University, Monterey Bay

In response to your memorandum of August 27, 2004, I accept the response as submitted with the draft final report on the Chapman Science Academic Center project at California State University, Monterey Bay.

CBR/amd

Enclosure

cc: Mr. Dennis Hordyk, Assistant Vice Chancellor, Financial Services
    Ms. Elyvra San Juan, Assistant Vice Chancellor, CPDC
    Dr. Peter P. Smith, President
    Mr. Richard P. West, Executive Vice Chancellor and Chief Financial Officer