



February 24, 2023

Mr. Ivan D. Butts  
President  
National Association of Postal  
Supervisors  
1727 King Street, Suite 400  
Alexandria, VA 22314-2753

Dear Ivan:

As a matter of general interest, the Postal Service is updating the Mobile Delivery Device-Technical Refresh (MDD-TR) to enhance the functionality of the devices.

Release 7.70 includes the following:

New Features and Enhancements:

- Edit Book – Address Marker
- Hazard Alert Enhancement
- Battery Find Me
- eArrow Lock Application Access Control
- Scanner Lock Down
- New Progress User Interface
- Arrow Key Management Enhancement
- Unlock Doors Enhancement

No Change to User Interface:

- eArrow Lock Usage Tracking
- COA Baseline File Downloading
- COA Data Encryption
- SPM No Trigger Completion Time
- TR Configuration Management (Details not included in the service talk)
- Update S3 to Download Geo Shape File
- Force Sync Service (FSS) Enhancement
- Update S3 to download Geo Shape File from AWS

National implementation for the MDD-TR updates is scheduled to begin on February 27.

Additionally, in reference to the September 26, 2022, notification letter that was sent to you relating to updating the Mobile Delivery Device-Technical Refresh (MDD-TR) 7.60.

One of the new features introduced on the scanner was an arrow key management function that was established to improve key tracking and accountability. The proof-of-concept pilot sites where the arrow key accountability feature is being tested are the Brookland Post office in the Maryland District and the Preston King Post Office in the Virginia District.

The Postal Service plans to expand the arrow key testing to 13 offices within the Southern Area and 6 offices within the WestPac Area.

The arrow key management testing will begin at the 19 new sites on February 27.

We have enclosed the final draft copy of the MDD-TR Release 7.70 talking points and a list of the 19 additional sites where the arrow key accountability feature will be tested for your review.

Please contact Bruce Nicholson at 7773 if you have questions concerning this matter.

Sincerely,



James Lloyd  
Director  
Labor Relations Policies and Programs

Enclosures

## Arrow Key Management Pilot Sites

Site Name	Address	Zip Code	Finance Number
Lamar Park	4801 Everhart	Corpus Christi, TX 78411	482024
Portairs	4213 South Port Ave	Corpus Christi, TX 78415	482025
Richmond	5560 FM 1640 Richmond, TX 77469	77406/77407/77469	487570
Alice Post Office	401 E 2nd St	Alice, TX 78332	480145
Bay City	1309 Baywood Dr	Bay City, TX 77414	480590
Cleveland	1213 E Houston St	Cleveland, TX 77327	481830
Greens North	1503 Green Mark Dr	Houston, TX 77067	480036
Martin Luther King	9444 Cullen Blvd	Houston, TX 77051	480128
Memorial Park	10505 Town and Country Way	Houston, TX 77024	480184
Westbrae	10910 S Gessner	Houston, TX 77071	480381
Westbury	11805 Chimney Rock	Houston Tx 77035	481384
Medical Center	7205 Almeda	Houston Tx 77054	481374
Barrington	200 S BARRINGTON AVE	LOS ANGELES, CA 90049	054503
West LA	2180 WESTWOOD BLVD STE 1H	LOS ANGELES, CA 90025	054559
Rancho Park	11271 EXPOSITION BLVD FL 2	LOS ANGELES, CA 90064	054550
Palms	3751 MOTOR AVE	LOS ANGELES, CA 90034	054546
Rimpau	4040 W WASHINGTON BLVD FRNT	LOS ANGELES, CA 90019	054551
Hollywood	1615 WILCOX AVE	LOS ANGELES, CA 90028	054537

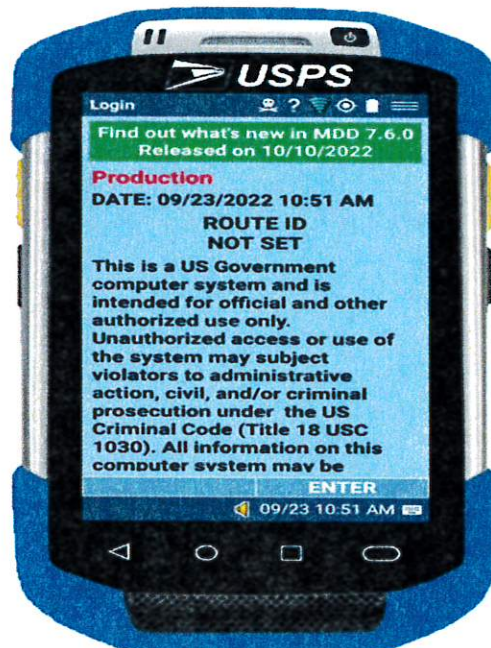
## Pilot: February 13 – 25, 2023 National Deployment – February 27, 2023

### New Features and Enhancements:

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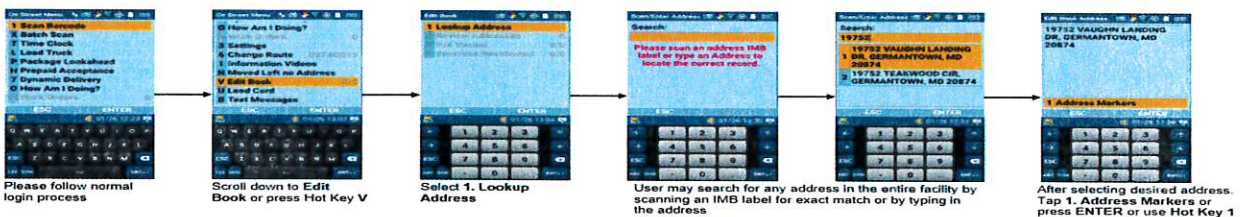
## EDIT Book-Address Marker

### Background

AMS has Address Marker indicators at each address. Two of the address markers are: Door Not Accessible (DNA) where a carrier cannot access the address to leave a package, and No Secure Location (NSL) where there is no secure place to leave a package. This enhancement to the MDD TR Edit Book workflow will allow carriers to update the Address Marker information.

### Changes on MDD TR

- An option has been added to the On Street Menu to allow carriers to set Address Marker DNA and NSL.
- The menu option is accessible under Edit Book (Hotkey V) and is called Lookup Address.
- Upon selecting the option, the carrier may scan the IMB label or manually enter the address. The DNA and NSL fields are editable by the carrier. The device will provide a confirmation screen to confirm the address marker update.
- Any Address Marker changes shall be reviewed by the supervisor prior to uploading to the AWS cloud.
- The Address Marker feature is currently not available to Rural Carriers.



## Hazard Alert Enhancement

### Background

The MDD TR device triggers a dog hazard alert to help keep carriers safe by alerting them to the presence of an animal in a specific area. At this time, the alert only notifies the carriers on the routes they are assigned. In addition, only supervisors can report hazards on carrier routes which sometimes would delay the hazard reporting into the systems.

Expanding the alert to trigger on all devices when the carrier breaks the geofence of the listed address will increase the safety of not only the carriers assigned to the route, but any personnel with a device including but not limited to Supervisors doing safety observations, delivering Express packages, and parcel runners on Static and Parcel Overflow routes.

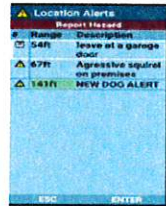
### Changes on MDD TR

- Carriers may now report dog alerts on their route and designate the alert as Temporary (expires in 10 days) or Permanent (no expiration date).

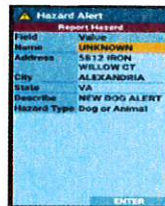
- The Hazard Alert/Delivery Instruction option will always be enabled on the main menu. After selecting the option, the MDD TR will display alerts if available and will allow the carrier to report a dog alert.
- The alerts will be triggered on the scanners when breaking the geofence of the alert, even though the alert is not reported for the users' login route.
- All User Role type employee, working in a field will be notified about any Hazard Alerts in the area and will be able to report a new Dog alert on a scanner and send to RIMS for consolidation.
- Rural carriers will be alerted to all hazards on route but will NOT have the capability to report new alerts.



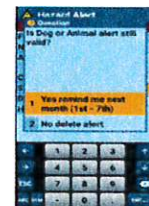
On Street Menu with option Z. Hazard Alert/Delivery Instruction available with total count of alerts presented



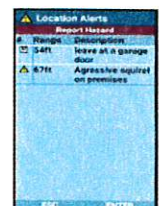
Upon breaking Geo fence at location with HZR, device will buzz and gives audible warning about Hazard alert in your area



Click on Alert in green to see details, Enter is available for the creator of this alert.



2 options appears. Select either option 1. to remind you next month Or option 2. Delete alert



Device goes back to the list of HZR alerts, where just suspended or deleted alert no longer listed

## Battery Find Me

### Background

This feature, originally launched in 2017 for the MDD devices, allows supervisors at local sites to log into RIMS and use the “Find MDD Battery” application to identify bad batteries to be replaced. When the “Find MDD Battery” feature is activated on a specific device, and the device is in the office cradle, the MDD TR will provide a visual indicator alerting the supervisor to the device containing the bad battery.

### Changes on MDD TR

- While inside the cradle, and after the device receives the “Find MDD Battery” replacement message from RIMS, the MDD TR will display the message detailed as below for 10 minutes. If the device is removed from the cradle within 10 minutes after activating “Find Device” from RIMS, the battery messages will be continuously displayed until the user presses “Enter.” After 10 minutes when scanner inside the cradle, the message will be discarded, and the scanner will revert to communication successfully screen.
  - **Red** – Battery needs to be replaced on this device. The present battery capacity is xxxmAh
  - **Yellow** – Battery should be replaced in approximately XX days. The present battery capacity is xxxmAh.
  - **Green** – Battery is OK.
- In order to alert the carriers for the battery approaching to replacement, two color coded messages will be presented after pressing “Enter” on the login screen:

- **Yellow** – Battery may start to show signs of degradation. You may experience reduced screen brightness, Alerts/Text Messaging and wireless scan uploading may be disabled toward the end of your shift. Ask your supervisor to order a battery.
- **Red** – Battery is BAD and in need of immediate replacement. As your supervisor to order a battery.

MDD Battery Locator (last known device association and battery information)

Note: Highlighted rows indicate devices with batteries that are greater than or equal to 425 Charge Cycles or less than or equal to 1300 Full Capacity and either no replacement battery has been shipped or 10 days have passed since shipment of the battery.

Battery ID	Device ID	Charge Cycle Range - Lower Limit	Upper Limit	Full Capacity Range - Lower Limit	Upper Limit	Charge Cycles	FULL CHARGE CAPACITY (MAH)	Date Shipped (ETHOS)	Tracking Number (ETHOS)	Order Date (ETHOS)	Find Device
5Y334376	22311 - LINCOLNIA	xxxxx0210xxxxxx P1315	0211A08792	20211022008792	07.89	425	2250				<input type="checkbox"/>
5Y334378	22311 - LINCOLNIA	xxxxx0210xxxxxx T2104	0084AC4502	20084022004508	07.89	425	2250				<input type="checkbox"/>

Battery Full Charge Capacity (MAH) shows if battery needs to be replaced.

Click on the box to select. Single or multiple devices can be selected.

After checking the box(s) "Find Device" button is enabled. Click on "Find Device" button to trigger the battery message on the device.

Find Device Status

Found status:  
Device was found in RIMS. Please check the status of device to make sure it is in the cradle. Status needs to be "Found" or "Not Found" (if Agency Configured).

Not Found status:  
Device was not found in cradle. Device is either not connected or not communicating to the cradle.

Device ID	Status
0211A08792	Found
0084AC4502	Not Found

Pop-up message is displayed in RIMS showing the status of each of the device that was triggered. Device needs to be in the cradle with good cradle connection for the device to show "Found" status. If a device is not in the cradle or it is not communicating in the cradle properly it will show a status of "Not Found".

- Note:
- Battery shall be replaced when its Full Charging Capacity (FCC) is at or below 2000mAh
  - Red – Battery needs to be replaced on this device. FCC < 2000mAh
  - Yellow – Battery Replacement needed in approximately XX days. 2000mAh < FCC <= 2250mAh
  - Green – Battery is OK. – FCC > 2250mAh

## eArrow Lock Application- access control (Limited locations)

### Background

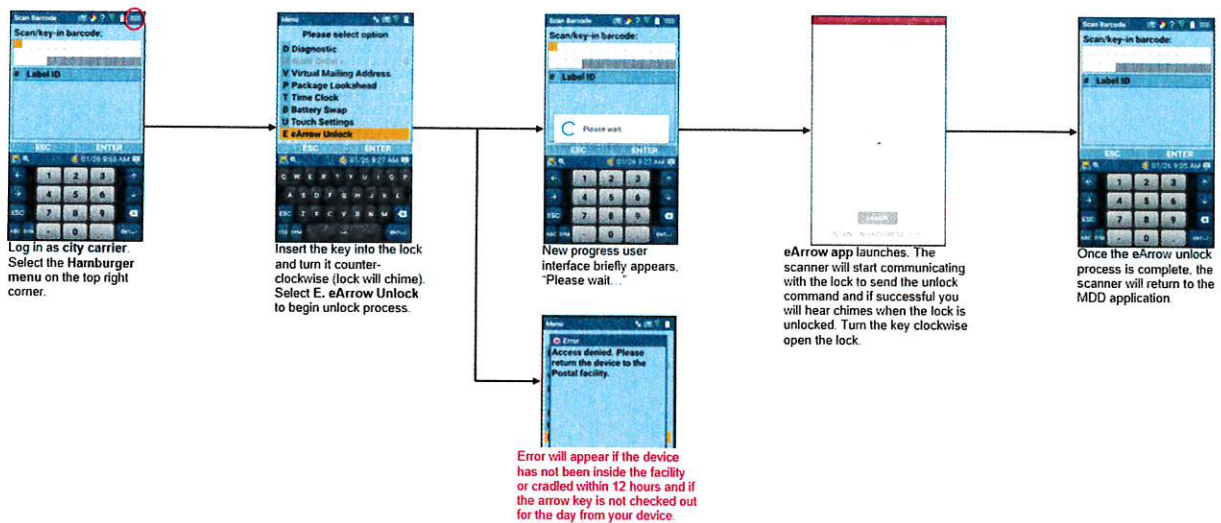
The eArrow unlock workflow has been updated to prevent any unauthorized user from accessing the eArrow unlock application. Condition checks are being added to the feature and if the conditions are not met, the MDD TR will prompt an error message and not allow the eArrow key application to be accessed.

### Changes on MDD TR

- During the eArrow unlock workflow, when the eArrow unlock process begins, the following condition checks are being verified in the background. If the conditions are not met, the MDD TR will prompt an error message and not allow the eArrow key application to be accessed.
    - The last date/time the scanner was inside the facility is within 12 hours
- OR
- The scanner has been cradled inside a postal facility within the last 12 hours

AND

- The arrow key for the route is checked out for the day if the “Arrow Key Management” feature is enabled.



## MDD TR Lockdown/Unlock (Limited location)

### Background

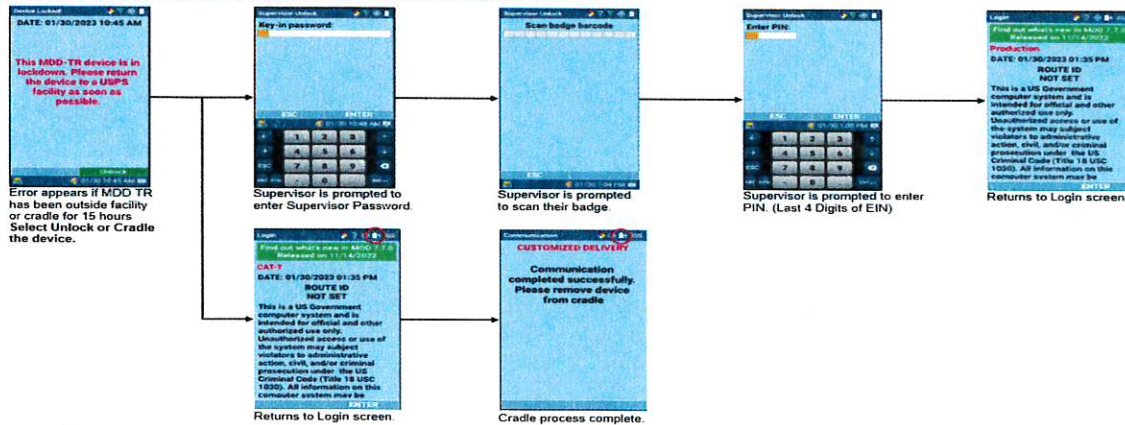
**This feature is only for devices that have eArrow and/or Unlock Doors functionality enabled.**

To prevent inappropriate and unauthorized usage of MDD TR to access the eArrow Lock and Unlock Doors applications, a lock down mechanism is introduced on the MDD TR scanners to make the scanner not operable if the scanner hasn't been returned to the office over a period.

### Changes on MDD TR

Throughout the day the MDD TR application checks if the device has returned to the facility and if it hasn't been returned for over 15 hours, the MDD TR will go into Lockdown mode. To unlock the device the carrier can either cradle the device into a cradle with power or ask the Supervisor to unlock it manually via the Unlock process.

**Note: Only for devices that have eArrow and/or Unlock Doors functionality enabled.**





# New Progress User Interface

## Background

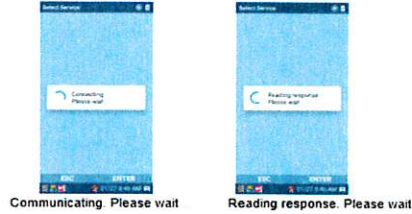
When waiting for an action on the device, the screen will display a message stating "Please wait" to alert the carrier the device is running in the background. Additional color coding is added to visually notify the user of the communication status such as busy, warning, and error.

A timeout feature has been added if the device is unable to communicate with the network. The device will not attempt communication if there is no network communication available.

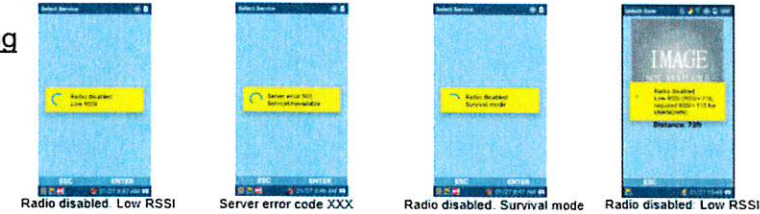
## Changes on MDD TR

- The new UI will appear whenever there is a long running process and with these specific server communications, which are triggered on user demand. For example, but not limited to:
  - PLA (when OTA manifest needed)
  - Dynamic Delivery (when catalog/manifest needs to be updated)
  - Unlock Doors
  - Arrow Key Receive/Return/Report/Look Up
  - Diagnostics - Test Communication
- Yellow (warning) and Red (error) communication messages will display for 2 seconds.

### White: Busy



### Yellow: Warning



### Red: Error



# Arrow Key Management (Pilot- Selected Offices only)

## Background

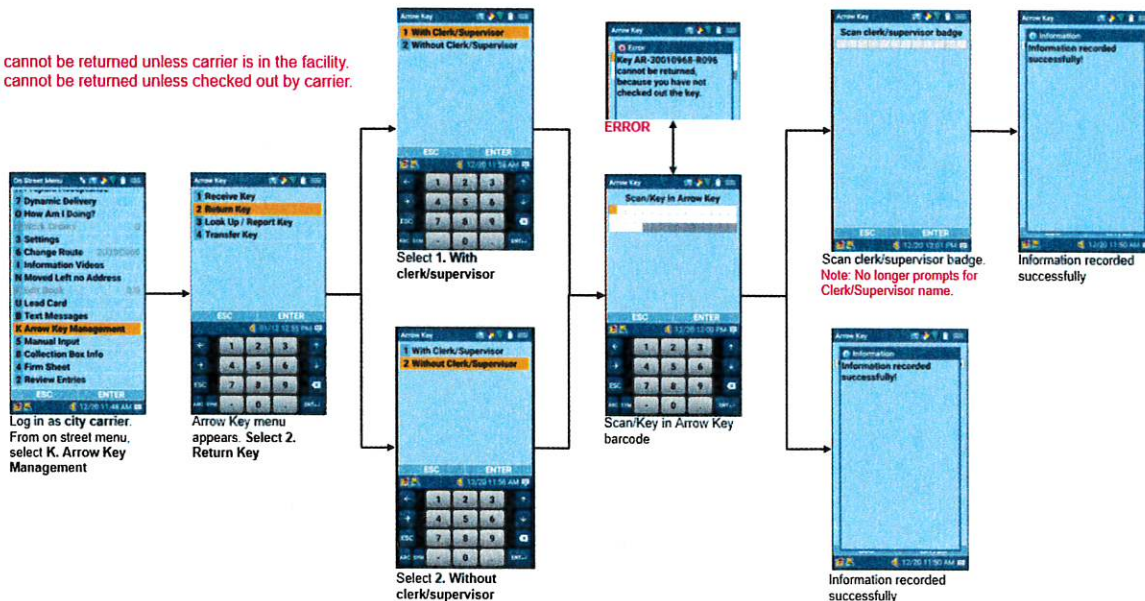
The OIG made the recommendation to create and maintain a nationwide Arrow key inventory. The inventory will make sure units reconcile their local inventory semiannually, ensure accountability, and leverage technology solutions in an effort to reduce risks associated with lost or stolen Arrow keys while enhancing the security of mail receptacles.

## Changes on MDD TR

- The MDD TR will be used daily to scan Arrow key barcodes for checking out/checking in Arrow keys.
- Clerks and Supervisors are no longer required to key in their name after badge scanning in the Receive Key and Return Key process.
- The MDD TR will not allow a key to be “Returned” if it is not “Checked Out/Received” by the carriers.
- The Look up and Report option have been combined. Scanning the key barcode is not required when looking up/reporting a key. Supervisors may view all keys that have been checked out, while carriers may only view the keys currently checked out under their EIN **on the day** with the most recent on top. **The key list for the Supervisors includes the carriers’ name and the checkout time. The list for the carriers includes the key barcode and the checkout time, both with the most recent ones on top.**
- Keys may be transferred from one employee to another through the Key Transfer option. **This option is only allowed on the scanners which have keys checked out for the day.** The process requires the scanning of the employee badge for-the employee receiving the key.

**Note:**

- Key cannot be returned unless carrier is in the facility.
- Key cannot be returned unless checked out by carrier.



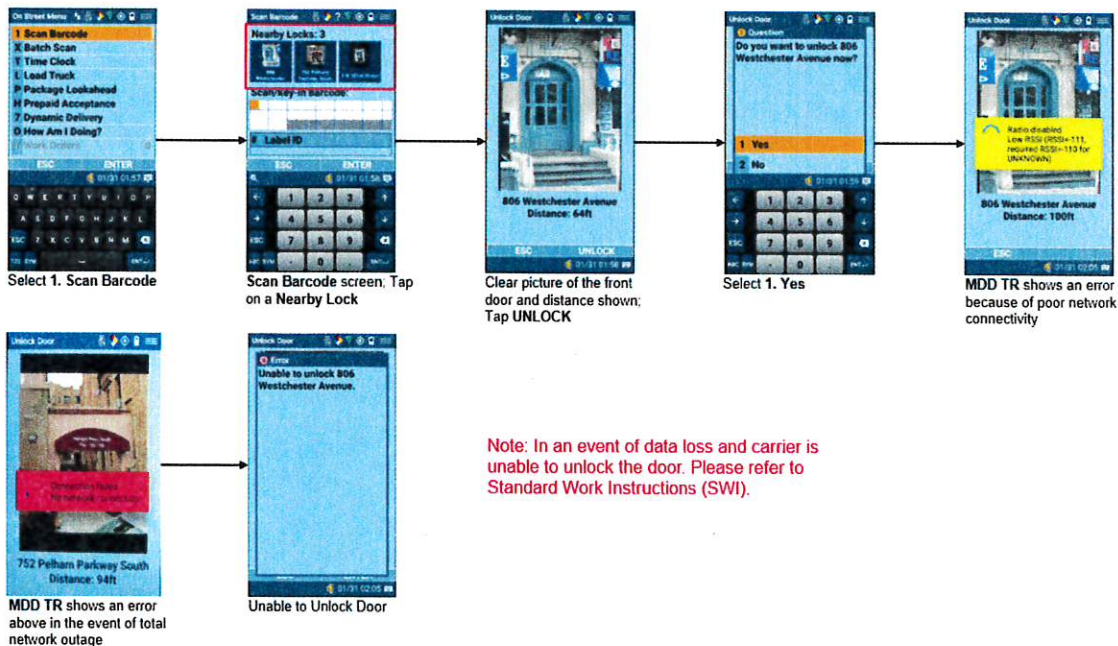
# Unlock Doors Enhancement (Pilot- Selected Offices only)

## Background

In MDD TR Release 7.60, the Unlock Doors feature was added to the device. This enhancement will allow the device to display a picture of the door/lock along with the location address to remind the carriers for the nearby electrical locks and to help them to identify the correct door to be accessed.

## Changes on MDD TR

- The device will now display up to 3 door icons on top of the Scan Barcode screen. The images will display the lock's address and will be in closest order from Left to Right.
- The images of the nearby locks will change based on carrier's movement.
- The carrier must be within 500 feet of the lock for the image to display on the Scan Barcode screen.
- When scanning, the images will disappear to not interfere with the regular scan barcode workflow.
- The current distance to the lock will be displayed on the Unlock Details screen, before an unlock request and if the unlock fails.
- The image of the lock will be removed after the door is successfully opened.



## **eArrow Lock Usage Tracking- No Change to User Interface**

### **Background**

There has been a steady increase of robberies associated with forcibly taking Arrow keys to steal mail from collection boxes. eArrow locks are being installed in collection/other boxes to add another level of security and will provide daily visibility of the locks being used.

### **Changes on MDD TR**

- The MDD TR will collect and send the following data related to eArrow lock usage to RIMS:
  - RouteID
  - SYSID
  - Date/Time lock was accessed
  - Employee EIN who accessed the lock
  - MDD TR device serial number
  - eArrow lock serial number
  - Latitude and Longitude where lock was opened

## **COA Baseline File Downloading- No Change to User Interface**

### **Background**

In the current MDD TR production software R7.66, the COA baseline data file is downloaded from RIMS. The large baseline file caused a significant increase in network traffic to RIMS and impacted RIMS performance. To avoid the large file download from RIMS an alternative download mechanism needs to be developed on the TR scanners.

### **Changes on MDD TR**

- The MDD TR will download the COA baseline file from the Amazon Web Services (AWS) servers.
- The COA Delta file will continue to be downloaded from RIMS.

## **COA Data Encryption- No Change to User Interface**

### **Background**

Because of the sensitive data captured on the MDD TR device, the information will be encrypted when being transmitted and at rest.

### **Changes on MDD TR**

- The MDD TR will encrypt the COA data after downloaded from AWS and RIMS.
- The MDD TR will use HTTPS when requesting COA data from AWS and RIMS to ensure the data is in encrypted mode when transmitting.
- The MDD TR will encrypt the MLNA data after received from the user.
- The MDD TR will upload the MLNA data with HTTPS to AWS to ensure the data is in encrypted mode when transmitting.

## TR Configuration Management- **No Change to User Interface**

### Background

Over time, the number of APKs has grown as new features have been added to the MDD TR software. It has been time consuming to ensure all APKs are updated and tested to ensure the device functions as expected. This change will consolidate all APKs into one so the features may be managed and tested more efficiently.

### Changes on MDD TR

- All APKs have been consolidated into a single APK for software deployment on the MDD TR scanners.
- The MDD TR will be able to:
  - Keep the existing configuration settings if no update from the new software.
  - Allow the existing configuration setting to be updated if the values are different between the old and new MDD TR software.
  - Append/Add new configuration settings into Registry.ini.
- The MDDConfig.xml file will no longer be present on the scanner.

## SPM No Trigger Completion Time- **No Change to User Interface**

### Background

With the implementation of efforts to reduce the SPM no trigger rate, the no trigger rate has successfully been reduced. The opportunity exists to reduce the number of SPM Sampling requests sent to the devices to provide a possible financial savings. This change will add a timer to track the time in minutes for the carriers to complete the SPM Sampling request transaction and will be used to determine total time spent for completion of SPM transactions to calculate potential savings.

### Changes on MDD TR

- The MDD TR will record the starting and ending timestamps of the SPM Sampling Request transaction.
- The MDD TR will track StartTime and End Time for Geo Based and Scan Based sample requests.
- The data that will be sent to RIMS will be:
  - DeviceID
  - Sample Request ID
  - Sample Request Type
  - Route ID
  - SYSID
  - Collection Box Label ID
  - Start Date and Time

End Date and Time