



# **Seattle Public Schools The Office of Internal Audit**

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**Internal Audit Report  
Maintenance**

**September 1, 2011 through February 28, 2013**

Issue Date: March 19, 2013



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## **Executive Summary**

### **Background Information**

The District's maintenance function is reported under the Operations department. The maintenance function has a current budget of approximately \$7,977,850, and is responsible for maintaining the District's facilities and systems, as well as providing a resource for District staff in maintaining a safe learning environment.

The Department is divided into three zones: North, South, and Central. Each zone consists of the following: electrician, fire alarm specialist, electronics, carpenter, plumber, steam fitter, roofer, glazier, and mechanical. There are also stand-alone trades like auto shop, machinist, laborers, lock shop/carpenter, sheet metal, and asbestos who provide their services on an as-needed basis within the District.

There are three core parts of maintenance:

- **Critical maintenance**  
This group is responsible for maintaining the essential infrastructure needed to operate the District smoothly. Each zone has a General Foreman who manages and assigns the work that falls in their respective zone. Work is managed through a work order system called School Dude Maintenance Direct.
- **Billable maintenance**  
This group is responsible for maintaining the requests made by the schools or other departments. Any requests made to this group are paid by the departments/sites who initiated the request. At the closure of the work order, the associated costs are charged back to the requester's budget.
- **Preventative maintenance**  
These work orders are executed by an automated system called School Dude Preventative Maintenance Direct. The schedule for preventative maintenance is programmed into this system and the work orders are generated and assigned automatically on a scheduled basis. There is no additional human intervention involved in this process.

All work order requests for critical, paid, and preventative maintenance are processed through the School Dude Maintenance Direct work order system. Access is provided to employees in the event that they need to schedule maintenance. The request is then received by the Facility Operations Center and routed to the North, South or Central zone, depending on the location of the request. It is further analyzed by the General foreman and then assigned to the relevant technician.



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### **Roles and Responsibilities**

This audit was completed as part of the *Annual Risk Assessment and Audit Plan* approved by the Audit and Finance Committee on September 11, 2012. District management has the primary responsibility to establish, implement, and monitor internal controls. Internal Audit's function is to assess and test those controls in order to provide reasonable assurance that the controls are adequate and operating effectively. We conducted the audit using due professional care, and we believe that the evidence obtained provides a reasonable basis for our findings and conclusions.

### **Audit Objectives**

The primary objectives of this audit were to evaluate the maintenance process and determine if:

- The District has an effective mechanism to track and account for District-purchased tools under \$1,000.
- District procedures are adequate to ensure the accountability of the District's fleet of vehicles.
- The District's process for scheduling maintenance results in the timely completion of necessary repairs, and ensures the accountability of District work orders.

### **Scope of the Audit**

September 1, 2011 through February 28, 2013

### **Audit Approach and Methodology**

To achieve the audit objectives, we performed the following procedures:

- Planned the audit in cooperation with Facilities Operations to ensure that we had a strong understanding of the District's maintenance process.
- Interviewed District staff knowledgeable of each type of maintenance category and the School Dude Maintenance Direct system.
- Analyzed available data to corroborate the information obtained during our walkthroughs.
- Reviewed all the applicable Collective Bargaining Agreements.
- Performed analysis of the objective areas to support our conclusions.

### **Conclusion**

The maintenance function does not have an effective mechanism to account for tools valued under \$1,000, and improvements are needed over the accountability of the District's fleet of vehicles. The maintenance function is making a good faith effort to create a systematic approach to the maintenance work order process, but we noted some major gaps over the accountability of the work orders. Our report includes recommendations that are intended to improve the internal controls and overall accountability of the maintenance function.

*Andrew Medina*

Andrew Medina, CPA, CFE  
Director, Office of Internal Audit



## **Findings and Recommendations**

### **1) Tool Inventory**

#### **District-Purchased Tools**

District employees are allowed to purchase small tools and other materials needed to complete a work order. However, there is only a limited process in place to account for these District-purchased tools. Without an effective inventory process to account for these District-owned tools, there is a risk that tools may be purchased unnecessarily, or that they may be subject to loss or theft.

#### **Employee Tools**

Maintenance employees also supply their own basic hand tools, and the District will reimburse employees if their personal tools are damaged or lost on the job, subject to the following collective bargaining agreement restrictions:

- **Pacific Northwest Regional Council of Carpenters - Article XXIV (C)**  
"The use of personal equipment at work must have the prior approval of the supervisor, and a current inventory must be on file."
- **Machinists Local 289 - Article 22**
  - **22.2.1:** "Claims will be honored only for tools/equipment which have been approved and listed on an appropriate inventory form filed with the District."
  - **22.2.2:** "Employees shall notify management whenever they remove their tools from the District's premises."
- **Seattle/King County Building and Construction Trades Council – Article XXIV (C)**  
"The use of personal equipment at work must have the prior approval of the supervisor, and a current inventory must be on a file".

We noted that management does not have an inventory of the employee's tools on file, as required by the collective bargaining agreements.

### **Recommendation**

To improve the accountability of tools, we recommend that:

- Management establish an effective inventory process to create a list of District-owned small tools.
- Employees submit an inventory of personal tools on an annual basis to be in compliance with their respective Collective Bargaining Agreement.



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## **2) Fleet Management**

The District currently has 279 vehicles, including 12 leases, with a cost of approximately \$4.7 million on the District's books. According to the District's organization chart, the Director of Logistics is responsible for fleet management. However, during the course of our maintenance audit, we noted that fleet management operations are actually being performed by maintenance department personnel. The District has not allocated any resources to the fleet management function, nor has it created a fleet management cost center within the District's accounting system. As a result, we included the functions of fleet management within the scope of this audit. We identified concerns associated with fuel, mileage logs, maintenance, and license verifications, which are detailed below:

### **Fuel**

#### **Fuel Chargeback**

During our review we noted that the District receives one invoice for the Fleet's total fuel consumption. The annual fuel consumption of the vehicles paid by the maintenance department for 2012 was \$329,313, and \$120,508 as of January 31, 2013. The costs associated with fuel are not broken down and charged to the departments that are assigned District vehicles. With the exception of the Transportation, Warehouse, and Security Departments, the Operations Department is absorbing the costs of all District fuel. The Operations Department reviews the fuel invoices for reasonableness, but they do not reconcile them to mileage logs.

#### **Fuel Card**

Currently, each vehicle is assigned one fuel card and the employees are assigned a unique pin to access the card. We reviewed the Petro card invoices and noted instances where vehicles were filled with multiple fuel cards. There is limited accountability of fuel cards in the District, and many employees keep the cards with them instead of keeping them in the car.

### **Recommendations**

We recommend that:

- Department managers be required to certify their fuel consumption on a monthly basis.
- Management charge the cost of fuel, based on consumption, back to the departments that are assigned District vehicles.
- Management establish procedures over fuel cards to ensure that they are unique to the cars, not the employees.

**Note:** As of March 1, the Operations department has changed the fuel vendor for the District and is in the process of establishing a fuel chargeback process for the departments that are assigned District vehicles. We also noted that the department is in the process of applying a more stringent approach to the accountability of fuel cards; however, these are ongoing improvements that have not been verified.



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**Vehicle Mileage Log**

In order to assign a dedicated vehicle to a person or a department, the District requires that the vehicle's yearly usage be a minimum of 2,400 miles. The District does not have a system where employees can check out a vehicle for a limited duration if their annual usage is less than 2,400 miles. In order to comply with the 2,400 mile requirement, the employees assigned with a District vehicle are required to complete a mileage log on a monthly basis and submit it to the Operations Department. We noted that this requirement was not been met, and that a majority of the employees did not submit the mileage log on a monthly basis. We also observed that the purpose of the mileage log was unclear in the Operations Department. Once the log was submitted they were filed and not revisited to measure vehicle use against the District mileage standard to determine a continuing need of the vehicle.

**Recommendation**

We recommend that management establish procedures to ensure that the mileage logs are submitted on a monthly basis. Mileage logs can provide relevant information on the continuing need of a vehicle.

**Vehicle Maintenance**

We noted that there is no set requirement or schedule for the maintenance of District vehicles. Maintenance of District vehicles is at the discretion of the employee assigned that vehicle. This kind of employee discretion could result in additional maintenance costs and can result in potential legal liability for the District in the event of an accident.

**Recommendation**

We recommend that the District track and monitor vehicle maintenance to ensure that all necessary maintenance is done on a timely basis. This includes establishing follow-up procedures to respond to employees who fail to get their vehicles serviced in a timely manner.

**Driver's License Verification:**

The District does not check the validity of employee driver's licenses if they are going to be allowed to operate a District vehicle. Employees who drive District vehicles with an expired, suspended, or revoked license increase the District's risk of legal liabilities.

**Recommendations**

We recommend that the District:

- Check the validity of employee driver's licenses on an annual basis.
- Validate on an annual basis from State motor vehicle records that the employee has not received a serious driving infraction that would increase the District's risk of property damage or legal liability.



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**Summary Fleet Recommendation**

We recommend that the District evaluate the manner in which it assigns vehicles and determine if an alternate assignment plan could result in cost savings to the District. By implementing a check-out system where employees can reserve a vehicle on a weekly, daily, or hourly basis, the District may be able to maximize the use of District vehicles. Similarly, an outsourced fleet service could result in cost savings to the District. We recommend that the District conduct a thorough analysis to determine which vehicle assignment method makes the most sense to the District.



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### **3) School Dude**

The School Dude Maintenance Direct and School Dude Preventative Maintenance Direct systems were implemented by the Facilities Operations Department for the purposes of maintaining District facilities. School Dude Maintenance Direct is a work order management system implemented by the District in order to channel the maintenance and custodial work with a systematic approach. There are priorities built into the system based on the urgency of the work order: emergency, high, medium, low, scheduled, and safety. There are different roles in the system that allows access based on the authority level of the employee. The School Dude Maintenance Direct system has a systematic work order process in place to assign and allocate maintenance and custodial work.

The schedule for routine maintenance is programmed into the School Dude Preventative Maintenance Direct system and the work orders are generated and assigned automatically on a scheduled basis. Otherwise, there is no human intervention involved in this process. All work orders, including the automated work orders initiated through the School Dude Preventative Maintenance Direct system, are actually executed in the School Dude Maintenance Direct system. We noted gaps in the School Dude Maintenance Direct system that can potentially result in liabilities for the maintenance and custodial departments.

#### **Completed Work Orders**

There are approximately 41,000 work orders that are complete in the system. Even though work orders are marked complete, labor hours and invoices can still be charged against them until they are locked down and closed. The department currently has a procedure that states that completed work orders need to be closed after 45 days. This gives sufficient time for the analysts to complete the work orders from the invoicing perspective. During our review, we noted that work orders as far back as 2011 have not been closed. Keeping a complete work order open for more than the management defined days can potentially increase the risk of labor hours and invoices being charged against the work order inappropriately.

#### **Recommendation**

We recommend that management direct more stringent guidelines on the closing of completed work orders to avoid any future risk of inappropriate charges.

#### **Pending Work Orders**

A pending work order is defined as a work order that is open and no steps to investigate or address the work order has been taken. During our review of the system we noted that approximately 7,800 work orders are pending, and that some of them date back to 2010. These pending work orders were not being monitored and addressed. Approximately 7,498 of these pending work orders have a priority status of medium, but due to budget cuts in the department there is no process to attend to these work orders. Not attending or prioritizing these work orders on a timely basis could result in future emergencies, which could result in more financial and legal liability to the District.





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## **Recommendation**

We recommend that the department establish a process to prioritize and address these work orders in order to avoid future emergency situations and legal liabilities for the District.

### **Open Extended Work Orders**

Open extended work orders are defined as the orders with a specific purpose and that last for a specific duration of time. These work orders are used for recurring events like regular staff meetings, and to report other administration time of employees. These work orders can also be kept open for various other reasons. During our review we noted work orders from contractors who perform work on different sites on a monthly basis. Open work orders help management to keep track of the contractor's time and the sites they visited. We noted that there were a minimum of 138 open extended work orders that are used by the Maintenance Department, Custodial Services, and contractors to charge their time. Some of the work orders have been open since 2010. We noted repeated instances where unreasonable administration time was charged to these work orders by employees. Charging time to an open work order as administration time misrepresents the work order from an accountability perspective, and does not provide accurate information on the actual work order being completed.

## **Recommendation**

We recommend that management:

- Implement a stringent criteria and a written approval process to create extended work orders.
- Close the current open extended work orders that have fulfilled their intended purpose.
- Direct employees to charge their time to the actual work order that they worked on, rather than to open extended work orders. This will provide more accurate timekeeping of the work done and better accountability of resources.



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**Management Response**

*Thank you to our internal audit team for reviewing and assessing our processes and internal controls for Maintenance. Management concurs with the conclusions and recommendations included in this report. The following is an overview of the steps we have, or will implement related to the recommendations.*

- **Tool Inventory:** *The tool cage and inventory/ assignment of tools were eliminated as a budget reduction. We have requested a tool inventory be completed by each General Foreman by the end of the school year and will require each General Foreman to maintain the inventory on the Maintenance Share Point. We have requested a quote from School Dude to add their inventory control module to our work order system so we have a tool to track and issue inventory.  
We have requested employees submit an inventory of all personal tools. Employees have been notified the District will not reimburse employees for lost or damaged tools without an approved inventory.*
- **Fleet Management:** *The District is aware that the management of its vehicles needs to be improved and the issue is not limited to the Maintenance Department. The District has assigned the responsibility to the Director of Logistics; however other staff time has not been identified. The priority and scope of work are under review but will include strengthening district-wide internal controls. Such procedures will include how vehicles are assigned to ensure our resources are used in an efficient manner.*

*As noted in the report, as of March 1, Facility Operations has changed the fuel vendor for the District and is in the process of establishing a fuel chargeback process for the departments that are assigned District vehicles. We are also taking this opportunity to order fuel cards for vehicles only, and issue new pin numbers only to drivers that have signed off on updated vehicle forms.*

- **Vehicle Mileage Log:** *Due to staffing reductions the review of mileage logs was eliminated. Management will review the procedure requiring mileage logs to ensure its use is clear and that it is adhered to.*
- **Vehicle Maintenance:** *Facility Operations eliminated the vehicle maintenance tracking and scheduling position and use of specific vehicle maintenance software, Extra Fleet. This was part of past budget reductions. We currently use our work order system, School Dude, to track vehicle maintenance. While not specific to vehicles is has eliminated additional software expenses and allows us to track vehicle maintenance. Based on the recommendation we are reviewing our current process.*
- **Annual License renewal:** *Facility Operations completes a check of all employee drivers' license at time of hire. We also track all driver's license expiration dates in the department. We will be researching adding an annual process with HR and Risk Management to ensure that all district employees who drive district owned-vehicles have a valid drivers license.*



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- **Completed Work Orders:** *Not closing work orders after 45 days as outlined in our procedure was an error in the department. It was assumed the 45 day closure was an automated process in the last School Dude upgrade; it has not been automated and is a manual process. This has been addressed and we are now current with closed work Orders. ( 83,959 closed, 8,925 complete)*
  
- **Pending Work Orders:** *The procedure for tracking and prioritizing pending work orders is currently under review.*
  
- **Open Extended Work Orders:** *The use of open extended work orders has been eliminated. Any open extended work orders require management approval and will be created by management.*