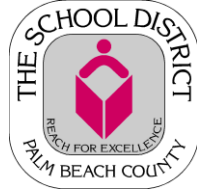


Audit of
TRIRIGA Work Order System
August 27, 2018

Report #2018-07



MISSION STATEMENT

The School Board of Palm Beach County is committed to providing a world class education with excellence and equity to empower each student to reach his or her highest potential with the most effective staff to foster the knowledge, skills, and ethics required for responsible citizenship and productive careers.

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Audit of
TRIRIGA Work Order System
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Audit of

TRIRIGA Work Order System

EXECUTIVE SUMMARY

Pursuant to the *Office of Inspector General's (OIG) 2017-18 Work Plan*, we have audited the TRIRIGA Work Order System. The primary objectives of this audit were to (1) determine whether the purchase and use of maintenance parts were supported by Maintenance Work Orders, (2) assess the adequacy of controls for maintenance parts inventory management, and (3) evaluate the adequacy of access controls for the TRIRIGA System. This audit produced the following major conclusions.

1. Purchases of Maintenance Parts and Supplies Properly Processed

During Fiscal Years 2014 through 2018, Facilities Services Department spent an average of \$6 million in parts and supplies for completing the District's Maintenance Work Orders. We reviewed 110 random sample purchases (totaling \$232,801). We concluded that these purchases were properly processed with supporting documentation, correct pricing, and supervisor approvals.

Management's Response: Management concurs. (Please see page 5.)

2. Regular Review of Access Needed

The review of access controls to the TRIRIGA Work Order System noted that two employees who were transferred to other departments still had access to create work orders in the TRIRIGA System.

TRIRIGA access should be reviewed regularly by all Directors and Principals. The access should be revoked immediately after the employee has been transferred to another department or terminated.

Management's Response: Management concurs.

Annual Review of TRIRIGA access was implemented in November 2017 which requires department heads and principals to review and approve staff access. Refer to Bulletin #PD 18-117 CFO – FY18 Annual IT Application Security Audit.

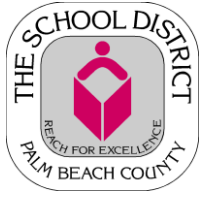
When an employee transfers from a job using existing TRIRIGA functionality, management should submit an eSupport Service Request for TRIRIGA Access to request termination or change of access for the transferred employee. (Please see page 5.)

3. Written Procedures Needed for Management of Maintenance Parts and Supplies Inventory

The review of Facilities Services processes for the purchases and management of Maintenance parts inventory noted that the department did not have written procedures for documenting the ordering, receiving, verification of vendors' billing, and crediting of parts inventory. Without written guidelines, staff may lack direction on the proper procedures to perform their jobs. To promote efficiency and understanding by staff, Facilities Services should codify the procedures for the purchase and management of Maintenance parts and supplies inventory.

Management's Response: *Management concurs.*

Step by step instructions and process flow charts will be completed and available online to employees by 12/31/2018. (Please see page 5.)



THE SCHOOL DISTRICT OF
PALM BEACH COUNTY, FLORIDA

OFFICE OF INSPECTOR GENERAL
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LUNG CHIU, CIG, CPA
INSPECTOR GENERAL

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MEMORANDUM

TO: Honorable Chair and Members of the School Board
Donald E. Fennoy II, Ed.D., Superintendent of Schools
Chair and Members of the Audit Committee

FROM: Lung Chiu, CPA, Inspector General

DATE: August 27, 2018

SUBJECT: Audit of TRIRIGA Work Order System

PURPOSE AND AUTHORITY

Pursuant to the *Office of Inspector General's (OIG) 2017-18 Work Plan*, we have audited the TRIRIGA Work Order System. The primary objectives of this audit were to (1) determine whether the purchase and use of maintenance parts were supported by Maintenance Work Orders, (2) assess the adequacy of controls for maintenance parts inventory management, and (3) evaluate the adequacy of access controls for the TRIRIGA System.

SCOPE AND METHODOLOGY

The audit was performed 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 the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The audit covered July 2015 through March 2017, and included:

- Interviewing District staff.
- Reviewing procedures for processing facility maintenance work orders.
- Inspection of PeopleSoft Accounts Payable, and TRIRIGA data.
- Examination of TRIRIGA access and PeopleSoft Human Resources records.

The draft report was sent to management for review and comments. Management comments are included in the Appendix. We appreciate the courtesy and cooperation extended to us by District staff during the audit. The final draft report was included in the August 27, 2018, Audit Committee Meeting Agenda.

BACKGROUND

The District's Facilities Services Department provides maintenance and repair services for all District facilities, including plumbing, air conditioning, appliances, roofing, etc. The mission of the District's Facilities Management Division is *"to provide an effective, efficient, respectful and customer friendly workforce promoting a student first learning environment."* To accomplish this mission, Facilities Services uses the web-based TRIRIGA Work Order Processing System for the creation and tracking of Maintenance Work Orders since 2014.

Work orders are reviewed, prioritized, and approved by Trade Service Representatives and Support Operations Leaders before they are assigned to technicians for completion. The workflow begins when work orders are either entered into TRIRIGA self-service function or called in to service representatives at Facilities Services. Only authorized users can access the self-service function.

TRIRIGA sends an email to the work requestor, confirming the request receipt. The requestors have the ability to monitor their requests through the District's web-portal and receive notification upon work order completion.

The request form (Work Task) is auto-populated with requestor, facility information, labor, and material fund strips. The requestor is asked to complete the description, specific location, whether the request is an emergency, and the request type. Request types include Appliances, Custodial Services, Electrical, Fencing, Air Conditioning (HVAC), Lock and Window, Pest Control, Plumbing, Roofing, Sheet Metal, Welding, Carpentry, Elevators, Fire Alarm, Fire Sprinklers, Irrigation, Painting, Security Systems, etc.

Requests are reviewed by Facilities Management Coordinators, and the estimated materials and labor are entered into TRIRIGA. Based upon budgets and other priorities, work requests, including parts and labor, are approved or declined. Items may be declined due to duplicate requests, or other priorities as deemed by Facilities Services. Once approved, the Work Task is generated and scheduled for either a District tradesperson or an outside vendor to complete the job.

Work orders are also sent to service representatives according to the zone (area) and trade. These zone teams follow regular schedules at schools in their geographic area to complete repairs as needed.

The District purchases parts for work orders performed by District staff. The Facilities Services Logistics Unit manages this function, instead of the District's Purchasing Department, because of the unique nature and numerous amounts of parts purchased. The Logistics Unit is responsible for (1) obtaining the lowest prices, (2) purchasing equipment replacement parts to complete the work order, and (3) receiving and distributing the needed parts to the technicians.

CONCLUSIONS

This audit produced the following major conclusions:

1. Purchases of Maintenance Parts and Supplies Properly Processed

During Fiscal Years 2014 through 2018, Facilities Services Department spent an average of \$6 million in parts and supplies for completing District Maintenance Work Orders. Table 1 shows the number of work orders processed by the TRIRIGA System during Fiscal Years 2014 through 2018.

Table 1
Work Orders Processed by TRIRIGA Work Order System
During Fiscal Years 2014 – 2018

Fiscal Year	# of Work Orders	Cost			Average Cost/Work Order		
		Labor	Materials	Total Cost	Labor	Materials	Total
2014	109,357	\$17,697,201	\$6,016,381	\$23,713,581	\$162	\$55	\$217
2015	110,299	\$17,346,211	\$6,454,828	\$23,801,039	\$157	\$58	\$215
2016	117,717	\$17,798,668	\$6,259,278	\$24,057,946	\$151	\$53	\$204
2017	117,506	\$17,270,284	\$6,474,551	\$23,744,836	\$147	\$55	\$202
2018*	113,010	\$12,209,774	\$4,644,758	\$16,854,531	\$108	\$41	\$149
<i>Average Per Year</i>	<i>113,578</i>	<i>\$16,464,428</i>	<i>\$5,969,959</i>	<i>\$22,434,837</i>	<i>\$145</i>	<i>\$53</i>	<i>\$198</i>

Source: TRIRIGA Work Order System

* 2018: July 1, 2017 through May 10, 2018.

We reviewed 110 random sample purchases totaling \$232,801.15, which included 25 PeopleSoft invoices totaling \$217,205.41 and 85 P-Card purchases totaling \$15,595.74.

We (1) examined the supporting *Purchase Order* and the supporting TRIRIGA work order for the quantities and types of the required parts and supplies, (2) compared the billing amounts with the contract prices, and (3) reviewed supervisor's approval of TRIRIGA work order parts and labor. The review of the 110 sample purchases for the above attributes concluded that these purchases were properly processed with supporting documentation, supervisor approvals, and proper pricing.

Management's Response: Management concurs. (Please see page 5.)

2. Regular Review of Access Needed

Our review of access controls noted that two employees who were transferred to other departments on October 6, 2014, and May 26, 2016, still had access to create work orders in the TRIRIGA System as of May 23, 2017.

OIG verified that no work orders were created by these two users following their transfer; and IT subsequently deleted access to both IDs. Regular monitoring of TRIRIGA access should help detect unwarranted access. At the time of our audit, there was no regular review of TRIRIGA access.

Recommendation

TRIRIGA access should be reviewed regularly by all Directors and Principals. Access to the system should be revoked immediately after the employee has been transferred to another department or terminated.

Management's Response: Management concurs.

Annual Review of TRIRIGA access was implemented in November 2017 which requires department heads and principals to review and approve staff access. Refer to Bulletin #PD 18-117 CFO – FY18 Annual IT Application Security Audit.

When an employee transfers from a job using existing TRIRIGA functionality, management should submit an eSupport Service Request for TRIRIGA Access to request termination or change of access for the transferred employee. (Please see page 5.)

3. Written Procedures Needed for Management of Maintenance Parts and Supplies Inventory

The review of Facilities Services processes for the purchase and management of Maintenance parts inventory noted that the department did not have written procedures for documenting the ordering, receiving, verification of vendors' billing and crediting of parts inventory.

Written procedures should be available for personnel to know how the processes should be performed, who is responsible to perform them, and how the tasks are tracked. The documentation should ensure that all processes are understood by personnel so they can be performed according to directives. Without written guidelines, staff may lack direction on the proper procedures to perform their jobs.

Recommendation:

To promote efficiency and understanding by staff, Facilities Services should codify the procedures for the purchase and management of Maintenance parts and supplies inventory. Documentation of all functions of parts inventory management including ordering, receiving, billing, and crediting of parts inventory need to be established and communicated to staff regularly.

Management's Response: Management concurs.

Step by step instructions and process flow charts will be completed and available online to employees by 12/31/2018. (Please see page 5.)

– End of Report –

Management's Response



**THE SCHOOL DISTRICT OF
PALM BEACH COUNTY, FL**

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WANDA F. PAUL
CHIEF OPERATING OFFICER

DONALD E. FENNOY II, Ed.D.
SUPERINTENDENT

MEMORANDUM

To: Lung Chiu
Inspector General

From: Wanda Paul
Chief Operating Officer *WFP*

Date: July 25, 2018

Subject: Management Response – Audit of TRIRIGA Work Order System

RECEIVED
JUL 25 2018
INSPECTOR GENERAL

Following is the Management Response to the Audit of TRIRIGA Work Order System, requested on June 11, 2018.

1. Purchases of Maintenance Parts and Supplies Properly Processed
Management concurs.

2. Regular Review of Access Needed
Management concurs.

Annual Review of TRIRIGA access was implemented in November 2017 which requires department heads and principals to review and approve staff access. Refer to Bulletin #PD 18-117 CFO – FY18 Annual IT Application Security Audit.

When an employee transfers from a job using existing TRIRIGA functionality, management should submit an eSupport Service Request for TRIRIGA Access to request termination or change of access for the transferred employee.

3. No Written Procedures for Management of Maintenance Parts and Supplies Inventory
Management concurs.

Step by step instructions and process flow charts will be completed and available online to employees by 12/31/2018.

WFP/SM/SK

The School District of Palm Beach County, Florida
A Top-Rated District by the Florida Department of Education Since 2005
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Management's Response

Page 2 of 2
July 25, 2018
SUBJECT: Management Response – Audit of Tririga Work Order System

Cc: Mike Burke
Deepak Agarwal
David Dolan
Stacey Marshall
Dawn Pumphrey
Sara Anderson

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