

# **Report AUD22005**

## **Follow Up Audit: Transportation Operations Inventory Audit**

# **FOLLOW UP AUDIT REPORT**

**June 2, 2022**

**Office of the City Auditor  
Nancy Hu, Senior Auditor  
Brigitte Minard, Deputy City Auditor  
Charles Brown, City Auditor**

## Recommendation #1

We recommend that standard operating procedures be created for all inventory-related processes, including the disposal of obsolete and excess inventory (that aligns with Procurement By-Law No. 17-064), disbursement of inventory to contractors and other City employees, inventory counts and security footage review. These procedures should apply to all current and future inventory locations. These procedures should include roles, responsibilities, process flow charts, sample documents and clear instructions to assist employees understand what is expected. A change management plan should be created to introduce the new operating procedures, including training and reinforcement with staff. Procedures must be reviewed at least annually and updated (as required). Evidence of the annual review should be documented and retained for audit purposes.

## Management Response

Agreed.

The Transportation Operations & Business Initiatives sections will develop an operational plan to include all components of inventory management. The purpose of this operational plan is to document policies and procedures related to the operation and maintenance of the inventory system.

Anticipated completion date: Q3 2021.

## Follow up Status

### **In Progress.**

Eleven Standard Operating Procedures (SOPs) were published in 2021 relating to Inventory Management. The procedures include defined roles and responsibilities, process flow charts (where applicable), and sample or reference documents related to the procedure. Per staff, more procedures are in the process of being drafted which include an overarching inventory operational plan and a procedure for disbursement of inventory to contractors and other city employees. Per staff, training for staff was provided, however, documentation of attendance was not retained. Since the procedures were published in 2021, in most cases a full year has not passed. Per staff, the procedures will be reviewed and updated in 2022.

## Recommendation #2

We recommend that management implement a more robust system of measurement by incorporating performance metrics into the standard operating procedures outlined in Recommendation #1. These metrics should be monitored by management and used to enhance inventory management around obsolescence, shrinkage, waste and scrap values.

## Management Response

Agreed.

The definition of performance metrics will be a key element in the development of the operational plan. The optimization of the new metrics will be monitored through the existing performance measurement methodology via the divisional balanced scorecard and annual reports.

The definition of metrics will be in alignment with the development of standard operating procedures in recommendation #1. The reporting and monitoring of metrics via the divisional scorecard and annual report will be incorporated in the 2022 work plan.

Anticipated completion date: Q4 2021.

## Follow up Status

### **Completed.**

Performance metrics (KPIs-Key Performance Indicators) are incorporated into all published SOPs. KPIs are tracked weekly by staff and critical divisional KPIs that roll up to the departmental goals are tracked using Business Intelligence Maintenance Application (BIMA). BIMA is the input application for the Public Works Balanced Scorecard. The results (actual KPIs) are monitored using the scorecards.

Some of the KPIs documented in the SOPs are not the KPIs being tracked. Management should update these in the SOPs as part of the annual updates.

## Recommendation #3

We recommend that management review the job duties and roles performed for all positions to ensure that responsibility and accountability for inventory management is included at appropriate levels and duties are appropriately organized overall. Changes should be reflected in standard operating procedures as well as in job descriptions (as required).

## Management Response

Agreed.

The division is reviewing and will modify the organizational structure implementing the changes accordingly. The associated changes to the roles and responsibilities will be outlined in the operational plan and standard operating procedures.

Anticipated completion date: Q1 2021.

## Follow up Status

### **Completed.**

Roles and responsibilities are documented in all published SOPs including responsibilities for individuals in the field using the inventory. Additionally, the Senior Project Manager-Inventory Management role was created and filled in January 2021. Per the job description, the position is "accountable for ensuring that inventory and supply chain management for the Transportation and Operations Maintenance Division meet or exceed inventory best practices/standards..."

## Recommendation #4

We recommend that Transportation Operations management be provided with read-only access and training to view inventory levels in Hansen and run inventory reports.

## Management Response

Agreed.

Business Initiatives will coordinate immediate access to Hansen with revised permission settings and complete require training for Supervisor level and above. Business Initiatives will develop an inventory report schedule for staff reference.

Anticipate completion date: Q4 2020.

## Follow up Status

### **Completed.**

Management was provided with read-only access and training. Training was held in Q1 2021. In addition to the read-only access, three weekly reports are sent out every Monday on stock levels to other applicable positions.

## Recommendation #5

We recommend that management undertake initiatives to break down silos between various sections and build a more inclusive, cooperative and collaborative environment. Such activities should focus on building awareness, desire, knowledge, ability, and reinforcement to support change.

## Management Response

Agreed.

The operational plan will also include the development of a change management plan so that the construction of an operational plan will assist in building awareness and enhance collaboration among cross-functional groups.

Anticipated completion date: 2020-2022.

## Follow up Status

### **In Progress.**

This item is in progress, however, OCA found that there is evidence of a more collaborative culture, though there is more work to be done. The key to the successful implementation of the some of the procedures described in the SOPs are the roles and responsibilities described for individuals in the field and Superintendents. For the procedures to be effective, there needs to be cooperation/compliance among all individuals across all Transportation Operations and Business Initiatives roles in the SOPs.

## Recommendation #6

We recommend that management review the primary and secondary inventory structure and what is stored in each area. Focus should be placed on the level of risk, control and access required when decided which items are stored in primary or secondary inventory.

## Management Response

Agreed.

Management will undertake the risk-based assessment of storage and complete a Kaizen event to optimize the inventory structure and breakdown.

Anticipated completion date: Q2 2021.

## Follow up Status

### **Completed.**

A Kaizen event was completed in the summer of 2021 where there was a reorganization of the stockroom that considered the risk, accessibility, and frequency of use of many items. The OCA was able to validate that management has reviewed the primary and secondary inventory structure and how inventory is stored in each area.

## Recommendation #7

We recommend that management implement additional controls to monitor higher risk items that remain in secondary inventory. Such controls may include cycle counts, reasonability analyses, utilizing usage-tracking technology (such as vending machines and rope counters), or creating and monitoring additional inventory classifications (such as **work vehicles**).

## Management Response

Agreed.

The definition of control measures required for the secondary inventory will be in alignment with the development of standard operating procedures in recommendation #1.

Anticipated completion date: Q3 2021.

## Follow up Status

### **In Progress.**

An inventory classification method was developed as part of the Cycle Count SOP which assigns a classification to all inventory parts based on their per unit value and/or total inventory value. This classification is assigned to inventory items in both Primary and Secondary locations and the cycle count cadence is scheduled based on the classification and location of the part. A schedule based on this classification was created, however, a cycle count for items in secondary locations was not performed in 2021. Additionally, there were inconsistencies in the classification of parts which drive the cadence of the counts.

## Recommendation #8

We recommend that management record all non-consumable items as inventory in Hansen. As part of this work, management should consult with Hansen support personnel to determine whether current capital items may be recorded in Hansen for tracking purposes only without charging costs out when materials are used.

## Management Response

Agreed.

Management will prioritize the implementation of this recommendation before the end of this calendar year to ensure correct identification and tracking of all non-consumable items. Alternative approaches to Hansen will be investigated and may be adopted for tracking purposes.

Anticipated completion date: Q4 2020.

## Follow up Status

### **In Progress.**

Work still needs to be done to move non-consumable items into inventory in Hansen, however, any new non-consumables received are being added to inventory in Hansen. For example, OCA observed that there were some new traffic radios (a non-consumable) in the stockroom which were listed in inventory.

## Recommendation #9

We recommend that Business Initiatives undertake a Kaizen or Kanban exercise to improve the organization of the stockroom and other secondary locations. Consideration should be given to designating specific areas to segregate and hold materials set aside for specific projects, obsolete goods awaiting disposal and items designated as "do not inventory".

## Management Response

Agreed.

We will undertake a Kaizen event or a methodology that results in a stockroom that is clean, uncluttered, safe and well organized.

Anticipated completion date: Q2 2021.

## Follow up Status

### **Completed.**

A Kaizen event was conducted in the summer of 2021 which resulted in an area in the yard for large obsolete items waiting disposal and a holding area for materials set aside for specific projects. In the stockroom, obsolete goods awaiting disposal and items designated as "do not inventory" are not held in one location in the stockroom. Instead, the items are tagged at their locations in the bin as "Do Not Inventory" or "Obsolete."

## Recommendation #10

We recommend that Business Initiatives review current part numbers and improve how inventory items are classified. This should include creating individual identifiers for kit components and signage.

## Management Response

Agreed.

Business Initiatives will prioritize the implementation of this recommendation to ensure the correct identification and tracking of all existing part numbers before the end of the calendar year.

Anticipated completion date: Q4 2020.

## Follow up Status

### **In Progress.**

The process to review and create individual identifiers for kit components and signage has begun but more work needs to be done.

## Recommendation #11

We recommend that Business Initiatives include a description, picture and location code in Hansen for each part number to assist Traffic Operations Clerks locate items quickly within the warehouse.

## Management Response

Agreed, in part.

Business Initiatives will investigate alternative approaches to fulfill the need of an ideal classification and identification of the inventory. Management may not necessarily use the current system Hansen for implementation of this recommendation.

Anticipated completion date: Q2 2021.

## Follow up Status

### **In Progress.**

An SOP, "Classification and Identification of Inventory", was developed that established a labeling convention for locations by bins has been implemented. Significant strides have been made to clean up the warehouse bins. There is still some updating in Hansen to be done to ensure a complete and accurate location for all items. This location and description are in Hansen for all primary inventory. Hansen has descriptions for all secondary inventory but since secondary inventory is spread across trucks, locations are not in Hansen. Per staff, consideration for pictures/schematics of parts will be a consideration for the new EAM system which will replace Hansen. Completion of this recommendation is dependant upon EAM implementation for Transportation Operations & Maintenance (TOM) which is planned for late 2024 – early 2025 according to the EAM team.

## Recommendation #12

We recommend that management revise the returned materials policy to include more oversight and a more formal process over the reuse and disposal of goods (e.g. storage location, disbursement, etc.). A record should be kept of more significant disposed items which should be reviewed by management to identify possible product issues or warranty opportunities. Training should be provided to staff to build awareness of how items may be reused and recycled. Inappropriate behavior should be reinforced through the performance management process.

## Management Response

Agreed.

The development of a returned material policy will be incorporated in the standard operating procedures in recommendation #1.



Anticipated completion date: Q4 2020.

### Follow up Status

#### **Completed.**

A "Return Merchandise Authorization (RMA) Procedure" SOP was published in April 2021 which provides guidance on materials which require repair by an approved vendor. There is also a "Materials Returned from the Street Procedure" SOP published in April 2021 which covers materials which may be replaced, damaged, obsolete, or excess. Staff uses an Order Tracking file which includes an RMA tracker tab to track RMA items sent for repair. Any disposed items would follow the "Disposal of Obsolete Excess and Dormant Inventory" SOP. Appropriate staff assess materials returned from the street. Any disposals of obsolete items are submitted by relevant staff and approved by higher management. When items that are no longer needed in the field are brought back (disposition may be scrap/obsolete, repairable, or can be reused in current condition), in the last case and after items repaired, a Stock Return ticket is used. The ticket is signed by employee and the supervisor for return of items to stock.

### Recommendation #13

We recommend that Business Initiatives reach out to Finance and Tangible Capital Assets to determine the best way to value materials returned from the street and how these transactions are recorded in Hansen. The valuation choices in Hansen should be restricted to eliminate possible data entry errors.

### Management Response

Agreed.

Business Initiatives will collaborate with Finance to define the best methodology to record system transactions and value materials returned from the street.

Anticipated completion date: Q4 2020.

### Follow up Status

#### **Completed.**

Per the Materials Returned from Street SOP, parts which can be reused, or repaired parts once repaired, and warranty items are also returned to Hansen at average cost. This was decided in collaboration with Finance. When items are re-entered into Hansen it is an "adjustment" and adjustment reports are run weekly and would catch if any item was going back into Hansen at \$.01 which was what was previously noted.

## Recommendation #14

We recommend that management explore the feasibility of going paperless or adopting a paper-lite approach in both inventory management and operations. Opportunities should be explored in advance of implementing a new Enterprise Asset Management system in early 2021. A change management plan should be developed to support staff at all levels.

## Management Response

Agreed, in part.

Management will adopt a paper-lite approach in accordance with the implementation of the Enterprise Asset Management System.

Anticipated completion date: To be determined – timeframe is dependent on the implementation of the Enterprise Asset Management System.

## Follow up Status

### **In Progress.**

How the system will be used for the paper-lite approach is still to be determined by management, depending on what EAM will be able to support. Completion of this recommendation is dependant upon EAM implementation for TOM which is planned for late 2024 – early 2025 according to the EAM team.

## Recommendation #15

We recommend that management develop an inventory count procedure describing the strategy and methodology to be followed for both year end and cycle counts. Management should oversee and monitor staff performance during inventory counts, including observation during the count, review of count documents and performing sample recounts.

## Management Response

Agreed.

Business Initiatives will prioritize the implementation of this recommendation to ensure an accurate inventory count procedure is adopted before the end of the calendar year.

Anticipated completion date: Q4 2020.

## Follow up Status

### **In Progress.**

A Year-End (YE) Inventory SOP and Cycle Count SOP was published in February 2021 which details the strategy and methodology to be followed for each of the respective counts including criteria for recounts. OCA observed portions of the 2021 YE inventory performed the week of January 4, 2022

and subsequent documentation in January and February 2022. For cycle counts, there was no documentation for 2021 secondary inventory cycle counts, only primary inventory cycle counts. Additionally, the count for the primary inventory cycle counts were entered into a spreadsheet for the monthly count but the physical count sheets were not retained. Per staff, for 2022 cycle counts, they will be retained. OCA also identified some inconsistencies with the classification assignment and cycle count frequencies as described per the SOP so more work is needed towards properly conducted and documented cycle counts.

### Recommendation #16

We recommend that management create a schedule indicating when cycle counts will occur and what will be counted. Staff should provide the cycle count forms to management at the end of the count for review and approval.

### Management Response

Agreed.

Business Initiatives will prioritize the implementation of this recommendation to create a schedule for cycle counts before the end of the calendar year.

Anticipated completion date: Q4 2020.

### Follow up Status

#### **In Progress.**

A schedule for cycle counts of primary and secondary inventory was created for 2021 and 2022. As noted in items 7 and 15 above, there are still aspects of the cycle count procedure which need to be performed in compliance with the SOP. Cycle count forms are not retained after the counts are entered into the monthly cycle count form (an Excel spreadsheet). Counts are reviewed by staff from the spreadsheet. Per staff, for 2022 cycle counts, and count sheets will be retained.

### Recommendation #17

We recommend that management implement safeguards for adjusting inventory within the system. One consideration may be for management to review and approve all inventory adjustments on a weekly basis. Management should compare the adjustment to the count form and explanations provided by staff to validate that the adjustment is appropriate. Management should sign and retain the transaction listing, along with supporting documentation, as evidence of their review for future audit purposes.

## Management Response

Agreed.

The associated changes to the roles and responsibilities for inventory adjustments will be outlined in the operational plan and standard operating procedures.

Anticipated completion date: Q4 2020.

## Follow up Status

### **Completed.**

Relevant staff reviews inventory adjustments and tracks related adjustment KPIs weekly. A weekly report for inventory adjustments is run and relevant staff reviews the adjustments made and investigates and inquires as needed. These also include any adjustments made as a result of a scheduled cycle count.

## Recommendation #18

We recommend that management recommit to the nine management action plans outlined in the original audit. Management should review the audit observations to understand the issues which led to the audit recommendations and consider implementing alternative action plans (as required) considering the new recommendations brought forward.

## Management Response

Agreed.

All outstanding recommendations will be addressed by the Transportation Operations & Business Initiatives sections with the development of an operational plan to include all components of Inventory Management.

The purpose of this operational plan is to document policies and procedures related to the operation and maintenance of the inventory system.

Anticipated completion date: Q3 2021.

## Follow up Status

### **In Progress.**

During the follow-up performed as part of the Audit Report 2020-04 Transportation Operations Inventory Audit (AUD20008), of the nine audit recommendations originally made in the Audit Report 2013-17-Public Works-Traffic Inventory (AUD14017), two recommendations were in progress, two recommendations were initiated and five remained not completed.

As of February 2022, three recommendations are completed, five are in progress, and one remains not completed.

The three completed recommendations are regarding Parts and Materials Orders (minimum re-order quantities) and Inventory Manufactured In-House (updating of table to cost in-house manufactured signs).

The five that are in progress are regarding Inventory Management (tracking of parts used on Daily Activity Sheets), Parts and Materials-Segregation of Duties (additional controls needed to mitigate SODs), Stock-Year-end Inventory and Physical Inventory Count (issues with cycle counts keeping three items from being deemed complete).

The one item that is not complete is related to management performing reviews to compare the quantities of materials transferred from the stockroom to the in-house sign shop and the quantities of materials tracked on the Daily Activity Sheets. This is to assess whether raw materials are being used in an efficient manner for intended purposes

Please note that there are four additional recommendations with Follow Up Audit updates contained in the Confidential Appendix "C" to Report AUD22005.