

December 31, 2015

Mayor McMillan, City Council and Audit Committee Members  
1 Public Square  
Clarksville, Tennessee 37040

### Executive Summary

The following is an executive summary of the objectives, findings and recommendations related to the Internal Audit report on the Street Department's work order process for the time period July 1, 2012 to June 30, 2014. The full audit report is attached and contains additional details about the audit results as well as management's responses. The full report also describes the audit methodology and provides background and statistical information.

### Objectives of the audit

- Determine if internal controls surrounding the work order process are present, adequately designed and operating effectively.
- Appraise the functionality and efficiency of the work order process and the Munis work order module.
- Evaluate the work order rates.
- Evaluate Street Department compliance with applicable regulations or laws.

### Brief Background

The Street Department is responsible for planning, designing, and maintaining streets, sidewalks, and the associated right of way in the city. It also is responsible for the placement and maintenance of traffic control signals, pavement markings and street lights. The Department uses work orders to track costs related to each task it performs. Open work orders are used to track costs associated with repetitive tasks. Unique work orders are used to capture citizens' requests and other tasks related to a specific job. The costs associated with the work orders are entered into the Munis work order software.

### Conclusions of Report

The audit commends the Street Department for the number of work orders it addressed during the audit period and the timeliness with which work orders were addressed. Our analysis of Munis work orders for that period showed that 6,013 work orders were created,

**40% of them were closed within three days and 69% were closed within two weeks. These figures do not include the additional open work orders which are not entered in Munis.**

**Our audit revealed the following results related to the original objectives of the audit.**

**The internal controls surrounding the work order process are weak in the following areas:**

- **A formal risk assessment process has not been implemented and there are no detailed written procedures that describe how tasks should be carried out and how goals will be achieved.**
- **Independent review of completed work orders is not documented before closing.**
- **Information input into Munis is not done in a consistent manner. Our testing showed that some “end” dates were prior to “create” dates. Some work orders had duplicate work orders with costs charged to both work orders.**
- **Work orders are not always closed even though work is completed.**
- **Some work orders have been open for over two years.**
- **Bills are not reconciled to receipt of final payments to identify repeat customers with outstanding balances.**
- **One audit-tested work order was marked paid but payment could not be traced to deposit.**
- **Inventory is not tracked and tied to a physical count.**

**In regard to the efficiency of the work order process and the functionality of the Munis work order module, the audit revealed that:**

- **Employees have received software training on the work order module of Munis but the design of the software and the employees’ perception that technical assistance is not readily available have contributed to inefficiencies in the process.**
- **Needed work order reports cannot be generated.**
- **Searches within the work order system are cumbersome.**
- **Labor rates that include employee benefits must be manually added to the labor costs.**
- **Information from another department shows up in the work order database which is confusing when selecting equipment and labor rates.**

**The audit found the following conditions related to work order costing and rates:**

- **Inventory rates are entered manually into the inventory system instead of through the accounts payable system. This increases the chance of error and reduces efficiency. It also reduces control surrounding the assets and associated transactions.**
- **Billing rates for street cut permits are not adequate to recover City costs in most circumstances.**
- **Rates for labor and equipment usage on work orders sometimes conflict with rate schedules or payroll records.**

- **Information on the paper copies of the work orders does not always agree with the information entered in Munis for the same work order.**

**The audit's evaluation of compliance with applicable regulations or laws revealed that the Department does not follow City Code Section 12-201 in all situations related to charging for street cuts.**

- **The Code requires all utilities and persons to obtain permits before cutting into a street. The Department has an informal policy of allowing Clarksville Gas and Water Department to cut streets without a permit and without a charge. The Department also allows street cuts made by contractors for Habitat houses to be made at no charge. The audit recommends that a formal policy be adopted for these situations and that City Code be amended if this policy is continued.**
- **The permit fee is supposed to cover the cost of the inspection and the repair of the street surface. Audit testing revealed that fees did not adequately cover costs in 24 of the 26 sample street cuts tested. The audit recommends annual comparisons of current fees with actual costs in order to adjust fees.**

**The audit makes specific recommendations related to each of the areas identified above as weaknesses. These can be read in the full audit report.**

**If you have any questions about the audit, the findings, or the recommendations please contact Internal Audit at 648-6106.**

**Respectfully,**



**Lynn Stokes  
Director of Internal Audit**

**cc: Charlie Gentry, Chief of Administration  
Laurie Matta, Chief Financial Officer  
David Shepard, Director of Clarksville Street Department  
Jeff Norris, Chief Accountant, Clarksville Street Department  
Amie Wilson, Information Technology Director**



## INTERNAL AUDIT REPORT

<b>AUDIT TITLE:</b>	<b>WORK ORDER PROCESS AUDIT</b>
<b>DEPARTMENT:</b>	<b>STREET DEPARTMENT</b>
<b>AUDIT PERIOD:</b>	<b>JULY 01, 2012 TO JUNE 30, 2014</b>



**CLARKSVILLE STREET DEPARTMENT**  
**Decorating Downtown for Christmas**

**CITY OF CLARKSVILLE  
STREET DEPARTMENT  
WORK ORDER PROCESS AUDIT  
AUDIT # 1403**

*Robin Manley and Lynn Stokes*

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**Robin Manley and Lynn Stokes - Auditors**

*Lynn Stokes*

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**Lynn Stokes – Director of Internal Audit**

**December 31, 2015**

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**Date**

**CITY OF  
CLARKSVILLE  
Street Department**

**The Street Department plans, designs, and maintains City streets and sidewalks and the associated right of ways. The Department also places and maintains traffic signals, street signs, pavement markings and street lights. The work order process is used to record the costs and manage the tasks that are accomplished on a daily basis.**

**Top: Cleaning streets**

**Middle: Patching pavement**

**Bottom: Clearing street right of way**



**CITY OF CLARKSVILLE  
INTERNAL AUDIT REPORT**

**Street Department Work Order Process Audit  
July 01, 2012 to June 30, 2014**

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**Appendix A**

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## **Internal Audit Report**

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### **Origin of the Audit**

This audit was included in the Internal Audit Committee's annual audit plan for fiscal years (FYs) 2014 and 2015.

### **Audit Objectives**

The specific audit objectives were to:

- Determine if internal controls surrounding the work order process are present, adequately designed and operating effectively.
- Appraise the functionality and efficiency of the work order process and the Munis work order module.
- Evaluate the work order rates.
- Evaluate Street Department compliance with applicable regulations or laws.

### **Scope and Methodology of the Audit**

The audit covered the time period from July 1, 2012 to June 30, 2014, and included the transactions and processes surrounding the work order process at the Street Department. The audit evaluated work order rates on a sample basis, including inventory rates, but the inventory management system as a whole was not evaluated.

Evidence to support our conclusions was gathered from on-site visits, inquiries of Street Department and Information Technology Department personnel, reviews of applicable laws and regulations, and examinations of sample source documents. The Street Department provided responses to a formal internal control questionnaire which was used to gain an understanding of the internal controls surrounding the process. We considered and evaluated the following components of internal control: the control environment, risk assessments, control activities, communication and information, and monitoring.

The auditors conducted a variety of tests of controls and attributes to evaluate the work order process. The tests were designed to assess specific aspects of the process. The audit samples were randomly and judgmentally selected from the total population of 6,013 work

orders created during the audit period. The details of the audit tests and sample sizes as they relate to the findings are described later in the report. Since statistical sampling was not used, the results of the audit tests should not be projected to the population as a whole.

## **Statement of Auditing Standards**

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## **Background**

The Street Department is responsible for planning, designing and maintaining streets and sidewalks and the associated right of ways in the city. This involves pavement management for approximately 630 miles of roads as well as the maintenance of drainage ditches, street sweeping, mowing, snow and ice removal, mosquito control, and storm debris pickup. The Street Department is also responsible for traffic control within the city which involves the placement and maintenance of traffic signals, street signs, pavement markings and street lights. The work order process is used to record the costs and manage the tasks that are accomplished on a daily basis. Work orders capture the cost of resources consumed for each work activity – labor, materials and equipment. Each piece of equipment is assigned a usage rate to account for its use on the job. The Department began using the Munis software work order module in 2011.

A work order number is assigned to every job, task or project carried out by the street department. Unique work order numbers are assigned to each request-for-service made via phone or online through the Department’s website. The costs associated with these work orders are tracked for informational purposes and serve as evidence that the work was completed. Unique work order numbers are also assigned when the Department plans to seek reimbursement from a third party for payment of the costs associated with a project. Examples include federal or state funded projects, or work which results from damages done to City property by a third party. The associated costs are entered into the Munis Work Order system and then billed out to the appropriate party.

Open work orders are used to track costs related to routine tasks that are repeated on a regular basis, such as street sweeping. Open work orders are also used for administrative

type tasks, such as training, supervision and equipment inspection, but they are generally not tracked in the Munis work order system.

## Statistical Information

The following tables provide a statistical overview. The first two tables provide an overview of the City infrastructure and the size of the Department. The next four tables provide statistical information about work orders that were created and entered into Munis software during the audit period. The information in these four tables does not include statistics for open work orders that are not entered into the Munis work order software.

<b>City of Clarksville Infrastructure Depreciated Net Value</b>		
	<u>FY 2013</u>	<u>FY 2014</u>
Street network	\$ 256,569,048	\$ 261,051,478
Bridges	\$ 2,662,427	\$ 3,499,718
Drainage systems	\$ 32,682,655	\$ 33,191,038
Sidewalks	\$ 23,587,300	\$ 25,037,689
Traffic signals/lighting	<u>\$ 3,234,731</u>	<u>\$ 2,998,587</u>
<b>Total net value</b>	<u><b>\$ 319,579,836</b></u>	<u><b>\$ 326,551,205</b></u>

*Source: Comprehensive Annual Financial Report (CAFR) FY 2014*

<b>Street Department Employees</b>		
	<u>FY 2013</u>	<u>FY 2014</u>
<b>Total full time equivalents</b>	<b>90</b>	<b>89</b>

*Source: CAFR FY 2014*

**Work Orders Created and Closed  
FY 2013 and FY 2014**

	<u>WOs Created</u>	<u>WOs Closed</u>	<u>Open at 6/30/14</u>
<b>FY 2013</b>	<b>3,124</b>	<b>2,896</b>	<b>228</b>
<b>FY 2014</b>	<b><u>2,889</u></b>	<b><u>2,493</u></b>	<b><u>396</u></b>
<b>Totals</b>	<b><u>6,013</u></b>	<b><u>5,389</u></b>	<b><u>624</u></b>

*Source: Munis Work Order Module*

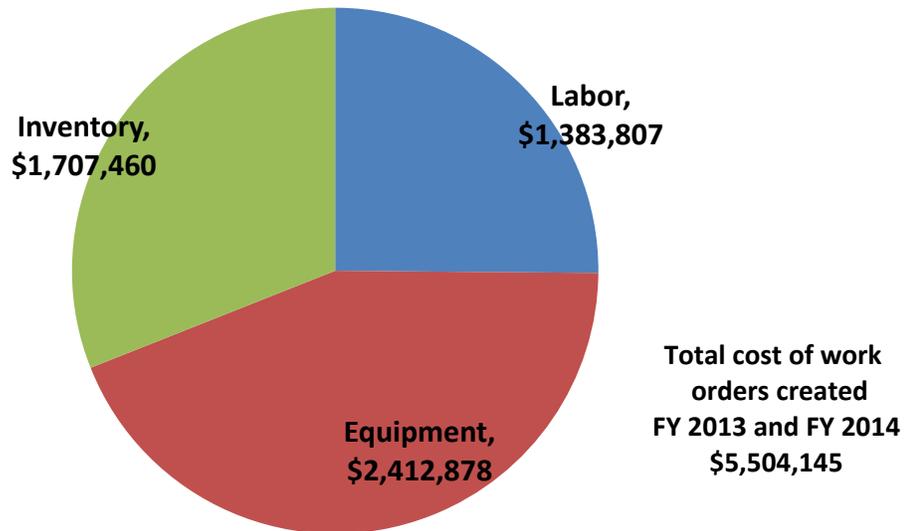
**Status of Work Orders Open  
at 6/30/2014**

Status Code	Created during FY 2013 and FY 2014	Created prior to FY 2013	Total
<b>2 - New</b>	<b>0</b>	<b>2</b>	<b>2</b>
<b>3 - Submitted</b>	<b>5</b>	<b>0</b>	<b>5</b>
<b>4 - Approved</b>	<b>348</b>	<b>58</b>	<b>406</b>
<b>5 - In progress</b>	<b>74</b>	<b>118</b>	<b>192</b>
<b>6 - On hold</b>	<b>4</b>	<b>1</b>	<b>5</b>
<b>7 - Completed (by 8/14/2014)*</b>	<b>192</b>	<b>27</b>	<b>219</b>
<b>9 - Cancelled</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>Total</b>	<b><u>624</u></b>	<b><u>207</u></b>	<b><u>831</u></b>

\*These were completed between 7/1/2014 and 8/15/2014 (through the end of audit fieldwork).

*Source: Munis Work Order Module*

**Cost of Work Orders**  
Created FY 2013 and FY 2014



Source: Munis Work Order Module

**Work Orders Created FY 2013 and FY 2014**  
**Detail**

<u>Activity Code</u>	<u>Description</u>	<u>No. Created</u>	<u>No. Closed</u>	<u>Ave. Days Open</u>	<u>Total Cost</u>
A1	Potholes	193	190	25	\$ 34,456
A10	Minor Asphalt/Paving/Milling	60	38	33	\$ 1,051,746
A2	Road Patch	12	12	10	\$ 2,291
A3	Asphalt Removal	2	1	69	\$ 947
A5	Mill/Pave	2	2	10	\$ 54,508
A7	Driveway Apron/Minor Asphalt	374	348	33	\$ 707,048
A8	Street Cuts	62	48	45	\$ 28,574
C1	Curbs	47	33	27	\$ 100,575
C2	Sidewalks	16	10	22	\$ 21,139
C3	Concrete Maintenance	40	31	9	\$ 37,975
C4	Brick Sidewalks	5	5	8	\$ 1,926
D1	Front Ditch	1	1	6	\$ 785
D10	Lane Striping	4	2	123	\$ 67
D2	Rip Rap	7	3	20	\$ 8,431
D3	Ditch Cleaning	8	4	63	\$ 7,883
D4	Drainage	78	66	21	\$ 75,514
D5	Sinkholes	189	150	43	\$ 570,769

Table continued on next page.

## Work Orders Created FY 2013 and FY 2014

### Detail

<u>Activity Code</u>	<u>Description</u>	<u>No. Created</u>	<u>No. Closed</u>	<u>Ave. Days Open</u>	<u>Total Cost</u>
D6	Yard Repair	8	6	1	\$ 2,501
D7	Pipe Installation	4	4	25	\$ 28,845
D8	Misc Drainage/Stoppage	1,039	728	81	\$ 1,717,613
D9	Illicit Discharge	8	7	4	\$ 62
G3	Speed Limit Signs	1	1	3	\$ 29
I1	Various	8	5	66	\$ 2,510
I2	Traffic Management	32	30	38	\$ 8,540
I3	Paving	2	1	77	\$ 285
I4	Contractor-Flooding	1	-	-	\$ -
R1	Sweeping	21	18	4	\$ 1,302
R10	Storm Damage	23	22	24	\$ 31,177
R2	Mowing	9	6	9	\$ 783
R3	ROW Trees/Limbs	204	179	33	\$ 69,737
R6	Catch Basin	2	1	-	\$ 1,531
R7	Water Wagon - Mud on Street	2	1	-	\$ -
R8	Tree Cutting	74	71	58	\$ 14,776
S1	Special Activity	12	9	55	\$ 295,981
S2	Supervisor's Time	1	-	160	\$ 15,180
T1	Speed Bumps	15	15	56	\$ 3,003
T10	Traffic Accident Damage	110	98	53	\$ 34,380
T11	Request New Street Light	30	19	41	\$ 3,566
T12	Graffiti Removal	19	18	17	\$ 1,423
T13	Flag Upside Down	1	1	1	\$ 85
T14	Signal Maintenance	11	1	345	\$ 8,364
T16	Erosion/Muc	4	4	2	\$ 430
T2	Signal Maintenance	9	8	57	\$ 10,135
T20	Signs	1	1	178	\$ 9,698
T3	Street Light Out	1,980	1,963	11	\$ 285,401
T4	Street Light Repair	284	273	28	\$ 54,674
T5	Painting Markings	8	5	126	\$ 1,165
T6	Guard Rails	7	6	32	\$ 4,813
T7	Signs Fab & Inst	762	731	15	\$ 161,184
T8	Special Signs	19	15	6	\$ 3,500
T9	Sign Maintenance	202	198	19	\$ 26,838
	<b>Total</b>	<b><u>6,013</u></b>	<b><u>5,389</u></b>		<b><u>\$ 5,504,145</u></b>

Source: Munis Work Order Module

## **Noteworthy Accomplishments**

According to our analysis of the information in the Munis work order system, the Department receives an average of 12 service requests daily via phone or internet. Of the 6,013 work orders created during the audit period, 348 were closed the day they were received. An additional 1,797 were closed within three days, which indicates that approximately 40% of the work orders created during the audit period were addressed within three days of being received. Sixty-nine percent of the work orders were completed within two weeks of the request. These figures do not include any work orders that were not entered into Munis.

In addition, Street Department employees have worked hard to overcome some of the difficulties associated with using the Munis work order software. They have sought out training opportunities and are willing to continue to resolve outstanding issues.

## **Results of Audit**

Auditor testing revealed the following findings and recommendations.

### **1. The internal controls surrounding the work order process are weak.**

#### **Criteria:**

The Internal Control and Compliance Manual for Tennessee Municipalities (ICCMTM) establishes the minimum requirements of the State Comptroller's office related to internal control and compliance. The following criteria identified in the manual are applicable to the work order process:

- a) Activity level objectives should be developed with identifiable goals against which periodic risk assessments can be performed.
- b) Written policies and procedures should be developed that address how the goals will be achieved and who is assigned the specific authority and responsibility for carrying out the related tasks.
- c) Work flow should be established so that one employee's work is independently verified by another employee.
- d) Accurate, timely information should be effectively communicated to internal and external users of information in order that appropriate, timely decisions can be made.

### **Conditions:**

The following conditions exist related to the work order process:

- a) According to Street Department personnel the department has not conducted a risk assessment of the work order process related to the obstacles of meeting work order goals.
- b) There are no detailed written policies and procedures for the work order process that explain how tasks will be carried out and how goals will be achieved.
- c) Completed work orders do not show indication of independent review, such as initials or signature of the supervisor and date.
- d) The work order reporting process has several hindrances that prevent accurate, timely information from being reported to those with a need for the information:
  - Information input into the work order system is not done in a consistent manner and, therefore, work order information is not always reliable. We found the following conditions related to the 6,013 work orders created during the audit period:
    - 57 work orders had an actual end date prior to the create date.
    - 62 work orders had a duplicate set of work orders for the same job. Of the 62 duplicate sets approximately 27 sets had work charged on both work orders.
    - 110 of the 624 Munis work orders open at 6/30/2014 had a create date prior to 6/30/2013 but no start date.
    - 36 of 5,389 work orders completed during the audit period (i.e. they showed an actual end date) had a status code other than “7- Work Completed”. Twenty-nine showed a status of in-progress, five showed a status of approved, one showed a status of submitted and one showed a status of on hold.

### **Causes:**

The following causes relate to the above Conditions:

- a) Risk assessments: The requirement for formal risk assessments at the department or activity level has not been promoted within the City.
- b) Lack of written policies and procedures: The work order process has always had informal policies and procedures. Written procedures take time to develop.
- c) Independent review documentation: Although completed work orders are independently reviewed by the crew chiefs and the lead crew chief, documentation of the review has not been required.
- d) Inconsistencies in data entry and the inability to retrieve information from the system are due to:
  - Lack of a standardized written process, and
  - Difficulty using the software program.

**Effects:**

The following are possible effects of the current conditions:

- a) With no formal risk assessment process, weaknesses in the work order process are not readily identified and corrected.
- b) The lack of written policies and procedures for the work order process can create inconsistencies, errors and confusion, especially when someone new assumes responsibility for a portion or all of the process.
- c) A lack of documentation of independent review of work orders makes it difficult to ascertain if work orders are independently reviewed.
- d) A lack of readily available, accurate, retrievable information from the work order system reduces efficiency of operations and accuracy of performance measurements.

**Recommendations:**

The auditors recommend the following corrective actions be taken:

- a) Conduct and document periodic risk assessments of the work order process. Appendix A provides guidance that can be used to assess and document risks.
- b) Create a written set of policies and procedures for the work order process that detail how tasks are to be carried out and how goals are to be achieved. Vet the policies and procedures with all stakeholders in order to get buy in from all parties.
- c) Document independent review of work orders by initials or signature and date.
- d) Close out all routine work orders at the end of each fiscal year. Begin a new routine (“open”) work order for the task for each year. Use the same work order number, if desired, but add a hyphen and the year after it. This should effectively track comprehensive information for each year.
- e) Evaluate other work orders that remain open at the end of each year and determine whether or not they should continue to remain open. Document decisions to keep work orders open beyond one year. Periodically run reports to identify missing fields in the work order system so that all information is complete.

**Management Comments:**

Agree \_\_\_\_\_ X \_\_\_\_\_

Disagree \_\_\_\_\_

**Corrective Action Plan:**

- a) The Department has performed an initial risk assessment for the work order process since we received the draft of this audit report. We will continue to review the assessment with managers and other stakeholders.
- b) The Department is in the process of developing more detailed written policies and procedures that will describe how tasks should be carried out and goals achieved.
- c) Crew chiefs and/or lead crew chiefs will begin documenting their review of completed work orders by initialing or signing the paper copy of the work order and dating it.

- d) **The Department believes there is benefit in keeping work orders open at year end rather than closing out the routine work orders at the end of each year. We will ensure that all routine work order information is entered into the work order system so that all useful information is captured and can be summarized.**

**Projected Completion Date: July 2016**

**Responsible Manager: Shirley Williams**

**2. Street cut procedures related to permitting, billing and work order entry are inconsistent and do not always follow City Code requirements.**

**Criteria:**

**Standardized data entry and billing procedures strengthen controls surrounding transactions and provide consistent information for decision making.**

**City Code Sec 12-201 states that no person or utility can cut into a street, alley or highway without first obtaining a permit. The permit fee (\$6/square foot) is supposed to cover the cost of inspection and the cost of repairing the street surface. No exceptions are mentioned in the Code.**

**Conditions:**

**Auditor testing revealed the following conditions related to street cut work orders entered into Munis. In a sample of 30 street cuts out of a total population of 89:**

- a) **Six work orders did not disclose in Munis the amount charged for the permit or the related check number.**
- b) **Four of the work orders did not identify the related permit number in Munis.**
- c) **The fees collected for 24 out of 26 of the sample street cuts were less than what it cost the City to complete the work order. The total difference was \$9,845.**
- d) **One permit fee out of 26 permit fees could not be traced to billing or collection in Munis. The amount of the fee was \$720.<sup>1</sup>**
- e) **Two of the work orders were related to cuts made by Clarksville Gas and Water Department. No permits were issued for the cuts nor were any charges billed for the work. The work orders totaled \$3,310.**
- f) **Two of the work orders were related to Habitat houses. No charges were made for the permits. The work orders totaled \$899.**

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<sup>1</sup> The fee was collected on November 20, 2015, as a result of auditor inquiry. The work was performed on January 30, 2012.

**Cause:**

The following causes relate to the above conditions:

- a) The information input into Munis is not standardized for each work order.
- b) The fees for street cut permits have not kept up with the cost of service. Fees are not adjusted regularly. Fees are not regularly compared to the actual costs of work completed.
- c) No written procedures exist regarding the billing, collection and deposit of permit fees to help ensure that all fees are billed, collected and deposited. Fees that are billed and collected by Finance are not reported back to the Street Department in order that the Department can verify that all permits are paid for.
- d) City Code has not been amended to reflect the Department's unwritten policy of not requiring a permit or charging Clarksville Gas and Water Department for street cuts. City Code has also not been amended regarding the Department's policy of not charging for street cuts related to Habitat houses.

**Effect:**

The following are possible effects from the current conditions:

- a) The controls surrounding the process are weakened because the information in Munis is inconsistent.
- b) Unbilled and unpaid permits might not be detected.
- c) The City is subsidizing other parties when full cost is not recovered through permit fees.
- d) The Department is out of compliance with City Code when permits and charges are not made in accordance with the Code.

**Recommendation:**

The auditors recommend that the following actions take place:

- a) Develop a standard written protocol regarding the type and location for the information that is recorded on each work order in Munis.
- b) At least annually, compare the cost of individual permits with the cost of the completed work for street cuts and adjust the rate to cover the City's costs in the majority of situations.
- c) Develop a written policy regarding no-charge permits for street cuts and amend City Code accordingly.

**Management Comments:**

Agree \_\_\_\_\_ X \_\_\_\_\_

Disagree \_\_\_\_\_

**Corrective Action Plan:**

The Department is in the process of re-writing Departmental policy in regard to street cuts. It is also in the process of updating City Code regarding street cuts. We will address these recommendations in our new policies.

**Projected Completion Date:** September 2016

**Responsible Manager:** David Shepard

**3. Supporting documentation contains inconsistencies and unverifiable rates.**

**Criteria:**

Work order information in Munis should agree with the related paper work order. Labor, equipment, and inventory rates should be verifiable.

**Conditions:**

In a sample of 30 work orders of all activity codes out of a total population of 6,013 work orders, the auditors traced all rates to supporting documentation and also compared the information on the paper copy of the work order to the Munis entries for the same work order. The sample revealed the following conditions:

- a) Eight of the 30 work orders contained pay rates for at least one employee that did not agree with Munis payroll records for the time period of the work order.
- b) Nine of the 30 work orders contained conflicting information between what was recorded in the Munis work order module and what was on the paper copy of the work order. The differences between the work orders involved discrepancies in the amount of time charged for employees and equipment and discrepancies in the rate or quantity of inventory.
- c) The sample contained 28 different pieces of equipment. The auditors traced the equipment rates on the work orders to the Street Department rate sheet. The auditor could agree the rates of three pieces of equipment to the rate sheet. Seven pieces of equipment were not listed on the rate sheet, and the rates for eighteen pieces of equipment did not agree with the rate sheet.

**Cause:**

The following are possible causes for the above conditions:

- a) Outdated rate schedules were used.
- b) Rates were adjusted but the adjustment was not noted on the work order.
- c) Some information on the paper work orders was mistakenly omitted from Munis.

**Effect:**

Inconsistent information and unverifiable rates create doubt about work order reliability.

**Recommendations:**

- a) Document which rate schedule is used to calculate a particular rate and retain the schedule in order that rates and costs can be substantiated after the fact.
- b) Implement a control to ensure that all information on the paper work order agrees with the related information in Munis.

**Management Comments:**

Agree \_\_\_\_\_ X \_\_\_\_\_

Disagree \_\_\_\_\_

**Corrective Action Plan:**

The payroll rates come directly from Munis. We have no control over payroll information as it is drawn into the work order module.

- a) As we develop our written policies we will include information about how rates are determined and we will retain rate schedules so that rates can be verified after the fact.
- b) We will include in our procedures a control to help ensure that information posted in the work order module agrees with the paper copy of the work order. This may include running a report of work orders entered for a certain period of time and comparing them to the paper work orders.

**Projected Completion Date: July 2016**

**Responsible Manager: Shirley Williams**

**4. Inventory controls are weak and inventory rate calculations are inefficient.**

**Criteria:**

Inventory balances should be supported by physical counts of inventory on hand. The proper use of an inventory system provides good control over goods in stock and helps identify losses due to misappropriation or other causes.

Figures which are separately input into a software module are more prone to error, and the process is less efficient, than if the figures are electronically transferred and calculated from information already residing in the software, especially where the information has been independently verified through another software function.

**Conditions:**

**Audit testing and inquiries revealed the following conditions related to inventory:**

- a) **Item counts in the inventory module are not accurate, and the total inventory amount does not tie to actual inventory on hand. Periodic physical counts are not taken.**
- b) **Inventory costs and quantities are manually entered into the Munis inventory module instead of being transferred from the accounts payable module as the system is designed to be used. As a result, information is entered into Munis twice instead of once. There is no independent control over the calculation.**

**Cause:**

**The Department believes it has more control over work order costing if inventory rates and quantities are manually entered into the inventory system instead of being pulled from the accounts payable system. Management made the decision not to set up the inventory module as a fully functioning inventory system. Artificial initial quantities of 10,000 were entered into the inventory system for many items so that when items are drawn from inventory into the work order system there would always be items “on hand” per the inventory report.**

**Effect:**

**When inventory is not effectively controlled, items can be misappropriated or lost without coming to the attention of those charged with oversight. When inventory costs and quantities are manually entered into Munis, efficiency is lost and the rates are more prone to error. There is no independent control over the figures.**

**Recommendation:**

**Take an initial physical count of supplies on hand and correct the quantity balances in the inventory module. Begin utilizing the accounts payable module as the method of entering all supplies into the inventory module so that item quantities in inventory are electronically updated and inventory rates are electronically calculated. This will provide independent control over the figures. Periodically make physical counts of items on hand and reconcile any differences.**

**Management Comments:**

Agree \_\_\_\_\_X\_\_\_\_\_

Disagree \_\_\_\_\_

**Corrective Action Plan:**

**As recommended by the audit, our department plans on utilizing the accounts payable module for inventory control. However, we will need Information Technology’s assistance in doing so, and perhaps additional guidance from Internal Audit. I will**

point out; however, there are still incidences whereby manual entries are needed, mostly concerning P-Card charges.

In reference to the physical inventory, I talked to David Shepard about this and we are planning an inventory of various items. However, we still have not obtained a clear guidance from Internal Audit as to the perimeters of which items that need to be considered in an inventory count. Also, we feel it is best to have an outside firm do the inventory, but it is unknown whether it is viable, because of not only budget constraints, but also cost efficiency.

**Projected Completion Date:** The Street Department desires to have a more efficient Work Order software system, such as the one Parks and Recreation uses. In order for us to use the Munis Accounts Payable module for inventory control, we must ascertain whether this software integrates with this feature. Also, we will have to wait for the FY 2017 budget for purchase of this new software.

As stated above, we feel an outside firm should perform the initial inventory count. Again, it is not a budget item in the present fiscal year. We must ascertain the costs associated and the benefits derived from this service.

**Responsible Manager:** Jeff Norris, Senior Accountant

## **5. Software difficulties hinder the efficiency of the work order process.**

### **Criteria:**

An efficient work order software system is one that requires the least amount of time and effort to enter, track and effectively report on work order activity.

### **Condition:**

Street Department employees have received Munis training on the work order module. However, they describe the following conditions related to the functionality of the Munis work order software as currently configured:

- a) Work order searches are cumbersome. Searches done by property location don't consistently return the same results. Searches done by customer name are not possible. The GIS functionality of the software is not working properly and, therefore, cannot be used for property searches within the software.
- b) The software doesn't provide the flexibility of allowing the cost of employee benefits to be added to the labor cost. This must be done manually when FEMA reimbursements are sought.
- c) Reports generated by the software don't provide the level of work detail that is required by FEMA or other third parties. The software also falls short in providing reports that the Department needs to effectively carry out its mission.

d) The software combines the work orders from different departments together resulting in confusion and errors. The work order numbers are intertwined between departments.

**Cause:**

The causes for the above conditions vary. Some of the conditions are the result of the software design. Some are the result of miscommunication between the Street Department and IT Department for requested assistance. Some are the result of the lack of resources within the IT Department to develop the needed specialized reports.

**Effect:**

The effect of the above identified conditions is inefficiency of the work order process. Duplication of effort, confusion, a lack of information for decision making, and possible liability to third parties or grantors because of deficient information are some of the resulting effects.

**Recommendation:**

Consider various options moving forward. Determine whether budgeting for the development of specialized reports by Munis (Tyler Technologies) is more cost effective than purchasing new work order software pre-configured with reports that satisfy internal and external needs.

Continue to work with the IT Department to resolve the issues that they are able to address.

**Management Comments: Street Department**

Agree \_\_\_\_\_ X \_\_\_\_\_

Disagree \_\_\_\_\_

**Corrective Action Plan:**

The Department is reviewing its options moving forward. We still have specific unanswered questions about the Munis work order system such as why inventory counts don't update after being drawn out for use on a work order, why overhead cost isn't an option on the work orders, why the system doesn't have the option to pull pay rates with benefits, and why name and address searches return different results on different computers. We will continue to try to resolve these issues with the IT department.

**Projected Completion Date: July 2016**

**Responsible Manager: Shirley Williams**

**Management Comments: Information Technology**

Agree \_\_\_\_\_X\_\_\_\_\_

Disagree \_\_\_\_\_

**Corrective Action Plan:**

If the Street Department can provide the needed report specifications, IT will identify if there are current reports within Munis to meet their needs. If the reports are not readily available, IT will determine if the reports can be built internally or we will contact Munis for a quote to build them.

IT will continue to address any issues that our brought to our attention.

**Projected Completion Date: 6/11/2016**

**Responsible Manager: Amie Wilson**

**Other Recommendations**

The audit has the following recommendations which are not related to specific weaknesses in the process, inefficiencies or non-compliance, but are suggestions to enhance the process:

- a) On the public service request website, consider adding other types of requests such as drainage problems or traffic light outages.
- b) On the public service request website or your Facebook page, consider adding a section for FAQ related to the Street Department. This may help citizens find answers to common questions.
- c) Consider developing a work order “overhead rate” that can be added to individual work orders that are billed to third parties such as insurance companies for damage done to City property. Such a rate would help recapture the cost of administrative and finance time required to process work orders.
- d) Consider partnering with IT or APSU GIS to use MUNIS Maplink, making use of the Street Department GIS administrator or an APSU GIS student to provide functionality support.

**Management Comments:**

Agree \_\_\_\_\_See discussion below\_\_\_\_\_

Disagree \_\_\_\_\_

**Corrective Action Plan:**

- a) The Department believes adding items to the public service request website is too complicated. For instance, drainage has so many issues.
- b) We will consider adding a FAQ section to the CSD Facebook page. We can see the benefit of this.

- c) We will add an administrative cost for billing third parties.
- d) The Department is not interested in partnering to use Maplink at this time.

**Projected Completion Date: July 2016**

**Responsible Manager: Shirley Williams**

## **Conclusions**

Our audit of the Street Department work order process for the period July 1, 2012 to June 30, 2014 revealed the following results related to our original objectives.

The internal controls surrounding the work order process are weak in the following areas:

- A formal risk assessment process has not been implemented and there are no detailed written procedures that explain how tasks are accomplished and goals met.
- Information input into Munis is not done in a consistent manner. Our testing showed that some “end” dates were prior to “create” dates. Some work orders had duplicates with costs charged to both work orders.
- Work orders are not always closed even though work is completed.
- Some work orders have been open for over two years.
- Bills are not reconciled to receipt of final payments to identify repeat customers with outstanding balances.
- One audit-tested work order was marked paid but payment could not be traced to deposit.
- Inventory is not tracked and tied to a physical count.

In regard to the efficiency of the work order process and the functionality of the Munis work order module, the audit revealed that:

- The Street Department created 6,013 work orders during the audit period, not including the open work orders used for routine work. Forty percent of work orders created during the audit period were completed within three days and 69% were completed within two weeks of the original request.
- Employees have received software training on the work order module of Munis but the design of the software and the employees’ perception that technical assistance is not readily available have contributed to inefficiencies in the process.
- Needed work order reports cannot be generated.
- Searches within the work order system are cumbersome.
- Labor rates that include employee benefits must be manually added to the labor costs.
- Information from another department shows up in the work order database which is confusing when selecting equipment and labor rates.

**The audit found the following conditions related to work order costing and rates:**

- **Inventory rates are entered manually into the inventory system instead of through the accounts payable system. This increases the chance of error and reduces efficiency. It also reduces control surrounding the transactions.**
- **Billing rates for street cut permits are not adequate to recover City costs in most circumstances.**
- **Rates for labor and equipment usage on work orders sometimes conflict with rate schedules or payroll records.**
- **Information on the paper copies of the work orders does not always agree with the information entered in Munis for the same work order.**

**The audit's evaluation of compliance with applicable regulations or laws revealed that the Department does not follow City Code Section 12-201 in all situations related to charging for street cuts. The Code requires all utilities and persons to obtain permits before cutting into a street. The permit fee is supposed to cover the cost of the inspection and the repair of the street surface. The Department has an informal policy of allowing Clarksville Gas and Water Department to cut streets without a permit and without a charge. It also allows street cuts made by contractors for Habitat houses to be made at no charge.**

**The auditors would like to thank management and staff of the Street and IT departments for their help and support during the performance of this audit.**

**If further information about this audit is desired please contact Internal Audit at 931-648-6106.**

## APPENDIX A



### RISK ASSESSMENT PROCESS

**DEPARTMENT:** \_\_\_\_\_ **DIVISION/FUNCTION,  
IF APPLICABLE:** \_\_\_\_\_

The Tennessee Comptroller's Office, Division of Local Government Audit, has a manual, entitled Internal Control and Compliance Manual for Tennessee Municipalities, which provides guidance related to the internal control activities of municipalities. The Manual recommends that the Committee of Sponsoring Organizations of the Treadway Commission (COSO) publication, *Internal Control – Integrated Framework*, be used as a model on which to base an internal control system.

The federal government GAO has also issued a publication, entitled the Green Book, which requires federal agencies to design and document their system of internal control. The principles in the Green Book are based on the COSO model as well. Federal grantees may eventually be required to comply with these same internal control standards. Therefore, as a City government we want to be prepared to meet federal regulations.

An effective system of internal control provides a measure of assurance that business goals will be met. Internal control is a means to an end, not an end in itself. It is geared toward the achievement of objectives in three categories: Operations, Reporting and Compliance.

COSO's *Integrated Framework* identifies periodic risk assessments as an important component of internal control. Risk assessments focus our attention on identifying obstacles to achieving our mission as well as proactively address potential issues. We can manage uncertainties and evaluate our current processes in order to maximize our efficiency and effectiveness. The process increases the likelihood of our success.

Risk assessments are an investment in the future performance of City government.

It is likely that you are already performing informal risk assessments in your daily activities, as risk management is tied to performance and success. In an effort to aid City departments in formalizing periodic risk assessments, internal audit has developed the tables below that provide a framework for the process. The risk assessment consists of two sections described in further

detail below. If your department already performs documented risk assessments you don't need to complete this form, but please forward a copy of your risk assessments to Internal Audit.

**A risk assessment should be completed for each division or major function within the department. Internal Audit recommends a similar process be performed at separate activity levels. This will facilitate any internal or external audit of the activity.**

**This guide can be used to document risk assessments at any level, from the department level to the activity level.**

### **Step I**

The first step in performing a risk assessment is defining specific objectives for your department/division/function/activity related to the mission of the department. The objectives should be in specific, measurable terms. This involves clearly defining what is to be achieved, who is to achieve it, how it will be achieved and the time frames for achievement.

Objectives are classified into one of three categories – operations, reporting or compliance.

After objectives are defined, management identifies and analyzes the risks that could prevent the specific identified objectives from being achieved. Management then evaluates what is currently being done or should be done to mitigate those risks.

### **Step II**

After mission related objectives and risks are defined and assessed, management should assess the fraud risks within the department/function/activity.

It is important to remember that risk management is an ongoing process that is the responsibility of each employee. While each employee will not individually be completing a risk assessment, all employees may have ideas for improvements or areas of concern and we encourage you to discuss risk with your employees. Below you will find details about each step in the risk assessment process.

By completing the following tables City departments will document their risk assessment process. **If the assessment relates to a division or function within a department, substitute the word “division” or “function” for “department” as you read the tables below.**

**SECTION I: RISK ASSESSMENTS FOR OPERATIONS, REPORTING AND COMPLIANCE**

**A. OPERATIONS**

<b>OPERATIONAL OBJECTIVES</b>				
List the department’s operational objectives related to fulfilling its mission, and rate the importance of each objective to the overall mission of the department. Objectives should be in quantifiable terms whenever possible. (E.g. Completing 200 – 250 work orders per month or having monthly financial statements prepared within 10 – 15 days after month end, etc).				
	Operational Objectives	Important	Critical	Highly Critical
1				
2				
3				
4				
5				
6				
7				

<b>OPERATIONAL RISKS</b>							
List the greatest risks to the department that it won’t be able to achieve the operational objectives listed above. Risks should be evaluated according to magnitude of impact and likelihood of occurrence, both on a scale of 1 – 3, with 3 being greatest impact or most likely to occur. (E.g. Software inaccessibility, untrained employees, understaffed function, etc).							
	Operations Risks	Impact			Likelihood		
		1	2	3	1	2	3
1							
2							
3							
4							
5							
6							
7							

<b>OPERATIONAL RISK MITIGATION</b>			
List the controls that are planned or in place to mitigate the risks identified above as operational risks. (E.g. IT redundancy required annual training, etc).			
	Operations Controls	Planned	In Place
1			
2			
3			
4			
5			

6			
7			

**B. REPORTING**

<b>REPORTING OBJECTIVES</b>				
List the department’s reporting objectives and rate the importance of each objective to the overall mission of the department. Consider both internal and external reporting. (E.g. monthly activity reports, monthly financial reports, reports to the state, grantor reports, etc.).				
	Reporting Objectives	Important	Critical	Highly Critical
1				
2				
3				
4				
5				
6				
7				

<b>REPORTING RISKS</b>							
List the greatest risks that could prevent the department from being able to achieve the reporting objectives listed above. Risks should be evaluated according to magnitude of impact and likelihood of occurrence, both on a scale of 1 – 3, with 3 being greatest impact or mostly likely to occur. (E.g. Software inaccessibility, key employee not available or terminated, etc).							
	Reporting Risks	Impact			Likelihood		
		1	2	3	1	2	3
1							
2							
3							
4							
5							
6							
7							

<b>REPORTING RISK MITIGATION</b>			
List the controls that are planned or are in place to mitigate the risks identified above as reporting risks.			
	Reporting Controls	Planned	In-Place
1			
2			
3			
4			
5			

6			
7			

**C. COMPLIANCE**

<b>COMPLIANCE OBJECTIVES</b>			
List compliance objectives related to federal, state or local laws/regulations for your department.			
	Compliance Objectives		
1			
2			
3			
4			
5			
6			
7			

<b>COMPLIANCE RISKS</b>							
List the greatest risks that could prevent the department from being able to achieve the compliance objectives listed above. Risks should be evaluated according to magnitude of impact and how likelihood of occurrence, both on a scale of 1 – 3, with 3 being greatest impact or mostly likely to occur.							
	Compliance Risks	<u>Impact</u>			<u>Likelihood</u>		
		1	2	3	1	2	3
1							
2							
3							
4							
5							
6							
7							

<b>COMPLIANCE RISK MITIGATION</b>			
List the controls that are planned or are in place to mitigate the risks identified as compliance risks in the table above.			
	Compliance Controls	Planned	In-Place
1			
2			
3			
4			
5			
6			
7			

**SECTION II: FRAUD RISK ASSESSMENT**

Fraud is defined as any illegal act characterized by deceit or concealment to obtain money, property or services; to avoid payment or loss of services; or to secure personal or business advantage. Fraud risks are considered separately because they are not related to objectives of the department.

<b>FRAUD RISKS</b>	
List the fraud schemes most likely to occur in your department.	
1	
2	
3	
4	
5	
6	
7	

<b>FRAUD RISK MITIGATION</b>			
List the controls that are planned or are in place to mitigate the risks identified as fraud risks in the table above.			
	Fraud Controls	Planned	In-Place
1			
2			
3			
4			
5			
6			
7			