



Audit Report

Austin City Council

Mayor
Will Wynn

Mayor Pro Tem
Jackie Goodman

Council Members
Daryl Slusher
Raul Alvarez
Betty Dunkerley
Brewster McCracken
Danny Thomas

City Auditor
Stephen L. Morgan

Deputy City Auditor
Colleen Waring

311 Citywide Customer Information Center (CIC) Implementation

August 2004

**Office of the City Auditor
Austin, Texas**

Audit Team

Joan Ewell, CISA, Auditor-In-Charge
Julie Nathanielsz

Assistant City Auditor

C'Anne Daugherty, CPA, CIA

You may request a hard copy of this report or download a copy in PDF format from our website at <http://www.ci.austin.tx.us/auditor>. You may also contact our office by email at oca_auditor@ci.austin.tx.us.

Please request Report No. AU04103.

Alternative formats are available upon request.
Please call (512) 974-2805 or Relay Texas #711.



Printed on recycled paper



Office of the City Auditor

206 E. 9th Street, Suite 16.122

P. O. Box 1088

Austin, Texas 78767-8808

(512) 974-2805, Fax: (512) 974-2078

email: oca_auditor@ci.austin.tx.us, web site: <http://www.ci.austin.tx.us/auditor>

August 24, 2004

To: Mayor and Council Members

From: Stephen L. Morgan, City Auditor

Subject: Audit of 311 Citywide Customer Information Center (CIC)
Implementation

We are pleased to present our audit report of the City's implementation of the 311 Citywide call center, currently scheduled for go-live in late 2004. This audit set out to determine what is and is not being implemented and to identify associated risks. We have scheduled completion of the audit to provide early feedback before go-live.

We found that management is using a phased approach to planning and implementing the CIC and that while the approach to Phase I implementation appears sound, some expectations of the CIC remain to be verified, and a comprehensive plan for fully developing the CIC is still needed.

The CIC will manage service requests for a limited number of departments and will transfer calls for other service requests to the appropriate departments. As a result, the data from the CIC will not provide a complete picture of all citizen requests.

Costs identified for the CIC are currently projected at \$2.5M through FY05, although issues of budgeting and cost tracking need to be addressed. While our ability to make comparisons with other cities is limited, Austin's identified costs to-date appear low. However, there are indications that both operating and implementation costs could increase. We also identified some issues for further study that we suggest management address.

As a result of our work, we issued five recommendations. Management concurs with all of them.

We appreciate the assistance and cooperation of the CIO and staff at CTM, Austin Energy, and the Public Information Office in conducting this audit.

Stephen L. Morgan, CIA, CGAP, CFE, CGFM
City Auditor

311 CITYWIDE CUSTOMER INFORMATION CENTER COUNCIL SUMMARY

This report presents the results of our audit of the City's implementation of the 311 Citywide Customer Information Center (CIC). This audit was approved by the Council Audit & Finance Committee as part of our office's 2004 service plan. The purpose of our work was to determine what is and is not being implemented and to identify associated risks.

We found that management is using a phased approach to planning and implementing the call center, in part due to staffing and funding constraints, and in part to allow a learning period with baseline functionality before moving on to planning and implementing more advanced features. Phase I of the CIC implementation, currently underway, includes establishing the call center facility and systems and integrating selected departments and service areas into the call center.

Departments are being implemented into the call center at three different levels, allowing the call center to manage requests for many of the more frequently requested services, provide answers to frequently asked questions, and transfer calls requesting other City services not handled by the call center. Because of the limited service areas configured in the CIC Customer Service Request system (CSR), the CSR data and reports at Phase I will not be a complete representation of citizen input and requests.

We found that management's approach to implementation in Phase I appears sound, addressing some best practices. The approach uses a systematic process for integrating service areas into the CSR while allowing a testing period and gradual increase in call volume before final go-live.

However, a comprehensive plan does not yet exist for expanding system capability beyond Phase I, limiting policy makers' ability to give input on the direction of future plans. Some features that better facilitate service delivery, while discussed or anticipated by management, are not included in Phase I. These are deferred for further assessment and include mobile interfaces with field crews, mapping of requests by geographic area, and establishing interfaces with various City systems.

Costs for the call center are estimated at approximately \$2.5 Million through FY05, although issues of adequate budgeting and cost tracking remain to be addressed. We found that past audit recommendations on improving budgeting and cost tracking of IT projects in the City had not been implemented for the CIC project. In addition, we have not verified that funding for FY05 will be adequate to achieve identified enhancements.

Because cost tracking in Austin has been problematic and because available cost information for other cities is incomplete and may not be fully comparable, we are limited in our ability to draw conclusions from comparing Austin's CIC costs to those of other cities implementing 311 call centers. Nevertheless, we have included in this report some of the kinds of comparisons that would be valuable. Based on these comparisons, Austin's costs appear lower; however, the potential exists for Austin's costs to increase.

We identified some issues for further study that were not fully addressed during this audit, including citizen and department experience and impact on service delivery, usefulness and reliability of reports, ongoing system development approach, operational plans and staffing, corporate use of system data through proactive reviews to identify trends, strategic issues related to the organizational placement of the call center, communication about call center expectations, and coordination among involved departments.

Recommendations in this report are directed at successfully completing Phase I, achieving full 311 CIC/CSR system potential, facilitating decision making, capturing and appropriately reporting cost, effectively budgeting IT projects, and addressing identified issues for further study.



ACTION SUMMARY

311 CITYWIDE CUSTOMER INFORMATION CENTER AUDIT

Rec. #	Recommendation Text	Management Concurrence	Proposed Implementation Date
01.	<p>To ensure successful completion of Phase I, the CIO should conduct an assessment of the extent to which:</p> <ul style="list-style-type: none">a. Steps in the Go-Live checklist have been effectively completed, andb. Data reliability controls are in place to ensure accurate call center data.	Concur	9/30/04
02.	<p>To ensure achievement of the 311 CIC/CSR system potential and to facilitate decision making, the CIO should apply CTM's standard project management methodology by establishing a Comprehensive Project Plan for the 311 CIC project beyond Phase I, including:</p> <ul style="list-style-type: none">a. Documentation of stakeholder expectations to be met by the system,b. A high-level strategy for multi-phase implementation,c. A needs assessment of specific information outputs needed from system,d. An assessment of additional service areas/request types needed to meet citizen need and expand coverage of the call center,e. An identification of additional functional requirements and options to be achieved, including the specific analysis of requirements for ACAP and AMANDA replacement/interfaces,f. Identification of technical requirements to accomplish identified functional and user requirements, andg. Identification of costs and staffing requirements to achieve specific enhancements, increasing levels of functionality, and overall project vision.	Concur	3/31/05

Rec. #	Recommendation Text	Management Concurrence	Proposed Implementation Date
03.	<p>To ensure that relevant costs for the CIC are captured and appropriately reported, the CIO, with assistance from the Controller's office, should:</p> <ul style="list-style-type: none"> a. Identify any material past costs related to the CIC, including any incurred before the project was transferred to CTM/AE, b. Segregate system implementation costs from operating costs by tracking them in separate accounts, and c. Comply with the intent of the City's accounting policies and GASB 34 with respect to CIC capital expenditures. 	Concur	9/30/05
04.	<p>To ensure the effective budgeting and cost tracking of IT projects, the CIO should revisit the audit recommendations of OCA's 2002 IT Project Management Audit report, assess the status of implementation, and establish a plan to address incomplete recommendations, as needed.</p>	Concur	9/30/04
05.	<p>To ensure the successful implementation through and beyond Phase I, the CIO should include in the CIC risk management plan the risks and issues for further study identified in this report, as well as other risks identified by management during the assessment of Phase I and the planning process for later phases.</p>	Concur	9/30/04

CONTENTS

Background: The City of Austin is in the process of improving citizen access to selected City services and information.	1
Audit Objectives, Scope, and Methodology	3
Audit Results	
◆ For Phase I, the call center is scheduled to go live with baseline functionality in late 2004.	5
◆ The City’s implementation of Phase I incorporates some recommended success factors and lessons learned from other entities’ 311 systems.	8
◆ Plans do not yet exist for features and call center expectations that will not be achieved by Phase I.	10
◆ Costs for the CIC are projected at \$2.5 M through FY05, although adequate budgeting and cost tracking as well as a number of other cost issues remain to be addressed.	15
◆ Because of the limitations of available data, it is difficult to compare CIC costs to other cities.	20
◆ We identified risks or issues for further study during the course of our work that warrant additional attention.	22
Recommendations	25
Exhibits	
1. Service Areas and Example Service Request Types Scheduled for Integration by Go-Live	6
2. Motorola Success Factors for 311 Implementation	8
3. Audit Verification of Expectations Being Met for the 311 CIC	13
4. Estimated CIC Implementation and Operating Costs	18
5. 311 Call Center Start-Up Cost Comparison.....	20
6. Call Center Comparison of Call Volume, Staffing, and Operating Costs	21
Appendices	
A. Management Response	27
B. Acronyms	33
C. Graphic of CSR Model	37
D. Department Implementation Levels – “Increasing operational readiness”	43
E. Sample Reports	47
F. OCA Identification of Expectations for the CIC	53

BACKGROUND

The City of Austin is in the process of improving citizen access to selected City services and information.

Citizens will be able to request a range of City services and information about others by calling 311 when the Citywide Customer Information Center (CIC) is launched. According to the scope of existing plans for the CIC, citizens will be able to call one number (311) to either make a request for selected services directly with the call taker, or be transferred to the appropriate City department for other services, as done in the past when citizens called the City's 974-2000 main number. Alternatively, citizens will be able to use web intake forms of selected City department web pages to make requests. In either case, citizens should be able to call 311 to track the status of the work order generated, whether the work order was originated by a call or via the Internet. In addition, citizens should be able to get information on City department business hours and locations, and answers to "frequently asked questions" (FAQs), by calling 311.

Project History. In 1997, the Federal Communications Commission (FCC) designated 311 as the new national, voluntary, toll-free, three-digit phone number for non-emergency public service access. In 2001, the City of Austin implemented the local 311 service in the Austin Police Department (APD) for non-emergency public safety requests. Call takers for this program are located at the Combined Transportation, Emergency and Communications Center (CTECC), and are cross-trained as 911 call takers.

In early 2002, exploration and planning were underway for establishing a Citywide call center to consolidate other call centers in the City into one location. The City Manager established a corporate initiative in late 2002 called "Uncomplicated Customer Access," with the goal of improving the customer's ability to obtain assistance and information from the City of Austin.

In June of 2003, after some stops and starts in project start-up and change in project ownership among the Public Information Office (PIO), Austin Energy (AE), and Communications and Technology Management (CTM), CTM was charged with the task of identifying appropriate software applications to support a Citywide Customer Information Center (CIC), which was envisioned as a call center that would be open twenty-four hours a day, seven days a week, that citizens could use to access any City service.

After assessing available software packages, CTM decided to expand the City's existing contract that provided the Customer Service Request system (CSR) software supporting APD's 311 system and utilize that software for the new call center as well. The new CIC is located at One Texas Center. APD's 311 service will continue to operate out of the CTECC.

In September 2003, CTM made the first purchase of configuration services and training in order to pilot selected services from five City departments for the new CIC. After a short pilot period, CTM assigned a full time project lead and the City purchased the CSR software along with additional service request configuration, training, and web intake capabilities.

Phase I. Phase I of the CIC implementation, currently underway, includes setting up the call center and configuring the selected services into the 311 system for “soft launch” over several months. Soft launch refers to making the change quietly without a public announcement. Configuration and testing is underway and scheduled for completion, along with a public marketing campaign to announce the new service, in late 2004.

Phase I activities include:

- Setting up the call center facility, furniture, phone systems, computers, and other equipment;
- Staffing the call center;
- Installing the Customer Service Request system (CSR) hardware and software and other peripherals;
- Identifying and configuring service request types to be included in the CSR as well as reporting needs for service areas involved;
- Establishing information content to be used to answer questions;
- Training configuration managers, department users, and call center staff;
- Testing the system in a “mock go-live” mode for each service area before moving into final go-live status, one service area at a time;
- Developing and initiating a public information campaign before final go-live; and
- Assessing the project after final go-live.

Phase I Goals. Management has documented success factors or goals for Phase I system development. In CTM’s project plan of March 2004, management articulated seven goals, or success factors, for assessing the project success. Three of the seven goals (listed first below) tie to the City Manager’s expectations regarding the citizen experience and management benefits, and the other four are specific to the Motorola deliverables on the system. These goals are as follows:

1. Provide citizens with an easy and convenient way to send feedback, ask questions, and obtain information.
2. Provide faster responses when citizens call with requests, complaints, and questions.
3. Provide stakeholders with an effective management tool: real time reports, trends and response times.
4. Provide consistent standardized information within an enterprise wide system that establishes a permanent traceable record of citizen requests.
5. Track and manage request information through the complete cycle.
6. Route request to right department automatically at the time the request is entered into the system.
7. Coordinate work processes between departments at appropriate time in the process.

Project Leadership. The executive sponsors for the project include the City Manager, the Chief Information Officer (CIO), and the Director of Austin Energy. The CIO has been designated as the overall project lead. CTM is managing the implementation of the call center system and its interfaces with affected departments. Austin Energy, which already manages the City’s utility services call center, is participating in the call center implementation and training of call takers.

After go-live, AE will manage the operations of the CIC, while CTM will continue to support the technical side of the 311 system.

Implementation of the CIC will bring Austin in line with approximately 20 cities nationwide that precede Austin in this centralization of customer service intake, including Chicago, Baltimore, San Antonio, Houston, Dallas, San Jose, New Orleans, and New York City, among others. At this time, the City plans to run the Call Center 24/7.

In the fall of 2003 at Council's request and with Council Audit and Finance Committee approval, an audit was included in the Office of the City Auditor's (OCA's) 2004 service plan to provide assurance on these efforts.

AUDIT OBJECTIVES, SCOPE, AND METHODOLOGY

Objectives:

Preliminary objectives of the audit were to:

1. Identify and assess current and planned uses of
 - a) 311 Call Center information and
 - b) other information sources being considered for integration.
2. Determine whether controls are in place to ensure that the data collected by the Call Center are accurate, timely, and accessible.
3. Optional objective: Identify tools for assessing risk and cost/benefit of the above systems or parts thereof.

When we began the audit and determined that plans for the system were not yet fully developed and the status of specific elements was uncertain, we revised the objectives and audit work as follows:

1. Conduct a survey assessment of current plans and implementation efforts to determine what specifically was being implemented and identify the risks associated with these efforts, in order to provide feedback to management and inform stakeholders.
2. Defer work on data reliability, due to the incomplete and evolving state of system implementation at the time of the audit.
3. Defer work on risk/cost/benefit assessment tools for future consideration.

Scope: The scope of this audit included all presently-existing system plans and system components related to the 311 Call Center, its related CSR system, and any broader plans for a Comprehensive Accountability System (or "Control Panel") for use by Council, management, and citizens in monitoring complaints about City services and performance results of City operations. The audit was conducted as the system was in early implementation stages.

In order to provide early feedback on the system before go-live, we decided to end our work at the survey phase of the audit. This allowed us to limit additional investment of audit resources on a system still being implemented, while allowing Council input on our results and on the need for or direction of any additional work. Because of this, it was necessary to exclude from the audit scope the experience of departments converting to the CSR and the impact on service delivery. This area is suggested as an issue for further study.

Methodology: Our methodology included interviews of relevant management and staff, review and analysis of documents, and limited testing of system functions. We also collected data and interviewed staff from other cities that have implemented 311 call centers in the last three years.

In accordance with 2003 auditing standards, the audit included steps designed to detect instances of fraud and abuse pertaining to the audit objectives. Any indications of fraud detected in the audit process would be reported to the City Auditor's Integrity Unit or other appropriate authority in compliance with standards.

To meet requirements for data reliability we conducted limited verification of financial data associated with the project, and we relied on KPMG's annual attestation of the City's financial statements and supporting systems in conducting that verification. We did not verify the reliability of City of Austin call volume and staffing data or data on other cities.

The audit was conducted in compliance with Generally Accepted Government Auditing Standards.

AUDIT RESULTS

For Phase I, the call center is scheduled to go live with baseline functionality in late 2004.

Basic call center and Customer Service Request system (CSR) functions have been established, and departments are in the process of being integrated into the CIC. However, management has indicated that go-live would be delayed if necessary into early 2005, if readiness for public launch is not complete.

Departments and individual service areas will be implemented in Phase I at different levels. Services anticipated by management to be the most frequently requested, outside of the utility and public safety areas, will be configured into the CSR system and handled by 311 call takers. Other service requests will still be handled by established call centers in selected City departments. In addition to service request intake, information provision both to citizens and to service managers is a key benefit of the CIC.

Department service areas will be implemented in Phase I at three different levels: Basic, Intermediate, and Full. These levels are described as follows:

- **Basic:** General information is provided on office hours, locations, and telephone numbers of City departments and staff.
- **Intermediate:** Includes Basic, plus answering Frequently Asked Questions. In addition, some service requests will be taken for most frequent requests.
- **Full:** Includes Intermediate, plus receiving requests for many of the most frequently requested City services, dispatches, or other actions. These service requests will be managed through the Service Request component of the CSR.

Departments implemented at the full level can expect to relinquish to the call center much, but not necessarily all, of their service request intake function. Departments implemented at the basic and intermediate levels, however, will still manage their own service request intake. For all departments, call center call takers should be able to answer basic questions.

See Appendix D for CTM's summary of implementation levels for each department service area and operational readiness in the phased go-live process.

Service request types configured for Phase I go-live include those anticipated by management to be the most frequently requested services, with some exceptions.

Management is making efforts to identify the most frequently requested services, outside of the utilities and public safety, to ensure readiness for service requests when the 311 CIC goes fully live. For example, the initial selection of service areas to be configured in the 311 CSR was based on a survey of departments Citywide and an analysis of calls coming into the City's previously-existing main switchboard, 974-2000. In addition, the CTM project manager has identified and compared the service request types configured for web intake in other cities, to identify additional service request types needed in Austin's CSR. Moreover, the CTM project manager has been analyzing the requests currently received through the *City Connection* web

intake link in order to identify requests that should be configured in the 311 CIC CSR. By June of 2004, the project team, with Motorola, had configured 140 service request types in the CIC CSR.

Exhibit 1 shows some examples of service request types that are included in the areas scheduled for Full and Intermediate integration by go-live, along with the departments scheduled for Basic level of integration.

EXHIBIT 1
Service Areas and Example Service Request Types
Scheduled for Integration by Phase I Go-Live

Full Service: (Service Requests taken/FAQ's answered)

Transportation¹: Traffic signals and signs, Street signs, Other traffic engineering services, Parking violation enforcement, Parking meter malfunction, Parking ticket complaint

Public Works – Street and Bridge¹: Pothole repair, Street and alley maintenance, Guardrail repair, Bridge repair, Curb/gutter repair, Sidewalk repair

Drainage¹: Erosion, Flooding, Standing water, Pond maintenance, Town Lake issues, Vegetation control, Lost items in storm drains

Health & Human Services¹: Animal Services, Birth and Death Certificate requests, Immunization information requests, Communicable disease reporting, Graffiti abatement, Rodent and mosquito control

Parks¹: Park Maintenance, Right of Way tree trimming

Intermediate Service: (Limited Service Requests taken/FAQ's answered)

Solid Waste Services²: Missed Garbage Pickup, Missed Recycling Pickup, Dead Animal Pickup

Austin Energy²: Utility line tree trimming, Street Lighting

Office of Emergency Management: Services not yet configured

Basic Service: (Some basic information provided and/or call transfer only)

APD, AE Utility billing and customer service, Austin Water Utility, Aviation, City Clerk, Community Care clinics, Community Court, Convention Center, Economic Growth, EMS, Fire, Financial and Administrative Services, Government Relations, Human Resources, Law, Library, Management Services, Mayor and Council, Municipal Court, Neighborhood Housing and Community Development, Neighborhood Planning and Zoning³, Office of the City Auditor, PIO, Public Works other divisions, Small and Minority Business Resources, Watershed Protection and Development Review other divisions, and Health and Human Services other divisions⁴.

SOURCE: OCA summary of CTM planned implementation levels for 311 CIC and CSR Service Request types configured or planned as of July 2004.

¹These service areas have already gone live as of the end of audit survey work. Other areas are underway or planned for integration by Go-Live.

² Austin Energy and Solid Waste Services are not yet configured and are tentative until configurations are completed.

³ Neighborhood Planning and Zoning (NPZ) was planned for Intermediate level of implementation. Service request types have been configured for Housing and Zoning code enforcement, Neighborhood Plan requests, and Zoning Change information requests, but are on hold pending implementation of the AMANDA system. Therefore, NPZ will only be at Basic level of implementation for Phase I.

⁴ Childcare and Food Establishment complaints are on hold pending AMANDA implementation.

Some service requests will still be handled by established call takers in City departments.

A number of departmental call takers will still exist in the various City departments after the CIC Phase I Go-Live, for departments in the Basic and Intermediate levels. If citizens call 311 for issues related to these departments, they will be transferred to the relevant department for service request intake or assistance.

As shown in Exhibit 1, a limited number of services will be handled by the CIC CSR itself for some of these departments, but all other matters related to these departments will be handled by the departments directly. These include, among others, services such as Water and Wastewater services, Utility Billing and Customer Service, Electric Emergencies, and some Solid Waste services. In particular, because of the potential for call overload and the need to link to the outage analysis database during electric emergencies, the AE Utility Call Center manager has indicated that citizens will still need to call the City's 322-9100 number for power outages.

Given limited service areas configured for the CIC CSR, the CSR data and reports at Phase I will not be a complete representation of citizen input and requests. One stated stakeholder desire for the CIC was that it would provide a complete representation of citizen input and requests, or an enterprise-wide view of performance across all departments. However, the City has five pages of numbers in the phone book's blue pages for contacting City service areas. Given the limited scope of the services so far planned for integration into the 311 CIC CSR, a number of other intake points for service and information requests will continue to exist that will not be captured in the CIC CSR database. Although there is some interest at the Council level in having 311 provide a complete data set of City service requests, the City Manager has stated that this is not an expectation for the system at this time. Further assessment would be needed to determine the cost and benefit of having one system that captures information on all citizen requests in one place.

In addition to service request intake, information provision is another key component of the CIC. A CSR module called Contact Center is expected to allow call takers access to various files such as City websites, linked directories, and other information or knowledge items useful in serving the informational piece of the Citywide CIC. This software is also expected to create a record of the call and of how the call taker disposed of the inquiry or request. This module was still being implemented at the time of this report.

The CSR also provides some valuable information to department management. We obtained copies of some reports already being generated that provide management with the following information:

- number of requests received for each service type,
- number and percent by status: open, closed, and overdue
- sorted by request type or department/division.

See Appendix E for sample reports generated from the CIC CSR.

The City’s implementation of Phase I incorporates some recommended success factors and lessons learned from other entities’ 311 systems.

We found that management has addressed some key success factors (or best practices) for 311 implementation in the public sector. We also found that management has adopted a systematic process and checklist for integrating departments into the call center, although we have not verified that all steps have been completed. In addition, management is working to mitigate the risk of call overload when the call center is publicly launched, although some uncertainties remain.

The City has addressed some of the recommended success factors for 311 implementation.

The keys to successful implementation of 311 in the public sector, as recommended by Motorola, are shown in Exhibit 2. The exhibit shows that the City has addressed most, but not all, of these success factors. For example, to help ensure success, the City is using phased implementation and maintaining operational autonomy of departments. However, the City’s ownership is shared between AE and the CIO for operations and system management. In addition, multiple call centers will remain.

**EXHIBIT 2
Motorola Success Factors For 311 Implementation**

	Success Factor	Austin’s Implementation
1	Stakeholder consensus on objectives. Identify key stakeholders and achieve their consensus up-front on the primary objectives of the system. Elected official leadership can be highly effective.	~ Informally*
2	Single ownership. Assign enterprise ownership and management of the application to a single organization, for example, the Chief Information Officer (CIO)’s office. This assignment ensures consistency across departments and helps facilitate inter-departmental communications.	√ Implementation X Operations
3	Phased implementation. Develop a phased implementation approach. Identify departments to bring on-line first, then expand the system enterprise-wide.	√
4	Operational autonomy. Enable retention of operational autonomy at the departmental level, but insist on collaboration.	√
5	One combined 311 call center. Strive toward the centralized management of non-emergency public safety and comprehensive government services in one call center.	X Separate call centers**
6	Marketing. Develop a marketing strategy aimed at citizens around the introduction and benefits of 311 in your jurisdiction.	√ Planned

SOURCE: OCA assessment of success factors contained in *Guide to Understanding 3-1-1 Systems*, Motorola White Paper, September 2002.

*During this audit, we did not evaluate the extent to which stakeholder consensus was achieved for 311 objectives. There is evidence that discussions with various stakeholders have taken place. However, there was no formally documented consolidated list of the various expectations identified. See Appendix F for expectations OCA gleaned from a number of sources.

**At the time of this report, management was considering combining the CIC and Public Safety 311 call centers into one operation, although no decisions are final regarding when or how this could be accomplished.

The City has adopted a systematic approach to implementing departments into the CIC that addresses lessons learned from ‘early implementers’ of 311 call centers. According to City staff, the highest risk facing the CIC is an unmanageable number of calls when the call center is publicly launched. To avoid this scenario, service request types and scripts need to be configured to reflect business processes, and staff need sufficient practice and preparation and system testing before publicly announcing the call center’s availability. To achieve this, CTM uses a 49-step go-live process, scheduling about four weeks to work with each department.

This process has involved working with user departments to understand work procedures and identify services, configure screens and scripts for request intake, and test the system live, by running dummy cases. Existing phone numbers for individual service areas are then rolled over to the call center to receive real requests in these service areas. New York City is another city that used the ‘soft launch’ model, in which there was a seamless roll-over of existing phone numbers to the new call center. For service areas that have rolled over to the CIC, callers may not be aware that their requests are now handled by call takers who are not in the servicing department.

A gradual rise in call volume, as service request types come live, has allowed staff to adjust to increasing call volume while still in test mode, reducing the risk of call overload once launched. Incoming calls have been rolling over to the CIC since late February of this year. At the end of April, call volume at the CIC totaled about 1,000 calls a day, including calls rolled over from the City’s existing 974-2000 main switchboard. Motorola literature asserts, and the project manager expects, that service requests will constitute 30% of all calls. The remaining 70% will be requests for information or telephone numbers.

We viewed periodic project status reports that showed increasing request volumes as phone numbers were rolled over. In the first two weeks of operation, the CIC entered 341 service requests into the CSR (or approximately 34 a day) for the Transportation Division. After five weeks of operations and bringing on the Street and Bridge division, the CIC averaged 37 requests a day. After three months of operation and bringing on the Drainage division, the Call Center had 61 active request types and averaged about 46 requests a day. The current percentage of service request to total calls (approximately 5%, or 46 requests/1000 calls) has not yet reached the expected percentage, reportedly because service request configuration was not yet complete.

Management is taking steps to further mitigate the risk of call overload when the call center is publicly launched, although some uncertainties remain. In addition to invisibly and gradually rolling in phone numbers, Call Center operations management has identified strategies for adjusting staff as needed to meet call demand. AE will supplement City staff as needed at the CIC, by cross-training AE Utility call center staff or using a contract for temporary staffing with a company that is also used for the AE Utility call center. However, due to uncertainties in call volume until go-live actually occurs, the risk of under- or over-staffing remains.

We found that Austin Energy has a forecasting software model that is currently used for staffing the Utility’s customer service center. The model requires assumptions about specific parameters such as average call duration, service levels for call pick-up (“wait time”), and call volume. The model is highly sensitive to the call pick-up service level expectation. However, at this time,

management indicates that the agreed service levels for the CIC have not been set. Additional considerations are call taker's learning curve and sick and vacation time. Reportedly it can take seven months for call takers to get fully proficient, so this would need to be considered in plans to use AE Utility call takers or temporary employees. As for call volume estimates, in 2001 project staff collected estimates of call volume from City departments. However, no existing hard data, such as phone switch data, were available to verify the accuracy of these estimates.

During the phased implementation in FY04, the CIC experienced significant turnover, and staff levels varied from five to eight call takers. One full capacity estimate provided by management anticipated the need for 15 call takers to provide 24x7 coverage, along with two supervisors, a manager, one administrative staff member, and an information manager. In contrast, information from AE's forecasting software indicated that 20 call takers were needed to cover a 14-hour shift. Furthermore, some early planning documents for the CIC anticipated a staffing level of 35, as compared to the current plan of 15-18. At the time of this report, we had not reconciled the differences among the different call center staffing estimates, but the estimate of 35 appears to have been based on assumptions that have now changed.

While management's approach to Phase I implementation appears sound, we have not verified that all steps have been completed. We found some indications that some steps in management's systematic implementation process were not yet complete or resolved at the time of this report. For example, the process included a step to assess internal and possibly external customer satisfaction after phased go-lives by service area. However, this had not been done as of the time of this report. Also, management was still resolving issues with CSR report development and reliability at the time of this report. These areas remain as issues for further study.

Plans do not yet exist for features and call center expectations that will not be achieved by Phase I.

We found that some features will not yet be implemented by the end of Phase I, and other expectations for the CIC remain to be verified. In addition, a comprehensive plan for completing the CIC implementation is still needed. As a result, costs and staffing needs cannot yet be fully estimated. The CIO has assumed the risk of not planning beyond the first phase, citing the need to gain experience with the system before developing future plans. However, without this information, Council and executive management are limited in their ability to make decisions or give policy input regarding staffing and funding of the CIC in relation to other City priorities.

Some features that better facilitate service delivery, while discussed or anticipated by management, will not be in place by the completion of Phase I. Management has identified some functionality considered necessary or desirable but currently deferred for future integration. No specific plans exist yet for these future integrations. Management has identified these enhancements as important for achieving the call center's potential. These enhancements would help provide broader coverage of citizen requests by the CSR, facilitate more effective service response, and provide more information sources to call takers to resolve calls. These include:

- **Mobile Interfaces.** A fully-developed CSR system would have mobile interfaces for field service providers with remote access to work orders. This would allow field crews to be notified of service requests as they come in, and to update the status of requests in the CSR remotely. This has been deferred for assessment after Phase I. Management indicates that this capability will be done at the discretion and expense of departments requesting it.
- **GIS Mapping.** This feature would allow mapping of service requests by geographic area. Some other cities such as Baltimore and New York publish request information in this format. Austin management is planning for the mapping feature after Phase I and has included funding for it in the CIC's proposed FY05 budget. However, the Geo Tool for assignment of some service requests by geographic area is being installed in FY04.
- **Other CSR system features:** Some features have been discussed such as e-mail notification to customers upon completion of requests, system tools for surveying customer satisfaction, and reporting triggers to give early warning to management at different levels up the chain when service request volumes exceed established thresholds. However, these are under consideration for later phases.
- **Integration or interfaces with other legacy systems or work order systems.** While these have been discussed, they have not yet been planned. These include
 - **ACAP (Automated Customer Assistance Program).** ACAP is an in-house system used to track and coordinate responses to public concerns, questions and complaints received by Council and CMO. ACAP generates a Customer Assistance Form (CAF) for each request – generally with an expected 10-day turn around. ACAP receives about 125 requests a month. This system is viewed as a candidate for replacement by the 311 CSR, by configuring service request types, scripts, and flex questions to replace the ACAP CAFs. Other reporting and routing features of the ACAP system have not yet been examined to identify specific requirements that need to be addressed in replacing ACAP.
 - **AMANDA™ Citizen & Land Use System for licensing, permits, zoning, and inspections.** The City is in the process of replacing its Permitting, Inspection Enforcement and Review (PIER) system with the Motorola/CDSC Systems' AMANDA product. Management expects to develop an interface between the CIC CSR and the AMANDA system, whereby requests received through the CIC CSR would "populate" the AMANDA database. This integration work is reported as a high priority after CIC Phase I is complete.
 - **City Connection.** The City of Austin's home page at www.ci.austin.tx.us has a link for citizens to contact the City. When used by citizens, this link produces an e-mail that goes to staff in the CIC (formerly in PIO), who send the e-mail to the appropriate party in the City for response. Approximately 800 requests per month are received from this source. Management is setting up capability for these requests to be manually entered by CIC staff into the CIC CSR for handling, rather than through e-mail routing. Management is considering replacing this semi-manual link with a direct link to the CIC CSR.
 - **Utility Customer Service.** The existing Utility call center is not currently planned for integration with CIC CSR, meaning that 311 callers would be transferred for utility billing issues and service requests. These requests would be tracked within existing utility systems. However, because the Utility's call center system is primarily a customer information and billing system, not a service request system, AE management has

indicated that future integration with the CIC CSR might facilitate better managing of customer requests.

- **Other systems.** Other systems that have been identified or considered candidates for integration or interface include:
 - AE's Data One system for tracking power system performance and availability
 - Austin Water Utility's Hansen work order system
 - Parks' maintenance database
 - Animal Shelter's pet adoption system
 - Health Clinics' appointment scheduling system
 - Library's system for tracking fines

Management has budgeted some funding in FY05 for licenses and configuration work to implement some of these features and interfaces after Phase I. However, no decision has yet been made as to which to include. Management has excluded these functions and features in Phase I for a number of reasons. These include: a primary focus on achieving "uncomplicated customer access," establishing basic system capabilities in Phase I, a conservative implementation model for additional features that will be "user-department demand driven," and cost considerations in a time when the City is still facing fiscal constraints.

We verified which expectations for the call center would and would not be met by the end of Phase I. We were able to verify a number of expectations as having a high likelihood of being met by Phase I completion. Due to the evolving state of system implementation and operating plan development during the course of our work, we were not able to fully verify or give assurance whether other expectations for Phase I would be met. Still others remain to be assessed by management after Phase I.

Exhibit 3 shows the verification status of expectations for the CIC at the time of this report. The location of the X's in the columns from left to right indicate decreasing levels of certainty as to whether each specific expectation will be achieved. We found that 53% of the listed items were either verified or planned but not verified for Phase I. The other 47% were either under consideration for later phases or not yet articulated in a specific plan.

Exhibit 3
Audit Verification of Expectations Being Met for the 311 CIC

Expectation	Verified for Phase I	Planned or Underway for Phase I but not fully verified by Audit*	Under consideration for later phase(s) or at Phase I end	Not intended
1. Call center Infrastructure and Support established	X			
2. Citizen ability to call CIC for <u>any</u> service ^L (CIC may need to refer or transfer the call to another intake point)		X ^A		
3. CIC CSR will capture request information for all City services (All City departments with workorder systems will be operating through the CIC with a few exceptions)				X ^B
4. 24x7 coverage		X ^C		
Citizen ability to request services by internet				
5. Individual service area web links (e.g., Transportation's web page)	X			
6. General City website		X ^{D,E}		
Citizen ability to track status of request				
7. by phone	X			
8. by internet		X		
9. Citizen notification when request is complete			X	
10. System survey tool for surveying customer satisfaction			X	
11. Tracking and managing information through the complete cycle ^L		X		
12. Routing requests to the right department ^L		X		
13. Coordinating work processes between departments at the appropriate time in the process ^L		X		
Management Reports for assessing service request activity ^L				
14. # open, closed, response time	X ^B			
15. exception reports (items overdue)	X ^B			
16. early warning of management when requests exceed set thresholds			X	
17. trends			X	

Continued. See notes, next page.

Exhibit 3, continued
Audit Verification of Expectations Being Met for the 311 CIC

Expectation	Verified for Phase I	Planned or Underway for Phase I but not fully verified by Audit*	Under consideration for later phase(s) or at Phase I end	Not intended
18. CIC CSR Output: An enterprise-wide view of performance across all departments / A complete picture of citizen requests for services and information^L				X^B
19. Call taker ability to answer questions^L (using information reference & Contact Center software)		X		
20. Proactive reviews of data to identify issues			X^F	
21. Citizen information display of service request data			X^{F,G}	
22. Mapping of service request data			X	
23. Mobile Interfaces			X	
24. Integration with other systems			X	
25. Incorporation of call center data into service area measures			X	
26. Performance measures for call center itself			X	
27. Service level agreement (set turnaround time for each request type)		X^H		
28. Faster response to citizen requests for services and info^L		X^I		
29. Better service^L at a lower price			X^J	
30. Plans to avoid call overload		X^K		
Total Count of Items	30	5	11	2
Percent	100%	17%	36%	7%

SOURCE: OCA analysis of identified stakeholder expectations for the CIC. **X** = Status as verified by OCA.

Notes: * = Verified by OCA as planned, but level of audit work does not provide assurance for Phase I.

A. At Basic, Intermediate, Full levels.

B. Only for services configured in the CIC CSR. Other request intake points will still exist in the City.

C. Not expected/ not met during implementation. 24x7 staffing still to be clarified for Go-Live.

D. Currently via email from Austin City Connection Web intake.

E. Direct web intake into CSR from the general City of Austin home page is under consideration for Phase I.

F. Corporate-level reports are expected to be available and to be reviewed routinely by the City Management Team; Such corporate reports for key areas may be designed to post on the Internet.

G. In aggregate form through on-line performance measures.

H. Reassessment planned.

I. Not yet measurable.

J. No cost savings yet identified. However, other benefits have been identified in relief of call intake workload for departmental staff.

K. Some plans have been identified but not verified adequate as of this report, with changes underway in call center assumptions that would affect call volume.

L. These are included or implied in success factors for Phase I defined in CTM's project plan.

Staffing and cost requirements, other dependencies, and cost/benefit analyses for future enhancements are not available for policy decision making at this time. Lack of a plan beyond Phase I inhibits management's ability to estimate the cost of future enhancements. Because full plans and cost estimates are not available, Council and executive management are limited in their ability to make decisions or give policy input regarding staffing and funding of the CIC vs. other City priorities.

As discussed earlier, a number of functions or features have been identified but are not included in the Phase I implementation. Management had identified some cost estimates for purchases related to these enhancements and has budgeted some funding in FY05 to implement them. However, detailed assessments of specific functional requirements and actual resource needs for these enhancements do not yet exist.

The CIO has assumed the risk of not planning beyond the first phase, citing the need to gain experience with the system before developing future plans. In regard to planning issues, the CIO indicated during the audit that the project team assessed risk during the early pilot to verify, for example, that there were no hidden license fees, and that server capacity was sufficient. According to the CIO, at that point, the decision was whether to continue or not, and it was time to get something done. The CIO stated that from contacting other cities, he determined that a step-by-step approach was appropriate. He further stated that he knew there wasn't a comprehensive plan and assumed the risk based on his contact with the other cities. The CIO indicated that he wanted to minimize risk by assessing after Phase I how far to go with the system, rather than developing a full-blown plan up front without enough information and then being tied to it. He stated that the decision was partly a resource issue with limited staff, but that the key was the need to gain knowledge and experience with the system. He also indicated that a full assessment and comprehensive plan were needed coming out of Phase I.

Costs for the CIC are projected at \$2.5 million through FY05, although adequate budgeting and cost tracking as well as a number of other cost issues remain to be addressed.

Despite past audit recommendations on improving cost tracking for IT projects in the City, we found the need for improvement in this area on the CIC project. In addition to the absence of an overall project budget, we found inconsistencies in the tracking and charging of implementation costs for the CIC. Costs identified to-date for the call center are estimated at approximately \$2.5 million through FY05, including both implementation costs and operating costs. However, we have not verified the adequacy of budgeted FY05 implementation costs for achieving desired functions, and plans to allocate costs to benefiting departments have not been finalized.

Past audit recommendations on tracking IT project costs have not been fully implemented. A 2002 OCA audit of IT Project Management in the City found that resources related to IT projects were not systematically budgeted and tracked, and management concurred with recommendations to improve tracking of staffing and costs for IT projects. Although we did not fully assess the implementation status of those recommendations during this audit, the findings

below indicate that the recommendations have not been implemented with respect to the 311 CIC project.

An overall implementation budget has not yet been established for fully achieving the CIC's vision and system potential. Because of the incremental approach being used for planning, budgeting for the call center is being done one year at a time, with no overall cost estimate or target for achieving a fully developed system. Council review of CIC-related costs has been limited to approval of change orders on the Motorola contract, without an overall review of total project costs.

During the course of this audit, we found inconsistencies in the tracking and charging of implementation costs for the CIC. We found that implementation costs for the CIC were not always consistently charged to the CIC account, that operating and implementation costs were co-mingled, that capital costs had not been handled appropriately, and that City labor costs for implementation were not tracked. As a result, the City's ability to rely on available cost information for the CIC is limited.

- **We were unable to verify all items included in CTM's project expense summary, or provide assurance that CTM's project expense summary was complete.** Austin's 311 Citywide call center concept has been underway for some time, with various project staff working on it at different times and ownership changing departments a number of times among PIO, AE, and CTM, at least as far back as FY02. Therefore, it is possible that costs that have been identified could be understated or overstated.

We were able to verify most, but not all, of the project expenses tracked by CTM, although not all were charged to the account identified for the CIC budget. We found approximately \$62,500 in costs attributable to the CIC charged to other accounts (CTM facilities expense and a separate AE capital account). We also did not do an exhaustive search for other costs related to the call center that could potentially have been charged to accounts other than the one set up for capturing CIC costs. For example, we did not determine whether PIO or anyone else incurred costs when the project was under their ownership, whether travel or other costs were tracked for researching or observing other cities' citywide 311 systems.

In order to identify full past costs, it would be necessary to review costs in the various organizations involved as the project moved around. However, the level of desired precision and cost/benefit of going back and reviewing all costs would need to be determined.

- **In addition, no costs for City labor expended on implementation have been included in project cost estimates or tracking.** During the course of the audit, we identified as many as 14 staff members working full or part-time on CIC implementation during 2004, in addition to actual call center operating staff. This expenditure of staff time does represent costs, which if fully identified, could help better inform cost/benefit decisions. At the time of this report, CTM management indicated they did not yet have a project time accounting system in place for tracking staff time on individual projects, but they indicated that one was underway.

- **Some costs have not been appropriately capitalized as required by City policy and accounting standards.** During the course of our work, we determined that some costs had not been capitalized in accordance with City accounting policies and Governmental Accounting Standards Board (GASB) Statement 34. City accounting policy requires that items over \$1,000 unit cost with a life greater than one year be capitalized. Some costs that meet these criteria have been charged to operating expense.

We notified management of this condition during the course of the audit, and management began taking steps to address it. Interestingly, in working to identify all past costs for the call center, management helped us locate some costs that had not been charged to the AE operating account established for the project. In fact, some of these costs had been charged to an AE capital account. However, perhaps due to the project having changed hands so many times since its inception, current management did not have a full understanding of how capital items had been handled. We recognize that management can't always control the loss of information when staff turnover occurs, but project documentation should be maintained sufficiently to avoid such loss of information as projects change hands. At the time of this report, management was in the process of determining costs to be capitalized.

- **Implementation and operating costs are co-mingled in the same account.** Another cost-tracking issue is the division of project start-up or implementation costs and ongoing call center operating costs. Currently, they are being charged to the same account. We feel it would be beneficial to separate the two into separate accounts for ongoing call center cost planning, budgeting, and tracking. In theory, FY04 costs could all be considered implementation costs, since the call center will be in a phased go-live testing and training mode through FY04. Therefore, FY05 might be an appropriate time to begin tracking operating costs separately from continued implementation costs. The key is distinguishing one-time cost investments from ongoing costs.

Costs identified to-date for the call center are estimated at approximately \$2.5 million through FY05, including both implementation costs and operating costs. Exhibit 4 identifies all estimated costs for the call center for FY03 through FY05. These figures include both project implementation costs and operating costs for running the call center during the phased go-live period and after go-live in 2004-2005. FY05 budget figures are preliminary and subject to change until approved by the City Manager and Council.

The exhibit includes project expenditures tracked by CTM for the CIC implementation, estimated at approximately \$1.1 million through FY05*. Although AE management did not provide a clear breakdown of budgeted implementation vs. operating costs, we derived operating costs by subtracting CTM's tracked project expenditures from total actual or budgeted costs. All figures exclude any City labor costs associated with implementing the 311 CIC call center, except for call center operating staff. (*Theoretically, operating costs during phased implementation could be considered part of implementation, testing, and training costs. If FY04 operating costs during phased go-live were included, implementation costs through FY05 would be approximately \$1.6 million.)

EXHIBIT 4
Estimated CIC Implementation and Operating Costs

	CTM Project Expenditures	Operating Costs	Total Current Estimate
FY03 actual	\$131,716	\$0	\$131,716
FY04 budget	\$530,441	\$550,963	\$1,081,404
FY05 preliminary budget	\$408,640	\$900,041	\$1,308,681
Total Est. through FY05	\$1,070,797	\$1,451,004	\$2,521,801

SOURCE: OCA Summary of AFS2 data for FY03 and FY04 and AE preliminary FY05 budget for the 311 CIC as of June, 2004, along with CTM project expense tracking documents. **Notes:**

1. An FY03 budget of \$1.8M was established in July of 2003, although actual expenditures were only approximately \$132K.
2. CTM's FY03 estimate was \$124,621. Actual costs of \$131,716 include \$89,382 charged to the identified AE operating account, and \$42,334 charged to CTM facility expense.
3. FY05 preliminary budget of \$1,308,681 also includes an assumption of \$500,000 in expense refunds from user departments, for a net cost to AE of \$808,681.
4. CTM project expenditures exclude costs of \$159K prior to FY03 for the Motorola contract for the original APD 311 non-emergency public safety CSR. This figure excludes other costs associated with the APD 311.
5. All of the above figures are for procured goods and services only and exclude any estimates of City labor costs associated with implementing the CIC, except for call center operating staff.

Cost allocations to the departments using the call center have not been finalized.

Management plans to allocate call center costs to benefiting departments starting in FY05. We raised a concern during our work that departments impacted by the cost allocations needed to be notified in time to include the cost in their FY05 budget submission. At the time of this report, management had identified and was considering alternative cost allocation methodologies for charging call center costs to benefiting departments. Additionally, an expense refund assumption of \$500,000 was included in the preliminary FY05 CIC budget of \$1.3 million, leaving a net cost to AE of approximately \$800,000.

We have not verified that implementation costs budgeted for FY05 will be adequate to achieve desired functions. It may take a number of years and funding dollars to fully achieve desired levels of functionality for the call center system. In that case, it would benefit management to carefully assess all additional functional requirements and costs needed to achieve them. From our review of project estimating documents, CTM appears to be doing that to some degree for Phase I and additional FY05 implementation. However, due to budgetary concerns, the lowest-current-cost approach seems to have prevailed in some project expenditure decisions, perhaps compromising the achievement of some desired functionality. The following are some examples of areas where we have concerns about the potential for cost increases.

- **Contact Center Software Module.** The purchase of a Contact Center module to the CSR was originally deferred by management in order to save money. However, this was at the expense of basic functionality that has since been determined to be essential for effectively managing the call center, and it has been ordered after all. We did not determine whether any additional cost was involved in purchasing this item separately from the original Motorola procurement for the CIC CSR.

- **Mobile licenses and set up.** The lowest-current-cost option may not buy much functionality. For example, the projected FY05 expenditures include \$75,500 for mobile interfaces licenses and set up. The feature has a base cost and then a per-unit cost for each mobile unit or laptop configured. The \$75,500 only covers the licensing and set up of 14 mobile devices. With the potential number of crews in the City responding to various service requests, it is unlikely that this projection will cover the number of mobile units needed to effectively facilitate and coordinate field service responses.
- **CSR licenses.** Phase I purchases include licenses for 25 CSR concurrent users. FY05 estimates include another \$50,000 for 14 more licenses, or a total of 39. CTM has indicated that based on Motorola's recommendations for the City, with approximately 8-10 call takers per shift, the rest of the 25 concurrent user licenses (15-17 licenses) would be sufficient for the 75-90 periodic department users and management, and that the additional 14 (for a total of 39) allows room to grow. We did not examine the analysis that yielded this conclusion. However, department users have to log on to the CSR to query for new service requests. Without mobile interfaces or paging features fully implemented, if department users have to stay logged on to the CSR to determine if new critical requests have come in, it is possible that 25-39 licenses will not be enough. We did not do any work to make a determination on this.
- **Configuration and design/development costs.** Configuration and design/development costs have the potential to increase beyond current estimates as further requirements are identified. The initial change order contract with Motorola specified configuration of 20 services in five departments. The subsequent larger change order included 320 hours of configuration services and training of configuration managers within CTM, AE, and City departments. Subsequent changes and proposed enhancements include additional hours and costs for configuration or developing interfaces with City systems. Configuration and development hours may be purchased from Motorola or may be expended by City staff, but in either case, they are a reflection of the potential for implementation costs to increase as additional configuration and integration work proceeds. CTM indicates that the City does not intend to purchase further configuration hours from Motorola, since the City now has trained configuration managers. As for developing interfaces, it remains to be seen whether Motorola or City staff will be used. However, until a thorough requirements analysis is completed after Phase I, the City will have limited ability to plan or estimate staffing and funding requirements for additional configuration and development work, whether done by City staff or Motorola.

These examples point out the importance of identifying and analyzing functional requirements and evaluating options to determine the most cost-effective ways of achieving these requirements. With limited staffing and funding available in the current fiscal climate, it will be important to prioritize enhancements. Therefore, it would be beneficial for management to define some basic criteria for assessing cost/benefit and prioritizing additional enhancements or service request configurations. Further analysis in this direction may yield more confidence in cost estimates of what the City needs in order to optimize the potential benefit from its investment in CSR capabilities.

Because of the limitations of available data, it is difficult to compare CIC costs to other cities.

Because cost tracking in Austin has been problematic and because available cost information for other cities is incomplete and may not be fully comparable, we are limited in our ability to draw conclusions from comparing Austin’s CIC costs to those of other cities implementing 311 call centers. Nevertheless, we have included in this report some of the kinds of comparisons that would be valuable. Based on these comparisons, Austin’s costs appear lower; however, the potential exists for Austin’s costs to increase.

Given the limitations of available data, a high-level comparison shows that projected implementation costs identified so far for Austin’s 311 CIC are less than those of other cities. Exhibit 5 shows a high-level comparison of 311 start-up costs for Austin and other cities where available, along with the CSR vendor and number of request types managed. However, other cities’ costs may include public safety 311, and we did not review costs for Austin’s public safety 311 in this audit. More work would be needed to determine comparability, although this initial overview provides a starting point for comparison. Also, since additional assessment and implementation work are planned after Phase I, full implementation costs for Austin’s CIC are not yet known.

**EXHIBIT 5
311 Call Center Start-Up Cost Comparison**

	Start-Up Costs	CSR Vendor	Number of Request Types Managed
Austin*	\$1.1M	Motorola	140
New York City	\$25M	Siebel Systems	n/a
Chicago	\$5M	Motorola	500
Los Angeles	n/a	n/a	1400
Houston	n/a	Unisys	300
San Antonio	n/a	n/a	169
Dallas	\$5M	Motorola	600
Baltimore	\$3M	Motorola	300

SOURCE: OCA summary of trade articles and web research (unaudited data). We have not verified comparability in call center functions/features, nor in what is included in reported costs, for example facilities costs. Austin's numbers are for the CIC only, not Public Safety 311, whereas other cities' 311 data may include both. Houston and San Antonio 311 call centers exclude public safety, while Chicago, Baltimore, Dallas, L.A., and New York City include non-emergency public safety. Dallas has a combined 911/311 call center, with 653 request types including public safety and 600 excluding public safety. A 2002 OCA audit reported implementation costs of \$539K for Austin's Public Safety 311 system. Project management for NYC was outsourced to Accenture. **n/a** = not available.

*Austin's cost figure is projected through FY05 only, with additional development beyond FY05 not yet defined.

Comparing the CIC’s operating data to other call centers indicates that the potential exists for operating costs to increase if call volume exceeds currently planned call center capacity.

A high-level comparison of the staff and costs of the 311 CIC call center to 311 call centers in other cities shows higher staffing and funding levels for 311 in other cities than are planned for Austin. (See Exhibit 6 for available call volume, staffing, and operating budget data.) In addition, other City of Austin call centers such as the AE Utility call center and the Public Safety 911/311 call center have significantly greater staff and funding than that planned for the CIC. This leads to a concern that the 311 CIC costs may be underestimated. Although these comparisons may be considered apples-to-oranges, further examination of cost estimates may be warranted.

**EXHIBIT 6
Call Center Comparison of Call Volume, Staffing, and Operating Costs**

City	Call Center	Average Daily Call Volume	Average Annual Call Volume	Number of City services converted to 311	Approx. Daily call volume per staff	Staff	Operating Budget
AUSTIN	311 CIC Call Center, FY04 as of 4/04	1000	.26M	61	154	5-8 (avg. 6.5)	\$.55M
	311 CIC Call Center, expected FY05	(Not yet clear)		140+	n/a	15-20	.9M
OTHER CITIES	New York City	15,000	5.5M	n/a	75	200	n/a
	Chicago	9,863	3.6M	500	126	78	n/a
	Los Angeles	19,726	7.2M	1,400	n/a	n/a	n/a
	Houston	5,753	2.1M	300	115	50	\$4.0M
	San Antonio	3,288	1.2M	169	126	26	\$1.3M
	Dallas	3,836	1.4M	600	n/a	n/a	n/a
	Baltimore	2,740	1.0M	300	61	45	n/a

SOURCE: OCA summary of trade magazine articles, web research, contact with other cities, and information from CTM and AE on Austin’s CIC. This information has not been audited for reliability. Unlike Austin, other cities’ data may include both non-emergency public safety and general city services. Houston and San Antonio 311 call centers do not include public safety, while Chicago, Baltimore, Dallas, L.A., and New York City 311 call centers were set up to relieve non-emergency public safety calls. Dallas has a combined 911/311 call center, although the 311 figures above exclude all public safety. In addition, the Dallas 311 takes water/waste water calls, which represents over 1/3 of its call volume. Chicago’s call center staff level is reported at 78, of which 65 are call takers.
n/a = not available. **N/A** = not applicable.

We identified risks or issues for further study during the course of our work that warrant additional attention.

The following additional issues came to our attention but were outside the scope of audit work completed. We suggest that management assess these issues, and we would want further guidance from the Council Audit and Finance Committee before pursuing them in an audit.

1. Customer Satisfaction. CTM's plans and systematic process for implementation include a step to assess customer satisfaction, both internal and external. However, as of the time of this audit, this step was not complete.

- **Departmental end user experience/impact to service delivery.** As indicated earlier, we have some initial indications from CTM of the positive impact of the CIC to department service areas that have completed the go-live process. A more systematic assessment of departmental user experience and the associated impact on service delivery is still needed.
- **Citizen experience/perspective.** As indicated, management is discussing ways to capture citizen customer satisfaction. We conducted limited testing and received input during the audit that yielded mixed results, with both positive and negative experiences reported. This is to be expected during phased implementation stages, and some citizen expectations may have been based on misleading media coverage. However, an assessment of citizen impact is still needed.

2. Reporting.

- **Usefulness of system reports.** For departmental users and other stakeholders, we did not assess the usefulness of reports from the CSR. Report development was underway during this audit, and some difficulties were identified by management in obtaining or developing routine as well as specialized reports from the system. Work was underway to address these issues at the time of this report.
- **Data reliability.** As indicated earlier, we did not assess data reliability during the audit due to incomplete report development and system implementation. Further assessment is needed to ensure the data from the call center are reliable.

3. System Development.

- **Needs assessment/identification of desired system outputs.** CTM's project plan includes a step to configure special reports after each department's service areas' phased go-live. However, we did not identify any up-front needs assessment of specific information outputs needed from the system. CTM did assess requirements for services to be configured in the CSR, but there was an expectation of "canned" reports from the system, indicating some reliance on Motorola's assessment of typical information needed from such a system. CTM has briefed the City Manager on some preliminary reports available from the system, allowing an opportunity for assessing needs at the CMO level. However, additional assessment of uses and needs of all stakeholders, including departments, CMO, Council, and citizens is warranted.
- **System development methodology.** CTM's project management model for the CIC Phase I is based on a modified version of the Commercial Off-the-Shelf (COTS) Life Cycle Model for project management. We did not assess the adequacy of this model

for the CIC project or the extent to which the model was followed, in terms of requirements analysis and architecture definition. The CIC team did rely to some extent on work that had been done previously for the City's Public Safety 311 CSR. This may have been appropriate for Phase I and establishing basic system functionality. However, the nature of the work being considered beyond Phase I, with the potential integration or interfaces with a number of other City systems, may require a more design and development-intensive approach than with the COTS-based work in Phase I, indicating more attention and staff time may be needed for requirements analysis and design.

- **Assessment of cost/benefit of additional enhancements.** In conjunction with a thorough requirements analysis for additional enhancements, an assessment of the cost/benefit of each potential enhancement should be considered. This would allow more informed decisions on which enhancements to implement and in what sequence.
4. **Operational Issues.** At the time of this report, management was still in the process of developing a plan for the transition to operations, an operations support plan, and a disaster recovery plan. In addition, the development of measures and service level standards for the CIC itself, as well as for services supported by the call center, were expected to be re-assessed after go-live. Another issue that has also not yet been fully verified by audit is the staffing of the call center to provide 24x7 availability to citizens. Some options have been discussed, such as using the AE Utility call center or CTECC staff for coverage during nights and weekends, but plans have not been finalized.
 5. **Corporate use of system data/Proactive reviews to identify trends.** In terms of corporate-level review or monitoring of service delivery using information from the CIC, AE management indicated that AE would be in the role of information provider, and the City Manager's Office would more appropriately fill the role of such corporate-level monitoring. The City Manager states that corporate reports and reports by Assistant City Manager grouping would be reviewed regularly by the City Management Team. Beyond the CMO team reviews, there is not yet consensus on what data should be made available to whom and who should review it.
 6. **Communication and Coordination:** Some indications exist that more attention is needed to establish realistic expectations for the call center both externally and internally with departments regarding this planned enterprise-wide system.
 - **Public expectations.** One of the key risks identified by the City Manager in regard to the Citywide CIC was in managing expectations, or keeping unrealistic expectations from developing. However, there have been instances of premature or misleading public communication regarding 311 that may have created internal or external expectations that will not be met. These included:
 - A Statesman article of January 2004 indicating availability of the call center to citizens in early February, when in actuality only the basic system (hardware and software) functionality had been installed, but department service areas had not yet been fully integrated into the system. No City response was issued to publicly clarify the incomplete status of the phased implementation. As a result, citizen expectations

of the CIC's availability may not have been met simply because the Phase I implementation was not fully complete.

- City Audit & Finance Committee presentation and discussion of November 2003 indicating specific features being implemented and ACAP integration during FY04. In fact, these are deferred until after Phase I, which is planned for completion in early FY05.
- November 2003 Council discussions indicating that citizens would be able to check the status of requests on the Internet, and that the system would capture requests related to power outages. In fact, at this time, plans are for separate numbers to be maintained for Utility billing and service requests and power outage emergencies, although in theory all calls received by the 311 CIC will be handled at least by a transfer. Capability for citizens to track the status of requests on the Internet had not been established at the time of this report, although it is intended for Phase I.

There is a risk that, as a result of these miscommunications, citizens or other stakeholders may experience dissatisfaction with the system even before it has officially gone live.

- **Internal expectations.** In addition to managing public expectations, continued attention is needed on managing internal expectations. The CTM project manager's status reports on the CIC project indicated that more communication was needed with departments as implementation was going forward. City department heads and affected staff, particularly for those departments not yet configured into the CIC CSR (or those scheduled for Basic level of implementation), need more information about their department's participation in the CIC and the specific benefits, options, and costs of participating. For example, Austin Water Utility (AWU) is currently scheduled for only the Basic level of implementation, but the AWU FY05 business plan describes their intention to use the CIC to improve customer service and to develop an interface between AWU's Hansen work order system and the CIC CSR. Such planning disconnects may occur as staffing and operational priorities change, but continued communication and coordination are needed.

Recommendations:

01. To ensure successful completion of Phase I, the CIO should conduct an assessment of the extent to which:

- a. Steps in the Go-Live checklist have been effectively completed, and
- b. Data reliability controls are in place to ensure accurate call center data.

MANAGEMENT RESPONSE: CONCUR

- The CIO has confirmed that the CIC Project Manager has consistently applied the steps in the Go-Live checklist. Successful phase in of departments are also an indication this task is completed.
 - Data reliability controls are embedded in the CSR software and phone system to ensure accurate call center data.
-

02. To ensure achievement of the 311 CIC/CSR system potential and to facilitate decision making, the CIO should apply CTM’s standard project management methodology by establishing a Comprehensive Project Plan for the 311 CIC project beyond Phase I, including:

- a. Documentation of stakeholder expectations to be met by the system,
- b. A high-level strategy for multi-phase implementation,
- c. A needs assessment of specific information outputs needed from system,
- d. An assessment of additional service areas/request types needed to meet citizen need and expand coverage of the call center,
- e. An identification of additional functional requirements and options to be achieved, including the specific analysis of requirements for ACAP and AMANDA replacement/interfaces,
- f. Identification of technical requirements to accomplish identified functional and user requirements, and
- g. Identification of costs and staffing requirements to achieve specific enhancements, increasing levels of functionality, and overall project vision.

MANAGEMENT RESPONSE: CONCUR

- The CIC Project Manager has consistently applied CTM’s standard project management methodologies and already has a Comprehensive Project Plan. The project plan is a living document that will be updated as project changes occur, including specific plans beyond phase I.
 - CTM will incorporate Audit recommendations.
-

03. To ensure that relevant costs for the CIC are captured and appropriately reported, the CIO, with assistance from the Controller’s office, should:

- a. Identify any material past costs related to the CIC, including any incurred before the project was transferred to CTM/AE,
- b. Segregate system implementation costs from operating costs by tracking them in separate accounts, and
- c. Comply with the intent of the City’s accounting policies and GASB 34 with respect to CIC capital expenditures.

MANAGEMENT RESPONSE: CONCUR

Austin Energy will implement Audit recommendations.

04. To ensure the effective budgeting and cost tracking of IT projects, the CIO should revisit the audit recommendations of OCA's 2002 IT Project Management Audit report, assess the status of implementation, and establish a plan to address incomplete recommendations, as needed.

MANAGEMENT RESPONSE: CONCUR

Input project team member time into CTM's Time Tracking System.

05. To ensure the successful implementation through and beyond Phase I, the CIO should include in the CIC risk management plan the risks and issues for further study identified in this report, as well as other risks identified by management during the assessment of Phase I and the planning process for later phases.

MANAGEMENT RESPONSE: CONCUR

Update the CIC Risk Management Plan to include Audit's issues for further study.

**APPENDIX A
MANAGEMENT RESPONSE**



City of Austin

Communications & Technology Management

MEMORANDUM

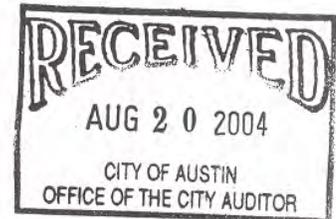
To: Stephen L. Morgan, City Auditor

cc: John Stephens, Acting Director of Finance
Vickie Schubert, Acting Deputy Director of Finance

From: Peter E. Collins, CIO

Date: August 20, 2004

Subject: CTM Management Response To Audit Report
311 Citywide Customer Information Center (CIC) Implementation



CTM presents the Management response to the 311 CIC Audit Report in the attached document. CTM concurs with the five Audit recommendations and offers implementation strategies and timelines as required.

The responses represent project work completed as of Friday, August 6, 2004. CTM will follow up with all responsible individuals to ensure implementation timeframes are met.

If you have any questions, please contact Pamela Hart at 974-1661.

**CTM Management Response to Audit Report
311 Citywide Customer Information Center (CIC) Implementation**

Rec#	Recommendation Text	Concurrence	Implementation Strategies	Current Status	Implementation Date	Responsible Individual
01	<p>To ensure successful completion of Phase I, the CIO should conduct an assessment of the extent to which:</p> <ul style="list-style-type: none"> a. Steps in the Go-Live checklist have been effectively completed, and b. Data reliability controls are in place to ensure accurate call center data. 	Concur	<ul style="list-style-type: none"> ▪ The CIO has confirmed that the CIC Project Manager has consistently applied the steps in the Go-Live checklist. Successful phase in of departments are also an indication this task is completed. ▪ Data reliability controls are embedded in the CSR software and phone system to ensure accurate call center data. 	Underway	9/30/04	T. Thomasson
02	<p>To ensure achievement of the 311 CIC/CSR system potential and to facilitate decision making, the CIO should apply CTM's standard project management methodology by establishing a Comprehensive Project Plan for the 311 CIC project beyond Phase I, including:</p> <ul style="list-style-type: none"> a. Documentation of stakeholder expectations to be met by the system, b. A high-level strategy for multi-phase implementation, c. A needs assessment of specific information outputs needed from system, d. An assessment of additional service areas/request types needed to meet citizen need and expand coverage of the call center, e. An identification of additional functional requirements and options to be achieved, including the specific analysis of 	Concur	<ul style="list-style-type: none"> ▪ The CIC Project Manager has consistently applied CTM's standard project management methodologies and already has a Comprehensive Project Plan. The project plan is a living document that will be updated as project changes occur, including specific plans beyond phase I. ▪ CTM will incorporate Audit recommendations. 	Underway	03/31/05	T. Thomasson/ P. Collins

Rec#	Recommendation Text	Concurrence	Implementation Strategies	Current Status	Implementation Date	Responsible Individual
	<p>requirements for ACAP and AMANDA replacement/interfaces,</p> <p>f. Identification of technical requirements to accomplish identified functional and user requirements, and</p> <p>g. Identification of costs and staffing requirements to achieve specific enhancements, increasing levels of functionality, and overall project vision.</p>					
03	<p>To ensure that relevant costs for the CIC are captured and appropriately reported, the CIO, with assistance from the Controller's office, should:</p> <p>a. Identify any material past costs related to the CIC, including any incurred before the project was transferred to CTM/AE,</p> <p>b. Segregate system implementation costs from operating costs by tracking them in separate accounts, and</p> <p>c. Comply with the intent of the City's accounting policies and GASB 34 with respect to CIC capital expenditures.</p>	Concur	Austin Energy will implement Audit recommendations.	Planned	9/30/05	E. Hart/ Controller's Office
04	<p>To ensure the effective budgeting and cost tracking of IT projects, the CIO should revisit the audit recommendations of OCA's 2002 IT Project Management Audit report, assess the status of implementation, and establish a plan to address incomplete recommendations, as needed.</p>	Concur	Input project team member time into CTM's Time Tracking System.	Underway	9/30/04	P. Hart
05	<p>To ensure the successful implementation through and beyond Phase I, the CIO should include in the CIC risk management plan the risks and issues for further study identified in this report, as well as other risks identified by management during the assessment of Phase I and the planning process for later phases.</p>	Concur	Update the CIC Risk Management Plan to include Audit's issues for further study.	Planned	9/30/04	T. Thomasson/

**APPENDIX B
ACRONYMS**

ACRONYMS

Acronym	Name	Brief Description (if needed)
ACAP	Automated Customer Assistance Program	A City-developed software program that manages citizen requests logged through Council Member and City executive management offices.
AE	Austin Energy	The City's electric utility
AMANDA™	AMANDA™	A registered Motorola/CDSC Systems citizen & land use software system for managing the licensing, permitting, zoning and inspection functions. Scheduled to replace the City's existing Permitting, Inspection, Enforcement, and Review (PIER) system
APD	Austin Police Department	
AWU	Austin Water Utility	
CAF	Customer Assistance Form	A Form generated by the Automated Customer Assistance Program that is used to prepare a response.
CIC	Citywide Customer Information Center	New call center designed to make citizen access to City services less complicated
CMO	City Manager's Office	
COA	City of Austin	
CSR	Customer Service Request system	A software enterprise system which supports customer service. For example, the City's 911 and 311 call center is supported by CSR software.
CTECC	Combined Transportation, Emergency and Communications Center	Austin's Emergency Management Center
CTM	Communications and Technology Management	A City Department formerly known as Information Systems Department
FAQs	Frequently asked questions	
FCC	Federal Communications Commission	
GASB	Government Accounting Standards board	
OCA	Office of the City Auditor	
PIER	Permitting, Inspection Enforcement and Review	A City system that manages licensing, permitting, zoning and inspection services. It is in the process of being replaced by the AMANDA system.
PIO	Public Information Office	The City's public relations clearing house

SOURCE: OCA summary of acronyms in this report

APPENDIX C
CUSTOMER SERVICE REQUEST (CSR) SYSTEM MODEL

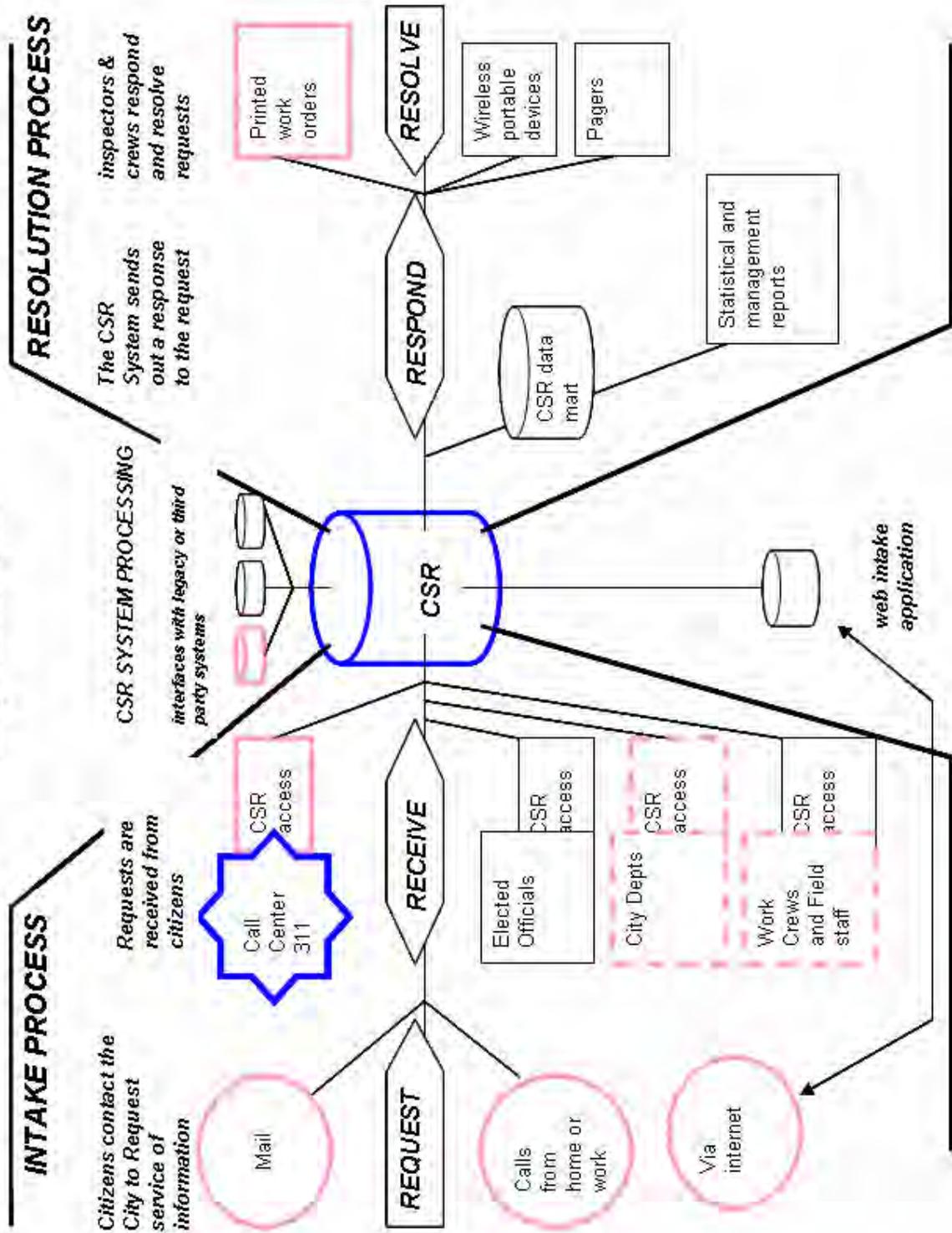
APPENDIX C

CUSTOMER SERVICE REQUEST (CSR) SYSTEM MODEL

A CSR system enables a series of interfaces and exchanges. A record is begun in the CSR when citizens make service requests by contacting the City by mail, telephone or directly via the web. After a request is entered by a call taker into the CSR, the CSR sends out a service request (or work order) to City departments for response. City inspectors and crews respond to the service requests and record their disposition in the CSR. Call center staff, City department staff responding to service requests, executive management, and elected officials may access the CSR to review and assess the status of service request resolution. In a fully developed application, CSR functions also include notifying citizens when requests are resolved. A customer website, linked to CSR by a web intake application, should also enable status checks on requests made. In addition, a fully-developed CSR may also include mapping, mobile access, and interfaces with existing City databases or legacy systems to facilitate service delivery and information response.

The following exhibit provides a graphic illustration of the CSR concept.

Exhibit 1
'Fully loaded' CSR



SOURCE: Adapted from Motorola website

APPENDIX D
DEPARTMENTAL IMPLEMENTATION LEVELS
Increasing Operational Readiness

City Wide Customer Information Center
Phase I Service Levels/Readiness

INCREASING OPERATIONAL READINESS		1	2	3	4
3-1-1 SERVICE LEVEL					
FULL			Health and Human Services	Parks & Recreation	PW - Street & Bridge Only TPSD - Transportation Only Watershed Protection and Dev. Review - Drainage Only Parks & Recreation Health and Human Services
INTERMEDIATE	Austin Energy Solid Waste Services				Office of Emergency Management
BASIC	APD Austin Convention Austin Water Utility Aviation City Clerk Community Care Community Court Economic Growth & Redev. Services EMS Fire Financial and Admin. Services Government Relations Human Resources Law Library Management Services Mayor and Council Municipal Court Neighborhood Housing & Comm. Dev. Office of the City Auditor Neighborhood Planning and Zoning(1) PIO Public Works - Other Div. Small and Minority Bus. Res. WPDR. - Other Div				
	(1) Implementation delayed until AMANDA interface is completed - 1st priority in next phase of project				
	BASIC =General information on office hours, locations and telephone numbers of City Departments and staff. The call takers will use Contact Center to access this and other department information including frequently asked questions regarding specific City services. Call takers will do live transfers of calls when needed.				
	INTERMEDIATE =General information on office hours, locations and telephone numbers of City Departments and staff. The call takers will use Contact Center to access this and other department information including frequently asked questions regarding specific City services. Some (3-5) service requests have been configured for the department's most frequent requests (street light out, missed trash, park maintenance). Call takers can take the requests or will do live transfers of calls when needed. Citizens can access selected service requests on the web.				
	FULL =General information on office hours, locations and telephone numbers of City departments and staff. The call takers will use Contact Center to access this and other department information including frequently asked questions regarding specific City services. Service requests have been configured for most of the services a citizen would request from the department. Call takers can take the requests or do live transfers of calls when needed. Citizens can access selected service requests on the web.				

APPENDIX E
SAMPLE REPORTS

**Service Request Statistical Report
Report For Audit**

From FEB 25, 2004 to AUG 10, 2004

Sorted Alphabetically

Criteria:

Service Requests	Total Count	Total Open	% Open	Total Closed	% Closed	Total Overdue	% Overdue	Avg Resp	Set Duration
Austin Police Department	1	0	0.0%	1	100.0%	0	0.0%	.6	
ZZ APD - CAD	1	0	0.0%	1	100.0%	0	0.0%	.6	0
Financial and Administrative Services	22	4	18.2%	18	81.8%	4	18.2%	7.8	
Communications and Technology Manag	22	4	18.2%	18	81.8%	4	18.2%	7.8	
CSR Issue/Change Reporting	22	4	18.2%	18	81.8%	4	18.2%	7.8	0
Health and Human Services	123	15	12.2%	108	87.8%	9	7.3%	.5	
Animal Control	112	6	5.4%	106	94.6%	1	0.9%	.5	
Animal Bite	9	0	0.0%	9	100.0%	0	0.0%	.6	1
Animal Complaint	6	1	16.7%	5	83.3%	0	0.0%	.5	1
Animal Cruelty	6	0	0.0%	6	100.0%	0	0.0%	.6	1
Bat Complaint	1	0	0.0%	1	100.0%	0	0.0%	.7	1
Dangerous/Vicious Dog Investigation	3	1	33.3%	2	66.7%	1	33.3%	.6	1
Found Animal - Pick Up	7	2	28.6%	5	71.4%	0	0.0%	.5	1
Injured Animal	3	0	0.0%	3	100.0%	0	0.0%	.4	1
Loose Animal (not dog)	2	0	0.0%	2	100.0%	0	0.0%	.5	1
Loose Animal - Hazardous (not dog)	5	0	0.0%	5	100.0%	0	0.0%	.6	1
Loose Dog	68	0	0.0%	68	100.0%	0	0.0%	.5	1
Lost Animal Report	2	2	100.0%	0	0.0%	0	0.0%	0	1
Lost and Found	10	8	80.0%	2	20.0%	8	80.0%	.5	
Found Animal Report - Keep	2	2	100.0%	0	0.0%	2	100.0%	0	1
Lost Animal Report	8	6	75.0%	2	25.0%	6	75.0%	.5	1
Neighborhood Centers	1	1	100.0%	0	0.0%	0	0.0%	0	
Lead Poisoning Prevention Services	1	1	100.0%	0	0.0%	0	0.0%	0	7
Office of Emergency Management	2	1	50.0%	1	50.0%	1	50.0%	.6	
ZZ OEM Debris Removal Test SR	1	1	100.0%	0	0.0%	1	100.0%	0	0
ZZ OEM Main Call Taking SR (Test)	1	0	0.0%	1	100.0%	0	0.0%	.6	0
Parks and Recreation Department	396	231	58.3%	165	41.7%	169	42.7%	5.2	
Park Maintenance	102	22	21.6%	80	78.4%	0	0.0%	4.2	
Mowing Medians/Vacant Lots	52	9	17.3%	43	82.7%	0	0.0%	3.3	30
Park Maintenance - Building A/C and H	5	3	60.0%	2	40.0%	0	0.0%	2.9	30
Park Maintenance - Building Electrical Is	1	0	0.0%	1	100.0%	0	0.0%	6.6	30
Park Maintenance - Building Issues	1	1	100.0%	0	0.0%	0	0.0%	0	30
Park Maintenance - Building Plumbing Is	2	0	0.0%	2	100.0%	0	0.0%	19.9	30
Park Maintenance - Grounds	27	4	14.8%	23	85.2%	0	0.0%	4.2	30
Park Maintenance - Grounds Electrical I	7	3	42.9%	4	57.1%	0	0.0%	5.2	30
Park Maintenance - Grounds Plumbing I	7	2	28.6%	5	71.4%	0	0.0%	5.7	30
Urban Forestry	294	209	71.1%	85	28.9%	169	57.5%	6.1	
Tree Issue Blind Corner (PARD)	121	91	75.2%	30	24.8%	62	51.2%	3.1	14
Tree Issue ROW/Emergency (PARD)	28	11	39.3%	17	60.7%	11	39.3%	7.5	1
Tree Issue ROW/Maintenance (PARD)	142	105	73.9%	37	26.1%	94	66.2%	7.5	1
ZZ Tree Issue - Blind Corner	1	1	100.0%	0	0.0%	1	100.0%	0	14
ZZ Tree Issue - ROW/Emergency - Duri	1	0	0.0%	1	100.0%	0	0.0%	20.5	1
ZZ Tree Issue - ROW/Routine	1	1	100.0%	0	0.0%	1	100.0%	0	30
Street and Bridge	1600	254	15.9%	1346	84.1%	159	9.9%	8	
Alley and Unpaved Street Maintenanc	99	21	21.2%	78	78.8%	5	5.1%	12.4	90
Barricade Request	20	5	25.0%	15	75.0%	4	20.0%	4.2	1

**Service Request Statistical Report
Report For Audit**

From FEB 25, 2004 to AUG 10, 2004

Sorted Alphabetically

Criteria:

Service Requests	Total Count	Total Open	% Open	Total Closed	% Closed	Total Overdue	% Overdue	Avg Resp	Set Duration
Bridge Repair	7	1	14.3%	6	85.7%	0	0.0%	1.9	90
Curb/Gutter Repair	78	25	32.1%	53	67.9%	6	7.7%	11.9	90
Debris in Street	278	40	14.4%	238	85.6%	36	12.9%	3.2	1
Fence Repair - MOPAC	7	0	0.0%	7	100.0%	0	0.0%	5.6	90
Guardrail - New	4	2	50.0%	2	50.0%	0	0.0%	1.1	180
Guardrail Repair	21	6	28.6%	15	71.4%	3	14.3%	10.6	30
Pavement Failure	101	15	14.9%	86	85.1%	10	9.9%	8.1	14
Pothole Repair	445	21	4.7%	424	95.3%	12	2.7%	11.5	4
Roadway Spillage	10	0	0.0%	10	100.0%	0	0.0%	1.8	1
Sidewalk Repair	119	18	15.1%	101	84.9%	9	7.6%	8.7	30
Street and Bridge - General	135	44	32.6%	91	67.4%	29	21.5%	5.9	14
Street Construction Inquiry	30	4	13.3%	26	86.7%	3	10.0%	4	30
Street Resurfacing Inquiry	65	21	32.3%	44	67.7%	19	29.2%	10.9	7
Tree Down in Street	143	20	14.0%	123	86.0%	20	14.0%	2.1	1
Utility Cut Repair	34	8	23.5%	26	76.5%	0	0.0%	9.8	90
Street and Bridge - Private	4	3	75.0%	1	25.0%	3	75.0%	.5	
Curb/Gutter Future Scheduled Work	1	1	100.0%	0	0.0%	1	100.0%	0	0
Fence Repair Future Scheduled Work	1	0	0.0%	1	100.0%	0	0.0%	.5	0
Pothole Future Scheduled Work	2	2	100.0%	0	0.0%	2	100.0%	0	0
Transportation	4110	555	13.5%	3555	86.5%	239	5.8%	11	
Parking Enforcement	177	4	2.3%	173	97.7%	0	0.0%	5.2	
Parking Ticket Complaint	172	4	2.3%	168	97.7%	0	0.0%	5.3	5
Parking Violation Enforcement	5	0	0.0%	5	100.0%	0	0.0%	1.5	2
Parking Meters	1177	3	0.3%	1174	99.7%	0	0.0%	1	
Parking Meter Knockdown	1	0	0.0%	1	100.0%	0	0.0%	3.4	4
Parking Meter Malfunction	1176	3	0.3%	1173	99.7%	0	0.0%	1	2
Signs and Markings	1169	394	33.7%	775	66.3%	190	16.3%	18.3	
Road Markings/Striping - Maintenance	50	28	56.0%	22	44.0%	11	22.0%	37.9	60
Sign - Parking Sign Maintenance	137	50	36.5%	87	63.5%	42	30.7%	17.6	21
Sign - School Zone Sign Maintenance	21	10	47.6%	11	52.4%	9	42.9%	13.1	21
Sign - Street Name	471	167	35.5%	304	64.5%	4	0.8%	26	130
Sign - Traffic Sign Emergency	288	105	36.5%	183	63.5%	100	34.7%	2.9	21
Sign - Traffic Sign Maintenance	195	31	15.9%	164	84.1%	22	11.3%	19.3	21
Sign/Markings Work Order (Private)	7	3	42.9%	4	57.1%	2	28.6%	14.6	60
Traffic Engineering	679	106	15.6%	573	84.4%	9	1.3%	24.5	
Pedestrian Flasher - New	10	1	10.0%	9	90.0%	0	0.0%	35.9	60
Road Markings/Striping - New	49	6	12.2%	43	87.8%	1	2.0%	28.7	70
School Zone - New/Review/Changes	15	2	13.3%	13	86.7%	2	13.3%	25.7	60
School Zone Flasher - New	4	0	0.0%	4	100.0%	0	0.0%	34.2	200
Sign - New	388	66	17.0%	322	83.0%	4	1.0%	24	70
Speed Limit - Changes/Signs	26	3	11.5%	23	88.5%	0	0.0%	21.1	70
Traffic Calming	171	25	14.6%	146	85.4%	0	0.0%	23.7	70
Traffic Signal Study - Private	5	1	20.0%	4	80.0%	0	0.0%	17.9	70
Transportation - General	11	2	18.2%	9	81.8%	2	18.2%	29.1	7
Traffic Signals	907	48	5.3%	859	94.7%	40	4.4%	10.3	
Pedestrian/School Zone Flasher - Instal	1	0	0.0%	1	100.0%	0	0.0%	12.6	60

**Service Request Statistical Report
Report For Audit**

From FEB 25, 2004 to AUG 10, 2004

Sorted Alphabetically

Criteria:

Service Requests	Total Count	Total Open	% Open	Total Closed	% Closed	Total Overdue	% Overdue	Avg Resp	Set Duration
School Zone Flasher - Timing/Maintenan	38	1	2.6%	37	97.4%	1	2.6%	8.5	1
Traffic Signal - Bulb(s) Out	97	2	2.1%	95	97.9%	2	2.1%	1.2	.125
Traffic Signal - Damaged	49	2	4.1%	47	95.9%	2	4.1%	5.9	1
Traffic Signal - Damaged (Private)	1	0	0.0%	1	100.0%	0	0.0%	2.5	90
Traffic Signal - Flashing	146	18	12.3%	128	87.7%	18	12.3%	.7	.125
Traffic Signal - New	32	5	15.6%	27	84.4%	0	0.0%	22.8	270
Traffic Signal - Timing (Individual)	275	14	5.1%	261	94.9%	11	4.0%	16.6	7
Traffic Signal - Timing (Series - Private)	2	0	0.0%	2	100.0%	0	0.0%	.5	180
Traffic Signal - Timing (Series)	35	0	0.0%	35	100.0%	0	0.0%	21.8	7
Traffic Signal Study - Private	1	0	0.0%	1	100.0%	0	0.0%	1.7	70
Watershed Protection	467	11	2.4%	456	97.6%	1	0.2%	11.5	
Drainage	467	11	2.4%	456	97.6%	1	0.2%	11.5	
Animal / Lost Item in Storm Drainage Sy	26	0	0.0%	26	100.0%	0	0.0%	2.5	.166667
Channels/Creeks/Drainage Easement	99	5	5.1%	94	94.9%	0	0.0%	13.4	120
Creek and Pond Vegetation Control	79	1	1.3%	78	98.7%	0	0.0%	10.1	90
Ditch/Driveway Pipe Services	12	0	0.0%	12	100.0%	0	0.0%	5.4	180
Drainage - Miscellaneous	78	1	1.3%	77	98.7%	0	0.0%	13.7	180
Drainage Pond Maintenance	17	0	0.0%	17	100.0%	0	0.0%	11.2	180
Erosion	16	0	0.0%	16	100.0%	0	0.0%	16.5	180
Flooding - Storms After Business Hour	2	0	0.0%	2	100.0%	0	0.0%	.6	2
Flooding - Storms During Business Hou	35	1	2.9%	34	97.1%	1	2.9%	9.7	2
Standing Water	29	0	0.0%	29	100.0%	0	0.0%	16.9	180
Storm Drain Inlet Services	72	3	4.2%	69	95.8%	0	0.0%	10.7	90
Town Lake - Issues	2	0	0.0%	2	100.0%	0	0.0%	2.4	21
Traffic Light Synchronization	78	5	6.4%	73	93.6%	5	6.4%	24.3	7
Traffic Signal - All Out	153	1	0.7%	152	99.3%	1	0.7%	3.4	.125

APPENDIX F
OCA IDENTIFICATION OF EXPECTATIONS FOR THE CIC

APPENDIX F

OCA IDENTIFICATION OF EXPECTATIONS FOR THE CIC

Expectations for the CIC may be derived from a number of sources. A number of sources may combine to articulate expectations for the 311 CIC. These include:

- the City Manager's Uncomplicated Customer Access corporate initiative,
- the CIO's project vision,
- the CTM project plan's Key Success Factors and Key Deliverables,
- Management presentations on the call center,
- Questions and interests expressed by CMO and Council during the course of this audit, and
- Representations by management during the course of the audit regarding the call center's potential.

Other sources, including media coverage and public discussion at Council, may have also created some citizen expectations that we have not verified as being achieved in Phase I. Combined, these sources allow us to establish criteria against which to measure the call center's success. During the course of our work, we verified whether some of these expectations were in place or planned for Phase I, deferred for later phases, or not articulated at all.

The vision for the call center articulated by the CIO for the CIC is as follows:

To provide the citizens of Austin with a high standard of non-emergency service through one-stop, quick and convenient access via a 24/7 Citywide Customer Information Center. This Center would provide intake utilizing one-call telephone technology or web access.

To realize this vision, the City will install a customer service request system that would facilitate not only the intake process and handling of citizen service requests, but also automate associated workflow processes. In addition to improved citizen access, the 24/7 Citywide Call Information Center will

- Drive operations to resolution by managing the intake, work breakdown, routing, and resolution of service requests.
- Promote collaboration among service providers by coordinating departments' response to service requests.
- Provide an enterprise-wide view of performance across all departments and provide a means for City management to assess service request activity.
- Allow performance metrics to be established and tracked through time to help managers determine where to deploy resources for maximum results.

Project Success Factors defined in CTM's project plan are for the CIC/CSR to:

1. Provide faster responses when citizens call with requests, complaints, and questions.
2. Provide citizens with an easy and convenient way to send feedback, ask questions, and obtain information.
3. Provide stakeholders with an effective management tool: real time reports, trends and response times;
4. Provide consistent standardized information within an enterprise wide system that establishes a permanent traceable record of citizen requests.
5. Track and manage request information through the complete cycle.
6. Route request to right department automatically at the time the request is entered into the system.
7. Coordinate work processes between departments at appropriate time in the process.

CTM project plan's also identifies key deliverables for the project, essentially infrastructure and support for the call center. Most of these are underlying technical requirements to support identified functional requirements and expectations. They include the following:

- Call center furniture and equipment
- CSR software licenses for 39 concurrent users
- CSR Web Forms installation upgrade
- Server and security hardware, phone equipment, cabling
- Oracle software licenses
- Training: Configuration managers, application managers, end users, and train-the-trainer.
- 320 hours of Service Request Configuration
- Mock Go-Live and actual Go-Live support

Other Expectations/Interests of Key Stakeholders: Other expectations for the CIC identified through the course of our work include, but are not limited to, the following.

The City Manager:

- Ensuring steps are being taken to ensure the call center will not experience call overload
- If a work order system exists in a City department, the department is expected to be operating through the 311 CSR by the time the CIC is publicly introduced, with a few exceptions such as utility billing.
- Integrating CIC results into performance measures
- Linking the CIC CSR with other systems, such as inspection scheduling systems.

Council:

- Will citizens be able to track the status of requests? By Phone or internet?
- How will call takers answer questions?
- Will the information coming from the CIC be a complete picture of citizen requests?
- What information needs to be provided to whom?
- Is information from the call center reliable?
- Will we be getting the best system for the money we're investing?
- Will data-driven decision making be facilitated through proactive reviews to identify problems in the community, with more accountability established through these reviews?
- Will the system provide better customer service at a lower price?

Other public representations of what the CIC will do

- Notification to requestors when requests are complete
- System tool for surveying customer satisfaction with services provided
- Early warning of management at different levels when requests exceed set thresholds
- Proactive reviews to determine where problems exist
- Mapping of service request data
- Mobile interfaces for field crews
- Integration or interfaces with other systems, including ACAP, AMANDA, and others

We verified that a number of expectations will be met in Phase I, while others remain unverified as of this report. Through the course of our work, we were able to verify a number of expectation as having a high likelihood of being met. Others, due to the evolving state of system implementation and operating plan development during the course of our work, were not able to be verified for Phase I. Still others remain to be assessed after Phase I. Exhibit 3 in the report body shows the status of verification as of the time of this report.