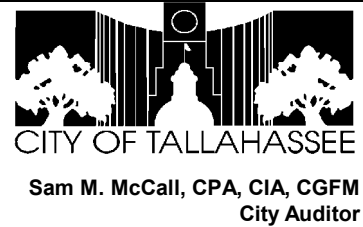


Project Progress Report #2

As of April 30, 2001



“Technology Integration Project”

Report #0130

July 9, 2001

Summary

The planning phase (Phase 1) for the Technology Integration Project (TIP) was completed December 2000. In February 2001, the contract with the consultant, Convergent Group, Inc., (Convergent) was terminated. The project is on hold while the City focuses on other implementation projects that directly impact the TIP. The purpose of this report, the second in a series on the TIP, is to:

- document the current status of the project,
- provide assurance as to compliance with City policies and procedures and contract requirements,
- communicate the status of outstanding significant issues previously identified in our report (Technology Integration Project Planning Phase, #0101, issued October 3, 2000), and
- identify any new issues as of April 30, 2001.

We can provide assurances that the TIP project has substantially complied with City policies and procedures and contract requirements. Specifically,

- ✓ contract deliverables were received and accepted before payments to Convergent were processed;
- ✓ a change order to increase the contract amount by \$10,000 was processed according to City policies;
- ✓ the contract termination was processed according to City policies and contract requirements; and
- ✓ a retainage account was set up but never funded due to contract termination.

In Table 1 of this report, we have summarized the previous relevant components, as reported in Report #0101, that needed to be improved and the current project components that have been completed satisfactorily, are still in progress, or have not been completed. Table 1 identifies areas where improvements can still be made including:

- overall project plan documentation;
- budget monitoring; and
- utilization of the Information Systems Services (ISS) Steering Committee.

In addition to assurances provided above, Table 2 summarizes the previously identified significant issues in the first report that need to be resolved as TIP moves forward into Phase II. For issues listed, we have included the status and any additional plans by management to address or resolve each issue. The

extent to which these or such other alternative resolution approaches are utilized by management will be addressed in our next report on the project's progress. These issues are listed at this time for information and for management's further analysis and resolution. The issues include:

- ◆ call center configuration;
- ◆ data accuracy and sharing;
- ◆ telecommunications infrastructure;
- ◆ 800 MHz radio/data channels;
- ◆ potential duplication of system functionality;
- ◆ communication;
- ◆ network security;
- ◆ managing business changes; and
- ◆ availability of technical and functional resources.

Scope, Objectives, and Methodology

The Office of the City Auditor is providing assurance and consulting services to assist management throughout the implementation of the TIP project. As part of these services, we will be issuing a series of reports.

Our objectives are to:

- determine compliance with City policies and procedures and contract requirements;
- provide an independent assessment of risk management and project controls;
- report on the project status and accomplishments as of April 30, 2001; and
- communicate the status of previously identified significant issues, and any new issues as of April 30, 2001.

To achieve our objectives, we participated in a consulting capacity on the project team and executive steering committee, reviewed key documentation, and conducted interviews with key staff on the project team and executive steering committee. This audit was conducted in accordance with generally accepted government auditing standards.

Background

Project Life Cycle

Every information technology (IT) project follows similar life cycle phases, such as:

Planning Phase – defining business problems, potential solutions, project scope, system interfaces, systems and software requirements, and resource needs. Other

activities include identifying risks, costs and benefits associated with each solution, developing a project plan, and obtaining funding.

Acquisition Phase – developing a request for proposal and evaluation criteria, evaluating proposals, selecting a vendor, and negotiating the contract.

Implementation Phase – managing the vendor contract and project staff, installing software, defining business rules and processes, converting data, planning and performing testing, preparing technical and user documentation, and putting the system into production.

Post-Implementation Evaluation Phase – evaluating to determine if the system meets the users’ needs and requirements.

Project Description

TIP was formally initiated in summer 1999. The project’s mission is to enhance the City’s utilities customer services by employing new technologies to manage operations more efficiently and effectively. It strives to develop and implement a seamless integration of the City’s major automated systems with a suite of new utilities applications. The project team consists of key staff from Information Systems Services (ISS), Electric Operations, Water Utilities, Utility Customer Business Services, and Convergent.

In December 1999, the City entered into a contract with Convergent to provide professional technical and project management services to plan and implement the new utilities applications and an integration platform at a cost “not to exceed” \$9,988,220. Convergent proposed to achieve the project’s objectives through two phases.

IT Project Phases	Convergent’s Phases
Planning	Phase I
Acquisition	Phase II
Implementation	
Post-Implementation Evaluation	Not Included in Contract

During the planning process, the project scope was refined to plan for the acquisition and implementation of four applications:

- 1) CCM/IVR - Call Center Management/Interactive Voice Response;
- 2) OMS - Outage Management System;
- 3) MWM - Mobile Workforce Management; and
- 4) Integration - the necessary software to integrate these three applications with each other and selected existing City applications.

The CCM/IVR increases the efficiency and effectiveness of handling customer telephone calls. The IVR is an automated telephone answering system that allows callers to make choices. The CCM routes calls to the appropriate location, including a customer services representative (CSR) in the call center. The CCM/IVR shares data with the utilities Customer Information System (CIS) and will be used to initiate customer utilities requests and update customer records. The CCM/IVR will also be used to collect electric outage

information from customers for the OMS.

The OMS is designed to assist the Electric Systems Control Center in managing electric outages throughout the City using information collected from the CCM/IVR, Geographic Information Systems (GIS), and other electric monitoring resources. This information helps identify where electrical problems are located to facilitate faster corrective measures. Then, work assignments can be dispatched to crews in the field via the MWM.

The MWM is a workorder distribution system that uses mobile data terminals to communicate among customer service representatives, utilities dispatchers, and field crews via the 800 MHz radio system. Crews can receive work assignments and can, in turn, report the status back to the call center representatives and dispatchers while remaining out in the field. Workorders can originate from the CIS or within the MWM.

Figure 1 (on the next page) provides a basic illustration of how these TIP applications are intended to work together to improve utility services to customers during an electrical power outage.

The integration software component will involve implementing a “middleware” application, which will function as a consolidator, enabling one application to communicate with another. The TIP scope includes the integration of the CCM/IVR, OMS, MWM, CIS, and GIS.

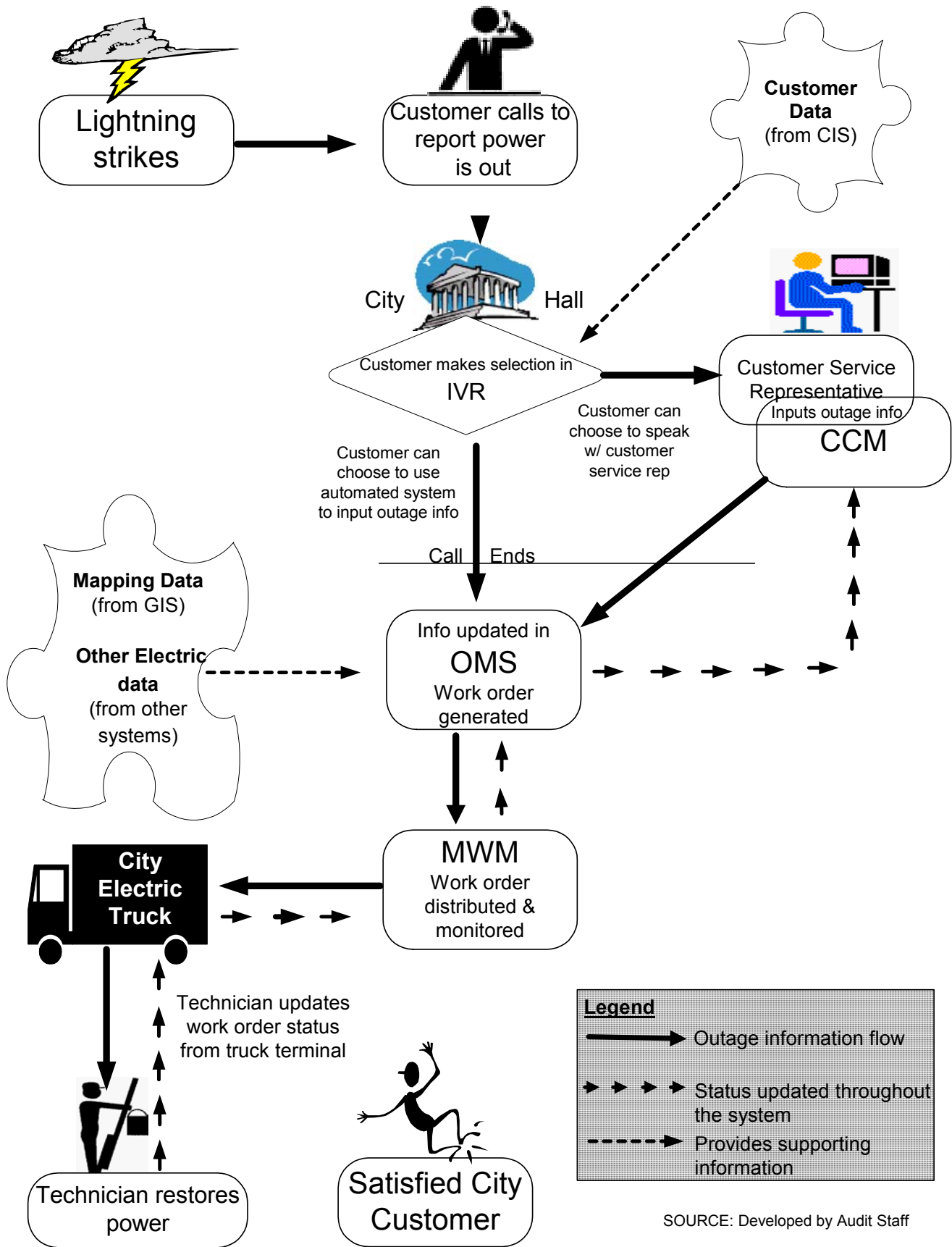
Project Status

Since our last report, Phase I, originally scheduled to be completed in May 2000, was completed in December 2000. Phase I culminated in the development of an IT implementation and deployment plan. On February 1, 2001, the City and Convergent mutually agreed to terminate the contract for the TIP project. The City accepted all contract deliverables and all agreed upon payments were made to Convergent (\$586,019). As of April 30, 2001, the City has expended approximately \$720,400 of the approved project amount of \$9,988,220. The City will not utilize the services of Convergent to proceed to Phase II, acquisition and implementation of the TIP applications.

At this point in time, the TIP project is “on hold.” The executive steering committee has directed the TIP project team to focus on current implementation projects that directly affect TIP (GIS and CIS, both projected to be completed by December 2001) and to continue researching the market for TIP software applications that may meet the City’s needs. In addition, the executive steering committee will be hiring a new Project Manager to manage the TIP project and researching the development and implementation of a web application to interact with utility customers and CIS.

Also in February 2001, the City and Convergent mutually agreed to terminate the contract for electric data migration services in the GIS Project. As noted above, this project has not been completed and, to date, the electric data has not been migrated or formatted in order for it to be utilized properly by the OMS.

Figure 1
How TIP Applications Will Work Together To Improve Utility Services To Customers
During An Electrical Power Outage



Assurances and Accomplishments to Date

In Table 1 below, we have summarized the prior report components that needed to be improved and the current relevant project components that have been completed satisfactorily, are still in progress, or have not been completed. As described in the project life

cycle above, there are common activities conducted during each phase of an IT project. Some of these activities are considered “good business practices,” while others are required by City administrative policies and procedures, or by the vendor contract. Table 1 provides a listing of the planning components that were identified for this project, the status, and auditor comments (if applicable). The source of each required component is also provided.

Table 1

Prior Report Components that Needed to be Addressed	Status/Comments
Applicable City Policies and Procedures	
Develop a draft Project Management Plan (PMP). Source: ⇒ Administrative Policies & Procedures (APP) #801, “IT Acquisition Policy”	<ul style="list-style-type: none"> ○ There is currently not a designated project manager for the TIP project. A project plan has not yet been developed. <p><u>Comment:</u> We recommend that the new project manager develop and utilize a project plan to effectively manage the project.</p>
Present project management plan to ISS Steering Committee for approval. Sources: ⇒ APP #402, “Information Systems Services Steering Committee” ⇒ APP #801, “IT Acquisition Policy”	<ul style="list-style-type: none"> ○ No change from prior report. The ISS Steering Committee has not met and addressed the TIP project since summer 1999. <p><u>Comment:</u> The purpose of this Committee and related policy should be re-evaluated as to how it can be most effective.</p>
Direct Activity Management – managing the project budget. Source: ⇒ APP #630, “Internal Control Guidelines”	<ul style="list-style-type: none"> ○ The new project manager will be responsible for monitoring the project budget and expenditures. <p><u>Comment:</u> We recommend that the Project Manager meet with Budget staff to identify and implement procedures to better monitor project budget and expenditures.</p>
Current Relevant Project Components	Status/Comments
Applicable City Policies and Procedures	
Execution of Transactions and Events – should be authorized and executed only by personnel acting within the scope of their authority, and they should be recorded. Sources: ⇒ APP #630, “Internal Control Guidelines” ⇒ City Commission Policy #218, “Capital Projects Management” ⇒ City Commission Policy #242, “Procurement”	<ul style="list-style-type: none"> ✓ All contract deliverables were received and accepted before payments were approved and processed (as per APP #630). ✓ A change order was properly approved by the City Manager to increase the contract amount by \$10,000 to cover additional travel expenses by Convergent (as per City Commission Policy #218). ✓ Contract termination was properly authorized by the Director of Procurement (as per City Commission Policy #242CP).

Contract with Convergent, Inc.	
There were nine sections in the contract scope of work with a total of 30 deliverables due to the City.	✓ All deliverables were received and accepted by the City and all payments have been made.
Retainage Account – City was to retain 20% of charges for custom software and Convergent services included in each payment up to \$1 million in an interest-bearing account until final acceptance of all deliverables.	✓ Retainage account was set up, but due to contract termination, it was not funded. Per mutual agreement, the contract amount was paid to Convergent and did not include any interest.
Special Conditions: “Other terms and conditions may be added to this agreement in the future by mutual written consent of both parties.”	✓ Termination of contract was attained via mutual written consent of the City and Convergent.

Table Legend: ✓ Completed Satisfactorily ♦ In Progress ○ Outstanding, Not completed

In summary, we can provide assurances that the TIP project has complied with City policies and procedures and contract requirements, except as stated above in Table 1; and that contract deliverables have been received and accepted before payment to Convergent was processed. We have provided recommendations relating to budget monitoring, the project management plan, and the ISS Steering Committee.

There were many issues identified by the project team that will impact the project’s success. They were able to resolve many of these issues, but there are some significant issues that still need to be resolved to ensure the successful implementation of the project. It is important to note that identifying and resolving significant issues are normal activities for every project team. If they are unable to resolve an issue, then they are to educate the executive steering committee regarding the issue, recommend alternative solutions, and seek their guidance.

Status of Significant Issues Previously Identified

The left column in Table 2 below provides those significant issues that were identified in the first progress report. The right column provides management’s actions, the current status, and auditor comments (if applicable). These issues, until resolved, will continue to impact the TIP project.

The extent to which these or such other alternative resolution approaches are utilized by management will be addressed in our next report on the project progress of TIP. These issues are listed at this time for information and for management’s further analysis and resolution.

Table 2

Significant Issues Previously Identified	Status/Management Actions
Call Center / Interactive Voice Recognition Systems	
Configuration and structure of City’s customer services (utilities, all City functions, etc.) call center needs to be determined. City must decide whether to have: 1) a centralized call center location to answer all calls in one physical location; or 2) a decentralized call center where calls are made to one number, and are routed to numerous locations based upon customer need. This decision will impact staffing needs and reporting status as it relates to supervision, and could result in staff shifting either location or organizationally in order to best meet the needs of the call center configuration.	○ No change from prior report. No decision made to date. The executive steering committee is waiting to make a decision until there is adequate information, such as costs, advantages, disadvantages, and impact to division staffing.
Customer telephone data in CIS needs to be accurate for IVR and CCM to work effectively. Customer telephone numbers in the current CIS (legacy application) are estimated by City staff to be approximately 30% accurate. The telephone number, while important, is not a critical field in the current system in that it will not impact the operation of the system. However, in the TIP applications, the telephone number will be critical in the call center application and IVR to pre-identify callers.	♦ No change from prior report. The CCM/IVR project lead is exploring opportunities to improve the telephone data in the current CIS that, in turn, will improve the data in the new CIS.

<p>There is no identified solution to enable critical customer information in the new CCM to be shared with the current CIS (mainframe) application. Without the ability to share data between these two applications, customer requests and information initiated in the CCM will not systematically update the information in the CIS. If there is different data in the two systems, it can result in unanswered customer requests or call center representatives utilizing inaccurate information when responding to customers.</p>	<p>✓ This issue is resolved by the project delay, since any new CCM will not be implemented until the new PeopleSoft CIS has been implemented.</p>
<p>Outage Management System</p>	
<p>GIS electric data needs to be up-to-date in the City standard format for the outage management system to be effective. The electric GIS data has not been migrated into the City's standard GIS program, and therefore cannot be used by other application systems. The outage management system relies upon the electric GIS data to be able to identify outage sources and manage trouble outage work. According to Convergent, the OMS can be implemented with incomplete electric GIS data, but the system will not operate as effectively as it could with complete and accurate data.</p>	<p>♦ The contract with Convergent to migrate the data has been terminated and the data is not yet ready to support an OMS. The City's GIS Project Manager is exploring alternatives to make the data ready, and expects to have the data ready by December 2001.</p> <p><u>Comment:</u> We consider this a high risk that will impact various system projects.</p>
<p>Mobile Workforce Management System</p>	
<p>There is no overall plan for the future usage and maintenance of the 800 MHz radio/data channels. As the City plans to implement more technologies that use the 800 MHz radio or data system, there is no strategic plan for funding to acquire additional channels, licenses, maintenance resources, or management resources. Increased usage planned for departments within the City and by non-city agencies indicates that plans for the future are imperative. For example, the City needs to consider the limited available channels and licenses and the costs associated with increased maintenance when planning for new technologies.</p>	<p>♦ ISS has an 800 MHz project manager responsible for managing all uses of the 800 MHz voice and data radio channel, and ISS has taken steps to purchase additional channels. City management agrees that there needs to be an oversight committee for the 800 MHz data system and is taking steps toward putting that committee in place.</p> <p><u>Comment:</u> We consider this a high risk that will affect multiple system projects.</p>
<p>The current IT implementation plan does not provide for project-related workorder information collected in the MWM system to be shared with the Project Costing module in the Financials system. The workorder information collected in the MWM will not be shared with the project costing information in the Financials system. For managers to analyze project work and costs, they will need to extract data from these two systems independently and use a separate database or spreadsheet application.</p>	<p>♦ This issue is sidelined at this time. While the IT implementation plan developed by Convergent will provide useful information, it does not include specific user requirements and the desired system design. It is still the intent of management to have the TIP systems integrated with vital City systems (HRMS, Financials, CIS, etc.)</p>
<p>Overall Project</p>	
<p>There may be duplication in system functionality and implementation efforts among concurrent system implementation projects, including CIS, Financials, MWM, and CCM/IVR. There are several cases where the system being considered contains functionality that currently exists in another City system. For example, the new CIS being implemented contains some call center, outage, and mobile workorder functionality. The new Financials system being implemented contains some workorder functionality. While the existing systems' functionality may not meet the business process needs, it should be fully evaluated for its potential value before additional funds are expended.</p>	<p>♦ Efforts have been made by project managers to share information on the various systems being installed.</p> <p><u>Comment:</u> This continues to be an issue that affects all systems being implemented.</p>

<p>Communication and information sharing needs to be increased and improved with Convergent and within the project team. The planning meetings have not provided an open environment for information to flow openly and freely between Convergent, the Project Manager, and the project team. For example, Convergent has regularly delivered documents and information to the City late and required an unrealistic turn-around period from the City; Convergent has set a very aggressive project schedule of one year despite repeatedly expressed concerns by the project team; City project team meetings have been rushed due to staff's other responsibilities, and information has not been shared between project leads so that the entire project team understands each other's system.</p>	<p>✓ The communication issues with Convergent were eliminated when the contract was terminated.</p> <ul style="list-style-type: none"> ◆ The project team has recognized the importance of good communication and has taken many steps to improve internal communications. The team is aware that this must be periodically re-evaluated to be a strong and effective project team. ○ At this time, there is not a designated project manager for the TIP project. <p><u>Comment:</u> We consider this a high risk for this project.</p>
<p>Network security is generally lax. During Convergent's assessment of the system architecture, they conducted a general assessment of the City's information systems security. Results from their assessment included: the City has not developed nor implemented sound security policies and procedures; the network is not actively monitored, and Convergent was able to penetrate the network through a supposedly inactive port; no one person is clearly responsible for security, and there is a separation of duties violation regarding who is responsible for information security.</p>	<ul style="list-style-type: none"> ◆ Progress has been made, in that ISS: <ul style="list-style-type: none"> ⇒ implemented network password controls ⇒ is deploying WindowsNT workstations to lock down employees' computers so that non-approved software cannot be downloaded or installed. <p><u>Comment:</u> We consider network security a high risk for the City.</p>
<p>It has not been decided as to how Utility Services will manage the business process changes resulting from the implementation of enhanced technology. The major technology projects in progress (i.e., CIS, TIP, Financials) encourage management to redesign business processes to obtain the available increased efficiencies. Management needs to determine how to implement their plan to address changes in business processes, employees' current and future job duties and skills, and needed training to provide employees these new skills.</p>	<ul style="list-style-type: none"> ◆ This issue is delayed until the City recommences activities relating to the TIP project.
<p>There is a risk that this project can be delayed due to the lack of technical and functional resources. The technical lead position on the project team is currently vacant, and there are other major technical implementation projects in progress affecting technical staff resources. In addition, the functional project leads for each of the applications being acquired and implemented for TIP are section supervisors with other Utility Services responsibilities.</p>	<ul style="list-style-type: none"> ◆ The executive steering committee is aware of this issue. Technical staff retention is a problem for the City of Tallahassee as well as for other governments. Higher pay for such employees in the private sector creates an environment of high turnover. ISS will dedicate the staff necessary to implement TIP. <p><u>Comment:</u> We consider this a high risk among all the system projects.</p>

Table Legend: ◆ Currently being addressed – in process ○ Not currently being addressed – Outstanding
 ✓ Resolved

In summary, most of the previously identified significant issues stated above remain unresolved, which may be attributed to the project delay. The only additional issue noted is the absence of a project manager to manage the TIP project. Two of the resolved issues may also be

attributed to the project delay and/or contract termination. Those remaining issues will continue to have an impact on the success of TIP as it moves forward. These issues are listed at this time for information and for management's further analysis and resolution.

Conclusion

This report has communicated the project progress and accomplishments, as well as the status of the significant issues previously identified. Our office will continue to provide assurance and consulting services throughout the life of this project. The objectives of our future reports will focus on the project's acquisition and implementation activities. The release of our next report will depend upon the progress of the TIP-related activities.

We would like to thank the TIP executive steering committee, project manager, and project team for their cooperation and assistance during this progress report.

Appointed Official Response

City Manager:

I appreciate the status report on this project and the continued proactive participation by the City Auditor and his staff in our technology projects.

As indicated, the TIP executive steering committee will be meeting to determine the course of action and next steps for this project.

Copies of this progress report #0130 (Project #0104) may be obtained via request by telephone (850 / 891-8397), by FAX (850 / 891-0912), by mail or in person (City Auditor, 300 S. Adams Street, Mail Box A-22, Tallahassee, FL 32301-1731), or by e-mail (dooleym@talgov.com)

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