



INSTALLATION REPORT OF AUDIT

F2010-0003-FBS000

**American Recovery and Reinvestment
Act of 2009
17th Training Wing
Goodfellow AFB TX**

Southwest Area Audit Office

5 October 2009

INTRODUCTION

On 17 February 2009, the President signed into law the American Recovery and Reinvestment Act of 2009. The goal of the Recovery Act is to provide an infusion of money, within specific guidelines, that will result in a jump start to the United States economy. In March 2009, the 17th Training Wing received \$28.4 million in Recovery Act funds to construct a 200-room dormitory.

OBJECTIVES

We accomplished this centrally directed audit to determine whether 17th Training Wing personnel properly managed Recovery Act military construction requirements. Specifically, we determined whether wing personnel:

- Properly justified the Recovery Act project.
- Conducted environmental studies for the project.
- Prepared an economic analysis or obtained a certificate of exception.
- Properly scoped and supported primary and supporting facility costs identified on the Department of Defense Form 1391, *Military Construction Project Data*.
- Reported contract information so it was transparent to the public.
- Included all new Federal Acquisition Regulation clauses in the contract.
- Met the goals of the Recovery Act by fostering competition, expeditiously awarding the contract, and creating or retaining jobs.

CONCLUSIONS

The 17th Training Wing effectively managed the first four Recovery Act requirements areas reviewed (with minor exceptions). We were not able to review the last three subject areas above because the 200-room dormitory construction contract had not been awarded. We summarized the results for the requirement areas reviewed below. In particular, we determined wing personnel:

- Provided proper justification, conducted an environmental study, and obtained a certificate of exception for economic analysis for the single Recovery

Act project examined. Fully justified and coordinated projects help prevent government waste and ensure Recovery Act goals to improve the economy are achieved. (Tab A, page 1)

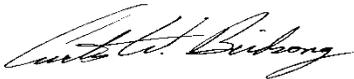
- Properly scoped floor space requirements; however, they could not provide verifiable cost data to support facility programmed amounts. As a result, we could not determine whether Recovery Act programmed amounts, estimated at \$2.8 million, were accurate. (Tab B, page 2)

RECOMMENDATIONS

We made two recommendations to improve military construction cost programming. (Reference the individual tabs for specific recommendations.)

MANAGEMENT'S RESPONSE

Management officials agreed with the audit results and concurred with the issues as presented in the report. Accordingly, there are no issues requiring elevation for resolution.



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	<u>Page</u>
EXECUTIVE SUMMARY	i
TAB	
A Project Planning	1
B Scope and Support	2
APPENDIX	
I Audit Scope and Prior Audit Coverage	4
II Points of Contact and Final Report Distribution	6

BACKGROUND

Civil engineers ensure Recovery Act military construction projects are fully justified and follow environmental and economic guidelines. For example, during the planning stage of a military construction project, the civil engineer programmer justifies the need for the project by completing a Department of Defense (DD) Form 1391, *Military Construction Project Data*. Justification data can include project information such as mission impact, people, productivity, and potential results if projects are not accomplished. Also during the planning stage, an environmental assessment is completed to determine what impact construction projects may have on the environment, and what additional costs may be realized due to environmental factors. Finally, the planning phase includes the completion of an economic analysis which determines the most economical and effective construction method (e.g., whether to renovate an existing building or construct a new one).

AUDIT RESULTS 1 – JUSTIFICATION, ECONOMIC ANALYSIS AND ENVIRONMENTAL ASSESSMENT

Condition. Civil engineer personnel provided proper justification, conducted an environmental assessment, and obtained an economic analysis exception for the 200-room dormitory project. In particular, civil engineer personnel:

- Justified the dormitory project using mission change information that included a current 424-room deficit identified in the dormitory master plan. Further, the justification explained that if the dormitory is not built, it could degrade students' learning environment, productivity, and career satisfaction.
- Completed an environmental assessment study on the project construction site and determined no significant impact on the environment existed.
- Properly coordinated the economic analysis exception.

Cause. This occurred because personnel adhered to Air Force guidance by following construction planning and programming procedures.

Impact. Fully justified and coordinated projects help prevent government waste and ensure Recovery Act goals to improve the economy are achieved.

Management Comments. The 17th Training Wing Vice Commander concurred with the audit result.

Evaluation of Management Comments. Management comments are responsive and addressed the issue identified.

BACKGROUND

Civil engineer programmers plan or “scope” military construction projects. Part of scoping a project requires the programmer to develop floor space and infrastructure requirements, estimate program amounts, and record data on a DD Form 1391. Program amounts are categorized into primary costs (price per floor space unit, anti-terrorist protection, and environmental conservation design costs) and supporting facility costs (utilities, pavements, communications, site improvements, and other special requirements). Program amounts are developed by using Department of Defense and Air Force guidance or other fully verifiable cost data. The DD Form 1391 must be closely scrutinized, first, by the installation engineering flight, and, second, the command military construction programmer to validate that program amounts are in-line with guidance or fully justified with historical cost data. The DD Form 1391 explains and justifies projects to all levels of the Air Force, the Office of Secretary of Defense, the Office of Management and Budget, and Congress.

AUDIT RESULTS 2 – SCOPE AND SUPPORT

Condition. Civil engineer personnel properly scoped floor space requirements; however, they did not provide verifiable cost data to support facility programmed amounts on the Recovery Act 200-room dormitory project. To illustrate, personnel appropriately planned for 10,580 square meters of authorized floor space, but were unable to defend how they determined \$2.8 million in utilities, pavements, and site improvement programmed amounts.

Cause. This occurred because civil engineer personnel did not have continuity procedures in place to ensure scope and cost data were maintained. In particular, the original facility cost estimates were developed in Fiscal Year 2003 and had been adjusted several times with limited support. Furthermore, the installation engineering flight chief and the command military construction programmer did not effectively review or validate the basis for how individual supporting facility programmed line amounts were determined. (Deleted a sentence)

Impact. As a result, we could not determine whether Recovery Act facility programmed amounts, estimated at \$2.8 million, were accurate.

Auditor Comment: The following items will be forwarded to the audit control point for possible inclusion in the Air Force report of audit:

- The command military construction programmer established a total facility programmed amount that was different from the installation programmer’s determination. However, the command programmer did not provide the installation civil engineer with documentation support or a basis for the amount change.
- The command military construction programmer indicated he did not validate programmed amounts listed on the DD Form 1391 provided by the installation.

Recommendations. The 17th Civil Engineer Commander should direct:

- Recommendation B.1. The civil engineer programmer to document sources for supporting facility amounts recorded on DD Forms 1391 and identify how program amounts were derived.
- Recommendation B.2. The engineering flight chief to review DD Form 1391 programmed amounts to ensure the costs are valid and supported.

Management Comments. The 17th Training Vice Wing Commander concurred with the audit results and recommendations, and stated,

- Recommendation B.1. Concur. The programmer will develop an Excel spreadsheet with Supporting Facilities (infrastructure) programming cost and identify the source of the programmed cost. This spreadsheet will be in electronic format and sent to the Programs Flight Chief for his review. (CLOSED)
- Recommendation B.2. Concur. The Programs Flight Chief will review the Excel spreadsheet and make comments as required and return the spreadsheet to the programmer. The electronic copy of the spreadsheet will be maintained in the project file. (CLOSED)

Evaluation of Management Comments. Management comments addressed the issues presented in this audit result, and actions taken should correct the problem identified.

AUDIT SCOPE

Audit Coverage. To determine whether 17th Training Wing personnel properly managed Recovery Act military construction requirements, we reviewed military construction documentation dated from January 2006 to August 2009. We performed audit field work during August 2009 and issued a draft report to management on 14 September 2009.

- To determine whether wing personnel properly justified the 200-room dormitory project, we discussed the project with civil engineer personnel and reviewed the project DD Form 1391, the 2008 Air Force Dormitory Master Plan, and other project documentation.
- To determine whether civil engineer programmers properly scoped and supported primary and supporting facility costs, we compared floor space unit cost, anti-terrorist protection, environmental conservation design, utilities, pavements, communications, site improvements, contingency, design, and supervision, inspection and overhead cost estimates listed on the DD Form 1391 against guidance requirements and supporting documentation. Additionally, we discussed design cost development with base-level and command civil engineer personnel.
- To determine whether civil engineer personnel conducted an environmental assessment for the project, we obtained and reviewed environmental impact study documentation and the assessment report. We compared assessed areas (air installation compatible zone/land use, air quality, water resources, safety and occupational health, hazardous materials/waste, biological resources, cultural resources, geology and soils and socioeconomic) to guidance and determined if appropriate areas were reviewed.
- To determine whether wing personnel prepared an economic analysis or certificate of exception, we obtained a copy of the completed certificate of exception and reviewed the certificate for appropriate command approval.

Criteria. We reviewed Department of Defense criteria, *Unified Facilities Criteria*, 2 July 2007, to calculate cost estimates. We also reviewed the following Air Force criteria to identify policies and procedures associated with military construction: Air Force Instruction 32-1021, *Planning and Programming Military Construction Projects*, 24 January 2003; *United States Air Force Project Managers Guide for Design and Construction*, 28 November 2007; 2008 Air Force Unaccompanied Housing Design Guide; and Historical Air Force Construction Cost Handbook, February 2007. Finally, we used the Air Education and Training Command Supplement to Air Force Instruction 32-7061 and 32 Code of Federal Regulation, Part 989; *Environmental Impact Analysis Process*; dated 6 June 2007.

Sampling Methodology. The Department of Defense Inspector General developed an American Recovery and Reinvestment Act military construction sample based on predictive analysis of critical risk factors (a form of judgmental sampling). The Air Force Audit Agency received a

sample of 13 military construction projects at Air Force bases from the Inspector General. The 200-room dormitory at Goodfellow was one of the 13 projects. We did not use computer-assisted auditing tools and techniques to analyze data or project results for the 200-room dormitory project.

Data Reliability. We did not use or rely on computer-generated data to support our audit conclusions. Floor space and cost estimates listed on the DD Form 1391 were not developed from the Parametric Cost Estimating System, but rather manually generated by the civil engineer programmer. Data on the DD 1391 is entered into the Automated Civil Engineer System – Program Management;¹ however we were unable to validate all the cost data on the DD Form 1391 because of limited documentation to support the estimates. No other documentation or information reviewed during the audit was system generated.

Auditing Standards. We accomplished this audit in accordance with generally accepted government auditing standards and, accordingly, included tests of management controls over documentation and management oversight.

Discussion with Responsible Officials. We discussed/coordinated this report with the 17th Training Wing Vice Commander, the 17th Civil Engineer Squadron Commander, and other interested officials. We advised management this audit was part of an Air Force-wide evaluation on American Recovery and Reinvestment Military Construction Projects (Project F2009-FD1000-0655.000). Therefore, selected data not reflected in this report, as well as data contained herein, may be included in a related Air Force report of audit. Management's formal comments were received on 25 September 2009 and are included in this report.

PRIOR AUDIT COVERAGE

A review of audit files and contact with base officials disclosed no other audit reports issued to the 17th Training Wing by any audit agency within the past 5 years that related to our specific audit objectives.

¹ The Automated Civil Engineer System – Program Management is a system that houses military construction project data. The system utilizes distributive processing, with information entered at local desktop computers to generate daily updated project data for worldwide availability.

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PROJECT NUMBER

We accomplished this audit under project number F2009-FD1000-0655.002.

FREEDOM OF INFORMATION ACT

The disclosure/denial authority prescribed in AFPD 65-3 will make all decisions relative to the release of this report to the public.