



# City of Norfolk

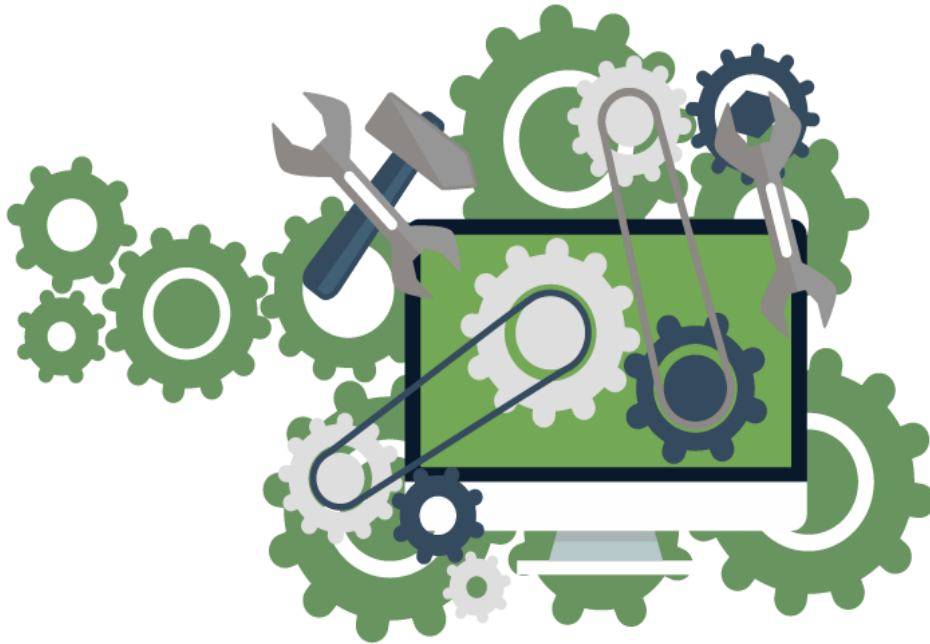
## Office of the City Auditor

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Audit of the General Services Department – Facilities Maintenance  
Division: A Focus on the Automated Work Order System  
*“Challenges for the Citywide Maintenance Process”*

October 7, 2019

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Honorable Mayor Dr. Kenneth Alexander and Norfolk City Council:

I am pleased to present the Audit of the General Services Department - Facilities Maintenance Division: A Focus on the Automated Work Order System “Challenges for the Citywide Maintenance Process Report.” The Office of the City Auditor initially conducted this audit as part of the Fiscal Year 2016 Audit Plan; however, we extended it to 2018 and 2019 audit plans, and expanded the scope to validate division progress due to management changes. The audit objective was to evaluate the challenges and effectiveness of management controls of the citywide maintenance process, with emphasis on the division’s automated work order system. Our audit noted several accomplishments over the last three years since its implementation to efficiently and effectively manage operations. We also noted some opportunities for additional improvements and made recommendations to assist with the challenges observed during the audit. We discussed the significant findings with the management and staff of the Department of General Services and the Facilities Maintenance Division on August 1, 2019. Incorporated within the body of the report are the management’s responses, corrective actions, and estimated completion dates. We want to thank management and staff for their cooperation and responsiveness to our requests and receptiveness to our questions, recommendations, and suggestions during the audit. If you have any questions about this report or any audit-related issue, I can be reached at 664-4044 or via email at [tammie.dantzler@norfolk.gov](mailto:tammie.dantzler@norfolk.gov).

Respectfully submitted,

Tammie Dantzler, CFE, MBA  
City Auditor

cc: Dr. Chip Filer, City Manager  
Catheryn Whitesell, Deputy City Manager  
Jennifer Riddick, Director of General Services



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## BACKGROUND

Facilities Maintenance (Facilities), a division of the Department of General Services, delivers a broad range of maintenance support services for most City buildings, parks, playgrounds, and ball fields, as well as provides oversight of the City’s contracted custodial and security services. These services include maintenance and repair for approximately 502 facilities, and the responsibility for the inventory and purchases required for the operation of the City’s warehouses and storage facilities. Their overall objective is to ensure that City facilities are safe, clean, and functional for Norfolk employees, residents, and visitors.

During the scope of our audit, Facilities appropriations, funded through the General Fund, included \$20.6 million in FY16, \$20.9 million in FY17 and \$21.5 million in FY18 for a total of \$63 million over three years. Table A provides a breakout of staff positions by designated areas, resulting in the seventy-four (74) maintenance professionals; six (6) administrative staffers; two (2) administrators; and five (5) managers that make up the eighty-seven (87) member team, whose mission is to provide safe, clean, functional facilities for Norfolk employees, visitors and residents by combining craftsmanship, responsiveness, financial responsibility, and innovative ideas for the future.

**Table A - Facilities Maintenance Division**

| Positions                                | [a]<br>Admin | [b]<br>Carpenter/<br>Maint Shop | [c]<br>Central<br>Energy Plant | Electrical<br>Shop | [d]<br>HVAC Shop | [e]<br>Paint Shop | Plumbing<br>Shop | Zoo / Nauticus<br>Half-Moone<br>Seven Venues |
|--|--------------|---------------------------------|--------------------------------|--------------------|------------------|-------------------|------------------|--|
| Assistant Facilities Maintenance Manager | 1            |                                 |                                |                    |                  |                   |                  |  |
| Business Manager                         | 1            |                                 |                                |                    |                  |                   |                  |  |
| Capacity Analyst                         | 1            |                                 |                                |                    |                  |                   |                  |  |
| Carpenter                                |              | 6                               | 1                              |                    |                  | 1                 |                  | 1  |
| Chief Operating Engineer                 |              |                                 | 1                              |                    |                  |                   |                  | 1  |
| Contract Administrator                   | 2            |                                 |                                |                    |                  |                   |                  |  |
| Electrician                              |              |                                 |                                | 5                  | 1                |                   |                  | 1  |
| Facilities Maintenance Manager           | 1            |                                 |                                |                    |                  |                   |                  |  |
| Facilities Manager                       | 1            |                                 |                                |                    |                  |                   |                  |  |
| Maintenance Mechanic                     |              | 6                               | 4                              |                    |                  |                   | 2                | 10   |
| Maintenance Shop Manager                 |              | 1                               |                                |                    |                  | 1                 |                  |  |
| Maintenance Supervisor                   |              |                                 |                                |                    |                  |                   |                  | 3  |
| Management Analyst                       | 1            |                                 |                                |                    |                  |                   |                  |  |
| Operating Engineer                       |              |                                 | 6                              |                    | 6                | 2                 |                  | 3  |
| Painter                                  |              |                                 |                                |                    |                  | 2                 |                  |  |
| Plumber                                  |              |                                 | 1                              |                    |                  |                   | 5                |  |
| Project Manager                          | 1            |                                 |                                |                    |                  |                   |                  |  |
| Storekeeper                              | 2            |                                 |                                |                    |                  |                   |                  |  |
| Supervising Operating Engineer           |              |                                 | 1                              |                    | 1                |                   | 1                | 1  |
| Support Technician                       | 1            |                                 |                                |                    |                  |                   |                  |  |
| Welder                                   |              | 1                               |                                |                    |                  |                   |                  |  |
| <b>Totals</b>                            | <b>12</b>    | <b>14</b>                       | <b>14</b>                      | <b>5</b>           | <b>8</b>         | <b>6</b>          | <b>8</b>         | <b>20</b>                                    |

- [a] Ensures efficiency of performance and realization of division goals.
- [b] Roofing; widows; carpet; keys; ceiling tiles; fencing; signs; concrete and beach access.
- [c] Energy; elevators.
- [d] Heating; ventilation; air conditioning; fire alarms; fire suppression.
- [e] Painting; drywall; pools; concrete.



Because of the massive volume of work order requests for maintenance and repair, and to assist in accomplishing its mission, Facilities entered into a third-party service agreement to obtain Facility Dude, an automated work order system, and began utilizing it in February 2015. Before the City invested in the Facility Dude application software, the division was using a manual process to manage work order requests. Facility Dude was purchased to automate the process and provide a mechanism for supervisors to monitor technician’s performance, status, and completion of work orders, as well as prioritize requested services and costs of materials used. The system has the following functionalities, as shown in Table B.

**Table B - Facility Dude Capabilities**

| <b>FUNCTIONALITY</b>  | <b>DESCRIPTION OF FUNCTIONALITY IN FACILITY DUDE</b>   |
|-----------------------|--|
| Work Order Management | Administration, field workers and office support alike have the ability to open, view, complete and analyze all of the maintenance work orders that come through the organization.   |
| Inventory Management  | Obtain notification before it's depleted; use equipment life cycles to know when to repair or replace something to cut down on waste; monitor inventory-related costs to maximize time, budget and assets.                 |
| Capital Forecasting   | Forecast budget and operational needs by predicting budget and equipment needs for future projects; prioritizing current projects more effectively; and streamlining work requests and tracking repairs that need to wait. |

When a City employee submits a work order request in Facility Dude, it is assigned to a City maintenance worker to perform, or it is contracted to a vendor. The state requires that permits are subject to inspection when constructing, maintaining, repairing, renovating, or changing the use of a building or structure. The determination of which work orders require permits, ensuring the health and safety of all that enter or occupy City buildings, lies with the assigned maintenance worker and supervisor. Within Facility Dude, there are seven types of work order users that have distinct application roles, and each application role has different capabilities and responsibilities. What a user can perform and what a user can view in the system is controlled by their application role assignment. These assignments include the following: Administrator, Supervisor I, Supervisor II, Technician, Manager, Clerk I, and Requester. There are over 500 active user-ids established in Facility Dude. Most user-ids are general City employees that can only enter work order requests for repairs, from changing light bulbs to installing power circuits, and tracking their status. There are City departments that do not utilize Facility Dude, and in some cases department staff performs minor repairs.

## AUDIT OBJECTIVES

The audit objective was to evaluate the challenges and effectiveness of management controls of the citywide maintenance process with emphasis on the automated work order system (Facility Dude).

## SCOPE OF AUDIT

The audit covered the division’s activities for the period July 1, 2015 to October 31, 2018.



## METHODOLOGY

We reviewed Facilities' policies and procedures, regulations, other related management documents, as well as interviewed management, former and current staff, to gather knowledge of the day-to-day operations, processes and functions of the division. We researched industry standards regarding facilities maintenance. We requested and reviewed the contract between City and SchoolDude.Com (Vendor), and related SOC-1 and 2 reports<sup>1</sup>. We obtained budgetary information from the City's Advantage Financial Management System (AFMS), the Expenditure Budget vs. Actual – Budget Basis (103A), Facility Dude query-based generated reports, and division manually produced schedules from AFMS generated reports. We also performed the following to accomplish our objective:

- Used the Facility Dude database to:
  - verify whether applicable permits were properly obtained for completed work orders.
  - evaluate controls over response time to address completed work orders.
- Randomly selected a sample of inventory to count from Facility Dude Inventory Management database to assess controls over the methods used to maintain and account for small tolls and shop/storeroom supplies.
- Accessed the City's payroll system (PeopleSoft) to validate whether terminated employees' application privileges were properly terminated in Facility Dude.

## STATEMENT OF AUDITING STANDARDS

We obtained an understanding of internal controls that were significant within the context of the audit objective. We assessed whether internal controls were adequately designed and implemented and performed procedures in order to obtain sufficient evidence to support the effectiveness of those controls. We assessed the reliability of the Facility Dude system data documentation and electronically tested the data and identified some problems with completeness or accuracy. Therefore, we concluded the information in the Facility Dude system was not reliable and determined that the data could not be used to perform an analysis of work orders performance response standards. The extent of our evaluation was dependent upon the expected importance of the data to the final report, strengths or weaknesses of any corroborating evidence, and anticipated level of risk in using the data.

We determined Facilities' financial information from the AFMS to be reliable. We based our assessment on the impact of the division's financial records to the City and anticipated level of risk in using this data. We found the AFMS records to be reliable and, therefore, the level of risk from using this information is low.

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.

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<sup>1</sup>System and Organization Controls (SOC) reports are third party assessments of security and operational controls as promulgated by auditing standards for Statement on Standards for Attestation Engagements No. 16 (SSAE 16)



## AUDIT CONCLUSIONS

### **Work Order Processing Non-Compliance - Failure to Obtain Permits**

**Condition-** Work order requests are being completed without required permits. Specially, during the audit we judgmentally selected 71 completed work orders to review and noted 54 of 71(76%) required a permit and did not have one.

Of the 54 work orders that required a permit and did not have one, we noted the following characteristics:

- Twenty-seven (27) work orders were the contractor's responsibility to obtain per the terms of the contract. Facilities technician supervisor did not ensure contractors obtained permits while overseeing the contractor's work performance.
- The technician determined ten (10) work orders did not require a permit based on their understanding of the Virginia Construction Code, and past management's view of the permitting of small jobs to be an administrative burden, therefore, determining only large jobs would be permitted and inspected.
- Facilities confirmed maintenance personnel should have but did not obtain a permit for seventeen (17) work orders.

**Criteria-** The Virginia Uniform Statewide Building Code (USBC) contains the building regulations that require compliance when constructing a new building, structure, or an addition to an existing building. They must also be used when maintaining, repairing, renovating or changing the use of a building or structure. USBC regulations are promulgated by the Virginia Board of Housing and Community Development, a Governor-appointed board for the purpose of establishing minimum regulations to govern the construction and maintenance of building and structures. Enforcement of the USBC is the responsibility of the local government's building inspections department through the issuing of permits and conducting inspections (Department of Planning/Building Construction Services Division/Building Commissioner).

Virginia Construction Code 201, Section 39-99 of the Code of Virginia states the purpose of the USBC is to protect the health, safety and welfare of the residents of the Commonwealth of Virginia, provided that buildings and structures should be permitted to be constructed, rehabilitated, and maintained at the least possible cost consistent with recognized standards of health, safety, energy conservation and water conservation.

**Cause-** The supervisors' and technicians' lack of familiarity with or maintaining current knowledge of the Virginia Construction Code (2012); the lack of oversight by Facilities of the contractor's responsibility to obtain permits; and the perceived administrative burden for obtaining permit and inspection for small jobs performed in-house.

**Effect/Potential Effect-** Failure to obtain required permits, subject to an inspection of repairs and maintenance performed, is a violation of the USBC and puts at jeopardy the health and safety of the employees, residents, and visitors who enter or occupy City buildings. This violation also has the potential for adverse publicity in the public's trust in that they are held accountable as it relates to the permit process. Also, failure to ensure that



contractors obtain the required permits could result in an issuance of a violation citation to both the contractor and the owner by the Building Safety Inspector.

**Recommendation-** We recommended, the Department of General Services, Facilities Maintenance Division (a) develop a process to monitor contracted work to ensure all permits and inspections are acquired and performed per contractual terms; (b) work with the Building Commissioner in developing a process that will reduce the administrative burden by streamlining the process for obtaining permits and inspections while maintaining compliance with the State building codes; and (c) commit to comprehensive training and continuing education on the Virginia Construction Code (2012) for all technicians and supervisors.

| <b><u>Finding #1</u></b>     | <b><u>Failure to Obtain Permits</u></b>  |
|------------------------------|--|
| <b>Management's Response</b> | AGREE.   |
| <b>Plan of Action</b>        | Facilities Maintenance (FM) has reviewed the permitting process and provided training to all personnel on the appropriate procedures. FM also recently reorganized personnel in an effort to provide a higher level of oversight for all projects. Because of the reorganization, supervisors and management will review all work requests prior to assignment to identify permitting requirements. Chief Operating Engineers, assigned to each trade skill and area of operations, are responsible for ensuring all proper permits are obtained. Front line technicians and maintenance mechanics are no longer authorized to make that decision. Project Management teams are required to include permitting requirements with the project documentation. Facility Dude is reviewed quarterly to ensure permits are attached to work orders that require permitting. |
| <b>Target Date</b>           | <b>COMPLETE: The review process and training were held in February 2019. Policy and direction from FM Manager established in February 2019. FM will continue to provide ongoing training opportunities for staff.</b>  |





**Inadequate Internal Controls over Shop Tools and Supplies**

**Condition-**

a. There are deficiencies in internal controls to ensure accuracy and completeness of small tools inventory records, accountability for inventory transactions, and safeguarding of inventory.

At the time of the audit, Facilities did not track small tools inventory in Facility Dude. These tools can range from hand power (i.e., drills, saws, etc.) to stationary (i.e., drill press, arc welding machine, etc.), or specialized tools used to detect gas leaks and underground pipe breakage. We were provided listings from each shop; however, values of the inventory were not provided. We subsequently requested each shop to give a listing of its inventory to include a value to each item listed; overall totaling 1,098 items valued at \$135,466<sup>2</sup> as shown in Table C.

Based upon the characteristics of the overall small tools inventory, we judgmentally sampled 211 items valued at \$102,996, and performed a physical count. Overall, we found a minor discrepancy of \$3,674 involving 21 items, as shown in Table D.

**Table C - Overall Small Tools**

| Shop/Location        | Small Tools Inventory Listing |                   |
|----------------------|-------------------------------|-------------------|
|                      | Quantity                      | Value             |
| Scope/Chrysler Hall  | 147                           | \$ 54,226         |
| HVAC                 | 524                           | 24,614            |
| Welder               | 13                            | 22,250            |
| Zoo                  | 38                            | 10,758            |
| Central Energy Plant | 22                            | 7,750             |
| Maintenance          | 165                           | 5,719             |
| Sign                 | 25                            | 4,575             |
| Paint                | 151                           | 2,822             |
| Electrical           | 13                            | \$ 2,752          |
| <b>Totals</b>        | <b>1,098</b>                  | <b>\$ 135,466</b> |

**Table D - Small Tools Sample**

| Shop/Location        | Sample Details |                   | Audit Determined/Results |                  |             |                   |
|----------------------|----------------|-------------------|--------------------------|------------------|-------------|-------------------|
|                      | Quantity       | Value             | Quantity                 | Value            | Quantity    | Value             |
| Scope/Chrysler Hall  | 79             | \$ 48,465         | 72                       | \$ 47,420        | (7)         | \$ (1,045)        |
| HVAC                 | 40             | 7,985             | 29                       | 6,164            | (11)        | (1,821)           |
| Welder               | 13             | 22,250            | 13                       | 22,250           | -           | -                 |
| Zoo                  | 14             | 7,962             | 14                       | 7,962            | -           | -                 |
| Central Energy Plant | 11             | 7,170             | 11                       | 7,170            | -           | -                 |
| Maintenance          | 14             | 2,162             | 14                       | 2,162            | -           | -                 |
| Sign                 | 10             | 2,900             | 9                        | 2,450            | (1)         | (450)             |
| Paint                | 20             | 1,485             | 20                       | 1,485            | -           | -                 |
| Electrical           | 10             | 2,617             | 8                        | 2,259            | (2)         | (358)             |
| <b>Totals</b>        | <b>211</b>     | <b>\$ 102,996</b> | <b>190</b>               | <b>\$ 99,322</b> | <b>(21)</b> | <b>\$ (3,674)</b> |

b. There are deficiencies in internal controls to ensure accuracy of supplies inventory records and accountability for inventory transactions.

Supplies inventory for the various shops and storeroom include such items as bulbs, nails, nuts, bolts, coupling, gaskets, batteries, generators, ladders, pipes, mats, carts, etc. Efforts to record and track the movement of these items, like for small tools, has been manual, inconsistent, and as of our audit, not entered in Facility Dude. Facilities' initial data entry efforts to account for supplies resulted in over \$300,000 items identified as shown in

<sup>2</sup> We did not inventory shops that did not provide a tool list, which were Plumbing, Half Moone, and Nauticus shops.



Table E. Based upon this data, as of September 29, 2017, we found an overall inventory record accuracy rate of 71%; thereby, 29% (743 items valued at \$91,900) of the recorded supplies were inaccurate.

**Table E - Supplies Inventory**

| Facility Dude<br>Inventory Listing<br>September 29, 2017 |                          |                             | Audited - Facility Dude<br>Inventory Listing<br>September 29, 2017 |                                    | Audit/Determined<br>Results |                    |
|--|--------------------------|-----------------------------|--|------------------------------------|-----------------------------|--------------------|
| Shop/Location  | Total<br>Items<br>Listed | Value of<br>Items<br>Listed | Actual<br>Items<br>Listed  | Value of<br>Actual Items<br>Listed | Differences                 |                    |
|  |                          |                             |  |                                    | Items                       | Value              |
| Storeroom  | 2,110                    | \$ 254,546                  | 1,571  | \$ 186,751                         | (539)                       | \$ (67,795)        |
| Carpenter  | 251                      | 53,937                      | 162  | 36,258                             | (89)                        | (17,679)           |
| Plumbing   | 64                       | 4,232                       | 52   | 2,212                              | (12)                        | (2,020)            |
| Scope  | 48                       | 495                         | 16   | 494                                | (32)                        | (1)                |
| Nauticus   | 43                       | 2,526                       | 20   | 1,086                              | (23)                        | (1,440)            |
| Zoo  | 27                       | -                           | -  | -                                  | (27)                        | -                  |
| Electrical   | 15                       | 1,612                       | 4  | 64                                 | (11)                        | (1,548)            |
| Half Moone   | 15                       | 1,612                       | 5  | 195                                | (10)                        | (1,417)            |
| <b>Totals</b>  | <b>2,573</b>             | <b>\$ 318,960</b>           | <b>1,830</b>   | <b>\$ 227,060</b>                  | <b>(743)</b>                | <b>\$ (91,900)</b> |

The 743-audit determined difference of the quantity of items listed was attributed to items listed on inventory having a recorded dollar value. These errors appear to have occurred because of rushed data entry efforts into Facility Dude, dated manual inventory lists, and the lack of management review. Having inaccurate inventory records may impact forecasting the needs for the coming months or years and, therefore, operational efficiencies. According to the Government Accountability Office (GAO), inventory record accuracy goals should be 95 percent or higher, and there should be performance expectations to ensure accountability and responsibility for the overall physical inventory.

Based upon the characteristic of the overall supplies inventory of September 29, 2017, we judgmentally sampled 100 out of the 2,573 inventory items, valued at \$61,736, and performed a physical count. Overall, we found a minor discrepancy of \$11,070 involving 229 items, as shown in Table F.



**Table F - Sample Supplies Inventory Results - September 29, 2017**

| Sample Details by Shop/Location |               |           | Audit Determined/Auditi Results |           |             |             |
|---------------------------------|---------------|-----------|---------------------------------|-----------|-------------|-------------|
| Shop/Location                   | Sampled Items |           | Sample Results                  |           | Differences |             |
|                                 | Quantity      | Value     | Quantity                        | Value     | Quantity    | Value       |
| Storeroom                       | 702           | \$ 42,436 | 606                             | \$ 30,832 | (96)        | \$ (11,604) |
| Carpenter                       | 25            | 15,999    | 21                              | 15,014    | (4)         | (984)       |
| Plumbing                        | 181           | 1,605     | 113                             | 1,069     | (68)        | (536)       |
| Scope                           | 59            | 494       | 66                              | 635       | 7           | 141         |
| Nauticus                        | 131           | 944       | 121                             | 1,749     | (10)        | 805         |
| Zoo                             | -             | -         | -                               | -         | -           | -           |
| Electrical*                     | 64            | 64        | -                               | -         | (64)        | (64)        |
| Half Moone                      | 65            | 194       | 71                              | 1,366     | 6           | 1,172       |
| Totals                          | 1,227         | \$ 61,736 | 998                             | \$ 50,665 | (229)       | \$ (11,070) |

\* Inventory testing not performed; unable to confirm site visit.

Although the dollars involved were not significant, such discrepancies have the potential to grow and, therefore, become problematic over time without the implementation of effective control measures. Our testing disclosed some operational issues, as follows:

- Absence of consistent and accurate supplies inventory records.
- Lack of audit trail to support the flow of supplies from their purchase to use, through work orders.
- Significant quantities of unused or infrequently used inventory.
- Minimal use of Facility Dude to control supplies stock using management reports.
- Lack of training in the utilization of Facility Dude.

Since our testing in September 2017, the division has made considerable progress in data input into Facility Dude to track the movement of inventory. We performed additional testing of the supplies inventory valued at \$318,429, as of October 30, 2018, as shown in Table G. We judgmentally sampled 4,779 out of 75,861 inventory items and performed a physical count. Overall, we found a minor discrepancy of \$26,826 involving 1,587 items as shown in Table H. The discrepancy was primarily due to the timing difference of the inventory date and the physical count (physical count performed within 1-5 days of inventory date), most of which could be verified by inventory issuances documentation and sign-out logs.



**Table G - Overall Supplies**

| Shop/Location | Supplies Inventory Listing |                   |
|---------------|----------------------------|-------------------|
|               | Quantity                   | Value             |
| Storeroom     | 74,442                     | \$ 255,542        |
| Carpenter     | 250                        | 53,937            |
| Plumbing      | 458                        | 4,050             |
| Scope         | 70                         | 534               |
| Nauticus      | 489                        | 2,567             |
| Half Moone    | 152                        | 1,799             |
| Electrical    | -                          | -                 |
| Zoo           | -                          | -                 |
| <b>Totals</b> | <b>75,861</b>              | <b>\$ 318,429</b> |

**Table H - Sample Supplies Inventory Results - October 30, 2018**

| Sample Details |               |                   | Audit Determined/Results |                  |                |                    |
|----------------|---------------|-------------------|--------------------------|------------------|----------------|--------------------|
| Shop/Location  | Sampled Items |                   | Sample Results           |                  | Differences    |                    |
|                | Quantity      | Value             | Quantity                 | Value            | Quantity       | Value              |
| Storeroom      | 4,026         | \$ 66,817         | 3,080                    | \$ 50,518        | (946)          | \$ (16,299)        |
| Carpenter      | 63            | 31,495            | 50                       | 27,617           | (13)           | (3,878)            |
| Plumbing       | 232           | 3,361             | 61                       | 695              | (171)          | (2,666)            |
| Scope          | 1             | 506               | 1                        | 506              | -              | -                  |
| Nauticus       | 374           | 2,288             | -                        | -                | (374)          | (2,288)            |
| Half Moone     | 83            | 1,695             | -                        | -                | (83)           | (1,695)            |
| Electrical     | -             | -                 | -                        | -                | -              | -                  |
| Zoo            | -             | -                 | -                        | -                | -              | -                  |
| <b>Totals</b>  | <b>4,779</b>  | <b>\$ 106,162</b> | <b>3,192</b>             | <b>\$ 79,336</b> | <b>(1,587)</b> | <b>\$ (26,826)</b> |

Criteria- Internal Controls are processes used by management to help an entity run its operations efficiently and effectively; report reliable information; and comply with applicable laws and regulations.<sup>3</sup>

Per City of Norfolk Personnel Administrative Policies Manual:

10.1 Financial Management – Internal Control Policy states, it is the policy of the City to establish and maintain internal control systems to reasonably assure the achievement of organizational objectives in operational efficiency and effectiveness, reliable financial reporting, safeguarding assets, and compliance with laws, regulations, and program compliance requirements. City operating policies and procedures require a separation of duties for all processes that possess any internal control risks.

Per the GAO: Executive Guide – Best Practices in Inventory Counts: Key Factors in Achieving Consistent and Accurate Counts of Physical Inventories

1. Establish Accountability
2. Establish Written Policies
3. Select an Approach
4. Determine Frequency of Counts
5. Maintain Segregation of Duties
6. Enlist Knowledgeable Staff
7. Provide Adequate Supervision
8. Perform Blind Counts
9. Ensure Completeness of Count
10. Execute Physical Count
11. Perform Research
12. Evaluate Count Results

<sup>3</sup> GAO-14-704G: Standards for Internal Control in The Federal Government (September 2014).



**Cause-** There was no formal inventory system for tools used by shops, and no procedures for maintaining and controlling shop and storeroom supplies.

**Effect/Potential Effect-** Inadequate internal controls over shop tools and supplies diminish the safeguarding of City assets from theft, loss, or mismanagement; allow for the additional storage, maintenance costs, and repurchase of assets already on hand; and distort financial information used for decision making.

**Recommendations-** We recommend management:

1. Develop effective broad, consistently implement, and enforce policies/procedures for small tools and supplies inventories that address:
  - a. Uniformity among shops.
  - b. Defining the process, the individual tasks associated with the process, and segregation of duties.
  - c. Classification of inventory items, and management of supplies levels, slow-moving or dead stock, and transitioning to new materials.
  - d. Procedures for and examples of filing, correcting, and completing the required paper work.
  - e. Regular review and revision of policies and procedures for changes in the process and individual tasks.
  - f. Physical inventory counts and frequency of counts.
2. Consult with the Department of Information Technology and the software vendor to ensure staff identifies and uses key Facility Dude management reports, and appropriately configures and updates parameters affecting inventory levels.
3. Consult with the Department of Finance, Purchasing Division, the appropriate process to dispose of obsolete or damaged inventory.
4. Provide comprehensive training in the utilization of Facility Dude for division staff and management.

| <u><b>Inadequate Controls over Shop Tools and Supplies</b></u> |  |
|--|--|
| <u><b>Finding #2</b></u>                                       |  |
| <b>Management's Response</b>                                   | AGREE.   |
| <b>Plan of Action</b>  | FM team worked with auditor to establish a standardized inventory format and requirements. All shop inventories were compiled and maintained by Parts Room personnel. Inventory lists are reviewed quarterly to ensure accuracy. On-going training for Facility Dude utilization is provided monthly to all personnel.<br><br>FM staff is actively seeking process improvement opportunities for inventory control and parts management. |
| <b>Target Date</b>   | <b>Completed- February 2019</b>  |



**Inadequate Controls over Response Time to Work Orders**

**Condition-** Facilities Maintenance is not meeting established key performance indicators for response time to work order requests.

We reviewed the division’s response time to work orders based upon their established priority level parameters. We focused on the work orders with a status of closed or completed. A closed work order is one that the supervisor has reviewed for material, labor, and work performed and approved. For the years examined, we noted 34.83% closed; however, 65.17% of the work orders were completed (not closed), indicating that supervisors did not review and approve a substantial amount of work orders in a timely fashion, as shown in Table I. Our review of the work order data revealed entry errors that impacted the system’s calculation of days aged. As a result, we were unable to accurately analyze performance response within the established priority level parameters.

**Table I - Closed and Completed Work Orders**

| Work Order Status | FY 2016       |        | FY 2017       |        | FY 2018       |        | FY 2019      |        | Total         |        |
|-------------------|---------------|--------|---------------|--------|---------------|--------|--------------|--------|---------------|--------|
|                   | Count         | %      | Count         | %      | Count         | %      | Count        | %      | Count         | %      |
| Closed            | 6,758         | 38.25% | 2,957         | 18.85% | 3,590         | 25.24% | 6,567        | 69.23% | 19,872        | 34.83% |
| Completed         | 10,909        | 61.75% | 12,729        | 81.15% | 10,633        | 74.76% | 2,919        | 30.77% | 37,190        | 65.17% |
| <b>Total</b>      | <b>17,667</b> |        | <b>15,686</b> |        | <b>14,223</b> |        | <b>9,486</b> |        | <b>57,062</b> |        |

**Criteria-** Facilities has established the following key performance indicators to measure their response time to work order requests through Facility Dude:

**Table J - Key Performance Indicators**

| Priority Level | Response Parameter                      |
|----------------|---|
| Emergency      | Address by FM in two (2) or less days.  |
| High           | Address by FM in four (4) or less days. |
| Medium         | Address by FM in six (6) or less days.  |
| Low            | Address by FM in ten (10) or less days. |

**Cause-** There is no formal reporting process or monitoring procedures to review key performance indicators in order to evaluate response time to work order requests, therefore, resulting in inaccurate data such as:

1. Inconsistency in completing the fields.
2. Negative numbers in the “Days Aged” column (inaccurate completion dates entered).
3. Blank fields in “Action Taken” column that help in managing work performed.

**Effect/Potential Effect-** Without a formal reporting process and monitoring procedures, management will not have the ability to determine how well it meets operational and strategic goals, how well technicians are performing, or whether problems exist.



**Recommendations-** We recommend management:

1. Develop standardized and controlled processes across the City for users, and the Division for those who respond to service requests utilizing Facility Dude reporting capabilities.
2. Provide training to Facility Dude users on how to enter the data in a consistent manner so that Facilities staff can effectively manage the work order process.
3. Establish a team including Facilities and representatives from City departments to improve configuration and monitor process for change adoption.

| <b><u>Inadequate Controls over Response Time to Work Orders</u></b> |  |
|---|--|
| <b><u>Issue #3</u></b>  |  |
| <b>Management’s Response</b>  | AGREE.   |
| <b>Plan of Action</b>   | Re-structuring of Facilities Maintenance’s personnel organization has placed administrative duties on the supervisors and Management staff for direct oversight on work orders. The current Facilities Maintenance Manager has already instituted monthly maintenance coordination meetings between Facilities Maintenance and other departments to review status of work orders, outstanding projects and general maintenance concerns. Training on Facility Dude program is being provided to all employees, supervisors and management staff on a monthly basis and upon request. Chief Operating Engineers, or designee, are to review all work orders for proper assignment, completion and documentation processes. Bi-weekly meetings between Chief Operating Engineers and Management discuss status of work orders. Work orders are reviewed quarterly for quality control. |
| <b>Target Date</b>  | <b>COMPLETE</b>  |

**Inadequate Controls over Facility Dude User Access**

**Condition-** There are deficiencies in internal controls over Facility Dude user access. Specifically, we noted the following:

1. Nine (9) application user-ids across four (4) City departments/divisions (Parking Division, Information Technology, Department of General Services, and Facility Maintenance) have application access with



administrator privileges. The noted individuals have job positions ranging from Administrative Assistant I to Facility Manager. There is no Citywide guideline for the criteria of establishing an application user with administrative privileges.

2. Thirty-three (33) user-ids for terminated employees had application privileges as of January 17, 2017; Technicians (3), Clerk (1), and Requestor (29).
3. Application user-ids are not forced to change their passwords periodically to mitigate the exposure of compromised passwords.

### Criteria

- The Information Systems Audit and Control Association (ISACA) states, “When employees are terminated, there should be effective controls in place to terminate the employee’s access to the systems. All entities need an effective control or set of controls to ensure that all terminated employees lose all access rights....”
- City Policy and Administrative Regulations, Chapter 10: Information Technology-Electronic Data Resources Acceptable Use Policy, Section VII Part B: Security Administrator, the security administrator’s responsibility is to:

“Delete users as requested by the departmental Security Liaison or according to payroll information or at the written request of the user’s department executive.”

Cause- Facility Dude is not a network client/server application that resides on the City network, but in the cloud under a service agreement with the application vendor, accessible to terminated and non-City employees (outside groups or agencies).

Effect/Potential Effect- Review of user-id activity reports provided to the City are performed biannually, thereby allowing terminated users potential access to the application between reviews.

Recommendations- We recommend management:

1. Review and justify the need to have nine (9) users with application administrative privileges by considering job responsibilities and duties while coordinating with the Department of Information Technology in determining the need and qualifications.
2. Grant the application administrator the ability to run Human Resources Employee Termination list as needed to update City employee security access in Facility Dude.
3. Develop a workable and efficient process to address the status of users who are non-employees, and assure only current, authorized, and approved individuals have access to the application.
4. In coordination with IT Network Security, establish password administration settings for the application that mimics City practices for password administration at the network level.





| <b><u>Inadequate Controls over Facility Dude User Access</u></b> |   |
|--|---|
| <b><u>Issue #4</u></b>   |   |
| <b>Management's Response</b>                                     | AGREE.  |
| <b>Plan of Action</b>  | A complete inventory was conducted of the user profile database. User accounts of employees no longer with the City were disabled. After reviewing the user lists Facilities Maintenance identified only four users required administrative privileges. A process has been established for Facilities Maintenance to receive a list of terminated employees from Human Resources monthly. New procedures in Facility Dude require users to reset their passwords every 90 days. |
| <b>Target Date</b>   | On-going process.   |