

An Audit on

Administration of Contracts For Information System Purchases



Office of the State Auditor
Lawrence F. Alwin, CPA

March 1995

Report No. 95-090



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Administration of information system contracts at the agencies reviewed provided reasonable assurance that the contractor was objectively selected and subsequently held accountable for delivering goods and services which met the agency's requirements.

Significant cost and scope escalations occurred over the life of all of the application development contracts reviewed. Escalations occur because considerable flexibility is built into the contracts allowing changes after the system design is complete and new legislative mandates are identified.

The agencies primarily relied on the contractors to estimate the costs and work hours associated with each of the changes. In order to ensure that contract amendments are necessary, cost-effective, and in the best interest of the State, agencies should consider using an outside consultant with expertise in information system development to independently analyze contract amendments when this expertise is not available within the agency.

The agencies reviewed (Office of the Attorney General, Employees Retirement System, Texas Department of Human Services, Texas Employment Commission, and the Texas Department of Protective and Regulatory Services) spent over \$57 million for information system related purchases during fiscal year 1993.

Sincerely,

A handwritten signature in cursive script that reads "Lawrence F. Alwin".

Lawrence F. Alwin, CPA
State Auditor

LFA/rmn/enclosure

Key Points Of Report

An Audit On Administration Of Contracts For Information System Purchases

March 1995

Key Facts and Findings

- Overall, agency procedures provide reasonable assurance that the best contractor was objectively selected and held accountable for delivering information system goods and services in accordance with the terms of the contract. The agencies included in our review spent over \$57 million on information system related purchases during fiscal year 1993.
- Our review was limited to reviewing the selection and monitoring of contractors. Successful implementation of information system projects depends on a variety of factors in addition to effective contract administration. The risks to successful implementation of information system projects have been recently reported on by both the State Auditor's Office and the multi-agency Quality Assurance Team.
- The scope and cost of the initial contract for the development of automated systems often increased significantly over the life of the contract. Contract provisions explicitly allowed the scope and cost of the contract to be changed, contingent upon certain events such as the completion of the system detailed design.
- Contract amendments appeared reasonable and were made in accordance with requirements established in the initial contracts. Project management actively reviewed and approved all of the amendments and refused to increase costs for changes the agency project team felt were within the scope of the initial contract.
- Although agency management has the final approval over the acceptance of contract amendments, agencies primarily relied on the contractors to estimate the costs and work hours associated with each of the changes. In order to ensure that contract amendments are necessary, cost-effective, and in the best interest of the State, agencies should consider using an outside consultant with expertise in information system development to independently analyze contract amendments if the expertise is not available within the agency.

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This audit was conducted in accordance with Government Code Section 321.013 (a).

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Executive Summary

Administration of the information system contracts reviewed provided reasonable assurance that the contractor was objectively selected and held accountable for delivering goods and services which met the agency's requirements. Although contract management was sufficient to hold the contractor accountable, the contract structure allowed the contracts to be amended, contingent upon certain events. Therefore, the scope and cost of the contracts frequently escalated over the life of the project.

Agencies Included In This Report

- Office of the Attorney General
- Employees Retirement System
- Texas Department of Human Services
- Texas Employment Commission
- Texas Department of Protective and Regulatory Services

Contract administration includes both the process used to select the contractor as well as the process used to monitor performance and hold the contractor accountable for delivering the goods and services specified in the contract. Selection of the contractor is important to ensure that the State receives the best value and that the contract is in the best interest of the State. Effective monitoring of the contractor is essential to ensure that progress is made according to schedule and that the contractor delivers the goods and services in accordance with the terms of the contract.

Our review was limited to reviewing the selection and monitoring of contractors. However, successful implementation of information system projects depends on a variety of factors in addition to effective contract administration. Factors such as capability and expertise of agency staff assigned to the project and changes in state

and federal requirements can affect the timeliness of project implementation as well as the total cost of the project.

The agencies included in this review spent over \$57 million on information system related purchases during fiscal year 1993. Contractors are responsible for developing information systems which will assist agency management in fulfilling responsibilities such as:

- automating case management and thereby increasing productivity over the administration of foster care services provided to children
- providing Food Stamp and AFDC clients with the ability to electronically access their benefits
- providing consultation and monetary assistance to Texans who are unemployed

Procedures Used To Award Information System Contracts Provide Reasonable Assurance That Contractors Are Objectively Selected

Overall, procedures used to select contractors provide reasonable assurance that the best contractor was fairly selected. Potential contractors were evaluated and selected based on specific criteria such as their qualifications, experience, resources, proposed work plan, and proposed costs. In several cases, the contractor selected bid a higher price than the rest of the vendors, but was awarded the contract based on the technical superiority of the bid/proposal.

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The new catalogue purchasing procedure allows state agencies to procure goods and services related to information systems without requiring involvement of the General Services Commission or the use of competitive procurement procedures. The lack of oversight for purchases made under the new catalogue purchasing system may increase risks associated with procurement of information systems such as conflicts of interest or excessive dependence on vendors.

A Variety of Controls Are Used To Ensure That Contractor Performance Is Adequately Monitored

Overall, agencies used appropriate monitoring procedures to hold contractors accountable for fulfilling their contractual obligations.

Contracts contained provisions which required the contractor to deliver specific products, or segments of work, and obtain agency approval before payment could be made. Agency and project steering committees were actively involved in monitoring contractor performance and the review and approval of contract deliverables.

Scope and Cost of Initial Contracts Often Increase Significantly Over The Life Of The Contract

The scope and/or cost of the initial contract increased over the life of the project for each of the application contracts we reviewed. In some cases, the final cost was, or will be, several times the original contract amount. Contract provisions allowed agencies to change the initial contract contingent upon certain events such as the completion of the detailed design or changes in state or federal requirements. We found that it is often

difficult for the agency and the contractor to accurately project the resource requirements and associated costs of implementing an information system until the detailed design (the first deliverable) has been completed.

The contract amendments we reviewed appeared to be reasonable and made in accordance with procedures specified in the initial contracts. However, the significant increases in the costs of the contracts raise concerns over whether the contractor is held accountable for delivering services specified in the initial contract. On one hand, the ability to amend the contract provides the agency with flexibility to adjust to various changes which occur throughout the development of the system. On the other hand, the agency must have the expertise to ensure that contract amendments are cost-effective and include only items which are beyond the scope of work defined in the initial contract.

We found that agencies primarily relied on the contractors to estimate the costs and work hours associated with contract amendments. Although agency management has the final determination and approval over the acceptance of the amendments, without independent analysis, it may be difficult to ensure that the changes are cost beneficial and in the best interest of the State.

We recommend that agencies consider the following in order to improve project cost estimates and strengthen oversight of the contractor's performance:

- Consider using an outside consultant with expertise in information system development to independently analyze contract amendments if the expertise is not available within the agency.

Executive Summary

- Consider using cost models or other "state of the art" techniques to estimate information system requirements.
- Analyze the cost-benefit of continuing the contract with the initial contractor once the detailed design of the system is complete.

Summary of Management's Responses

Management responses from all five agencies are included in Appendix 7.

Objective, Scope, and Methodology

The objective of this audit was to examine the process for awarding and monitoring information system contracts (including software, hardware and implementation) at each of the five agencies reviewed. We

limited our audit to contracts which exceeded \$1 million each and were awarded from September 1, 1989, through July 31, 1994.

We focused on determining the following:

- Do procedures used to award information system contracts ensure that the contractor is selected fairly and objectively?
- Is the performance of the contractor adequately monitored during the term of the contract?
- Are contract provisions designed to ensure vendor performance is enforced?

We did not address the cost-effectiveness of the decision to develop an automated information system or the ability of the automated system to achieve the benefits anticipated by agency management.

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Section 1:

**Procedures Used To Award Information System Contracts Provide
Reasonable Assurance That Contractors Are Objectively Selected**

Overall, procedures used to select contractors provide reasonable assurance that the best contractor was fairly selected. Potential contractors were evaluated and selected based on specific criteria such as their qualifications, experience, resources, proposed work plan, and proposed costs. Contracts were awarded using competitive procurement procedures pursuant to either Article 601b of the State Purchasing and General Services Act or the Consulting Services Act. Both of these acts were amended during the time frame covered by this review. (See Appendix 5 for history of changes.)

The primary change in the regulations was the addition of the catalogue purchasing procedure to the State Purchasing and General Services Act. The catalogue purchasing procedure allows state agencies to procure goods and services related to information systems without requiring involvement of the General Services Commission or the use of competitive procurement procedures. The lack of oversight for purchases made under the new catalogue purchasing system may increase risks associated with procurement of information systems such as collusive arrangements, conflicts of interest, or excessive dependence on vendors.

We focused our review on contracts which exceeded \$1 million and were awarded between September 1, 1989, and July 31, 1994. Of the 47 contracts, ten were application development contracts (Figure 1), and 37 were for purchases of hardware, software, and computer services (Figure 2). Since the majority of the application development contracts were not yet completed, our assessment was limited to the controls that are in place and decisions that have been made to date.

Figure 1
Application Development Contracts Reviewed

AGENCY	CONTRACT	CONTRACTOR	CONTRACT AMOUNT
Department of Human Services	Electronic Benefits Transfer Services (EBT)	Transactive Corporation, formerly known as GTECH Administrative Services Corporation	\$2.00 and \$0.97 per food stamp and AFDC case per month, respectively*
	Accounts Receivable Tracking System (ARTS)	Applied Information Sciences, Inc.	\$4,378,704
Department of Protective and Regulatory Services	Child and Adult Protective System (CAPS)	Andersen Consulting	\$19,866,164 (Total for fiscal years 1994-1995, with possible additional payments of \$68,454,715 in fiscal years 1996-1999.**)
Texas Employment Commission	Strategic Tax Application Redesign (STAR) Project	Andersen Consulting	\$5,927,506
	Unemployment Insurance Benefits Payment Redesign Project (Benefits Redesign)	Andersen Consulting	\$12,976,000
Employees Retirement System	Integrated Employees Benefit System (IEBS)	Andersen Consulting	\$5,649,519 (Total amount of four contracts to same vendor)
Office of the Attorney General	Texas Child Support Enforcement System (TXCSES)	Andersen Consulting	\$11,624,099

* The first full year of statewide EBT implementation will be 1996. Based on DHS estimates, the total cost of the contract for 1996 would be \$29,647,149.

** Payments to the CAPS contractor during fiscal years 1996-1999 will be finalized in a change order which was under negotiation at the time of our review.

Figure 2

Contracts For Purchases of Hardware, Software, and Computer Services

AGENCY	CONTRACT	CONTRACTOR	CONTRACT AMOUNT
Department of Human Services	31 Contracts for Hardware, Software, and Computer Services	Various	\$148,559,630 (combined)
Texas Employment Commission	Direct Access Storage Devise (DASD) and Control Unit Upgrades	IBM	\$1,313,598
	New Mainframe Procurement	IBM	\$5,123,175
Office of the Attorney General	4 Contracts for Hardware, Software, and Computer Services	Various	\$6,752,041

Section 1-A:

Effective Planning For Contracting Reduces Risks

All of the agencies reviewed had procedures in place to ensure that information system needs were identified and ultimately included in the contract. Effective planning for contracting is as important as oversight of contractors' costs and performance. One of the most critical elements of the procurement process is to identify the agency's needs and the results required to meet the need. For information systems, this includes ensuring that proposed systems are aligned with long-range data processing plans and agency goals. Improperly defined requirements increase the risk of cost and schedule overruns and lead to systems that are inconsistent with the agency's overall needs and may not perform as expected.

While the specific planning processes and procedures used by the agencies varied, they all contained a combination of those listed below:

- **Formalized planning processes.** All of the agencies used formalized planning processes to identify information system requirements. Some agencies documented how the missions and goals of the agency are affected by the development of the system by including the information systems in the agency's strategic plan.

In several cases, agencies used contractors to conduct feasibility studies to provide an independent analysis of how well the existing systems were functioning and to address the future direction of each system.

- Approval by oversight entities. Several oversight entities were also involved in reviewing planning documents and the Request For Bid (RFB)/Request For Proposal (RFP). In order to receive federal funds, agencies must first receive federal approval of the system design and budget. The Department of Information Resources (DIR) and the General Services Commission also provided assistance to the agencies in reviewing the RFBs (prior to the implementation of the catalogue purchasing system and the statutory change in DIR's involvement) and approving project plans.
- Development of Detailed RFBs/RFPs. The RFBs/RFPs we reviewed were detailed and well written. The RFBs/RFPs set forth specific requirements, including:
 - detailed description and scope of the project
 - bidder specification information
 - contractual terms
 - bid evaluation criteria

A well-written RFB/RFP helps to ensure responsive proposals and results. It minimizes the amount of contract development and negotiations following selection of a contractor and allows for effective contract management and minimized misunderstandings.

Section 1-B:

Bid Evaluation Procedures Were Designed To Prevent Favoritism And Select The Best Overall Vendor

BEST CONTRACTOR

For purposes of this report, we defined "best contractor" as the contractor who submitted the most economical proposal capable of meeting the State's needs with the highest probability of success.

Bid evaluation procedures were very specific and provided reasonable assurance that the best contractor was fairly selected. We did note that for several of the application development contracts, the agencies only had two vendors from which to select.

For the majority of application development contracts, potential contractors were evaluated based on specific criteria contained in the RFBs/RFPs. Bid evaluation criteria for application development contracts were based on qualitative factors as well as proposed costs and included areas such as vendor's qualifications, experience, resources, references, and proposed work plan. On the average, only 10 to 35 percent of the evaluation was based on the costs of the system. In several cases, the selected contractor bid a higher price than the rest of the vendors, but was awarded the contract based on the technical superiority of the bid/proposal.

Bids for the application development contracts were evaluated by separate teams consisting of both information system and user personnel. Each team independently reviewed selected components within the bid and combined their results to arrive at an overall score for the vendor.

In several instances, contracts for additional work on the same project were awarded "sole-source" to the original contractor without going through the competitive bid process. However, the agency requested and received approval for these contracts from the General Services Commission after justifying the need to retain the original contractor.

The majority of contracts awarded for purchases of computer hardware, software, or computer services were awarded as proprietary procurements. For a proprietary procurement, the agency must justify its desire to purchase goods which are proprietary to one vendor. We found adequate justification for each proprietary procurement we reviewed. Examples of these justifications included the need to purchase equipment already in place at the agency and the need for equipment which meets specific speed and capacity requirements.

Section 1-C:

New Catalogue Purchasing System Poses Risks

Two application development contracts reviewed were awarded subsequent to September 1, 1993, and were made pursuant to the catalogue purchasing system. Although it appears that the State benefitted in these two instances (see appendices 2.1 and 2.2 for details), we noted some inherent risks associated with using the catalogue purchasing system.

The primary risk associated with the catalogue purchasing system is that control over purchasing is solely the responsibility of the purchasing agency. As a result, there is no assurance that the State is always getting the best value on information system purchases. Specifically:

- Agency purchasers do not have convenient access to all of the catalogues of vendors who are authorized to do business with the State. The General Services Commission (GSC) has a system to track vendors and the commodities they offer, but the agency must obtain the catalogues and do the research and evaluation itself. There is no statewide data base showing the approved vendors, the items they sell, and the lowest price offered.
- Although agencies can negotiate with vendors, some agencies will invariably be good at it, and others will not. If an agency does not have the expertise to negotiate, or just will not take the time to negotiate, it may pay a higher price for the product.
- There is no external oversight of purchases. GSC will assist an agency with its procurement only if asked, and there is only one purchaser assigned to information system procurement at this time. Thus, there is no mechanism to prevent an agency from developing a "sole source" type of relationship with a particular vendor.

Risks associated with the catalogue purchasing system have been addressed through recommendations made in the *State of Texas Procurement Practices: Report to the 74th Legislature as Mandated by Senate Bill 381*, which was issued by the State Comptroller's Office in December 1994.

Section 2:

A Variety Of Controls Are Used To Ensure That Contractor Performance Is Appropriately Monitored

Overall, agencies used appropriate monitoring procedures to hold contractors accountable for fulfilling their obligations. Contracts contained provisions which required the contractor to deliver specific products, or segments of work, and obtain agency approval before payments were made. Agency and project steering committees were actively involved in monitoring contractor performance. Adequate monitoring of contractor performance helps to ensure that progress is made according to schedule and that the contractor delivers the goods and services in accordance with the terms of the contract.

Section 2-A:

Monitoring Contractor Performance Helps to Ensure That Contractual Obligations Are Fulfilled

For all of the application development contracts, contractor performance was appropriately monitored, which provides reasonable assurance that the contractor performs in accordance with contractual requirements. In some cases, the monitoring function began even before the contract was awarded. Agencies frequently established specific requirements for contract monitoring and quality management in the Request for Bid (RFB)/Request for Proposal (RFP). RFBs/RFPs included agency requirements in areas such as quality management, risk management, communication and coordination, project management, and oversight management. Prospective contractors' ability to fulfill these requirements was then factored into the bid evaluation process.

After the contract was awarded, both the agencies and the contractors used a variety of tools to monitor the performance of the contractor. Specifically:

- All of the application development contracts required both the agency and contractor staff to prepare regular project status reports. These status reports described the current status of the project and identified significant accomplishments, issues, planned activities, and other items of interest surrounding the project. These reports were reviewed by appropriate levels of agency management and agency steering committees.
- Regular status meetings were attended by agency and contractor personnel and served to facilitate effective communication between both parties.

Example of a System Development Methodology

One agency used the NAVIGATOR system development methodology, which included the following levels of review:

- A team review of work product to check for correctness and accuracy.
- A formal review of deliverables to check for correctness, completeness, and consistency.
- A management review and approval of deliverables.
- A quality assurance review of processes, techniques and deliverables.

- Some agencies required the contractor to use a system development methodology. A system development methodology helps to ensure that the system being developed by a contractor meets user needs and management's objectives.
- Project management was set up to ensure participation by all relevant parties and ensure that decisions were promptly made by the appropriate personnel. Detailed project management tools depicting the status of project deliverables were prepared by both the agency and contractor staff. Examples of these tools include project GANTT charts and spreadsheets on which hours charged by vendor and agency staff are recorded and monitored.

- Agency and project steering committees were actively involved in monitoring contractor performance. The committees usually consisted of members from executive management, information resources, and the appropriate user groups. The committees reviewed project status reports, provided direction, and resolved policy and procedure issues. They also identified computing priorities, computing needs, and computing resources and reviewed and approved computing projects.
- Monitoring was also performed at the federal level in cases where information systems contracts were associated with projects receiving federal funding. In some cases, the Federal Government provided the majority of funding for the project, and the agencies obtained federal approval for the original plan and budget, as well as for any subsequent changes. The federal approval process serves as an independent control to ensure that project plans and expenditures were justified.

Section 2-B:

Contracts Contain Provisions Designed To Hold The Contractor Accountable

All of the contracts reviewed contained provisions intended to hold the contractor accountable for delivering the desired product or service. The provisions were

specific and included monetary penalties for ineffective performance. These provisions included:

- **Contract structure.** The majority of the application development projects were set up as fixed-fee deliverable contracts which required the contractor to deliver specific products before payment can be made.
- **Performance Bonds.** Requiring vendors to post a performance bond until completion of the contract provides protection against bad faith or failure on the part of the contractor. The performance bonds went up to 50 percent of the contract amount.
- **Liquidated Damages Clauses.** These clauses allow the agency to recover actual damages incurred due to contractor non-performance or default. Some also include penalties for failing to meet performance measures set out in the contract.
- **Retainage Clauses.** These clauses allow the agency to withhold or "retain" a specific percentage of contractor payments until deliverables are completed and approved. The amount of retainage varied from 10 to 25 percent of the payment amount.

Section 3:

Effective Contract Administration Alone Does Not Guarantee A Successful Project

Our review was limited to reviewing the selection and monitoring of contractors. However, successful implementation of information system projects depends on a variety of factors in addition to effective contract administration. The following factors affect the timeliness of project implementation as well as the total costs of the project:

- The majority of application development contracts we reviewed apply to information systems which are being developed as a joint effort between the contractor and the agency. In some cases, as much as 50 percent of the resources were provided by agency staff. Therefore, the success of the project is dependent upon both effective contract administration and the capability and expertise of agency staff assigned to the project.

The use of agency staff also increases the total cost of implementing the system. It is an incorrect assumption that the cost of the contract equals the cost of implementing the system.

- Many of these projects are developed and implemented over several years. As a result, state and federal requirements often change during the development of the system, creating the need to modify the work plan. Modification of the system involves more than just adding new programs.

Changes to one area can create the need to reprogram areas that have already been completed.

- Each of the systems under development is unique. As a result, it is hard for the agency to project the actual time frame and the necessary resources. The agency may not always have the necessary expertise to assess the exact requirements up front. Therefore, it is difficult to estimate the necessary resources until the contractor has completed the detailed design.

While effective monitoring of contractors is critical to ensure that the State receives the goods and services they contract for, effective controls over contractors alone will not guarantee that a project is successfully implemented. The State Auditor's Office reported on the risks to successful information system development in a report titled *Texas Lacks Effective Controls For Developing Automated Information Systems* (SAO Report Number 3-038). The report concluded that Texas needs enhanced development and review processes in order to improve the efficiency and effectiveness of automated systems.

In addition, a report issued in January 1995 by the multi-agency Quality Assurance Team identified several issues related to processes which prevent the agencies from consistently providing the Legislature with information that allows tracking of project progress and evaluation of project expenditures and performance. This report can be obtained from the Legislative Budget Board, the Department Of Information Resources, or the Office of the State Auditor.

Section 4:

Scope And Cost Of Initial Contracts Often Increase Significantly Over The Life Of The Contract

All of the application development contracts we reviewed had been amended to increase the scope and/or cost of the initial contract. The amendments were made in accordance with contract provisions which allow agencies to change the initial contract contingent upon certain events such as the completion of the detailed design or receipt of additional funding. In several cases, the final cost was, or will be, several times the original contract amount. This fact raises several important and interrelated questions:

- Are escalations in the contract price unavoidable?
- Is the current method of contracting the norm?
- Is the contractor ultimately held accountable for delivering services specified in the initial contract?
- After the consultant has been working with the agency over a long period of time, can the agency still be objective when analyzing and approving contract amendments?

- Do consultants have unequal leverage which results in a “lock” on all amendments once they enter a contract with the agency?

Although a “fixed” contract amount is normally stated in the original contract, analysis of contract provisions reveals that the terms of the contract are subject to change at various stages of the project. The contracts are intentionally written to allow flexibility as conditions change over the life of the project. On one hand, the ability to amend the contract provides the agency with flexibility to adjust to changes which occur throughout the development of the system. On the other hand, the agency must have the expertise to ensure that contract amendments are cost-effective and include only items which are beyond the scope of work defined in the initial contract.

Section 4-A:

Final Cost of System Development is Difficult To Estimate Before Detailed Design Of System Is Completed

The ability to amend the contract after completion of the detailed design (the first deliverable) allows the agency to more accurately assess the resources required to complete the project. As each application development contract is unique, it is often difficult for the agency and the contractor to accurately project the resource requirements and associated costs of implementing an information system until the detailed design has been completed. The initial contract amount is based on the agencies’ best idea of what the system should cost at that point in time.

Our research indicates that both the private sector and Federal Government find it difficult to establish a fixed fee for the development of an information system until the detail design of the system is complete. As a result, it is not unusual for the cost of the system to increase three to four times during the development phase in both private and Federal Government contracts.

During our review, we noted that the agencies were not using formal cost models to assist with estimating the costs for information system development. Using formal cost models may increase the accuracy of the agencies’ cost estimates. Cost models are tools that estimate the effort needed to develop software. The United States General Accounting Office (GAO) suggests that its auditors use cost models to help assess whether the estimated costs and schedule for the development of information systems are reasonable. Some firms in the private sector have also indicated that they use cost models to help estimate the cost of software production.

As cost models base estimated costs on the assumed relationships between the size of a system and the effort needed to design, code, and test the software, they are more useful once the detailed design has been completed. Another limitation is that they are used only for software construction and do not address other costs of the project such as conversion, training, and installation of the system.

Section 4-B:

Ability To Amend Contracts Provides Agency With Flexibility To Adjust To Changing Requirements

Provisions which allow the contract to be amended provide the agency with the flexibility to address changes in requirements without having to start from scratch again. However, these changes can also cause contract costs to escalate significantly. Development of an information system usually can take anywhere from two to six years. During this time, federal regulations, state laws, technology, and management priorities can change. Without the ability to amend the contract to adjust to these changes, the agency could end up with a system which does not fully meet their needs.

For those agencies, in particular, that receive federal funds to assist with the development of the system, the agency must incorporate any new requirements or risk losing the federal funding. As a result, the contract cost often increases, but the additional costs are primarily absorbed by the Federal Government.

Section 4-C:

Following Documented Procedures To Control Expansions In Contract Term And Scope Helps To Ensure That Contract Amendments Are Reasonable

Although changes in contract terms and scope were often unavoidable, the agencies reviewed had established requirements for controlling contract amendments which provide reasonable assurance that the changes were justified and in the best interest of the State. The contract amendments we reviewed appeared reasonable and were made in accordance with requirements established in the initial contracts. (See Figure 3 for the types of contract amendments reviewed.) The procedures invested the agency with the ultimate responsibility and approval over whether or not the contract should be amended to incorporate changes suggested by either the agency project team or the contractor.

The significant increases in costs raise concerns over whether the contractor is held accountable for delivering services specified in the initial contract. We saw evidence that agency project management actively participated in the decision to make changes to the contract and held the contractor to the terms of the contract by refusing to increase costs for changes which the agency project team felt were within the scope of the initial contract.

Although the agency and consultants often work together for long periods of time, the agencies have established procedures designed to ensure objectivity when analyzing and approving contract amendments. Specific procedures for controlling contract changes include:

- Requiring approval and sign-off of the changes by key agency users, management, steering committees, and board members.

- Requiring federal approval of changes for those projects receiving federal funding. Changes proposed by the agency required detailed justification of added costs and requirements and were subjected to a thorough review by the Federal Government.
- Assessing the project-related impact of each change.
- Assessing the external impact of the changes on other related projects and interfaces with other systems.
- Documenting the overall assessment and recommendation regarding each change.
- Assigning an importance code ranking to each change request.
- Using a standard change request form detailing the nature of each change.
- Creating a change request data base for quantitative analysis.
- Requiring that the change be processed and approved using the same procedures that were used to authorize the original contract (for changes to contracts related to procurement of information systems equipment and maintenance).

Prior to amending the contracts, the changes were reviewed and evaluated for impact, new deliverables were identified, deliverable schedules were adjusted, and other efforts were expended to identify the most appropriate method to achieve the required results.

Specific details regarding each of the change orders reviewed are contained in Appendix 3.

Figure 3
System Development Contracts - Amendment Summary

Type of Change	Number of Changes in Category	Dollar Amount of Change	Percent of Total Dollar Amount (rounded)
System enhancements requested by the agency after completion of detailed system design	8	\$18,577,186	54.083%
System enhancements mandated by changes in federal or state legislation	2	2,239,500	6.519
Agency exercised option in contract to accept secondary bid for system enhancements	1	12,650,000	36.828
Changes in technology which were unforeseen at the time the primary contract was signed	1	1,563	0.005
Changes to clarify or expand upon provisions in the primary contract	5	0	0
Revisions in the deliverable or payment schedule dates	9	0	0
Changes in requirements for training, outsourced services, or operations and maintenance requested by the agency	3	881,000	2.565
Total	29	34,349,249	

Section 4-D:

Lack Of Independent Analysis Of Contract Amendments Makes It Difficult To Determine If The State Receives The Best Value For Changes

Although agency management has the final determination and approval over the acceptance of contract amendments, agencies primarily relied on the contractors to estimate the costs and work hours associated with each of the changes. Without independent review and analysis of contract amendments, it may be difficult for agency management to ensure that the changes are cost beneficial and in the best interest of the State. Only one agency, the Department of Protective and Regulatory

Services (DPRS), used an external consultant to independently analyze changes proposed by the contractor.

Contract amendments which provide the contractor with additional compensation or change the scope and time frame of the project must be evaluated carefully to determine if the changes are valid and cost-effective. If the contract amendment stems from the contractor having underestimated the effort or expense required to perform the services agreed to under the initial contract, the amendment is not justified and should not be agreed to. Valid amendments should only include items which are beyond the scope of work defined in the initial contract.

The following factors impact agencies' ability to ensure that contract amendments are justified and cost effective:

- Over the duration of the project, changes in the scope of the project can be so extensive that it is difficult to distinguish between the original specifications and the new requirements on a line-item basis. For example, if the project is amended after the completion of the detailed design, the original deliverables may become indistinguishable to the extent that the original contract is no longer correct. As a result, agency management may not be able to ensure that amendments do not include compensation for goods and services included in the original contract.
- The initial contractor is almost always assured of receiving additional work resulting from contract amendments once they enter into a contract with the agency. As mentioned previously, the contracts contain provisions which allow the initial contract to be amended contingent upon certain events. As a result, the original contractor usually receives additional work automatically, instead of competing against other contractors.

Although current state and federal requirements do not prohibit agencies from structuring contracts in this manner, it makes it difficult for agency management to ensure that the State is receiving the best value for the amendments.

Recommendations:

We recommend that agencies consider the following in order to improve project cost estimates and strengthen oversight of contractor's performance:

- Consider using an outside consultant with expertise in information system development to independently analyze contract amendments, if the expertise is not available within the agency. The independent review should analyze contract amendments to ensure they are not part of the original contract. Obtaining an independent analysis of the costs and other changes associated with the amendments will assist agency management in ensuring that contract amendments are necessary, cost-effective, and in the best interest of the State.

- Consider using cost models or other “state of the art” techniques to estimate information system requirements. Given the significant amount of funds currently spent on application development contracts, the cost models or other estimating tools should be investigated to determine whether they would assist the agency to more accurately estimate system requirements.
- Analyze the cost/benefit of continuing the contract with the initial contractor once the detailed design of the system is complete. The analysis should include determining if it is in the best interest of the State to continue with the initial contractor or whether it would be beneficial to solicit competitive bids for the completion of the system. In addition, an evaluation of the contractor’s performance in completing requirements should also be made prior to awarding the contractor additional work.

Objective, Scope, And Methodology

Objective

The objective of the audit was to examine the process for awarding and monitoring information system contracts (including software, hardware, and implementation). We focused on determining the following:

- What procedures are used for awarding the initial contracts?
- What is the process used to award extensions of time and expansions of scope to the initial contracts?
- How is contractor performance monitored during the term of the contract?
- Are contract provisions designed to ensure vendor performance is enforced?

Scope

The scope of this audit included information system contracts awarded from September 1, 1989, through July 31, 1994, at each of the five agencies listed below. We included contracts for the purchase, lease, rental, development, and maintenance of information system hardware and software. We limited our review to individual contracts which exceeded \$1 million. We focused on the objectivity of the contract award process and evaluated the ability of the monitoring functions to ensure the agency received the products and services as contracted.

The five agencies included in this audit were:

- Texas Department of Human Services
- Employees Retirement System
- Office of the Attorney General
- Texas Employment Commission
- Texas Department of Protective and Regulatory Services

Areas addressed during the review included:

- Do procedures used to award information system contracts ensure that the contractor is selected fairly and objectively?
- Is the performance of the contractor adequately monitored during the term of the contract?
- Do contract provisions allow the agency to hold the vendor accountable for performance under the contract?

Methodology

The methodology used on the audit consisted of collecting information, performing audit tests and procedures, analyzing the information, and evaluating the information against pre-established criteria.

Information collected to accomplish our objectives included the following:

- Interviews with management and staff with responsibilities in contracting areas
- Documentary evidence such as:
 - ▶ Policies and procedures related to contract administration
 - ▶ Applicable state statutes and guidelines
 - Article 601b. State Purchasing and General Services Act.
 - Article 6252-11c. Use of Private Consultants by State Agencies.
 - Article 4413(32j). The Information Resources Management Act.
 - ▶ Review of contract files, including contracts and contract amendments

For each of these contracts, we reviewed and tested the processes used to:

- Award the initial contract.
- Monitor contractor performance.
- Award extensions of time and expansions of scope to the initial contracts.

Criteria used:

- Standard auditing criteria
- Contract management model developed by the State Auditor's Office
- GAO Audit Guide for Assessing Acquisition Risks

Fieldwork was conducted from June 10, 1994, through November 23, 1994. The audit was conducted in accordance with applicable professional standards, including:

- Generally Accepted Government Auditing Standards
- Generally Accepted Auditing Standards

There were no significant instances of noncompliance with these standards.

The audit work was performed by the following members of the State Auditor's staff:

- Cynthia L. Reed, CPA (Project Manager)
- J. Scott Killingsworth, CIA
- John F. Locklear, CISA
- Nancy L. McBride
- Kay Wright Kotowski, CPA (Audit Manager)
- Craig D. Kinton, CPA (Audit Director)

Detailed Contract Information

Appendix 2.1:

Department Of Human Services

The Department of Human Services awarded the following information systems contracts exceeding \$1 million during the past five years:

Contract	Original Contract Amount	Contract Amount After Amendments
EBT Services	\$2.00 and \$0.97 per Food Stamp and AFDC case per month respectively	(same)
ARTS System Development	\$ 4,377,141	\$ 4,378,704
31 Contracts for Hardware, Software, and Computer Services	\$ 145,928,593	\$ 148,559,630

During the past five years, the Department of Human Services (DHS) awarded 33 information systems related contracts which exceeded \$1 million. One of these contracts was for the purchase of Electronic Benefit Transfer (EBT) services, another contract was for the development of the Accounts Receivable Tracking System (ARTS), and the remaining 31 contracts were for the purchase of computer hardware, software, or services such as computer maintenance or contract programmers and analysts. DHS properly awarded and appropriately monitored each of the 33 contracts.

ELECTRONIC BENEFIT TRANSFER SERVICES (EBT)

Background

Through the EBT contract, DHS is purchasing EBT services, it is not purchasing an automated system. In other words, the EBT contract is not for the development of an automated system, but rather the contract requires the contractor to provide EBT services to DHS for a specified fee based upon client caseloads.

The EBT contractor chosen by DHS is Transactive Corporation (Transactive), formerly known as GTECH Administrative Services Corporation. The EBT system administered by Transactive allows Food Stamp and Aid to Families with Dependent Children (AFDC) clients to use plastic debit cards to electronically access their benefits. Transactive provides the services, software, hardware, equipment, and related items required to implement and operate the EBT system. EBT services were implemented in the Houston area in October 1994, and the EBT implementation schedule provides for statewide implementation by November 1995.

Federal matching funds for the Food Stamp and AFDC programs are a significant factor surrounding the EBT system. Specifically, federal EBT regulations require EBT systems to be cost neutral with regard to the federal matching costs for operating

an EBT system relative to the matching costs for operating a coupon issuance system. The cost neutrality requirement essentially places a limitation on the cost cap per case. These cost caps are \$2.00 per Food Stamp case per month and \$0.97 per AFDC case per month. Since the EBT contract specifies that Transactive will be paid \$2.00 per Food Stamp program case per month and \$0.97 per AFDC program case per month, the EBT contract meets this requirement.

DHS did not make payments to Transactive during the installation of EBT services. Transactive did not begin receiving payment based upon AFDC and Food Stamp caseloads until November 1994, after the implementation of EBT services in the Houston area in October 1994. The first full year of statewide EBT implementation is 1996. Based on DHS's estimate of annual Food Stamp and AFDC caseloads, the total cost of the contract for 1996 would be \$29,647,149.

Selection of the EBT Contractor

Prior to awarding the EBT contract, DHS planned for and identified a need for EBT services. In a 1993 report, the State Auditor's Office noted that the EBT project was planned effectively and that the project had received high priority. The following points were noted:

- EBT supports overall agency philosophy and functional goals.
- EBT is a strategic initiative.
- Executive management exercises leadership through an EBT Executive Steering Committee.
- The EBT project team is comprised of competent and qualified management. The team performed an in-depth risk analysis and action plan, and it also researched the design and similarities of EBT systems in other states in great detail.
- DHS management has recognized the potential savings and ease of benefit delivery from using an EBT system.

In addition to researching EBT and studying its benefits, DHS also received approval for the EBT system from the Texas Department of Information Resources (DIR), U.S. Department of Agriculture Food and Nutrition Service, and the U.S. Department of Health and Human Services Administration for Children and Families.

The procedures followed by DHS in selecting an EBT contractor were appropriate. DHS originally attempted to award the EBT contract through the Request for Proposal (RFP) process. However, the bids DHS received in response to this RFP exceeded the federal cost caps. During this time period, the General Services Commission (GSC) instituted the new catalogue purchasing procedure, and DHS chose to select an EBT contractor using this procedure. It is noteworthy that agencies can use the catalogue

purchasing procedure to purchase or lease both information systems products and information systems services.

This decision provided DHS with the opportunity to negotiate directly with qualified vendors, something which was not possible using the competitive bid procedure. With a system as large and complex as the EBT system, the opportunity to negotiate with a vendor appears to have been an important factor in obtaining the information which was necessary to select an EBT contractor. It is important to note, however, that DHS voluntarily chose to take full advantage of the opportunities and flexibility offered through the catalogue procedure. There is no requirement in the catalogue procedure requiring agencies to extensively negotiate and thoroughly investigate a variety of vendor proposals. If DHS had not chosen to thoroughly explore a variety of options and negotiate extensively with vendors, it still would have been in compliance with the requirements of the catalogue procedure. However, this could have adversely impacted the selection of the EBT contractor, and DHS may have entered into a contract which was inferior to the contract it eventually awarded.

DHS received five initial proposals from vendors for the EBT system. Of the five vendors expressing interest in the EBT system, DHS determined that the information submitted by two vendors did not encompass all components of the EBT system. After eliminating those vendors, DHS then held discussions with the remaining three vendors.

These discussions were attended by representatives from DHS, the State Comptroller's Office, and the vendor. The transcripts from these discussions indicate that a significant amount of detailed discussion occurred between DHS and the three vendors. There was also evidence in the transcripts that DHS attempted to avoid demonstrating favoritism toward a particular vendor. For example, we noted several points at which the vendors requested information from DHS. However, DHS told the vendors that it could not supply this information because it would be unfair to the other vendors with whom discussions were being held.

After conducting discussions with the vendors, an EBT Evaluation Committee reviewed and rated the Best and Final Offers (BAFOs) submitted by vendors. This committee included four representatives from DHS and four representatives from the State Comptroller's Office. The background and experience of each of these individuals appeared to be adequate. The committee also received assistance from other staff from DHS and the State Comptroller's Office who had experience or knowledge in areas such as the evaluation procedures, legal assistance, financial matters, and checking bidder references.

Committee members initially reviewed each BAFO independently. They also discussed the BAFOs as a group, reviewed the references checked by the technical resource staff, and met with legal advisors and the project director. After reviewing the BAFOs and conferring with advisors, each committee member individually rated each of the BAFOs.

DHS rated EBT vendor proposals in each of these areas:

- Offerer Experience and Qualification
- Project Management
- Training
- Retailer Management
- Marketing/Public Information
- Retailer Help Desk
- Client Help line
- Card Issuance
- Automated Systems/Services
- Financial Management
- General Terms and Condition
- Deliverables
- Cost Methodology

EBT BAFO rating criteria were weighted so that the vendor's approach was 80 percent of the final score, the vendor's schedule was 10 percent of the final score, and the vendor's cost was 10 percent of the final score. To arrive at the final scores for each vendor and the vendor rankings, the EBT Evaluation Committee added the weighted scores from each of the committee members. Using the scoring procedures described above, the committee recommended Transactive, and it also prepared a list of potential issues and costs if the contract was awarded to this vendor. The committee's recommendation was then forwarded to the EBT Project Oversight Committee. On February 10, 1994, DHS entered into a contract with Transactive. One of the rejected vendors initially filed a protest of the EBT contract award, however, this contractor has since withdrawn its protest.

GSC participated in the original attempt to select a contractor through the RFP procedure, and it also participated in the subsequent attempt to select a contractor through the catalogue procedure. The participation on the part of GSC in both attempts at awarding an EBT contract was adequate and appropriate.

Monitoring Of The EBT Contract And Contract Amendments

DHS is creating a permanent EBT auditing group for continuous auditing of the EBT system. This group will reside in the DHS Office of Inspector General (OIG), and will perform the following functions:

- Daily transactions testing
- Cash transfers and payments testing
- Comparisons of the DHS data base with the contractor's data base

Appropriate monitoring procedures have been established for the EBT contract. The EBT project is monitored by both the DHS Management Information Systems Steering Committee and an EBT Executive Steering Committee. In addition, the EBT project team members are qualified for their positions, and the staffing of the EBT project is adequate. It is also noteworthy that DHS is creating a full-time EBT auditing group for continuous auditing of the EBT system.

DHS has also developed an extensive contract monitoring plan to be used after the implementation of the EBT system. This plan includes detailed monitoring procedures for each of the 206 EBT contract terms and conditions. In addition, the EBT system is also subject to review by the joint Quality Assurance Team (QAT) comprised of representatives from the State Auditor's Office, Department of Information Resources, and the Legislative Budget Office. The State Auditor's Office QAT review in June 1994 found that a project reporting system which provides current and accurate status information for the EBT system is in place at DHS. In addition, the QAT review found that project status information is provided

to management for monitoring on a periodic basis. Although the QAT review found that estimated timeframes for completion of milestones are not documented, we determined that these estimates are now being documented.

The EBT system is also subject to review at the federal level. DHS submitted a feasibility study, an alternatives analysis, a cost-benefit analysis, and a system requirements study to the U.S. Department of Health and Human Services and the U.S. Department of Agriculture when it requested federal funds for the EBT project. DHS has also received federal certification of the EBT system, a mandatory requirement necessary for implementing the system.

Examples of EBT contract provisions designed to ensure adequate contractor performance include:

- Payments to the contractor are based upon DHS records of caseloads.
- The EBT contractor is required to post a \$10 million performance bond.
- System performance processing speeds have been established, and liquidated damages can be assessed if these speeds are not met.
- The contractor's computer programs have been placed with an escrow agent, and DHS can obtain this programming code if the primary contract is terminated.

One contract amendment has been added to the EBT contract, and a second amendment was in draft form during our review. Neither the first amendment nor the second draft amendment will change the dollar amount of the contract or the costs incurred by DHS in implementing EBT services. However, adequate procedures have been established for managing expansions of time and scope if they become necessary.

The first amendment clarified several provisions in the primary contract and was properly reviewed by the appropriate parties. A second amendment was in draft form at the time of our review. According to the EBT contract manager, this amendment will modify the implementation schedule (to implement the EBT system by region, rather than by individual county), modify the approach to training, add additional penalties for non-performance, and clarify other aspects of the contract.

The EBT contract also contains appropriate provisions to ensure contractor performance. Examples of these provisions include payments to the contract based upon DHS records of case number, requiring the vendor to post a performance bond, and the specification of performance standards along with liquidated damages if these standards are not met.

In its *Contract Administration Handbook*, DHS establishes minimum requirements for contracts. The EBT contract is in compliance with the applicable minimum contract requirements set forth in this document.

EBT Contract Provisions Regarding Regulation E

Finally, the EBT contract also addresses a unique issue which could have a significant impact upon the EBT system. Specifically, in a December 1993 report, the State Auditor's Office (SAO) noted that, if federal Regulation E is applied to EBT cards, the

State would be responsible for replacing benefits for lost or stolen cards at no cost to the clients or the Federal Government. The report stated that this could make EBT cost prohibitive for Texas. Since that report was issued, the Federal Government has mandated that EBT systems comply with Regulation E beginning in March 1997. The EBT contract contains a provision allowing DHS to terminate the contract if DHS determines that the effect of Regulation E "adversely affects" the Texas EBT system. Additionally, DHS is monitoring the activities of several organizations which are involved in attempting to remove EBT from the requirement of Regulation E.

ACCOUNTS RECEIVABLE TRACKING SYSTEM (ARTS)

Background

The ARTS system is being developed to provide DHS with an automated, integrated accounts receivable management system. The current accounts receivable systems in place at DHS are fragmented and have created a barrier to the effective collection and management of claims. The Federal Government has also recognized the need for DHS to have an integrated accounts receivable system, and federal law has mandated that DHS pursue the recovery of over issuances of benefits to clients. Additionally, the Federal Government requires detailed reports of case and collection activity, and the ARTS system will allow DHS to increase the integrity of these federal reports. DHS is developing the ARTS system jointly with a contractor, Applied Information Sciences, Inc. (AIS). The total amount of this contract is \$4,378,704. According to the July 1993 DHS Biennial Operating Plan submitted to DIR, one-half of the direct costs of developing the ARTS system will be funded with federal funds.

Selection Of The ARTS Contractor

DHS began considering an ARTS project in the mid-1980s. When the concept of a single accounts receivable tracking system was initially proposed, DHS developed a Request for Information document and conducted a review of packaged accounts receivable systems already available in the market. However, DHS found that packaged systems already available did not fit its needs because of the unique allocation features which DHS requires. DHS then decided to develop a custom system and has received DIR approval for the system.

DHS scored ARTS vendor proposals in each of the following areas:

- Executive Summary
- Vendor Background and Understanding of an Accounts Receivable Tracking System
- Qualifications of the Offeror
- Project Organization and Staffing

The procedures followed by DHS in selecting the contractor for the ARTS system were appropriate. DHS followed a documented evaluation plan when it selected the contractor. DHS received two bids for the project, and the bid evaluation process DHS followed was performed using reasonable criteria. An evaluation team scored the bids based upon criteria identified in the evaluation plan, and each element of the bid was assigned a numerical score. In order to assign these numbers, the evaluation team considered the answers to several basic questions set forth in the evaluation plan.

In addition to the scoring system, evaluations of the project costs were performed, and DHS also invited the bidders to present oral presentations. Although DHS did not select the lowest bid, based on the evaluation, the Applied Information Sciences, Inc., (AIS) proposal was superior to the other proposal. GSC approval was not required for the ARTS contract. Instead, since the contract was designated as a consultant contract, approval from the Governor's Office was required and obtained.

Monitoring Of The ARTS Contract And Contract Amendments

Appropriate monitoring procedures have been established for the ARTS contract. The ARTS project is monitored by both the DHS Management Information Systems Steering Committee and an ARTS Steering Committee. The participation on the part of steering committees in the development of the ARTS system is appropriate. The ARTS project team is comprised of staff from both AIS and DHS, and the staffing of the ARTS project is adequate. DHS Internal audit is planning a review of the ARTS application controls. This review will cover system security and access.

The ARTS contract outlines a deliverable review process, and payment for each deliverable is based upon this review. After review of a deliverable, three scenarios are possible:

1. If the deliverable is acceptable, DHS will pay the contractor 80 percent of the cost of the deliverable for initial billings for the deliverable. The remaining 20 percent balance due will be held until the final billing for the deliverable.
2. If the deliverable has been completed at a reduced level of effort and cost, any savings to DHS for the deliverable will be held in a reserve fund.
3. If it is determined that the level of effort associated with the deliverable exceeds the original projection in the Best and Final Offer, DHS will pay the contractor the CAP amount specified in the Best and Final Offer less prior payments.

If funds remain in the reserve fund at the conclusion of the ARTS project, a percentage of this fund is available to the contractor as an incentive payment.

Two amendments have been added to the original ARTS contract. The first amendment allowed AIS to set up a project development environment in its home office to attempt to identify problems before they impact the project. No cost changes resulted from this amendment. The second contract amendment allowed AIS to provide a different COBOL compiler. This amendment increased the contract costs by \$1,563. Neither of the two existing ARTS contract amendments involved expansions of time or scope. However, appropriate procedures have been established for expansions of time and scope in the event that these issues arise.

The contract for the ARTS system requires DHS to review each deliverable AIS provides to ensure that the deliverable is acceptable. In addition, the contract allows DHS to withhold payment if the deliverable is considered incomplete. The contract also specifies a cap amount for each deliverable, and it also includes incentives for AIS to provide deliverables on or before the deadline for implementing the ARTS system.

Finally, the ARTS contract is in compliance with the applicable DHS minimum contract requirements and the DHS consulting contract requirements which are set forth in the DHS Contract *Administration Handbook*.

MISCELLANEOUS CONTRACTS FOR THE PURCHASE OF COMPUTER HARDWARE, SOFTWARE, AND COMPUTER SERVICES

Background

DHS entered in to 31 contracts exceeding \$1 million for computer hardware, software, and services. Specifically,

- 23 contracts totaling \$121,332,519 were for the purchase of computer equipment and associated software and maintenance.
- 2 contracts totaling \$2,250,000 were for on-site support for microcomputers, peripheral equipment and cabling.
- 4 contracts totaling \$21,977,111 were for the lease of computer equipment.
- 2 contracts totaling \$3,000,000 were for contract programmers and analysts.

We identified 31 contracts which DHS awarded for computer hardware, software, or computer services which met the criteria for our review. The total amount of these 31 contracts was \$148,559,630. (The hardware, software, and computer services contracts were funded with a combination of both state and federal funds. In addition, many of these contracts were "blanket" contracts from which DHS could order any quantity it desired up to a specified maximum. The \$148,559,630 total amount is calculated based upon the maximum amounts in each blanket contract; however, depending upon the contract, DHS may or may not have actually chosen to purchase the maximum quantity specified in the contract.) DHS properly awarded and appropriately monitored each of these 31 contracts.

Selection of the Contractors for Hardware, Software, and Services

Prior to selecting contractors for hardware, software, and computer services, DHS received the necessary approvals from the DIR. The procedures followed by DHS in selecting the vendors for these 31 contracts were appropriate. Of these 31 contracts, 25 were awarded through the open market purchase process, 3 were purchased from the state contract list, 2 were awarded through the catalogue procedure, and 1 contract resulted from renewal of a previous contract. DHS prepared appropriate Requests for Proposals (RFPs) or Invitations for Bids (IFBs) for each of the open market purchases. Competitive bids were received in 12 of these cases, and in each case, DHS selected the vendor whose bid met the specifications at the lowest cost. For the remaining open market purchases, DHS received only one bid.

Of the 31 contracts, 17 were awarded as proprietary procurements. For a proprietary procurement, the agency must justify its desire to purchase goods which are proprietary to one vendor. These 17 contracts were with eight different vendors, and we found justification for each proprietary procurement we reviewed. Examples of these justifications included the need to purchase equipment which is compatible with

existing equipment already in place at the agency and the need for equipment which meets specific speed and capacity requirements.

Monitoring The Hardware, Software, And Service Contracts

DHS has established appropriate policies and procedures for monitoring contracts for the purchase of computer hardware, software, and services. Examples of these procedures include requiring sign-off from user departments for services received prior to the payment of invoices, and the routine comparison of purchase orders, receiving reports, and purchase vouchers. We determined that DHS adhered to these policies and procedures in monitoring the 31 contracts we reviewed. In one case, DHS paid a contractor \$62,000 more than the maximum contract amount of \$1 million, however, it appears that procedures have been instituted to prevent this from happening in the future.

DHS procedures for change orders on contracts for purchases of computer hardware, software, and services are identical to the procedures for awarding the original contract. We determined that change orders associated with the 31 purchase contracts reviewed were implemented following these procedures.

We also noted a variety of procedures and contract provisions in the 31 purchase contracts which were designed to ensure acceptable performance by the contractor. Examples of these procedures and provisions included obtaining performance bonds, conducting acceptance testing prior to payment, and including liquidated damages clauses in the contracts.

Appendix 2.2:

Department Of Protective And Regulatory Services

Since its inception in 1992, the Department of Protective and Regulatory Services (PRS) has awarded one application development contract which met the qualifications for our review. This contract was for the development of the Child and Adult Protective System (CAPS). PRS properly awarded and is appropriately monitoring this contract.

CHILD AND ADULT PROTECTIVE SYSTEM (CAPS)

Background

The CAPS system will provide automation equipment and automated case management to PRS local offices, and it will eliminate manual processes which currently impede productivity in the PRS field offices. The CAPS system is being developed entirely by a private contractor, Andersen Consulting (Andersen). The amount of the CAPS contract is \$19,866,164 for two fiscal years, with provisions for possible additional payment during subsequent fiscal years. However, the contract specifies that any payments during subsequent years are subject to the availability of appropriated funds.

Selection Of The CAPS Contractor

Prior to selection of the CAPS contractor, PRS adequately identified the need for the CAPS system. This process was discussed in a 1994 State Auditor's Office report (SAO Report No. 94-148). Specifically, the report noted that PRS had no comprehensive, integrated, automated system and lacks basic office automation capabilities. Examples of expected benefits of the CAPS system include the following:

- Increased PRS staff retention and redeployment of clerical staff time to direct service delivery
- Increased caseworker and supervisor productivity
- Increased child support collections are expected since PRS will be sharing data with the Office of the Attorney General
- Improved targeting of at-risk and vulnerable client populations, more rapid case intervention, reduction in recidivism, and more efficient use of contracted resources

The procedures followed by PRS in selecting the CAPS contractor were appropriate. PRS awarded the CAPS contract using the catalogue purchasing procedure. PRS originally attempted to award the contract through the RFP procedure. However, the bids received in response to the RFP did not meet PRS' expectations. During this same time period, the new GSC catalogue procedure was implemented. GSC recommended that PRS award the contract using the catalogue procedure, which would allow PRS more flexibility in negotiating with vendors. The two bids received by PRS under the catalogue procedure were less than the bids originally submitted by

the same two vendors under the RFP procedure. One vendor's catalogue procedure bid was \$6.8 million less than its RFP procedure bid, and the other vendor's catalogue procedure bid was \$1.4 million less than its RFP procedure bid.

Five vendors originally submitted bids under the catalogue procedure; however, all but two of them withdrew their bids before the contract was awarded. PRS believed that the two remaining bids were technically similar and chose the bidder whose proposed costs were lowest, Andersen. In addition to offering the lowest costs, the Andersen offer also included other elements which added value. Examples of these elements included providing regional liaison staff to ensure smooth implementation and operations; upgrading dial-up modems; and providing 7-day, 24-hour help desk support for the custom application and office automation software.

After conferring with the Office of the Attorney General, PRS obtained the assistance of a legal firm with expertise in automation contracts to assist in writing the CAPS contract. Since the CAPS contract was negotiated using the catalogue procedure, GSC approval was not required for the CAPS contract.

Monitoring The CAPS Contract And Contract Amendments

The CAPS project is monitored by a steering committee and the multi-agency Quality Assurance Team. Oversight of the project appears to be sufficient. PRS has also hired a private consulting firm to assist in monitoring the contract. This firm prepares regular risk analysis reports regarding the development of the CAPS system.

PRS has hired an outside consultant to assist in monitoring the CAPS contract. This consultant prepares regular risk analysis reports and assists in the development of change orders. The outside consultant also makes recommendations in order to reduce project risk.

For example, PRS intends to share a computer network with DHS when the CAPS system is implemented. Upon the recommendation of its outside consultant, PRS included specific roles and responsibilities of each agency in its memo of understanding with DHS outlining the specifics of the shared network.

The CAPS system is also subject to review at the federal level. PRS submitted a feasibility study, an alternatives analysis and a benefit analysis to the U.S. Department of Health and Human Services when it requested federal funds for the CAPS project.

As of the time of our review, the project is currently four months behind its original schedule. This appears to be due to the delay in receiving a final decision from the Federal Government regarding the amount of federal funding PRS will receive for the system.

The CAPS contract also established appropriate procedures for change orders. The outside consulting firm PRS hired to assist in monitoring the contract provides assistance in the change order process. The consulting firm has also provided PRS with independent estimates of change order costs.

For example, a sixth change order under negotiation at the time of our review will revise the contract costs for fiscal years 1994 through 1999. Andersen originally estimated the revised six-year costs at \$104,222,835. However, the consulting firm hired by PRS estimated the revised six-year costs at \$93,857,533. As of the time of

our review, PRS anticipated that the six year costs of the sixth change order would be \$99,562,000. (The sixth change order is discussed later in more detail.)

Enhanced federal funding for the CAPS system will not be available after October 1996. However, as of the time of our review, the Federal Government had not finalized its policy regarding the definitions of operational and implementation costs.

Operational and implementation costs are matched by the Federal Government at different rates. Therefore, while PRS has received interim approval for federal funding, the exact amount of federal funding it will receive will not be known until the Federal Government finalizes its definitions of operational and implementation costs.

Since the enhanced federal funding window is limited but the exact amount of federal funding is unknown, PRS is negotiating a sixth change order with the CAPS contractor based upon the amount PRS anticipates receiving from the Federal Government. In a provision in the primary contract, however, the contractor acknowledges that payment on the contract is subject to the availability of appropriated funds.

Five change orders resulting in amendments to the CAPS contract have been signed. These change orders include the following:

- Andersen agreed to use a shared communications network with DHS. The change order compensated Andersen \$250,000 for this change. The \$250,000 figure was negotiated by PRS and Andersen and compensates Andersen for the additional and revised planning it needs to perform in order to make this change.
- The payment schedule was revised due to the delay in receiving a final decision from the Federal Government regarding the amount of federal funding PRS will receive for the system. The revised schedule moved up some of the payment dates but did not change the total cost of the contract. Specifically, this change order grouped several deliverables into a start-up cost group for which Andersen was paid a lump sum.
- A change order clarified Andersen's use of office space, miscellaneous equipment, telephones, and fax machines. The total cost of the contract was not changed.

- A change order added five PCs and additional office equipment at a training facility. This change order increased the cost of the contract by \$1,087.
- In connection with the decision to use a shared communications network with DHS, a change order allowed DHS to purchase routers for the shared communications network from Andersen. The total cost of the contract with Andersen was not changed.

The first five change orders appear to be reasonable. A sixth change order regarding the receipt of federal funds and the resulting impact upon the contract and the CAPS system was under negotiation at the time of our review. As stated previously, the primary contract between PRS and Andersen contains a provision in which Andersen acknowledged that funding for the project beyond the first two fiscal years is subject to the availability of appropriated funds. The primary contract also contained a provision specifying that, if additional funding was appropriated for the project, Andersen and PRS would negotiate a change order.

PRS has received interim approval for federal funding for the CAPS project. However, as of the time of our review, federal policy impacting the exact amount of federal funding PRS will receive had not yet been finalized. Specifically, while the Federal Government matches operational costs at a 50/50 rate and implementation costs at a 75/25, it has not yet finalized the definitions of these two cost categories. Therefore, although PRS will receive federal funds for the project, it does not know the precise amount of federal funding it will receive. As a result, PRS has decided to proceed with the sixth change order based upon the amount of federal funding it anticipates receiving. It is important to note that a limited three-year window exists for enhanced federal funding of the CAPS system, and this is the primary reason that PRS has decided to proceed with the sixth change order.

Including changes from amendments 1 and 4, the original contract compensated Andersen \$19,866,164 during fiscal years 1994 and 1995, and it detailed possible additional payment of \$68,454,715 during fiscal years 1996 through 1999. Therefore, the original cost of the contract for fiscal years 1994 through 1999 was expected to be \$88,320,879 (\$19,866,164 plus possible payments of \$68,454,715 in fiscal years 1996 through 1999). The sixth change order will finalize the six year costs of the contract for fiscal years 1994 through 1999, and it locks in the costs for two additional two-year options which PRS can exercise after fiscal year 1999. It is important to note however, that, even when this change order is finalized, the provision which specifies that payments are subject to the availability of appropriated funds still remains in the contract.

The sixth change is expected to revise the costs for fiscal years 1994 through 1999 to \$99,562,000. This change order will not, however, change the state share of the project costs during the 1994-1995 biennium. The increase in the six-year costs was caused by the following:

- Expansion of the system was necessary to meet guardianship and facility investigation functions required by new legislation implemented after the original requirements for the system were completed.
- Reduction of the number of dial-up network connections and an increase the number of dedicated circuits.
- Installation of an additional 784 workstations which will increase the ratio of workstations to caseworkers from 1:3 to 1:1.
- Additional training necessary due to the increase in staff coverage.
- Increases in the costs associated with outsourced services such as site preparation and equipment installation due to the acceleration of the schedule.

In addition to finalizing costs for subsequent fiscal years, the sixth change order is also expected to outline the design of the shared network with DHS. The sixth change order will also combine the first two releases of the system into a single release.

Appropriate provisions and procedures have been established to help ensure contractor performance. The contract requires PRS to review each deliverable to ensure that the deliverable is acceptable. In addition, the contract permits PRS to defer a percentage of the payment for certain deliverables until portions of the system are operating statewide. Andersen was also required to post a performance bond.

Additionally, in one of its risk analysis reports, the outside consultant PRS hired to assist in monitoring the contract stated that risks relating to CAPS system performance would be introduced if PRS chose to use a shared network with DHS. The consultant recommended that PRS include in its agreement with DHS the specific roles and responsibilities of each agency with regard to the shared network. As a result, the memorandum of understanding between PRS and DHS includes a service level agreement detailing these roles and responsibilities.

Texas Employment Commission

The Texas Employment Commission awarded the following information system contracts exceeding \$1 million during the past five years:

Contract	Original Contract Amount	Contract Amount After Amendments
STAR Project	\$3,630,000	\$ 5,927,506
Benefits Redesign	326,000	12,976,000*
Mainframe Replacement	5,123,175	5,123,175
Disk Storage Upgrade	1,313,598	1,313,598

* This amendment resulted from TEC's decision to exercise the secondary bid option to continue with Phase II of the project (the actual development of the automated system). This amendment had been anticipated and planned for since the inception of the project.

During the past five years, the Texas Employment Commission (TEC) awarded four information systems related contracts which exceeded \$1 million. The Strategic Tax Application Redesign (STAR) Project and the Unemployment Insurance Benefits Payment Redesign Project were system development projects that required consulting services. The other two contracts were for hardware resources, specifically mainframe replacement and disk storage upgrade. TEC properly awarded and appropriately monitored each of the four contracts.

TEC has developed procurement policies and procedures and follows them on each procurement. The Information Resource Planning and Procurement Section handles all information system purchases and ensures that procedures are adequately followed and that documentation is maintained. They are also responsible for the final preparation of bid specifications, bid requests, and evaluation and selection of vendors for information system purchases at TEC.

**STRATEGIC TAX APPLICATION REDESIGN
(STAR)
PROJECT**

Background

Between 1979 and 1989, TEC initiated several internal projects to design a new automated, integrated Tax System. Although some new modules had been developed and implemented over the years, various problems were encountered along the way which ultimately stalled each attempt at a total system redesign. In 1989, TEC decided to curtail all work on the Tax System Redesign until they could properly assess where the system was and what action would be required to correct the problems so that TEC could successfully redesign the system.

In December 1989, TEC hired a consultant to develop a "Tax Systems Assessment Plan" for \$75,000. This contract was awarded sole source to Andersen Consulting because of their experience with other State Employment Service Agencies throughout the nation. The scope of the project included: identification of user needs,

assessing the present status, recommending the technology direction, and development of an implementation plan for the STAR Project.

Based on the results of the feasibility study, TEC entered into a contract with Andersen Consulting on December 3, 1990, to design (Phase I) and develop (Phase II) the Tax System. Phase I of the project was completed in June 1991 and Phase II was completed in October 1992.

Selection Of The STAR Contractor

Andersen's feasibility study identified organizational issues that had hampered past development efforts and recommended a design and implementation approach for the STAR Project. The plan identified 12 work segments/products required for system design and implementation. In addition, the plan contained a proposed project schedule, a proposed work plan, a recommended project organization structure for each phase, and functional descriptions of the project management teams. TEC's STAR Project Steering Committee, consisting of key TEC management personnel, approved the plan, and proceeded with the proposed redesign and implementation of the new STAR system.

TEC obtained approval for the contract from the Department of Information Resources. Although TEC estimated that the cost would range from \$3.3 to \$4.4 million, DIR only authorized TEC to spend up to \$3.63 for consulting services to assist in the development efforts. However, it was communicated to DIR that the contract and costs would be reevaluated during Phase II, after the detail design had been completed and that the contract would be modified as needed. It was anticipated even at that time that the project could not be completed within the \$3.63 million approved by DIR. TEC later submitted and received approval from DIR for the additional expenditures up to \$5.9 million total.

Since a consultant was hired to assist in and help manage the redesign effort, TEC obtained a "Finding of Fact" from the Governor's Office that consulting services were needed. A Request For Bids (RFB) was prepared and issued by the General Services Commission (GSC) to solicit bids for the project. The criteria to be used to evaluate each bidder's proposal was included in the RFB.

TEC received bids from only two vendors. An evaluation team consisting of Data Processing, user personnel, and the Commissioner's staff reviewed and evaluated the two bids and made a recommendation to TEC management for the award of the contract. The review team selected Andersen Consulting, even though their bid was higher than the other vendor. This was due to the fact that using the evaluation methodology set forth in the RFB, of which only 35 percent was based on cost, Andersen's final evaluated score was higher than the other vendor.

TEC and Andersen entered into a fixed-fee based on deliverables contract on December 3, 1990, for \$3.63 million. The project was set up in two phases, each with specified deliverables.

Monitoring the Star Contract and Associated Contract Amendments

TEC established and used appropriate monitoring procedures for the STAR contract. This project was undertaken as a joint design between TEC and Andersen, and project man hours were equally split between the two. TEC implemented a four-tier project management approach consisting of a Steering Committee, Project Directors, Project Managers, and Team Leader levels, each with varying degrees of responsibility for the project.

Status reports were prepared weekly by the project team to document progress, design issues, and other issues requiring management action. Copies of status reports were provided to the STAR Project Steering Committee. Monthly meetings were also held with Committee members to discuss those issues important to them, to address policy and procedure issues, and to adjust project schedules as needed.

There were three contract amendments during the project, resulting in changes to the contract scope and terms. The amendments increased the original cost of the contract by approximately \$2.3 million. All of the amendments were made in accordance with specific criteria established in the original contract, and TEC solicited and obtained approvals from DIR and the Governor's Office to make these changes. It is also important to note that TEC anticipated from the beginning that the project could not be completed within the \$3.63 million approved by DIR.

The reasons for the amendments are as follows:

- The original project plan called for TEC to convert programs for three of the subsystems without performing a major redesign effort. During detail design and conversion planning, it became apparent that these sub-systems should be redesigned to improve their overall efficiency and integration with the other subsystems.

The Steering Committee authorized these changes, and TEC amended the existing contract to increase the scope of the project to address the redesign of the three subsystems. This change added \$1,726,000 to the cost of the contract.

- Early in the project, an issue arose related to the processing of records from Employer Service Agents. The issue was assigned to a member of the project team to evaluate and provide recommendations and alternatives to the Steering Committee for consideration. The project team identified significant cost savings, benefits, and increased interest earnings which could be achieved through incorporating this area into the STAR project.

The Steering Committee approved the expansion in scope, which added \$34,000 to the cost of the contract. The additional expenditures were approved based on the limited cost of this change as compared to the anticipated savings and other benefits.

- During the final stages of implementing the STAR application, the 73rd Legislature met and passed Senate Bill 130, which created the Smart Jobs program and established an employer training assessment to be administered by TEC in conjunction with the Unemployment Insurance Tax Program. This legislation resulted in the need to modify programs recently implemented for the STAR System, as well as the development of several new programs.

As the original contractor was still under contract with TEC (the final deliverables had not been approved), TEC amended the contract to include the Smart Jobs component at a cost of \$537,500.

A group of users and Data Processing personnel reviewed and signed-off on each deliverable provided by the consultant before payment was made. In addition, contract provisions allowed TEC to retain 10 percent from selected deliverables and/or payments to ensure that the vendor would deliver all of the products required by the contract.

UNEMPLOYMENT INSURANCE BENEFITS PAYMENT REDESIGN PROJECT (Benefits Redesign Project)

Background

The Benefits Payment System is used primarily by TEC's Benefits Department to assist in providing consultation and monetary assistance to the workers of Texas who are unemployed through no fault of their own. The system is used daily by field office personnel to process unemployment claims and to respond to claimant inquiries regarding the status of a claim or check. TEC statistics showed that the system is used to:

- respond to an average of 10,500 local and 1,700 state office telephone inquiries per week
- manage and store approximately 860,000 initial claims forms
- review and process 3.1 million continued claims forms each year

For a number of years, TEC has been evaluating the benefits payment delivery process with the ultimate desire to re-engineer the overall service delivery process and incorporate new technologies into the system. Because of recent success with the STAR Project, TEC decided to pursue a redesign and reengineering process for benefits payment.

The development phase of the project is currently underway, and a great deal of work remains to be done. The current contract with Andersen is scheduled to run through January 1997.

Selecting the Benefits Redesign Contractor

The procedures followed by TEC in selecting the contractor for the Benefits Redesign Project were appropriate. The contract for the Benefits Redesign Project resulted from a "mixed services" open market RFB for a feasibility study of the Benefits system and reengineering process with an option to extend the contract to provide detailed design and implementation phases if TEC desired. As part of the mandatory options bid, TEC requested that vendors provide pricing information per hour for consulting personnel that would possibly be involved in the design and implementation phases.

TEC worked with DIR and GSC to structure the RFB so that multiple vendors could participate. To further ensure that the RFB was not too restrictive, TEC also provided copies to several vendors who could potentially bid on the RFB to solicit their comments. Many of the suggested changes were incorporated into the RFB and bid evaluation criteria.

Two bids were received for the project. Both vendors bid a fixed fee for the feasibility study (primary bid) and hourly rates for personnel (secondary bid) to complete Phase II implementation, to be exercised by TEC if desired. The bids were evaluated using the criteria specified in the RFB. Thirty-five percent of the rating was based on costs, with the remainder based on vendor's qualifications, experience, resources, references, and work plans. Separate teams were set up to independently evaluate the proposals from each vendor. The review teams selected Andersen based on the total evaluated score.

The contract with Andersen was executed on October 29, 1993, as a fixed-fee deliverable based contract. The contract was awarded for \$326,000, and contained an option to extend the contract to continue with Phase II if desired. The actual costs for Phase II would be determined at the conclusion of Phase I (using hourly rates in the secondary bid) after TEC reviewed the feasibility study and identified the direction and technologies they wished to implement. The contract guaranteed the hourly rates bid by Andersen would remain in effect until September 1, 1997.

Monitoring The Benefits Redesign Project And Contract Amendments

Appropriate monitoring procedures have been established for the Benefits Redesign Project. The project uses a project management structure similar to the one used for the STAR Project. A Steering Committee, consisting of the Administrator, Deputy Administrators, Division Directors, and Regional Directors is set up to oversee the project, provide direction, and resolve policy and procedure issues. The project is a joint effort between TEC and Andersen, and TEC has assigned personnel to work with the consultants on a full-time basis. Many of the personnel assigned to represent Andersen on the project had also worked on the STAR Project and are familiar with TEC's operation and business policies.

The Steering Committee met early during Phase I to develop a mission for the project and to develop goals and objectives for reengineering the benefit delivery process, and has met on a monthly basis afterwards. Status reports are prepared weekly by the project teams to document progress, open issues, and future direction.

There has been one amendment to the Benefits Redesign Project, which added \$12,650,000 to the cost of the project. However, this change order resulted from TEC's decision to exercise the secondary bid option to continue with Phase II of the project (the actual development of the automated system). Although it appears that a substantial change was made to the contract, in reality the amendment had been anticipated and planned for since the inception of the project.

The decision to proceed with Phase II of the project was made after the Steering Committee reviewed the Master Plan prepared by for Phase I and selected those issues that it wanted to pursue further. TEC then submitted and received DIR approval to amend its operating plan to reflect the revised costs.

The Benefits Redesign Contract has been structured in a manner to protect TEC, and the vendor will be paid only for deliverables which have been reviewed and approved by TEC. In addition, a 10 percent retainage is withheld from each billing pending final approval of the project.

DIRECT ACCESS STORAGE DEVISE (DASD) AND CONTROL UNIT UPGRADES

Background

During fiscal year 1992, TEC decided to obtain a Direct Access Storage Devise (DASD) to replace approximately 50 percent of its existing disk drives with an option to replace the remaining 50 percent during the following fiscal year. The existing drives had been obtained in the early 1980s, and TEC was starting to experience a large number of failures.

Selection of the DASD Contractor

The DASD procurement was originally planned and approved by DIR as a three-year phased implementation, but TEC expedited the procurement to a two-year process due to the growth in services and the failure rate of existing DASD. The estimated costs of the DASD projects were \$1,882,432.

The agency planned to obtain the DASD through a restrictive, competitive bid pursuant to Section 3.09 of Article 601b. The Request For Bid (RFB) was written as a restrictive/proprietary purchase for one manufacturer so that TEC could obtain DASD compatible with the existing IBM mainframe computer and control units could be obtained without incurring additional expenses to upgrade/replace existing hardware. Since federal funds were used for this procurement, new or used equipment could be bid by the vendors in accordance with the Competition in Contracting Act of 1984.

The RFB also set forth the procedures TEC would follow to evaluate and rate each bid and award the contract.

Five vendors submitted bids, which ranged from \$905,070 to \$1,313,598. Based on the evaluation of the five bids, the lowest cost bid was ranked the highest. However, during the bid analysis phase, the selected vendor withdrew its bid. During confirmation of the vendors ability to provide references, delivery dates and proposed maintenance, the second and third ranked vendors also withdrew their bids. With only two vendors from which to choose, IBM was selected as the vendor.

Monitoring The DASD Contract

The contract was awarded to IBM on August 12, 1992, and the DASD was delivered, installed and accepted on October 7, 1992. Additional federal funds were made available during fiscal year 1993, which allowed TEC to exercise its option to make a secondary DASD purchase at the price agreed to during the original bid opening. On October 12, 1992, TEC submitted a request to GSC to exercise this option, and a purchase order was issued on October 23, 1992. The secondary DASD order was received, installed, and tested on November 26, 1992, and formally accepted on December 16, 1992.

The RFB and the subsequent contract required the vendor to obtain a performance bond in the amount of \$175,000 to protect the State in the event the vendor could not deliver the hardware, or if the hardware failed to live up to expectations.

NEW MAINFRAME (CPU) PROCUREMENT

Background

During fiscal year 1992, TEC decided to replace its existing mainframe because it was no longer sufficient to handle the increased computing needs and expected growth in transaction volume of the agency. TEC's data processing environment consists of a statewide teleprocessing network that handles approximately one million transactions per day and is used by 4,000 TEC employees.

Selection Of The Mainframe Vendor

Procedures used to select the vendor allowed TEC to obtain the desired hardware at the lowest bid price. Vendor bids were accurately and consistently evaluated. Agency procurement procedures were followed and well documented in the contract files. In addition, The U.S. Department of Labor (DOL) approved funding in the amount of \$1,079,000 towards the procurement, with the stipulation that the procurement be initiated by December 31, 1991.

TEC planned to obtain the CPU through open market, but restricted it to an IBM plug-compatible unit. A plug-compatible CPU was justified based on the potential

increased costs associated with acquiring a different CPU such as conversion of existing applications and training. Various concerns were raised by DIR relating to vendor competition, system sizing, multi processor capabilities, etc. After several discussions, DIR authorized TEC to proceed with the procurement on December 2, 1991.

The RFB set forth the procedures used to evaluate and rate each bid and award the contract. Bidders were required to submit a bidder's bond in the amount of \$1,000,000. In accordance with federal requirements, the market was opened to suppliers of both new and used equipment.

Five bids were received from potential vendors, however, one bid was rejected since the vendor failed to submit a bidders bond as required in the RFB. During the bid analysis phase, a number of formal protests were lodged with GSC, primarily over the requirement for the vendors felt that the requirements for the bidders bond and the performance bond were too high. TEC justified the \$1 million bid bond based on the use of federal funds for the purchase and the requirement that the purchase be made within a designated time frame or they could potentially lose those funds.

The contract to deliver the mainframe was awarded to IBM and a purchase order was issued on February 5, 1992. IBM posted a performance bond in the amount of \$5,123,375 to guarantee the performance of their equipment. The hardware was delivered and installed on February 23, 1992, and formally accepted on March 28, 1992, after completing the required 200 hours of operational time.

Employees Retirement System Of Texas

To date, ERS has entered into three contracts which exceeded \$1 million with Andersen Consulting to assist in the development and implementation of various phases of the Integrated Employee Benefits System (IEBS). A fourth contract, for \$360,919 was also issued to Andersen for work on the IEBS, and was included in our review.

<u>Date Issued</u>	<u>Contract Amount</u>
July 11, 1990	\$2,373,600
April 30, 1992	1,889,000
June 16, 1993	1,026,000
June 8, 1993	360,919
Total	\$5,649,519

During the past five years, the Employees Retirement System of Texas (ERS) awarded four contracts to Andersen Consulting for consulting work related to design, development, and implementation of the Integrated Employee Benefits System (IEBS). Three of these contracts exceeded \$1 million. The combined total of the contracts issued through August 31, 1994, was \$5,649,519. ERS properly awarded and appropriately monitored each of the four contracts.

**INTEGRATED EMPLOYEES
BENEFIT SYSTEM (IEBS)**

Background

For a number of years during the mid to late 1980s, ERS realized the need to redesign and integrate the various automated systems in production: Member Benefits, Group Insurance, and Retirement applications. These systems were written in the early to mid 1970s as stand-alone systems and did not take advantage of many of the advancements in technology that had occurred since that time, such as the use of data base management software, fourth generation languages, and integrated data bases.

The IEBS project was undertaken to redesign and program the functional requirements for three basic areas: Active Membership, Insurance, and Retirement Applications. The original contract called for the work to be completed in four phases:

- Phase I - Complete preliminary design
- Phase II - Active membership
- Phase III - Retirement
- Phase IV - Group Insurance

Phase I of the project was completed in March 1991. Phase II, the Active membership component, was completed in April 1992. Phase II has not been implemented because of its link to the Retirement component, which is still under development.

When planning work on IEBS, ERS had intended to address Group Insurance as the last phase of the project. However, legislation passed during fiscal year 1991 placed additional insurance requirements on ERS. As a result, development of the Group Insurance component was accelerated to meet the implementation dates set in the

legislation. The Group Insurance component has been completed and has been in operation since mid 1993. The Retirement component is still in the design stages and will be developed over the next two to three years.

All of the Andersen contracts expired in August 1994. ERS anticipates hiring contract programmers and analysts on a "fee for services" basis to complete the detailed design of the Retirement component and assist with some of the programming. The contract programmers will be managed and supervised by ERS personnel.

Selection Of The IEBS Vendor

The initial contract with Andersen Consulting was appropriately awarded through competitive bid procedures. ERS adequately planned for the project and worked with the Department of Information Resources (DIR) and the General Services Commission (GSC) to develop the Invitation for Bid (IFB). Procedures for evaluating each bid response and awarding the contract were well documented, included in the IFB and followed prior to awarding the initial contract.

A bidders list containing 29 potential vendors was prepared, and each was mailed copies of the IFB. In addition, a bidders conference was held to discuss the IFB and to allow potential vendors to ask questions about the IFB, the agency and the project. Representatives from 17 vendors attended the bidders conference. In addition to questions about the project, ERS also discussed the bid evaluation process that would be used to review, evaluate, and award the contract.

Bid Evaluation Criteria

ERS evaluated and rated bids for the IEBS system in four categories:

- . Price - 35%
- . Capability of contractor - 40%
- . Quality of application enabling products - 15%
- . Work Plan - 10%

Valid bids were received from four vendors. Various teams consisting of Information System Division and user personnel independently reviewed various aspects of each bid. Scores and weighing factors used by the teams were well documented and supported the decision to award the contract to Andersen Consulting. In addition, evidence was available to support that ERS reviewed the qualifications of personnel to support the project, including the disqualification of personnel that did not meet the criteria set forth in the IFB and bid evaluation documentation.

On July 11, 1990, ERS entered into a contract with Andersen Consulting for the development, implementation and redesign on the IEBS for \$2,373,600.

The contract term was to last through August 4, 1992. Three subsequent contracts for IEBS were awarded sole-source to Andersen because of its knowledge of the ERS program areas. All contracts were approved by the ERS Board of Trustees, DIR, and GSC. Approval of consultant services (Finding of Fact) was also obtained from the Governor's Office.

Monitoring The IEBS Vendor And Subsequent Contract Amendments

ERS and Andersen set up a project management structure that ensured participation by all relevant parties and ensured that decisions were promptly made by the appropriate personnel. ERS was scheduled to provide approximately 50 percent of the personnel resources, including dedication of personnel from both the Information System Division (IS) and the user areas. Andersen Consulting provided the remaining 50 percent. Andersen was also responsible for providing project management, since the IS Division did not have the required expertise and because Andersen assumed the project risks based on the structure of the contracts.

A Steering Committee, consisting of ERS Division Directors, was set up to provide direction and resolve policy and procedure issues raised by the project team. The project team reported to the Deputy Director of Information Systems, who oversaw the daily activities of the project, including the project manager designated by the consultant. Routine status reports were provided, and team meetings were held to keep him abreast of the project's status, open issues, and planned activities. Representatives from the Group Insurance and Member Benefits Divisions were assigned to work with the project teams to develop functional specifications for the programs and to test/approve the resulting outputs.

Andersen was also required to perform independent Quality Assurance Reviews and report to ERS and Andersen management about the project's progress and issues that needed to be addressed. These reviews appear to adequately reflect the project's condition at that time.

A number of changes to the project's scope have occurred since the original contract with Andersen was issued. In some cases, the contract was amended to address the changes, and, in other cases, new contracts were issued.

Although several of the amendments did not actually increase the cost of the contract, ERS must still incur the cost of preparing Retirement deliverables that were postponed and not completed as a result of the changes. For example, the Board recently authorized ERS to spend up to \$400,000 to contract for services to complete the detailed design of the Retirement system.

All new contracts were approved by the ERS Board of Trustees. Changes to deliverable schedules were approved by the Deputy Director of Information Systems and the appropriate Division Director. Figure 4 depicts the timeframe and scope of each contract amendment and new contract.

Figure 4
IEBS Contracts and Contract Amendments

DATE	ACTION	SCOPE	COST
July 11, 1990	Initial Contract	Development, implementation and redesign of the IEBS. Install a Data Base Maintenance System and programming utilities to assist in the redesign efforts.	\$ 2,373,600
April 30, 1992	Amend initial contract	Revised deliverable dates, extended contract completion date.	0
April 30, 1992	Award second contract	Increase the scope of development to include expanded benefit programs required and approved by the Board of Trustees, to implement Senate Bill 1331, et.al., "Omnibus Bill," including provisions of House Bills 683, 721, and 1246, and implement House Bill 2. As a result, the development of the Insurance component was accelerated to meet implementation dates set in the new legislation.	\$1,889,000
March 3, 1993	Amend initial contract	Revise deliverable dates, add new Insurance deliverables, delete most Retirement deliverables.	0
June 16, 1993	Award third contract	Consultant to perform additional work to test and implement Phase III of Group Insurance.	\$ 1,026,000
June 8, 1993	Award fourth contract	Consultant to perform additional work to prepare the detailed design of Phase IV Retirement and to support Phase III Group Insurance through the first stage of implementation.	\$ 360,919
June 11, 1993	Amend second contract	Revise deliverable dates.	0
October 28, 1993	Amend third contract	Changed contract completion dates and extended periods of service.	0
February 25, 1994	Amend first contract	Revise deliverable dates.	0
March 18, 1994	Amend first contract	Revise deliverable dates. Release retainage for deliverables successfully completed by August 31, 1993.	0

Appropriate provisions and procedures have been established to help ensure contractor performance. The first two contracts with Andersen were set up as "fixed-fee-deliverable based" contracts and required the vendor to deliver specified products before payment would be made. Approval (acceptance) of each deliverable by a member of management within the program area was required before payment could be made for that deliverable. In addition, ERS retained 15 percent from each payment to ensure that the vendor would deliver all products required by the contract. ERS also required the vendor to post performance bonds of 50 percent of the contracted amounts for the first two contracts to ensure that the final system satisfied the contract requirements. ERS still retains these bonds, pending approval of the latest deliverables.

The last two contracts were set up as "fee for service" contracts, and ERS managed the personnel assigned to them.

Appendix 2.5:
Office Of The Attorney General

The Office of the Attorney General awarded the following information systems contracts exceeding \$1 million during the past five years:

Contract	Original Contract Amount	Contract Amount After Amendments
TXCSES System Development	\$4,000,000	\$11,624,099
4 Contracts for Hardware, Software, and Computer Services	\$6,752,041	\$ 6,752,041

During the past five years, the Office of the Attorney General (OAG) awarded five information system related contracts which exceeded \$1 million. One of these contracts was for the development of the Texas Child Support Enforcement System (TXCSES), and the other four were for the purchases of computer hardware, software, or services such as computer maintenance.

The OAG properly awarded each of the contracts and appropriately monitored contractor performance.

TEXAS CHILD SUPPORT ENFORCEMENT SYSTEM (TXCSES)

Background

In 1988, Congress passed the Family Support Act of 1988 (Act) mandating the implementation of automated Child Support Enforcement systems in every state. Further, the Act requires that such systems be fully operational not later than October 1, 1995, and rescinds the enhanced federal financial participation for Child Support Enforcement systems development and equipment costs effective September 30, 1995.

Because OAG did not have adequate data processing resources to develop the system in-house and because the Family Support Act initially required that a system be transferred from another state, OAG decided to contract with an outside vendor to provide consulting services to assist in the transfer, design, development, and implementation efforts.

The initial contract with Andersen Consulting was signed on August 26, 1991, and was scheduled to terminate on February 26, 1993. The contract required the consultant to provide "advice for the enhancement, design, development, and installation of a computerized system for the initiation, management, accounting and enforcement of child support obligations." The termination date was based on OAG's anticipation that the computerized system would receive final certification by the Federal Government by February 26, 1993. However, the contract contained a clause which specified that if certification was not obtained by the termination date, the contract would extend until the certification was received.

Andersen's proposal included a partnership with the Clemson University Research Foundation (CURF) to transfer the South Carolina Child Support Enforcement System to Texas. CURF, who actually developed the South Carolina system, helped in the transfer process. According to OAG, CURF consultants provided a great deal of assistance in analyzing the transfer system and educating the OAG and Andersen personnel on how it worked.

The Detailed Work Plan set the project up in four stages as follows:

- . Phase I - Design (including Logical System Design)
- . Phase II - Development
- . Phase III - Installation
- . Phase IV - Post-Installation and Certification

The contract incorporated a 79 page "Statement of Work and Detailed Work Plan." The structure of the contract indicates that the parties anticipated significant changes in cost and performance from the outset. Contract performance was segmented into four phases, with full renegotiation of the contract to take place after the initial design phase. Specifically, the objectives of Phase I of the project were to:

- Install the transfer system on Attorney General's computer for use during the logical system design.
- Resolve project management issues.
- Establish system development standards.
- Develop logical system design to meet Attorney General's requirements.
- Conduct a study for the development of the technical architecture to determine the system's software requirements.
- Revise the Detailed Work Plan for Phases II through IV based on the results of work performed during Phase I.

Phase I of the project was completed on July 31, 1992, and the results were used by the OAG to more accurately estimate the resources necessary to implement the system design based on the completed detailed design and amend the contract accordingly. Contract provisions explicitly state that the OAG, with prior federal approval may propose any amendment to the contract as they see fit.

Five amendments have been made to the initial contract. The last amendment, which was signed on September 16, 1994, increased the contract total to \$11,624,099 and extended the termination date to July 31, 1995. As of November 1994, Andersen has received payments of only \$1,622,260.

The latest amendment contractually committed Andersen to ensuring the successful statewide installation of TXCSES by February 28, 1995, and for securing federal certification of the TXCSES no later than July 31, 1995. However, as this report was prepared for release, the OAG had determined that the project team would not be able to meet the February 28 deadline. As a result, the OAG has initiated efforts to ensure Andersen is accountable under the terms of the contract. Discussions regarding the applicability of contract provisions designed to protect the State's interests (see page 57) are currently in progress to ensure the completion of the system in time to meet the requirements of the Family Support Act of 1988.

The OAG has recently submitted an amendment to the Department of Information Resources for its fiscal years 1994-1997 Biennial Operation Plan (BOP). The BOP contains a revised project cost summary showing total estimated project costs to be \$47,487,097. The OAG anticipates the source of funding for the TXCSES project to be as follows:

FUNDING SOURCE	AMOUNT
Federal Reimbursement	\$ 39,683,128
State Reimbursement	7,803,969
Total Project Costs	\$47,487,097

Approximately 100 OAG staff are assigned to the project full-time; additional supplemental staff are assigned to the project by area of expertise and as required by the Detailed Work Plan. These include Data Services technical staff, child support enforcement subject-matter experts, and other staff whose participation is required only at specific times during the project.

TXCSES project management estimates that Phase II, which concluded November 30, 1994, required the efforts of approximately 104 full-time equivalents (FTEs) to complete the phase. Phase III, Installation, which began September 5, 1994, will require the efforts of approximately 134 FTEs to see the phase to completion by April 28, 1995. Phase IV, Post-Installation and Certification is estimated to require approximately 122 FTEs to carry out the phase from April 3, 1995, through July 28, 1995.

Selection Of The TXCSES Contractor

The OAG began preparing for the development of the Texas Child Support Enforcement System (TXCSES) in 1989 and submitted its first Advanced Planning Document (APD) to the Department of Health and Human Services (DHHS) Administration for Children and Families (ACF) on June 1, 1989. This planning APD set forth the OAG's initial work plan to address the requirements of the Family Support Act of 1988. In addition, the APD requested funding to assist in the transfer and conversion of a child support enforcement system to meet the needs of Texas.

Upon approval of the APD, the OAG began the development of the Request for Proposal (RFP) to obtain consulting services to assist in the transfer and conversion efforts. OAG requested and obtained DIR approval to obtain consulting services through competitive bids at an estimated cost of \$5.8 million in March 1990. The OAG received two proposals for the contract on April 27, 1990.

The process set forth in the RFB required two committees composed of agency staff to evaluate the proposals based upon the technical merit and cost of the proposals.

Technical Evaluation of RFB

According to the OAG's "RFB Evaluation Overview" guide, the technical review was to follow a two-step approach:

Step One: ERC determines the overall status of each proposal based on a determination of "acceptable" or "unacceptable" in each of the major categories.

Step Two: All proposals with an "acceptable" status are evaluated by the ERC on a point scale basis and referred to the Selection Committee. The scores for each category are reported to the Selection Committee.

The Evaluation and Recommendation Committee (ERC) was to rate the proposals on qualitative factors such as the vendor's background, experience, staffing, and detailed work plan. The OAG's "RFP Evaluation Overview" specified a two-step approach for the ERC's technical review of the proposals. (See text box titled "Technical Evaluation of RFB.") The RFP further stated that the results of all work performed by the ERC would be considered as recommendations only and that the selection of the contractor was the sole responsibility of the Selection Committee. The Selection Committee was to review the results of the ERC in conjunction with an evaluation of the proposed costs.

The final evaluation was to be based on 70 percent of the technical evaluation and 30 percent on the bid price. The RFP also states that the Selection Committee will award the contract to the offeror with the proposal most advantageous to the Attorney General.

The ERC evaluated both of the proposals using the selection process specified in the RFP. The detailed score sheets indicate that both of the proposals were acceptable to the OAG, and were rated very close in technical merit and cost. (The bid of the vendor who was not selected was only \$45,900 less than the Andersen proposal.) Although the OAG could not locate any formal scoring documentation provided by the ERC to the Selection Committee, representations from prior OAG employees, as well as other evidence indicate that the information from the ERC was orally presented to the Selection Committee.

Based on ERC's evaluations, the Selection Committee decided to seek a joint development partnership between both of the vendors which would incorporate the benefits offered in each proposal. The strengths of the vendor not selected included system development experience, the superiority of the financial package and the transferability of the proposed system. Andersen's major strength was their project management ability. The OAG entered into extensive negotiation with both of the vendors in an attempt to make a joint award to both offerors. The negotiation process lasted almost a year, but OAG was unable to obtain the other vendor's agreement to a partnership contract. Based on the technical acceptability of Andersen's original proposal, OAG awarded the contract to Andersen Consulting on August 26, 1991.

Monitoring Of The TXCSES Contract And Contract Amendments

Management of the project is carried out by the OAG's New System Development Project Director and Deputy Director, as well as Andersen's Project Manager and back-up Project Manager. Project management's primary responsibility is to ensure that all deliverables are completed on schedule and in accordance with the Department of Health and Human Services regulations.

Andersen is contractually obligated to manage and deliver all tasks and major products identified in the contract "Statement of Work and Detailed Work Plan," including those in which OAG staff and resources are assigned or used. Assignment of OAG staff to TXCSES design, development, and implementation activities does not release Andersen from its responsibility for completing any work set forth in the contract.

The OAG adequately monitors the contractor's progress by following requirements specified in the contract. These contract provisions require the contractor to:

- Submit weekly oral reports which are followed by written minutes and a schedule for next week's activities. The weekly reports must include problems encountered and status, failures to meet deadlines and proposed solutions, and deviations from the plan.
- Submit monthly written reports encompassing overall status, prior month accomplishments, and outstanding problems and issues, and upcoming activities. Monthly reports are to include GANTT charts.
- Submit quarterly reports including information on the current status of project activities and a summation of monthly reports covered for the quarter.

In addition to monitoring the contractor through status meetings and reports, the OAG has established a Quality Assurance Team which inspects deliverables to determine whether the contractor has complied with requirements before payment is authorized. The OAG also tracks the status of technical quality control of individual programs in the system on a database. From this data base, the OAG generates weekly Technical Quality Control Reports.

The OAG has also established a Quality Assurance Review Board. The members of this board evaluate the status of the project and make recommendations for approval of payment to the contractor for deliverables.

As the majority of the project costs will be funded with federal funds, the TXCSES is also monitored by the Federal Government. The OAG must submit an update to its Advance Planning Document (APD) annually, or when changes are anticipated in the project. As of October 1994, the OAG has submitted seven updates to the initial APD.

In addition, a federal compliance review was conducted in September 1993. In this review, the Department of Health and Human Services (DHHS) assessed Texas'

efforts to develop its automated systems in accordance with applicable federal law and regulations, and in accordance with the project's management plan defined in the State's approved APD. DHHS found the OAG generally in conformance with the approved project management plan.

To date, five amendments have been made to the initial contract. These amendments have been made as a result of the continuous process of reassessment and evaluation necessary in a project of this magnitude and to incorporate new and expanded work plans based on the detailed system design which was completed at the end of Phase I of the project. Contract provisions explicitly provide for these amendments. Based on written and oral representations from the OAG, the amendments were necessary for the following reasons:

- It was initially believed that the South Carolina Child Support Enforcement System would be transferred, modified, and installed as the TXCSES. Upon further analysis by OAG and Andersen, it became apparent that the financial segment of the South Carolina system was inadequate to meet state and federal requirements for the Texas system. This resulted in the need to seek a second transfer system, the Maine Child Support Enforcement System.

The installation of two separate transfer systems required substantially more work from Andersen than was originally anticipated. The installation of the financial component from the Maine system proved to be especially difficult because the documentation furnished with that system was both incomplete and inadequate. This required Andersen to complete or correct the documentation necessary to install and operate this transfer system.

- Until the transfer systems were installed in Texas, it was not possible to gauge the extent of modifications required to handle the processing requirements of Texas' caseload. The Texas child support caseload is many times greater than the caseloads of either transfer state. Changes were required in almost 80 percent of the on-line processes and more than 50 percent of the batch processes in the transfer systems.
- The Family Support Act of 1988 mandated compliance with general guidelines. Specific system standards and requirements regarding the execution of the guidelines contained in that Act have been published gradually over a long period of time, and some regulations have yet to be published. The federal regulatory requirements that clarify the Act were not reflected in the designs of either of the transfer systems. Modifications to the system necessitated by the published federal regulations required much more work by Andersen than was anticipated at the time the original contract was signed.

All of the amendments to the original contract have complied with the requirements of the Consulting Services Act. OAG has obtained the proper approvals for all five amendments from the Department of Information Resources, the Governor's Office (finding of fact), and the Department of Health and Human Services.

The OAG also has established procedures in place to track and monitor the status of change requests. (See text box for details.) Any changes that result in contract amendments must be approved by a member of executive management. Three potential scenarios can occur with approved change requests:

CHANGE REQUEST PROCEDURES

Once a change request has been generated, OAG uses the following procedures to approve and monitor the change:

- All changes are submitted on the prescribed forms and sent to Andersen to log in its change control software.
- The change is assigned to the appropriate OAG analyst/team for research and evaluation. The team assess the impact on its functional area and develops a proposed plan of action.
- The Andersen coordinator assesses the time and cost associated with the change.
- Change analysis is passed to a project management committee for review and approval or denial.

- If the change addresses a federal requirement, then Andersen will complete the change request at no charge because it is within the scope of the project.
- If the change is to address a problem that was already within the general scope of the project, such as an Andersen program that did not function properly, there is no charge to make the change.
- If the change is a result of an enhancement to the system or a change in design (i.e. because the OAG changed its mind or did not like something), and the change is feasible, OAG may incur additional costs for Andersen to implement the change.

The five amendments to the original contract are discussed in detail below:

Amendment One - August 26, 1991 (No \$ Adjustment)

The first amendment to the TXCSES Contract was signed on August 26, 1991, the same day as the original contract. The main purpose of this amendment was to incorporate language requested by the DHHS. No dollar adjustment to the contract resulted from this amendment, nor did it change the payment schedule or retainage clause.

Amendment Two - February 26, 1993 (No \$ Adjustment)

This amendment extended the contract termination date from February 26, 1993, to July 1, 1994. No other provisions within the contract were changed. This amendment was required because of the significant modification and enhancements required to transport and convert child support systems from South Carolina and Maine. The additional time was necessary to allow OAG and Andersen to complete the Detail Design (Phase I) and to better estimate the timeframe required to develop and implement a system that would meet federal certification guidelines.

Amendment Three - July 1, 1993 (\$3,728,615)

This amendment increased the total contract amount to \$7,728,615 and contained a revised "Statement of Work and Detailed Work Plan" to address the expanded scope of the project. This amendment resulted from work completed during the previous 21 months of the project. During that time, the OAG and Andersen had transferred, installed, and tested child support enforcement systems from South Carolina and Maine, and had identified the functionalities of those systems that they wished to incorporate into TXCSES. The project team had also completed the high level design of TXCSES and had a good "road map" of the additional work that was necessary to develop and implement the system.

The majority of the increased costs were associated with additional work related to system design and programming. A significant amount of additional work was required to modify the transfer systems because of the difference in case loads between Texas and the other states.

Amendment Four - June 21, 1994 (No \$ Adjustment)

This amendment extended the contract termination date from July 1, 1994, to September 1, 1994. This two-month extension allowed Andersen to continue to work on the TXCSES project under contract, while negotiating the costs and tasks associated with the final stages of the project.

A large number of changes, tracked through the Change Control process, had been identified and were being addressed; some of the changes were within the scope of the project, while a number of others represented enhancements identified by the project team.

Amendment Five - September 16, 1994 (\$3,895,484)

The final amendment increased the contract total to \$11,624,099 and extended the contract from September 1, 1994, to July 31, 1995. A revised "Statement of Work and Detail Work Plan" were also incorporated into the contract along with a "Letter of Understanding" between the OAG and Andersen. The Letter of Understanding served to document "guarantees" by Andersen that the system pilot would be completed by February 5, 1995, that the system would be operational by February 28, 1995, and that the system would be ready for final certification by July 31, 1995. These date commitments had been made to the Federal Government in the Advanced Planning Document (September 1994).

Between Amendments Three and Five, a number of enhancements and new program area initiatives to the system were identified by program personnel which expanded the work of Andersen. In addition, over 20 bills were passed during the 73rd Legislature (1993) that impacted the child support area. The impact of these bills and the enhancements were assessed and incorporated into the revised contract at a cost of \$917,215.

The contracts between the OAG and Andersen Consulting contain a number of provisions to hold the contractor accountable for delivery of the TXCSES. The contract requires OAG to pay Andersen only after full acceptance and approval of all deliverables within a designated phase or work segment. As of November 1994, Andersen has received payment of only \$1,622,260 of the total contract amount of \$11,624,099.

Some of the other key provisions include:

- performance bond totaling 50 percent of contract amount
- payment retainage of 21 to 25 percent from each payment
- liability of contractor in the event of default
- performance liability for missed deadlines
- provisions for terminating contract if legislative and federal appropriations are not available
- prohibition on employment of Attorney General's former employees
- written, royalty-free, non-exclusive and irrevocable license for the automated system and all supporting materials

The latest amendment to the contract increased Andersen's maximum liability to \$23,248,000 in the event of default or failure to deliver the system as required. The contract also required Andersen to issue a new performance bond in the amount of 50 percent of the new contract amount. This level of liability should be sufficient to cover the OAG's losses should Andersen default on the contract.

The system design is completed and only the unfinished programming, testing, pilot testing, statewide implementation, and federal certification remains. Most of the deliverables/stages are at least 75 percent complete. If Andersen were to default, the OAG would be able to use the remaining funds approved by the Federal Government to hire contract programmers and testers. In addition, the OAG could:

- Cash in and keep the \$5.8 million performance bond.
- Keep the retainage on payments made to date.
- Sue for breach of contract.

MISCELLANEOUS CONTRACTS FOR THE PURCHASE OF COMPUTER HARDWARE, SOFTWARE, AND COMPUTER SERVICES

The OAG entered into four contracts exceeding \$1 million for computer hardware, software, and services. Specifically,

- 1 contract totaling \$1,482,539 was for the purchase of Local Area Network (LAN) equipment and software.
- 1 contract totaling \$1,765,563 was for the purchase of Wide Area Network (WAN) equipment and installation services.
- 1 contract totaling \$1,198,259 was for the purchase of 723 personal computers and installation services.
- 1 contract totaling \$2,305,680 was for the purchase of a mainframe computer upgrade and maintenance services.

Selection Of The Contractors For Hardware, Software, And Services

Prior to selecting contractors for hardware, software, and computer services, the OAG received the necessary approvals from the DIR and, when required, from the Federal Government. The procedures followed by the OAG in selecting the vendors for these four contracts were adequate. Of these four contracts, two were purchased from the state contract list, and two were proprietary procurements awarded through the GSC open market process. The OAG prepared appropriate Requests for Proposals (RFPs) or Invitations for Bids (IFBs) for both of the open market purchases. The OAG adequately justified the proprietary procurements based upon the need to purchase equipment which would meet certain performance standards.

Monitoring The Hardware, Software, And Service Contracts

Generally, the OAG has established adequate policies and procedures for monitoring contracts for the purchase of computer hardware and software. For example, the OAG division receiving computer hardware and software routinely compares the goods received with a purchase order and then forwards a product receipt acknowledgment form to OAG Accounts Payable.

Three of the four purchase contracts had been modified with change orders. These changes were appropriately reviewed and processed. There were a variety of procedures and contract provisions in the four purchase contracts designed to ensure acceptable performance by the contractor. Examples of these procedures and provisions included obtaining performance bonds, conducting acceptance testing prior to payment, and the specification of performance requirements in the RFPs or IFBs.

Appendix 3:

Application Development Contract Amendments

Appendix 3 displays the contract amendments and associated dollar amounts for each information systems development contract we reviewed. It is important to note that many of the contract amendments to system development contracts involved no changes in the total dollar amount of the contract. These contract amendments generally served to further clarify provisions in the original contract or revise deliverable schedules. The system development contract amendments which increased the amount of the contract originated from new legislative requirements, changes in technology which were unknown at the time the original contract was signed, or expansions in scope deemed necessary by agency management or made possible by additional federal funding.

System Development Contract Amendments at the Time of the State Auditor's Review				
Agency	Contract	Original Contract Amount	Amendment(s)	Amount
DHS	Electronic Benefits Transfer (EBT) System	<p>Total contract amount depends on the number of cases. Payment is based upon the number of AFDC and Food Stamp cases. Contractor is paid \$2.00 and \$0.97 per case per month for Food Stamp cases and AFDC cases, respectively.</p> <p>The first full year of EBT implementation is 1996. Based on DHS' estimate of annual Food Stamp and AFDC caseloads the total cost of the contract for 1996 would be \$29,647,149.</p>	1. Clarification of liquidated damages associated with system processing speeds, retailer responsibilities surrounding manual vouchers, processing of commercial transactions, vendor/retailer settlement, delivery of deliverables to the Federal Government, retailer agreements, proprietary software, procedure for contract amendment, adjustments to credit the Federal Government, and timing of payment on manual vouchers.	\$ 0
	Accounts Receivable Tracking System (ARTS)	\$ 4,377,141	<p>1. Allowed the contractor to set up development methodology tools off-site.</p> <p>2. Allowed the contract to procure a different COBOL compiler to replace one which was withdrawn from availability by its manufacturer.</p>	<p>\$ 0</p> <p>\$ 1,563</p>

System Development Contract Amendments at the Time of the State Auditor's Review				
Agency	Contract	Original Contract Amount	Amendment(s)	Amount
ERS	Integrated Employee Benefits System (IEBS)	\$ 2,373,600	<ol style="list-style-type: none"> 1. Revised deliverable schedule, categorized deliverables, and revised contract completion date. 2. Revised deliverable schedule, added new deliverables, deleted deliverables, and reallocated \$357,090 from deleted deliverables to the new deliverables. 3. Revised deliverable schedule, reallocated \$339,126 to other deliverables. 4. Revised deliverable schedule and released payment retainage (\$195,396) for successful completion of deliverables. 	<p>\$ 0</p> <p>\$ 0</p> <p>\$ 0</p> <p>\$ 0</p>
	Integrated Employee Benefits System (IEBS) This contract expanded the system from the original contract to incorporate Legislative changes.	\$ 1,889,000	<ol style="list-style-type: none"> 1. Revised deliverable schedule, changed contract completion date, removed some deliverables, and reallocated funds to new deliverables. 	\$ 0
	Integrated Employee Benefits System (IEBS)	\$ 1,026,000	<ol style="list-style-type: none"> 1. Changed contract completion date and extended period of service. 	\$ 0
	Integrated Employee Benefits System (IEBS) This contract was for additional services necessary due to changes in initial two contracts.	\$ 360,919	(None)	

System Development Contract Amendments at the Time of the State Auditor's Review				
Agency	Contract	Original Contract Amount	Amendment(s)	Amount
PRS	Child and Adult Protective System (CAPS)	\$19,615,077 for two fiscal years. However, an additional \$68,454,715 is specified depending upon the availability of additional federal funding during the next four years. Total six-year contract cost was estimated at \$88,068,792.	1. The contractor agreed to use a shared communications network with DHS. The change order compensated the contractor \$250,000 for this change. The \$250,000 figure was negotiated by PRS and the contractor and compensates the contractor for the additional and revised planning it needed to perform in order to make this change.	\$ 250,000
			2. Revised the payment schedule. The revised schedule moved up some of the payment dates but did not change the total cost of the contract.	\$ 0
			3. Clarified contractor's use of office space and miscellaneous equipment.	\$ 0
			4. Agency requested five PC's and additional office equipment at the project training facility.	\$ 1,087
			5. In connection with the decision to use a shared communications network with DHS, this change order gives DHS permission to purchase routers from Andersen Consulting.	\$ 0

System Development Contract Amendments at the Time of the State Auditor's Review				
Agency	Contract	Original Contract Amount	Amendment(s)	Amount
PRS (Cont'd)			<p>6. Amendment #6 is currently under negotiation. However, PRS expects that the six-year contract costs finalized by this amendment will increase by \$11,525,000. Reasons for the increase include:</p> <p>\$7,171,000 of the increase is due to an increase in the number of workstations from 5,600 to 6,384.</p> <ul style="list-style-type: none"> • Even though the shared network is now being used, the costs associated with the network are actually increasing by \$1,771,000. This is due to the decision to replace a significant number of dial-up connections with dedicated circuits and additional costs to expand LAN connections for additional staff coverage. • Increased scope due to new legislative requirements and the purchase of addressing software and automated fax capability increased the costs by \$1,702,000. • Training for additional staff coverage and increases in outsourced services due to the accelerated schedule increased the costs by \$836,000 and \$1,135,000, respectively. • Operations and maintenance costs were reduced by \$1,090,000. 	\$ 11,525,000

System Development Contract Amendments at the Time of the State Auditor's Review				
Agency	Contract	Original Contract Amount	Amendment(s)	Amount
TEC	Strategic Tax Application Redesign (STAR)	\$ 3,630,000	<ol style="list-style-type: none"> 1. Redesign of subsystems to improve efficiency and integration with other systems was not included within original scope of project. 2. Added new functions which were expected to produce cost savings and increased interest earnings. 3. Added new functions due to the Smart Jobs program passed by the 73rd Legislature. 	<p>\$ 1,726,000</p> <p>\$ 34,000</p> <p>\$ 537,500</p>
	Benefits Payment System Redesign	\$ 326,000 for a feasibility study (with an option for the State to extend the contract) to continue with system design and implementation phases.	1. TEC exercised its option to extend the contract to the next phase.	\$12,650,000
OAG	Texas Child Support Enforcement System (TXCSES)	\$ 4,000,000	<ol style="list-style-type: none"> 1. Added language clarifying OAG obligations. 2. Extended the contract termination date from February 26, 1993, to July 1, 1994, to allow time for significant modification and enhancement required for transporting and converting existing systems from other states. 3. Revised the statement of work and detailed work plan to expand the scope of the project. The scope was expanded after the transfer and installation of systems from other states and the completion of the high level system design. 	<p>\$ 0</p> <p>\$ 0</p> <p>\$ 3,728,615</p>

System Development Contract Amendments at the Time of the State Auditor's Review				
Agency	Contract	Original Contract Amount	Amendment(s)	Amount
OAG (Cont'd)			4. Extended the contract termination date from July 1, 1994, to September 1, 1994. This allowed the contractor to continue working on the contract while negotiating the costs associated with the final stages of the project. In addition, with this amendment, the contractor could also assist the OAG in analyzing the impact of new legislation on the work already completed.	\$ 0
			5. Extended the contract termination date from September 1, 1994, to July 31, 1995, expanding the scope of the project to include needed enhancements identified by program personnel and changes required due to legislation passed during the 73rd Legislative Session. This amendment also revised the statement of work and detail work plan. In addition, the amendment included a letter of understanding from the contractor guaranteeing that the system would be operational by February 28, 1995, and that the system would be ready for final certification by July 31, 1995.	\$ 3,895,484

Issue For Further Study

Examination Of Agencies' Post-Implementation Reviews Of Automated Systems May Be Necessary

Our review focused upon agency selection and monitoring of information systems contractors. However, our review did not include an assessment of agency procedures to determine whether anticipated system benefits were actually realized after the systems were implemented. Planning documentation for the system development contracts we reviewed contained a number of specific anticipated benefits of these new systems. Examples of these benefits included expected cost savings and improvements in efficiency.

In order to more fully determine whether a system has served its purpose, agencies should conduct post-implementation reviews of automated systems to measure whether the anticipated benefits of these systems have been realized. Examination of agencies' post-implementation review procedures may be valuable to determine if the agency has a way to identify benefits realized from the implementation of the system.

Applicable State Statutes

The following laws applied or currently apply to the contracting of information resource goods and services as discussed in this report:

Article 601b: State Purchasing and General Services Act

Article 601b created the General Services Commission and specifies its roles and responsibilities. Purchases or leases of automated information and telecommunications were made pursuant to the competitive bid procedures specified in Article 601b, Section 3.021. This section also prohibited the Commission from awarding contracts for the acquisition of information systems or services unless they were approved by the Department of Information Resources.

The 73rd Legislature amended Article 601b to include Section 3.081 (Catalogue Purchase Procedure.) This section provides the General Services Commission with the authority to designate "qualified information systems vendors" and develop catalogue purchase procedures. The process calls for information resource vendors to supply state agencies with catalogs detailing goods and services they offer. The law then allows agencies to choose commodities they wish to purchase from these catalogs without any requirement for competitive bids or prior existing contracts.

The law also allows state agencies to buy information resource goods and services by determining the "best value" to the agency and negotiating with vendors for the best price and service. "Best value" decisions may weigh not only the initial price of an item, but also its total cost over its useful life.

Article 4413(32j): The Information Resources Management Act

Article 4413(32j) created the Department of Information Resources and specifies its role and responsibilities. Article 4413(32j) prohibited state agencies from acquiring information resource technologies unless the specifications for the acquisitions were submitted to the Department of Information Resources (DIR) for review. DIR was to determine whether the specifications for the proposed acquisitions were consistent with the appropriate final operating plan and amendments.

However, DIR's role in approving information resource procurement was changed during the 73rd legislative session. Article 4413(32j) now requires only that agency projects which will exceed \$1 million to be approved by DIR in the agency's biennial operating plan.

Article 6252-11c: Consulting Services Act

This article specified requirements for state agencies when contracting for consultant services in excess of \$10,000. The statute was recodified as Government Code, Chapter 2254, Subchapter B, effective September 1, 1993.

Article 6252-11c was amended by the 72nd Legislature in 1991 to require agencies to obtain a "finding of fact" from the Governor's Office of Budget and Planning stating that consulting services are necessary. Any contract executed prior to the required finding of fact is void.

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Appendix 7:

Management's Responses

Texas 
Department
Human^{of}Services

COMMISSIONER
Burton F. Raiford

January 23, 1995

Ms. Cynthia L. Reed, CPA, Project Manager
Office of the State Auditor
206 E. Ninth St., Suite 1900
Austin, TX 78701

Dear Ms. Reed:

Re: Management's Response to Report

We are pleased to provide the following response to the recommendation included in the recently completed report on Administration of Contracts for Information Systems Purchases during FY 1993.

We agree with the recommendation; specifically, we will take under advisement using an outside consultant with expertise in information system development to independently analyze contract amendments for material changes.

We appreciate the professionalism of your staff in performing this project.

Sincerely,


Burton F. Raiford

BR:cfl

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TEXAS DEPARTMENT OF PROTECTIVE AND REGULATORY SERVICES

EXECUTIVE DIRECTOR
Janice M. Caldwell, Dr. P.H.
January 26, 1995

Ms. Cindy Reed
State Auditor's Office
206 East 9th Street, Suite 1900
Austin, Texas 78701

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Dumas

Dear Ms. Reed:

Thank you for the opportunity to review your draft report regarding the Administration of Contracts for Information System Purchases. The contract process is increasing in importance in agencies such as ours and your assessment is helpful in examining our performance in this area and making appropriate changes.

After reviewing your draft report, there are two clarifications that we would like for you to consider. First, on page 31, the report indicates that the project is currently four months behind schedule. While it is true that we are four months behind in our original schedule due to delays of the federal decision, we were able to shorten the application design by combining releases one and two and shorten training requirements by using computer based training, thereby allowing us to maintain the original end date.

Also, on page 33 where the report discusses the change order, the last item associates the increases in the cost for site preparation and equipment installation with the acceleration of the schedule. While acceleration was one factor that increased these costs, two other factors contributed to this cost increase: the increased coverage and the reduction in the dial-up sites.

TDPRS appreciates your acknowledgment of the benefits of the use of an independent third party in preparing cost analysis and assisting in the change order process. The project has benefited from the expertise in cost analysis and negotiation from our monitoring contractor, Spectrum Consulting.

Thank you again for this opportunity to review the report prior to its release.

Sincerely,

Rosemary Youngblood ^{RAY}

Rosemary Youngblood
Information Resource Manager

RAY:daw

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Representing Labor

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Administrator

TEXAS EMPLOYMENT COMMISSION

Austin, Texas 78778-0001



January 26, 1995

Ms. Cindy Reed
Project Manager
Information Systems
Contract Project
State Auditor's Office
206 E. 9th St.
Austin, Texas

Dear Ms. Reed:

Re: Report on Contract Administration for Information Systems Purchases

The Texas Employment Commission reviewed the Report on Contract Administration for Information Systems Purchases and wishes to make the following comments:

Consider using cost models or other "state of the art" techniques to estimate information system requirements.

We are unclear on your definition of information systems requirements. It appears you are trying to determine a valid cost rather than specific application changes required to operate a system. If that is what is intended, it is important to note that developing cost estimates before conducting the Feasibility Study and Systems Design phase of a project is unrealistic. Cost estimates made prematurely lead to unfounded expectations; increase the risk of project failure due to poor system design decisions made in an attempt to bring the development costs into line with cost projections that were made too early to be valid; and possibly reduce the quality and experience of the project's staff in an effort to contain project costs. Only when the Systems Design phase of the project has been completed can realistic estimates of information systems requirements be computed. Certainly at that point in time, using cost models or other "state of the art" techniques to develop costs would be appropriate.

Analyze the cost benefit of continuing the contract with the initial contractor once the detailed design of the system is complete.

While we concur there should be some type of cost benefit analysis done upon completion of a detailed design, it is difficult to accomplish that analysis without delaying the project and bidding the detailed design to other vendors. Clearly, the original contractor has an advantage. Their people and equipment are in place and on-site; they are extremely

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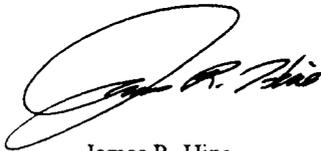
knowledgeable of the design of the new system; they can begin work immediately; and they should be able to offer a lower price than a vendor not currently involved in the project because there is no "learning curve" necessary to become familiar with the project. For these reasons, the focus of any evaluation should be on the reasonableness of the estimates and competitiveness of the hourly pricing needed to accomplish those estimates that are being proposed by the original vendor. If those estimates or pricing are not appropriate, or the original vendor has exhibited marginal performance, then an agency should consider a bid and a formal solicitation for proposals from competing vendors. Keep in mind that a second solicitation will delay the project; will idle staff that are committed to the project; will consume additional staff time developing the specifications and proposals, and could result in getting little vendor competition. Competing vendors will be reluctant to take the time and effort to submit a proposal when the advantages of the original contractor clearly favor their selection.

Consider using an outside consultant with expertise in information systems development to independently analyze contract amendments.

TEC recommends that independent analysis of contract changes be required for those changes that individually or cumulatively exceed a specified percent of the original cost of a specific project phase or a minimum dollar threshold. In addition, in order to reduce the expenditure of staff time and funds and avoid project delays, especially when little risk exists, it is recommended that this process only be required of large development projects and that consideration be given to agency peer review teams rather than incurring the additional costs of an outside analyst.

Your consideration of the points discussed above will be appreciated.

Sincerely,



James R. Hine
Deputy Administrator

mc: Frank Almaraz, Internal Auditor

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EMPLOYEES RETIREMENT SYSTEM OF TEXAS

18TH & BRAZOS STREETS
P. O. BOX 13207
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(512) 476-6431

January 23, 1995

Ms. Cindy Reed
State Auditor's Office
206 East Ninth Street
P.O. Box 12067
Austin, Texas 78701

Dear Ms. Reed:

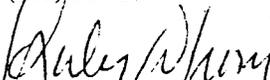
Thank you for the opportunity to provide feedback regarding the draft report on "Contract Administration for Information Systems Purchases." We appreciate your comments and the thorough work performed by your staff during the analysis of contracts relating to the Integrated Employee Benefits System (IEBS).

We have carefully studied the report and concur with your overall facts and findings, assessments, and recommendations. The portion of the report dedicated in particular to the Employees Retirement System of Texas (ERS) accurately reflects contract administration for the IEBS.

The ERS will strive, as your recommendation suggests, to improve estimating techniques for medium to large automation projects through formal techniques and the utilization of historical project data as input to the project planning process. We will also select multiple contractors through competitive processes to meet specific project requirements, once the planning and design phases are complete.

The ERS will also utilize independent analysis, as it has in the past, to assess contract amendments during future application development projects. Overall, we will continue to manage contracts in a manner consistent with our fiduciary responsibility and with consideration to the needs of the State as a whole.

Again, thank you for your efforts. If I can be of further assistance, please contact my office at (512) 867-3174.


CHARLES D. TRAVIS
Executive Director

CDT:RM:kjc

cc: James A. Adkins, Deputy Executive Director
Steven J. DeRemer, Acting Deputy Director for Information Systems
William E. Palmquist, Director of Internal Auditing

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Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

February 2, 1995

Ms. Cindy Reed
State Auditor's Office
P.O. Box 12067
Austin, Texas 78711-2067

Dear Cindy:

We have reviewed the SAO's draft report on *Information Systems Contract Purchases*, transmitted under a cover memo dated January 9, 1995, along with subsequent revisions transmitted on January 19 and January 27, 1995. We appreciate being given the opportunity to review this draft.

The OAG offers the following comments with regard to the three across-the-board recommendations offered in the SAO report, with the understanding that these recommendations are offered for future projects, or projects that are still in the initial design stage.

- **SAO Recommendation:** *Consider using cost models or other "state of the art" techniques to estimate information system requirements.*

OAG Comment: Recognizing the inherent complexities of large information systems application development projects, the OAG agrees that consideration of cost models or other estimating techniques could be of value in estimating system requirements more accurately. The OAG further suggests that the identification of proven models or techniques is an appropriate task for the State of Texas' overall information systems planning efforts.

- **SAO Recommendation:** *Analyze the cost-benefit of continuing the contract with the initial contractor once the detailed design of the system is complete.*

OAG Comment: The OAG agrees that a post-detailed design cost-benefit analysis is appropriate for major application development projects. In fact, the OAG's original New System Development Project contract provided for just such a reassessment.

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- **SAO Recommendation:** *Consider using an outside consultant with expertise in information system development to independently analyze contract amendments.*

OAG Comment: The OAG agrees that the possible use of an outside consultant to analyze substantive contract amendments (amendments addressing major scope of work, resource, and/or schedule changes) could be of considerable benefit. Again, the OAG suggests that the identification of proven expertise of this nature is a task that merits attention as part of the State of Texas' overall information systems planning efforts.

With regard to the OAG's New System Development Project, we agree with the SAO's narrative on the OAG's Request for Proposal (RFP) evaluation process, including the discussion of the extensive contract negotiation efforts, which preceded the OAG's award decision. We were also pleased to see that the OAG's consultant contract award, monitoring, amendment, and performance enforcement procedures compare favorably with those used by other state agencies and are in compliance with applicable state and federal regulations.

The OAG also commends the SAO for identifying and discussing factors beyond basic contract administration, such as changes in federal and state law, that may affect the cost or schedule of any information system development project. It is important to recognize and note that projects of this complexity and duration will always be affected by unanticipated events or circumstances, despite an agency's best planning efforts.

Finally, the OAG would like to recognize the professionalism of the SAO staff, who conducted this audit and express our appreciation to the SAO for its cooperation in scheduling the required audit field work to minimize disruption to the New System Project. We look forward to receiving a copy of the final report.

Sincerely,



Jorge Vega
First Assistant Attorney General of Texas

cc: Gay Erwin, Office of the Attorney General
Larry Crawford, Office of the Attorney General
Deepak Chawla, Office of the Attorney General

Copies of this report have been distributed to the following:

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Representative Robert Junell, Chair, House Appropriations Committee
Representative Tom Craddick, Chair, House Ways and Means Committee

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