



# Internal Audit Report

## Assessor's Entrance/Exit Review July 2005



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# Maricopa County

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July 15, 2005

Max W. Wilson, Chairman, Board of Supervisors  
Fulton Brock, Supervisor, District I  
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Andrew Kunasek, Supervisor, District III  
Mary Rose Wilcox, Supervisor, District V

We have completed our FY 2004-05 Entrance/Exit review of the Assessor's Office. This review was conducted to help ensure a smooth transition between incoming and outgoing elected officials and was performed in accordance with the annual audit plan approved by the Board of Supervisors. The specific areas reviewed were selected through a risk-assessment process. Highlights of this report include the following:

- Weak user access controls resulted in users with inappropriate levels of access within the Assessor's information system
- Remote access controls appear to be established and functioning properly; access has been granted to appropriate staff based on their duties
- Failure to follow established pricing policies resulted in a \$9,500 data set being provided to a customer without charge

Within this report you will find an executive summary, specific information on the areas reviewed, and the Assessor's response to our recommendations. We have reviewed this information with the Assessor and appreciate the excellent cooperation provided by management and staff. If you have any questions, or wish to discuss the information presented in this report, please contact Joe Seratte at 506-6092.

Sincerely,

A handwritten signature in cursive script that reads "Ross L. Tate".

Ross L. Tate  
County Auditor

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# Executive Summary

## **Application Security (Page 5)**

The Assessor's information systems application contains inappropriate levels of access—including terminated employees with active logon IDs. Unauthorized or inappropriate access to core business applications could lead to the processing of unauthorized transactions. The Assessor should perform a complete review of established user access to determine if user access is appropriate, develop a user access matrix, and establish a formal process to review user access on a quarterly basis.

## **Remote Access (Page 7)**

Remote access privileges to the Assessors critical business applications have been appropriately granted and are effectively controlled.

## **Controls Over Data Sales (Page 8)**

Internal control weaknesses exist within the Assessor data sales process, including a lack of segregation of duties and an insecure receivables accounting system. As a result, cash receipts and data sets could be misdirected without detection. The Assessor's Office should implement additional controls over data sales.

## **Data Sharing and Pricing (Page 10)**

The Assessor's Office data sharing and sales policies establish prices for data sold to the public and shared with other governmental agencies. Failure to follow these policies resulted in a \$9,500 data set being inappropriately provided to a customer at no charge. Failure to follow established pricing policies and procedures could result in lost revenue and inconsistent treatment of County citizens. The Assessor's Office should strengthen established controls over data sharing and sales.

## **Fixed Assets (Page 12)**

In prior years, the Assessor's Office has not maintained adequate controls over capital asset acquisition and disposal, which has resulted in an understatement of \$870,000 in the Assessor's capitalized fixed assets according to the Department of Finance (DOF). The Assessor's Office should ensure that asset additions and disposals are processed and annual validations performed in accordance with County policy. In addition, the Assessor's Office should follow up with DOF to ensure asset additions/deletions are processed timely.

# Introduction

## Background

Entrance/Exit reviews of newly elected officials are limited scope engagements, which are offered to newly elected officials to assist a smooth transition. The objectives of these reviews are established based on risk assessment. The newly elected Assessor, Keith Russell, took office in January 2005.

## The Assessor's Office

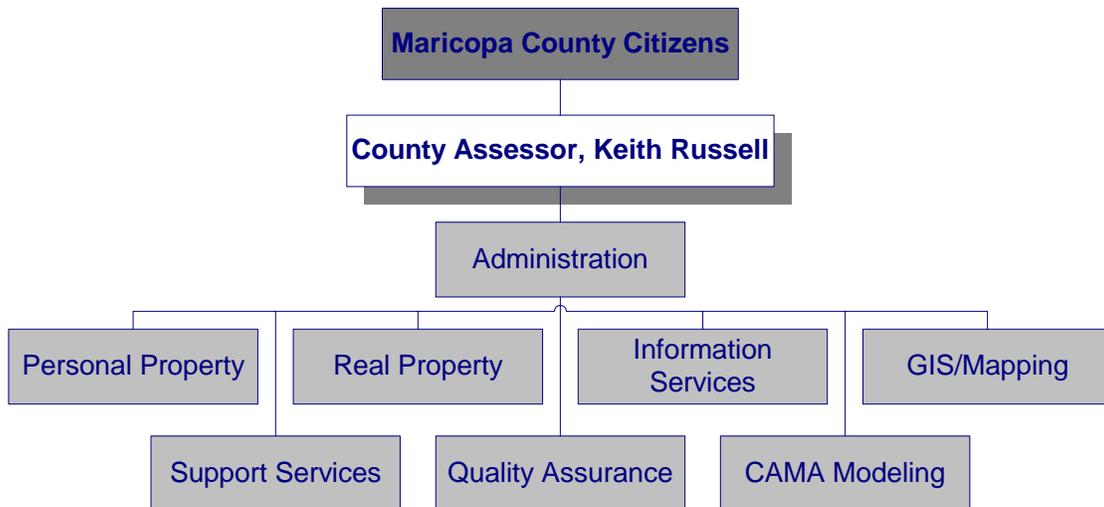
The Maricopa County Assessor is an elected official and the Office is mandated by a number of Arizona Revised Statutes (ARS). The primary duties of the Assessor's Office are dictated by ARS 42 (Chapters 11-17) and include determining the full cash value, and limited value, of all taxable property in the County. In addition, the Assessor is responsible for preparing the assessment roll showing the ownership of all property and assessments, computing the levy limit prescribed by ARS 42-17051, and determining the limited property value within each school district in the County.

In conjunction with these duties, the Assessor's Office operates a Property Assessment program. The program provides ownership, mapping, property characteristics, and valuation information to the public, government agencies, and internal customers so they can be assured that our valuations are fair and equitable. The primary activities and purposes of this program are:

- Ownership activity provides updated ownership identification, exemptions, accelerated parcel numbers, and annexation/special district information to the public, government agencies, and internal customers so they can identify ownership and related information of all property in Maricopa County
- Mapping / GIS activity provides updated subdivision and "splits" maps to the public, government agencies, and internal customers so they can utilize current, quality mapping information for Maricopa County
- Property Characteristics activity provides updated and new property component data to the public, government agencies, and internal customers so they can utilize our component data and establish fair and equitable valuations
- Valuation / Modeling activity provides property valuations to the public, government agencies, and internal customers so they can have a fair and equitable basis for computing property taxes
- Valuation Notification activity informs the public so they can be aware of the newly established valuations
- Defend and Adjust Valuation activity provides an appeal or correction opportunity for the public so they can challenge their current valuations

## Organization

The major organizational divisions and their subdivisions within the Assessor's Office are depicted in the following organization chart:



## Mission, Vision, and Goals

The Assessor's Office mission is to efficiently administer state property tax laws and to provide quality information to taxpayers and various taxing jurisdictions to assure that all County property is valued fairly and equitably.

The Assessor's Office vision is, "To do our very best." The Assessor's Office goals are:

- By June 2005 and annually thereafter, maintain an employee retention rate of at least 95% of quality, experienced employees exclusive of retirees
- By June 2005 and annually thereafter, make fair and equitable valuation of property that continues to meet or exceed Department of Revenue guidelines
- By June 2006 and annually thereafter, have quality customer service and information that "satisfies" at least 95% of the public and taxing jurisdictions based upon satisfaction surveys
- By June 2005 and annually thereafter, achieve timely and accurate identification of property owners that are updated within 30 days of a recorded change 95% of the time
- By June 2005 and annually thereafter, have new construction added to our system within 30 days of completion 99% of the time and passing audit compliance 98% of the time

## **Scope and Methodology**

Our audit objectives were to determine if the Assessor's records and assets were properly safeguarded and accounted for. We examined the following areas:

- Information systems access, and controls over confidential information
- Cash balances and reconciliations
- Capital (\$5,000 and over) and Controllable (under \$5,000) assets
- Travel expenses
- Payroll expenses

Findings related to information systems, cash, and fixed assets are presented on the following pages. We did not identify any significant issues related to travel or payroll expenses.

This audit was performed in accordance with generally accepted government auditing standards.

# Issue 1 Application Security

## Summary

The Assessor's information systems application contains inappropriate levels of access—including terminated employees with active logon IDs. Unauthorized or inappropriate access to core business applications could lead to the processing of unauthorized transactions. The Assessor should perform a complete review of established user access to determine if user access is appropriate, develop a user access matrix, and establish a formal process to review user access on a quarterly basis.

## User Access

User access to the Assessor's application must be requested on the "Update System Access" form, which must be approved by the employee's manager and the Application Service manager. In addition, a valid user ID and password combination is required to access the application.

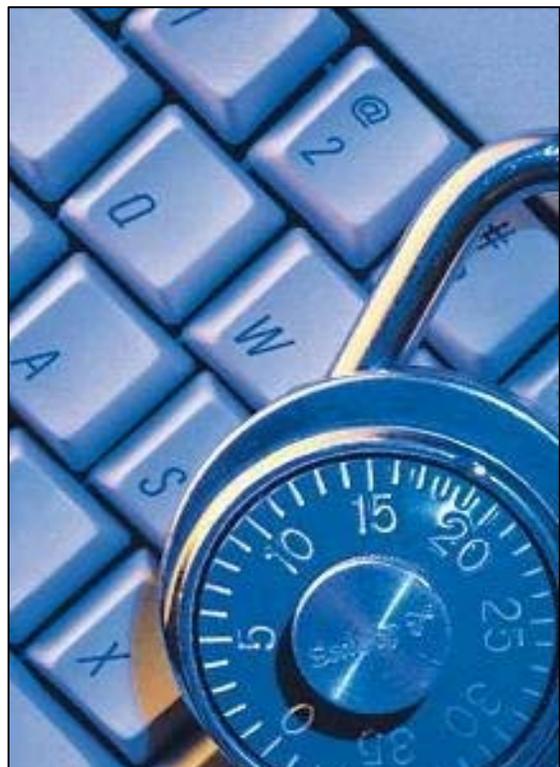
User IDs are given "roles" within the application that have different levels of access associated with them. There is no limit to how many roles can be associated with a user ID. However, two roles, Developer and Data Entry, define a user's ability as "inquiry" or "update," respectively. All other roles determine the screens in the Assessor's application to which the user will have access.

## Business Risks

Unauthorized or inappropriate access to core business applications could lead to segregation of duty issues or the processing of unauthorized transactions. Access to a multi-user information system should be controlled through a formal user registration process. The ISO/IEC 17799 International Security Standard states that passwords provide a means of validating a user's identity and establishing access rights to information processing facilities or services. Section 9.3.1 of ISO/IEC 17799 provides guidance on leading practice standards with regard to password parameters.

## Review Results

We obtained a system-generated list of user IDs and associated roles within the Assessor's application and analyzed user access. In addition, we obtained a list of current employees within



**Sound user access controls are critical to system security and data integrity**

the Assessor's Office and compared it to the user listing previously noted through system queries to identify terminated employees with active user IDs.

While reviewing user access levels with management, we noted many users with access to the Assessor's application did not appear to have access levels appropriate for their job responsibilities. We reviewed user IDs and Data Entry access within the Assessor's application with management, and noted multiple users with inappropriate levels of access. During this review we also determined many of the roles configured within the Assessor's application did not meet the operating needs of each function within the Assessor's Office.

Our review of the Assessor's application also noted the following:

- We were not able to associate 299 user IDs (180 of which have update access) to a current employee of the Assessor's Office
- Two employees who had been terminated from the Assessor's Office in the past six months still had an active user ID, and eight active user IDs with update access were associated with employees who had been terminated for up to four years
- Two developers and four users had inappropriate update access to the production database
- The paper listing of user access, maintained by the Assessor's Office to track user access levels, is not adequate to precisely identify the level of access granted a specific user or group of users
- We found a higher number of users with update access to the application than was expected by management
- The Assessor's application password parameters, which are controlled in the Oracle database, are not configured in accordance with leading practice standards

## **Recommendation**

The Assessor should:

- A.** Review user access to identify and remove all user IDs that are not associated with a current employee.
- B.** Develop a user access matrix to provide an easy-to-understand document that quickly identifies the access rights each employee has been granted.
- C.** Formally review user access to the Assessor's Office application on a quarterly basis to determine if user access is appropriate.
- D.** Remove developer (update) access to the production instance of the Assessor's application for ISD employees.
- E.** Limit users with server access to inquiry only access to the production instance of the Assessor's application.
- F.** Configure the Assessor's application password parameters to leading practice standards as specified in ISO/IEC 17799.
- G.** Consider enabling the Oracle database audit function to capture a user's last login data.
- H.** Assign more complex, random, and non-repetitive passwords to new user IDs.

# Issue 2 Remote Access

## Summary

Remote access privileges to the Assessor's critical business applications have been appropriately granted and are effectively controlled.

## Remote Access

Remote access is the ability to log on to the County's network from a distant location. This arrangement is often set up to allow County employees to work from their home computers without traveling to the office. Once connected to the network, the remote user has the same permissions and access rights as the office workstation. Because this creates a potential vulnerability, remote access should be controlled and granted only when appropriate for employees' job duties.

## Remote Access Testing

Maricopa County Assessor's Office has 20 employees with remote access privileges to the Assessor's critical applications. The County's E-Gov group, charged with management of remote access to County systems, provided a listing of Assessor employees with remote access capabilities.

## Review Results

We confirmed with Human Resources that the 20 users with remote access privileges were valid, active employees. We also validated the listing of remote access users with Assessor management to ensure that remote access was appropriate based on user responsibilities. Our review of established controls over the remote access users and the appropriateness of those users' granted access noted no exceptions.

## Recommendation

None, for informational purposes only.

# Issue 3 Controls Over Data Sales

## Summary

Internal control weaknesses exist within the Assessor data sales process, including a lack of segregation of duties and an insecure receivables accounting system. As a result, cash receipts and data sets could be misdirected without detection. The Assessor's Office should implement additional controls over data sales.

## Standards For Internal Controls Over Cash Receipts

The State and Local Government Committee of the American Institute of Certified Public Accountants (AICPA) recommends 40 safeguards and procedural controls over cash receipts. Five of the most important controls are listed below.

- The duties of cash collection, receipts, deposit preparation, and recording should be adequately segregated
- Incoming checks should be restrictively endorsed when received
- Cash receipts should be controlled by cash register, pre-numbered receipts, or other equivalent means
- Cash receipts should be deposited in a timely manner; any undeposited cash receipts should be adequately secured
- Cash receipts should be balanced to daily cash collections on a regular basis

## Assessor's Data Sales Cash Receipt Procedures

The Assessor's Office sells two primary types of data sets to the public: Secured Master Data and Geographic Information Systems (GIS) Data. Secured Master Data sets include parcel information such as parcel numbers, addresses, property descriptions, and property owners for multiple parcels. GIS data sets are interactive aerial photomaps with parcel information. Our analysis of cash receipt procedures for Secured Master and GIS data sales noted the following:

- The functions of sales, cash receipts and record-keeping are not segregated. One individual performs all functions for Secured Data Sales and one individual performs all functions for GIS data sales.
- Controls over the data sales accounts receivable database are inadequate. The Access database is designed to assign a new invoice number whenever a new record is added. However, records can, and are, deleted from the database. At 4/13/05, 201 invoice numbers were missing from the database.

We also performed surprise cash counts and analyzed cash receipt procedures at two satellite offices and the Assessor's 301 W. Jefferson front counter, and did not identify any significant issues.

## Potential Lost Revenue

Current procedures increase the risk that cash receipts could be misdirected and/or data sets could be provided without charge.

## Recommendation

The Assessor's office should:

- A. Consider establishing credit card capabilities at the Assessor's 301 W. Jefferson 1<sup>st</sup> floor counter to control cash receipts and eliminate the need for tracking receivables.

If credit card transactions are not feasible, the Assessor should control the current cash receipt process by:

- B. Segregating the duties of data sales and receipt of payment for data sales.
- C. Segregating the duties of payment receipt and accounts receivable record keeping for data sales.
- D. Voiding accidental and unneeded records in the data sales accounts receivable database instead of deleting them.

**Assessor's data  
sold to the public  
include hard copy  
and interactive  
maps**



# Issue 4 Data Sharing & Pricing

## Summary

The Assessor's Office data sharing and sales policies establish prices for data sold to the public and shared with other governmental agencies. Failure to follow these policies resulted in a \$9,500 data set being inappropriately provided to a customer at no charge. Failure to follow established pricing policies and procedures could result in lost revenue and inconsistent treatment of County citizens. The Assessor's Office should strengthen established controls over data sharing and sales.

## Assessor's Data Sharing & Pricing Policies

The Assessor's Office has established data sharing pricing and policies that are available on the Assessor's web site. Secured Master and GIS data is shared with other governmental agencies free of charge. The prices established for other customers are dependent on whether the data is to be used for commercial or non-commercial purposes.

## Review Results

We noted three "no-charge" data set requests by entities listed as "Commercial" totaling \$12,340 from the data sales accounts receivable database and reviewed the customers' no-charge status. Results showed:

- \$9,500 should have been charged for one data set provided to a trade organization.
- Data with a standard charge of \$2,100 was provided at no charge to a charter school for direct mail purposes. It is questionable whether these charges should have been waived. Because ARS lists charter schools as public schools, the Office considers this a "gray area."
- A \$740 charge for data provided to a subcontractor of the Town of Wickenburg was appropriately waived.

## Effect

Failure to follow these policies resulted in a \$9,500 data set being inappropriately provided to a commercial customer at no charge. Failure to follow established pricing policies and procedures could result in lost revenue and inconsistent treatment of County citizens.

## Recommendation

The Assessor's Office should:

- A. Communicate data sharing and pricing policies to responsible employees and monitor their performance for compliance.
- B. Strengthen controls over no-charge determination.

# Issue 5 Fixed Assets

## Summary

In prior years, the Assessor's office has not maintained adequate controls over capital asset acquisition and disposal, which has resulted in an understatement of \$870,000 of the Assessor's capitalized fixed assets according to the Department of Finance (DOF). The Assessor's Office should ensure that asset additions and disposals are processed, and annual validations performed in accordance with County policy. In addition, the Assessor's Office should follow up with DOF to ensure asset additions/deletions are processed timely.

## County Fixed Asset Policies

At the time an office purchases an asset costing \$5,000 or more, it should submit an asset acquisition form to DOF. Conversely, any time an office disposes of an asset that cost \$5,000 or more, it should submit an asset disposal form to DOF. At the close of each fiscal year, the office should validate 100 per cent of their capital fixed assets, report the results to DOF, and submit forms for any additional asset changes identified during the validation process. The validation should be planned and supervised by an individual independent of the purchasing, custody, and record-keeping functions.

## Review Results

We obtained the Assessor's Office capital asset list from DOF and attempted to verify all the assets listed. In addition, we used the Assessor's parcel search and information from the CIO's office and the Assessor's internal fixed asset listings to verify that all assets that met the capitalization criteria were included in the DOF listing. Results are presented in the following table:

<b>Asset Description</b>	<b>Cost of Recorded Assets That Could Not Be Located</b>	<b>Cost of Located Assets Not Recorded</b>
Scottsdale Satellite Office - Building		\$ 796,450
Scottsdale Satellite Office - Land		588,000
Dell 1550 Server (purchased in 2001)		5,196
Disk Drives & CPU (purchased in 1993)	\$384,984	
Clarion Disc Storage System (purchased in 1994)	107,075	
Toshiba Voice Mail System (purchased in 1997)	13,413	
Communications Server (purchased in 1991)	8,008	
Microfilm Reader/Printer (purchased in 1996)	7,918	
Column Total	\$521,398	\$1,389,646
<b>Net Understatement</b>		<b>\$ 868,248</b>

## Effect

The Assessor's capital assets were understated by \$870,000 in the County's financial statements. While this understatement would not be material to the County's financial statements, it contributes to the combined misstatement of all departments, which collectively could be material. In addition, assets not appropriately tracked and validated are at increased risk for misappropriation.

## Recommendation

The Assessor's Office should:

- A. Complete asset disposal/acquisition forms at the time assets are disposed or acquired and follow up with DOF to ensure that additions/deletions are appropriately processed.
- B. Use fixed asset number, model, serial number, and date purchased in addition to asset descriptions to ensure that assets validated annually are those on the validation listing, and not similar assets.



**Computer Equipment Comprises a Large Portion of the Assessor's Office Fixed Assets**

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# Department Response

Keith E. Russell  
County Assessor



Office of the Maricopa  
County Assessor

**Audit Response**  
**Assessor Department, July 6, 2005**

**Issue #1 A:** Review user access to identify and remove all users Ids that are not associated with a current employee.

**Response:** Concur – In Process

**Recommendation:** From the initial audit completed, the identified employees have been removed from the system. We are obtaining a list of employees from HR and will also need to correct spelling errors on names. The original list contained valid employees in which the database contained a spelling error. We will also need to develop a procedure to report all id's on a quarterly basis. The employee table has been modified to contain hire data and term date. On a quarterly basis we will compare the employee database with the HR database for any discrepancies.

**Target Completion Date:** 9/1/2005

**Benefits/Costs:** Eliminate unauthorized access to database.

**Issue #1 B:** Develop a user matrix to provide an easy-to-understand document that quickly identifies the access rights each employee has been granted.

**Response:** Concur – In process

**Recommendation:** In order to comply with this, it will be necessary to re-design the database structure security for updating user access. Currently this is controlled by the database and we will need to change this to be controlled by our production control group. Therefore, we will need to perform a detail analysis before making any changes. In order to complete this, all of the access data will most likely need to be re-added manually into the application. After this is completed, a report can be easily created with will identify the specific areas a user or group of users have.

**Target Completion Date:** 1/1/2006

**Benefits/Costs:** Ability to ensure employees have correct access rights to the database.

Keith E. Russell  
County Assessor



Office of the Maricopa  
County Assessor

**Issue #1 C:** Formally review user access to the Assessor's Office application on a quarterly basis to determine if user access is appropriate.

**Response:** Concur – In process

**Recommendation:** After the redesign of the security access, a report will be generated which will provide access rights on an employee or group of employees. On a quarterly basis, a document/report can be produced and distributed to management which identifies all access rights.

**Target Completion Date:** 1/1/2006

**Benefits/Costs:** Ability to ensure employees have correct access rights based on job description.

**Issue #1 D:** Remove developer (update) access to production instance of the Assessor's application for ISD employees.

**Response:** Concur – Completed

**Recommendation:** Remove insert, update and delete capability for all users which are in the ISD department.

**Target Completion Date:** 3/31/2005

**Benefits/Costs:** Ensure ISD employees do not update the production instance.

**Issue #1 E:** Limit users with server access to inquiry only access to the production instance of the Assessor's application.

**Response:** Concur – In Process

**Recommendation:** Currently 6 individuals have server access to the production instance, which is used for file transfers. Two of these individuals are in the data entry role and have update capability to the production database. The other individuals do not have update capability and only have inquiry access. For those with update capability, the sqlplus option will be removed and the security controlled via the menu system. We need to keep these ids active as they are used to transfer files for update into the Oracle database.

**Target Completion Date:** 8/1/2005

Keith E. Russell  
County Assessor



Office of the Maricopa  
County Assessor

Benefits/Costs: Ensure there is no unauthorized access to the production database.

**Issue #1 F:** Configure the Assessor's application password parameters with leading practice standards as specified in ISO/IEC 17799.

Response: Concur – In process

**Recommendation:** The HP UNIX database servers have been modified to force passwords to be updated every 90 days. It also requires a combination of alphas/numerics when a new password is generated. On the Oracle database, we can add the password aging but there is currently no mechanism for a user to change a password. As part of the re-design of the security access, we will address the issue of password changes.

Target Completion Date: 1/1/2006

Benefits/Costs: Ensure passwords are secure to prevent unauthorized access.

**Issue #1 G:** Consider enabling the Oracle database audit function to capture a user's last login data.

Response: Do Not Concur

**Recommendation:** There are over 500 sessions created each day on the Oracle database as many users sign on multiple times. For each session when audit is enable this would create a log file. This would create substantial overhead on the database and the log files would be very large with the number of daily sessions. A better solution would be to identify critical tables within the Oracle database and create an audit procedure for those tables. Furthermore, a large number of these user's are view only.

Target Completion Date:

Benefits/Costs: The cost to implement this would be the need for additional disk space and memory. An estimate would be around \$100,000 for more memory and disk space.

**Issue #1 H:** Assign more complex, random, and non-repetitive passwords to new user ID's.

Response: Concur – In process

**Recommendation:** Need to find a software program, which will randomly assign/create passwords for new users.

Keith E. Russell  
County Assessor



Office of the Maricopa  
County Assessor

Target Completion Date: 9/1/2005

Benefits/Costs: Better security and control for access to the production database.

**Issue #3 A:** Consider establishing credit card capabilities at the Assessor's 301 W. Jefferson 1<sup>st</sup> floor counter to control cash receipts and eliminate the needs for tracking receivables.

Response: Concur – In process

**Recommendation:** Contact Paymentech for feasibility study. Establish new pricing with Board approval to allow for credit card expense.

Target Completion Date: 12/31/2005

Benefits/Costs: Better security and control for data and copy sales.

**Issue #4 A&B:** Communicate data sharing and pricing policies to responsible employees and monitor their performance for compliance.

Strengthen controls over no-charge determination

Response: Concur – In process

**Recommendation:** Need to educate all employees with customer contact, as to the approved policy for data sharing and pricing. Furthermore, to train them how to research various entities and determine their status.

Target Completion Date: 9/30/2005

Benefits/Costs: Better security and control for compliance with established policy.

**Issue #5 A&B:** Complete asset disposal/acquisition forms at the time assets are disposed or acquired and follow up with DOF to ensure that additions/deletions are appropriately processed. Use fixed asset number, model, serial number, and date purchased in addition to asset descriptions to ensure that assets validated annually are those on the validation listing, and not similar assets.

Response: Concur – In process

Keith E. Russell  
County Assessor



Office of the Maricopa  
County Assessor

**Recommendation:** To diary requests made to Finance for future follow up. Request copy of asset list after each change request.

**Target Completion Date:** 9/1/2005

**Benefits/Costs:** Better tack and account of assets assigned to department.

Approved by:

A handwritten signature in black ink, appearing to read 'Keith E. Russell', is written over a horizontal line.

Department Head/ Elected Official

7/6/05  
Date