



INTERNAL AUDIT REPORT

Construction Aggregates Controls

Mayor

Mattie Parker

July 13, 2023

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City Auditor

July 13, 2023

Date

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Assistant City Auditor

July 13, 2023

Date

Akia Terry
Senior Auditor

Date



Executive Summary

This Construction Aggregates Control Audit was performed in accordance with the approved schedule of engagements identified in the Department of Internal Audit Fiscal Year 2023 Annual Audit Plan.

As part of the Fiscal Year 2023 Annual Audit Plan, the Department of Internal Audit conducted an audit of the City's controls over aggregates purchased by the City. Based on audit test results, controls were established for construction aggregates purchased by the City. Additionally, we concluded that controls implemented by the City were aligned to industry standards.

During Internal Audit's review of work orders for the Water Department, we were unable to verify supporting documentation for eight (8) of the 11 requested before a process update, however, after a process change on May 11, 2021, the Water Department was able to provide seven (7) of the eight (8) vendor receipts of the work orders sampled. Approximately 88% of the exceptions noted were before an updated policy was implemented.

Additionally, formal policies and procedures were not available for the use of emergency work orders.

Our audit finding is discussed in further detail within the [Detailed Audit Findings](#) section of this report.

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Background

Internal Audit identified three departments that purchase construction aggregates: Park & Recreational Department, Transportation & Public Works (TPW), and the Water Department. Due to the low volume of purchases of construction aggregates by the Park & Recreational Department, Internal Audit concluded further review was not warranted.

For the audit scope period, the City of Fort Worth spent approximately \$12 million on construction aggregates. The Water Department purchased the most construction aggregates, whereas TPW followed.

Transportation & Public Works Process

The TPW Department purchases construction aggregates to aid in completing jobs related to City improvements. TPW utilizes VUEWorks software to manage work orders, from intake to completion. Additionally, staff utilize SharePoint to submit the Purchase Request Form for purchases of construction aggregates, wherein the request is verified for completeness and uploaded to PeopleSoft, the City's financial management system.

According to staff, asphalt is ordered by the tonnage to complete jobs as needed. Once a purchase order is submitted to the vendor, the vendor informs the City regarding availability of construction aggregates and deliverability. When ordering by the ton, vendors deliver the construction aggregates directly to the City. TPW receives and stores construction aggregates at either the Southside Service Center, Northside Service Center or Brennan. These locations are gated with card access and monitored with security cameras.

Water Department Process

The Water Department is responsible for completing jobs that require usage of asphalt and concrete to repair pavement that has been damaged due to waterline repairs. The Water Department utilizes Maximo Software to manage operational and maintenance requirements including creation and tracking of work orders and purchase orders. Work crews can use utility tablets in the field to access Maximo and update work orders.

Construction aggregates are stored at North and South Holly Complex. Based upon the work order, aggregates needed are either delivered directly to project sites or acquired through a local vendor. Hot Mix Asphalt Concrete and concrete are obtained directly from local vendors.

Historically, when additional asphalt was required for job completion, staff had the ability to obtain the additional material directly from vendor without a work order. Current procedures prevent work crews from obtaining material from the vendor without prior approval. Prior to staff picking up asphalt from the plant, a Field Operation Supervisor (FOS) emails a purchase order to the vendor. The vendor provides a receipt to staff after completion. If additional asphalt is needed, the FOS is required to call or email the vendor prior to material being released. The vendor will not release material without the approval of FOS. If work crew arrives prior to receiving confirmation from FOS, plant will notify FOS. The plant provides a receipt to work crew and the FOS updates purchase order.



Audit Objective

To evaluate controls over aggregates (e.g., asphalt, sand, gravel, etc.) purchased by the City.

Audit Scope

Review of controls for the test period October 1, 2019 through December 31, 2021. Some areas of review went beyond the test period due to data availability.

Methodology

To achieve the audit objective, the Department of Internal Audit performed the following tests and procedures:

- interviewed Water, TPW, Park & Recreation department personnel;
- flowcharted processes;
- physical observation of City locations where construction aggregates are maintained;
- reviewed work orders documented in VUEWorks and Maximo;
- reviewed policy and procedures;
- reviewed general ledger postings; and,
- evaluated internal controls related to construction aggregates purchases.

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 enough, 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.



Audit Results

Based on our audit results, the City has adequately implemented controls of construction aggregates purchased by the City except as noted below.

The Water Department was not able to provide documentation (vendor receipts) for all the samples selected for review.

Also, no formal written policies and procedures regarding work completed by emergency trucks. However, all work orders reviewed were closed within 48 hours as stipulated within the Channel Restoration/Maintenance guide.

The Department of Internal Audit would like to thank the Park & Recreation Department, the Transportation & Public Works Department, and the Water Department for their cooperation and assistance during this audit.

Overall Risk Evaluation

High	Medium	Low
		Vendor receipts for some work orders not located.



Detailed Audit Finding

1. Staff was not able to locate all vendor receipts for work orders that had been completed.

Historically, work crew had the ability to obtain asphalt directly from the vendor prior to supervisor approval. As a result, new procedures were developed to strengthen internal controls. According to The Water Department's Standard Operating Procedure (SOP), work crews picking up asphalt are provided a vendor receipt and these receipts are to be provided to the supervisor at the end of the day.

The SOP also states the Supervisor will reconcile receipts against the purchase order daily. After reconciliation is completed by the Supervisor, receipts for aggregates used for the day are provided to the warehouse for payment. Based on our review, the process in which work orders are tracked within Maximo, limits the end-user from reconciling the work order to the vendor receipt. Although the purchase order number is on the receipt, it is not on the work order being tracked in Maximo therefore limiting the ability to reconcile.

Internal Audit reviewed a random sample of 19 work orders wherein asphalt was used during our audit period. The sample covered work orders that occurred before and after a process change on May 11, 2021. Of the work orders sampled, Internal Audit requested the correlating vendor receipts from the Water Department and was provided supporting documentation for three (3) of the 11 requested, however, after the process change on May 11, 2021, the Water Department was able to provide seven (7) of the eight (8) vendor receipts of the work orders sampled. The Water Department staff advised their inability to provide all the vendor receipts related to the work order not having complete information or enough details to identify the receipt.

Recommendation 1: The Water Director should continue to ensure the newly implemented processes and controls are operating as intended and being performed by staff.

Auditee's Response: Concur

The Utility updated its invoicing process in 2021 to capture vendor receipts related to work order materials. Work orders audited after the updated process did include vendor receipts, though in some cases the receipt was attached to a child work order. Staff will review the updated process to ensure the receipt records are appropriately uploaded and easily referenced and retrieved through the maintenance management system

Target Implementation Date: July, 2023

Responsibility: Roy Teal, Assistant Director, Field Operations

Applicable Department Head: Chris Harder, Water Director

Applicable Assistant City Manager: Dana Burghdoff