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An Analysis of the Acquisition Process for Simplified Acquisition of Base Engineering Requirements (SABER) Contracts and its Potential Impact on Contractor Performance

Brian J. Heaps

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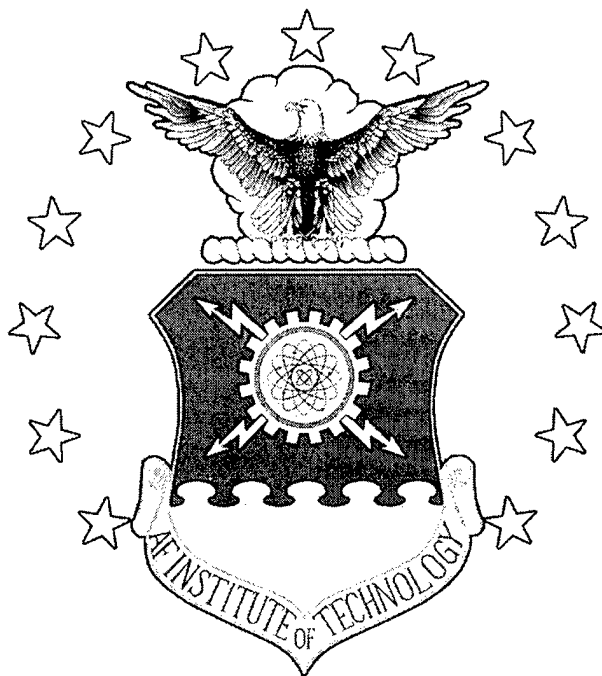
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AN ANALYSIS OF THE ACQUISITION PROCESS FOR SIMPLIFIED ACQUISITION
OF BASE ENGINEERING REQUIREMENTS (SABER) CONTRACTS AND ITS
POTENTIAL IMPACT ON CONTRACTOR PERFORMANCE

THESIS

Brian J. Heaps, Captain, USAF

AFIT/GAQ/ENV/01M-08

DEPARTMENT OF THE AIR FORCE
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Wright-Patterson Air Force Base, Ohio

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THESIS

Presented to the Faculty
Department of Systems and Engineering Management
Graduate School of Engineering and Management
Air Force Institute of Technology
Air University
Air Education and Training Command
In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Acquisition Management

Brian J. Heaps, B.S.
Captain, USAF

March 2001

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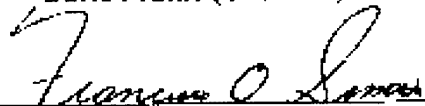
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Acknowledgments

There are a number of people that I would like to express my appreciation to. First, many thanks to my thesis advisor, Lt Col David Petrillo, for his guidance and support throughout this effort.

I would also like to thank my thesis committee members Lt Col Bradley Ayres and Capt Francisco Simas for their assistance over the past eighteen months.

I am especially grateful to Maj Edgar LaBenne from the Assistant Secretary of the Air Force for Acquisition's Operational Contracting Division and the aforementioned Capt Simas from the Air Force Institute of Technology's Civil Engineering and Services School's Department of Engineering Management. These individuals sponsored my thesis effort and provided me with a wealth of knowledge.

I am indebted to the outstanding individuals in both the contracting and civil engineering fields who willingly supported this thesis effort by giving me their time and allowing me to use their programs as case studies. You are all true professionals.

Many thanks and love to my wife and two daughters. Thank you for your love and patience throughout this endeavor. This was a long journey for us all. Your support and understanding did not go unnoticed.

Finally, I would like to thank God for His presence in my life. Without Him, none of this would have been possible.

Brian J. Heaps

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Abstract

The Simplified Acquisition of Base Engineering Requirements (SABER) contract's main purpose is to expedite contract award of civil engineer requirements through the issuance of individual delivery orders. The contract contains a collection of detailed task specifications that include most types of real property maintenance, repair, and construction work.

The Assistant Secretary of the Air Force for Acquisition's Operational Contracting Division (SAF/AQCO) identified a number of failed SABER contracts. The problem statement designed for this research effort was:

There are a large number of SABER contractors that are failing during the performance period on their SABER contracts. SAF/AQCO is trying to identify whether any Government actions or procedures are negatively impacting the contractor's ability to perform satisfactorily on the SABER contract.

This research effort focused on five areas within the SABER process that is controlled by the Government. A qualitative approach using case study analysis was used. Seven SABER contracts were selected as case studies.

The research did not identify any Air Force-wide procedures in the five areas that negatively impacted the contractor's ability to perform satisfactorily on the contract.

The research identified two areas of potential follow-on research.

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I. Introduction

The Air Force Federal Acquisition Regulation Supplement (AFFARS) Appendix DD defines a Simplified Acquisition of Base Engineering Requirements (SABER) contract as a fixed-price, indefinite-delivery, indefinite-quantity (IDIQ) contract that contains provisions for economic price adjustments. Containing a collection of detailed task specifications, a SABER contract includes most types of real property maintenance, repair, and construction work (AFFARS DD, 2000:DD-102).

A SABER contract's main purpose is to expedite contract award of civil engineer requirements through the issuance of individual delivery orders (DO). A SABER program achieves this purpose through a reduction in the acquisition lead time and civil engineering design work (AFFARS DD, 2000:DD-103(a)).

There are six benefits of a successfully run SABER program. Two primary benefits are identified in AFFARS Appendix DD. The first benefit is that the Government obtains improved customer service and responsiveness. The acquisition lead-time for issuance of a DO is approximately three to four weeks (AFFARS DD, 2000:DD-103(b)(1)). This is compared to traditional construction acquisition methods that have a normal acquisition lead time of at least 60 days.

The second benefit is that the Government motivates the contractor to produce high quality work in a timely manner (AFFARS DD, 2000:DD-103(b)(2)).

As an IDIQ contract, a SABER contract provides the Government with the majority of control as to the amount of work the contractor will be awarded. SABER contracts include a stated minimum and maximum dollar amount that the Government can award to the contractor. The Federal Acquisition Regulation (FAR) Part 16.504(a)(2) identifies that the minimum amount awarded must be greater than a nominal amount, but should not exceed the amount that the Government is fairly certain to award. When determining the stated maximum amount, FAR 16.504(a)(1) provides that the Government's contracting officer should establish a reasonable maximum amount based on a number of factors. These factors include market research, trends for similar work, and a survey of potential demand within the using community (FAR, 2000:16.504). Often, the difference between the minimum and maximum dollar amount is large. For example, a number of the SABER contracts studied contained a stated minimum amount of \$200,000 with a stated maximum amount of \$5,000,000 over the 5-year contract period.

One way that the Government motivates the SABER contractor is through the Government's authority to award DOs above the stated minimum dollar amount. If the contractor is producing high quality work in a timely manner, the Government will continue awarding work until the contract performance period ends or the contract maximum dollar amount is reached. If the contractor is not performing satisfactorily, the Government is under no obligation to award work above the stated minimum dollar amount. At that point, the Government has the ability to use traditional construction

contracting methods to satisfy future requirements until the existing SABER contract's period of performance ends. The Government then reserves the right not to exercise any available option to the current SABER contract and is free to reprocure the requirement through a new source selection process. Theoretically, the second benefit of a successful SABER program results from the potential for the contractor to lose work above the stated minimum dollar amount, which acts as a motivator for the contractor to provide top quality work in a timely manner (AFFARS DD, 2000:DD-103).

Recently, the Assistant Secretary of the Air Force for Acquisition's Operational Contracting Division (SAF/AQCO) identified a number of installations that are having problems with its SABER contractors. Some contractors have gone out of business and defaulted on their contracts. Other contractors have not lived up to the performance standards identified in the SABER contract. In these situations, the Government decided not to exercise the next option on the existing SABER contract.

As in the commercial world, a failed contract with the Government negatively impacts both the buyer--the Government does not get what it needs--and the seller--the contractor loses revenue and risks financial instability. Since it is not the intent of the Government to place a contractor in financial distress, the aforementioned problems relating to SABER contracts have led to concern within SAF/AQCO on whether the Air Force's acquisition strategy is creating an environment that leads these contractors to failure. This concern led to the following problem statement.

Problem Statement

There are a large number of SABER contractors that are failing during the performance period on their SABER contracts. SAF/AQCO is trying to identify whether any Government actions or procedures are negatively impacting the contractor's ability to perform satisfactorily on the SABER contract.

For the purpose of this research, contractor failure is defined by two outcomes.

First, a SABER contractor defaults on its contract during the period of performance.

Typically, the contractor either goes out of business or decides to no longer perform work on the existing contract. This results in the Government exercising its right to terminate the contractor for default.

The second failure outcome results from poor performance by the contractor during the period of performance. The poor performance leads to a Government decision to not exercise an existing option on the SABER contract.

Research Question and Subsidiary Research Questions

The main research question developed for this thesis is:

Are there any Government-controlled factors of the SABER acquisition process that is leading to contractor failure during the contract's period of performance?

In addition to the main research question, a number of subsidiary research questions were developed that were potential factors in contributing to contractor failure. These areas were specifically identified for research analysis from the case studies to determine whether they were contributory factors in contract failure, where applicable.

These subsidiary questions are:

(1) What was the Government's method of pricing the SABER contract? Did this pricing method negatively impact the contractor's ability to satisfactorily perform?

- (2) What role, if applicable, did liquidated damages have during the performance of the SABER contract? Did the assessment of liquidated damages, when applied, negatively impact the contractor's ability to satisfactorily perform on existing and future SABER DOs?
- (3) Does the Government reimburse the contractor for the cost of preparing a proposal for a project that is eventually not executed? If not, did this practice negatively impact the contractor's ability to satisfactorily perform on the contract?
- (4) How does the Government balance the issuance of SABER delivery orders over the course of the contract period? Were there any surges, particularly in the fiscal year 4th quarter, which negatively impacted the SABER contractor's ability to satisfactorily perform?
- (5) Was there any inappropriate use of the SABER contract? If so, did this negatively impact the SABER contractor's ability to satisfactorily perform?

Research Objective

The objective of this research effort was to identify and analyze any conditions that may have been created by the current acquisition strategy and lead to SABER contractor failures.

Prior to conducting the research, there were no specific anticipated results. Preliminary inquiries determined that there were a number of failed SABER contracts throughout the Air Force. Each SABER contract failure represented that installation's unique situation. There was limited information to specifically identify whether any aspect of the Government's acquisition process, as a whole, was responsible for the failed contracts. Therefore, this research was geared to determine whether there is an overall problem with the current process.

Research Methodology

A qualitative approach was used for conducting the research. Case study analysis was determined as an effective method of research. Interviews and the compilation of case study documents were used for research data collection. A number of Air Force bases were identified where a SABER contractor has either defaulted or will not be renewed for the next option period. Interview subjects included base contracting and civil engineering personnel. Primarily for legal reasons, SABER contractors were not interviewed during this research effort. Chapter III, Limitations of the Research, fully addresses the rationale behind this decision.

The purpose of collecting this data was to identify similarities or trends in the numerous contractor failures and to determine if they are related to conditions resulting from Government actions in the acquisition process.

Information was gathered to identify the processes and procedures used during the source selection process, the contract award process, and the contract performance. The specific area of focus was on any circumstances that led to contractor failure on the contract. The details and specifics of the data collection process is presented in Chapter III, Methodology.

Scope of Research

The main research question encompasses all of the aspects of the SABER acquisition process. The subsidiary questions included specific areas that were identified as potential problematic areas to analyze. These questions were developed prior to the collection of the data for this research.

The Research Objective section identified that there were no specific anticipated results. Therefore, the scope of the research encompassed the entire SABER acquisition process while it focused on five specific areas of interest.

Relevance of the Research

This research provided empirical data that directly impacts two communities within the Air Force. These two areas are SAF/AQCO and the Air Force Institute of Technology's Civil Engineering and Services School's Department of Engineering Management (AFIT/CEM).

The research will be used by SAF/AQCO in two ways. The research will aid SAF/AQCO in the rewrite of AFFARS Appendix DD. This rewrite will directly impact the procedures and processes used by each Air Force operational contracting squadron that utilizes the SABER contract.

Furthermore, the research will also be used by SAF/AQCO for the rewrite of the SABER Guide, which was last published in 1992. The new SABER guide will be written in conjunction with the Air Force Logistics Management Agency, who co-authored the SABER Guide written in 1992.

AFIT/CEM will also use this research in two ways. Primarily, the research will help validate the program's course material for its SABER course offered to all organizations that utilize or intend on utilizing a SABER contract. Participants in past courses included government contracting and civil engineer personnel, as well as SABER contractors. In addition, the empirical data will provide field feedback on the SABER program, to include the successes and opportunities for improvement within the SABER

community. This information can be used to survey the using community to identify best practices and lessons learned in the SABER program.

Summary

Chapter I provided an introduction to the research topic related to this thesis effort. The chapter provided a definition of a SABER contract followed by the purpose and the benefits of a SABER contract. In addition, this chapter introduced the problem statement and the research questions on which the research focused. The objective of the research was also covered. Chapter I also provided a brief introduction to the methodology used for the research effort. Chapter I concluded with the scope and the relevance of the research.

Chapter II, Literature Review, will provide the specifics of the SABER contract and the SABER acquisition process that is presented in the current literature. Chapter III, Methodology, will break down the methods and applicable tools that were used in collecting the necessary data to meet the research objective. Chapter IV, Analysis, will provide the data and information gathered during the interviews and installation visits. Finally, Chapter V, Results and Conclusions, will provide the results from the research as well as any conclusions that can be made from the research data collected.

II. Literature Review

Chapter II synthesizes recent literature available on the Air Force's SABER program. The first part of this chapter focuses on the indefinite-delivery, indefinite-quantity (IDIQ) contracts. The second part covers acquisition planning involved with Government acquisitions, specifically SABER acquisitions. The third and final part of the chapter provides the specifics of the SABER program.

There is a limited amount of literature available specific to the Air Force's SABER program. Literature regarding Government acquisitions in general was found in the Federal Acquisition Regulation. The primary literature on SABER includes the Air Force Federal Acquisition Regulation Supplement (AFFARS) Appendix DD and the SABER Guide, published in 1992 by the Air Force Logistics Management Agency and the Air Force Civil Engineering Support Agency.

Indefinite-Delivery, Indefinite Quantity (IDIQ) Contracts

As stated in Chapter I, the contract instrument used by the SABER contract is a fixed-price indefinite-delivery, indefinite-quantity (IDIQ) contract. Federal Acquisition Regulation (FAR) Subpart 16.5, Indefinite-Delivery Contracts, provides the guidance for making awards of indefinite-delivery contracts.

The use of IDIQ contracts is appropriate when the Government cannot predetermine the quantities or delivery times of recurring requirements for services or supplies during the contract period (FAR, 2000:16.504(b)).

The Government is required to provide a stated minimum and maximum quantity, in dollar values or number of units, in each IDIQ contract. SABER contracts state dollar values since each requirement is unique under the contract (FAR, 2000:16.504(a)).

The contracting officer must ensure the stated minimum quantity is “more than a nominal quantity, but it should not exceed the amount that the Government is fairly certain to order” (FAR, 2000:16.504(a)(2)).

Acquisition Planning

FAR Subpart 7.1, Acquisition Plans, defines acquisition planning as “the process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. It includes developing the overall strategy for managing the acquisition” (FAR, 2000:7.101).

Like the head coach of a National Football League team going to the Super Bowl, the Government wants to enter into its acquisition procurements with a strong game plan. The acquisition plan is just the vehicle the Government team needs for this purpose. FAR 7.102(a) requires each agency to perform acquisition planning for all acquisitions.

FAR Subpart 7 prescribes the policies and procedures for acquisition planning for all Government procurements. In addition to this guidance, AFFARS DD-203, SABER Acquisition Strategy, identifies specific efforts the Government should make in SABER procurements.

SABER Acquisition Strategy and Plan Development

AFFARS Appendix DD Part 2 covers the SABER acquisition planning and source selection process.

Establishment of a SABER Working Group

The initial step in the SABER acquisition process is to establish a SABER working group. The working group should consist of the SABER personnel from the contracting and civil engineering squadrons. The group should be led by the CE SABER Chief or the base civil engineer (BCE) and the contracting officer should be an assistant on the group. Initial tasks should involve estimating the expected scope of the SABER program for the base, attempting to obtain up-front funding and projected budget requirements from associate organizations, and deciding on the best organizational structure for the SABER unit, to include the number of personnel assigned to the team (AFFARS DD, 2000:DD-201). The working group's efforts lead to the SABER Acquisition Strategy Panel (ASP).

SABER Acquisition Strategy Panel and Acquisition Plan

AFFARS Appendix DD-203 requires the contracting officer to convene an ASP at the earliest practical point in the SABER acquisition process. The primary objective of the ASP is to ensure the government establishes an effective approach to the SABER acquisition process (AFFARS DD, 2000:DD-203(a)).

Big picture considerations in preparing for the ASP include the acquisition background and program objectives for the base's SABER program, the anticipated

SABER requirements and program value, applicable contractual specifications, and pricing methodology (AFFARS DD, 2000:DD-203(c)).

In addition, AFFARS DD-203(d) prescribes 10 specific areas to include:

- The anticipated sources for the SABER requirement,
- Competition issues such as the need to enhance competition as well as the use of streamline source selection procedures identified in acquisition reform initiatives,
- Unique contracting considerations regarding the requirement,
- Funding and budgeting issues,
- Management information considerations,
- The use of Government-furnished property on the contract,
- Environmental issues,
- Security issues,
- Milestones for the SABER acquisition cycle, and
- Identification of personnel for the SABER acquisition process.

A product from the ASP process is the Acquisition Plan. The Acquisition Plan is the roadmap for the SABER source selection process. Elements of the Acquisition Plan include the SABER acquisition's background, the acquisition objectives, a plan of action or game plan for the source selection process, and a list of milestones for the source selection (FAR, 2000:7.105).

Following these activities, the BCE is responsible for preparing the SABER program specifications. AFFARS Appendix DD-202 provides the specifics that should be included in this part of the process.

In addition to this process, the BCE prepares the unit price book (UPB), which is described below. The UPB must be localized to reflect the costs of various task specifications within the base's region. The accomplishment of the UPB is vital in the acquisition process since the UPB is included in the SABER Request for Proposal and will be the basis for the offeror's proposed coefficients and eventual contract pricing (AFFARS DD, 2000:DD-202(b)).

SABER Request for Proposal

The SABER Request for Proposal is the official document sent out by the SABER contracting officer to potential bidders interested in submitting proposals for award of the SABER contract.

AFFARS Appendix DD-205 lists the specific information that should be included in the SABER Request for Proposal.

SABER Source Selection Procedures

Air Force Acquisition Circular 96-2 eliminated AFFARS Appendix BB, Source Selection Procedures For Other Than Major Acquisitions, which was the guidance for source selection procedures for SABER acquisitions.

In lieu of this change, FAR 36.103, Methods of Contracting, establish the criteria that should be used in conducting SABER source selections. In referencing FAR 6.401(a), FAR 36.103 sets the use of sealed bidding as the preferred method of contracting. However, FAR 6.401(b) establishes the exceptions that allow the contracting officer to use the competitive proposal process, which allow negotiations.

The procedures for sealed bid procurements are covered in FAR Part 14. The competitive proposal procedures are covered in FAR Part 15.

SABER Contracts

The SABER contract is a fixed-price indefinite-delivery, indefinite-quantity (IDIQ) contract that may contain provisions for economic price adjustments during the term of the contract. Each SABER contract contains a set of detailed task specifications that cover most types of real property maintenance, repair, and construction work. SABER contracts are normally awarded for one year and can contain a maximum of four option years that may be subsequently awarded (AFFARS, 2000: DD-102). The following sections will review the history of the SABER contract, as well as describe the purpose and benefits of the SABER contract. This section will conclude with an overview of the SABER delivery order process.

SABER History

The SABER contract was first used in January 1987 at McClellan Air Force Base, California. The SABER program was modeled after the Army and Navy's Job Order Contracting (JOC) program. JOC was developed and implemented in an effort to overcome a number of problems including the performance quality and responsiveness of the contractor. Following a brief test period at McClellan, SABER contracts were authorized for use Air Force-wide (SABER Guide, 1992:1).

The SABER program was developed to complement traditional construction contracting methods. A SABER contract is designed to expedite contract award of Civil Engineer (CE) requirements relating to the procurement of most types of real property

maintenance, repair, and construction work (SABER Guide, 1992:4). Under traditional construction contracting methods, individual requirements identified would be procured through a competitive source selection process that required a minimum of 60 days.

Since its inception, the SABER contract has grown to be an effective contract tool. In data collected by the Assistant Secretary of the Air Force for Acquisition's Operational Contracting Division (SAF/AQCO) in July 1999, 79 of 85 bases reported having a SABER contract in place. Three of the six bases without SABER contracts were part of the Air Force Reserve.

Purpose of SABER

AFFARS Appendix DD-103(a) states "The purpose of the Air Force SABER program is to expedite contract award of civil engineer requirements by reducing civil engineer design work and acquisition lead time. SABER is best suited for non-complex, minor construction and maintenance and repair projects that require minimum design."

Benefits of SABER

There are six benefits that have been identified with successful SABER programs. AFFARS Appendix DD and the SABER Guide, developed by the Air Force Logistics Management Center and the Air Force Civil Engineering Support Agency, address these benefits.

The first benefit is that the SABER program improves customer service and responsiveness. A SABER DO can typically be awarded within four weeks of the submission of work request by the Base Civil Engineer (AFFARS DD, 2000:DD-103(b)(1)). At Ramstein Air Base, Germany, the average acquisition lead-time, during

the period from January 1998 – July 1999, was less than 11 days for DO award. In lieu of traditional construction contracting methods, which normally requires a minimum of 60 days to award, SABER DOs provide the customer with rapid service.

A second benefit inherent in a successful SABER program is that the contractor will be motivated to perform high quality work in a timely manner. The SABER contractor is guaranteed a certain minimum dollar amount each year the contract is in place. Once this minimum dollar amount is reached, the Government is not required to use the SABER contract during that period of performance. Therefore, the contractor risks losing additional business if it does not perform high quality work during the contract's period of performance (AFFARS DD, 2000:DD-103(b)(2)). Poor performance also places the contractor at risk of not being renewed for any applicable contract options on the existing SABER contract.

The third benefit is the potential synergy that will be obtained between the base contracting office, the civil engineering office, and the contractor. When all three parties are team-oriented and maintain an open line of communication, the SABER program will be very effective (SABER Guide, 1992:5). This type of environment was established on the SABER program at Ramstein Air Base, Germany. The three parties formally met once per week to review all open delivery orders, discuss any past discrepancies, and forecast upcoming projects that were awaiting funds.

A fourth benefit of SABER is the ability to accomplish backlogged work orders and high-level requirements that require immediate action (SABER Guide, 1992:5). SABER can easily accommodate the high-level projects, such as refurbishing the new

base commander's office, without interrupting in-service work or overextending the existing workforce.

The fifth benefit is that a successful SABER program provides the BCE with additional resources to accomplish CE's mission (SABER Guide, 1992:5). This benefit has especially been realized since the force reduction experienced throughout the 1990s. With the downsized environment, base civil engineering squadrons do not have the manpower to accommodate much of the minor construction work it once could handle. Furthermore, other situations, like deployments and training, directly affect the mission capability of every military unit. SABER provides the BCE with an effective tool to manage the overall workload in the civil engineer community.

The sixth benefit is that the customer (the using organization) has added fiscal flexibility (SABER Guide, 1992:5). If a work order, that is SABER eligible is placed on a backlog within civil engineering, organizations have the option to fund the project with its organizational funds. This provides the organizations with the ability to obtain quality work in a responsive, timely fashion.

SABER Delivery Order (DO) Program

The execution of SABER contracts is accomplished through the issuance of individual delivery orders (DOs). The DO is the formal contractual instrument that orders the contractor to perform work under the SABER contract. The contracting officer issues SABER DOs once negotiations are completed for the specific work covered in the Government's request for proposal.

SABER Execution and Administration

This section provides an overview of the program execution and contract administration of the SABER process. The step-by-step process for SABER is detailed in AFFARS Appendix DD Part 3.

Pre-issuance of a Delivery Order

Once the customer identifies a requirement to CE, CE completes a preliminary planning estimate that is then submitted with a statement of work and other required documentation to the SABER element within the contracting squadron (AFFARS DD, 2000:DD-301(a)). The SABER contracting element then issues a request for proposal to the contractor on the SABER contract (AFFARS DD, 2000:DD-301(c)).

Prior to the submission of proposals, a site visit is conducted to allow the contractor access to the work area. During the site visit, the contractor, CE project manager, contracting officer, and customer will review the requirements of the work to be accomplished. Specific items that will be covered during the site visit include the method and time requirement for accomplishing the work (AFFARS DD, 2000:DD-301(b)). Once the site visit is accomplished, the contractor develops and submits a cost proposal for the work.

Upon receipt of a proposal, the contracting officer and the assigned contract administrator review the proposal for completeness, compliance, scope, and reasonableness. The contracting officer then requests a technical evaluation of the proposal from the CE SABER office (AFFARS DD, 2000:DD-301(d)(1)).

If the proposal is technically acceptable, the contract administrator will then review the proposal's pricing structure to ensure compliance to the contract's pricing book (AFFARS DD, 2000:DD-301(d)(2)). Prices not included in the book, known as non-priced items (NPI), must be negotiated prior to DO award. Each NPI must be within the general scope of the contract (AFFARS DD, 2000:DD-301(d)(2)).

If the proposal is not acceptable, the SABER contracting officer may opt to return the proposal for rework or send the original work request package back to the Base Civil Engineer to determine if the project should be postponed, cancelled, or completed by another method (AFFARS DD, 2000:DD-301(d)(3)).

The contracting officer, CE SABER technical representative, and the contractor then negotiate any differences between the contractor's proposal and the government's position on the work to be performed. Once all issues are resolved, the contracting officer must prepare a price negotiation memorandum (PNM) that covers specific areas relating to the project (AFFARS DD, 2000:DD-301(d)(4)). AFFARS Appendix DD-301(4)(i-iii) provides the necessary information that must be included in the PNM.

Issuance of the Delivery Order

Following the completion of the PNM and all other required documentation, the contracting officer issues a delivery order for the work. The DO is the legal authority from the contracting officer to obligate the government to the work identified in the DOs statement of work. The DO should include the statement of work, any applicable drawings, and a notice to proceed (AFFARS DD, 2000:DD-302(a)).

Modifications to a Delivery Order

If, during the course of performance, a legitimate change in work is identified, the DO may be modified. Potential changes in work, such as differing site conditions, must be within the scope of the original DO. The process of issuing a modification is the same as that of issuing a delivery order (AFFARS DD, 2000:DD-302(b)).

Inspection and Acceptance of Work Completed on a Delivery Order

In order to ensure satisfactory contractor performance of each delivery order, the SABER contracting and SABER CE elements are responsible for a number of actions.

In accordance with Federal Acquisition Regulation (FAR) 52.236-1, Performance of Work by the Contractor, the contracting officer and administrator are required to monitor contractual requirements including the percentage of direct work completed on the DO.

The SABER CE program manager ensures quality assurance inspections are performed during the performance period on the DO. Once work is accomplished on the DO, the SABER CE program manager, contracting officer and/or administrator, contractor, and customer perform a final inspection on the work performed (AFFARS DD, 2000:DD-303). If the performance meets DO requirements, the Government accepts the work and begins the closeout process (AFFARS DD, 2000:DD-303(c)). If the work is unsatisfactory, the Government must determine whether the areas of unacceptable performance are minor or major. If the discrepancies are minor, the Government can still accept the work. A document, called the punch-list, is created that identifies the minor discrepancies and establishes a deadline for the contractor to correct them. If the

discrepancies are deemed major, the work is not acceptable. In this situation, the contractor must correct the work identified as unacceptable. If the period of performance deadline has been reached, the Government has the ability to assess liquidated damages on the DO.

SABER Contract Terms and Options

As previously stated, SABER contracts are usually awarded for 12 months and may contain a maximum of four option years on the contract. AFFARS Appendix DD-401 identifies the need for the contracting officer to balance the benefits of increased administrative efficiency in exercising SABER contract options and the positive performance incentive offered to the current SABER contractor against the added economic and market risks that are inherent in extending the contract term. The regulation suggests that three option years offer the optimum balance.

SABER contracts must also contain provisions for making yearly adjustments to the option prices listed on the SABER contract. These adjustments can be accomplished through two avenues. The first is through the issuance of an updated price book that is localized to reflect the current market conditions within the area. The alternative is through the use of an economic price adjustment (EPA) clause. The EPA clause includes the criteria and predetermined formulas to update the coefficients on the SABER contract (AFFARS DD, 2000:DD-402).

SABER DO Pricing

Prices on delivery orders are established using the SABER contract's price book and the applicable coefficient for the contract line item listed in the SABER contract.

Price books contain a majority of the standard work tasks associated with construction. Standard unit prices are listed with each work task. The listed price is multiplied by the coefficient to obtain a total for the specific DO task. Each contract line item is totaled to arrive at the total cost for the DO.

There are traditionally two types of price books used on SABER contracts. The first is a Government-generated Unit Price Book (UPB). The second is a commercially available price book. This research identified that the most commonly used commercial price book is published by R.S. Means, headquartered in Kingston, MA.

Unit Price Book

The Base Civil Engineer prepares the Unit Price Book (UPB) for inclusion with the SABER Request for Proposal during the source selection process. The UPB is a list of task specifications unique to the type of work within the contract. Each task specification lists a standard unit of measure and standard unit price. For example, a task specification may be a specific grade of road paving with a standard unit of measure by the square foot with a standard unit price of \$25 per square foot. The UPB is localized for each SABER contract. Localization involves tailoring the UPB task specification information to the specific location of the base the SABER contract is awarded (AFFARS DD, 2000:DD-102 (1); DD-202). An example of localization would be an adjustment to a line item based on the prevailing wage rate for the particular task, e.g. plumbing, for that area.

Creating or modifying a UPB is a time-intensive task. There are tens of thousands of line items contained in a UPB. For this reason, many bases are opting to use a commercially available price book for the contract.

R.S. Means

Many Air Force bases have turned to the R.S. Means price book for its SABER contract. R.S. Means publishes an annual price book that contains most of the line items typically identified in construction efforts. The list prices identify the average cost found throughout the United States. Another section of the price book provides locality adjustment factors for a large number of cities throughout the country.

When pricing a SABER DO using the R.S. Means price book, the applicable line item is taken from the R.S. Means catalog and multiplied by the catalog's locality adjustment factor that corresponds to the base's region. This figure is then multiplied by the SABER contractor's coefficient to obtain a total cost for that line item.

Coefficients

Coefficients are factors that are multiplied by the price book's standard unit prices and result in a cost for the task specification identified in individual DOs. Coefficients are calculated and included by the contractor in its initial proposal during the source selection process. The contractor considers various internal costs, such as overhead, profit, and general and administrative expenses, in determining its proposed coefficients. The number of coefficients is developed based on the amount of contract line items in the request for proposal. SABER contracts typically include line items for standard and non-

standard labor hours, or unique work environments, such as secured areas or isolated site work.

A coefficient of 1.0 indicates that the contractor is performing the contract at the exact costs identified within the applicable price book. AFFARS Appendix DD presents a case that the offeror's proposed coefficients reflect its perception on the accuracy of the price book used on the SABER contract. For example, if the contractor believes the UPB prices are consistently lower than the prices actually found in the local area, the contractor will bid high coefficients in its proposal. AFFARS Appendix DD argues that unbalanced UPBs increase the uncertainty for the contractor in preparing its proposal, which increases the possibility of inequitable pricing of SABER contracts. This fact stresses the importance of the localization process in developing the UPB.

Liquidated Damages

FAR 11.502 establishes the policy on determining when liquidated damages clauses should be included in Government contracts. Liquidated damages are normally included on SABER contracts. Liquidated damages are applied to individual DOs versus the total contract. The SABER contracting officer should assess the need for liquidated damages for each delivery order. Areas for consideration should include the total number of DOs outstanding and the contractor's ability to control project milestones (AFFARS DD, 2000:DD-306(b)).

If the contractor exceeds the deadline on the period of performance on a DO that contains liquidated damages, the contracting officer assesses liquidated damages on the delivery order until the project is completed.

Project Estimating Fees

Some SABER contracts include a contract line item, which reimburses the contractor for Government-requested proposals, or project estimations, for potential SABER work that is eventually not executed.

The Government normally uses this line item towards the end of the fiscal year. In preparation for end of year fall-out money, a number of potential SABER projects will be identified and the Government will request a project estimate for the work. If the project is not funded within a specified amount of time, the contractor is paid for the cost of preparing the estimate, which is identified in the contract. If the project is funded, the cost for the preparation is absorbed in the total cost of the delivery order.

Balanced Workload

Due to the nature of Government spending, SABER programs and contracts often experience a fiscal year 4th quarter surge in use. This period occurs during the months of July through September. It is essential for the Government to ensure the SABER contractor understands this situation and is prepared for such occurrences.

An unprepared contractor could be overwhelmed with the amount of work that is awarded during this time frame. An effective SABER contractor must have the capability to expand and contract its work force to meet such demands. Government SABER personnel should also communicate to the contractor any anticipated surges due to upcoming events.

Inappropriate Use

There are a number of limitations placed on the issuance of SABER DOs. SABER contracts should be used as a complement, not a replacement, to traditional construction methods. Specifically, SABER is not an appropriate tool for procuring large, complex construction projects that normally require extensive design efforts. In addition, SABER is not appropriate for predominantly single skill/material projects where other contractual vehicles may be more cost effective (AFFARS DD, 2000:DD-104(a)).

There is a monetary limit of \$500,000 that a SABER DO cannot exceed without a waiver signed by the base commander. This limitation includes any proposed modification to an existing DO. Therefore, the total sum of the delivery order and the proposed modification cannot exceed \$500,000. In either case, the waiver must be approved by the base commander prior to the award of the DO or modification. AFFARS Appendix DD-104(c)(1-3) provides the specific information that must be included in a waiver package (AFFARS DD, 2000:DD-104(c)).

There are also limitations placed on Architect-engineer (A-E) services and non-personal services. SABER contracts may not be used on most projects that were designed using A-E services (AFFARS DD-104(b)). AFFARS Appendix DD-104(b)(2)(i-ii) lists the exceptions to this rule.

SABER is inappropriate for work that is subject to the provisions of the Service Contract Act. The Department of Labor has the jurisdiction over whether a particular requirement is construction work, therefore subject to the Davis Bacon Act, or service work, subject to the Service Contract Act (AFFARS DD, 2000:DD-104(e)).

AFFARS Appendix DD also places a limitation on NPIs for each SABER delivery order. NPIs shall not exceed ten percent of the total value of the DO without prior approval by the base commander. However, this waiver authority for NPIs is only applicable to 25 percent of the total value of the DO. The justification behind this limitation is that the need to negotiate a number of NPIs reduces the efficiency of the SABER contract (AFFARS DD, 2000:DD-104(d)).

Other Areas

There were a number of issues identified during the interviews that were particular to each base's situation. Some of these issues were relevant to the research while others were issues that could be further examined. These areas are presented at the end of each case study in Chapter IV.

Summary

Chapter II provided a literature review on the current literature available regarding the SABER program. Chapter III, Methodology, will provide the research methodology used in collecting the data to meet the research objective. Chapter IV, Analysis, will present the data gathered during the interviews. Chapter V, Results and Conclusions, will provide the results from the research as well as any conclusions that can be made based on the research data collected.

III. Methodology

Chapter III presents the methodology that was used to acquire and analyze the data for this research effort.

Overview

The objective of this research effort was to identify and analyze any conditions that may have been created by the current SABER acquisition process that led to SABER contractor failures. There were no anticipated results prior to conducting the research and data collection. The acquisition process for any Government contract, in this case SABER contracts, is extensive. A number of processes and procedures are incorporated into the Government's acquisition process. The major processes within a SABER acquisition include the source selection process, the contract award process, and the contract performance process. Each process can be further segmented into additional processes. For instance, the source selection process can be separated into the process of selecting a source selection team, the process of creating evaluation criteria for evaluation purposes, and the process of determining whether limitations will be placed on a bidders' proposal.

Due to this inherent nature of the Government acquisition process, the task of attempting to identify problem areas within the overall process without focusing on an area or a number of specific areas is nearly impossible. For this reason, the scope of this research was narrowed to one overall research question with five specific subsidiary research questions within the SABER acquisition process. The research question developed was:

Are there any Government-controlled factors of the SABER acquisition process that are leading to contractor failure during the contract's period of performance?

The five subsidiary research questions selected for this research effort were:

(1) What was the Government's method of pricing the SABER contract? Did this pricing method negatively impact the contractor's ability to satisfactorily perform?

(2) What role, if applicable, did liquidated damages have during the performance of the SABER contract? Did the assessment of liquidated damages, when applied, negatively impact the contractor's ability to satisfactorily perform on existing and future SABER DOs?

(3) Does the Government reimburse the contractor for the cost of preparing a bid for a project that is eventually not executed? If not, did this practice negatively impact the contractor's ability to satisfactorily perform on the contract?

(4) How does the Government balance the issuance of SABER delivery orders over the course of the contract period? Where there any surges, particularly in the fiscal year 4th quarter, that negatively impacted the SABER contractor's ability to satisfactorily perform?

(5) Was there any inappropriate use of the SABER contract? If so, did this negatively impact the contractor's ability to satisfactorily perform?

Method Selection

As stated in Chapter 1, Research Methodology, a qualitative methodology was used to conduct the research. Specifically, the case study methodology was selected as the most beneficial way to meet the objective of the research.

Yin identified three conditions to assist a researcher in determining the type of research strategy to use for a research topic (Yin, 1994:4-6). Yin also provided a table, Table 1, which identifies five resource strategies along with the three conditions (Yin, 1994:6).

**Table 1. Five Research Strategies and Three Conditions for Selection Criteria
(Yin, 1994:6)**

<i>CONDITIONS</i>			
<i>Strategy</i>	<i>Form of research question</i>	<i>Requires control over behavioral events?</i>	<i>Focuses on contemporary events?</i>
Experiment	how, why	yes	yes
Survey	who, what, where, how many, how much	no	yes
Archival analysis	who, what, where, how many, how much	no	yes/no
History	how, why	no	no
Case study	how, why	no	yes

The underlying question of this research concerned “why” or “how” these SABER contractors are failing. There was no attempt to control behavioral events and the research focused on contemporary events. Therefore, the appropriate strategy for this research was case study analysis.

Yin defined a case study as “...an empirical inquiry that investigates a contemporary phenomenon within the real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 1994:13).

Based on the recommendation of Yin, the process used for this research effort was broken into four stages. These stages entail the:

- design of the case study;
- performance of the case study;
- analysis of the case study evidence;
- development of the conclusions and recommendations.

Design of the Case Study

Given the objective of this research, the design of the case study targeted specific SABER contracts. Seven Air Force bases were selected as case study subjects by the researcher and the researcher’s sponsors, SAF/AQCO and AFIT/CEM. The seven bases represent three Major Commands throughout three states in the continental United States (CONUS). The three states cover the eastern and southern CONUS. The three states are geographically separated in an effort to reduce any regional effects on the data collected.

Of the seven bases selected, three bases terminated their SABER contractor for default, one base terminated for convenience, one base identified the contract as failing, and the remaining two bases did not have SABER contractors in a failed or failing situation.

Yin identified six sources of evidence used in case study research (Yin, 1994:79 – 90). Table 2 presents the six sources alongside the strengths and weaknesses of each source.

Table 2. The Six Sources of Evidence Identified by Yin

<i>Source of Evidence</i>	<i>Strengths</i>	<i>Weaknesses</i>
Documentation	<ul style="list-style-type: none"> - stable, unobtrusive, exact, broad coverage (wide span of events) 	<ul style="list-style-type: none"> - retrievability, biased selectivity (if collection is not complete), reporting bias, access
Archival records	<ul style="list-style-type: none"> - same as above - precise and quantitative 	<ul style="list-style-type: none"> - same as above - accessibility due to privacy reasons
Interviews	<ul style="list-style-type: none"> - targeted (focused on specific topic), insightful 	<ul style="list-style-type: none"> - bias due to poorly constructed questions, response bias, inaccuracies due to poor recall, reflexivity
Direct observations	<ul style="list-style-type: none"> - reality (observing in real time); contextual 	<ul style="list-style-type: none"> - time-consuming, selectivity, reflexivity, cost
Participant-observation	<ul style="list-style-type: none"> - same as above for direct observations, insightful into interpersonal behavior and motives 	<ul style="list-style-type: none"> - same as above for direct observations, bias due to investigator's manipulation of events
Physical artifacts	<ul style="list-style-type: none"> - insightful into cultural features and technical operations 	<ul style="list-style-type: none"> - selectivity, availability

The primary source of evidence used in this research effort was interviews. Interviews provided the researcher with the ability to gain insightful information on each base's SABER process. Another benefit of the interview was the ability to focus the interview on the individual situation specific to each base.

A questionnaire was developed for preparation and guidance for conducting the interviews. The questionnaire was separated into questions dealing with the SABER background information for pre-award and post-award as well as a number of specific questions related to the execution of the SABER contract. The questionnaire can be found in Appendix B, Field Visit and Interview Guide. The questions were developed by the researcher, the researcher's advisor, and coordinated through the researcher's sponsors. The questionnaire was sent to each base prior to conducting the interview.

The second source of evidence was the collection of copies of documentation. Each base maintains a contract file that contains all relevant information regarding the SABER contract. Yin states "For case studies, the most important use of documents is to corroborate and augment evidence from other sources" (Yin, 1994:81). In this research effort, the collection of documentation, when necessary, supported the statements made by the interviewees.

Limitations of the Research

There are a number of limitations to this research effort. The SABER contractor was not contacted during the data collection process. The rationale for this decision was two-fold. The primary rationale was due to potential legal issues between the Government and the contractor in a failed situation. One of the case studies involved the

situation where the Government was at the initial stages of a failed situation. In addition, a number of case studies involved situations where the contractor was no longer in the local area of the base. These situations involved contractors that had gone out of business. The decision not to interview the contractor will limit the overall analysis, as the research will only collect one side of the story in each case study.

Other areas of concern in this area included the rapid turnover of Government personnel. In some cases, the individuals who were part of the SABER source selection process were no longer at that base due to change of assignments or separation from Government service. This impacted the ability of the current personnel to provide background information regarding various aspects of the base's SABER contract.

Validity and Reliability of the Research

Four tests that are commonly used by researchers to address the quality of any empirical research study include construct validity, internal validity, external validity, and reliability. Yin provides a table, Table 3, of these four tests along with a case study tactic and the phase to use this tactic in an effort to strengthen the applicable test (Yin, 1994:33).

**Table 3. Case Study Tactics for Four Design Tests
(Yin, 1994:33)**

<i>Tests</i>	<i>Case study tactic</i>	<i>Phase of research in which tactic occurs</i>
Construct validity	<ul style="list-style-type: none"> - use multiple sources of evidence - establish chain of evidence - have key informants review draft case study report 	<ul style="list-style-type: none"> - data collection - data collection - composition
Internal validity	<ul style="list-style-type: none"> - do pattern-matching - do explanation-building - do time-series analysis 	<ul style="list-style-type: none"> - data analysis - data analysis - data analysis
External validity	<ul style="list-style-type: none"> - use replication or logic in multiple-case studies 	<ul style="list-style-type: none"> - research design
Reliability	<ul style="list-style-type: none"> - use case study protocol - develop case study data base 	<ul style="list-style-type: none"> - data collection - data collection

Construct Validity

Yin described construct validity as "...establishing correct operational measures for the concepts being studied." (Yin, 1994:33-34). In an effort to strengthen the construct validity of this research, two sources of evidence, interviews and documentation, were selected in lieu of just one or the other. The use of these two sources compliments each other. The documentation gathered supported the responses provided during the interview. In addition, the interview provided the researcher with a number of details that documentation could not provide, such as the political environment that existed during the SABER contract's period of performance.

Internal Validity

Internal validity, as described by Yin, is establishing a causal relationship versus a false, or spurious, relationship from the research data (Yin, 1994:33,35). Each case study subject had the opportunity to review the case study data prior to its inclusion into this study. The purpose of this review was to ensure that the researcher accurately portrayed the information and the meaning of that information provided by the contracting and civil engineering personnel.

The research effort was geared towards establishing a potential causal relationship based on any Government action that led to the failure on the part of the SABER contractor. The coding process, as explained below, was designed in an effort to compare individual base's situations to discern if a causal pattern existed on a macro-level.

External Validity

Yin identified external validity as "...establishing the domain to which a study's findings can be generalized." (Yin, 1994:33, 35-36). To strengthen external validity, the same research design was replicated for each of the seven case studies.

This research focused on five aspects of the overall SABER acquisition process as potential conditions that may have led to SABER contractor failure. However, the questionnaire included a number of questions regarding the wide spectrum of the SABER acquisition process. This research could be replicated with a number of other bases not used in this research.

Reliability

Yin stated, "The objective is to be sure that, if a later investigator followed exactly the same procedures as described by an earlier investigator and conducted the same case study all over again, the later investigator should arrive at the same findings and conclusions." (Yin, 1994:33, 36-37).

The reliability test has been addressed throughout Chapter 3. The design of this research was geared to allow future researchers to use the same protocol and obtain the same results.

Execution of the Case Study

Coordination for the case studies was through SAF/AQCO and each MAJCOMs contracting point of contact for SABER contracts. A copy of Appendix A, First Contact with Primary Point of Contact, was sent to each base prior to the interview. Upon arrival

at each Air Force base, the initial meeting was with the Contracting Squadron's commander or deputy commander when that individual was available.

Following this initial meeting, interviews were conducted with the Contracting Squadron's SABER contracting officer and SABER contract administrator(s). These individuals compose the contracting portion of the SABER program. In addition to the contracting personnel, interviews were held with five of the seven bases' SABER civil engineer personnel.

The interview process was semi-structured. Interviews covered specific topics related to the five subsidiary research questions. In addition, the interviews addressed a number of additional areas relating to the SABER acquisition process. These questions, as identified in Appendix B, were identified as potential areas for future research in this area.

Several of the case studies involved situations where the SABER contractor failed in the performance of the contract. In these situations, the focus of the interview was directed at the circumstances, as determined by the interviewees, which led to the contractor failure.

Prior to the interview, each interviewee was provided an overview of the research effort. Each interview was audiotaped to allow the researcher to review the information prior to documenting each case study. All subjects were questioned prior to conducting the interview concerning their preference not to be audiotaped; no one declined. Interviewees were assured of their and their base's anonymity and were asked to be direct and truthful during the interview. The case study analysis was provided to both the

contracting and civil engineering personnel for comments and concerns prior to this publishing.

Analysis of the Case Study Evidence

The researcher gathered a large quantity of data during the execution phase of the research effort. A total of seven case studies were performed over a two-week period. In addition to the large amount of documentation collected, there were numerous hours of audiotape to review for this effort. To identify whether there were any conditions created by the Government in the SABER acquisition process that led to the SABER contractor's failure was likened to finding the proverbial needle in the haystack. Novak addressed such a dilemma by stating:

We moved to the use almost exclusively of interviews...but then we were faced with numerous audiotapes or typed transcripts of the tapes. It was exceedingly difficult to analyze these records and find patterns or regularities that could help us understand how and why... (Novak, 1998:27).

Faced with a similar situation, a process was needed to code the data into a manageable form. The researcher used a process espoused by Strauss and Corbin (Strauss and Corbin, 1990). Strauss and Corbin describe three stages of coding that was used in this research effort.

Stage one involved open coding, which is the process of breaking down and conceptualizing the data gathered.

Stage two, known as axial coding, involves the process of conducting a cross-case analysis of all data relevant to the research effort. For this research effort, axial coding consisted of identifying all data relevant to each of the five subsidiary research questions.

Finally, the third stage, called selective coding, involved identifying any common data found throughout the case studies and determining whether the data impacted the SABER contractor's ability to satisfactorily perform on the SABER contract.

To document the coding process, the researcher used a technique called mind-mapping (Buzan and Buzan, 1993:59). The mind-map is a manifestation of radiant thinking. Radiant thinking involves the process of creating ideas and thoughts from a central point. These thoughts burst out from the central point. The mind-map is the written expression of radiant thinking (Buzan and Buzan, 1993:53-69). The use of a mind-map encourages radiant thinking in place of linear or hierarchical thinking.

Figure 1 contains the mind-map used for this research effort. The central point, Government-controlled actions or procedures that impact contractor performance, represented the central theme of the research effort: are there any Government-controlled factors that led to the SABER contractor's failure? Five of the six main themes corresponded to the five subsidiary research questions. The final theme--Other areas identified during case studies--represented additional information gathered during the case study execution that was pertinent to the situation. Opportunities for future research efforts are identified from this theme.

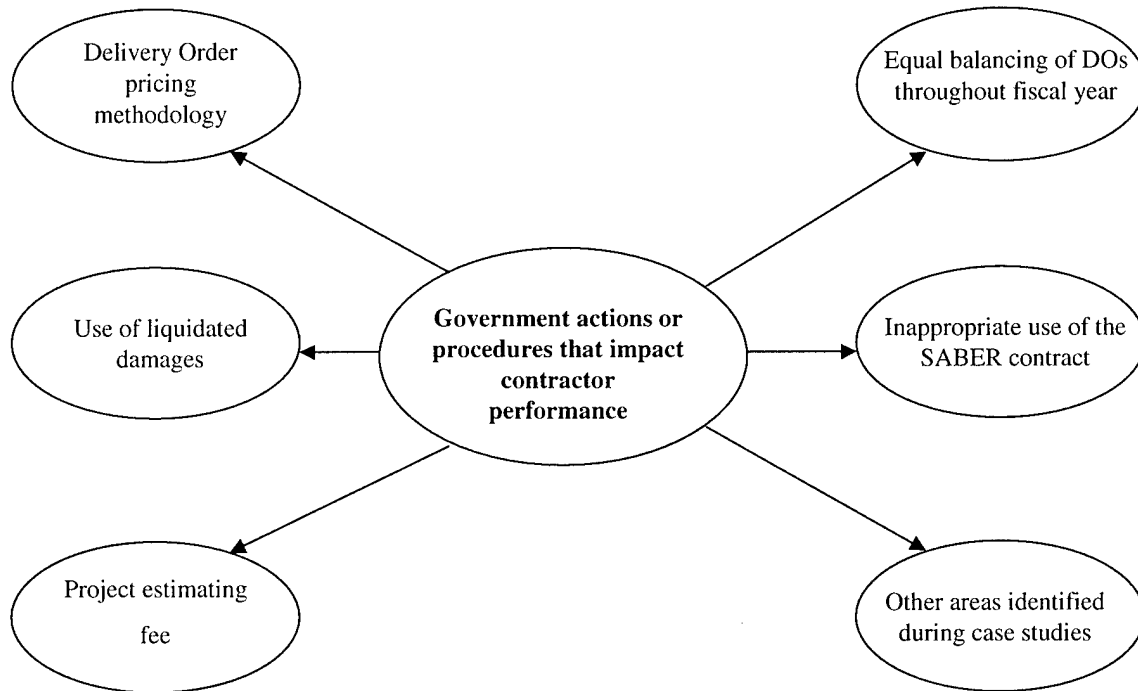


Figure 1. Mind Map Designed for the Research Effort

Organization of the Remaining Report

Chapter IV, Analysis, reports the findings of each case study. Each case study was documented in the following manner:

Base X Analysis

Background Information - This section introduces the case study. Items presented include the relevant facts of the SABER contract. Such facts include the amount and period of the SABER contract.

Five Areas Relating to the Subsidiary Questions - A section is dedicated to discuss, in detail, the responses to the five subsidiary questions that the research targeted. The titles of each section are *Pricing Methodology*, *Liquidated Damages*, *Project Estimating Fees*, *Balanced Work*, and *Inappropriate Use*.

Other Areas - As previously identified, this section identifies relevant issues, excluding the five targeted areas, pertaining to each bases situation.

Chapter IV also provides a cross-case analysis of the seven case studies.

Comparisons are made across the board for each of the six themes identified in the mind-map. The purpose of this cross-referencing was to identify whether the five areas were consistent with one another. This allowed a comparison to whether the case studies that resulted in a failed situation were any different to those case studies that were not in a failed situation. This comparison assisted in identifying whether the specific area, e.g. Use of liquidated damages, was a relevant factor in the failure of the SABER contractors at different bases.

Chapter V, Results and Conclusions, states the results from the research. In addition, Chapter V identifies future research efforts. These topics were identified during the interview and data collection process as potential candidates of causal relationships regarding Government-controlled actions that may lead to SABER contractor failure.

IV. Analysis

Chapter IV is separated into two sections. The first section provides an in-depth case study analysis on each installation's SABER program. The analysis focuses on the five subsidiary research questions as well as any other areas of interest that were identified during the interview and field visit. The second section of Chapter 4 contains a cross-case review of the six areas in an effort to identify any trends across the seven installations studied during this research effort.

Overview

Each analysis is covered separately and is identified as Base A through Base G. Each case study analysis consists of a brief summation on the background information of the SABER program at the base studied. The next portion of the analysis is dedicated to each of the five subsidiary research questions in the following order: Pricing Methodology, Liquidated Damages, Project Estimating Fees, Balanced Work, and Inappropriate Use. Following this is a section, Other Areas, which provides additional areas of interest that were identified during the case study interviews. Each case study write-up was provided to the respective installations for review of content and accuracy prior to publishing.

Base A Analysis

Background Information. The SABER contract at Base A was established for a maximum of five years, base period with four option periods, with a set minimum dollar amount of \$200,000 and a maximum dollar amount of \$5,000,000 per period of performance.

Nine contractors bid for the contract during the source selection period. There were no 8(a) small business set-asides for this contract. The contract was awarded to a large firm that had SABER contracts at other bases as well as substantial experience in construction contracting with the Air Force.

The contract was approximately five weeks into its third option period when a high-level executive for the contractor informed the base contracting squadron commander and the SABER personnel that the contractor would close operations within 30 days.

Within its letter of notification, the contractor identified that a criminal action, embezzlement, by one of its employees resulted in the financial insolvency of the firm. The contractor also informed the Government personnel that the contractor's employees and subcontractors would be immediately notified of the situation.

In time, the contractor was terminated for default and the bonding company took over the open delivery orders on the work that had not been completed.

Base contracting personnel stated that the contractor performed satisfactorily on the contract prior to this incident. They also stated that the contract probably would have been renewed for the fourth option period if this incident did not occur.

Pricing Methodology. The SABER contract's pricing structure was based from the RS Means database. The RS Means book was updated annually. The contractor was required to procure the annual updates and provide copies to both base contracting and civil engineering personnel.

The contract had four coefficients for four contract line items for each period of performance. Two coefficients were for standard working hours for two separate locations, the base and an additional facility not physically attached to the base. The remaining two coefficients were for non-standard working hours for the same two locations. The contract identified standard working hours.

The contractor proposed negative coefficients for each of the contract line items. A contractor who quotes a negative coefficient, which is below 1.0, is proposing that the work can be accomplished by the contractor at less than the contract pricing book costs including any locality adjustment for that contract's area. Base civil engineering personnel expressed concern regarding this fact. One inspector questioned whether SABER contracts should be awarded to any contractor that proposes a negative coefficient.

Despite the fact that the contract was awarded to a firm that proposed negative coefficients, it does not appear that the Government's action in this area negatively impacted the contractor's performance thereby resulting in the contractor failing.

Liquidated Damages. The liquidated damages clause was used on each SABER delivery order. The amount of liquidated damages was approximately \$140 per day beyond the expiration date of the delivery order.

Contracting personnel stated that liquidated damages were not assessed extensively on the contract. In addition, the contracting officer stated that there appeared to be no domino effect that affected other open delivery orders once liquidated damages were assessed on an individual delivery order. The following scenario provides an example of domino effect. The SABER contractor is being assessed liquidated damages against DO 1. To alleviate the situation, the contractor moves personnel from DO 2 and DO 3 to DO 1 to finish the work. Due to the personnel shift, the contractor then falls behind and is assessed liquidated damages on DO 2 and DO 3.

The contracting officer further identified that the contractor never provided negative feedback that the assessment of liquidated damages on an individual delivery negatively impacted its ability to perform on any outstanding delivery orders.

It does not appear that the Government's use of liquidated damages negatively impacted the contractor's ability to perform satisfactorily on the contract.

Project Estimating Fees. The SABER contract contained a contract line item for a project estimating fee. The shelf life for the project estimating proposals was one year. If the DO was awarded, the cost for preparing the proposal was absorbed into the overall cost of the awarded DO. This line item was used less than 10 times over the period of the contract. The contracting officer noted that the line item could have been used more often. However, the contractor voluntarily provided a majority of project estimations at no cost to the Government. These free estimates were provided on projects awaiting fiscal end of year fall-out funding.

It does not appear that the contractor's failure to charge the Government for project estimations negatively impacted their ability to perform satisfactorily on the contract.

Balanced Work. Throughout each period of performance, the SABER contractor experienced a fiscal year 4th quarter surge as a result of the Government committing dollars prior to losing them on 1 October.

The contracting officer stated that the contractor never expressed concern that the workload was overwhelming. Furthermore, the contractor never attempted to refuse any projects during the contract performance period.

It does not appear that 4th quarter surges negatively impacted the contractor's ability to perform in a satisfactory manner.

Inappropriate Use. Based on current government laws and AFFARS Appendix DD limitations, the contracting personnel did not identify any attempts of inappropriate use, of the SABER contract at Base A. However, the civil engineering personnel expressed concern that the SABER program has turned into an inappropriate program to quickly obligate end of year funds on projects that may have been better suited for individual competitive procurements.

It does not appear that the Government's actions in this area negatively impacted the contractor's ability to perform satisfactorily.

Other Areas. There were a number of areas of concern identified by contracting and civil engineering personnel during the interview process.

Contracting personnel stated that the dollar expenditures on the SABER contract have decreased over the years. Two speculations on the root cause of this reduction were

identified. First, the decreasing DoD budget has negatively affected a majority of the programs and the program's expenditure levels. Second, the Air Force contracting squadron on Base A faces procurement competition from the Navy and Army. The Navy maintains a three-person office on Base A and actively pursues Air Force business on the base. In addition, an Army post is located within 30 minutes of Base A. The Army contracting office has a JOC contract in place that Base A has used in the past and is currently using until a new SABER contract is in place. There are no firm cost figures on how much potential SABER business has been placed through the Navy or Army contracting offices.

A second area of interest identified was the need for personnel to attend source selection classes prior to entering a SABER source selection. Civil engineering personnel identified a number of courses offered through the Army that prepares individuals for source selections.

A third area of interest that was identified by civil engineering personnel involved a claim that the subcontractors were not getting paid in a timely manner. This resulted in the subcontractors abandoning some sites and refusing to work for the prime contractor on future projects. The prime contractor was then forced to hire less qualified workers. This resulted in low quality workmanship.

Base B Analysis

Background Information. The SABER contract at Base B was established for a maximum of five years, base period with four options. The contract had a minimum

dollar amount of \$200,000 and a maximum dollar amount of \$4,000,000 per period of performance.

There were a total of 10 bidders that submitted proposals for the SABER contract. There were no 8(a) small business set-asides for this contract. The contract was awarded to a large firm that had SABER contract experience on other Air Force bases.

The contract was awarded in May 1997 and was used infrequently during the first year. This was the second SABER contract awarded on Base B. The contracting officer stated that the SABER program was not initially wanted on Base B. Base B is located in close proximity to an Army post and the Air Force was using the Army JOC contract prior to the implementation of the SABER program. However, Base Bs MAJCOM mandated that a SABER contract be put in place. The use of SABER did increase following the initial period of performance in 1997.

In the third option period, problems arose with the SABER contractor. The contractor experienced a large surge in delivery orders due to preparations for a major Air Force training exercise. This situation is covered in detail under Balanced Workload.

In addition, the contractor had major difficulties obtaining subcontractors for projects. This resulted in the contractor having limited capability to manage its workload. The contracting officer stated that the contractor could only handle two DOs at a time.

A week before the field visit, the SABER contracting officer issued three cure notices and one show cause letter to the contractor for delinquent work.

Pricing Methodology. Base B used the RS Means database to price DOs on its SABER contract. The contractor was required to procure annual updates and provide copies to both base contracting and civil engineering personnel.

The contract had three coefficients for three working level contract line items. One coefficient was for regular working hours; one for non-regular working hours; and a third for concentrated work. Concentrated work included work that involved unexpected mission changes, extremely short performance periods, or damage repair as a result of a natural or unnatural disaster.

The contractor proposed negative coefficients for each of the contract line items. The coefficients ranged from 0.88 for regular working hours to 0.918 for both non-regular working hours and concentrated work.

The contracting officer stated that both the Government and the contractor were comfortable with using the R.S. Means price book on the contract. It does not appear that the Government's action in this area negatively impacted the contractor's ability to perform satisfactorily on the SABER contract.

Liquidated Damages. The liquidated damages clause was applied to every delivery order valued over \$25,000. The use of the liquidated damages clause for orders under \$25,000 was made on a case-by-case basis.

The contracting officer stated that there had never been a monetary assessment of liquidated damages prior to the interview. However, the assessment of liquidated damages on open DOs was imminent due to the contractor's inability to perform in a timely manner. In a few instances, the Government took non-monetary consideration in lieu of money on orders that went beyond the DO expiration date.

Since liquidated damages were not assessed on the contract, the contractor's ability to perform satisfactorily could not have been negatively impacted.

Project Estimating Fees. The SABER contract contained a line item for project estimations. The cost of the estimation was based on the magnitude of the project. For projects with an estimated total of \$25,000 or less, the project estimating fee was \$500; project magnitude estimations between \$25,000 to \$100,000 cost \$800; and estimates that were over \$100,000 cost \$1,200.

The project estimating line item was used infrequently and only during preparation for end of fiscal year fall-out. The shelf life for the estimation was one year. The contracting personnel did not mention any instances where the contractor provided project estimations at no cost to the Government.

There does not appear to be any evidence to support the Government actions in this area negatively impacted the contractor's ability to perform satisfactorily on the SABER contract.

Balanced Work. As previously stated, the SABER contract was used infrequently during the first period of performance. As the base prepared for a high-level Air Force exercise for 2000, the SABER contractor experienced a large surge in the amount of work awarded. Most of this work consisted of facility renovation and improvement projects.

In addition, the contracting officer noted that a number of interested personnel directly contacted the contractor to emphasize the importance of the DOs related to the exercise. Individuals went so far as to prioritize the work without the contracting officer's knowledge that such actions were taking place.

The contracting officer noted that this situation resulted in the contractor falling behind schedule on DOs not associated with the exercise. Following the surge, the contracting officer gave the contractor the opportunity to adjust performance periods on uncompleted DOs. The DOs were modified to reflect the adjusted periods. However, the contracting officer noted that the contractor did not recover from that period.

Although the contractor was not in default at the time of the data collection, the actions of the Government in this matter negatively impacted the contractor's ability to perform satisfactorily on the contract.

Inappropriate Use. There had been previous attempts to use the contract for work, such as single-trade projects, that is inappropriate for a SABER contract. The SABER contracting officer refused to issue SABER delivery orders on the work and the requirements were sent back to the customer or forwarded to another branch of the contracting office to handle appropriately.

It does not appear that the Government's actions in this area negatively impacted the contractor's ability to perform satisfactorily.

Other Areas. The existence of competition for work on Base B is evident. With SABER in place, Air Force customers no longer use the Army JOC contract. However, the Army does compete for work on Base B. The Army Corps of Engineers has an office on Base B. A number of projects that were SABER eligible were given to the Corps of Engineers. For example, the Corps of Engineers had all of the base's runway projects and a number of base housing projects.

The contracting officer also noted that the SABER contractor had difficulty hiring reliable subcontractors to work on the SABER contract. This was due to the large

amount of construction projects at the Army post that is located near Base B. The contracting officer believed the limited number of qualified subcontractors negatively impacted the contractor's ability to handle more than two delivery orders at any given time. This resulted in potential SABER projects being procured under traditional construction contracting methods versus being awarded as a SABER delivery order.

Base C Analysis

Background Information. The SABER contract at Base C was established for a maximum of five years, base period with four option periods, with a set minimum dollar amount of \$200,000 per period of performance with a maximum dollar amount of \$15,000,000 over the life of the contract.

A total of 13 contractors placed a bid for the contract during the source selection process. This was not an 8(a) small business set-aside contract. The contract was awarded to a large firm that had SABER contracts at other bases as well as substantial experience in construction contracting with the Air Force.

The contractor at Base C was also the firm that was awarded the SABER contract at Base A. As with Base A, the SABER contract was in its third option period when the contractor defaulted on the contract. The contracting officer noted that the contractor was performing satisfactorily on the contract. The third option had just been exercised when the default situation occurred.

Pricing Methodology. R.S. Means was the price book used on this SABER contract. The contractor was required to procure annual updates and provide copies to the SABER contracting and civil engineering offices.

The contract contained four coefficients per period of performance. The coefficients were for standard and non-standard hours for two separate locations, the base and an additional facility not physically attached to the base.

The coefficients during the first two periods of performance were negative. The coefficients applicable to projects completed on base were 0.921 for standard hours and 0.983 for non-standard hours during the initial contract period. The coefficients during the first option period were 0.926 and 0.988 respectively.

Prior to the execution of the third option period, a contract modification was done which increased the coefficients for option year 2 and subsequent periods. The coefficients for projects on base rose 0.063, 0.058, and 0.053 for standard working hours for option periods 2, 3, and 4. Similar increases were applied to the remaining coefficients. There was no documented justification or consideration for this modification. However, contracting personnel noted that the price increases within the modification did not displace any other bidder and was given legal review prior to approval.

Since the contractor failed due to an internal criminal action, there is no evidence that conclusively supports that the Government's actions negatively impacted the contractor's ability to satisfactorily perform. However, the modification to raise coefficients without consideration suggests that the Government was possibly attempting to right a wrong by raising the coefficients to allow the contractor to recover past losses. One could only speculate whether the contractor would continue to satisfactorily perform given this situation.

Liquidated Damages. Liquidated damages were assessed on a number of delivery orders throughout the life of the contract. Contracting personnel stated that there appeared to be no domino effect when liquidated damages were assessed.

It does not appear that the Government's use of liquidated damages negatively impacted the contractor's ability to satisfactorily perform the contract.

Project Estimating Fees. The SABER contract contained project estimating line items. The cost of the estimation was based on the magnitude of the project. Estimations for projects less than \$25,000 cost \$1,200; for projects between \$25,000 and \$100,000, the cost for the estimation was \$1,750; and for projects greater than \$100,000, the cost for the estimation was \$3,000. These costs were the same for each period of performance. Project estimations had a shelf life of one year.

Data provided by the contracting personnel identified 15 occasions that the project estimating line item was used. All 15 uses were for preparation of fiscal year-end fallout. The contracting personnel did not mention any instances where the contractor provided project estimations at no cost to the Government.

There does not appear to be any evidence to support that the Government's actions in this area negatively impacted the contractor's ability to satisfactorily perform.

Balanced Work. On data collected from the contracting personnel, a majority of the SABER workload was awarded during the fiscal year 4th quarter. Approximately 65 percent of 113 delivery orders reviewed were awarded during the 4th quarter.

The SABER contracting personnel noted that the contractor had not expected the large surge in delivery orders during the 4th quarter. Furthermore, the local area did not have the infrastructure, specifically the manpower, needed to handle so much work at any

given time. Government personnel had to work with the contractor to establish schedules of performance on each delivery order that was fair for both the contractor and the customer.

Although the amount of work was unexpected, the Government and contractor worked around this issue to avoid future problems. Therefore, it does not appear that 4th quarter surges negatively impacted the contractor's ability to perform in a satisfactory manner.

Inappropriate Use. The contracting officer noted that there were no incidents of inappropriate use of the SABER contract. Therefore, there was no potential negative impact on the contractor's ability to perform.

Other Areas. A new SABER contract was in place at Base C during the field visit. One concern identified regarding the new contract is the price book. The R.S. Means book is being used on the new SABER contract. The contract was awarded to a large construction firm with significant Air Force SABER experience at other bases. All of the contractor's coefficients are positive. One possible explanation of a positive coefficient proposed within a bid indicates that the contractor believes the R.S. Means prices are slightly lower than the market prices surrounding the area. The closest city listed in the R.S. Means City Cost Index (CCI) is over 60 miles away. The contracting officer believes that local costs are higher than the adjusted CCI price. The contractor has provided feedback to the contracting officer regarding the discrepancy between the price book and actual local costs. The contractor claims that they are losing money more often than making a profit on many delivery orders.

The contracting officer further stated that he believed the price differences are negatively affecting the contractor's ability to meet the cost of the work under the contract.

Base D Analysis

Background Information. The SABER contract researched at Base D was awarded as an 8(a) set-aside for a period of one year. The contract was awarded following a series of capabilities briefings of the six best qualified contractors as identified by the Small Business Administration (SBA). Following the six briefings, SABER civil engineering and contracting personnel selected the best-rated contractor.

The contract was awarded in June 1999 for a minimum dollar amount of \$100,000 and a maximum amount of \$3,000,000. At that time, the contractor selected already had two other SABER contracts as well as significant experience with other construction projects.

In selecting this SABER contractor, traditional source selection procedures were not used. The previous SABER contractor, a large firm, was not renewed for a second option term leaving the Government with little time to conduct a SABER source selection. Under the circumstances, the contracting officer opted to award a one-year SABER contract through the SBA. This approach allowed the Government the necessary time to conduct a normal source selection. Unfortunately, this would not happen.

In early April 2000, the contractor notified the contracting officer at Base D that the contractor was having financial problems. The contractor claimed it had over

\$1,300,000 in accounts receivable from its customers. The contractor was also having difficulty with its SABER contract at Base E.

On 20 July 2000, the SABER contractor's president notified the contracting officer at Base D that the company filed for bankruptcy and all work would be halted. At this time, the contract at Base D had expired; however, there were 17 open delivery orders that needed to be completed. Eventually, the contracting officer terminated for default each delivery order.

Pricing Methodology. Base D used the R.S. Means book for pricing delivery orders. Previous SABER contracts on Base D used locally developed unit price books. Contracting and civil engineer personnel agreed to change to the R.S. Means book in lieu of attempting to update the locally developed unit price book. The contractor was familiar with the R.S. Means pricing book since it used R.S. Means on its other SABER contracts.

The contract's coefficient for standard work hours was 1.169. Prior to award, Base Ds MAJCOM provided pricing assistance to the source selection team and verified that the coefficient proposed would cover the contractor's expenses.

There does not appear to be any Government action in this area that negatively impacted the contractor's ability to perform satisfactorily on the contract.

Liquidated Damages. The liquidated damages clause was included on each delivery order. The amount of liquidated damages varied dependent on mission impact. The contracting officer stated that liquidated damages were never assessed against the contractor on this contract.

Since liquidated damages were not assessed on the contract, the contractor's ability to perform satisfactorily could not have been negatively impacted.

Project Estimating Fees. The SABER contract did not contain a project estimating fee line item. The contractor voluntarily provided end of fiscal year estimates under a hold harmless agreement. The agreement stated that the contractor acknowledged the fact that the project requested under the Government's request for proposal may not be executed and the costs for preparing the estimate were not reimbursable. The contracting officer stated that all of the projects under this agreement were executed; therefore, the contractor did not suffer a loss of revenue from preparing estimates that were not executed.

There does not appear to be any evidence to support that the Government's actions in this area negatively impacted the contractor's ability to satisfactorily perform.

Balanced Work. A total of 22 delivery orders were awarded on the contract. Of the 22, 13 orders were awarded in the 4th quarter of the fiscal year 1999. Government personnel had some concern regarding the contractor's ability to handle the workload.

SABER civil engineering and contracting personnel identified customers' requirements and worked with the contractor to establish a balanced schedule. However, the contracting officer stated the fact that the contractor could not keep up with the work and suggested that the Government may have overextended the contractor during this time period.

The civil engineering SABER chief disagreed and suggested that the contractor grew too fast too soon. At the time, the contractor had four other major contracts including two SABER contracts with other bases, a local school district contract, and a

contract with the Army Corps of Engineers. The CE SABER chief inferred that the contractor's management could not handle the rapid growth the company experienced in a brief amount of time.

Given this information, there existed some possibility that the Government's actions may have negatively affected the contractor's ability to perform satisfactorily. The Government's actions do not appear to be the result of a single installation's actions, but possibly a cumulative effect from the surge experienced by each contract during the fiscal end of year surge. However, field visits were also completed at the two installations where the contractor had SABER contracts, Base E and Base G.

Due to a protest following the award at Base E, actual performance on the SABER contract did not begin until the first quarter, fiscal year 2000. In addition, performance on the SABER contract at Base G was concluding at this time. There was no data gathered from the school district or the Army Corps of Engineers. However, any cumulative effect by the Government that negatively impacted the contractor's ability to satisfactorily perform that is based solely on the number of contracts cannot be established.

In addition, the contractor was not required to accept all work submitted as SABER projects. The contracting officer noted that the contractor did not refuse any work submitted under the SABER contract.

Therefore, there is no evidence to support that the Government's action negatively impacted the contractor's ability to satisfactorily perform on the contract.

Inappropriate Use. The contracting officer stated there were no attempts of inappropriate use of the SABER contract. Therefore, there was no potential negative impact on the contractor's ability to perform.

Other Areas. The contracting officer noted there was no competition with other DoD agencies regarding potential SABER work.

Base E Analysis

Background Information. The SABER contract at Base E was awarded for a maximum of five years, base period with four options, with a set minimum dollar amount of \$50,000 per period of performance and a maximum dollar amount of \$35,000,000 for the life of the contract.

The award of this contract was based on the reopening of discussions from the previous SABER solicitation. The original SABER solicitation included an 8(a) small business set-aside and was awarded in January 1998 to a local small business. There was a post-award protest that contained two allegations. The first allegation was that the Government was not clear on certain technical issues within its solicitation. The second allegation was that the small business that was awarded the contract had a partnering arrangement with a large construction firm and therefore was not actually a small business. Following legal review, the Government's lawyers advised the contracting officer to reopen discussions.

A total of seven contractors placed a bid for the SABER contract. The firm chosen was the same contractor that had the SABER contracts at Base D and Base G. The contract was awarded in August 1999. Once again, there was a post-award protest

and the performance of the contract was put on hold until December 1999 when the court lifted the stay.

There were a limited amount of delivery orders issued on this contract. Under contract requirements, the Government SABER personnel requested a technical proposal prior to requesting a cost proposal. Both contracting and civil engineering personnel noted that the contractor had difficulty providing acceptable technical proposals. This resulted in numerous rewrites and delayed the award of delivery orders. The CE SABER chief noted that the personnel originally identified to work on the contract in the contractor's proposal was not the same personnel once the contract was in place. The CE SABER chief also noted that the personnel working on the contract were less qualified and experienced than the personnel originally proposed. Therefore, the Government SABER personnel spent extensive time with the contractor in an attempt to improve the quality of the technical proposals. Since few technical proposals were accepted prior to the company's break-up, there were only a few delivery orders actually awarded on the SABER contract.

The contracting officer was informed in April 2000 of the financial difficulties the contractor was facing. On 20 July 2000, the contractor's president notified the contracting officer at Base E that the company filed for bankruptcy and all work would be halted. The contracting officer terminated the contract for convenience on 31 July 2000.

Pricing Methodology. Base E used the R.S. Means book for pricing delivery orders. The contractor was familiar with the R.S. Means pricing book since it used R.S.

Means on its other SABER contracts. The contract's coefficient for work hours ranged from 1.138 to 1.188.

There does not appear to be any Government actions in this area that negatively impacted the contractor's ability to perform satisfactorily on the contract.

Liquidated Damages. Liquidated damages were not assessed against any delivery orders on the contract.

Since liquidated damages were not assessed on the contract, the contractor's ability to perform satisfactorily could not have been negatively impacted.

Project Estimating Fees. The SABER contract contained a Project Estimating & Design (PE&D) fee line item. The PE&D fee was based on the magnitude of the project. The contractor received \$500 for projects estimated under \$25,000; \$1,000 for projects estimated between \$25,000 to \$200,000; and \$2,000 for projects estimated over \$200,000.

There does not appear to be any evidence to support that the Government's actions in this area negatively impacted the contractor's ability to satisfactorily perform.

Balanced Work. The actual performance of the SABER contract lasted seven months with few delivery orders actually executed on the contract. There were no delivery orders awarded during the 4th quarter.

There does not appear to be any Government actions in this area that negatively impacted the contractor's ability to satisfactorily perform on the contract.

Inappropriate Use. The contracting personnel did not note any inappropriate actions as it related to this SABER contract.

There does not appear to be any evidence to support that the Government's actions in this area negatively impacted the contractor's ability to satisfactorily perform.

Other Areas. The contracting personnel stated that there have not been any competition-related concerns for the SABER program at Base E.

The contracting and civil engineering personnel identified that the contractor had problems with the minimal design issue. The CE SABER chief stated that the quality of the technical proposals were unacceptable. He noted that the design provided to the Government as part of the contractor's original bid was top-notch. However, the contractor had difficulty meeting acceptable standards once the contract was in place. Through numerous teaming meetings, the SABER personnel attempted to resolve the situation with the contractor. These problems may have been a result of personnel being reassigned once the award was protested and halted for four months. These individuals were not the same personnel assigned to the contract once the court stay was lifted in December 1999.

Base F Analysis

Background Information. The SABER contract at Base F was established for a maximum of three years, the base period with two options, with a set minimum dollar amount of \$20,000 and a maximum dollar amount of \$3,000,000 for the life of the contract. There were no annual minimum or maximum dollar amounts established for the contract.

Due to the fact that Base F is located in a rural area that is approximately 155 miles from the closest city, the contract was awarded as an 8(a) small business set-aside in a sole source environment. The contract was awarded to the incumbent contractor.

At the time of the field visit, the contract was at the end of its first year. The contract had nine open delivery orders valued over \$566,000. Another ten delivery orders were in the works as the SABER personnel were preparing for end of fiscal year fallout.

The contract was originally established with the contractor as the prime contractor. However, numerous quality control problems resulted in a modification changing the contract to a tripartite arrangement where the SBA is the prime contractor and the SABER contractor is the subcontractor.

The Government SABER personnel have weekly partnering meetings with the SBA and the SABER contractor in an effort to improve the quality of contract performance.

Pricing Methodology. The R.S. Means book is used for pricing delivery orders at Base F. The contractor has not indicated dissatisfaction with the use of the R.S. Means book. The contract's coefficient was negotiated prior to contract award. The contractor originally proposed a coefficient of 1.435. The final negotiated coefficient was 1.33.

There does not appear to be any Government action in this area that negatively impacted the contractor's ability to perform satisfactorily on the contract.

Liquidated Damages. The liquidated damages clause was applied to each of the nine delivery orders. Liquidated damages were only assessed against one delivery order for a total of three days.

There does not appear to be any negative impact to the contractor's ability to satisfactorily perform on the contract when liquidated damages were assessed.

Project Estimating Fees. The contract does not have a project estimating fee line item. The contract administrator noted that the contractor voluntarily submitted proposals for potential work with the understanding that the costs for preparing those proposals were not reimbursable if the delivery orders were not awarded. These proposals were prepared as part of the end of the fiscal year process. The contract administrator noted that a majority of these projects were awarded during the previous fiscal year closeout.

There does not appear to be any evidence to support that the Government's actions in this area negatively impacted the contractor's ability to satisfactorily perform.

Balanced Work. The contract had approximately ten delivery orders awaiting end of fiscal year funds.

As the contractor was the incumbent, a similar situation occurred on the previous SABER contract. The contractor had voiced concern over the traditional 4th quarter surge. As previously identified, Base F was in a remote locale. Due to the limited labor force in the area, the contractor has limited ability to expand and contract the number of personnel available for work at any given time in an effort to meet the demands of the Government.

In an attempt to alleviate the situation, the Government SABER personnel and the SABER contractor cover these issues during the weekly partnering meetings. The objective is to ensure the contractor is not overburdened with 4th quarter surges that result in late performance completions and/or poor quality work and design.

There does not appear to be any Government-controlled actions that negatively impacted the contractor's ability to perform in a satisfactory manner.

Inappropriate Use. The contracting and civil engineering personnel noted there were no incidents of inappropriate use on the SABER contract

There does not appear to be any evidence to support that the Government's actions in this area negatively impacted the contractor's ability to satisfactorily perform.

Other Areas. The contracting and civil engineering personnel noted that the contractor had a quality control problem. Specific areas of concern included the contractor's proposals for delivery orders. Civil engineering personnel believed that the Government personnel were spending excessive amounts of time reviewing and revising poorly written contractor proposals.

In addition, the contracting personnel identified that the contractor has stated that the Defense Finance and Accounting Service was very slow in making payments. The contractor stated at that time that the slow payments were not impacting the company's ability to perform.

Base G Analysis

Background Information. The SABER contract at Base G was awarded for a maximum of five years, base period with four option periods, with a set minimum dollar amount of \$100,000 and a maximum dollar amount of \$2,000,000 per period of performance.

Nine contractors bid for the contract. The award was an 8(a) small business set-aside. The contract was awarded to a small firm that had extensive experience with DoD construction jobs within the local area.

The contract had been awarded shortly before the field visit. There were 6 delivery orders awarded valued over \$400,000. Another 18 projects were in various stages of the award process. The contracting officer stated that the total would be close to \$1,000,000 for all of the actions.

The previous SABER contractor was the same contractor who was awarded SABER contracts at Bases D and E. Base G was fortunate that their SABER contract expired the month that the contractor filed for bankruptcy. No termination actions had to be taken. However, the Government SABER personnel did note that they had numerous problems with the previous SABER contractor.

Pricing Methodology. The current SABER contract used the R.S. Means book for pricing delivery orders. Government and contractor personnel did not indicate dissatisfaction with the use of the R.S. Means book. The coefficient on the SABER contract was 1.318.

There does not appear to be any Government action in this area that negatively impacted the contractor's ability to perform satisfactorily on the contract.

Liquidated Damages. The liquidated damages clause was included on each delivery order. The amount of liquidated damages varied dependent on mission impact. The contracting officer stated that liquidated damages were never assessed against the contractor on this contract.

Since liquidated damages were not assessed on the contract, the contractor's ability to perform satisfactorily could not have been negatively impacted.

Project Estimating Fees. The contract does not have a project estimating fee line item. The Government SABER contracting personnel stated that the contractor voluntarily submitted proposals for potential work with the understanding that the costs for preparing those proposals were not reimbursable if the delivery orders were not awarded. These proposals were prepared as part of the end of the fiscal year process. The contracting personnel further noted that the contractor did not voice a concern over this situation.

There does not appear to be any Government-controlled actions that negatively impacted the contractor's ability to perform in a satisfactory manner.

Balanced Work. Having been recently awarded, the SABER contract was in its initial period. Therefore, the contractor had yet to experience a 4th quarter surge typical to SABER contracts. The contract administrator did identify that there were 18 projects in various stages of preparation for award under SABER. A majority of these awards would be during September.

Given the fact that the contractor had not yet experienced a surge in activity, there were no Government-controlled actions that hindered the contractor's ability to satisfactorily perform.

Inappropriate Use. The contracting officer stated there were no incidents of inappropriate use of the SABER contract. Therefore, there was no potential negative impact on the contractor's ability to perform.

Other Areas. One area identified by the Government SABER personnel was the lack of discussion within the SABER community. The contracting personnel identified the use of SABER workshops in the past. The purpose of these workshops was for the SABER community to gather together to share information and experiences. The Government SABER personnel believed it would be beneficial to the whole SABER community to implement a program to allow a cross-flow of information between the various SABER offices.

Cross-case Analysis

This section covers the cross-case analysis of the research. Table 4 provides an overview of the results of the cross-case analysis for each of the five areas covered in the case study analysis.

Table 4. Cross-case Analysis of Five Subsidiary Research Questions

Did Government actions negatively impact contractor's ability to satisfactorily perform?					
Base	<i>Pricing methodology</i>	<i>Liquidated damages</i>	<i>Project estimating fees</i>	<i>Balanced word</i>	<i>Inappropriate use</i>
A	no	no	no	no	no
B	no	no	no	yes	no
C	possible	no	no	no	no
D	no	no	no	no	no
E	no	no	no	no	no
F	no	no	no	no	no
G	no	no	no	no	no

Cross-case Analysis of Pricing Methodology

Figure 2 identifies all of the data related to this area that was collected during the seven case studies. Each base used the RS Means price book on their SABER contract.

Of the three bases that contained negative coefficients, two of them resulted in a failed situation. The same contractor failed at both installations. However, the failure was a result of an internal criminal action by a corporate executive that resulted in the financial instability that led to the failure.

The situation identified at Base C was not found throughout the other case studies. There were no other cases where the contract's coefficients were increased by modification during the performance period.

Therefore, there was no evidence found that might imply that the Government actions in this area negatively impacted the contractor's ability to perform satisfactorily.

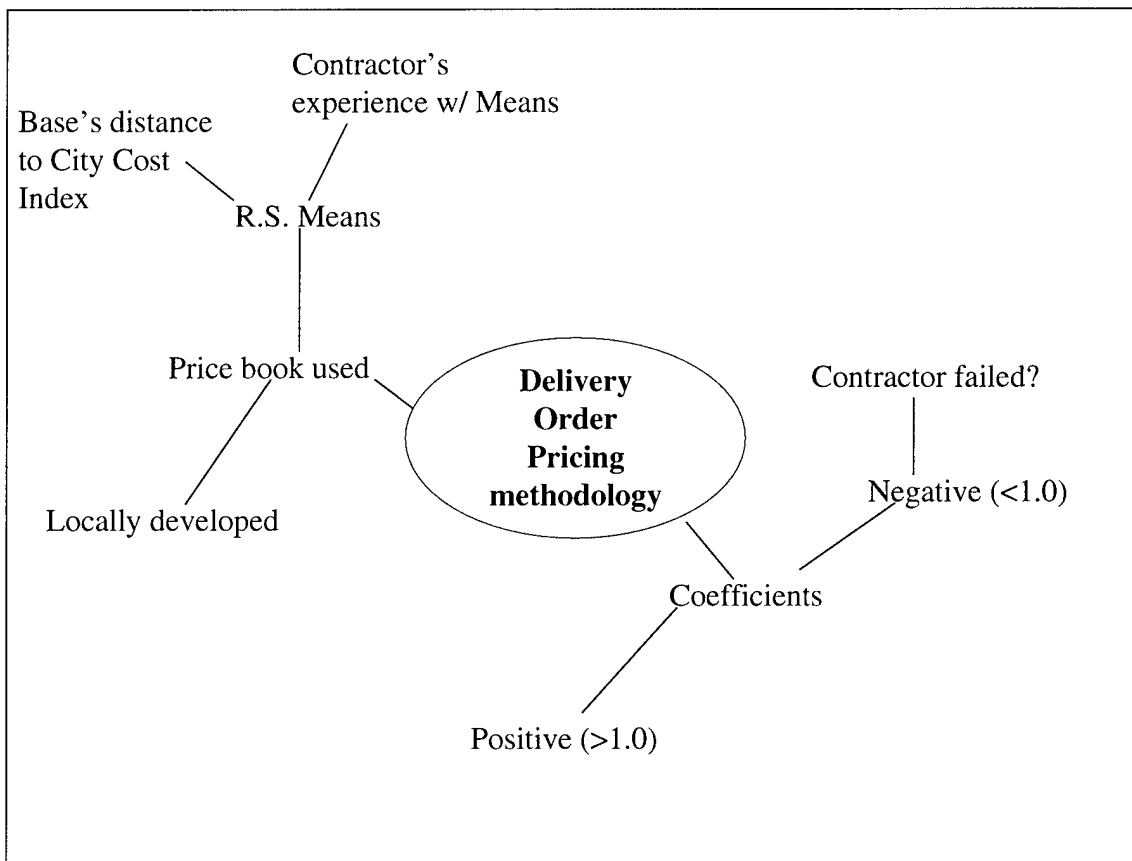


Figure 2. Cross-case Analysis of Pricing Methodology

Cross-case Analysis of Liquidated Damages

Figure 3 identifies all of the data related to this area that was collected during the seven case studies. Each of the contracts contained the liquidated damages clause. The clause was included on all delivery orders in six of the seven cases. Base B included the clause on all orders above \$25,000. For orders below \$25,000, the determination to include the clause was made on a case-by-case basis. There was no indication that a domino effect resulted from the Government assessing liquidated damages.

There was no evidence found throughout the case studies that might imply that the Government actions in this area negatively impacted the contractor's ability to perform satisfactorily.

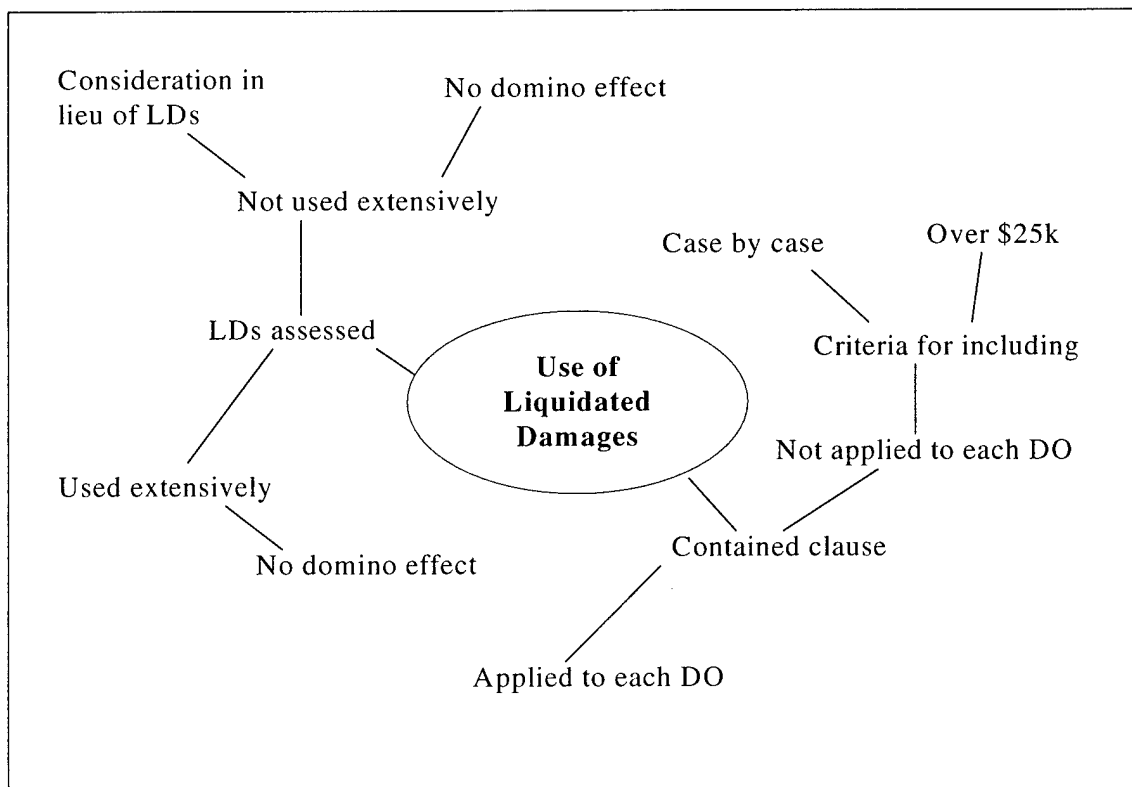


Figure 3. Cross-case Analysis of Use of Liquidated Damages

Cross-case Analysis of Project Estimating Fees

Figure 4 identifies all of the data related to this area that was collected during the seven case studies. Five of the seven bases contained project estimating line items within the contract. Of the five, four bases actively used the line item in preparation for end of fiscal year fallout.

Four of the seven cases also involved situations where the contractor provided free estimates. In each case, the contractor had knowledge that the costs for preparing the proposals were not reimbursable if the deliver order was not awarded. There was no indication that any of the contractors voiced concern over this practice.

There was no evidence found that might imply that the Government actions in this area negatively impacted the contractor's ability to perform satisfactorily.

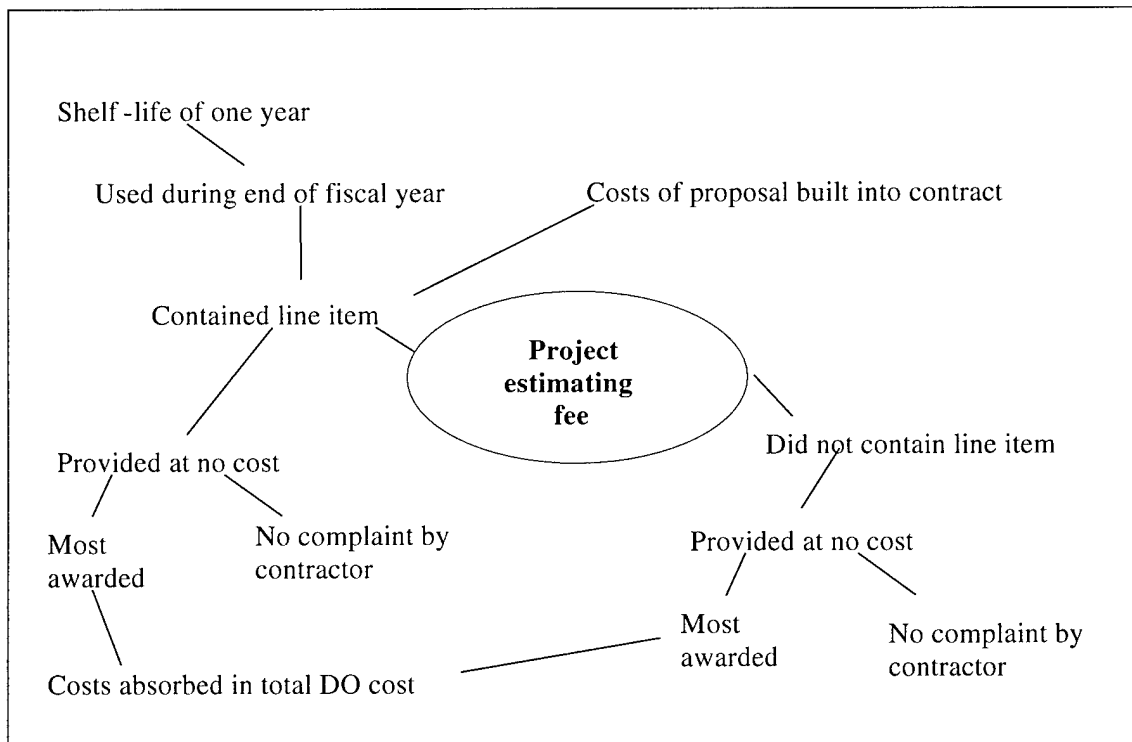


Figure 4. Cross-case Analysis of Project Estimating Fees

Cross-case Analysis of Balanced Work

Figure 5 identifies all of the data related to this area that was collected during the seven case studies.

Five of the bases identified that the contractor experienced a surge in work during the period of performance. Three of the cases involved concern by the Government and contractor over these surges. Two of the bases, D and F, used a teaming arrangement to spread periods of performance on the open delivery orders in an effort to alleviate the situation resulting from the surge. The situation at Base B was not a result of 4th quarter surge. Rather, the contractor was inundated with a large number of delivery orders. This surge was to prepare for a major Air Force exercise. Furthermore, the contractor was directly given priority requirements that were not known by the contracting officer. While this situation was partially caused by the Government, there is no indication that this type of problem existed at the other bases researched.

There was no evidence found that might imply that the Government actions in this area negatively impacted the contractor's ability to perform satisfactorily.

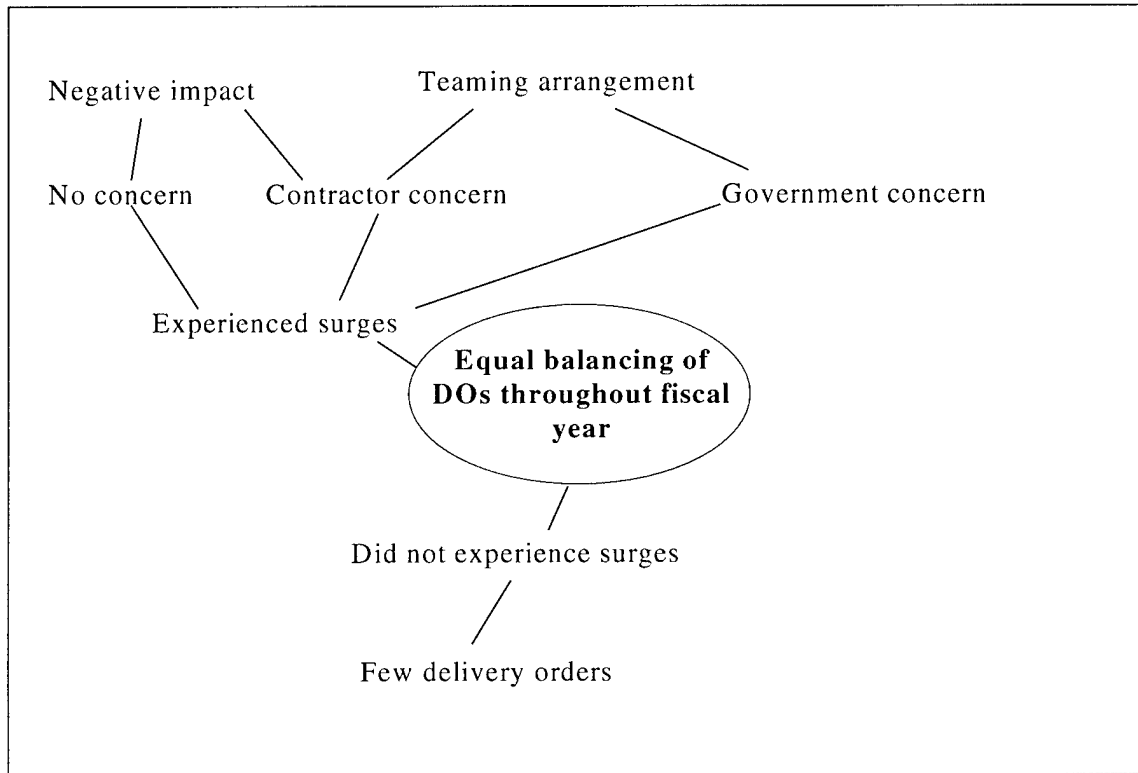


Figure 5. Cross-case Analysis of Equal Balancing of DOs Throughout Fiscal Year

Cross-case Analysis of Inappropriate Use

Figure 6 identifies the data related to this area that was collected during the seven case studies.

In only one case study, Base B, was there any indication that the Government attempted to use SABER in an inappropriate manner. In this situation, the contracting officer either returned the requirement to the customer for further action or forwarded the requirement to the appropriate contracting element for procurement actions.

There was no evidence found throughout the case studies that might imply that the Government actions in this area negatively impacted the contractor's ability to perform satisfactorily.

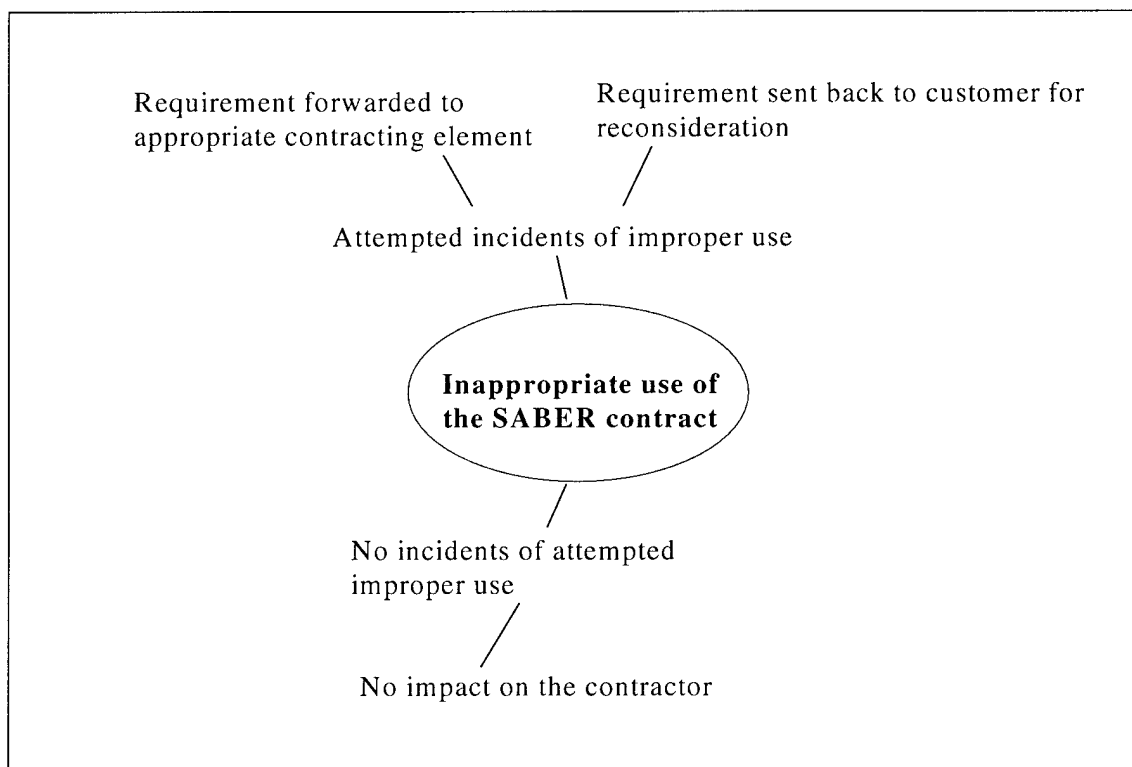


Figure 6. Cross-case Analysis of Inappropriate Use of the SABER Contract

V. Results and Conclusions

Chapter V provides the results and conclusions of this research effort. In addition, future research efforts are addressed.

Results

The objective of this research effort was to identify and analyze any conditions that may have been created by the current SABER acquisition process that led to SABER contractor failures. The specific research question addressed by this research was:

Are there any Government-controlled factors of the SABER acquisition process that are leading to contractor failure during the contract's period of performance?

In an effort to scope the research to a manageable level, five specific areas were identified as potential problem areas. A subsidiary research question was created for each area. These questions were:

- (1) What was the Government's method of pricing the SABER contract? Did this pricing method negatively impact the contractor's ability to satisfactorily perform?
- (2) What role, if applicable, did liquidated damages have during the performance of the SABER contract? Did the assessment of liquidated damages, when applied, negatively impact the contractor's ability to satisfactorily perform on existing and future SABER DOs?
- (3) Does the Government reimburse the contractor for the cost of preparing a bid for a project that is eventually not executed? If not, did this practice negatively impact the contractor's ability to satisfactorily perform on the contract?
- (4) How does the Government balance the issuance of SABER delivery orders over the course of the contract period? Were there any surges, particularly in the fiscal year 4th quarter, which negatively impacted the SABER contractor's ability to satisfactorily perform?
- (5) Was there any inappropriate use of the SABER contract? If so, did this negatively impact the contractor's ability to satisfactorily perform?

There were no significant findings in any of the five areas that would indicate the Government's actions in those areas negatively impacted the SABER contractor's ability to perform satisfactorily on the contract.

Conclusions

The research effort did not find conclusive evidence to support that the five targeted Government-controlled factors of the SABER acquisition process led to contractor failure during the contract's period of performance.

Follow-on Research

The research effort identified two areas for potential follow-on research. The first area relates to the pricing of SABER delivery orders. The standard unit price book used is the R.S. Means price book. R.S. Means updates their price book annually to reflect the changing environment related to costs.

Of the seven bases researched, three bases awarded their contract to contractors who bid negative coefficients. Each of these contracts failed.

In addition, the new SABER contractor at Base C has noted the price discrepancies between the R.S. Means price book and the local area prices. That contractor is working with a positive coefficient, but still claims they are working a majority of the time at a loss.

A potential follow-on research effort could look into the accuracy of the R.S. Means price book compared to local costs. Specific attention could focus on the rural areas where some Air Force bases are found.

A second follow-on effort could focus on the role small businesses have on SABER contracts. Four of the seven bases researched involved an 8(a) set-aside. Of the four, two failed during contract execution. Base E was in the process of re-procuring its SABER contract without an 8(a) set-aside. However, this requires approval from various Governmental agencies, including the Small Business Administration.

Many individuals expressed, during the interview process, their opinion that SABER was not appropriate for a small business at their base. A follow-on effort could focus on comparing the size of the Air Force base related to the size of the contractor, large or small business. The research could then identify whether the SABER program was successful at that base and determine whether there is a possible correlation between the three areas.

Appendix A: First Contact with Primary Point of Contact

Introduction

Captain Brian Heaps,
Primary duty Air Force Specialty Code is 64PX, Contracting Officer
Graduate student
Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio

Preliminary contact

SAF/AQCO is the co-sponsor of my thesis. The point of contact for SAF/AQCO is Major Ed LaBenne. Major LaBenne made initial contact with each of you to coordinate my site visit and gather data relating to my thesis effort.

About the research

Over the past 12 months, 15 SABER contracts have resulted in contract failures. For the purpose of this research, contractor failure is defined by two outcomes. First, a SABER contractor defaults on its contract during the performance period. Typically, the contractor either goes out of business or decides to no longer perform work on the existing contract. This results in the Government exercising its right to terminate the contractor for default. The second failure outcome results from poor performance by the contractor during the performance period. The poor performance leads to a Government decision to not exercise an existing option on the SABER contract.

Research Objective

To identify and analyze any Government-controlled actions in the current acquisition process that negatively impacts and contributes to the failure of contractors on SABER contracts.

Five areas of the current SABER acquisition process have been identified as potential problem areas and will be the focus of this research effort. They include:

- (1) The Government's method of pricing SABER contracts (UPB, MEANS...).
- (2) The Government's use of the liquidated damages clause in the SABER contract.
- (3) The Government's role in reimbursing the contractor for the cost of preparing a bid for a project that eventually is not executed.
- (4) The Government's role in balancing the issuance of SABER delivery orders over the course of the contract period (4th quarter surge).
- (5) The Government's inappropriate use of the SABER contract.

As a stipulation of allowing me to do so, I will send a complete write-up of my visit to you for your review prior to publication.

What I'll Require

- (1) The actual interview questionnaire will be included in Appendix B, which will be electronically mailed to your organization.
- (2) A copy of the acquisition plan, contract, and any related materials if the contract was terminated or a contract option was not executed.
- (3) Any other related materials pertinent to the site visit.

I expect to spend one day interviewing the points of contact followed by me reading documents and reviewing my notes over the following four to six weeks. A number of questions or areas of clarification may arise which will result in the need for follow-up questions. This follow-up portion will be through the telephone or electronic mail.

Appendix B: Field Visit and Interview Guide

Purpose of the Research

To identify and analyze any Government-controlled actions in the current acquisition process that negatively impacts and contributes to the failure of contractors on SABER contracts.

Interview Questions

Background information (Pre-award):

Were there any protests during this period from SABER contract bidders?

- (1) Were the team members originally selected for the Government source selection on the team throughout the entire source selection process?
- (2) What functional areas were included on the SABER source selection team?
- (3) What was the team members SABER experience?
- (4) Was the team co-located in one facility during the process or any portions of the process?
- (5) Were the team members dedicated solely to the source selection process? If not, approximately how much of their time was spent on the source selection (percentage-wise)?
- (6) Was an acquisition plan developed for the procurement?
- (7) Does the acquisition plan contain specific data relating to the overall Government acquisition plan, its criteria for selection, and an acquisition milestone chart?
- (8) Was the milestone chart met? What was the actual execution schedule?
- (9) Was a pre-proposal conference conducted prior to dissemination of the Request for Proposal (RFP)? Who attended (contractors)?
- (10) Were there any modifications to the RFP? What were they for?
- (11) What was the minimum and maximum dollar amount listed on the RFP?

- (12) How many bidders submitted proposals for the SABER contract?
- (13) Was there an 8(a) set-aside for the SABER contract? If so, were any 8(a) contractors selected?
- (14) How many contractors were awarded the SABER contract? What companies were awarded the SABER contract for the installation?
- (15) If applicable, did the incumbent contractor win any portion of the award?
- (16) What was the awarded amount on the SABER contract?
- (17) Was the SABER contract awarded without discussions?
- (18) Were there any lessons learned identified during these phases of the acquisition? What were they?

Background Information (post-award):

- (1) How many years is the current SABER contract set up for?
- (2) What period of performance is the SABER contract in?
- (3) Were there any protests following contract award?

Have there been any modifications to the SABER contract? What were they for?

- (4) Are SABER Contracting and SABER CE personnel co-located?
- (5) Are there any lessons learned identified during these phases?
- (6) If the contractor has failed or is in a situation leading to failure, what was/is the justification for the termination or the Government's decision not to exercise the option on the contract?
- (7) With the elimination of the detailed Government Cost Estimate, how does CE perform a technical evaluation and justify the methodology and costs proposed by the contractor if it differs from the preliminary estimate submitted by the SABER CE Project Manager?
- (8) Are there any other issues not previously covered that could shed light on the success/failure of the installation's SABER program? Was anything identified after contract award that should have been included in the source selection process?

Specific Information

- (1) How many Delivery Orders (DOs) were issued over the past 12 months? What was the total amount awarded during this timeframe?
- (2) How many DOs were issued over the final quarter of FY00? What was the total amount awarded during this timeframe? What work were they for?
- (3) What is used to cost out SABER DOs (Unit Price Book, MEANS database...)?
- (4) With the elimination of the detailed Government Cost Estimate, how does the Contracting Officer determine fair and reasonable on DOs?
- (5) Does the SABER contract have a bid and proposal cost (where Government pays the contractor for the cost of proposals if the work is not performed)? If so, has this line item been used and when?
- (6) Has the contractor accepted work above their maximum required amount as identified in the SABER contract?
- (7) Have any liquidated damages been assessed on any delivery orders? What type of impact was experienced by the contractor (domino effect...)?
- (8) Has there been any bonding issues identified over the performance of the contract?

Method of Data Collection

A majority of the data will be collected during the site visit and interview process. I expect to spend one full day for each site visit. The interview questions provided above represent the minimum information relating to my research. Additional information will be gathered on a case-by-case basis.

I will review documents relating to the above questions and request a copy of each document for follow-up review.

For the validity and reliability of this research, I must address all of the above questions. However, discussions will be allowed to take their natural course according to the availability of respondents, information, and documentation.

Follow-up

It will likely be necessary for me to conduct follow-up calls to clarify and verify information during the data analysis process. It is my intention to use the telephone and electronic mail to conduct my follow-up efforts.

To ensure accuracy on the part of the researcher, once the case study is written, it will be sent to the respondents for review prior to publication.

Bibliography

- Air Force Logistics Management Center. Simplified Acquisition of Base Engineering Requirements (SABER) Guide. Gunter Air Force Base AL, 1992.
- Buzan, Tony and Barry. The Mind Map Book: How to Use Radiant Thinking to Maximize Your Brains Untapped Potential. New York NY: Penguin Group, 1994.
- Department of Defense. Federal Acquisition Regulation. Washington DC: Government Printing Office, 2001.
- Department of the Air Force. Air Force Federal Acquisition Regulation Supplement. Washington DC: Government Printing Office, 2001.
- Novak, Joseph. Learning, Creating, and Using Knowledge: Concept Maps as Facilitative Tools in Schools and Corporations. Mahwah NJ: Lawrence Erlbaum Associates, 1998.
- Strauss, Anselm and Juliet Corbin. Basics of Qualitative Research: Grounded Theory Procedures and Techniques. Newbury Park CA: Sage Publications, 1990.
- Yin, Robert K. Case Study Research: Design and Methods (Revised Edition). Newbury Park CA: Sage Publications, 1994.

Vita

Captain Brian J. Heaps was born on [REDACTED] in New Bedford, Massachusetts. He graduated from Middleboro High School in Middleboro, Massachusetts in 1986. In 1992, he graduated from Western New England College with a Bachelor of Business Administration Degree in Management. He enlisted into the Air Force in 1989 and received his commission through Officer Training School at Maxwell Air Force Base, Montgomery, Alabama in 1994.

His first assignment was to Hanscom Air Force Base, Massachusetts where he served as an information manager from 1989 to 1994. Following commission, he was assigned to the 729th Air Control Squadron, Hill Air Force Base, Utah as the squadron section commander from 1994 – 1996. After completing the basic contracting officer course, he was sent to Kaiserslautern, Germany where he was assigned as a contracting officer for the United States Air Forces in Europe Contracting Squadron from 1997 – 1999. During his time there, he earned his Acquisition Professional Development Program Contracting Levels I and II. In September 1999, he entered the Graduate Acquisition Management Program, Graduate School of Engineering and Management, Air Force Institute of Technology. Upon graduation, he will be assigned to the Electronic Systems Center, Hanscom Air Force Base, Massachusetts.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 074-0188	
The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 20-03-2001		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) Sep 1999 - Mar 2001	
4. TITLE AND SUBTITLE AN ANALYSIS OF THE ACQUISITION PROCESS FOR SIMPLIFIED ACQUISITION OF BASE ENGINEERING REQUIREMENTS (SABER) CONTRACTS AND ITS POTENTIAL IMPACT ON CONTRACTOR PERFORMANCE				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Heaps, Brian J., Captain, USAF				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 P Street, Building 640 WPAFB OH 45433-7765				8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GAQ/ENV/01M-08	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) AFIT/CEM Attn: Captain Frank Simas 2950 P. Street WPAFB OH 45433-7765 DSN: 785-5654 x 3560				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The Simplified Acquisition of Base Engineering Requirements (SABER) contract's main purpose is to expedite contract award of civil engineer requirements through the issuance of individual delivery orders. The contract contains a collection of detailed task specifications that include most types of real property maintenance, repair, and construction work. The Assistant Secretary of the Air Force for Acquisition's Operational Contracting Division (SAF/AQCO) identified a number of failed SABER contracts. The problem statement designed for this research effort was: There are a large number of SABER contractors that are failing during the performance period on their SABER contracts. SAF/AQCO is trying to identify whether any Government actions or procedures are negatively impacting the contractor's ability to perform satisfactorily on the SABER contract. This research effort focused on five areas within the SABER process that is controlled by the Government. A qualitative approach using case study analysis was used. Seven SABER contracts were selected as case studies. The research did not identify any Air Force-wide procedures in the five areas that negatively impacted the contractor's ability to perform satisfactorily on the contract. The research identified two areas of potential follow-on research.					
15. SUBJECT TERMS SABER, Simplified Acquisition of Base Engineering Contracts, Acquisition, Contracts, Government Procurement					
16. SECURITY CLASSIFICATION OF:		17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPOR T	b. ABSTR ACT			David Petrillo, AFIT/ENV	
U	U	UU	100	19b. TELEPHONE NUMBER (Include area code) (937) 255-3636, ext 4799	
c. THIS PAGE					
				Standard Form 298 (Rev. 8-98) Prescribed by ANSI Std. Z39-18	
				Form Approved OMB No. 074-0188	