

# **REPORT TO THE CITY COUNCIL BY THE CITY INTERNAL AUDITOR**

## **AUDIT OF THE DEPARTMENT OF ENGINEERING AND AND ENVIRONMENTAL SERVICES – ROADWAYS & BRIDGES and DRAINAGE, FLOODPLAINS & PRIVATE DEVELOPMENT DIVISIONS**

**INTERNAL AUDIT REPORT 100013-02**

**October 16, 2013**





The Council  
City of Shreveport

Leanis L. Steward, CPA, CIA  
City Internal Auditor  
P.O. Box 31109  
Shreveport, LA 71130-1109

E-Mail Address:  
Leanis.Steward@shreveportla.gov  
Phone: 318.673.7900  
Fax: 318.673.7911

October 16, 2013

Councilman Michael Corbin  
Chairman, Shreveport City Council

Dear Councilman Michael Corbin:

Subject: IAR 100013-02 - Audit of the Department of Engineering and Environmental Services, Roadways & Bridges and Drainage, Floodplains & Private Development Divisions

Attached please find the report mentioned above. Management comments are included in the report.

Sincerely,

A handwritten signature in cursive script that reads "Leanis L. Steward".

Leanis L. Steward, CPA, CIA  
City Internal Auditor

sbh

# EXECUTIVE SUMMARY

## AUDIT OF THE DEPARTMENT OF ENGINEERING AND ENVIRONMENTAL SERVICES, ROADWAYS & BRIDGES AND DRAINAGE, FLOODPLAINS & PRIVATE DEVELOPMENT DIVISIONS

### INTERNAL AUDIT REPORT (IAR) 100013-02

The purpose of the executive summary is to convey in capsule form the significant issues of the audit report. The executive summary is a vehicle for reviewing the report and should only be used in conjunction with the entire report.

#### INTRODUCTION

The Divisions of Roadways & Bridges and Drainage, Floodplains & Private Development, under the direction of the City Engineer, are responsible for all design and construction activities on the streets, bridges and drainage facilities for the City, as well as the approval and inspection of private development infrastructure.

#### RECOMMENDATION EVALUATION RISK CRITERIA

The chart below summarizes the recommendations outlined in the report and our evaluation of risk for the recommendations. We evaluated the importance of each audit recommendation by assigning each a level of risk. The risk levels, as defined in the chart below, were determined based on the possible results for the entity if the recommendation is not implemented. This report contains ten findings with fifteen recommendations.

<i><b>Risk Levels</b></i>	<i><b>Recommendations</b></i>
<p style="text-align: center;"><b>High Risk</b></p> <p>Possibility of fraud, waste, and abuse of City assets; Interrupted and/or disrupted operations; Entity's mission not being met; Adverse publicity.</p>	<ul style="list-style-type: none"> <li>❖ Revise the spreadsheet used to calculate contractor payments to ensure accuracy of all balances. (Finding 1)</li> <li>❖ Include a Policy/Procedure: <ul style="list-style-type: none"> <li>➢ Requiring that project be halted and assessed for best solution when significant errors are discovered after work has begun. (Finding 2)</li> <li>➢ Precluding change orders benefitting contractor at the expense of the City. (Finding 2)</li> <li>➢ Providing guidance in defining and addressing contract scope changes. (Finding 3)</li> <li>➢ Assisting personnel in identifying and resolving situations that might violate City policies. (Finding 4)</li> <li>➢ Requiring documented review of all change orders exceeding 10% of the original contract cost. (Finding 4)</li> </ul> </li> </ul>
<p style="text-align: center;"><b>Medium Risk</b></p> <p>Possibility of continuing, significant operating inefficiencies and high-level non-compliance issues.</p>	<ul style="list-style-type: none"> <li>❖ Establish goals for completing/implementing its Policies and Procedures Manual. (Finding 5)</li> <li>❖ Review the needs and uses for the contract, including all its parts and pages. (Finding 6)</li> <li>❖ Some compliance affidavits could be filed annually: policy/procedure to effect this change be drafted and implemented. (Finding 6)</li> <li>❖ Mechanical copies of contracts or parts thereof be provided to engineering personnel as necessary for performance of their work. (Finding 6)</li> <li>❖ Review the process for initiating an RFQ/IFB to improve and shorten it without disturbing checks and balances. (Finding 7)</li> <li>❖ Develop and implement controls ensuring major decisions are documented as made. (Finding 8)</li> <li>❖ Establish and implement policies/ procedures: <ul style="list-style-type: none"> <li>➢ For regular quality inspections of work during the maintenance bond period. (Finding 9)</li> <li>➢ Providing for reporting the results of quality inspections in writing, and for maintaining these reports in contract files. (Finding 9)</li> </ul> </li> </ul>
<p style="text-align: center;"><b>Low Risk</b></p> <p>Possibility of continuing operating inefficiencies and some low-level non-compliance issues.</p>	<ul style="list-style-type: none"> <li>❖ Establish and implement standard procedures for organizing, maintaining and storing contract/project files. (Finding 10)</li> </ul>

## INDEX

Executive Summary .....	1
Index .....	2
Objectives .....	3
Scope and Methodology .....	3
Background.....	3
Conclusions/Findings/Recommendations .....	3

## **FINDINGS**

	<b><u>Risk Factor</u></b>	
1. Contract Payment Spreadsheet Lacks Controls .....	High	4
2. Poor Project Management.....	High	5
3. Change Orders, Scope of Work and State Bid Law Concerns .....	High	7
4. Violations of City Ordinances .....	High	10
5. Department Has No Written Policies and Procedures Manual ..	Medium	11
6. Inefficiencies and Inaccuracies Exist Within Contracts.....	Medium	12
7. Extensive Time Elapses Between Out to Bid and Contract .....	Medium	13
8. Contract Exceeded its Work Time by at least 150 Days.....	Medium	14
9. Follow Up On Maintenance Bond Items of Performance.....	Medium	15
10. No Consistent Organization in Contract/Project Files .....	Low	18

## **APPENDICES**

A. Process Flowchart – Originate a Construction Contract.....	20
B. Process Flowchart - Award a Construction Contract.....	21
Exhibit A. Sample Payment Template Described in Response to Finding #1.....	22



# **AUDIT OF THE DEPARTMENT OF ENGINEERING AND ENVIRONMENTAL SERVICES, ROADWAYS & BRIDGES AND DRAINAGE, FLOODPLAINS & PRIVATE DEVELOPMENT DIVISIONS**

## **INTERNAL AUDIT REPORT (IAR) 100013-02**

### **OBJECTIVES**

We have completed an audit of the Department of Engineering and Environmental Services, Roadways & Bridges and Drainage, Floodplains & Private Development Divisions. The objective of this audit was to ascertain the effectiveness and efficiency with which these Divisions manage the contracts and projects for which they are responsible.

### **SCOPE AND METHODOLOGY**

The scope of the study of internal control was limited to the general controls surrounding our objectives for the two year period ending March 31, 2013. Audit procedures applied included the following: reviewing applicable records and documents, interviewing operating personnel and management, testing compliance with stated policies, practices and procedures as well as applicable ordinances, laws and regulations; and site visits to selected project sites.

We conducted this audit in accordance with generally accepted government auditing standards, except that a peer review has not been performed, and included such test of procedures and controls as considered appropriate. We believe that the evidence obtained provides a reasonable basis for our findings, conclusions, and recommendations based on our audit objectives.

### **BACKGROUND**

The Divisions of Roadways & Bridges and Drainage, Floodplains & Private Development, under the direction of the City Engineer, are responsible for all design and construction activities on the streets, bridges and drainage facilities for the City, as well as the approval and inspection of private development infrastructure. These activities include plans for the construction of streets, bridges, sidewalks, alleys, storm sewers, drains, and street lighting; as well as design and plans for major repairs and improvements to these assets. These sections also provide plan reviews and site inspections on private development infrastructure projects to assure that City standards are met.

### **CONCLUSIONS/FINDINGS/RECOMMENDATIONS**

The Internal Audit Office expresses appreciation to the management and personnel of the Department of Engineering and Environmental Services and other Departments and Divisions impacting the audited Divisions or impacted by them for their cooperation and assistance provided during our audit. Based on our review, we believe management could enhance the efficiency and control environment by addressing the following concerns:

- ❖ We recommend that the Department revise its spreadsheet and procedures for calculating interim and final payments.
- ❖ If an error in the final payment occurs and is actually paid, the department should request repayment from the contractor.



- ❖ That Engineering include in its policies and procedures manual appropriate guidance for the following:
  - If errors in assumptions or estimates are discovered after the contract has started, the project should be halted and alternate solutions considered in order that the best solution for the City may be determined.
  - Changes should not be made or approved which benefit the contractor at the expense of the City.
  - A section on the initiation and execution of change orders. This section should mandate the various limitations imposed by the State bid laws as its minimum requirements.
- ❖ That the City install the water fountain contemplated in a change order for the benefit of the citizens using the bicycle path.
- ❖ That the Engineering Department coordinate with the Purchasing Department and include in its Policies and Procedures Manual appropriate guidance defining and addressing changes in scope for projects.
- ❖ Engineering include in its Policies and Procedures Manual appropriate guidance prohibiting violations of City Ordinances and that other Departments/Divisions involved in the contract procurement process implement similar policies and procedures.
- ❖ The Department, in concert with legal and purchasing, review the needs and uses for the contract and all its pages and parts. The contract should be revised in accordance with the results of this review, including establishing a procedure to ensure correct legal names are listed on contracts.
- ❖ That the Department establish goals for completing and implementing its Policies and Procedures Manual. These goals should include establishing mileposts and fixing responsibility for its completion.
- ❖ That the Finance Director, in concert with Purchasing and Engineering, draft and implement appropriate Policies and Procedures for maintaining affidavits and their incorporation into contracts by reference.
- ❖ That mechanical copies of contracts or of their parts be provided to project managers and other engineering staff as necessary for the performance of their work.
- ❖ That Engineering and other departments/divisions involved in the contracting process review the process and seek ways to improve efficiency.
- ❖ The Department should develop and implement controls to ensure major decisions such as extensions of time or waiver of damages are documented as they occur.
- ❖ Engineering establish and implement policies and procedures for conducting quality inspections at regular intervals subsequent to the completion of a project thru the end of the two year maintenance bond period.
- ❖ Engineering implement standard filing procedures for maintenance of project/contract files.

## **1. Contract Payment Spreadsheet Lacks Controls**

**Criteria:** Payments to contractors should be accurate based upon the contractual terms. Good business practices include balancing current and to date earned and paid



amounts on each active contract every pay period.

**Condition:** The City overpaid one contractor \$3,000 on an interim billing because there is no procedure in place to balance the prior earnings and payments to date and the current earnings and payment.

**Effect:** The City is temporarily without the use of these funds, and could experience a delay in receiving the Contractor repayment, especially if the contract has been closed and final payment made prior to discovery of the problem. In this case, the error was caught as the final payment (including retainage) was being calculated when someone noticed the error.

**Cause:** The spreadsheet the Department uses to calculate the interim and final payments due to the contractor calculates the new payments to date balances without reference to the previous payment to date balances.

**Recommendation:** We recommend that the Department revise their spreadsheet and procedures for calculating interim and final payments. To ensure the accuracy of payments, new payment to date balances should provide a cross check against prior payment to date balances. If an error in the final payment occurs and is actually paid, the department should request repayment from the contractor.

**Management Plan of Action:** Our office will develop a standard payment spreadsheet to calculate payment for current construction periods and total amounts earned to date. This new payment spreadsheet will be located in a master electronic project file to be used and modified for each project by the Project Manager. Location of the template file will be located in L:\ENG\_ENV\_SHR\City Engineer\Standard Forms.

**Time frame:** Sample payment template attached as Exhibit A in this response report.

## 2. Poor Project Management

**Background:** The East Preston 12" Water Main Extension Project was an 805 foot extension of an existing water main. It extended the water main from the west side of Clyde Fant Memorial Parkway to the end of East Preston east of the Parkway. The water main was to pass under the entrance and exit ramps for the Parkway. The contract provided for an installation method that does not disturb the surface for the sections passing under the ramps. This method is significantly more expensive, but allows traffic to continue unimpeded. The balance of the installation was to be accomplished by digging a conventional ditch and laying the pipe within it. More specifically, the contract called for 590 feet of pipe to be installed in the conventional open ditch method, and 215 feet of pipe (crossing the entrance and exit ramps) to be installed using the more expensive installation method.

**Criteria:** Effective project management should adequately control changes in scope and cost once the project has begun. Additionally, a clause in the contractor's bid states that the contractor has "personally inspected and is familiar with the project site."





**Condition:** The plans and specifications did not properly identify the existence of sidewalks (see picture below) under the Clyde Fant overpass. When the sidewalks were discovered by the contractor, the installation method of that portion of the water main under the sidewalks was modified to the same more expensive installation method being used for the ramps. This decision changed the scope of the contract work by exchanging 204 feet of conventionally installed pipe for an additional 215 feet of pipe using the more expensive method. At the conclusion of the project, a change order was processed adding \$22,000 (or 44.5% to the project's cost). The justifications for the change order were: to avoid disturbing the sidewalks; and, to install a second water meter for SPAR to install a water fountain by the bicycle path for the convenience of citizens using the path. The fountain was never installed. The final contract project cost paid was \$2,000 higher than it might have been in identical circumstances had the second low bidder been chosen.



**Effect:** The City paid more to complete the project than should have been necessary. Additionally, this practice opens an opportunity for abuse or waste of City resources.

**Cause:** Project management did not identify the existence of the sidewalks (retentions) under the Clyde Fant Overpass in the City's plans and specifications.

The contractor failed to identify the sidewalks in his bid, even though he stated in the bid that he had "personally inspected and is familiar with the project site." Policies and procedures to guide the initiation and execution of change orders for construction projects do not exist.

**Recommendation:** (1) We recommend that engineering include in its policies and procedures manual appropriate guidance for handling situations of this nature. This



should include the following:

- If errors in assumptions or estimates are discovered, the project should be halted and an assessment of the situation and alternate solutions considered in order that the best solution for the City is implemented.
  - Changes should not be made or approved which benefit the contractor at the expense of the City. In this specific instance, project management should have required the contractor, at his expense, to cut and remove the sidewalk, install the pipe, and then replace the concrete when installation was complete.
  - Include in its Policies and Procedures Manual a section on the initiation and execution of change orders. This section should mandate the various limitations imposed by the State bid laws as its minimum requirements.
- (2) That the City complete the installation of the water fountain contemplated in the change order for the benefit of the citizens using the bicycle path.

**Management Plan of Action:** Our office will make efforts towards more thorough record keeping by documenting all modifications to original project scope and construction expenditures. The audit recommendations do not accurately reflect the true political nature or project manager reasoning related to this specific project. This is due to lack of file documentation with proper explanation for each change directive. In future engineering projects, documentation will be provided to support all additions/changes to the project.

**Time frame:** On going.

### 3. Change Orders, Scope of Work and State Bid Law Concerns

**Criteria:** The Louisiana State Bid Law requires that public works contracts in excess of \$150,000 be let for bid. (LRS (Louisiana Revised Statute) 38:2212 A. (d))

The State Bid Law requires change orders which change the scope of the contract be separately bid. (LRS 38:2212 A. (6)) Also, the State Bid Law requires that any change order not required to be separately bid to be negotiated in the public interest. Where the change order is negotiated, the public entity shall require that said change order be fully documented and itemized as to costs, including material quantities, material costs, taxes, insurance, employee benefits, other related costs, profit and overhead. Where certain unit prices are contained in the initial contract, no deviations shall be allowed in computing negotiated change order costs. (LRS 38:2212 A.(7))

The State Bid Law does not provide guidance for determining when a change order constitutes a change in the scope of work. Generally, civil law holds that the addition of items or processes not contained in the original contract, significant increases or decreases in the quantity of work required and changes in site conditions are some of the factors which constitute a change in the scope of work.

**Condition:**

- The initial contract bid price of the *2010 Citywide Concrete Panel Replacement Program* was \$286,908. The engineer's estimate was \$335,000, which was the





amount available in the budget. After the bid opening but prior to the contract award, \$48,078 (or an increase of 16.75%) was added to the low bidder's price. There was no renegotiation of the contract bids. Engineering modified upward the engineer's estimate of selected (but not all) required work quantities which increased the bidder's values in order to fully encumber the \$335,000 available in the budget.

- For the *2010 Citywide Concrete Panel Replacement Program*, a change order for \$1,899,998, that included a new cost item for \$50,000 lump sum, was subsequently issued. We believe the change order size in relation to the original contract (567%) was more than sufficient to be considered a change in scope. We further believe that the addition of a new work item equal to 15% of the original contract should have triggered a change in scope.
- The City entered into a contract entitled *SporTran ADA Accessibility Project* for \$138,810. A change order was subsequently issued for \$38,185, increasing the total contract value to \$176,995. This change order caused the contract to exceed the \$150,000 threshold for contracts to be bid, but more importantly, it introduced a new cost item to the scope of work. We believe that the change order should have been negotiated in accordance with the procedure outlined in the criteria as stated above.
- The City entered into a contract entitled *East Preston 12" Water Main Extension* as described in finding #2. A change order was subsequently issued changing the installation methodology and material requirements which triggered a change in work scope. We believe this change order should have been priced using the negotiation format described in criteria above as a matter of "best" practice, even though it may not have been required.

**Effect:**

- The panel replacement project work quantity increases subsequent to bid opening and prior to contract award resulted in additional contract work that was neither rebid nor renegotiated. The same result could have been achieved by letting the contract for the bid price and concurrently issuing a change order for the \$48,708 increase. Doing so would have been in complete compliance with the bid law and would have made the entire process transparent.
- The City may have paid more to complete the panel replacement project than should have been necessary. When the change order increased the contract by almost \$1.9 million, it was neither rebid nor renegotiated. Thus there were no potential savings gained thru efficiencies realized from delivering a greatly increased volume of work units.
- The change order issued in the *SporTran ADA Accessibility Project* may not have been in compliance with State Bid Laws as it caused the contract amount to exceed \$150,000.
- The scope of work in the East Preston water main was changed after work was begun. This change was not formally noted until the final billing was submitted, precluding any opportunity to renegotiate or rebid the changed scope of work. The low bidder's final cost was \$2,000 higher than the second low bidder's cost might have been under the same circumstances.



**Cause:** The City did not recognize that the change order in each case may have constituted "change in scope" events and may have exceeded limits placed on change orders by State law.

**Recommendation:** We recommend that the Engineering Department coordinate with the Purchasing Department and include in its Policies and Procedures Manual appropriate guidance defining and addressing changes in scope for projects.

**Management Response:**

The Louisiana public bid law defines a change order to mean an alteration, deviation, addition or omission to a preexisting public work contract and a change order "within the scope of the contract" means a change order which does not alter the nature of the thing to be constructed and which is an integral part of the project objective. LSA R.S. 38:2211A.(2) & (4).

In accordance with the Louisiana Public Bid Law, there is no limitation on the size of a change order only that the change order be within the scope of the project.

**Management Response Conclusion to Condition and Effects:**

The project entitled 2010 Citywide Concrete Panel Replacement Program was handled in accordance with all applications of the Public Bid Law and was done in the best interest of the City. The Project Objective was clearly met in the change order, and since there are no size limitations on change orders, the additional negotiated work was clearly done in the best interest of the City. To delay the work would have resulted in additional cost to the citizens of Shreveport.

The project entitled Sportran ADA Accessibility was a quoted project. The change order was within the project scope and meets the project objective. The change order did increase the value of the contract to above the contract limit. The Public Law is clear on what the contract limit is however, the Public Bid Law is unclear as to whether this change order should have been denied and subsequently let out for bids.

The project entitled East Preston 12" Water Main Extension was a project let out for bids with a clearly defined project scope and objective. The project scope was defined as installing a 12" water main from the current terminus point on East Preston to the East for approximately 800 feet. The installation method of the main was partially by boring and partially by open cut. To simply change the method of installation increasing one method and decreasing the other does not constitute a change in the project scope. The project scope was to install the main.

However, in changing the installation method, the increasing of the boring method and reducing the open cut method, the new contract total would have resulted in a different low bidder. Had this been checked at the time of the requested change, then the plan change should have been denied and no change order should have been authorized for this action.

**Management Plan of Action:**

Prior to the issuance of any plan change and change order, the City needs to verify that



the proposed change first of all must comply with the project scope and objective. Secondly, the change order must not affect the low bidder with the revised contract amounts. Thirdly, the change must be coordinated with the Purchasing office. The procedure manual for project supervision needs to have a check list outlining these checks to ensure compliance with the Louisiana Public Bid Law.

**Time Frame:** On Going.

#### 4. Violations of City Ordinances

**Criteria:** The City's Capital Budget Ordinances for 2011 provided for *City-Wide Water Main Renewal/Replacement* (Index 425199) described as: "Replace undersized diameter water mains and replace any other deteriorated water mains."

Additionally, City Ordinance 26-212 states, "It is . . . the public policy of the city that projects of maintenance, construction, or other public works contracts to be performed on city-owned properties . . . to be performed by private contractors, should be performed only by those contractors who agree to perform a majority of the work with their own employees." City Ordinance 26-214 states: "Language identical or similar to the following: 'The contractor agrees that at least 51 percent of the wages paid to workmen, mechanics or laborers who perform work under this contract will be paid to workmen, mechanics, or laborers who are employees of the contractor . . . ' shall be made a part of the specifications for the contract . . ."

**Condition:**

- The City entered into a contract entitled *East Preston 12" Water Main Extension* under the 2011 *City-Wide Water Main Renewal/Replacement* Project. This contract was neither a renewal nor replacement, but an 805 foot extension of an existing water main. It extended the main from a point just east of Knight Street to the end of East Preston east of the Clyde Fant Parkway. The project added one customer for water service only at a total cost of \$71,710. This contract appears in these findings elsewhere for other discrepancies.
- In another instance, the City entered into a contract entitled *SporTran Tree Trimming Service*. The contract was awarded to a general contractor who did not possess the requisite license as an arborist or utility arborist to perform the work. Virtually all the work on this contract was sublet to two licensed arborist contractors, which appears to violate City Ordinance 26-212.

**Effect:**

- The East Preston Water Main contract utilized funds for new construction that were intended for renewal and repair.
- The City may have paid more to complete the tree trimming project than should have been necessary, as it appears that this contract may have had more of a brokerage nature, which City Ordinance 26-212 intended to eliminate. The City violated its own ordinances in each of these instances.

**Cause:** The City failed to recognize, or chose to ignore, its own ordinances and how



they came into play in these situations.

**Recommendation:** Engineering should include in its Policies and Procedures Manual appropriate guidance prohibiting situations of this nature and that other Departments/Divisions involved in the contract procurement process implement similar policies and procedures to heighten their awareness of situations affected by these and similar ordinances.

**Management Plan of Action:** Our office will familiarize itself with current City Ordinances related to project funding and contractual requirements as they apply to engineering projects. Should situations arise requiring Ordinance modification, this department will pursue proper procedures for amendment. These procedures should be included in the department Policies and Procedures Manual.

**Time frame:** On going.

## 5. Department Has No Written Policies and Procedures Manual

**Criteria:** Standardized policies and procedures can greatly improve operations and efficiency of an entity by providing uniformity in practices, clear lines of responsibility, accountability, and lessening the threat of interruption from employee turnover or absenteeism.

**Condition:** There are no written guidelines (Policies and Procedures) to guide the day to day operations of the Department. Operations are guided by employees' memories of the way specific situations have been handled in the past. Differences between the individuals involved and their memories may provide inconsistencies in the handling and resolution of similar situations.

**Effect:** The Department's operations and handling of various situations may be viewed as arbitrary or capricious. Employees and contractors may become tempted to shop answers and/or resolutions to their questions that agree with their ideas and goals.

**Cause:** Policies and Procedures to guide Departmental operations are not codified, thus no single authority for decision guidance exists. Work on a Policies and Procedures Manual has begun, but is not a high priority. No timeline for its completion has been established and efforts to move it to completion are sporadic.

**Recommendation:** We recommend that the Department establish goals for completing and implementing its Policies and Procedures Manual. These goals should include establishing mileposts and fixing responsibility for its completion.

**Management Plan of Action:** In review of the report, there are actually two "manuals" that need to be either updated or developed. The first is the written policies and procedures manual which would define the administrative policies and procedures for the general office. The second "manual" would be a project manual which would define the policies and procedures regarding the ongoing projects. The department is currently working with a consultant in developing this 'Project Manual'.





**Time frame:** On Going.

## **6. Inefficiencies and Inaccuracies Exist Within Contracts**

**Criteria:** Operations of an entity should be as efficient and economical as possible. Contracts should be straightforward and unambiguous. They should clearly identify the parties and the agreements they memorialize.

**Condition:** Presently seven duplicate original copies of the contract are put together and sent out to the contractor and within the City offices. Each copy includes all the originally signed and notarized copies of the bonds, affidavits as to City taxes and felony convictions, etc. Some of these copies are used in the field by project managers and inspectors for whom all these documents and signatures are unnecessary. This is costly for the contractors, expensive to the City in paper, time and mailing costs, and sometimes ineffective. Additionally, we identified six instances where names of contractors as used in the contracts were incorrect.

**Effect:** The City expends time, effort and money to secure and disseminate documents and other information inefficiently and ineffectively. Inspectors, Project Managers and other individuals have significantly more paperwork than is necessary to perform their jobs. Redundant files exist that do not require complete originally signed copies of contracts when mechanical copies could serve as well. Incorrect names on contracts could cause adverse legal issues.

**Cause:** Procedures for processing/administering contracts have not been reviewed for efficiency.

**Recommendation:** We recommend the following:

- The Department, in concert with legal and purchasing, review the needs and uses for the contract and all its pages and parts. <Auditor's Note> We were made aware during the audit that management is considering reducing the seven original copies required for contract processing. The contract should be revised in accordance with the results of this review, including establishing a procedure to ensure correct legal names are listed on contracts.
- Contractors and their subcontractors be required to file annual affidavits regarding their compliance and currency with City taxes. The affidavits should be filed with, and maintained by, Purchasing. <Auditor's Note> We were made aware during the audit that Purchasing does require an annual filing of contractor tax compliance affidavits and maintains these affidavits in their office.
- That the Finance Director, in concert with Purchasing and Engineering, draft and implement appropriate Policies and Procedures for maintaining these affidavits and their incorporation into contracts by reference.
- Mechanical copies of contracts or of their parts be provided to project managers, inspectors and other engineering staff as necessary for the performance of their work.

**Management Plan of Action:** The Criteria of the audit states that the operations should





be as efficient and economical as possible. Contracts should be straightforward and unambiguous. They should clearly identify the parties and the agreements they memorialize.

The audit then utilizes the remainder of this section with a finding that the City initiates seven (07) complete sets of contracts. This has been the established policy for many years, allowing original signed contracts for the Accounting, Purchasing, Contracts, and Division files, with the remaining three originals given to the Vendor with one (01) for their filing with the Court House as required by law, and the remainder for their company files/usage. Other entities do not require seven originals, and this procedure is currently being reviewed for revision within the City. The Contract Section does furnish photocopies of signed contracts to the field inspectors for their use in the field when overseeing the project.

The audit also finds that there appears to be a redundancy in obtaining insurance certificates, affidavits as to City taxes or monies owed, etc. While entities performing services for the City are required to file these forms with separate departments within the City on a yearly basis, it actually streamlines the process by including the blank forms within the contract to be completed and signed by the vendor when signing the contract. This process insures that the contract has the most recent declaration and coverage in effect. Many insurance policies expire or are renewed during the year, which if a Certificate of Insurance was filed and current on January 01st each year, may not still be current on a contract signed in June. Likewise, a certificate filed in Compliance stating that a vendor didn't owe any fees or taxes at the first of the year, may not be accurate during the year.

Therefore, in response to the recommendations of the audit, there is already a review of the process in formatting the number and scope of the contract; including policies to maintain annual affidavits and certificates which would ensure them being current and protecting the City from liabilities. Mechanical photocopies are already being utilized with employees and field personnel whom may not need original documents.

#### **Time frame:**

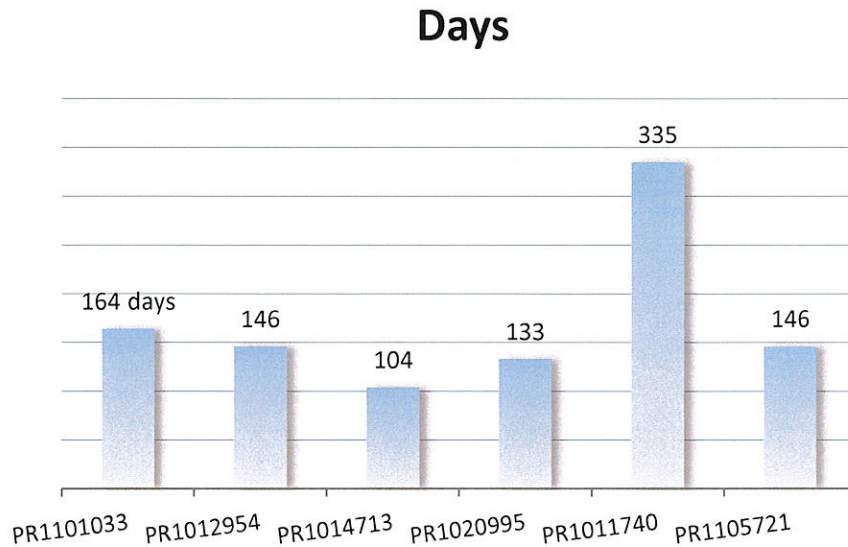
### **7. Extensive Time Elapses Between Out to Bid and Contract**

**Criteria:** To ensure efficiency and economy of the contracting process, contracts should be awarded as soon as possible after bids are opened and tabulated. Selection of the successful bidder and issuance of the contract should be accomplished within a very short time frame.

**Condition:** While some delay is inevitable due to State statute requirements, it appears that the internal process to select and issue the contract is cumbersome and sometimes duplicative. This time lapse may find the apparent low bidder in a booked up situation, unable to begin work on the City's time schedule. The City experienced at least one situation during the period under review when the successful contractor asked for a delay in the Notice to Proceed because his schedule was full. The requested delay, in



excess of six months, was granted in order to preserve that contractor's price. As the chart below shows, the average time from approval to put out to bid to Notice to Proceed was 139 days, or four months and nineteen days. That average excludes the contract for which the extension of time was granted. If that contract is included, the average becomes 171 days.



**Effect:** Funds may be encumbered for more extensive periods than necessary, precluding their use for other projects. Citizens may experience frustration over the perceived inefficiency in the process, along with the inconvenience often associated with delay.

**Recommendation:** We recommend that Engineering and other departments/divisions involved in the process review the process and seek ways to improve it without compromising necessary and appropriate checks and balances. To this end, two flow charts graphically depicting the time consuming process are included at Appendices A and B.

**Management Plan of Action:** Our department will investigate ways to expedite the process.

**Time frame:** On going.

## 8. Contract Exceeded its Work Time by at least 150 days

**Criteria:** A specific time period is provided by contract for the selected contractor to complete the work under contract. The contract also provides for a daily charge for liquidated damages for each day beyond the contracted time that the work is incomplete.

**Condition:** We discovered at least one major contract which exceeded its work day allocation by at least 150 days. There was nothing in the file indicating that the days



allotted had been extended or that the liquidated damages had been waived. There were several requests for extension in the file which had been denied. Notwithstanding this fact, the work continued on beyond the contract time by a number of months; yet liquidated damages were not assessed and the time was not extended.

**Effect:** A major project was delayed in coming on line creating significant loss for the City.

**Cause:** According to the Project Manager, the supplier of the main equipment items did not deliver in accordance with their commitments, delaying the contractor's completion. The delay was out of the control of the contractor, and the Project Manager failed to document the file after he verbally agreed to extend the work time.

**Recommendation:** We recommend the Department should develop and implement controls to ensure major decisions such as extensions of time or waiver of damages are documented as they occur.

**Management Plan of Action:** This particular project did exceed the time frame as identified in the bid documents. The contractor pursued completion of the project in the fastest manner possible. The department indicated that the time extension would be granted as determined by the changes to the project and due to unforeseen problems not the responsibility of the contractor. The time extension was never properly allowed. This project was very unique in its character and posed unique problems. The City was not delayed any longer than absolutely necessary prior to the station being placed in operation. The station was in operation within three months of the expected date. The use of contract days has to be carefully considered for each project. Quite often the contractor will use all of the days that are allowed. The charge of liquidated damages has to be considered if the contractor is not pursuing the completion of the project. It is these circumstances when the public is damaged.

**Time frame:** On going.

## 9. Follow Up On Maintenance Bond Items of Performance

**Criteria:** The City's standard contract requires a two year maintenance bond. This assures that all aspects of the work, including site remediation, meet the expectations of the contract specifications. If some aspect(s) of the work prove unsatisfactory, the repair or replacement of all defects in workmanship or materials is free of cost to the City. The maintenance bond is for a period of two (2) years from the date of the final acceptance of the project.

**Condition:** Visits to several project sites left questions about follow up on work during the maintenance period. These visits indicate that some sites were left with unfinished or deteriorated safety conditions, debris, poor vegetation cover, mosquito infested water pools, and other apparently unsatisfactory conditions as a result of the work performed.

The following pictures depict these conditions:





### Contract Site A - Rail Crossing Closure



Large bald spot in ground cover



Drop off at edge of the road looking south



Longer view of drop off looking north



View of drop off looking south.

### Contract Site B - Rail Crossing Closure



Sparse ground cover and pooling in poorly graded surface



Close up of larger pool in picture to left





Pile of road debris not removed from site



Debris at end of closing on east side of tracks



Bald surface from the tracks facing west

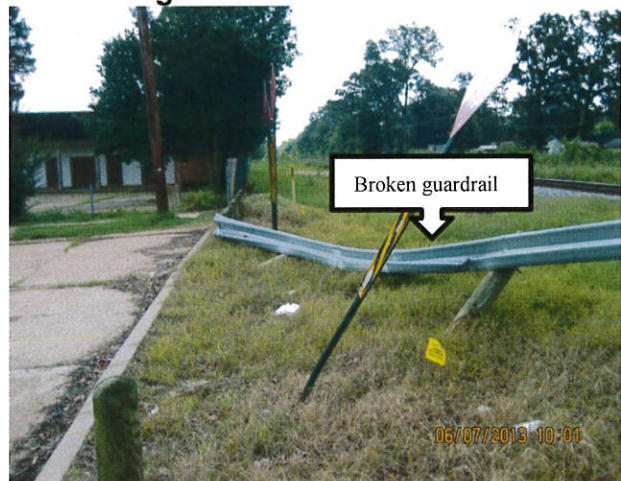


Bald surface looking west from tracks.

### Contract Site C - Rail Crossing Closure



2-1/2 to 3-1/2 foot growth of weeds and unsightly accumulation of trash on the east side of the closure



Destroyed and dangerous guard rail on the west side of the closure.

**Effect:** The most serious effect is serious safety conditions which might cause vehicle





accidents and liability on the part of the City. Other effects include several adverse sanitary and health conditions and citizens' disappointment over the perceived poor quality of the work and its impact on the neighborhood.

**Cause:** While senior management believes that inspections of site conditions are occurring at six, twelve, and eighteen months subsequent to the completion of these projects, there are no policies or procedures in place to document these inspections and establish guidelines for determining when or how the maintenance remedies can or should be invoked.

**Recommendation:** We recommend that engineering establish and implement policies and procedures for conducting quality inspections at regular intervals subsequent to the completion of a project thru the end of the two year maintenance bond period. Further, the procedures should provide for reporting the results of these inspections in writing and, where necessary, in pictures and maintaining these reports and pictures in the contract files.

**Management Plan of Action:** Our office will develop policy and procedure for follow up inspections during the warranty period of projects. A standard form will be developed to document the inspections. This form will remain in the project file. A meeting will be held with all applicable parties to discuss the implementation of the policy and procedure to ensure all employees understand how to proceed with and document the inspections.

**Time frame:** On going.

## 10. No Consistent Organization in Contract/Project Files

**Criteria:** Files of this nature are often kept using a uniform order such that certain documents are maintained in the same place in every file; i.e., contract is at the front of the file, change orders in chronological order behind the contract, notice(s) to proceed next, tests and test results next, then construction reports chronologically – most recent to the front, etc.

**Condition:** Contracts and other materials maintained in Project/Contract files are filed in a random fashion. The existing files are difficult to research or review because there is no structure within a file and no uniformity from file to file. On several occasions, documents were found placed in incorrect files.

**Effect:** The ability to locate a document or review a file is impaired, creating loss of time and efficiency at times when it is necessary to locate a document or review a file.

**Cause:** Files are presently maintained in absolute random fashion, and locating the document one needs is often reduced to a sheet by sheet search thru the file.

**Recommendation:** We recommend that the Department and its Divisions establish and implement a standard filing procedure for its project/contract files that specifies the order of the documents within the file. This procedure would be enhanced if it included a standard file cover sheet listing the various documents to be contained in the file,



designed so that the person placing a document in the file would initial and date next to the document's name, thus indicating that the document is in the file.

**Management Plan of Action:** The department is investigating the use of scanned documentation in order to "properly" file any and all documents for a project. The use of scanned information allows for an improved method of file structure and the prevention of lost documentation. The current filing system allows for free access to anyone looking for information. This results in the problems as identified in the audit report. The department needs to consider limiting access to the files until such time it can develop an improved record keeping process.

**Time frame:** On going.

Prepared by:

A handwritten signature in black ink, appearing to read "S. Ben Hebert".

S. Ben Hebert, CPA, CFE, CMA, CISA, CGMA  
Staff Auditor

Approved by:

A handwritten signature in black ink, appearing to read "Leanis L. Steward".

Leanis L. Steward, CPA, CIA  
City Internal Auditor

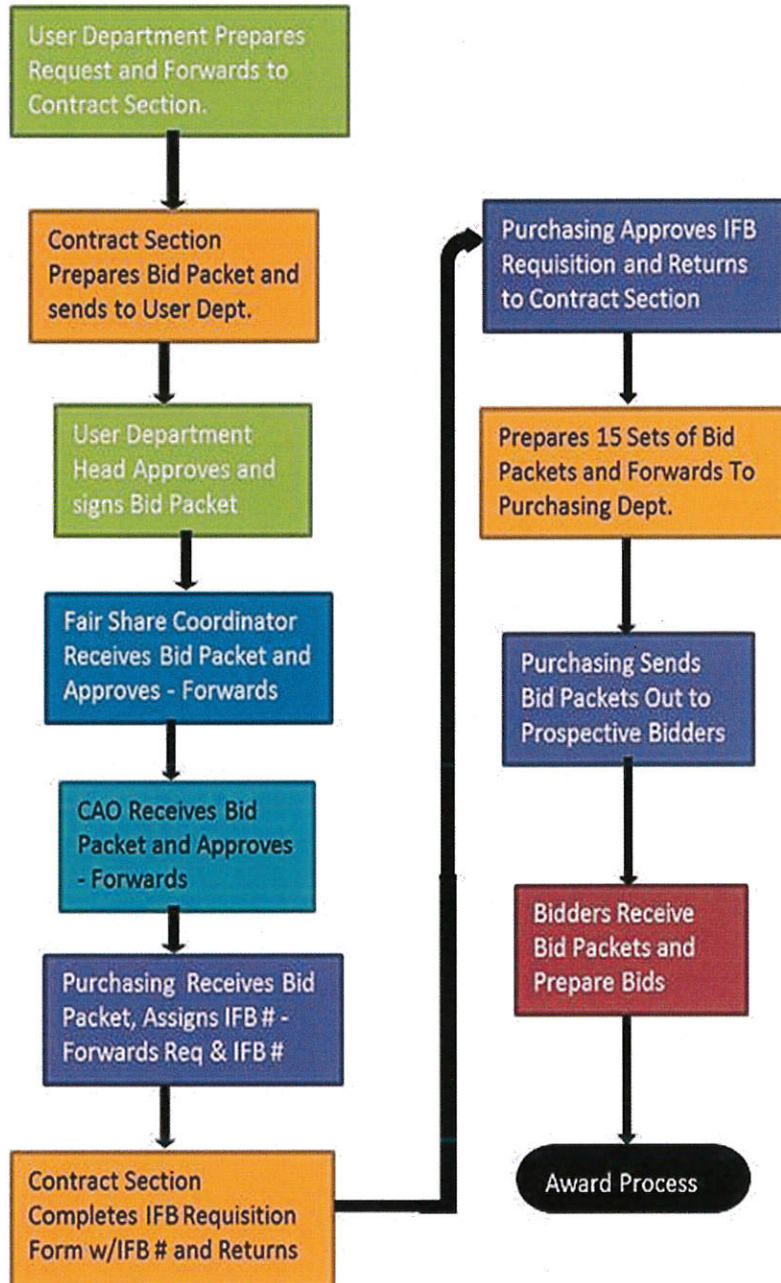
ND

c: Mayor  
CAO  
City Council  
Clerk of Council  
City Attorney  
External Auditor  
Department of Engineering and Environmental Services



## APPENDIX A

**City of Shreveport  
Department of Engineering and Environmental Services  
Process Flow To Originate a Construction Contract  
As of June 14, 2013**

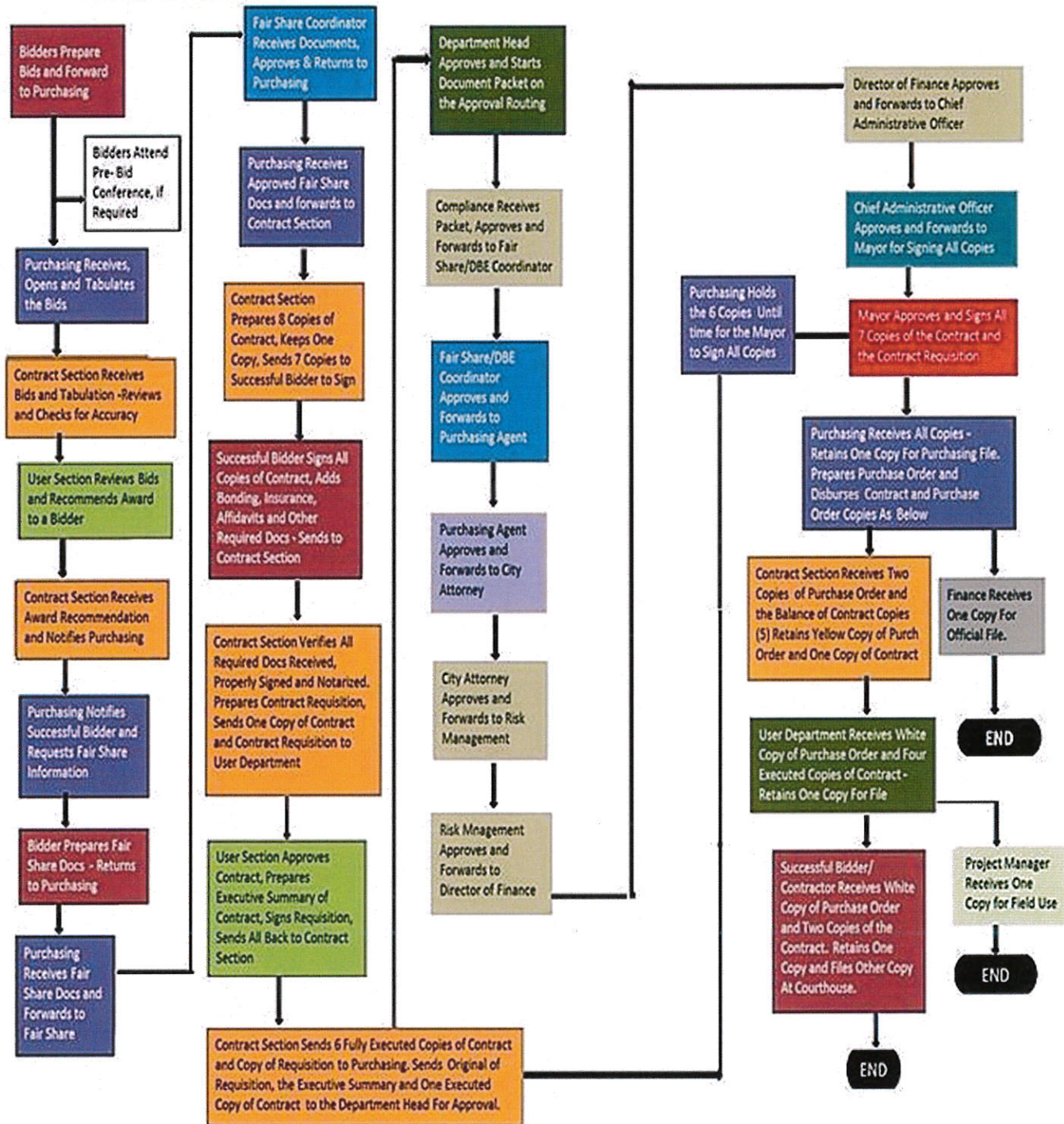






## APPENDIX B

### City of Shreveport Department of Engineering and Environmental Services Process Flow To Award a Construction Contract As of June 14, 2013





(Exhibit A to Management's Response)

PROJECT NAME: Paved Drainage Ditch Repairs - Summer Grove Ditch Repairs - Phase D  
PROJECT NO.: 11-0002  
IFB NO.: 13-503  
CONTRACTOR: Landworks Construction  
CONTRACT AMOUNT: \$46,850.00  
CO 1 CONT. AMOUNT: \$62,680.00  
CONTRACT TIME: 40 Working Days  
CONTRACT DATE: April 24, 2013

ESTIMATE NO. 1  
ESTIMATE OF QUANTITIES THROUGH 7/24/2013

ITEM NO.	DESCRIPTION	CONTRACT ITEMS			THIS PERIOD			TOTAL TO DATE		
		QUANTITY	UNIT	UNIT PRICE	QUANTITY	AMOUNT	MATERIAL STORED	MATERIAL USED	QUANTITY	AMOUNT
1		1	LS	\$100,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
2		1	LS	\$30,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
3		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
4		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
5		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
6		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
7		1	LS	\$50,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
8		1	LS	\$264,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
9		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
10		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
11		1	LS	\$25,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
12		1	LS	\$120,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
13		1	LS	\$35,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
14		1	LS	\$10,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
15		1	LS	\$18,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
16		1	LS	\$92,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
17		1	LS	\$285,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
18		1	LS	\$54,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
19		1	LS	\$58,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
20		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
21		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
22		1	LS	\$12,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
23		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
24		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
25		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
26		1	LS	\$52,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
27		1	LS	\$190,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
28		1	LS	\$285,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
29		1	LS	\$54,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
30		1	LS	\$58,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
31		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
32		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
33		1	LS	\$12,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
34		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00
35		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00	0	\$0.00





(Exhibit A to Management's Response Continued)

PROJECT NAME: Paved Drainage Ditch Repairs - Summer Grove Ditch Repairs - Phase D  
PROJECT NO.: 11-0002  
IFB NO.: 13-503  
CONTRACTOR: Landwork Construction  
CONTRACT AMOUNT: \$46,850.00  
CO 1 CONT. AMOUNT: \$52,660.00  
CONTRACT TIME: 40 Working Days  
CONTRACT DATE: April 24, 2013

ESTIMATE NO. 1  
ESTIMATE OF  
QUANTITIES  
THROUGH  
7/24/2013

ITEM NO.	DESCRIPTION	CONTRACT ITEMS			THIS PERIOD		TOTAL TO DATE	
		QUANTITY	UNIT	UNIT PRICE	QUANTITY	AMOUNT	MATERIAL STORED	MATERIAL USED
36		1	LS	\$54,000.00	0	\$0.00	\$0.00	\$0.00
37		1	LS	\$58,000.00	0	\$0.00	\$0.00	\$0.00
38		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00
39		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00
40		1	LS	\$12,000.00	0	\$0.00	\$0.00	\$0.00
41		1	LS	\$15,000.00	0	\$0.00	\$0.00	\$0.00
42		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00
43		1	LS	\$20,000.00	0	\$0.00	\$0.00	\$0.00
44		1	LS	\$50,000.00	0	\$0.00	\$0.00	\$0.00
45		1	LS	\$25,000.00	0	\$0.00	\$0.00	\$0.00

AMOUNT EARNED \$0.00  
MATERIAL STORED \$0.00  
AMOUNT OF MATERIAL USED \$0.00  
TOTAL WORK COMPLETED PLUS STOCKPILED MATERIAL \$0.00  
AMOUNT RETAINED \$0.00  
LESS PREVIOUS PAYMENTS \$0.00  
TOTAL AMOUNT DUE \$0.00

THIS PERIOD  
TOTAL TO DATE

Project Manager \_\_\_\_\_ Date \_\_\_\_\_  
Approved For Payment \_\_\_\_\_  
Assistant City Engineer \_\_\_\_\_ Date \_\_\_\_\_  
Approved For Payment \_\_\_\_\_  
City Engineer \_\_\_\_\_ Date \_\_\_\_\_