Florida Gulf Coast University Board of Trustees
January 18, 2011

SUBJECT: Construction Audit Report: Academic Building 7

PROPOSED BOARD ACTION

Accept the internal audit report of Construction of Academic Building 7 provided to President Wilson Bradshaw, Vice President for Administrative Services and Finance Joe Shepard, and Director of Facilities Planning Barrett Genson on August 30, 2010.

BACKGROUND INFORMATION

Academic Building 7 is FGCU’s first building to receive Platinum LEED Certification. It opened during the spring of 2010 when most of audit fieldwork took place. Fieldwork was completed on August 6, 2010 as shown on the title page of the report. The transmittal memo date is the date the report including Management’s Response was issued to President Bradshaw.

The audit was originally part of the 2009 – 2010 internal audit plan approved by the FGCU Board of Trustees at its June 16, 2009 meeting. When it was not completed by June 30, 2010, the audit was carried forward to the 2010 – 2011 audit plan approved by the Board of Trustees at its September 21, 2010 meeting.

Supporting Documentation Included: Construction Audit Report: Academic Building 7
Issued August 30, 2010

Prepared by: Director of Internal Audit Carol Slade

Legal Review by: N/A

Submitted by: President Wilson G. Bradshaw
INTEROFFICE MEMORANDUM

To:     Dr. Joseph Shepard, Vice President of Administrative Services and Finance
        Barrett Genson, Director of Facilities Planning

Cc:     Dr. Wilson Bradshaw, President
        Susan Evans, Chief of Staff

From:   Deborah McEwan, Internal Auditor
Through: Carol Slade, Director of Internal Audit

Date:   August 30, 2010

Re:     Construction Audit: Academic Building 7 (FINAL)

Please see the attached final report of the subject review, which includes the management response.
Florida Gulf Coast University

Construction Audit: Academic Building 7

Internal Audit

Report Date: August 6, 2010 [End of Fieldwork]
CONSTRUCTION AUDIT: ACADEMIC BUILDING 7

EXECUTIVE SUMMARY

This Report represents a limited scope audit of the construction process for Academic Building 7, which accommodates the College of Arts and Sciences and opened in spring 2010. Overall, the construction process was well-managed and in compliance with Florida Statutes and University policies and procedures. However, page 8 of this Report includes recommendations for management consideration. These recommendations address issues such as documenting the current license status for specialty trade contractors, expanding written justifications in the subcontractor bid award process, and minor exceptions in some invoice payments.

Special Note: On August 19, 2010 Academic Building 7 officially received the highest Platinum LEED Certification. Additional information is contained on page 7 of this Report.

OBJECTIVES

1. Determined if bidding and contract award requirements for the Construction Manager and Trade Contractors were in accordance with Florida Statutes, Construction Management Agreement and University policies and procedures.

2. Determined if payments to the Construction Manager were properly recorded by the University, made timely, and based upon a review and approval of the invoices.

3. Determined if construction costs billed by the Construction Manager, including those for trade contractors, were actually incurred, appropriate, properly supported, accurate, and in accordance with the contract.

4. Determined if change orders were properly reviewed and approved, and were in accordance with the Construction Management Agreement.

5. Identified and determined extra costs that were incurred to attain Leadership in Energy and Environmental Design (LEED) Certification. This objective was accomplished based on general internal auditing experience and does not qualify as an expert review of LEED Certification. The costs identified were readily assessable from a layperson’s perspective.

This audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing, issued by the Institute of Internal Auditors. The
audit procedures provided a reasonable basis for our opinion and the following reportable observations and recommendations.

BACKGROUND

This audit was a result of management input from the annual risk assessment in April 2009 and is considered a routine audit in the approved FY10 Internal Audit Plan.

Facilities Planning oversees the Campus Physical Facilities Master Plan, and the design, planning, and construction of all campus building and infrastructure projects. In March 2009, Jack Fenwick, the long standing Director of the department retired and the position is now occupied by Barrett Genson. Initially, Mr. Genson, a licensed architect, was hired as the Assistant Director of Facilities Planning in August 2003. However, since Mr. Fenwick’s retirement, Mr. Genson has assumed the Director position. The additional staff in Facilities Planning consists of an Administrative Assistant, a Coordinator - Building Projects (formerly the Project Manager), a Coordinator - Building Codes, and a Computer-Aided Design (CAD) Operator.

Based on a preliminary discussion with the Director of Facilities Planning, Academic Building Seven (AB7) was selected as the focus of this audit report. AB7 is designated for the College of Arts and Sciences and was approved for occupancy in the spring 2010 semester. AB7 is a four-story building of approximately 60,000 gross square feet and consists of laboratory/lecture classrooms and administrative offices. STH Architectural Group, Inc, West Palm Beach, Florida was awarded the architectural firm contract and Kraft Construction Company, Naples, Florida was awarded the construction management contract. Under the Construction Management Agreement, the contracted guaranteed maximum price (GMP) for the project was listed as $16,092,888. In general, the GMP represents the University’s maximum obligation for the construction of the building and cost overruns would typically be the construction manager’s liability.

Previous Construction Related Audits

For fiscal year ending on June 30, 2008, the State of Florida Auditor General issued a Florida Gulf Coast University: Operational Audit Report No. 2009-107, which included two findings related to the construction process. One recommendation was the establishment of written policies and procedures for the minimum liability insurance coverage for design professionals
and the other related to the direct purchase of construction goods. Both of these findings were subsequently resolved.

**SCOPE**

- Reviewed sections of the Florida Statues related to educational construction projects (i.e. Sections 215, 489, 1013)
- Reviewed sections of FGCU Finance and Accounting Policies and Procedures – (i.e. Procurement and Construction Accounting)
- Reviewed the contract between the University and STH, the architectural firm
- Reviewed the contract between the University and Kraft Construction Company
- Reviewed the bidding process for the architect and the construction manager
- Reviewed the bid summary tabulation sheets for trade contractors.
- Reviewed trade contractor contracts
- Reviewed scope analyses for the work performed by the trade contractors

The following table captures the Application and Certificate for Payments (invoices for payments) that were judgmentally selected and reviewed. Facilities Planning has received 18 Applications for payment to date for the AB7 project through April 2010. However, this audit only reviewed a sampling of those Applications as noted in the table below.

These Applications totaled $7,818,401.15 or 49% of the project cost of $16,092,888 (before change orders). Supporting documents such as invoices, receipts, and continuation sheets were reviewed for all itemized expenses listed in each Application.

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<th>Application No.</th>
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<th>Amount</th>
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</tbody>
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GENERAL INFORMATION

Architectural and Construction Management Bidding and Contract Award

The construction process begins with a written a Facilities Program, which is initiated by the Vice-President of Administrative Services and Finance, the Director of Facilities Planning and the Dean of the respective building. The Program incorporates specific requirements for the building along with funding sources. This Program requires approval by FGCU Administration, which includes the University President and the Vice-President of Academic Affairs as well as the above mentioned individuals.

Upon approval, a request for proposals is placed in the statewide Florida Administrative Weekly for a professional architectural firm to design and oversee the construction of the project. The request is listed in the Florida Administrative Weekly for a minimum of 30 days. The proposals received are reviewed by a selection committee which is typically composed of the Vice-President of Administrative Services and Finance, the Dean of the respective building, the Director of Physical Plant and the Facilities Planning Project Manager. The Director of Facilities Planning is also a non-voting member and chairperson of the selection committee. The committee selects a minimum of three firms that they are interested in interviewing. Experience with similar projects, experience with other university projects in the state of Florida, experience with other FGCU projects, and the abilities of the architectural and engineering team project members are key factors in the selection process. The selection committee provides a recommendation to the University President who reviews and approves the final selection.

Once the architectural firm is selected a contract with the selected firm is negotiated and approved by FGCU Administration. Upon receipt of the contract, the design process commences, which is comprised of the following three phases: schematic (3 months), design development (3 months), and contract document (5-6 months).

During the schematic design phase, the University also solicits proposals from various construction management firms and the same selection process that is described for the architectural firm is deployed.

A review of the advertisements, original bid proposals, and selection committee vote documentation for the construction of Academic Building 7 did not yield any notable observations. STH Architectural Group, Inc, West Palm Beach, Florida was awarded the architectural firm contract and Kraft Construction Company, Naples, Florida was awarded the construction management contract.

Trade Contractors

The contract between the University and Kraft delegated the performance of the trade contractors (aka subcontractors) to Kraft. The process included the advertising, bidding of
contracts, and preparing written recommendations for the final selection of the contract awards for the various subdivisions of work by respective subcontractors.

For AB7, Kraft advertised the project in the local newspaper and received the sealed bids. The sealed bids were opened in the presence of Jack Fenwick, the former Director of Facilities Planning, who initialed each bid summary tabulation sheet. Each sheet represented a division of work for completion by a subcontractor. Kraft prepared the summary sheets by listing the various bids for each division of work along with the amount of the bid. Once the bids were opened, Kraft took the bids and prepared in-depth scope analyses for all divisions of work. Also, Kraft contacted various bidders to clarify their scope and adjusted some bids to ensure that the scopes for all bidders were equitable and complete.

*Overall, the process for the selection of the trade contractors was adequate, but Observation No. 1 and No. 2 listed on Page 8, suggest a need for expanded documentation.*

**Application and Certificate of Partial Payments**

Throughout the construction of AB7, Kraft submitted several *Application and Certificate for Payments* (Applications) to the University, which are invoices for construction work already completed. As of April 2010, eighteen applications had been processed for payment. Each Application contained several underlying invoices for labor costs and expenses incurred by Kraft as well as any subcontractor work. The architectural firm initially reviewed and approved each Application. Then, the Director of Facilities Planning reviewed and approved each Application. These reviews were conducted to ensure that the expenses were actually incurred and supported. Finally, the Application was sent to the University’s Finance and Accounting Department for final review, input into the accounting records, and for payment.

All payments reviewed within the scope of this audit were timely and within the 40-day timeframe required by Section 215.422(3)(b), F.S. and in the Construction Management Agreement. *However, Observation No. 3 listed on Page 8 of this Report addresses minor invoice exceptions that were insignificant in dollar value, but should be addressed by University administration.*

**Change Orders**

The University change order process usually involves the following individuals: the Vice-President of Administrative Services and Finance, the Director of Facilities Planning, the Architect, and the Construction Manager. Change orders which affect the contractual Guaranteed Maximum Price (GMP) are discussed extensively prior to the work being actually completed. Owner-Architect-Contractor meetings are typically held every two weeks to discuss the status of the construction project. Potential change orders are a critical part of this discussion.
For AB7, there was only one change order, which was a deductive order of $174,130. This change order was due to the University deciding to directly purchase “autoclaves” which resulted in a tax savings for the University. This change order effectively reduced the GMP from $16,092,888 to $15,918,758. This change order received the appropriate prior review and approval.

A second change order is currently pending, but it is reportedly another reduction to the GMP. All other construction changes were funded through contractual contingencies and allowances.

**Leadership in Energy and Environmental Design (LEED) Certification**

Academic Building 7 is the first campus academic/laboratory building projected for certification with the U.S. Green Building Council. The actual certification program is administered by the Green Building Certification Institute. The certification process provides a third-party verification that the building is designed and built to save energy, increase water efficiency, reduce CO2 emissions, improve indoor air quality, and demonstrate stewardship of resources.

LEED provides a specific framework for identifying and implementing measurable green building design, construction, operations, and maintenance. It is comprised of six standards which address all aspects of the development and construction process. The LEED for New Construction and Major Renovations version 2.2 delineates a total of 69 possible points and buildings may qualify in four levels of escalating certification which includes Certified, Silver, Gold, and Platinum. AB7 is currently pursuing the highest Platinum certification, which represents attaining 52 points or above.

*The final objective of this audit was to determine the additional costs that were incurred in the construction of AB7 to obtain the LEED certification. With assistance from Facilities Planning personnel and the construction manager, the additional expense related to the certification process was approximately $320,000 to $330,000.*

This range is only an estimate due to the challenges of accurately identifying and capturing all LEED related expenses after the project is substantially completed. A more precise cost may be obtained by tracking specific LEED expenses during the construction phase. Facilities Planning intends to track the LEED expenses during the construction of Academic Building 8.

**Certification Update**

LEED Platinum is the highest level of certification. On August 19, 2010, Academic Building 7 officially received the Platinum Certification. It is the first Florida university academic/laboratory building to receive such a designation.
OBSERVATIONS AND RECOMMENDATIONS

1. Subcontractor License Verification

   **Condition:** FGCU administration and Kraft did not verify that the specialty trade contractors were appropriately licensed or registered for the specific areas of construction. A subsequent license review conducted during this audit with the assistance of both the construction manager and Facilities Planning personnel revealed that all specialty licenses of trade contractors were current and active.

   **Criteria:** Section 1013.45(1)(c), of the Florida Statutes indicates that a construction management entity must consist of or contract with licensed or registered professionals for specific areas of construction to be performed as required by law. Chapter 489 of the Florida Statutes establishes specific licensing requirements for specialties such as air conditioning, plumbing, and roofing.

   **Recommendation**

   Since neither Kraft nor University personnel verified that specialty trade contractors were appropriately licensed and/or registered, administration should develop a process to verify the licensing of subcontractors. This process should enhance assurance that only licensed subcontractors are used on any project and that they are fully qualified to perform the work on behalf of the University.

   **Management Response**

   *We will create an Affidavit that will be signed by the Construction Manager indicating their verification that all subcontractors are licensed. The affidavit will be added to our collection of other Owner Documents.*

   **Responsible Person:** Barrett Genson, Director of Facilities Planning
   **Projected Implementation Date:** January 2011 (Academic Building 8)

2. Subcontractor Bid Selection

   **Condition:** The bid summary tabulation sheets did not clarify the identity of the subcontractor who was awarded the final bid for each subdivision of work. Furthermore, it
was unclear if the lowest bidder was ultimately selected. During a visit to the construction manager office the original bids were reviewed along with in-depth scope analyses for all divisions of work. In most cases, the lowest bidder was selected, but in at least five instances, the lowest bidder was not selected. Kraft personnel indicated that in these instances, the lowest bidder was not selected because of poor past performance as witnessed by either the University’s Facilities Director or by Kraft personnel. However, there were no written justifications capturing these decisions. (Note: Some bids are considered “non-responsive” and did not fulfill the project scope.)

Criteria: Section 2.2.3 of the contractual agreement between FGCU and Kraft states that the construction manager is responsible to negotiate for the performance of the trade contractors. The construction manager should also “prepare and submit written recommendations to the Owner and Architect for award of Trade Contracts by the Construction Manager…”

Recommendation

As a public entity it is prudent that FGCU retain evidence of competitive bidding for the construction of its educational facilities. In accordance with good purchasing practices, the university should retain sufficient evidence of the competitive bidding process performed by the construction manager. All construction bid summary tabulation sheets should clearly document the specific selection of any trade contractor along with the rationale for not selecting the lowest bidder, if applicable.

Management Response

The suggested recommendation for documenting the awarded bidder and the rationale for doing so was implemented with the Student Union Addition project. The same effort to document this process will be applied to all future projects.

Responsible Person: Barrett Genson, Director of Facilities Planning
Projected Implementation Date: Completed

3. Minor Exceptions in the Review of the Application and Certificate for Payment

A. Condition: Some requests for payments for payroll had missing timesheets and/or subcontractor work did not have supporting documents which captured the specific work completed. The contractor prepared cover sheets which contained a general item description and dollar amount. During the University review, these cover sheets were
used as support rather than actual primary documents such as individual timesheets. There were more instances of this activity in the earlier applications such as in Applications 1 through 8, but Application 14 contained significantly less exceptions.

Also, there were some minor discrepancies in the supporting documentation of underlying invoices. All instances appear to be genuine human errors based on the volume of paperwork. For example,

- The labor rates for some payroll expenses were unclear and in one instance there was an overcharge of 1 hour for $150.

- In another instance, the contractor issued a duplicate invoice number of 11 was issued for separate expenses of $1,235 and $274 that were for different and legitimate personnel expenses. Apparently, the invoice template number was not changed when the invoices were printed by the contractor.

**Criteria:** Article 7.4 of the contractual agreement between the University and Kraft specifically states:

*"Invoices for fees or other compensation for services or expenses shall be submitted in detail sufficient for a proper preaudit of postaudit thereof."*

The missing information was insufficient for a proper audit. Also, the noted discrepancies revealed the potential for more egregious errors.

**B. Condition:** In three instances, food items totaling $171.71 were charged directly to the University for reimbursement. These items were typically included under the title of “Office Equipment and Supplies.” The dollar amount is considered minuscule as compared to the GMP, but food items such as pretzels, creamers, brownie bites, snickers, donuts and potato chips were itemized on the receipts.

**Criteria:** University Finance and Accounting Policies and Procedures prohibit the use of state appropriated funds for the purchase of refreshments such as coffee and donuts. If any exception is made it must be specifically allowed by Florida statute. Since PECO (Public Educational Capital Outlay) funds are state appropriated funds used to construct educational facilities, these expenses should not be included for reimbursement. These expenses should be absorbed by the contractor.

**Recommendation**
Although Facilities Planning administration routinely reviews all application for payments, the level of review is insufficient to detect the above mentioned missing information and discrepancies. Preliminary discussions with administration revealed that the review of the invoices, ongoing physical observations of construction in progress, biweekly Owner-Architect-Contractor Meetings, and monthly written reports from the contractor are also used to assess the reasonableness of each Application for payment. Itemized reviews of the supporting documents for all invoices contained in an Application may reduce efficiencies and result in poor use of limited personnel resources. A key indicator in each Application is the percentage of work completed in relationship to the GMP. The GMP limits the University’s liability to any excessive costs.

Based on this information, it is recommended that a more in-depth sample review of Applications for payment on major construction contracts should be periodically performed, during the construction phase. This type of selected review should disclose if the project is subject to increased risk of overcharges and therefore, a more extensive review of additional Applications is needed.

**Management Response**

*We determined that an in-depth analysis of the first pay application and a random in-depth analysis of at least one pay application thereafter would be enough to alert us to insufficient supporting documents or inappropriate expenses.*

**Responsible Person:** Barrett Genson, Director of Facilities Planning  
**Projected Implementation Date:** December 2010 (Academic Building 8)

Performed by: Deborah McEwan, Internal Auditor  
Reviewed by: Carol Slade, Director of Internal Audit