

June 2018

Facilities Maintenance Performance Audit



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AUDIT SERVICES
CITY OF DURHAM

Date: June 25, 2018
To: Audit Services Oversight Committee
From: Germaine Brewington, Director of Audit Services
Subject: Facilities Maintenance Performance Audit June 2018

The Audit Services Department staff completed the report for the Facilities Maintenance Performance Audit. The purposes of this audit were to:

- Assess the adequacy of processes over facilities maintenance including preventive/planned maintenance and unscheduled repairs;
- To assess the adequacy of processes over the custodial function; and
- To assess the adequacy of controls over the supplies/parts inventory.

This report presents the observations, results, and recommendations of the Facilities Maintenance Performance Audit. In response to this audit's recommendations, City Management concur with the recommendations made. The detailed Management Response to the recommendations is included with the attached report.

The Department of Audit Services staff would like to acknowledge the contributions of the staff from the Department of General Services in the completion of this audit.

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Audit Report Highlights

Background

The Department of General Services serves as a steward of the City's physical assets and maintains the infrastructure of City facilities. The Facilities Division of the General Services Department is responsible for maintenance of City buildings. The two sections that comprise the Facilities Division are: Custodial Services and Facilities Management. FacilityDude is a computerized maintenance management system used by the General Services Department to schedule work orders for preventive maintenance activities and unscheduled repairs.

Purpose

The purposes of the audit were to:

- 1) Assess the adequacy of processes over facilities maintenance including preventive/planned maintenance and unscheduled repairs.
- 2) To assess the adequacy of processes over the custodial function.
- 3) To assess the adequacy of controls over supplies/parts inventory.

Why this audit was performed

This audit was performed to examine the propriety of the systems in place to maintain and repair the infrastructure purchased with tax payer dollars in the City of Durham.

Highlights

Overall the Department of General Services staff have adequate controls over facilities maintenance including scheduled preventive maintenance and unscheduled repairs. Audit Services Staff also reviewed the time it took to complete work assigned per the scheduled preventive maintenance work orders and determined that 98% of scheduled preventive maintenance work orders were completed on time (within 30 days). In addition, 82% of the unscheduled work orders were completed on time (within 6 days). Areas for improvement were noted. The process to close out work orders in the FacilityDude system was not working as intended. Standard Operating Procedures pertaining to the custodial function should be updated. Lack of segregation of duties existed in the stock room to store the inventory of parts and supplies. These parts are used most frequently by the Facilities Management and Custodial Services staff, and helps reduce the response time on addressing outstanding work orders. Specifically with regard to segregation of duties, the inventory supervisor ordered supplies/inventory, received them, updated records in the inventory system, stocked them and issued them. Lack of segregation of duties poses a risk that inventory may be misappropriated. Three recommendations have been offered to address the areas for improvement identified in the report.

Audit Services Department

Internal Audit

The Audit Services Department serves a three-fold role at the City of Durham. Our number one goal is to provide independent, objective assurance that City processes are working effectively. Secondly, we serve as internal fraud examiners when fraud, waste, or abuse is alleged against a City employee or department. Finally, in order to constantly foster high ethical standards, we provide in-depth ethical training to all City employees on a rolling basis. To learn more, visit our CODI site or our page on the [City of Durham's website](#).

Audit Services Oversight Committee

In order to maintain its organizational independence, the Audit Services Department reports to the Audit Services Oversight Committee (ASOC) a minimum of four times a year. The ASOC approves all proposed audit plans and completed audits prepared by Audit Services staff.

The Audit Services Oversight Committee is made up of six members: two City Council Members, three resident members, and one alternate City Council Member. The current members include two certified public accountants and persons with business experience. The City Manager is an ex-officio, non-voting member of the ASOC.

Audit Services Oversight Committee Members

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Charlie Reece
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Non-Voting Member:

Thomas J. Bonfield
City Manager

Background

The Department of General Services serves as a steward of the City’s physical assets. The Department maintains the infrastructure of City facilities. The Facilities Division of the General Services Department is responsible for maintenance of City buildings. As shown in Figure 1 below, the two sections that comprise the Facilities Division are: Custodial Services and Facilities Management.

Figure 1: Facilities Management Department organization chart



Facilities Management: Areas of work include performing preventive maintenance, repairs and improvements to City facilities and real estate properties. Staff specialize in the following trades: heating, ventilation and air conditioning (HVAC), electrical, plumbing, carpentry and painting. Services are provided on a routine and emergency basis.

Custodial Services: Areas of work include maintaining office, assembly and restroom areas in all City buildings. Custodial staff clean floors, furnishings, walls and windows.

Figure 2 below outlines the facilities that are managed by the General Services Department.

Figure 2: Facilities managed by the Facilities Division of the General Services Department.



The Facilities Division maintains City facilities. In addition, they have agreements with other City departments to provide support services. They also ensure that companies that have owner operator agreements with the City are maintaining and performing preventive maintenance activities as needed.



FacilityDude

FacilityDude is a computerized maintenance management system used by the General Services Department to schedule work orders for preventive

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maintenance activities as well as unscheduled repairs. The front line staff utilize the system to input critical data such as labor hours and actions taken on each work order.

Objectives

The objectives of the audit were to:

- Assess the adequacy of processes over facilities maintenance including scheduled preventive maintenance and unscheduled repairs;
- Assess the adequacy of processes over custodial services; and
- Assess the adequacy of controls over supplies/parts inventory.

Scope, Methodology, and Compliance

Scope

The scope of the audit included examining the current practices related to administering the scheduled preventive maintenance, unscheduled repairs and custodial functions. All work orders for fiscal year (FY) 2018 (as of May 2018) were examined.

Methodology

Audit Services Department staff performed the following procedures to accomplish the objectives of the audit:

- Interviewed staff responsible for scheduled preventive maintenance, unscheduled repairs and custodial services;
- Evaluated policies and procedures governing all activities including scheduled preventive maintenance, unscheduled repairs and custodial services;

- Reviewed the preventive maintenance program;
- Reviewed the methodology used to develop the preventive maintenance schedule;
- Analyzed all preventive maintenance work orders for FY 2018 by the following data fields: employee, status of work order, purpose code, trade, priority;
- Reviewed time to complete scheduled preventive maintenance work orders and determined percentage of work orders completed on time (within 30 days). Evaluated reasons for a sample of work orders not completed timely;
- Analyzed all work order data to ensure required fields were entered into the FacilityDude System;
- Verified if the FacilityDude System tracks all work performed on an individual piece of equipment. Determined whether this information was used for decision making;
- Reviewed the process of creating, prioritizing, and assigning work for unscheduled work orders;
- Analyzed all unscheduled work orders for FY 2018 by the following data fields : status of work order; employee assigned to complete the work order; purpose code; trade; priority;
- Selected a sample of unscheduled work orders and verified that work was actually performed;
- Reviewed time to complete all unscheduled work orders and determined percentage of work orders completed on time (6 days). Evaluated reasons for a sample of work orders not completed on time;
- Analyzed all emergency work orders for FY 2018 by the following data fields : Status of work order; employee to whom work order assigned; purpose code; trade; priority;
- Selected a sample of emergency work orders and verified that work was actually performed;
- Reviewed time to complete all emergency work orders and determined percentage of work orders completed on time (24 hours). Evaluated reasons for a sample of work orders not completed timely;
- Evaluated management oversight over scheduled preventive maintenance, unscheduled repairs and custodial functions;

- Reviewed reports used to monitor progress on work orders;
- Evaluated the performance measures used by management to monitor staff efficiency/effectiveness;
- Reviewed schedules established for cleaning activities;
- Verified the cleanliness of a few facilities maintained by performing a walk through;
- Reviewed the process of issuing, ordering and tracking supplies for preventive maintenance and the custodial function and determined if controls were adequate;
- Obtained a list of all inventory items on hand and the associated dollar value of the items on hand;
- Determined the total expenditures for FY 2018 and FY 2017 on supplies (cleaning and maintenance); and
- Documented the process of tracking costs and labor hours on work orders.

During the audit, Audit Services Department staff also maintained awareness to the potential existence of fraud.

Compliance

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

Results and Findings

Objective 1 Results Summary

TO ASSESS THE ADEQUACY OF PROCESSES OVER FACILITIES MAINTENANCE INCLUDING SCHEDULED PREVENTIVE MAINTENANCE AND UNSCHEDULED REPAIRS.

Overall the Department of General Services staff have adequate controls over facilities maintenance including, scheduled preventive maintenance and unscheduled repairs. The Facilities Division staff have established Preventive Maintenance Job plans which outline the equipment, location of the equipment and the preventive maintenance frequency for that equipment. The frequency of preventive maintenance on any given piece of equipment depends on the type of equipment—some equipment requires monthly maintenance while others require seasonal or yearly maintenance. The preventive maintenance work orders are generated in the FacilityDude system based on these maintenance plans. These plans are reviewed by the department regularly. Audit Services Staff also reviewed the time it took to complete work assigned per the scheduled preventive maintenance work orders and determined that 98% of scheduled preventive maintenance work orders were completed on time (within 30 days). In addition, eighty two (82) % of the unscheduled work orders were completed on time (within 6 days). Adequate management oversight also existed over these activities. The Facilities Division staff utilized reports from the FacilityDude system to monitor workload and effectiveness of staff in completing the work orders. They also met regularly to discuss the workload and to stay well informed of any issues. Information was disseminated at all levels ensuring that all staff was aware of potential issues. An area for improvement was noted.



98%

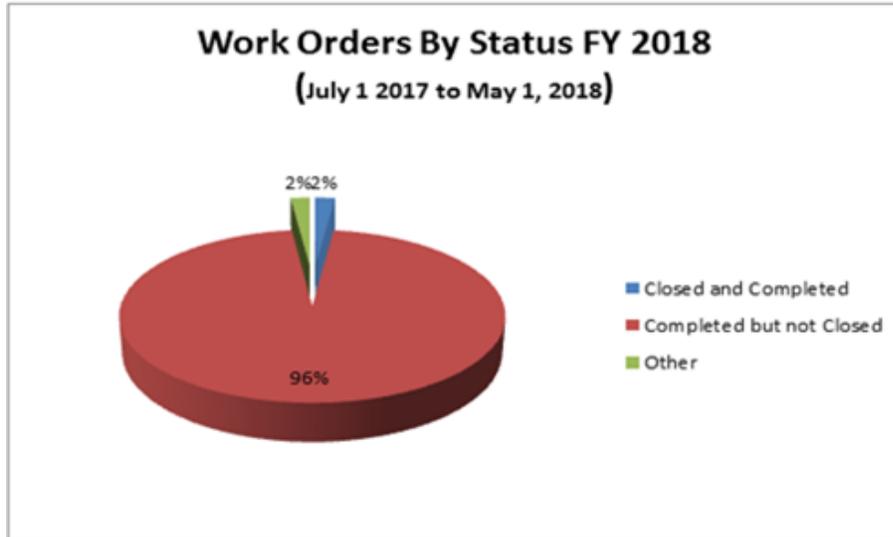
Finding 1

Audit Services staff found:

The process to close out work orders in the FacilityDude system is not working as intended.

Approximately 96% of preventive and unscheduled work orders (excluding custodial activities) were reflecting a completed status in FacilityDude. These work orders with a complete status have not been closed out. A work order with a completed status reflects that work was performed. A work order with a closed status reflects that the supervisor reviewed the work order after work was performed and all necessary information such as labor hours and cost of materials used was entered into the FacilityDude system. Figure 3 below shows the work orders by status for FY 2018 (July 1, 2017 to May 1, 2018).

Figure 3: Total work orders by status (excluding custodial activities)



Source: Auditor analysis of work orders obtained from FacilityDude

Work orders are assigned to staff in the FacilityDude system. After the work is completed, the assigned staff updates the status of the work order to “complete” in the FacilityDude system. Supervisors are required to review work orders with a complete status and provide all relevant information pertaining to material costs to the administrative analyst in order for the close out process to occur. The supervisory review assist in ensuring that work was properly completed and all the pertinent information associated with the work order was recorded accurately. This review includes ensuring all labor hours are recorded and that costs for materials used are submitted for the close out process to occur. Per the Assistant Facilities Operations Manager, work orders were not closed out timely as a result of staff shortages and heavy workload. The supervisory review serves as a control to ensure work is performed and in addition all relevant information is captured in the system to accommodate data analysis and decision making. Best practice encourages closing out all work orders to ensure all data has been captured properly, i.e. man hours, material used and material costs—in order to facilitate decision making related to the facilities maintenance operations. Not closing out the work orders would impact the Facilities Division’s ability to analyze data and make informed decisions.

Objective 2 Results Summary

ASSESS THE ADEQUACY OF PROCESSES OVER CUSTODIAL SERVICES.

Overall, the supervisor conducts monthly unscheduled inspections of City facilities and uses the results for coaching opportunities on any areas that need improvement. The supervisor also performs continuous spot checks and reviews all complaints/feedback obtained from various sources. An area for enhancement was noted.

Finding 2

Audit Services staff found:

Standard Operating Procedures (SOPs) should be updated

At present, written SOPs exist; however they were created in 2011 and are outdated. The Custodial staff currently do not perform cleaning activities as per the schedule outlined in the SOPs. The development and use of written procedures are always important to a successful quality control system. Written procedures provide employees with information to perform a job properly and facilitate consistency, good quality and better results. Lack of updated processes increases the risk of errors. Best practices encourage a department to have written standard operating procedures to ensure employees can perform their duties consistently. The supervisor in charge of custodial services is currently in the process of revising the standard operating procedures to reflect the current practices as well as incorporate a cleaning guide specific to each location. The guide will outline the custodial activity and the frequency with which each activity should be completed each day and at each location. Per the supervisor, cross training for all staff will also commence to facilitate, with fewer difficulties, the efficient and effective allocation of resources during resource shortages.

Objective 3 Results Summary

ASSESS THE ADEQUACY OF CONTROLS OVER THE SUPPLIES AND PARTS INVENTORY.

The General Services Department maintains a stock room to store an inventory of parts and supplies. These parts are used most frequently by the Facilities

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Management and Custodial Services staff; and helps reduce the response time on addressing outstanding work orders. The Department uses the inventory module in FacilityDude to track inventory in the store room. Adequate controls exist over requesting materials from the warehouse. Direct supervisors of employees requesting materials are required to approve all requests. The requests for materials are tied to specific work orders. Written Standard Operating Procedures exist as well. An area for enhancement was noted.

Finding 3

Audit Services staff found:

Lack of segregation of duties existed

Segregating employee duties is an important internal control in inventory management. Dividing specific duties between employees helps minimize risk of fraud, and maximize inventory security. The inventory supervisor ordered supplies/inventory, received them, updated records in the inventory system, stocked them and issued them. Lack of segregation of duties poses a risk that inventory may be misappropriated.

Conclusion

Overall the Department of General Services staff have adequate controls over facilities maintenance including scheduled preventive maintenance and unscheduled repairs. Audit Services Staff also reviewed the time it took to complete work assigned per the scheduled preventive maintenance work orders and determined that 98% of scheduled preventive maintenance work orders were completed on time (within 30 days). In addition, eighty two (82) % of the unscheduled work orders were completed on time (within 6 days). Adequate management oversight also existed over these activities. Information was disseminated at all levels ensuring that all staff were aware of potential issues. An area for improvement was noted. The process to close out work orders in the FacilityDude system was not working as intended. Approximately 96% of preventive and unscheduled work orders (excluding custodial activities) were not closed. Best practice encourages closing out all work orders to ensure all data have been captured properly in order to facilitate decision making related to the facilities maintenance operations.

Processes over the custodial services were also examined. Standard Operating Procedures pertaining to the custodial function should be updated. At present, written standard operating procedures existed; however they were outdated and did not reflect the current practices of providing custodial services.

The General Services Department maintained a stock room to store an inventory of parts and supplies. These parts are used most frequently by the Facilities Management and Custodial Services staff; and helps reduce the response time on addressing outstanding work orders. Lack of segregation of duties existed. The inventory supervisor ordered supplies/inventory, received them, updated records in the inventory system, stocked them and issued them. Lack of segregation of duties poses a risk that inventory may be misappropriated.

Recommendations

Recommendation 1

The Department of General Services staff should review the close out process for work orders and ensure that work orders are closed out timely. The Department staff should establish timeliness standards for the close out process.

Value Added: *Efficiency*

Recommendation 2

The Department of General Services staff should revise standard operating procedures for the custodial function. The procedures should outline the frequency of custodial activities to be performed by location maintained by the General Services Custodial staff.

Value Added: *Efficiency*

Recommendation 3

The Department of General Services staff should address the issue of lack of segregation of duties over the inventory stock room function. They should consider segregating the ordering, receiving and issuing functions. If that is not feasible, they should consider ways to mitigate the risks associated with lack of segregation of duties. Increased management oversight over the inventory function can help mitigate the risk of misappropriation.

Value Added: *Risk Reduction*

Value Added Legend



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Management Response



Memo to: Dr. Germaine F. Brewington, Director of Audit Services
Through: W. Bowman Ferguson, Deputy City Manager
From: Steven Hicks, General Services Director
Date: August 6, 2018
Subject: Management's Response to Recommendations
Facilities Maintenance Performance Audit June 2018

The following is the management's response to the Facilities Maintenance Performance Audit June 2018.

Recommendation 1:

The Department of General Services staff should review the close out process for work orders and ensure that work orders are closed out timely. The Department staff should establish timeliness standards for the close out process.

Management's Response:

We concur. Management is in full agreement with the recommendation. The Department is reviewing the close out process for work orders and is establishing timelines and assigning administrative tasks to staff to ensure orders are closed within set time periods. In addition, last year GSD and BSM completed a facilities work order mapping process to look at way to create efficiencies and accountability. This Audit report will allow us to incorporate some of the findings as we approve our process.

Recommendation 2:

The Department of General Services staff should revise standard operating procedures for the custodial function. The procedures should outline the frequency of custodial activities to be performed by location maintained by the General Services Custodial staff.

Management's Response:

We concur. Management is in full agreement with the recommendation. The most recent SOPs on file (2011) will be updated to reflect current Custodial processes and required tasks.

Recommendation 3:

The Department of General Services staff should address the issue of lack of segregation of duties over the inventory stock room function. They should consider segregating the ordering, receiving and issuing functions. If that is not feasible, they should consider ways to mitigate the risks associated with lack of segregation of duties. Increased management oversight over the inventory function can help mitigate the risk of misappropriation.

Management's Response:

We concur. Management is in full agreement with the recommendation. The Department will increase management involvement in the review of monthly inventory reports and maintain the current approval process for the purchase of equipment and supplies.

Distribution of Report

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