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Date: February 16, 2010

To: Audit and Finance Committee

From: Jennifer Ruttman, Interim City Auditor 

Subject: Audit of Engineering Contract Monitoring Process – Final Report

cc: Jack Friedline, Deputy City Manager
Elizabeth Huning, City Engineer

Pursuant to the Council-approved audit plan, the City Auditor's Office has completed an audit of the Engineering Department's contract monitoring process. Included with this letter are the final audit report, three corrective action plans (CAPs) and management's response.

We would like to thank the Department's management and staff for their cooperation, professionalism and assistance throughout the audit process. If you have any questions please feel free to contact me at x3767 or Jerry Faccone at x2403.

AUDIT REPORT

Report Date: January 13, 2010
Department: Engineering

Audit Subject: Engineering Contract Monitoring Process

Objectives: The objectives of this audit were to:

- Determine whether the policies, procedures and controls over the Engineering Department's contract monitoring process are adequate and effective in minimizing the risk of loss due to errors or fraud.
- Determine whether the monitoring of contracts is being performed and documented according to policy.

Scope: January 2001 – September 2009

Methodology: To accomplish this audit we:

- Reviewed Engineering's contract monitoring workflow process and applicable internal policies and procedures.
- Performed detailed testing to determine whether the monitoring of contracts is being performed and documented according to the approved standards of Engineering and the City of Mesa.

Background: The Engineering Department includes Engineering Design, Engineering Construction, CIP Management Services and Real Estate Services. Engineering Design performs analysis, design and bidding of all capital projects. Engineering Construction performs contract administration and inspection of the City's capital projects and work done in the public right-of-way. CIP Management Services provides financial information for capital projects and ensures timely payments are made on design and construction contracts. Real Estate Services acquires and manages the real property rights for the City of Mesa, which includes all acquisition of real estate for Capital Improvement Projects.

Engineering's capital improvement contracts follow Arizona Revised Statutes and the Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction. The contracts address all required contractual issues including scope of work, project documents, insurance, legal requirements, project schedule, quality control, payments, change orders, dispute resolution, warranties, etc.

The City has established standard principles and practices for managing and monitoring contracts. The purpose of monitoring contracts is to effectively manage the risks associated with engaging a second party to deliver goods and services to or on behalf of the City. The goal is to improve outcomes and mitigate potential problems through oversight of the activities and obligations of each party to the contract.

The process of monitoring begins when a contract has been fully executed and has been implemented within the Department. The process ends when all deliverables under the contract have been received and all terms and conditions have been fulfilled.

Conclusion: Overall, the Engineering Department's contract monitoring process is operating effectively. A database of active contracts is maintained, enabling proper management of the Department's agreements. Adequate policies and procedures are in place to mitigate risk in the preparation and approval of contracts, and to effectively monitor and document agreements in regard to timelines, deliverables, reporting requirements, fiscal management and other compliance steps necessary for successful contract performance and completion.

We did, however, find isolated instances in which proper procedures were not followed and the City was exposed to undue risks. These are detailed in the attached corrective action plans (CAPs), along with our recommendations for improvement.

CAP #1: Stop Work Order Not Issued & Letter Of Acceptance Backdated

Observations: A Stop Work Order was not issued on a project despite knowledge of the expiration of a contractor's required insurance coverage.

The Letter of Acceptance (LOA) on the project had an intentionally backdated completion and acceptance date.

Comments: A contractor failed to renew the required owner's liability insurance but was permitted to continue construction after the insurance expiration on 4/5/09. A Stop Work Order was not issued to give notice to the contractor to cease activity.

An owner's liability insurance policy names the City of Mesa, its agents, representatives, officers, directors, officials and employees as the insured and must remain in effect until all work has been completed and the project has been accepted by the City. A policy expiring during the life of a contract must be renewed in order for construction to continue. Failing to do so puts the City at risk.

The LOA on the project had a backdated completion and acceptance date to make it appear that the construction was completed prior to the expiration of insurance. It was dated 5/8/09 and stated that construction was completed and accepted on 4/4/09, despite the continuation of construction activity on eight subsequent days, the latest being 4/29/09. This activity is supported by detailed project inspection logs completed by a City construction inspector. The LOA should not be issued with an inaccurate date to mask the granting of unauthorized permission to continue construction activity.

- Recommendations:**
1. The Engineering Department should implement controls to ensure that City construction inspectors do not allow construction to continue beyond the expiration of insurance. A Stop Work Order should be issued immediately if required insurance lapses.
 2. Prior to signing the LOA, the Deputy City Engineer should verify the accuracy of completion and acceptance dates by reviewing documented inspection evidence providing proof of project completion.

CAP #2: Design Work Performed Prior to Contract Signing

Observation: Design consultants were permitted to perform professional services for the Engineering Department without contracts.

Comments: Design contracts involve the engaging of professional consultants to provide design services for construction projects. Professional design services were performed on behalf of the City, and the City was invoiced for such services, prior to the establishment of contracts with consultants and the issuance of notices to proceed.

Design contracts contain clauses that detail the services of the consultant, the consultant's compensation, the City's responsibilities, insurance, indemnification, labor requirements, compliance with federal and state laws, dispute resolution, termination, etc. Allowing a consultant to perform services without a contract leaves the City unprotected and exposed to liability.

Recommendation: The Engineering Department should ensure that a proper contract is established and signed prior to the performance of any design services on behalf of the City by a professional consultant.

CAP #3: Security of Payment Records Needs Improvement

Observation: Employees not authorized to make payments on contracts have update access to payment records.

Comments: Unauthorized employees have the ability to update Engineering project payment records. There was no evidence during the audit of any improper adjustments to payments; however, proper internal control dictates that update access to payment records should be limited to the individuals authorized to make payments upon the receipt of an approved invoice.

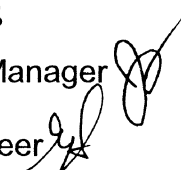
Recommendation: The Engineering Department should ensure that only employees authorized to make payments on contracts have update access to the payment records. If other employees need to access these records, their access should be limited to read-only.



DATE February 4, 2010

TO: Jennifer Ruttman, Interim City Auditor

THROUGH: Chris Brady, City Manager ^{CJB}
Jack Friedline, Deputy City Manager

FROM: Elizabeth Huning, City Engineer 

SUBJECT: Department Response to January 13, 2010 Audit Report for Engineering Contract Monitoring Process

This report is in response to the Engineering Contract Monitoring Process Audit Report forwarded to the Engineering Department by the City Auditor's Office on January 13, 2010. The Engineering Department manages the City's Capital Improvement Program and we are continually seeking ways to ensure financial integrity through checks and balances in our contract monitoring process. We appreciate the assistance and feedback from the Auditor's office and welcome its recommendations. The Assistant City Engineer, Kelly Jensen, and I have reviewed the auditor's recommendations/corrective action plans and have the following responses:

CAP#1: Stop Work Order Not Issued & Letter of Acceptance Backdated

Observation: A Stop Work Order was not issued on a project despite knowledge of the expiration of a contractor's required insurance coverage.

The Letter of Acceptance (LOA) on the project had an intentionally backdated completion and acceptance date.

Response: After receiving this corrective action plan and reviewing backup documentation provided by the auditor, the Assistant City Engineer, Kelly Jensen, who oversees the construction staff, and I elected to review the overall process as well as the requirements for the contractor's insurance including what we require, the duration it is required, how the insurance certificates are received and accepted, and how we are monitoring the expiration dates. As part of this process, we met with the Deputy Engineer for Construction and followed up with a meeting with the City's Risk Manager to discuss insurance types, levels, and durations.

As a result of this review, we elected to change several items in the process. Before discussing these, it is important to understand the types of insurance we require on a construction contract. These include:

- a. **Worker's Compensation.** This is a requirement of the State of Arizona and all contractors must carry this at the limits required by the State if they have employees. Worker's Comp is coverage in the event an accident occurs at the site that did not occur due to "gross negligence" on the part of the contractor.
- b. **Employer's Liability Coverage.** The City requires a contractor to carry this policy in their name in addition to worker's compensation; which covers the contractor for gross negligence above what worker's comp policy. In general, they are covered in the event an accident occurs on the construction site for which the contractor is not following safety requirements and/or other industry standard practices in the prosecution of the work. An example of this might be if an employee is injured when they are told to enter a confined access space without the contractor providing the appropriate OSHA safety protection.
- c. **Commercial General Liability.** The City requires a contractor to carry this policy in their name to cover other accidents that may occur on the project site that do not relate to employees. An example of this is if someone is touring a site and they fall into a trench or are injured in some other manner. The City is listed an additional insured and is covered under an endorsement modifying the contractor's policy; however, this insurance is not in the City's name. While it provides us coverage as an additional insured, we have to have the contractor defend us against claims.
- d. **Automotive Liability.** The City requires a contractor to carry this policy in their name to cover their rented, non-owned, and owned automobiles and other vehicles.
- e. **Owner's Liability.** Owner's liability is a policy that we require the contractor to purchase in the City's name, so the City is directly insured and can draw upon this policy in the event of a claim arising out of the work. The coverage is similar to what the contractor is required to carry in their name listed above. This policy is only required on City construction projects. Private parties or developers working in our right-of-way carry a through D above, but not E. In some cases, the City has waived this insurance depending upon the size and complexity of the project, since we are also covered as an additional insured under the contractor's policies. However, for most projects, it is required. The benefit of this insurance is that it is our policy and, even if the contractor is no longer in business, we have access to this coverage.
- f. **Course of Construction.** This policy provides protection to the City for projects that include construction of a new building, or modification of an existing building. These projects are typically not in the public right-of-way and the coverage is not required on projects unless a building is involved. The coverage is for fire damage, vandalism and malicious mischief, theft, collapse, water

damage or flood, and is provided in the same amount of the contract. Each project is reviewed prior to bidding and determined if this coverage is needed. Approximately 10-20 percent of Engineering projects provide this insurance coverage.

With that understanding, we verified that we were covered during the additional 8 days under the contractor's policies. The only policy that had expired was the Owner's Liability. The particular contractor we were working with has had re-occurring situations where they are slow to provide the required documentation of the policies. This is becoming a re-occurring situation for many of the smaller, low bid contractors. Most contractors have laid off staff; so their internal tracking and managing documents including insurance coverage has become an issue for some of our projects.

In a review of this situation with the Deputy Engineer, he felt the risk to the City of issuing a Stop Work order was greater than operating without this policy in effect for this particular project for a few days. A Stop Work order would have left a construction site with uncompleted paving in the traveled roadway and barricading in travel lanes for potentially days or weeks while the contractor acquired additional coverage as opposed to 8 days without the owner's liability. His judgment was that uncompleted paving work in the traveled way with barricading for a period of weeks is a greater risk to the City in terms of accidents than an extension of an owner's liability policy when the City is also covered under the contractor's insurance.

While the auditor felt that not issuing the Stop Work order was a concern, it is not as great a concern for us as the auditor's second observation, because of the relative risk of an incomplete construction project with barricades when the City also had the additional coverage provided by the commercial general liability insurance. The primary concern is that the letter of acceptance (LOA) was intentionally dated concurrently with the insurance expiration. This issue should have been elevated to the Assistant City Engineer, City Engineer, and the Risk Manager. If it had, it is likely that we would have concurred with not issuing a Stop Work order. However, the Assistant City Engineer would have had communications with the contractor to get the coverage in place immediately or face punitive actions. During the review of this process, we also found a couple of other items that should be addressed. Our recommendations are based on addressing the documentation process as well as the other items that arose:

1. The expiration dates of all insurance policies are tracked in an Access Database maintained by the Department's Contract Payment Specialists (CPS). The CPS staff input these at the time the insurance certificates are received and then check the database when monthly progress payments are made. They then notify the construction staff of the upcoming expirations. The concern with this practice is that there have been a few instances

when monthly payments were not requested and a CPS missed the expiration dates resulting in construction staff not being notified. To minimize this risk, we will have IT develop a report from the existing database that the CPS staff will provide to the Assistant City Engineer and the Deputy Engineer for construction at a minimum of the beginning of each month showing the status of all certificates and highlighting those that will be expiring in the next month.

2. The Deputy Engineer is being directed to elevate matters of insurance expirations versus continuing construction to the Assistant City Engineer. The Assistant City Engineer routinely reviews insurance requirements and coverage with the City's Risk Manager and will take it under advisement with the Risk Manager as needed. The Assistant City Engineer will make the final determination on whether the benefits outweigh the risk and what actions need to be taken with the contractor.
3. Currently, the City's insurance requirements expire on the date of acceptance. However, our contracts include a one year warranty from the contractor and many times they return to correct defective work. Their return to work on site could result in a liability situation to the City. We raised this issue with the City's Risk Manager and we are exploring the cost versus benefit of requiring the contractor to keep these policies in effect during the full course of the warranty period. This has two benefits; it protects the City during any warranty work and it makes it less likely to set acceptance dates that concur with insurance expirations. The drawback is that it will cost the City and, in some cases, it may not be needed because a contractor may never have to return for warranty work. We are in the process of reviewing cost versus benefit of extending the coverage, and will review this with the Risk Manager and the City Manager's office prior to any implementation. If needed, modifications will be made to the City's standard construction contract language prior the City Auditor's 6 month review.

CAP#2: Design Work Performed Prior to Contract Signing

Observation: Design consultants were permitted to perform professional services for the Engineering Department without contracts.

Response: The auditor expressed concern that design consultants had started work and had invoiced the City for work prior to the contract being signed by all parties. After a review of this process, we found that the issue is one of timing. On all of these contracts, the contract language, scope and fee for the project had been negotiated and concurred with. The contracts were in process. The primary issue was the timing of receipt of the insurance certificates so that we had fully executed contracts in place. In all cases, payment was not recommended by staff prior to receipt of the fully executed contract. The staff works very diligently to ensure that projects are not unduly delayed due to processing of paperwork and that we meet

or exceed the budget and schedule requirements of each project. However, the contracts should be in place prior to initiating work so there aren't any misunderstandings regarding scope, fee, billing, and schedule.

Similar to the insurance discussed for construction contractors in the prior CAP, we require engineers, architects, landscape architects and other designers who contract with the City to carry a series of insurance policies. These include all of the policies the contractors carry with the exception that in lieu of the owner's liability and course of construction, they are required to carry professional liability insurance commonly referred to Errors and Omissions (E & O) insurance. This insurance covers damages resulting from errors or omissions that are a result of the professional's design of our projects.

Historically, the City has used a certificate of insurance form specific to the City to show that the professional has coverage. The industry typically uses a form referred to as the "ACORD form". Because we have used a form specific to the City, it is adding time to processing contracts, and many times, requires the Assistant City Engineer to discuss the policies and requirements with designer's firms before we can get the form signed. In discussions with the City's Risk Manager, he suggested we consider using the industry standard ACORD form in conjunction with an attached endorsement for being named as additional insured on the commercial general liability policy. In review of the practices in other major municipalities in the State, we found that they were accepting the ACORD form. Use of this form will greatly improve the time required to process design contracts.

Currently, the administrative assistant II for the payments section reviews the insurance forms for compliance with the contracts as well the rating of the insurance company. She keeps an Excel spreadsheet to track where the contract with the insurance is in process. She will modify this spreadsheet to track the date we contact the consultant for scope and fee, the date we arrive at a set scope and fee with our contract language, the date we receive the insurance forms, and the date the consultant starts work. The Deputy Engineer for Design will work with her to provide this information to her. She will consult with the Assistant City Engineer and the Deputy Engineer via the report to let them know the status of the agreements and monitor the progress of the contracts so that they are in place prior to initiating work.

CAP#3: Security of Payment Records Needs Improvements

Observation: Employees not authorized to make payments on contracts have update access to payment records.

Response: The Engineering Department currently tracks contract payments made to contractors in Excel spreadsheets on a shared department drive. At the present time, the spreadsheets are not pass word protected, read only to those not authorized to make payments. Multiple staff open these spreadsheets to monitor the expenditures on their projects and could

accidentally modify the data. I agree with the auditor's recommendation to limit access to the spreadsheets for modification to those authorized to make payments to ensure the integrity of the data. The spreadsheets will continue to be maintained on the shared drive with a read only access.

The ability to modify data on these spreadsheets will be limited to personnel in the contract payment specialist (CPS) positions, the administrative support assistant II that supports the CPS's, and the fiscal analyst. All of these positions are within the Department. This change will be made effective this month, February, 2010.

As a Department, we monitor numerous complex documentation requirements as well as financial and schedule reporting for the 120 plus active projects in the City's Capital Improvement Budget (CIP). We maintain a number of Excel spreadsheets and Access databases to do this. Longer term, we have asked that an element be included in the City's financial system replacement project, CityEdge, to include a CIP project management module such as CIP Planner to convert all these smaller tracking and financial databases (that require considerable time to create, input and monitor, don't interact with each other, and don't have appropriate security protocols) into one system with these built into it. We are hopeful that a CIP module will be included in the final selected vendor package for the City's financial system.