



Item: AF: I-1A

AUDIT AND FINANCE COMMITTEE

Wednesday, February 20, 2008

SUBJECT: REVIEW OF AUDITS: REPORT NO. FAU 07/08-2, AUDIT OF CONSTRUCTION FOR THE PERIOD JULY 1, 2004 THROUGH SEPTEMBER 30, 2007.

PROPOSED COMMITTEE ACTION

Information Only.

BACKGROUND INFORMATION

Two major projects, the HBOI Research Facility and the S.E. Wimberly Library Expansion, were reviewed to determine fulfillment of the following objectives:

- Subcontractors hired by construction managers (CM) were selected as a result of a properly documented competitive bidding process;
- Construction change orders and any work self-performed by CMs were properly reviewed and approved, and were in accordance with CM agreements and established policies and procedures; and,
- Payments to construction managers were supported by appropriate backup documentation, reviewed and approved by management, processed timely, and accurately recorded in the University's accounting records.

Five recommendations were made to improve procedures related to documentation issues.

IMPLEMENTATION PLAN/DATE

Management has agreed to implement the audit recommendations during the period December 31, 2007 through April 30, 2008.

FISCAL IMPLICATIONS

Not Applicable.

Supporting Documentation: Report No. FAU 07/08-2.

Presented by: Mr. Morley Barnett, Inspector General

Phone: 561-297-3682

Report No. FAU 07/08-2
Report Issue Date: December 21, 2007

FLORIDA ATLANTIC
UNIVERSITY™

Office of Inspector General

Audit Report: Construction
For the Period July 1, 2004 through September 30, 2007

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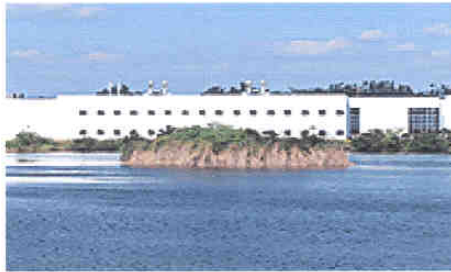
REPORT ON THE AUDIT OF

CONSTRUCTION

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BR-603 HBOI Research Facility



BR-649 Wimberly Library Expansion





OFFICE OF INSPECTOR GENERAL
Florida Atlantic University

MEMORANDUM

TO: Frank T. Brogan
President

FROM: Morley Barnett 
Inspector General

DATE: December 21, 2007

SUBJ: AUDIT OF CONSTRUCTION

In accordance with the University's Internal Audit Plan for fiscal year 2007-08, we have conducted an audit of selected major construction projects at Florida Atlantic University. The report contained herein presents our scope and objectives and provides comments and conclusions resulting from procedures performed.

We have made five recommendations to address our current findings. We concur with the responses of the auditee which have been incorporated into the report. In accordance with our established procedures, follow-up will be performed subsequent to the issuance of this report to determine effective implementation of our recommendations by management.

Please call me if you have any questions.

cc: University Provost
Vice Presidents
Auditee
FAU BOT Audit and Finance Committee
Chancellor, State University System of Florida
Florida Auditor General
Inspector General, Florida Board of Governors

EXECUTIVE SUMMARY

In accordance with the University's Internal Audit Plan for fiscal year 2007-08, we have conducted an audit of major construction projects (expected costs greater than \$1,000,000) at Florida Atlantic University for the period July 1, 2004 through September 30, 2007.

Our audit objectives were to determine - for a sample of two completed major projects - that:

- Subcontractors hired by the Construction Manager (CM) were selected as a result of a properly documented competitive bidding process;
- Construction change orders and work self-performed by the CM were properly reviewed and approved, and were in accordance with the Construction Manager Agreement and established policies and procedures; and,
- Payments to the CM for general conditions items, profit & overhead, and subcontracted and self-performed construction work were properly supported by appropriate backup documentation, reviewed and approved by management, processed timely, and accurately posted to the university's accounting records.

Based on a review of the relevant available documentation for the two selected projects, we found no evidence to indicate material non-compliance with the stated objectives of the audit. However, we did identify several opportunities for Facilities Planning to revise its policies and procedures in order to better streamline its operations, and improve the adequacy, consistency, and relevance of the project documentation the university requests and retains from its construction managers. The details of all findings, as well as suggestions for corrective action, can be found in the Comments and Recommendations section of this report.



OFFICE OF INSPECTOR GENERAL
Florida Atlantic University

December 21, 2007

Frank T. Brogan
President
Florida Atlantic University
Boca Raton, Florida

Dear President Brogan:

SCOPE AND OBJECTIVES

In accordance with the University's Internal Audit Plan for fiscal year 2007-08, we have conducted an audit of major construction projects (expected costs greater than \$1,000,000) at Florida Atlantic University for the period July 1, 2004 through September 30, 2007.

Our audit objectives were to determine - for a sample of two completed major projects - that:

- Subcontractors hired by the Construction Manager (CM) were selected as a result of a properly documented competitive bidding process;
- Construction change orders and work self-performed by the CM were properly reviewed and approved, and were in accordance with the Construction Manager Agreement and established policies and procedures; and,
- Payments to the CM for general conditions items, profit & overhead, and subcontracted and self-performed construction work were properly supported by appropriate backup documentation, reviewed and approved by management, processed timely, and accurately posted to the university's accounting records.

We obtained an understanding of the relevant construction processes by reviewing written policies and procedures, interviewing key personnel, performing analytical reviews of selected financial information, and evaluating key internal controls. Completed projects selected for documentary and financial review were:

<u>Project #</u>	<u>Project Title</u>	<u>Original GMP</u>	<u>GMP Construction Costs Incurred (as of 9/30/07)</u>
BR-603	HBOI Research Facility	\$8,367,930	\$7,426,290
BR-649	S.E. Wimberly Library Expansion	\$4,352,453	\$4,529,309

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Populations, sample sizes, and selection methods were determined based on our evaluation of internal controls, our assessment of audit risk, the availability of pertinent University records, and other factors including auditor judgement. For the Harbor Branch Oceanographic Institute (HBOI) Research Facility & Library Expansion projects, we reviewed supporting documentation for expenditures representing approximately 44% and 37% respectively, of the original GMPs (guaranteed maximum prices) for construction.

We conducted our audit in accordance with the Institute of Internal Auditors' International Standards for the Professional Practice of Internal Auditing.

BACKGROUND

The university's construction process is administered by the Facilities Planning (FP) Department, a unit of the Division of Facilities. FP is currently staffed by 14 employees, and is responsible for planning and managing the design, construction, demolition, remodeling, and renovation of facilities, and the acquisition and disposal of real estate. The department is based at the Boca Raton campus, and maintains a limited staff at both the Broward and Northern campuses in order to more effectively administer construction programs at the branch campuses. Facilities Planning has assumed a leadership role in ensuring that appropriate policies and procedures are developed and implemented to address all aspects of FAU's building construction program.

To control costs and promote efficiency, the university generally uses the construction manager (CM) process for its major construction projects. CMs are contracted to manage projects pursuant to a formal selection process, and are required to submit guaranteed maximum price (GMP) proposals for the construction costs of the projects. After the agreed-upon GMP is executed as a contractual amendment to the CM's agreement with the university, it is the CM's responsibility to, among other things, prepare bid packages for the construction trade work, solicit and evaluate competitive bids from pre-qualified trade contractors, and appropriately award and execute trade contracts between itself and the successful bidders.

COMMENTS AND RECOMMENDATIONS

Current Findings and Recommendations

Incomplete Supporting Documentation for Billings Submitted by Construction Managers

In accordance with established policies and procedures of Facilities Planning, the university is required to ensure pay requests from the CM are submitted in accordance with the *Agreement Between Owner and Construction Manager*, and all requisite documentation supporting the pay request is reviewed for propriety and completeness. This review process is critical for ensuring that CMs are not paid for unsupported, inappropriate, or unauthorized expenditure items.

Compliance testing of a sample of five partial payments made to each of the CMs for the HBOI Research Facility (BR-603) and Library Expansion (BR-649) projects respectively, resulted in the following technical exceptions:

- We were unable to locate supporting documentation for an expenditure of \$16,943 for subcontracted concrete work included in the CM's pay application #13 for the BR-603 project;
- There was no evidence on file supporting an expense item for \$3,647.47 – included in the CM's pay application #8 - representing the partial amortization of prepaid general liability insurance coverage purchased by the CM for the BR-649 project. The invoice for the premium of \$21,943 for the general liability insurance policy could not be located; and,
- We were only able to locate support for \$2,265.25 of a sales tax credit of \$3,265.25 included in the CM's pay application #10 for the BR-649 project. The sales tax credit of \$2,265.25 was realized from an owner direct purchase of equipment for \$34,850. Management was unable to provide an explanation for the additional credit of \$1,000 (\$3,265.25 - \$2,265.25) provided by the CM.

Recommendation No. 1

We encourage Facilities Planning to continue to work at being diligent and thorough in its review of the CM's pay requests to ensure all billed items are supported by appropriate documentation.

Management's Response

Action Plan:

Existing policies and procedures require that the CM, architect/engineer, and Facilities Planning project manager carefully review and approve CM bills, including all required back-up for each item. This requirement will be reinforced on all existing and new projects with the project team to ensure that the existing policy is followed.

Implementation Date:

January 31, 2008

Responsible Auditee:

Raymond Nelson, Facilities Planning Director

Lack of Documentation Supporting the CM's Labor Burden Rate

In accordance with established industry practice, construction managers will bill their clients for the labor overhead costs associated with providing managers and other personnel to perform services on construction projects. These labor burden costs will typically include payroll taxes, worker's compensation insurance premiums, medical, dental, and life insurance benefits, and other items, and are computed as a percentage of the employee's base pay.

Our review of the documentation files for the HBOI Research Facility (BR-603) and Library

Expansion (BR-649) projects provided no written evidence that the university had agreed to a specific labor burden rate (or rates) to be assessed for labor services provided by the CMs for these projects. Based on a review of the supporting documentation for a sample of five partial payments made to each of the CMs for the aforementioned projects, we calculated a CM labor burden rate in excess of 73% for the BR-603 project, and CM labor burden rates ranging from approximately 50% to 64% - depending on the type of labor - for the BR-649 project.

Recommendation No. 2

In order to contain project costs, and ensure the reasonableness of the CM's billable labor burden rate(s), we recommend that management obtains and retains documentation supporting the agreed-upon rate(s) to be billed by the CM on each major construction project. Facilities Planning should closely monitor the labor burden rate charges included in the CM's pay requests to ensure concurrence with the contractually-established rate(s).

Management's Response

Action Plan:

Existing policies and procedures require that the CM submit the company's actual labor rate, broken out by each item in the burden, with the percentage mark-up charge listed. They are required to give an affidavit that all charges billed to the project are the actual rates. The Division of Facilities normally compares historic labor burden rates from other projects to verify that the submitted rates fall within the same general range. We must be more diligent in comparing the rates with our historical data and checking that the agreed-upon rates are those being billed. The CM for the HBOI project has stated that due to a change in their internal business plan, the labor burden rate should have been billed at a lower rate. They are correcting this error and will revise the GMP downward. Thank you for bringing this to our attention.

Implementation Date:

February 29, 2008

Responsible Auditee:

Thomas Donaudy, University Architect & Vice President - Facilities

Inadequate Review of CM's Billings for Profit & Overhead Fees

Construction managers are required to bill the university for management (profit & overhead) fees on major construction projects using the percentage-of-completion method. These fees should be recalculated by the university to ensure that CMs are paid correctly for fees actually earned.

Our recalculation of the profit & overhead fees included in a sample of five partial payments made to each of the CMs for the HBOI Research Facility (BR-603) and Library Expansion (BR-649) projects indicated no material differences between the billed fees and the audit-recalculated fees. However,

based on discussions with Facilities Planning personnel, we noted that the university had not recalculated the management fees billed by the CMs to ensure their accuracy. In addition, we noted differences between the percent-of-completion methodologies used by the CMs for the BR-603 and BR-649 projects to calculate their fees. As of 9/30/07, the contractual profit & overhead fees for the BR-603 and BR-649 projects - \$992,146 and \$478,149 respectively – had been paid to the CMs.

Recommendation No. 3

We recommend that Facilities Planning revise its policies and procedures to define an appropriate percentage-of-completion methodology to be used by the CMs to specifically compute the profit & overhead fee to be billed with each pay request. This methodology should be communicated to, and agreed-upon with the CMs, and used by Facilities Planning as the basis for recalculating the billed fee to verify its accuracy.

Management's Response

Action Plan:

The Inspector General recommends that FP revises its policies and procedures to define an appropriate percentage-of-completion methodology. We will include a standard fee calculation form in a revision of FP Policy & Procedure #7 – “Receipt and Approval of Invoices (A/E, GC/CM) Major Projects”.

Implementation Date:

February 29, 2008

Responsible Auditee:

Raymond Nelson, Facilities Planning Director

Unlocated/Incomplete Trade Contractor Records

According to Facilities Planning Policy & Procedure #5 – *Construction Manager Bidding Procedures* – a representative of the university is required to attend bid openings for all trade work bid packages for all CM projects. A bid tabulation sheet - signed by the bid opener and witnessed (signed) by the FAU representative – is to be completed for each bid package. In addition, the university is required to obtain trade contract award recommendation letters for each bid package from the CM that states the basis of selection.

Our review of the trade contract records – bid tabulation sheets and CM letters of recommendation of award of subcontracts – on file for the HBOI Research Facility (BR-603) and Library Expansion (BR-649) projects indicated the following exceptions:

- We were unable to locate trade contract award recommendation letters from the CM for *five* of 35 bid packages for the BR-603 project, and *seven* of 28 bid packages for the BR-649 project;

- We were unable to locate a bid tabulation sheet for one bid package – *Termite Control* – for the BR-603 project where the successful subcontractor was documented on a letter of recommendation of award of trade contract from the CM;
- We identified one bid package – *Sitework (Bridge for access road)* – for the BR-649 project for which the trade contractor recommended for award of the subcontract by the CM was not listed on the bid tabulation sheet. Management was unable to provide an explanation for the discrepancy; and,
- All 28 bid tabulation sheets for the trade work bid packages for the BR-649 project did not properly document the signatures of the individuals who opened, and witnessed the opening of the bids. Each sheet had one set of initials but it was not evident to whom the initials belonged or what role this individual had in the bid opening process.

Recommendation No. 4

We recommend that Facilities Planning ensure that all trade contract award recommendation letters and bid tabulation sheets are received from the CM for all trade work bid packages for all CM projects. The FAU project manager should reconcile all the CM trade contract award recommendation letters to the corresponding bid tabulation sheets to ensure there are no discrepancies. In addition, FP should ensure that the CM uses an appropriately formatted bid tabulation sheet to properly document the signatures of all individuals involved in the bid opening process. The aforementioned records and procedures will serve to document that all project trade work has been subject to competitive bidding as required by established university policies and procedures, and the *Agreement Between Owner and Construction Manager*.

Management's Response

Action Plan:

Existing FP Policy & Procedure #5 requires bid tabulation sheets, and indicates that bid openings must be attended by the FP project manager. The CM, architect/engineer, and FP project manager are required to sign the tab sheets. We will reinforce to all project managers to strictly follow this policy and procedure.

Implementation Date:

December 31, 2007

Responsible Auditee:

Raymond Nelson, Facilities Planning Director

Incomplete Verification of Licenses and Insurance for Subcontractors

Pursuant to Facilities Planning Policy & Procedure #16 – *Code Compliance & Construction Permit Administration* – the university is required to verify licenses and insurance certificates for all subcontractors on those projects for which FP issues the building permit. Although the CM is contractually obligated to pre-qualify all bidders for trade work on the university’s CM projects, the verification of the credentials of all subcontractors is important for helping to ensure the quality of the buildings constructed.

Based on discussions with FP management, we noted that – as a practical matter – the university has only been verifying the licenses and insurance certificates for those trade contractors that are required to have state-issued occupational licenses. For the HBOI Research Facility (BR-603), we noted that St. Lucie County issued the construction permits, and as such, was responsible for verifying the licenses and insurance certificates for the project’s major subcontractors.

Our review of the trade contractor records on file for the Library Expansion (BR-649) project (for which FP issued the building permit) indicated the following exceptions:

- We were unable to locate documented evidence that – at the outset of the project - FP had verified the licenses (state-issued occupational licenses and/or city/county occupational or business licenses, as applicable) and liability insurance certificates for 27 of the 28 indicated subcontractors. More specifically, we noted that FP had not verified the licenses and liability insurance certificates for *seven* of the *eight* subcontractors identified as requiring state-issued occupational licenses.

Recommendation No. 5

We recommend that management either reinforces compliance with Facilities Planning Policy & Procedure #16 – *Code Compliance & Construction Permit Administration* as it relates to the subcontractor license and insurance verifications, or otherwise revise the existing written guidance to require the verification of the licenses and insurance certificates for only those trade contractors that are required to have state-issued occupational licenses – its indicated current business practice. To facilitate future compliance, FP should consider requesting a complete listing of all subcontractors from the CM at the outset of each project, with updated subcontractor information being provided by the CM, as applicable.

Management’s Response

Action Plan:

We will modify FP Policy & Procedure #16 to require verification of licenses and insurance certificates for only those trade contractors that are required to have state-issued occupational licenses.

Implementation Date:

April 30, 2008

Responsible Auditee:

Raymond Nelson, Facilities Planning Director

Prior Audit Recommendations

Our examination generally includes a follow-up on findings and recommendations of prior internal audits, where the subjects of such findings are applicable to the scope of the current audit being performed.

Within the past three fiscal years, our office has not conducted any audits related to major construction projects. Accordingly, a follow-up on prior audit findings is not applicable.

CONCLUSION

For the two projects examined, we found no evidence to indicate material non-compliance with the stated objectives of the audit, notwithstanding the unavailability of certain documents for our review. Our recommendations point to the need for the Facilities Planning Department to enhance certain of its operating policies and procedures relating to major construction projects, in order to improve the adequacy, consistency, and relevance of the project documentation the university requests and retains from its construction managers.

We wish to thank the staff of Facilities Planning for their cooperation and assistance which contributed to the successful completion of this audit.



Morley Barnett, CPA, CFE
Inspector General

Audit Performed By: Mike Hewett, CIA, CBA, CFSA, CGAP
Ben Robbins, CPA

