



OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE

Package Delivery Scanning: Chicago District

Audit Report

Report Number
DR-AR-16-003
March 31, 2016





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UNITED STATES POSTAL SERVICE

Highlights

When scans are inaccurate, customers can become dissatisfied and lose confidence in the Postal Service's ability to meet their shipping needs. Improving scanning operations should reduce customer complaints related to the location and delivery status of packages.

Background

The U.S. Postal Service's goal is to scan all of its barcoded mailpieces (flats, letters, and packages) that enter the mailstream. The Postal Service wants to achieve 100 percent visibility and provide world-class package delivery services to be increasingly competitive. The Postal Service measures package delivery service performance based on its acceptance through the first attempt to deliver.

When a carrier attempts to deliver a package, it gets a stop-the-clock scan, indicating the Postal Service has completed its commitment to deliver or attempt to deliver the package. Delivery unit management uses the *End of Day* report to monitor stop-the-clock scans. The report identifies packages received at delivery units each day that did not receive a stop-the-clock scan.

City carriers must perform stop-the-clock scans for packages at the point of delivery. They use a handheld Mobile Delivery Device (MDD), which uses a cellular network and Global Positioning System technology to obtain real-time delivery tracking information. If a mobile delivery device is not available, carriers can use an Intelligent Mail® Device, the predecessor to the MDD; however, the Intelligent Mail Device does not provide Global Positioning System data or real-time delivery tracking information.

The U.S. Postal Service Office of Inspector General (OIG) learned through its Office of Investigation about possible

delivery scan falsifications in the Chicago District. Subsequent data analysis and reviews of customer posts on social media sites confirmed that some delivery scans in the Chicago District could be false.

The Chicago District has 48 city delivery units and 2,126 routes. From October 1, 2014, through July 31, 2015, the district scanned over 20 million packages. Using scan data, we judgmentally selected 30 sites for review. These 30 sites delivered 75 percent of packages scanned in the district (or 15.4 million packages) and received 33,071 customer complaints related to package delivery scanning.

Our objective was to assess the package scanning process for city delivery operations in the Chicago District.

What the OIG Found

Our analysis of the 30 delivery units showed opportunities exist to improve the Chicago District's package scanning process in city delivery operations. Specifically, we found 10,181 packages that were falsely scanned as delivered even though the carrier had not left the office. We found an additional 71,434 packages that were scanned either before the carrier left the office or after the carrier returned. However, we were unable to definitively determine how many of them were falsely scanned because some were designated as Caller Service (a fee-based optional delivery service) to be picked up by a customer at the office rather than being delivered to a



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customer's location and the scans were not specific enough to determine delivery type. In addition, we found 296,219 packages with delivery scans and no location data, so it was impossible to determine if the required scans were performed at the point of delivery.

These issues occurred due to:

- Insufficient supervision of city delivery operations.
- Carriers not following proper procedures.
- The lack of a specific scan designated for packages associated with Caller Service.
- Unfilled supervisor vacancies.
- Scans improperly performed at the end of day to clear reports of non-delivered packages.
- Insufficient number of MDDs for all routes.
- Scan devices experience Global Positioning System signal obstruction due to tall buildings, trees or other physical interference with Global Positioning System signals.

Customers rely on accurate data to track their packages in real time. By improving scanning operations, district management can potentially save money and receive fewer customer complaints related to the location and delivery status of their package. When scans are inaccurate, customers can become dissatisfied and lose confidence in the Postal Service's ability to meet their shipping needs.

What the OIG Recommended

We recommended the vice president, Delivery Operations, establish a specific scan designated for Caller Service packages to differentiate these scans from false scans.

We also recommended the vice president, Great Lakes Area, coordinate with the vice president, Delivery Operations, to repair or obtain additional MDDs; reinforce to delivery unit managers the importance of adhering to guidelines for properly securing relay mail, scanning packages, and supervising delivery operations; fill vacant supervisor positions within 6 months; and provide guidance to delivery unit management on proper use of the *End Of Day* report and communicating issues to district management for resolution.

Transmittal Letter

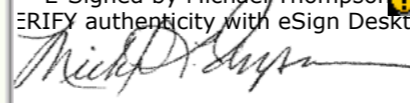


OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

March 31, 2016

MEMORANDUM FOR: EDWARD F. PHELAN, JR.
VICE PRESIDENT, DELIVERY OPERATIONS

JAKKI KRAGE STRAKO
VICE PRESIDENT, GREAT LAKES AREA

E-Signed by Michael Thompson
VERIFY authenticity with eSign Desktop


FROM: Michael L. Thompson
Deputy Assistant Inspector General
for Mission Operations

SUBJECT: Audit Report – Package Delivery Scanning – Chicago District
(Report Number DR-AR-16-003)

This report presents the results of our audit of Package Delivery Scanning – Chicago District (Project Number 15XG044DR000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Rita F. Oliver, director, Delivery Operations, or me at 703-248-2100.

Attachment

cc: Corporate Audit and Response Management

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Findings

From October 1, 2014 through July 31, 2015, carriers at 30 delivery units scanned 15.4 million packages. During this period, we found 10,181 packages were falsely scanned as delivered even though the carrier had not left the office.

Introduction

This report presents the results of our self-initiated audit of package delivery scanning in the Chicago District (Project Number 15XG044DR000). Our objective was to assess the U.S. Postal Service's package scanning processes in city delivery operations in the Chicago District. See [Appendix A](#) for additional information about this audit.

The U.S. Postal Service Office of Inspector General (OIG) learned through its Office of Investigation of possible delivery scan falsifications in the Chicago District. Subsequent data analysis and review of customer posts on social media sites confirmed that some delivery scans in the Chicago District could be false.

The Chicago District has 48 city delivery units and 2,126 routes. From October 1, 2014, through July 31, 2015, the district scanned over 20 million packages. Using scan data, we judgmentally selected 30 sites for review. These 30 sites delivered 75 percent of the packages scanned in the district (or 15.4 million). Additionally, these sites received 33,071 customer complaints related to package delivery scanning.

The Postal Service scans packages from acceptance through delivery and records scanning data in the Product Tracking and Reporting (PTR) system.¹ Carriers use a Mobile Delivery Device (MDD)² to scan packages during delivery and the scan data updates the Postal Service's tracking information to allow customers to track packages. The Postal Service also uses the scan data for its internal management reports (see [Appendices B and C](#)).

Summary

Our analysis of the 30 delivery units showed that opportunities exist to improve the Chicago District's package scanning process in city delivery operations. Specifically, we found 10,181 packages that were falsely³ scanned as delivered even though the carrier had not left the office. We found an additional 71,434 packages that were scanned either before the carrier left the office or after the carrier returned. However, we were unable to definitively determine how many packages were falsely scanned because some were designated as Caller Service⁴ (a fee-based optional delivery service) to be picked up by the customer at the Post Office rather than delivered to their location and the scans were not specific enough to determine delivery type. In addition, we found 296,219 packages with delivery scans and no location data, so it was impossible to determine if the required scans were performed at the point of delivery.

These issues occurred due to:

- Insufficient supervision of city delivery operations.
- Carriers not following proper procedures.
- Lack of a specific scan designated for Caller Service packages.

1 A system that receives and stores all tracking scan data, from acceptance to delivery, and is used by employees and customers for shipment tracking information.
2 A wireless handheld device that scans barcodes for package tracking. MDD scans and Global Positioning System (GPS) data are transmitted to the PTR system for customers to track package information in real time.
3 These scans were not associated with Caller Service (special services).
4 A stand-alone special service that provides an optional delivery service for a fee to customers who have large volumes of mail, need multiple separations, or need a Post Office (PO) Box number address when no PO Boxes are available. A caller is a customer who regularly picks up mail from the Post Office.

Delivery units had insufficient supervision of city delivery operations, carriers did not follow proper procedures, scanners lacked a specific scan designated for Caller Service packages, and scans were improperly performed at the end of the day to clear reports of non-delivered packages.

- Unfilled supervisor vacancies.
- Scans improperly performed at the end of day to clear reports of non-delivered packages.
- Insufficient number of MDDs for all routes.
- Scan devices experienced GPS signal obstruction due to tall buildings, trees or other physical interference with GPS signals.

Figure 1. Opportunities Exist to Improve Chicago District’s Package Delivery System



Customers rely on accurate data to track their packages in real time. By improving scanning operations, district management could potentially save money and receive fewer customer complaints regarding the location and delivery status of packages. When scans are falsified, customers become dissatisfied and lose confidence in the Postal Service’s ability to meet their shipping needs.

False Scans

Postal Service policy requires carriers to perform stop-the-clock scans for packages at the delivery point to document package delivery.⁵ Our analysis of the 30 judgmentally selected delivery units showed that, at 28 delivery units,⁶ 10,181 packages had false delivery scans with GPS data showing carriers performed the scans at the office and not at the delivery point (see [Appendix D](#)). Specifically, at one location we determined that 30 percent of total scans were false. These scans were performed between 12:01 a.m. and 8 a.m., before carriers started street delivery and within 10 minutes of the out for delivery scan. These scans were clearly false as there was no justification for scanning the packages as delivered before the carrier left the office (see [Video 17](#)).

⁵ *Delivery and Retail Standardization* Tab 3, Section 5.

⁶ The Clearing and Loop Stations did not show false scans; however, the Loop Station did not show GPS data and was included in the unknown location scans.

⁷ This video is a reenactment of false scans performed at a delivery unit.

At the 30 delivery units we found an additional 71,434 potentially false package delivery scans performed at the office. Of these scans, 51,493⁸ were potentially false scans performed at the delivery unit before the carriers started street operations. Specifically, at one location 55 percent of total scans were potentially false as they were performed between 12:01 a.m. and 8 a.m., before carriers started their delivery routes. However, we were unable to determine definitively which of these 51,493 scans were false, as some of the packages were designated as Caller Service packages to be picked up by customers rather than delivered to them by carrier and there was no scan code specific to Caller Service packages.

Further, we determined that 19,941⁹ scans were performed after the carriers completed their routes to clear the packages from the *End of Day* (EOD)¹⁰ report to avoid scan failures. Specifically, at another location, 26.5 percent of total scans were potentially false as they were performed between 7 p.m. and 12 a.m., after carriers returned from their delivery routes

False scans were performed at the delivery units for several reasons:

■ **Insufficient Supervision of City Delivery Operations.** Delivery unit supervisors did not always effectively manage delivery operations. Specifically, carriers did not follow scanning guidelines requiring packages to be scanned at the delivery point. In our interviews, some carriers stated they are consistently reminded about the importance of scanning packages at the delivery point, while other city carriers and City Carrier Assistants (CCA)¹¹ stated they scan packages at the delivery unit out of convenience or to save time on their routes.

Also, delivery unit supervisors could not always dedicate time to review the Delivery Management System (DMS),¹² EOD report, and Regional Intelligent Mail Server (RIMS)¹³ to monitor package delivery scan activity. Delivery unit supervisors were impacted by span of control¹⁴ challenges with combined duties in delivery and customer service operations. The Postal Service does not have a defined span of control¹⁵ goal for delivery units and our analysis of the 30 delivery units we visited found span of control ratios ranging from 1:14 to 1:65 (see [Appendix E](#)).

District officials indicated they were aware of the challenges, are constantly addressing staffing, and planned to fill vacancies soon. District officials stated there were 14 vacant supervisor positions in the Chicago District, which contributed to supervisory challenges. As of November 2015, the web-based Complement Information System¹⁶ (WebCoins) showed the Chicago District had 22 vacant delivery supervisor positions. During our observations, we noted inexperienced or temporary supervisors who were not familiar with how to supervise delivery operations. District officials were aware of training issues and stated that they will assist with training all newly hired supervisors to be more efficient. During the audit, district officials filled six supervisor vacancies and are in the process of filling 11 additional vacancies. An additional, two vacancies are on hold due to updates to the Supervisor Workload Credit (SWC)¹⁷ process.

8 The Loop and Ravenswood Stations did not show improper scans before starting delivery routes. However, the Loop Station did not show GPS data and was included in the unknown location scans.

9 The Hedgewisch and Loop Stations did not show improper scans after completing delivery routes. However, the Loop Station did not show GPS data and was included in the unknown location scans.

10 Identifies all packages sent out for delivery each day that did not receive a stop-the-clock scan. It is on the PTR system website.

11 Non-career, bargaining unit employees who perform the full range of city carrier duties.

12 DMS provides visibility on packages, vehicles, routes, and actual deliveries in real time.

13 RIMS captures geo-location and scan data from MDDs and IMDs and transmits them to the PTR system via the National Intelligent Mail Server (NIMS). NIMS receives all scan data and makes it available to USPS Tracking®. RIMS also displays that information on a web interface for delivery supervisors.

14 The number of subordinates in an organization who report directly to one supervisor.

15 We plan to conduct a separate review on span of control in city delivery operations.

16 A web interface that displays and stores information about employee complement details down to the office or unit level. The system gives local management a resource for monitoring and tracking employee complement.

17 The supervisory staffing model for delivery units. The SWC determines the number of earned supervisors based on the number and mix of employees at a delivery unit. According to Postal Service officials, they are in discussions to revise the entire process.

- **City Carriers did not Follow Mail Preparation Guidelines.** City carriers scanned packages at delivery units to ensure all packages prepared for relays¹⁸ received a stop-the-clock scan to avoid delivery scan failures on the EOD report. Pick-up carriers prepared relays by placing mail and packages in open flat tubs instead of securing them in sacks. Parcel Post drivers dropped off relay tubs at various locations in high-rise residential buildings because a relay box was not available. Relays were not secured in the lobbies, maintenance closets (see Figure 2), or other locations¹⁹ allowing customers to pick up their packages before carriers could scan them at the delivery point. Unsecured relay drops contributed to carriers improperly scanning packages at the delivery unit to avoid delivery scan failures. Postal Service policy requires carriers to place mail in sacks secured with padlocks²⁰ when it cannot be placed inside relay or collection boxes. Securing relay drops will allow carriers to properly scan packages at delivery points.

Figure 2. Unsecured Relay Mail in Maintenance Closet at a High-Rise Building



Source: OIG photograph taken October 6, 2015, at 3:58 p.m.

- **City Carriers had no Specific Stop-the-Clock Scan for Caller Service.** Some of the scans that appeared to be false were designated as Caller Service to be picked up by customers rather than delivered. Delivery unit clerks and city carriers did not have a stop-the-clock scan to distinguish special service packages such as Caller Service. Stop-the-clock scans for Caller Service packages on carrier routes are performed at delivery units and not at delivery points. These scans appear to be false and often appear on the *Scan Data Integrity* report,²¹ requiring additional work from the delivery unit supervisor.
- **Report to Identify Scanning Issues Needs Improvement.** Stop-the-clock scans performed before 8 a.m. and for more than two packages at a single location will generally appear on the Postal Service's *Scan Data Integrity* report as potentially improper scans. Delivery unit managers are required to research and respond to senior management on the status of stop-the-clock scans on the *Scan Data Integrity* report within 24 hours. Because this requirement increases delivery operations duties for supervisors, it is critical that the report is easy to use, clearly identifies carriers who are experiencing issues, and quickly identifies the issues that need improvement. Currently this report does not exclude package delivery scans for Caller Service and management must manually review these scans.

¹⁸ Mail at the delivery unit that a city carrier prepares in sacks or flats trays to place in relay boxes for another city carrier to pick up for delivery along the line of travel.

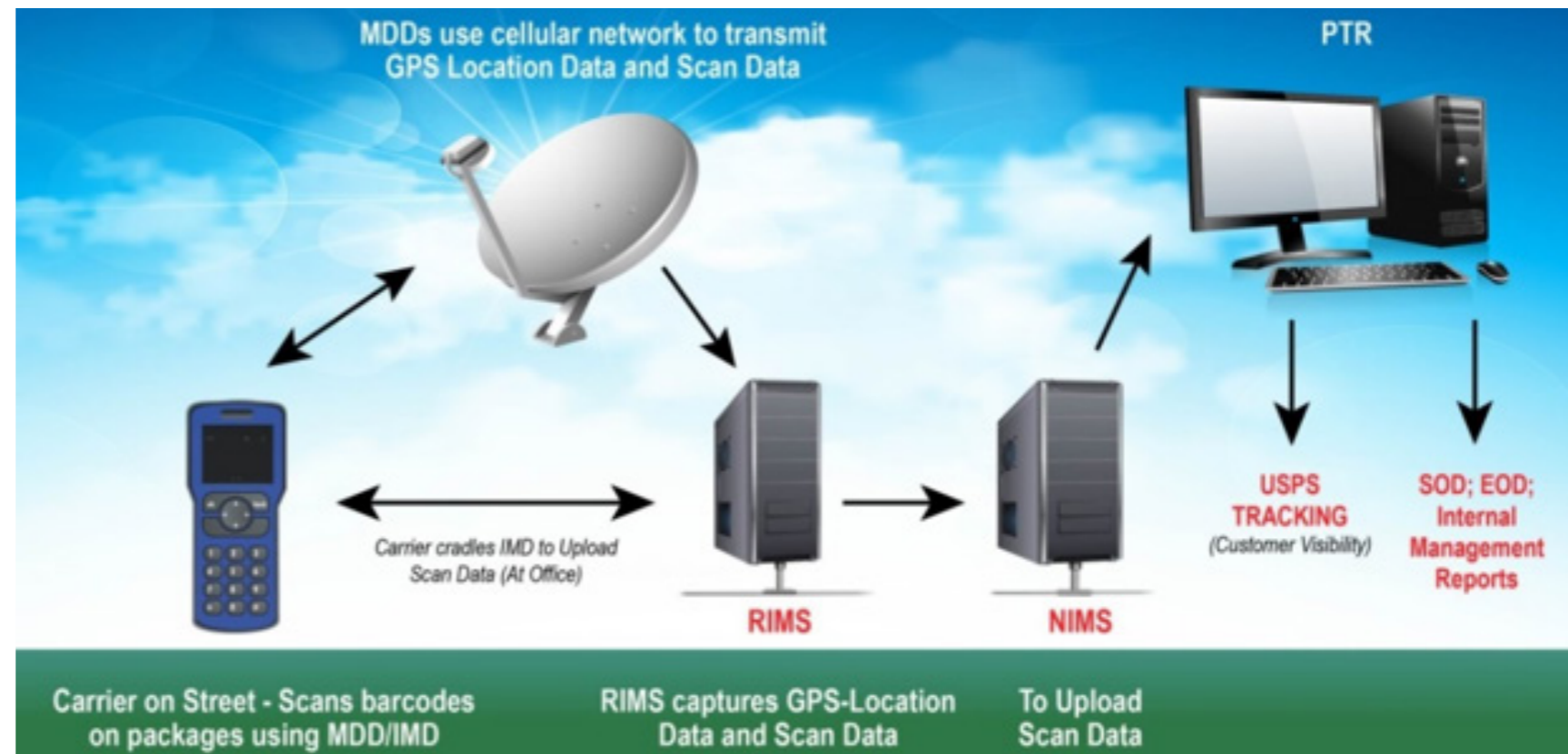
¹⁹ There was a district-wide practice for leaving mail and packages in predetermined locations such as cleaners and corner grocery stores.

²⁰ Handbook M-39, Management of Delivery Operations, Section 123.11, March 1998.

²¹ Identifies stop-the-clock scans that are inconsistent with delivery standard operating procedures (SOP). The data is intended to resolve improper scans so customers and Management can get accurate tracking data that represents actual delivery status and timeline.

- **Improper Senior Management Instructions for Using the EOD Report.** Delivery unit management at 18 of the 30 delivery units visited stated that senior management instructed them to clear the EOD report at the end of the day to avoid delivery scan failures for missed deliveries. Senior management also used the EOD report as a performance measure for the delivery unit. Postal Service guidance states that the EOD report is a tool for identifying all packages sent out for delivery each day without a stop-the-clock scan. This report is for information only and should not be used to enter new or missed scans or rescan tracking information. District personnel were aware the EOD report was occasionally untimely due to the technical limitations, but did not consider informing senior management of the issues. Communicating EOD report issues is a good business practice that helps resolve delayed package delivery data at delivery units.
- **Delayed Stop-the-Clock Scan Transmissions.** The stop-the-clock scans performed during the carrier's route did not always transmit to the PTR system after carriers completed their routes, which showed the package in an "out for delivery" status on the EOD report. Delivery managers stated that they frequently experienced stop-the-clock scan transmission delays from city carriers' MDDs to Postal Service systems, which caused packages to appear as delivery scan failures and contributed to improper scans performed after 7 p.m. MDDs communicate to Postal Service systems using a cellular network to upload geo-location and package delivery scan data. The goal is notification within 5-6 minutes (see Figure 3).

Figure 3. Delayed Stop-the-Clock Scan Transmissions



Source: OIG analysis based on the RIMS User Guide and discussions with Postal Service Engineering personnel.

Stop-the-clock scan data may not post timely for several reasons:

- Poor cell phone service;
- Interference with cellular transmissions in urban environments;²²
- Postal Service system-wide delays due to limited space on the cluster database;²³ or
- The monitoring capability for identifying server and system issues with transmitting scan data ahead of time were reduced due to recent cyberattacks on the Postal Service network.

These interferences can cause untimely or incomplete reporting, leading to unavailable or unreliable EOD reporting and package tracking data.²⁴

- **Limited Scan for Delivery Delays.** Carriers inadvertently missed delivering packages during street delivery. However, upon their return to the delivery unit, delivery unit personnel entered a stop-the-clock scan to clear the EOD report. These scans did not provide accurate scan visibility for packages scanned as out for delivery but not delivered. Postal Service Headquarters Delivery officials stated they were aware of this package delivery scan limitation and were actively developing a delivery delay scan to reflect the correct scanning information for the customer.²⁵ In November 2015, the Postal Service released a new MDD software download, version 3.17, which includes the new delivery delay scan. This scan will provide accurate information to the customer, but will not stop-the-clock on the Postal Service delivery commitment. Therefore, we will not make a recommendation on this matter.

Customers rely on accurate data to track their packages in real time. By improving scanning operations, district management could potentially save \$80,832 in complaint resolution costs and have fewer customer complaints related to the location and delivery status of their packages. When scans are inaccurate customers can become dissatisfied and lose confidence in the Postal Service's ability to meet their shipping needs, resulting in a potential loss of about \$1 million in the Chicago District.

22 Locations with high-rise buildings.

23 A cluster database has multiple servers sharing the same database storage.

24 We will refer this matter to our Information Technology directorate for future review.

25 Per a Postal Service Headquarters meeting on August 11, 2015, in relation to understanding DMS and MDD.

Delivery units had an insufficient number of MDDs for all routes and scan devices experienced GPS signal obstruction.

Unknown Scan Location Data

At the 30 delivery units we visited, delivery unit personnel²⁶ performed stop-the-clock scans in unknown locations for 296,219 packages. Carriers used MDDs and Intelligent Mail® Devices²⁷ (IMD) to scan packages. Our analysis of the data showed carriers performed these scans between 12:01 a.m. and 8 a.m. (before starting street delivery or within 10 minutes of the out for delivery scan) and between 7 p.m. and 12 a.m. However, we could not determine the location of these packages when they were scanned.

Unknown location/no data available stop-the-clock scans occurred because of:

- **Insufficient Number of MDDs.** Delivery units did not have enough MDDs to service regular and auxiliary²⁸ routes. Our review of Postal Service MDD Phase 1²⁹ and Phase 2³⁰ deployment showed delivery units received 1,556 MDDs to cover carrier routes. Also, inventory records³¹ provided by district officials identified additional MDDs were deployed increasing MDDs deployed to 1,601. However, delivery units could not use 84 MDDs due to operational problems therefore, the current inventory showed a shortage³² of 39 MDDs.³³

In our observations, management created auxiliary routes due to a sudden increase in package volume. While, Phase I and II deployment of MDDs provided devices to cover auxiliary routes, 84 MDDs could not be used due to operational problems; therefore, delivery unit management allowed city carriers and CCAs to continue using IMDs. Employees used IMDs when MDDs were not available for stop-the-clock scans on 189,234 packages. Consequently, no GPS coordinates were available to identify where the scan occurred and stop-the-clock scan data was only available when the carrier returned to the delivery unit at the end of the day. Per our discussion with Postal Service Technology Development and Applications officials, delivery operations requested MDDs to cover regular carrier routes with one spare device during Phase 1 deployment. Management also requested additional MDDs for Phase 2 deployment for collection and Parcel Post routes.³⁴

- **Unavoidable and Intermittent GPS Signal Obstruction.** The MDDs did not record GPS coordinates (location) for stop-the-clock scans in 106,985 instances. MDDs experienced unavoidable and intermittent GPS signal obstruction during street delivery.³⁵ This blocked the ability of MDDs to provide the location of the stop-the-clock scan or the city carrier. Tall buildings, trees, tunnels, mountains, clothing, and the human body can cause unavoidable and intermittent GPS signal obstruction. For example, carriers in the downtown area (Loop Station³⁶ and the Chicago Central Annex) who used MDDs experienced unavoidable obstructions due to tall buildings that blocked satellite signals. GPS devices typically need to receive signals from at least seven or eight satellites to calculate locations to within 10 meters. With fewer satellites contributing, the amount of uncertainty and inaccuracy increases to produce location estimates.³⁷ Missing GPS coordinates did not allow delivery unit managers to monitor and track street operations for these stop-the-clock scans (see [Figure 4](#)).

26 City carriers, supervisors, and/or station managers.

27 A non-wireless handheld device used to scan barcode data that provides package tracking information to the customer. The barcode data is downloaded at the end of the day, transmitted to the PTR system, and used by customers for shipment tracking information. IMDs do not transmit GPS data.

28 A carrier route that is regularly scheduled for completion in less than 8 hours and is not up for bid by full-time carriers.

29 During Phase I delivery units received MDDs to cover regular carrier routes and a spare.

30 During Phase II, delivery units received MDDs equal to 3 percent of the regular carrier routes to cover collection routes and parcel post routes.

31 We reviewed inventory records as of October 2015 and February 2016.

32 We plan to review MDD shortages in a separate review.

33 The Chicago District received about 400 temporary IMDs for in-office operations and street delivery during November and December 2015.

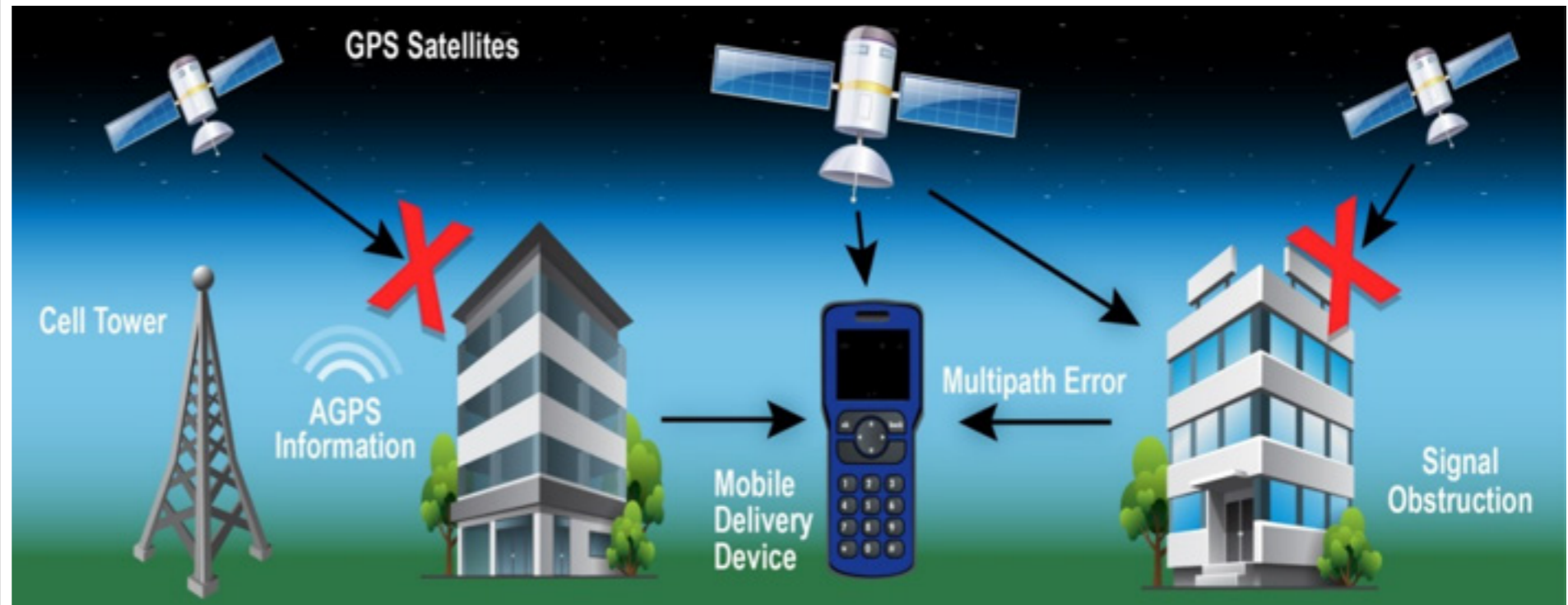
34 Delivery personnel reported that MDDs did not function as expected. The OIG issued a report recommending the Postal Service evaluate and establish corrective program controls to ensure that current and future MDD functionalities are operational (*Mobile Delivery Device Deployment and Functionality*, Report Number MI-AR-15-005, dated July 8, 2015).

35 Intermittent GPS obstruction can be corrected if satellite signals are clear and unobstructed.

36 We expanded our review of Loop Station package delivery scans to include all scans performed between October 1, 2014, and July 31, 2015, and found 65 percent of them did not have GPS coordinates.

37 Strava Help Center, Knowledge Base and Community Forum on GPS Accuracy, May 2015.

Figure 4. Unavoidable GPS Signal Obstruction



Source: OIG graphic.

Recommendations

We recommended a specific scan for Caller Service packages; obtaining additional Mobile Delivery Devices; reinforcing guidelines for securing relay mail, scanning packages, and supervising delivery operations; filling vacant supervisory positions; and providing guidance on proper use of End of Day reports and communicating issues for resolution.

We recommend the vice president, Delivery Operations:

1. Establish a specific scan designated for packages associated with Caller Service to differentiate them from false scans.

We recommend the vice president, Great Lakes Area:

2. Coordinate with the vice president, Delivery Operations, to repair or obtain additional Mobile Delivery Devices for the Chicago District.
3. Reinforce to delivery unit managers the importance of adhering to guidelines for properly securing relay mail relay, scanning packages, and supervising delivery operations.
4. Fill vacant supervisor positions at delivery units within 6 months.
5. Provide guidance to delivery unit management on the proper use of the *End of Day* report and communicating issues to district management for resolution.

Management's Comments

Management agreed with the findings and recommendations but disagreed with the methodology used to determine the supervisor labor rate of \$61.00 for predictive savings. Management questioned our use of the Postal Service's national average labor rate used for business cases and financial analysis. Management stated that we should have used the July 2015 *Labor Utilization Report* year to date workhour rate of \$45.12 for Labor Distribution Code 20 delivery supervisors. Using this rate and management's calculation would reduce cost savings for inspections.

In response to recommendation 1, management disagreed with establishing a specific scan designated for packages associated with Caller Service to differentiate them from false scans. However, management stated at the initial scanner set up that the route ID alpha character should be entered as (B) for P.O. Box Section. Caller Service packages should be scanned "available for pick up" and then "tendered to agent for final delivery" or use a firm sheet with the final scan being "tendered to agent for final delivery." This will allow Caller Service package scans to be differentiated from any possible incorrect scans made in the office.

In response to recommendation 2, management agreed with repairing or obtaining additional MDDs for the Chicago District. Management stated that, as of February 1, 2016, the Chicago District had 2,329 MDD scanners. All carriers, collectors, parcel posts routes, and CCAs had MDD scanners. In addition, in November 2015, the district obtained 240 IMD scanners as backup in the event of MDD breakdowns. Management also stated that when a MDD becomes disabled, a supervisor or manager contacts the Postal Service Help Desk for troubleshooting. If the resolution is to replace the scanner, the unit will use its assigned back-up IMD scanner until it receives a replacement scanner. In February 2016, Operations Programs Support created an online survey for customer service personnel to report non-functional scanners as a tracking mechanism.

In response to recommendation 3, management agreed with reinforcing to delivery unit managers the importance of adhering to guidelines for properly securing relay mail, scanning packages, and supervising delivery operations. Management stated they will survey each delivery unit to identify the unsecured location(s) of relay mail and work with property management to provide secure locations. Management also stated that the Chicago District and Great Lakes Area service teams are working with the top 16 scanning opportunity stations to improve scanning in the Chicago District. They plan to conduct onsite field reviews for audit

scanning process compliance, troubleshoot technical issues, coach, and share best practices with local management. They plan to replicate these field visits throughout the Chicago District. The expected completion date is May 2016.

In response to recommendation 4, management agreed with filling vacant supervisor positions at delivery units within 6 months. Management stated that the Chicago District Complement Committee holds weekly meetings to identify and address filling vacant positions. During FY 2016, management filled twenty (20) supervisor positions and fifteen (15) supervisor vacancies remain. As vacancies become available, they are filled. The expected completion date is June 2016.

In response to recommendation 5, management agreed to provide guidance to delivery unit managers on proper use of the EOD report and communicating issues to district management for resolution. Management stated that SOP for the EOD report and the EOD supervisor checklist for closing and opening supervisors has been disseminated to the field and is available on the Operations Programs Support website. Guidance on SOP is discussed on a monthly basis. Local Operation Centers are monitoring the EOD report nightly and communicating with delivery personnel on any technical or download issues. The Chicago District manager will go over the EOD process with station managers during the district's Tuesday scanning telecom. Given our findings, the Chicago District manager will instruct district officials to develop and put in place a compliance mechanism. The expected completion date is June 2016.

See [Appendix F](#) for management's comments in their entirety.

Evaluation of Management's Comments

The OIG considers management's comments responsive to the recommendations in the report.

In regard to the supervisor labor rate used in our calculations, the OIG used the Executive and Administrative Schedule levels 19-24 national average salary and fringe benefit labor rates to calculate an average hourly supervisor rate of \$61.00 for FY 2015. National average labor rates are provided by the Postal Service's Finance department and are intended to be used for business cases and financial analysis. The rates represent the cost of a productive workhour and are best suited for national comparisons.

Concerning the number of MDDs, management stated the Chicago District has 2,329 MDDs. The Chicago District received 2,329 MDDs; however, it could not use 152 of them due to operational problems. For example, the John Buchanan Station was assigned 64 MDDs and 13 were not operational. The OIG reported on 30 selected delivery units in the Chicago District and found that 1,601 MDDs were received, but 84 could not be used due to operations problems. For example, the Uptown Station was assigned 53 MDDs and 10 were not operational.

All recommendations require OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. Recommendations 3, 4, and 5 should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendations can be closed. We consider recommendations 1 and 2 closed with the issuance of this report.

Appendices

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Appendix A: Additional Information

Background

The Postal Service's goal is to scan every mailpiece with a barcode (flats, letters, and packages). With the increased package volume, it aims to achieve 100 percent visibility and provide world-class package delivery services. The Postal Service offers several updates on the status of delivery to achieve world-class visibility (see Table 1).

Table 1. Scanning Events From Package Acceptance to Delivery

Scan ³⁸	Type and Description	Visible to Customer
1. Acceptance	Handheld or Point-of-Service Scan on Mailpiece by Clerk or Carrier (Pick Up)	Yes
2. Depart Post Office	System-Generated Scan	Yes
3. Arrive Origin Sort Facility	Work In Progress to Make Visible	No
4. Processed Through Origin	Machine or Handheld Active or Passive Scan of Mailpiece	Yes
5. Depart Origin Sort Facility	System-Generated Scan	Yes
6. Transportation (Arrive, En Route, Depart)	Work in Progress to Make Visible	No
7. Arrive at Destination Sort Facility	Handheld Scan of Mail Containers	Yes
8. Processed Through Destination Sort Facility	Machine or Handheld Scan of Mailpiece	Yes
9. Depart Destination Sort Facility	System-Generated Scan of Mail Container	Yes
10. Arrival at Post Office	Handheld Scan of Mailpiece by Clerk	Yes
11. Sorting Complete	System-Generated Scan	Yes
12. Out for Delivery	System-Generated Scan	Yes
13. Delivered	Handheld Scan of Mailpiece by Carrier at Delivery Point	Yes

Source: OIG analysis.

Packages receive a stop-the-clock scan when a carrier attempts delivery. Service performance is generally measured as the time between acceptance of the package and the first stop-the-clock scan on a mailpiece. A stop-the-clock scan indicates that the Postal Service has completed its commitment as it applies to the service measurement on a mailpiece.

City carriers must perform the stop-the-clock scan for packages at the point of delivery. Carriers use the handheld MDD for this purpose. MDDs use a cellular network to provide customers with real-time delivery product tracking information. The package delivery scan data is transmitted to RIMS and forwarded to the NIMs. The NIM reformats the data and forwards it to the PTR system, which provides package tracking data to the EOD report and to customers (see [Figure 3](#)).

The MDD is intended to support multiple requirements, such as Sunday delivery and dynamic routing, report scan data faster, and support future software enhancements. The investment in MDDs is part of a larger effort to establish a delivery network that supports volume growth, meets delivery expectations, and improves the customer experience by documenting activity as it occurs.³⁹

³⁸ Not all mail will receive all scans depending on the amount of worksharing performed by the customer before the mail is entered into the system.

³⁹ Decision Analysis Report (DAR), *MDD Program – Phase 2*, dated September 23, 2014.

Objective, Scope, and Methodology

Our objective was to assess the package scanning process for city delivery operations in the Chicago District. To accomplish our objective, we:

- Obtained and reviewed documentation and application policies and procedures related to the delivery scanning process.
- Obtained, analyzed, and reviewed city delivery operations data such as package scanning, supervisor staffing, MDD and IMD inventory, and customer complaints.
- We selected the top 30 delivery units with the highest number of delivery scans performed between 12:01 a.m. and 8 a.m., before carriers started street delivery; within 10 minutes of the out for delivery scan; and between 7 p.m. and 12 a.m., after carriers returned from their delivery routes.
- Observed city delivery operations at 30 randomly selected delivery units.
- Met with Chicago District personnel, delivery unit personnel, and union stewards to discuss package delivery scanning.

We conducted this performance audit from August 2015 through March 2016, in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on February 11, 2016, and included their comments where appropriate.

We assessed the reliability of PTR system data by performing electronic testing of the parcel tracking ID and interviewing agency officials knowledgeable about this data. We also assessed the reliability of the Enterprise Consumer Care system by reviewing existing information about the system and the system that produced the data. We determined that the data were sufficiently reliable for the purposes of this report.

Prior Audit Coverage

Report Title	Report Number	Final Report Date	Monetary Impact
<i>Mobile Delivery Device Deployment and Functionality</i>	MI-AR-15-005	7/8/2015	\$255,017

Report Results: Our report found that MDD deployment was adequate; however, there were three common functionality issues: screen freezes, laser beam reader freezes, and insufficient battery life. Letter carriers used ineffective or inefficient workarounds, often counter to operating instructions when MDDs did not work as designed. In addition, we found the MDD training program needs improvement and the Critical Parts Center processes e-Buy requests for MDDs and accessories without ensuring the parts actually needed to be replaced or were not covered by warranties. Inadequate MDD functionality, training, and spare parts management can cause mail and service delays, which may reduce customer satisfaction and prevent the Postal Service from becoming the shipper of choice. In addition, the MDD program has an added expense of over \$600,000 because of purchasing items that were under warranty, \$80,000 of which has been credited back. Management disagreed with our findings, recommendations, and monetary impact.

<i>Geo-Fence Technology in Delivery Operations</i>	DR-MA-14-006	8/14/2014	None
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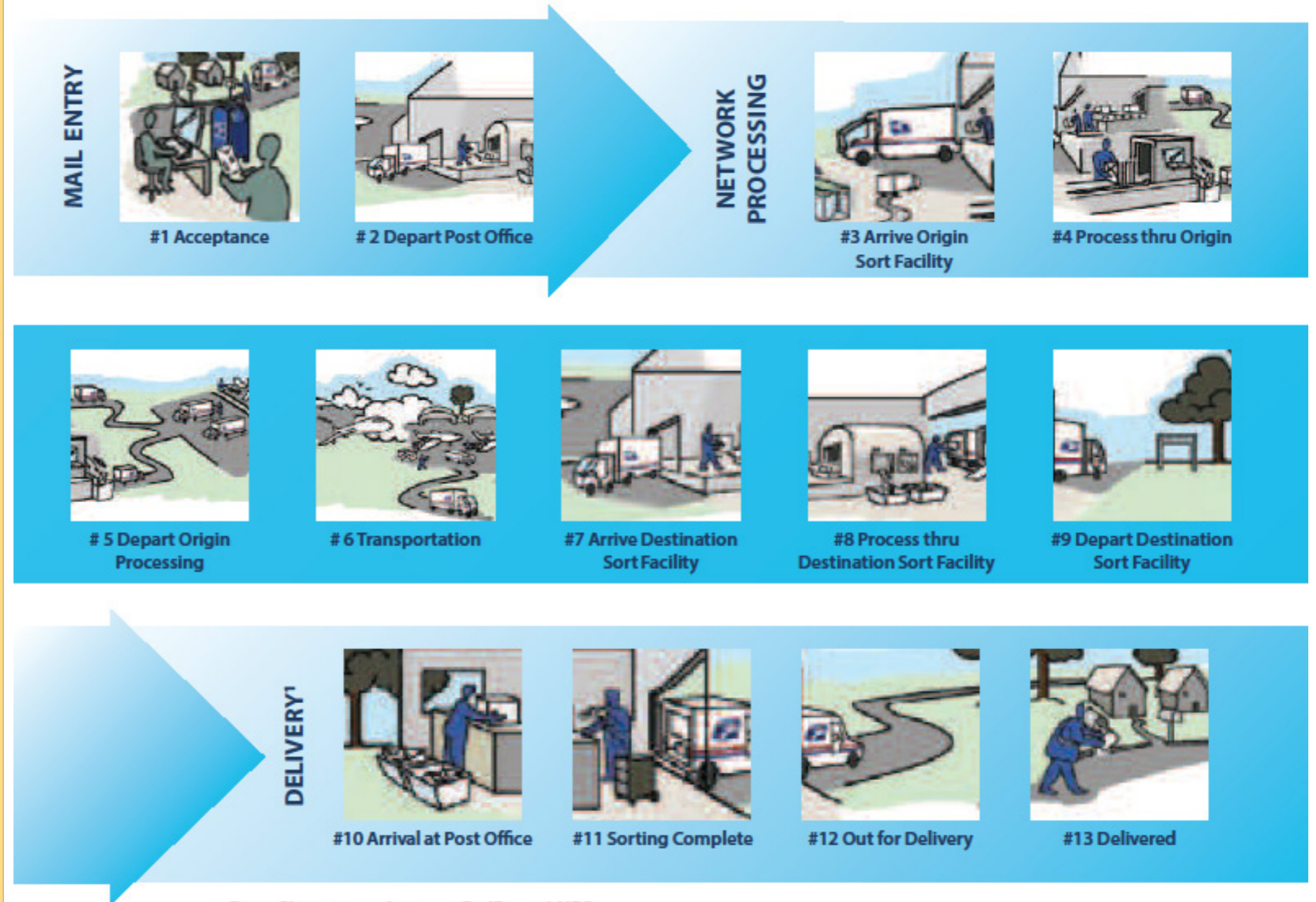
Report Results: Our report identified an inaccuracy in the Postal Service's Delivery Management System (DMS). Specifically, if a carrier is assigned deliveries in addition to their primary route, a common practice known as pivoting,³⁹ Managed Service Point⁴⁰ scan variance data will be inaccurate. This occurs because projected scan times are not adjusted for authorized route deviations recorded in the Delivery Operations Information System.⁴¹ Also, management has not updated the DMS to incorporate data elements related to pivoting. Management planned to address the scan variance inaccuracy by April 2014; however, as of June 2014, they have not finalized the adjustments. Inaccurate scan variance data may cause supervisors to react to carrier delays that are actually justified based on their daily delivery assignment. Management agreed with our findings and recommendations.

⁴⁰ A management tool used as part of normal delivery operations to allow supervisors to balance carrier workloads. Management stated they do not calculate the number of actual pivoting occurrences; therefore, we could not measure the extent of inaccuracies due to pivoting.

⁴¹ A designated location along a delivery route with an affixed barcode that a carrier is expected to scan. Management uses MSP scan times to help supervise the performance on each route.

⁴² A national computer application that helps supervisors manage delivery unit office tasks, such as preparing mail before delivery, planning street activities from the office, and handling route inspections and adjustments.

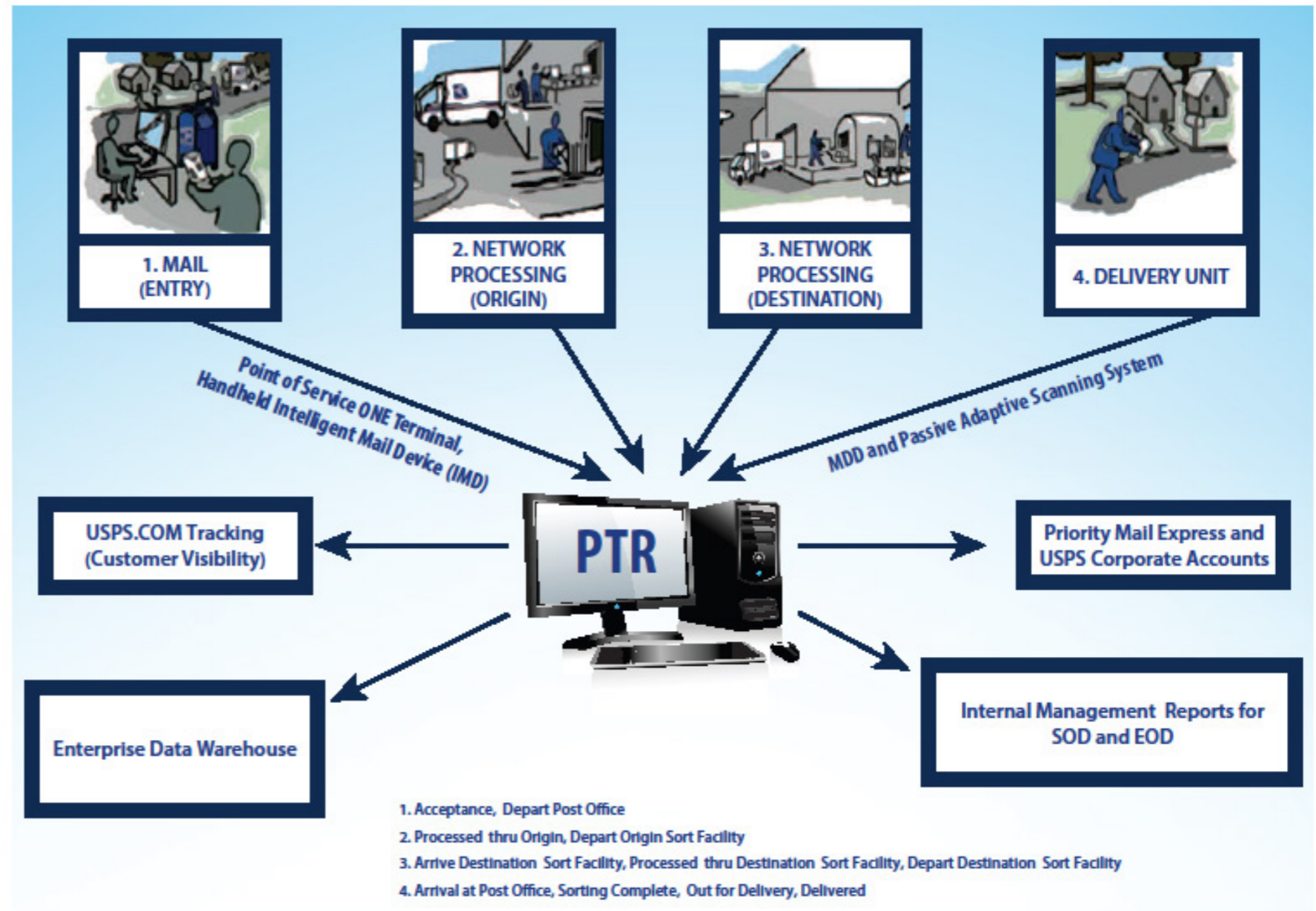
Appendix B: Scanning From Package Acceptance to Delivery



1. Drop Shipments: Amazon, FedEx and UPS

Source: Postal Service.

Appendix C: Package Scanning Data Reported to Product Tracking and Reporting System



Source: Postal Service.

Appendix D: Stop-the-Clock Scan Codes Included in False Scans

The stop-the-clock event indicates that the Postal Service has completed its commitment to deliver or attempt to deliver the package. The table below shows a summary of OIG-identified stop-the-clock scan codes included in false scans (see Table 2).

Table 2. Stop-the-Clock Scan Codes Included in False Scans

Stop-the-Clock Scan Codes	Scan Description	Total
1	Delivered	8,887
5	Undelivered as Addressed	131
51	Business Closed	490
52	Notice Left	48
54	Receptacle Full/Item Oversized	2
55	No Secure Location Available	605
56	No Authorized Recipient Available	18
Total		10,181

Source: OIG analysis of PTR system, October 1, 2014 – July 31, 2015.

We considered several stop-the-scan options available to carriers in our review:

- Delivered. Item is delivered to the customer.
- Undelivered as Addressed. Item is undeliverable at the address given, no change of address order on file, or forwarding order expired.
- Business Closed. Item cannot be delivered to businesses that are closed on what is a normal delivery day for the Postal Service.
- Notice Left. Item cannot be delivered to the addressee after the carrier made an attempt to deliver the item.
- Receptacle Full/Item Oversized. Substituted for the attempted scan when a signature waiver has been requested, but the item will not fit in the mailbox and it cannot be left in a secure location.
- No Secure Location Available. Substituted for an attempted scan when the item will not fit in the mail receptacle, but the carrier is authorized to leave the item in a secure location. However, no safe or secure location is available.
- No Authorized Recipient Available. Substituted for an attempted scan of an item requiring a signature and no authorized recipient or recipient of acceptable age is available to sign for the item.

Appendix E: Delivery Operations Span of Control

Delivery unit supervisors' span of control was a concern at many of the delivery units we visited. The Postal Service does not have a defined span of control goal for delivery units;⁴³ however, it does have a 1:25⁴⁴ ratio for P&DC operations. Delivery unit span of control⁴⁵ at the 30 delivery units we visited ranged from 1:14 to 1:65. Table 3 summarizes span of control ratios at delivery units.

Table 3: Supervisor to Carrier Ratio⁴⁶

ZIP Code	Station Name	Authorized SPV ⁴⁷	SPV on Roll	City Carriers	Span of Control
60608	Cesar Chavez Station	2	1	65	1:65
60615	Henry McGee Station	4	2	86	1:43
60612	Nancy B. Jefferson Station	2	1	42	1:42
60634	Roger P. McAuliffe Station	3	2	75	1:38
60640	Uptown Station	3	2	76	1:38
60601	Loop Station	7	4	137	1:34
60610	Fort Dearborn Station	8	5	167	1:33
60657	Graceland Carrier Annex	4	3	97	1:32
60625	Ravenswood Station	3	2	63	1:32
60626	Rogers Park Station	4	3	87	1:29
60645	Northtown Station	4	3	83	1:28
60614	Lincoln Park Station	5	4	106	1:27
60638	Clearing Station	3	3	78	1:26
60606	Chicago Central Carrier Annex	6	5	123	1:25
60616	Twenty-Second Street Station	2	2	49	1:25
60641	Irving Park Station	3	3	72	1:24

⁴³ The Postal Service uses the SWC process to determine supervisory staffing.

⁴⁴ One supervisor to 25 employees.

⁴⁵ Staffing ratios are based on employees assigned to a particular unit as reported in WebCoins. This may not reflect employees detailed in or out of a station, craft employees on detail as acting supervisors, or employees on extended leave.

⁴⁶ This span of control is based on the number of supervisors assigned to a delivery unit and does not take into account that all supervisors may not work with carriers. Many delivery units have dedicated supervisors to oversee retail operations or another supervisor who comes in mid-morning (or later) to oversee afternoon operations. Delivery units with supervisors dedicated to tasks other than managing carrier operations would further increase the number of carriers each supervisor would have to oversee.

⁴⁷ SPV is an abbreviation for supervisor.

Zip Code	Station Name	Authorized SPV	SPV on roll	City Carriers	Span of Control
60637	Jackson Park Station	2	2	47	1:24
60629	Southwest Carrier Annex	6	6	144	1:24
60622	Wicker Park Station	4	4	97	1:24
60649	Charles Hayes Station	2	2	46	1:23
60618	Daniel Doffyn Station	4	4	86	1:22
60646	Edgebrook Station	4	3	66	1:22
60619	James E. Worsham Station	4	4	88	1:22
60707	Elmwood Park Branch	2	2	41	1:21
60644	Milton R. Brunson Station	2	2	41	1:21
60620	Auburn Park Station	4	4	81	1:20
60630	Jefferson Park Carrier Annex	3	3	60	1:20
60613	Lakeview Station	3	3	61	1:20
60609	Stockyards Station	3	3	58	1:19
60633	Hedgewisch Station	1	1	14	1:14

Source: OIG analysis of data obtained from WebCoins.

Appendix F: Management's Comments

EDWARD F. PHELAN, JR
VICE PRESIDENT, DELIVERY OPERATIONS



March 17, 2016

LORI LAU DILLARD
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Package Delivery Scanning – Chicago District
Report Number DR-AR-16-DRAFT

The following is in response to recommendation 1 in the above subject audit. I am in agreement with management's comments on the findings and other recommendations sent to you earlier by the Vice President, Operations, Great Lakes Area.

Recommendation 1:

We recommend the vice president, Delivery Operations:

1. Establish a specific scan designated for packages associated with Caller Services to differentiate them from false scans.

Management disagrees with recommendation 1.

I recommend that no further scans be created and/or added to the scanner at this time. The process should be at the initial scanner set-up and the route ID alpha character should be entered as (B) for P.O. Box Section. Caller Service packages should be scanned "available for pick up" and then "tendered to agent for final delivery" or use a firm sheet with the final scan being "tendered to agent for final delivery." This will allow the caller service to be differentiated from any possible incorrect scans made in the office.

A handwritten signature in black ink, appearing to read "E. Phelan, Jr.", written over a light blue horizontal line.

Edward F. Phelan, Jr.

cc: CARM

E-FOIA@usps.oig.gov

Jacqueline Krage Strako

Gregory W. Johnson, District Manager, Chicago

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JACQUELINE KRAGE STRAKO
VICE PRESIDENT, OPERATIONS
GREAT LAKES AREA



March 17, 2016

LORI LAU DILLARD
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Package Delivery Scanning – Chicago District
Report Number DR-AR-16-DRAFT

Management agrees with recommendations #2, #3, #4 and #5.

The following is in response to the above subject audit and management's comments on the findings.

Monetary and Other Impact

Regarding the findings of the monetary impacts, management disagrees with the amount calculated based on the methodology utilized to determine the predictive savings.

As stated in the audit, management disagrees with the methodology utilized in determining the supervisor labor rate of \$61 in Table 3.

July 2015 Labor Utilization Report shows YTD Work hour Rate of \$45.12 for LDC 20 Delivery Supervisors. Using this rate, the calculated "Costs of Inspection" would be:

- Prior to MDD: 7,368, hours * \$45.12 = \$332,444 vs. OIG's calculated \$449,448.
- After MDD: 3,684 hours * \$45.12 = \$166,222 vs. OIG's calculated \$224,724.
- The Potential Savings calculate to \$166,222 vs. OIG's calculated \$224,724.

Recommendation [2]:

Coordinate with the Vice President, Delivery Operations, to repair or obtain additional Mobile Delivery Devices (MDD) for the Chicago District.

500 FULLERTON AVENUE
CAROL STREAM IL 60199-1000
630-539-5566
FAX: 630-539-7171

Management Response/Action Plan:

Management agrees with this recommendation.

As of February 1, 2016, the Chicago District has 2,329 MDD scanners. All carriers, collectors, parcel posts routes and CCA's have the new MDD scanners. In addition, the district has obtained 240 IMD scanners as backup in the event of MDD breakdowns. Should a MDD become disabled, a supervisor/manager contacts the USPS Help Desk for troubleshooting. If the resolve is to replace the scanner, the unit will utilize their assigned back up IMD scanner until a replacement scanner is received. Operations Programs Support has created a Web survey for customer service to report non-functional scanners as a tracking mechanism.

Target Implementation Date:

Replacement IMDs received November 2015.
MDD/IMD scanner malfunction survey created February 2016.

Responsible Official:

District Manager, Chicago District.

Recommendation [3]:

Reinforce to delivery unit managers the importance of adhering to guidelines for properly securing relay mail, scanning packages and supervising delivery operations.

Management Response/Action Plan:

Management agrees with this recommendation.

Management will survey each unit to identify the location where relay mail is not secured and will work with property management to provide secure locations. The Chicago and Great Lakes Area Service team are working together with the Top 16 scanning opportunity stations to improve scanning in the Chicago district. Onsite field reviews are being conducted for audit scanning process compliance, troubleshooting technical issues as well as coaching and best practice sharing with local management. These field visits will be replicated throughout the Chicago District.

Target Implementation Date:

May 2016.

Responsible Official:

District Manager, Chicago District.

Recommendation [4]:

Fill vacant supervisor positions at delivery units within 6 months.

Management Response/Action Plan:

Management agrees with this recommendation.

The Chicago District complement committee holds weekly complement meetings to identify and address the filling of vacant positions. During FY 2016, twenty (20) supervisor positions have been filled and fifteen (15) supervisor vacancies remain. As vacancies become available they are filled.

Target Implementation Date:

June 2016.

Responsible Official:

District Manager, Chicago District.

Recommendation [5]:

Provide guidance to delivery unit management on the proper use of the End of Day report and communicating issues to district management for resolution.

Management Response/Action Plan:

Management agrees with this recommendation.

The SOP for the End of Day report (EOD) as well as the EOD supervisor checklist for closing and opening supervisors has been disseminated to the field and is available on the Operations Programs Support website. Guidance on the SOP is discussed on a monthly basis. Local Operation Centers (LOC) is monitoring the End of Day report (EOD) nightly, communicating with delivery personal on any technical or download issues. The Chicago District will go over the End of Day process with station management on the district's Tuesday Scanning Telecom. Given the findings, a compliance mechanism will be developed and put in place.

Target Implementation Date:

June 2016.

- 4 -

Responsible Official:

District Manager, Chicago District.

Please contact Gregory W. Johnson, District Manager, Chicago, via email or by phone at 312-983-8030, should you have any questions regarding this response.



for Jacqueline Krage Strako

cc: Sally K. Haring, Manager, Corporate Audit Response Management
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Edward F. Phelan, Jr., Vice President, Delivery Operations
Gregory W. Johnson, District Manager, Chicago



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