Agenda Item # 12
ATTACHMENT A.1

September 30, 2016

To: Mike Poucher, Director, Ocala Electric Utility

From: Emory Roberts Jr, Internal City Auditor

Re: Electric Utility Cogsdale Work Order System – Project 2016-01

We have conducted a review of the Electric Utility Cogsdale Work Order System processes and associated reconciliations for the capitalization of work projects per the request of the Electric Utility Director.

The purpose of the review was to assess the Cogsdale Work Order System processes for possible improvements to efficiently and effectively meet the operational needs of the Electric Utility.

To accomplish our objectives, we met with Electric Utility staff in a series of meetings to review and understand the processes currently in place for creating a work order, obtaining materials, building the job, and accounting for the additions/improvements for asset capitalization into the accounting records. Our audit included reviews of processes and records, as we considered necessary during FY 2016.

Based on our work performed, we conclude that that the Cogsdale Work Order System, as discussed in this report, does not effectively nor efficiently meet all of the operational needs of the Electric Utility. The current work order system requires a cumbersome and inefficient financial reconciliation process that must take place between the engineering plans and the job "as built". The reconciliation process requires multiple personnel and hours of effort to accomplish.

We appreciate the assistance provided by Engineering, Transmission & Distribution, Warehouse, and Utility Accounting departments during this review.

Cc: Sandra Wilson, Deputy City Manager

Background

The work order process tracks time and materials for all electric utility work (set poles, install transformers, capital infrastructure, additions to the system), provides costing for customers, allocates capitalization so when the job goes to finance it is allocated correctly, and provides budgeting information.

The current work order process crosses four functional departments within the electric utility and no one person or department has the authority and/or responsibility to ensure documentation is complete and accurate. The four functional department heads report to the Electric Utility Director. The departments are:

Engineering	Transmission & Distribution (T&D)	Warehouse	Utility Accounting

The process begins with the Customer. The customer calls for either a new or upgrade service, or maybe a relocation. The customer could be a developer, homeowner or business. They work with the engineers who will determine exactly what is needed for the job.

There are three types of work Engineering is responsible for

1) Service Order - repetitive, low dollar, non-capital repairs.
2) Work Ticket - unique type of job, but small dollar amounts, non-capital items.
3) Work Order - large jobs that increase the value of the system, capital items.

For the engineers, the first step is to use the Designer Software (Designer) in order to design the job. This software enables engineering techs to enter a description of the work to be done as well as what will be needed for the job: equipment, materials, assemblies, number of crews, number of people in the crews, etc. This software also allows Engineering to set the locations for work to be done. Once the job is input into Designer, it will be exported to Cogsdale for parts and pieces, and it will be exported to GIS for the layout of the system.

Engineering has been using the work order management function in the Cogsdale system for four years and the Cogsdale customer billing function has been in use for three years.

When the design is completed in Designer, Engineering then goes into Cogsdale and:

1) Creates a customer (duplicates work in Designer).
2) Creates a New Customer Contract ("contract" is type of project). Each job has its own contract number. Cogsdale cannot be used for custom jobs, but only for stock items. Account/fund selected through the selection of the contract class (type of project grouping; i.e. Electric – New Construction).
3) Creates a construction project record.
4) Imports the design from Designer (this will bring in the material costs).
5) Creates the project. Estimated labor is brought in and based on the assemblies used, all parts are based on the Warehouse cost and is brought in as an estimate. The prices that are brought in are the last purchase price of inventory.
6) Create the work order (this is given to the warehouse crew).

Although these steps seem simple, the engineering tech inputting a work order typically uses a binder with step-by-step instructions each time. The system is cumbersome and not intuitive. The walk through of this process took three hours.

Frequently jobs are not built exactly as detailed in the engineering drawings due to site specific conditions and unforeseen situations. Additional or different materials may be required, resulting in a variation of costs that could require a "change order" for proper accountability of costs. Therefore, once the job is complete, a reconciliation process is necessary to update the Cogsdale and GIS system with the materials as it was built on site. Any variability from the original work developed by Engineering requires the change order process to be completed to ensure accurate costs are documented and reported.

Anyone can close a work order. Once a work order is closed, no changes can be made. If someone erroneously closes a work order, any changes must them be made manually. If the closing function were limited, this would be less likely to occur. Currently, Engineering is not able to access reports from Cogsdale.

The current reconciliation process is completed through a joint effort of the Engineering Tech Manager, and the Utility Accountant. Reconciliation is often completed through a review of the field notes, warehouse documentation, and conversations with field crews. Sometimes it is even necessary to go back to the job site and try to conduct a physical inventory of installed materials and equipment to complete a reconciliation.

Additionally, repair or replacement of current fixed assets may require the corresponding partial or full removal of those affected fixed assets from the accounting system as applicable to ensure fixed assets are not overstated.

Conclusion

Based upon our review, the Cogsdale work order system does not meet the operational needs of the Electric Utility and results in a cumbersome and inefficient financial reconciliation process that must take place between the engineering plans and the job "as built."

Opportunities for Improvement

Our audit disclosed certain policies, procedures and practices that could be improved. Our audit was neither designed nor intended to be a detailed study of every relevant system, procedure or transaction. Accordingly, the Opportunities for Improvement presented in this report may not be all-inclusive of areas where improvement may be needed.

We recommend that Management consider:

1. **Exploring a New Work Order System Software Solution/Application that is compatible with the needs of the Electric Utility** - *The new solution should improve the efficiency and effectiveness of all processes and be compatible with the existing financial system through data import or real time. The City Finance and IT Departments should be involved in any exploration of possible solutions to ensure compatibility.*

   Please note that the Finance Department is considering a new ERP system, MUNIS, which does have a Work Orders module designed for Utility Districts (water, sewer, power lines) and their associated construction management needs. MUNIS is a Tyler Technologies product which is compatible with the current financial and inventory systems.

2. **Creating a Permanent Cross - Department Quality Control Inspector** - *This position would work with all employees involved in the work order process with the authority to make changes to the process across departments. This employee would have the technical skills to perform job site quality control inspections and monitoring to confirm the use of materials, equipment, and labor as applicable to ensure proper accountability. Also, this position would coordinate the completion of any necessary change orders by Engineering due to changes during the actual on-site work processes. This position would also be the liaison to reconcile the work performed of external contractors if used.*

3. **Process Re-Design Task Force** - *This temporary task force would be composed of employees from the four functional departments who are involved in the current work flow and given responsibility to make process changes and evaluate other solutions to improve the current processes. The task force would also review the change order process and reconciliation to ensure accurate costs are documented and reported. Any process re-design would require multiple personnel with an undetermined amount of hours to review and improve the process.* ***A process re-design could enhance / improve the process but the inherent risks related to changes that occur during "on-site" work and the accountability of changes would still remain due to the numerous manual processes.***

Additionally, the documentation of related policies and procedures and assigned responsibilities throughout the processes is necessary to enhance the consistency of performance by all employees involved.