FleetLink

Route Management

User Guide

Version 23.2

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Chapter 1. Introduction

In this chapter

About This Document

This document is intended as an instructional aid for users of the Route Management app. The material presented here introduces the app and explains its general concepts, tasks, and workflows.

Route Management is an evolving app, with new features and enhancements introduced with each new version. As such, your installation may vary somewhat from the content presented in this guide in terms of appearance and functionality.

> **ⓘ NOTE: Latest available documents**
>
> Always refer to the most recent version of the **FleetLink Route Management User Guide** (full manual) for information concerning rules for importing data into your system.

About Route Management

Route Management is a web-based solution that supports dispatch operations for:

- Residential waste collection service, cart delivery and maintenance
- Commercial waste collection service and container delivery (dumpsters)
- Industrial (roll-off) waste collection service and container delivery
- Graffiti cleaning service
- Street sweeping service

Route Management takes the theory of improving route efficiencies and combines that with FleetLink Mobile's real-time fleet tracking and turn-by-turn driver direction to ensure that vehicles actually use those routes that minimize the distance, the amount of fuel used, or the amount of time required to accomplish their assignments.

Route Management can be deployed as a standalone dispatch solution or integrated with your existing back-office system to manage your routing. The app features the capability to import all the necessary data in comma-separated-value (CSV) files to populate your database and get you started quickly and easily.

Route Management supports full integration with customers' back-office customer care and billing systems, enabling communication and synchronization between the systems, and supporting special considerations such as rates for usage of shared containers.

Using Route Management, you can:

- Create and maintain routes that will be used to deliver services
- Assign routes to trucks and drivers and verify route completion
- Automatically dispatch routes daily for all types of services
- Initiate wireless delivery of electronic route sheets to the FleetLink Mobile devices
- Ensure that the services have been delivered (service verification)
- Manage customer subscriptions
- Generate routes based on geozones
- Re-assign service stops to different trucks
- Create extras and on-demand stops
- Investigate incidents and ensure driver safety
- Maintain container inventory, subscriptions, and status
- Maintain lists of trucks and drivers required to provide the services
- Import route data from a CSV file
- Export data to support reporting and analysis.

Getting to Know Route Management

Logging In

This section describes how to log in to your Route Management app.

To log in:

1. Open a browser window and navigate to the URL provided by your system administrator. Your organization's FleetMind landing page is displayed.
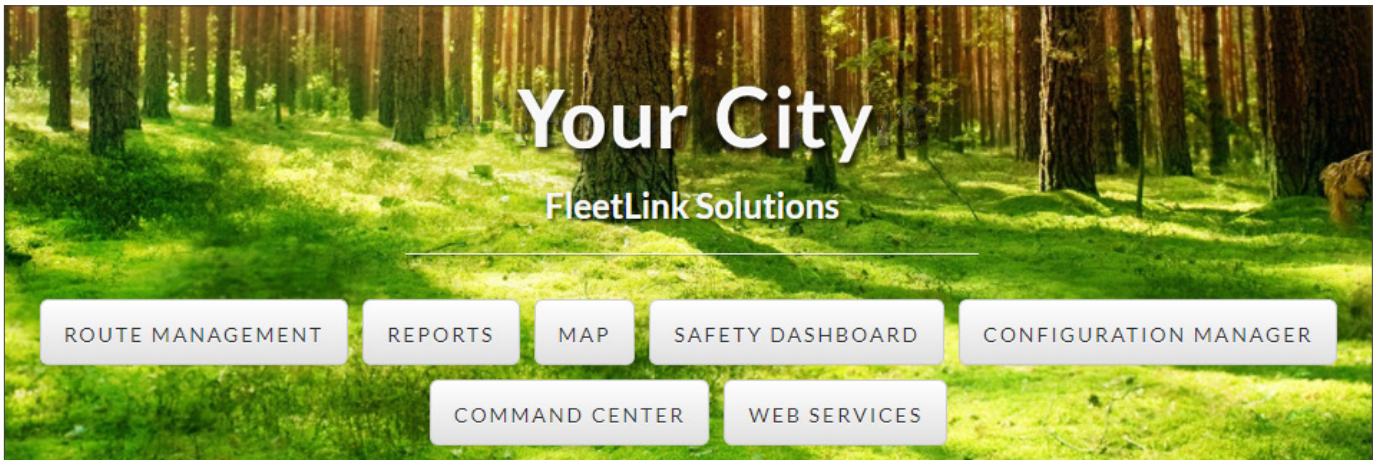
2. Click **Route Management**. The Safe Fleet login page is displayed.

> **ℹ NOTE: Login credentials**
>
> At the time of deployment, your FleetMind system administrator adds users to the system. The system sends a welcome email to each new user, inviting them to activate their account.
>
> Your login credentials are:
>
> - Email address associated with your FleetMind user account
> - Password that you created after visiting the link in the welcome email.
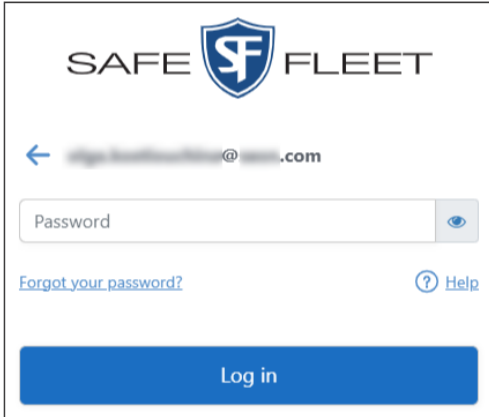
3. Select the **Remember my account** checkbox if you want the system to prepopulate your email address on your subsequent logins.

> **ℹ NOTE: Getting help**
>
> To find out more about the single sign-on process, click the Help link. You have to be logged in to Safe Fleet Community to view the help page.

4. Enter your email address, then click **Next**. The password page is displayed.

5. Enter your password, and then click **Log in**. **NOTE**: If you don't remember your password, click the **Forgot your password?** link, then follow the system prompts. The Route Management app is launched and its home page is displayed.
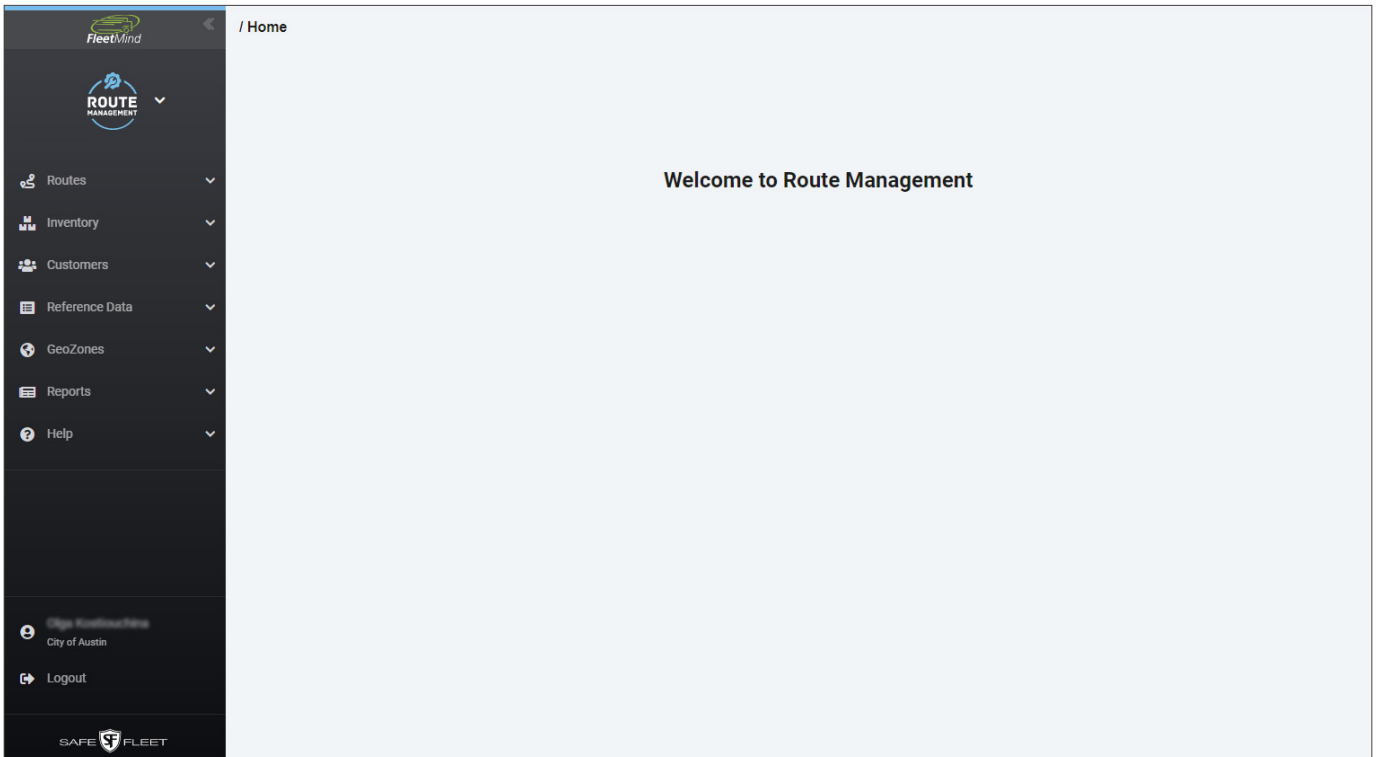
User Interface Overview

The Route Management app's user interface consists of two main components: navigation side bar and application window.

Navigation Side Bar

The collapsible left-hand side bar remains displayed at all times and contains the following elements:

1. The collapsible app selection panel, where you can switch between available apps. When the panel is expanded, the currently active app is displayed at the top.

2. The context-sensitive side bar that provides access to menus relevant to the app you are currently using and the menu item you click, for example:
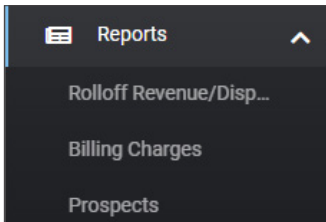
3. The user control panel, where you can view your user name, switch between divisions and use the **Logout** button to exit the app.

4. The information panel that displays the software release version and build information.
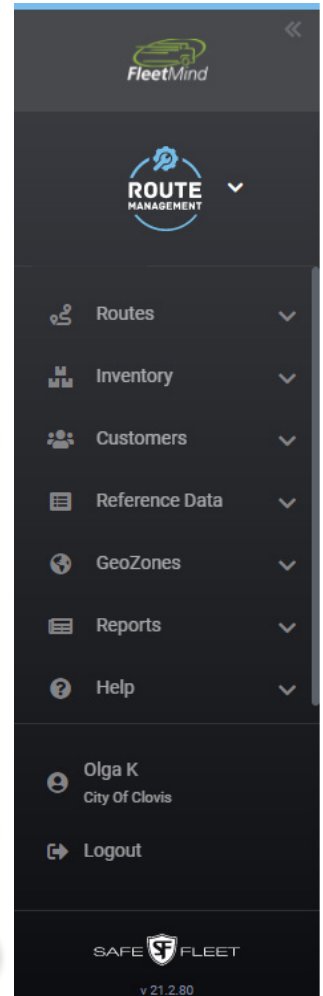
Application Window

Once you select an option from any of the menus, the application window is populated with relevant data.

Typically, the information is formatted as a table with controls available for searching, sorting, and filtering it. Other controls are provided for performing additional tasks, depending on the information you are viewing.

Software Navigation

Expanding or Collapsing the Side Bar

By default the side bar is expanded but you can collapse it to obtain more screen real estate for the contents displayed in the application window. To expand or collapse the side bar, click the double arrow icon at its top right corner.
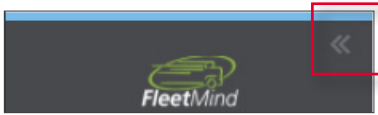
Switching Between Apps

To switch between apps when the app selection panel is collapsed, click the arrow displayed beside the app name to expand the panel, and then select the desired app.
The screen is refreshed. The name of the app you selected is displayed at the top of the collapsed app selection panel, and the relevant menu options are displayed in the menu panel.
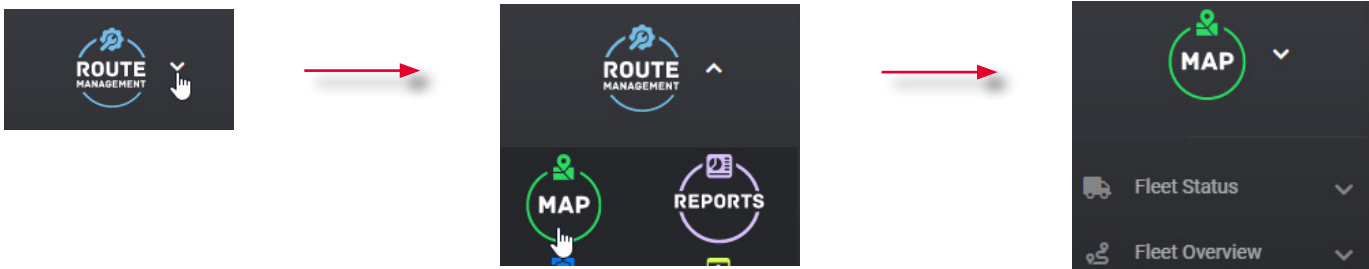
Switching Between Pages

To navigate between pages you can:

- Use your browser's back and forward buttons
- Click the links displayed in the breadcrumbs area in the top left corner under the main menu.

Organizing Information

Typically, the list of results displayed in the application window is a table that can be sorted and filtered to pinpoint exactly what you need.

Sorting information

- To sort the displayed results in ascending order (from lowest value to highest value, or from A to Z) click the desired column header. The list is rearranged and an up arrow appears beside the header.
- To sort the displayed results in descending order (from highest value to lowest value, or from Z to A) click the desired column header twice. The list is rearranged and a down arrow appears beside the header.

Filtering information

To filter the displayed results, start typing the relevant words in the search field of the desired column header. The system displays all the results that contain words that you typed.

Accessing item details

Many items displayed in the application window's tables are clickable links that take you to the relevant page. For example, when you click the number that appears in the **Route** column on the today's routes page, you are taken to the corresponding **Edit Route** page.

Setting up Route Management

As is the case with any software app, it is the integrity of the data entered into a system that determines its level of success (or failure).

Data preparation process includes planning, preparing for, and performing the data migration from your existing back office/ dispatch system to Route Management.

Route Management features data import capabilities that can give you a head start when setting up your system, thus minimizing the need for time-consuming manual data entry and its inherent potential for error.

In addition, FleetMind offers value-added assistance with migration of your data. Using data migration tools, FleetMind can combine your imported data and manipulate it for use in Route Management.

Data preparation involves two phases:

1. **Initial Setup**: This phase begins immediately, and involves assembling the data from your current back-office/ dispatch system and migrating it to Route Management, defining the necessary data elements (reference data) used by the app, and generating your routes.

2. **Optimizing Route Sequencing using Vehicular Data**: This phase occurs after your deployment has been in place long enough (usually within two weeks). Its goal is to collect "real-world" data using FleetLink Mobile, analyze the data using FleetLink Reports, and make the necessary improvements to the sequencing of your routes.

Phase 1 - Initial Setup

Using Location Reference Files

Using FleetMind-Generated Location Reference File

FleetMind can provide, as a value-added extra, a service that generates a reference file that increases the reliability of a cart/container's starting point (latitude and longitude). This enhanced level of accuracy may have a significant impact on the optimization of your route(s), as the coordinates for delivery of a container (e.g., curb) may differ significantly from those in which it is serviced (e.g., alley).

If the optimal servicing coordinates cannot be determined easily, then the property centroid may be used as a reference. These coordinates can be adjusted later, as required. Route Management provides options that will update the container's coordinates and other associated data (RFID, serial number) when the lift is performed.

Using Company-Generated Location/Inventory Reference File

The source of this information is your current back-office/dispatch system, and will include the types of material, container location, and container size.

A combination of this data is used to establish the service codes master list. Where walk-up service is provided, driver notes indicating the container's location (curb, alley, back yard) can be included in the call information on the FleetLink Mobile unit.

Carts/containers have associated serial numbers and RFIDs, usually assigned by the manufacturer providing their delivery. In Route Management the RFID database can be rebuilt based on the data collected during lifts.

Preparing Reference and Combined Data

Reference data is specific to your organization. It defines the properties for your business and represents information that is available for use by all routes in your system.

Populating Route Management with your reference data is the starting point for your project. The most efficient way to do this is to import a comma-separated-values (CSV) file that you have prepared off-line (or have generated using your back-office system or other software) and formatted according to the criteria defined for each type of data.

For more information, see *Appendix 1. Reference Data*.

> ℹ **NOTE: Order of importing data**
>
> All reference data must be created/imported into the system before you import any combined data, which includes assignment-specific details such as containers, customer locations, and services.

Combined data consists of routes and stops reference data, and inventory reference data. Any data item in the combined data that corresponds to a reference data element must first be defined in the Route Management's reference data prior to import; otherwise, errors will be generated stating what is missing and needs to be added.

For more information, see *Appendix 2. Combined and Geozone Data.*

Creating or Importing Geozones

Geozones are user-defined geographical zones that can be used for a variety of purposes, including shipping, taxation, and route management.

Geozones play an important role in Route Management. They provide a convenient graphic representation of your operating territory, and can used by the system to create your routes and rebuild them as you add stops or fine-tune property coordinates.

If your current dispatch system uses geozone files, you can import them into Route Management as WKT (well-known text) files. Alternatively, you may be able to acquire geozone files or city street geometry/Geographic Information System (GIS) data through your local municipal government offices. Once you have imported geozones, you can edit them as required. The app's geozone management features enable you to generate routes, populating them with assignments whose property coordinates are within the defined area.

For more information, see *Chapter 5. Managing Geozones*.

> **ⓘ NOTE: Route sequencing**
>
> Generated routes are not optimally sequenced. The app provides a feature that will sequence the routes based on the truck breadcrumbs. Note, however, that such sequencing will yield consecutive stops on alternating sides of the street. Fine tuning of your route sequencing can be done easily after your new system has been in place for a sufficient time to perform a meaningful data analysis. For more information, see *Resequencing and Optimizing Routes*.

Generating Routes from Geozones

Once you have created or imported geozones, you can generate routes in Route Management, populating them with assignments whose property coordinates are within the defined area. You can then edit them to define the profile for the first route (for example, container types, list of building categories, list of services) and reuse the profile for subsequent routes. By doing so, you can quickly regenerate the entire suite of geozone-derived routes.

For more information, see *Generating Routes from Geozones* and *Editing Routes Based on Geozones*.

Phase 2 - Optimizing Route Sequencing Using Vehicular Data

Resequencing Based on Driver's Execution of Route

Route Management provides a mechanism that helps you edit and save the sequence of a route, for example, as it has been executed by the driver. This feature is accessible from the **Edit Route** page.

> **ⓘ NOTE: Real route data is important!**
>
> In order for the route optimization mechanism to yield effective results, the driver must be diligent, ensuring that lifts are recorded for the correct address.

For more information about resequencing and optimizing routes, see *Resequencing and Optimizing Routes*.

Reviewing Historical Breadcrumb Data using FleetLink Map

> **ⓘ NOTE: How to use breadcrumb data**
>
> The success of this procedure is based on the assumption that the driver has selected the route he was working on at logon. Otherwise, for each day you will need to identify which truck actually ran each route.

The FleetLink Map app's breadcrumb data enables you to identify a specific day that corresponds to how a route should be run. Using FleetLink Reports for the desired truck and day, you can export this data to a CSV file and, in turn, import it into Route Management.

Options for refining your route sequencing using FleetLink Map include:

- Identifying route segments based on start and end addresses
- Matching property centroids to closest driver breadcrumb.

Option 1. Identify Route Segments based on Start and End Addresses

- A route can be broken down into a series of street segments, where a segment represents an uninterrupted list of addresses on the same street until a turn is made onto a new street.
- By determining the addresses at the beginning and end of the street segment, you can establish whether they are odd or even addresses, and in which direction the sequencing needs to be established—low to high or high to low.
- By establishing the latitude and longitude of each new street block at the point where the truck turned, you can get the

starting and ending addresses for each street segment from the Telogis NAVTEQ data.

- Once the start and end addresses of each street segment have been established, along with the odd/even and increasing/decreasing civic numbers, you can sequence every stop within each street segment, reviewing each entry one at a time based on the address and not the latitude and longitude.

Option 2. Match Property Centroids to Closest Driver Breadcrumb

- Matching is done based on the property centroid located closest to the breadcrumb.
- The breadcrumb sequence is used to assign a sequence number to every stop in the route.
- Stops that cannot be matched are given a sequence number of 0 or 1, and thus flagged for review.

Chapter 2. Managing Routes

In this chapter

About This Chapter

This chapter describes the route-related tasks you can perform in Route Management. All the tasks in this chapter are performed from the **Routes** menu, however, due to the close inter-dependency of the various types of data involved in route management, you may find yourself navigating back and forth between various other app menus.

Overview of Essential Route Tasks

This section provides a brief overview of the more common route-related tasks. For information on how to add routes and stops, see the ***Adding Routes and Stops*** section.

Viewing Today's Routes

You can view the list of today's routes (and lists for each of the next 7 days) and check the route completion progress as well as access a number of essential daily tasks from that page.

Dispatching Routes

Routes can be dispatched manually or automatically. The automatic dispatch is configured by FleetMind Customer Support and typically, for permanent recurring routes, the system dispatches routes at 18:00 local time by default, but this can be adjusted depending on your preferences.

Reassigning and Transferring Routes and Stops

You can permanently or temporarily reassign regular routes to trucks other than originally assigned in case of truck breakdown or scheduled maintenance. You can also transfer routes to temporary routes, or transfer stops from one regular route to another when the excessive workload or other circumstances prevent timely route completion.

Rescheduling Routes

Routes can be rescheduled to different dates when necessary, for example, to accommodate a holiday schedule. You can reschedule routes on the **Edit Route** page. See step **3** of the ***Editing Routes*** procedure.

Editing Positions of Containers

Containers associated with customer locations are displayed on maps throughout the app. You can reposition each container to improve accuracy.

Resequencing and Optimizing Routes

To improve route efficiency, you can change the sequence of route stops using the historical data that exists in the system. If you purchased the route optimization solution, you can also optimize routes with the help of the third-party software that analyzes route attributes and creates an optimal stop sequence.

Working with Routes

Once the system is populated with routes and stops, administrators, dispatchers and supervisors can perform a variety of daily and occasional tasks related to the management of routes and stops to ensure that the services are delivered to customers as scheduled. This section describes the most frequent route tasks.

Searching and Viewing All Routes

The information about all routes currently existing in your system is displayed on the **Search Routes and Stops** page.

To view the list of routes, select the **Search Routes and Stops** option from the **Routes** menu. The **Search Routes and Stops** page is displayed. By default, the displayed list includes all routes that exist in the system.

If needed, you can refine the list as follows:

- Enter/select the desired values in the fields available at the top of the page, and then click **Search**.
- To sort the list in the ascending or descending order, click the desired column heading once or twice, respectively.
- To filter the list, start typing in the column of interest. As you type, the list is updated with matching results.

/ **Home** / Routes / **Search Routes and Stops**

Operating Department	Route Name	Truck	Work Group	Supervisor
--All				--All

[Q Search] [Save All] [Show Conflicts] [Show Geozone/Path]

	Route Name	Stop Count	Modified	Truck	Work Group	Service Date	Frequency	M...	Operating De...	Disable Automatic Dispatch	Update Geolocation	Update RFID	Update Serial #	
	01may	4	2023-05-24 12:31:00		CITY	2023-05-01 00:00:00	Daily	G...	Regular service	false	☐	☐	☐	✖
	05may	0	2023-05-27 23:00:18	40111		2023-05-05 00:00:00	Daily	G...	Regular service	false	☐	☐	☐	✖
	101	627	2023-06-05 23:02:17	31019		2018-12-16 00:00:00	Daily	G...	Regular service	false	☐	☐	☐	✖
	102	1	2023-06-04 23:00:53	40047		2018-12-09 10:00:00	Monday	G...	Regular service	false	☐	☐	☐	✖
	104	0	2023-06-04 23:00:30	31019		2018-12-08 08:00:00	Monday	S...	Regular service	false	☐	☐	☐	✖
	104-WINTER	0	2021-09-28 23:00:49			2021-04-19 00:00:00	Wednesday	G...	Regular service	false	☑	☑	☑	✖
	105	1027	2023-04-16 23:00:07			2021-05-12 14:00:00	Monday EOW	G...	Regular service	true	☐	☐	☐	✖
	106	1436	2023-06-04 23:01:32	31009		2018-12-07 16:00:00	Monday	G...	Regular service	false	☐	☐	☐	✖
	107	405	2023-05-31 08:54:17	40113		2021-10-27 00:00:00	Wednesday	G...	Cart maintena...	false	☐	☐	☐	✖
	108	2147	2023-06-05 23:02:17	31009		2019-05-26 00:00:00	Daily	G...	Regular service	false	☐	☐	☐	✖
	108Temp	0	2023-05-02 13:34:45	31009		2023-05-02 00:00:00	Once	G...	Regular service	false	☐	☐	☐	✖
⚠	11	292	2023-06-04 23:02:20	40047		2018-12-07 00:00:00	Monday	G...	Regular service	false	☐	☐	☐	✖
🚫	12	126	2023-06-05 23:00:30	40111	CITY	2018-12-10 08:00:00	Daily	G...	Regular service	false	☐	☐	☐	✖
⚠	13	126	2023-06-05 23:01:44	40111		2019-06-04 07:00:00	Daily	G...	Regular service	false	☐	☐	☐	✖
⚠	14	117	2023-06-05 23:01:44	31009		2018-12-08 16:00:00	Daily	G...	Regular service	false	☐	☐	☐	✖
⚠	15	120	2023-06-01 23:01:30	40047		2018-12-09 01:00:00	Friday	G...	Regular service	false	☐	☐	☐	✖
	16	0	2022-12-05 23:00:20	40038		2018-12-07 02:00:00	Tuesday	G...	Regular service	true	☐	☑	☑	✖

Tasks You Can Perform Directly on the Search Routes and Stops Page

To...	Do this...
Adjust the container information settings	Select or deselect the checkboxes in the **Update Geolocation**, **Update RFID**, and **Update Serial #** columns as needed for each route of interest, then click the **Save All** button.
	ⓘ NOTE: About container information settings The initial settings on how the container information is handled on each route are defined when a route is first added to the system. When the checkboxes in the **Update Geolocation**, **Update RFID**, and **Update Serial #** columns are selected, the system updates the container information once the lift is performed and a confirmation of the lift is received.
Delete routes	Find the routes of interest on the list, and then click the cross icon ✖ in the rightmost column of the corresponding rows. **NOTE**: If you think you might need to recreate this route in the future, record the route parameters before deleting it. The following parameters are important: route name, frequency, truck, material, work group (if applicable).
Display information about route conflicts	Click the **Show Conflicts** button, then click the header of the displayed **Conflicts** column to bring the routes with existing conflicts to the top of the list. The number link appearing in the **Conflicts** column corresponds to the number of conflicting routes. To resolve conflicts, follow the ***Resolving Route Conflicts*** procedure.

To...	Do this...
Display information about route geozones and paths	Click the **Show Geozone/Path** button, then click the header of the displayed **Has GeoZone** or **Has Path** columns to bring the routes with existing geozones to the top of the list. To edit a route's geozone, click the link for the route of interest in the **Has GeoZone** column, and follow the relevant steps of the ***Editing Geozones*** procedure.

Pages You Can Access from the Search Results Page

To access the...	Do this...
Edit Route page where you can edit a route of interest.	Click the desired route name in the **Route Name** column, then follow the relevant steps of the ***Editing Routes*** procedure.
Edit Route Sequence page where you can adjust the stop sequence for a route of interest.	Find a route whose sequence you want to change, and click inside the table cell in the leftmost column of the corresponding row, then follow the appropriate resequencing procedure described in the ***Resequencing and Optimizing Routes*** section. ⓘ **NOTE: Route sequence** Icons displayed in the leftmost column provide information about route optimization that took place in the past ✅ and route changes since the last optimization procedure ⚠️. **TIP**: You can click inside the leftmost column's table cells even if there are no icons displayed in those cells.

Managing Waste Collection Routes

This section describes how you can view, dispatch, edit, and reassign waste collection routes.

Viewing Today's Waste Collection Routes

The today's routes page is a starting point for a number of daily route management tasks.

On this page you can:

- Check the route completion progress
- Dispatch routes
- Assign routes to different trucks
- Send messages to drivers
- Add and use temporary routes
- Navigate to other pages where you can:
  - Transfer stops to different routes
  - Edit or resequence routes

To view the list of today's waste collection routes:

1. Go to the **Routes** menu and select the **Routes: D-Mon-XXh - D-Mon-XXh** option where the date/month/hour information is that of your current date and timeframe. The list of today's residential routes for all operating departments is displayed by default. **NOTE**: A maximum of 5000 routes can be displayed at one time.

2. To display the list for a different service type and/or operating department, select the desired radio button and make a selection from the **Operating Department** drop-down list, then click **Search**. The route list is updated.

3. To view route lists for other days:

   i. Select the day of the week other than today from the **Check Routes For** drop-down list. **NOTE**: Any day of the week that you select is the future day, even if it is located above the today's day on the list.

   ii. Select a different operating department from the **Operating Department** drop-down list.

   iii. Select one of the available radio buttons for the desired line of business.

   iv. Click **Search**.

4. Sort and filter the list as needed using the column headers.

Tasks You Can Perform Directly on the Today's Routes Page

To...	Do this...
Check the route completion progress	Go to the **Complete** column and check the displayed colored bar with the percentage of completion and the total number of completed stops.
Dispatch routes	Follow the steps of the **Dispatching Waste Collection Routes** procedure.
Permanently or temporarily assign a route to a different truck	Follow the relevant steps of the **Reassigning Waste Collection Routes** procedure.
Send messages to the truck drivers	Follow the relevant steps of the **Sending Messages to Truck Drivers** procedure.
Review the list of cart delivery routes and related container information	Click the **Cart Delivery** button, then review the information in the displayed **Cart Delivery** window. **NOTE**: This window lists information for today's date only.
Export the container information for today's cart delivery routes	Click the **Cart Delivery** button, then select the **Export to PDF** or **Export to CSV** button as needed and follow system prompts to save the file to a preferred location on your PC.
Add a temporary route	Follow the steps of the **Creating a temporary route** procedure.
Transfer a route to a temporary route	Follow the steps of the **Transferring Routes to Temporary Routes** section.

Pages You Can Access from the Today's Routes Page

To access the...	Do this...
Edit Route Sequence page where you can adjust the stop sequence for a route of interest	Find a route that you want to resequence, then click inside the table cell in the leftmost column of the corresponding row (it may or may not contain an icon), and follow the appropriate resequencing procedure described in the **Resequencing and Optimizing Routes** section.

To access the...	Do this...
Transfer stops page where you can transfer select stops to a different route	• For all stops, click the link in the **Incomplete** column, then follow the relevant steps of the *Transferring Select Stops to a Different Route* procedure. • For cart delivery stops, click the **Cart Delivery** button, find the route of interest, then click the **Partition Bins** link and follow the relevant steps of the *Transferring Select Stops to a Different Route* procedure.
Edit Route page where you can edit a route of interest	Click the desired route name in the **Route Name** column, then follow the *Editing Routes* procedure.

Dispatching Waste Collection Routes

Routes can be dispatched manually or automatically. The automatic dispatch is configured by FleetMind Customer Support and typically, for permanent recurring routes, the system dispatches routes at 18:00 local time by default but the time can be adjusted on request.

To dispatch routes manually:

1. Open the today's route page from the **Routes** menu.

2. Select one or more checkboxes for routes of interest in the **Select Routes** column. Alternatively, to select all routes, select the checkbox in the header of the **Select Routes** column.

3. Click the **Dispatch Now** button, then click **Yes** in the displayed **Dispatch Routes** dialog box. A confirmation message is displayed.

4. Click **OK** to close the message. The status of the selected route(s) in the **Status** column is updated to **Dispatched**.

Reassigning Waste Collection Routes

This section describes how you can reassign waste collection routes to other routes permanently or temporarily. You may want to reassign routes for a variety of reasons, for example, truck breakdowns, driver shortage, eliminating routes, or holiday scheduling.

Reassigning Routes Permanently

You can permanently reassign waste collection routes from either the **Edit Route** page or the today's routes page.

To reassign from the Edit Route page:

1. Navigate to the **Edit Route** page for the route of interest.

2. Click the **Truck** button. The drop-down list of trucks is displayed.
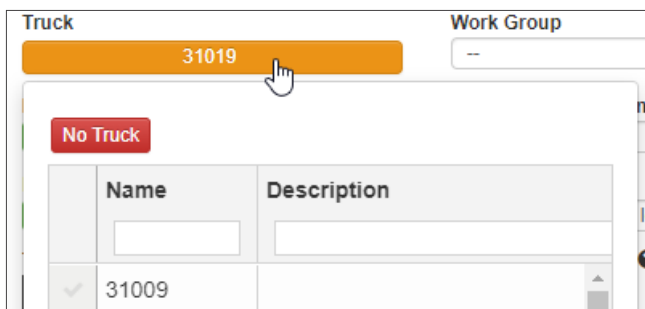
3. Select the checkbox beside the desired truck.

4. Click **Save**.

To reassign from the today's routes page:

1. Open the today's routes page from the **Routes** menu.
2. Click the truck number for the desired route in the Truck column, then click it again to display the drop-down list.

3. Select the desired truck from the list, then click away.
4. Dispatch the route as needed.

Reassigning Routes Temporarily

You can temporarily reassign waste collection routes from either the **Edit Route** page or the today's routes page.

To reassign from the Edit Route page:

1. Navigate to the **Edit Route** page for the route of interest.
2. Click the **Temporary Truck** button. The **Assign Temporary Truck** form is displayed.

3. Select the desired truck from the **Temporary Truck** drop-down list.
4. Enter/select the start and end dates for this assignment.
5. Click **Save** to save this reassignment without dispatching the route.

   -OR-
   Click **Save & Dispatch** to save the assignment and immediately dispatch this route.

To reassign from the today's routes page:

1. Open the today's routes page from the **Routes** menu.
2. Select the checkbox for the route of interest in the **Select Routes** column.
3. Click the **Assign Temp Truck** button. The **Assign Temporary Truck** form is displayed.

4.   Select the desired truck from the **Truck** drop-down list.

5.   Enter/select the start and end dates for this assignment.

6.   Click **Save** to save this reassignment without dispatching the route.

7.   Dispatch the reassigned route as needed.

Managing Street Sweeping Routes

This section describes how you can view, dispatch, and reassign street sweeping routes, also called workzones.

Viewing Today's Street Sweeping Routes

The today's routes page is a starting point for a number of daily route management tasks.

On this page you can:

- Check the route completion progress
- Dispatch routes
- Assign routes to different trucks
- Send messages to drivers
- Navigate to the Edit Route page for a route of interest.

To view the list of today's street sweeping routes:

1.   Go to the **Routes** menu and select the **WorkZones: D-Mon-XXh - D-Mon-XXh** option where the date/month/hour information is that of your current date and timeframe. The list of today's routes is displayed.

2.   To view a list for a different day, up to one week ahead, click the calendar icon beside the date field at the top of the page, and then select one of the available dates.

3.   If needed, refine the displayed list as follows:
- To sort the list in the ascending or descending order, click the desired column heading once or twice, respectively.
- To filter the list, click the funnel icon beside the header of interest to display a filter panel, then enter your criteria, and click **Filter**. The list is adjusted to match your filter criteria.

4.   If needed, adjust the map view as follows:

- Click the settings icon ⚙, and then click the available toggle switches on the displayed settings panel:
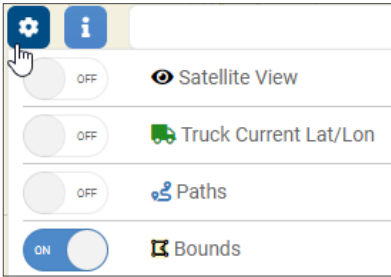
> **ⓘ NOTE: Map legend**
>
> When you click the information icon ℹ, the legend panel is displayed with descriptions of different map markers (pins).

- **Satellite View** - to turn on or off the satellite map view.
- **Truck Current Lat/Lon** - to display the current location of vehicles currently out on routes. You can hover over each truck's icon to view its number and the date and time when the currently displayed location has been reported.
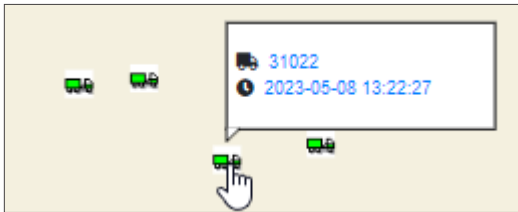
- **Paths** - to hide or display a route path for a selected route. You must first select the route of interest on the list before using the switch to display the route path.
- **Bounds** - to hide or display the boundaries of the route geozones.
- Type an address in the search field, select a city and country, and then either press **Enter** on your keyboard or click the search icon 🔍. You can also click the cross icon to clear the entered address.
- Use the mouse's scroll wheel to zoom in or out on the map.
- To zoom in on the specific area on the map, left-click the marquee icon ⛶, then draw a shape on the map while holding down the mouse button, to zoom in on the area within the shape.

Tasks You Can Perform Directly on the Today's Workzones Page

To...	Do this...
Check the route completion percentage	Select the checkboxes for the routes of interest in the leftmost column, then click the **Route Completion %** button. The percentage of route completion is displayed on the map, under the route name.
Check the route progress	Select the checkboxes for the routes of interest to check the progress of the trucks along their paths.
Dispatch routes	Follow the steps of the **Dispatching Street Sweeping Routes** procedure.
Permanently or temporarily assign a route to a different truck	Follow the relevant steps of the **Reassigning Street Sweeping Routes** procedure.
Send messages to the truck drivers	Follow the relevant steps of the **Sending Messages to Truck Drivers** procedure.

Pages You Can Access from the Today's Workzones Page

- To access the **Edit Route** page where you can edit a route of interest, click the desired route name in the **ROUTE** column, then follow the relevant steps of the **Editing Routes** procedure.

Dispatching Street Sweeping Routes

To dispatch routes manually:

1. Open the today's workzone route page from the **Routes** menu.
2. Select one or more checkboxes for routes of interest in the leftmost column. Alternatively, to select all routes, select the checkbox in the header row of that column.
3. Click the **Dispatch Selected Routes** button. The status of the selected route(s) in the **Status** column is updated to **Dispatched.**

Reassigning Street Sweeping Routes

This section describes how you can reassign routes to other routes permanently or temporarily.

Reassigning Routes Permanently

You can permanently reassign waste collection routes from either the **Edit Route** page or the today's routes page.

To reassign from the Edit Route page:

1. Navigate to the **Edit Route** page for the route of interest.
2. Click the **Truck** button. The drop-down list of trucks is displayed.

3. Select the checkbox beside the desired truck.
4. Click **Save**.

To reassign from the today's routes page:

1. Open the today's workzone routes page from the **Routes** menu.
2. Select the checkbox for the route of interest. The **Assign Truck To The Route** form is displayed.

3. Select the desired truck number from the **Assigned Truck** drop-down list.
4. Click **Save**. The route is permanently assigned to the selected truck.

5.   Dispatch the route as needed.

Reassigning Routes Temporarily

You can temporarily reassign waste collection routes from either the **Edit Route** page or the today's routes page.

To reassign from the Edit Route page:

1.   Navigate to the **Edit Route** page for the route of interest.

2.   Click the **Temporary Truck** button. The **Assign Temporary Truck** form is displayed.

3.   Select the desired truck from the **Temporary Truck** drop-down list.

4.   Enter/select the start and end dates for this assignment.

5.   Click **Save** to save this assignment without dispatching the route.

   -OR-
   Click **Save & Dispatch** to save the assignment and immediately dispatch this route.

To reassign from the today's routes page:

1.   Open the today's workzone routes page from the **Routes** menu.

2.   Select the checkbox for the route of interest. The **Assign Truck To The Route** form is displayed.

3.   Select the desired truck number from the **Assigned Truck** drop-down list.

4.   Click **Save**. The route is temporarily assigned to the selected truck.

5.   Dispatch the route as needed.

Performing Other Street Sweeping Route Tasks

To...	Refer to the relevant steps of the...
Edit a street sweeping route	*Editing Routes* procedure

To...	Refer to the relevant steps of the...
Transfer a street sweeping route to a temporary route	*Transferring Routes to Temporary Routes* procedure
Send a message to the truck driver	*Sending Messages to Truck Drivers* procedure

Performing Other Route Tasks

This section describes how you can perform tasks that are applicable to both waste collection and street sweeping routes.

Editing Routes

This section describes how you can edit existing waste collection and street sweeping routes. You can edit a route from the **Edit Route** page, which is a starting point for various editing tasks.

On this page you can:

- Update this route's information
- Reschedule this route
- Assign this route to a different truck
- Add or remove stops to/from this route
- Send messages to the truck driver
- Navigate to other pages where you can:
    - Edit positions of containers
    - Resequence this route
    - Add or updated the route geozone and/or route path
    - Edit locations, stops and containers.

You can access the **Edit Route** page by clicking the desired link that appears in any of the following locations throughout the app:

- The **Route Name** column on the **Search Routes and Stops** page
- The **Route** column on the today's route list (for waste collection routes)
- The **Route** column on the today's workzones list (for street sweeping routes).
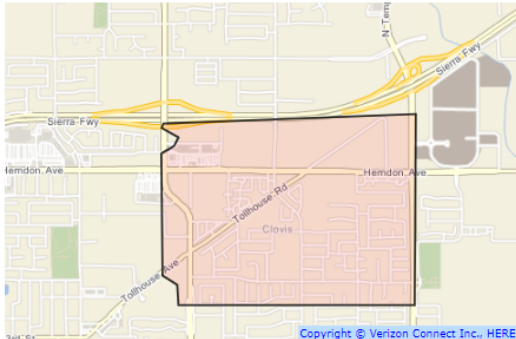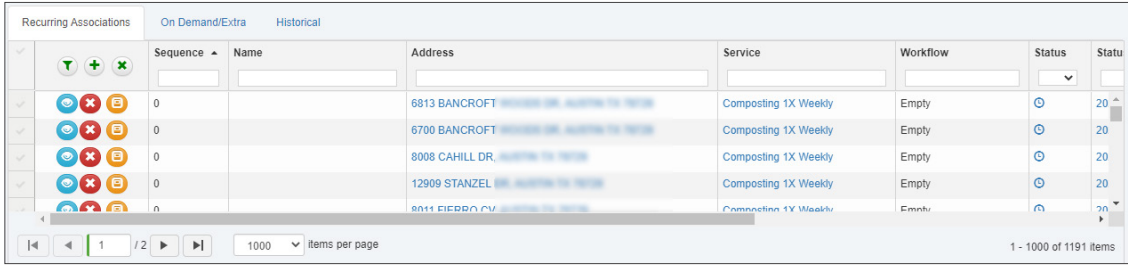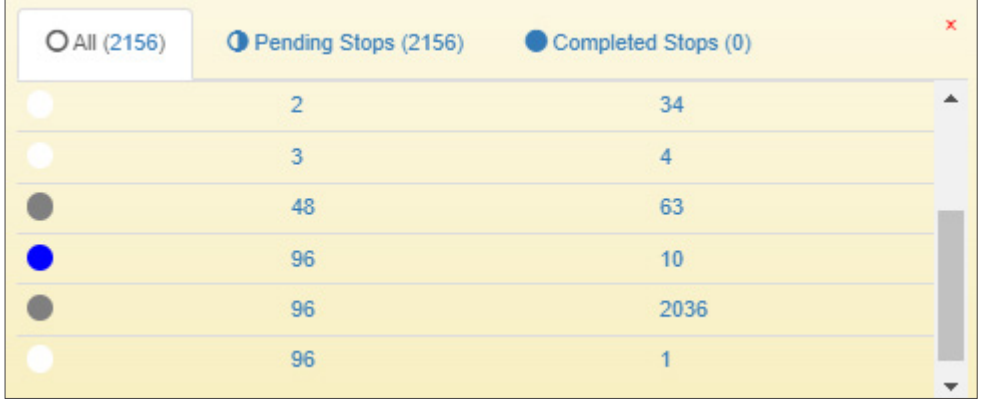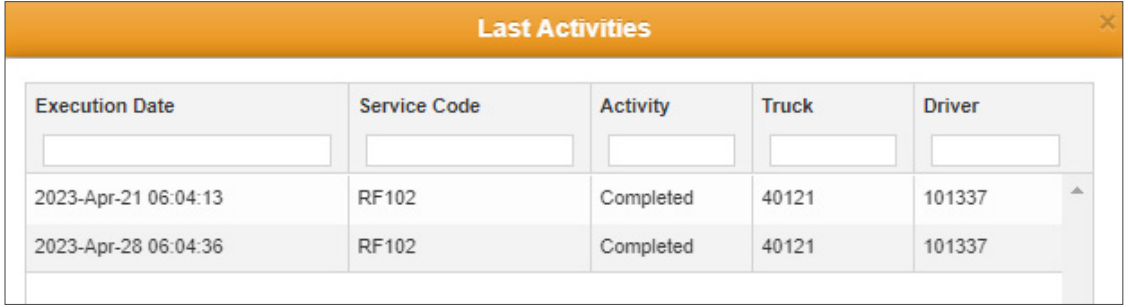
To edit a route:

1. Access the **Edit Route** or **Edit Last Viewed Route** page for a route of interest.

2. If necessary, adjust the map view as follows:
   - To zoom in or out, use your mouse's scroll wheel
   - To reposition the map in the viewing window, click and drag as needed
   - To display the satellite view, select the **Satellite view** checkbox
   - To display the geozone(s) associated with this route, select the **Geozone** checkbox
   - To display this route's path, select the **Path** checkbox (street sweeping routes only)

3. Proceed to the sections that follow to edit this route as needed.

Tasks You Can Perform Directly on the Edit Route Page

To...	Do this...
Change the route attributes	Enter/select the desired information in the following fields and drop-down lists: • **Name**. Change this route's name. • **Start Date**. To reschedule this route, enter/select the date when the servicing of this route will begin. • **Work Group**. Select the workgroup, to which the truck that will service this route belongs. • **Material**. Select the type of material associated with this route. • **Operating Department** and **Line of Business**. Select the options from these lists that are associated with this route. • **Container Type**. Select the type of containers that will be serviced on this route. • **Disable Automatic Dispatch**. Select **Yes** if you don't want the system to dispatch this route automatically. • **Update Geolocation**, **Update Rfid**, and **Update #Serial**. Select **Yes** to have the corresponding container information updated in the system once the lift is performed and a confirmation of the lift is received by the system. • **Route Expiration Days**. If you are editing a multi-day route, enter the number of days this route will remain in effect.
Display the list of stops on this route	Click the **Show/Hide Stops** button. The list of stops is displayed, with the **Recurring Associations** tab selected by default.
Reschedule this route	1. Enter/select the date when you want the servicing of this route to begin in the **Start Date** field. 2. Adjust the route frequency, by making a selection from the **Route Frequency** drop-down list.
Permanently assign this route to a different truck	Follow the relevant steps of the *Reassigning Waste Collection Routes* or *Reassigning Street Sweeping Routes* procedures.

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To...	Do this...
Assign this route to a temporary truck	Click the **Temporary Truck** button, then follow the relevant steps described in the ***Reassigning Routes Temporarily*** section.
Send messages to the truck driver	Follow the relevant steps of the ***Sending Messages to Truck Drivers*** procedure.

List of stops

Recurring Associations tab

Filter the list of stops	Click the funnel icon ▼ in the header row, then review the stop count (**All**, **Pending**, and **Completed**) in the displayed pop-up, and click the available links to filter the list by container capacity. **NOTE**: You can switch between tabs on the stops list with the pop-up still open. ○ All (2156) ◐ Pending Stops (2156) ● Completed Stops (0) ○ 2 34 ○ 3 4 ● 48 63 ● 96 10 ● 96 2036 ○ 96 1
Display a container's location on the map	Find the stop of interest, then click the blue eye icon 👁 in the second from the left column of the corresponding row. The map is refreshed and the icon depicting this container is displayed in the center of the map.
Add stops to this route	Click the plus icon ➕ in the header row, the follow the relevant steps of the ***Adding Stops to Routes*** procedure.
Remove stops from this route	Follow the relevant steps of the ***Removing Stops from a Specific Route*** procedure. **NOTE**: Once a stop is removed, it is added to the list of unscheduled stops and can be assigned to a different route. To do so, follow the ***Adding Unscheduled Stops to Routes*** procedure.
Display the latest activities for a stop	Find the stop of interest, then click the orange activities icon 🗋 in the second from the left column of the corresponding row and review the list of activities in the displayed pop-up. Activities typically refer to the status of service completion for this stop within the last month. **Last Activities** | Execution Date	Service Code	Activity	Truck	Driver
---	---	---	---	---
2023-Apr-21 06:04:13	RF102	Completed	40121	101337
2023-Apr-28 06:04:36	RF102	Completed	40121	101337	

This table is continued on the next page.

To...	Do this...
Historical tab	
Display the list of stops that have been completed on this route in the past	
On Demand/Extra tab	
Display the list of currently scheduled on-demand stops	• To view the list of scheduled on-demand stops not yet serviced, click the **Current** tab. -OR- • To view the list of on-demand stops serviced in the past, click the **Archive** tab.

Pages You Can Access from the Edit Route Page

To access the...	Do this...
Edit positions of containers page where you can adjust the positions of containers for this route on the map	Click the **Edit Positions** button, then follow the relevant steps of the *Editing Positions of Containers* procedure.
Edit Route Sequence page where you can adjust the stop sequence for this route	Click the **Edit Sequence** button, then follow the relevant steps described in the *Resequencing and Optimizing Routes* section. **NOTE**: This procedure is applicable only to waste collection routes.
Add Geozone page where you can add a new route geozone or route path to this route or **Edit Geozone** page where you can edit an existing route geozone and/or route path for this route	Click the edit icon [icon] beside the **GeoZone** or **Route Path** fields respectively, then follow the relevant steps of one of the corresponding procedures: • *Creating New Route Geozones* • *Editing Route Geozones* • *Adding Route Paths Manually* • *Editing Route Paths*.
Edit Assignment page where you can change various attributes for this stop	Find the stop of interest under the **Recurring Assignments** or **On Demand/Extra** tabs, then click the link in any of the following columns: **Service**, **Status**, **Status Date**, or **Start Date**. Follow the relevant steps of the *Editing Stops* procedure.
Edit Location page where you can make changes to a customer location	Find the stop of interest on the **Recurring Assignments** tab or the **Historical** tab, then click the link in **Address** column. Follow the relevant steps of the *Editing Locations* procedure.
Edit Container page where you can make changes to a container	Find the stop of interest under any of the tabs found on the list of stops, then click the link in **Container** column. Follow the relevant steps of the *Editing Containers* procedure.

Performing Tasks Related to Temporary Routes

To...	Do this...
Add a temporary route	Follow the steps of the **Creating a temporary route** procedure.
Transfer a route to a temporary route	Follow the steps of the **Transferring Routes to Temporary Routes** section.

Transferring Routes to Temporary Routes

This section describes how you can transfer an entire regular route to a temporary route. Use this procedure to transfer the entire route to a temporary route once. Note that temporary routes are in effect for only one day and are automatically deleted on the day following their creation.

Transferring routes to a temporary route is a two-step procedure:

> **Step 1**: Creating a temporary route

> **Step 2**: Transferring route(s) to the temporary route.

Step 1. Creating a temporary route

You can create a temporary route using the **Entering the route information** procedure. Alternatively, you can create a temporary route from the today's routes page. To do so:

1. Open the today's route page from the **Routes** menu.
2. Click the **Add Temp Route** button. The **Add a Temporary Route** form is displayed.

3. Enter/select the following values on the form as needed:
   - Route name by which this route will be identified in the system. **NOTE**: Keep the route name under 10 characters.
   - Route start date (optional)
   - A truck that this route will be assigned to
   - A work group, to which the truck will belong
   - The material associated with this route
   - Operating department and line of business, with which this route will be associated
   - Type of containers that will be serviced by this route.
4. Select the following checkboxes as needed to have the corresponding container information updated in the system once the lift is performed and a confirmation of the lift is received by the system
   - **Update Geolocation**
   - **Update Rfid**

- **Update #Serial**.

5. Click **Add**. The new temporary route is created and a confirmation message is displayed.

6. Click **OK**.

Step 2. Transferring routes to temporary routes

1. On the list of today's routes find the route(s) that you want to transfer to the new temporary route, and then select the corresponding checkbox(es) in the **Select Routes** column.

2. Select the new temporary route from the **Select Temporary Route** drop-down list.

3. Click the **Transfer routes to** button, and then click **Yes** in the displayed confirmation dialog. The routes are transferred to the temporary route and a confirmation message is displayed.

4. Click **OK**. If you are transferring waste collection routes, observe that the number of incomplete stops in the **Incomplete** column for each selected route is brought to zero. Be sure to dispatch the temporary route after the stops are transferred.

Editing Positions of Containers

This section describes how you can adjust the positions of containers on waste collection routes.

> **ℹ️ NOTE: Waste collection routes vs. street sweeping routes**
>
> This section mostly applies to waste collection routes as the street sweeping routes do not service containers. However, for street-sweeping routes that have stops, this procedure can also be used.

To edit the positions of containers:

1. Navigate to the **Edit Route** page for the route of interest. See *Editing Routes*.

2. Click the **Edit Positions** button. The **Edit position of containers** window is displayed, with the list of all of this route's stops on the left side and the map on the right side.

3. If necessary, adjust the map and list views as follows:
   - To sort the list in the ascending or descending alphabetical/numerical order, click the desired column header(s).
   - To clear the sorting order, click the down arrow beside the column header, the click **Remove Sort**.

- To filter the list, type a string of text in any of the text fields under column headers. The list will display the results with matching text.

- To clear the filter, click the cross icon in the text field under column headers.

- To load a list of recurring associations based on the main screen filter, click the reload icon 🔄 .

- To hide the columns, click the down arrow beside the column header, and then click **Hide Column**. **NOTE**: To redisplay the hidden columns, close the window and refresh the **Edit Route** page.

- To zoom in or out, use your mouse's scroll wheel.

- To display the satellite view, select the **Satellite view** checkbox.

- To limit the number of stops displayed on each of the list's pages, select a number from the **items per page** drop-down list.

- To display a breadcrumb trail of the truck's actual route, select a truck and date in the bottom section of the window, then click **Show Trail**. The trail is displayed on the map with up to 200 direction arrows with timestamps.

4. To adjust the position of a container:

    i. Optionally, to display all of this route's containers on the map, click the eye icon 👁 in the leftmost column header. **NOTE**: To clear the containers from the map, close the window, then reopen it.

    ii. To display a location's coordinates marker relative to the container of interest on the map, click the corresponding eye icon 👁 in the leftmost column. The view is adjusted to display the marker in the center of the map and the corresponding stop is highlighted and brought to the top of the list.
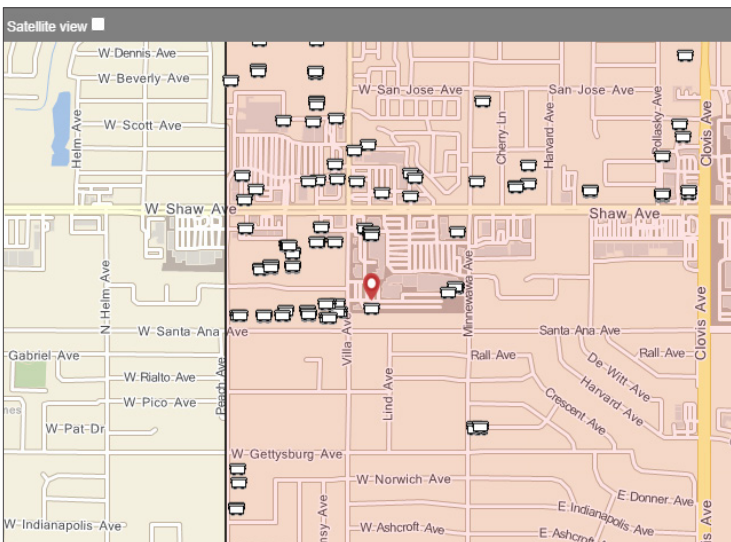
    iii. Click the container of interest on the map and drag it to its new position. Ideally, you want to aim to place the container as close as possible to the location coordinates marker. Repeat for any other containers, whose positions you want to adjust.

5. Click **Save Positions**. A confirmation message is displayed.

6. Click the cross icon in the upper right corner of the **Edit position of containers** window to close it.

Sending Messages to Truck Drivers

If you need to send a message to a truck driver, you can do so in one of the following ways:

To send a message from the...	Do this...
Edit Route page	1. Navigate to the **Edit Route** page for the route of interest.
	2. Type your message in the **Message** text box, then click **Save**.
Edit Assignment page	• Follow the relevant steps of the **Editing Stops** procedure.

To send a message from the...	Do this...
Unscheduled Stops page	• Follow the relevant steps of the *Adding Unscheduled Stops to Routes* procedure.
Today's routes page -OR- Today's workzones page	1. Open the today's routes or workzones page from the **Routes** menu. 2. Select the checkbox for the desired route in the **Select Routes** column. 3. Click the **Message** button. 4. Type your message in the displayed pop-up's text box, then click **Send**. 5. Click **OK** to close the confirmation message (if displayed).

Resolving Route Conflicts

There might be times when waste collection routes have stops that are in conflict with other routes. You can resolve these conflicts by removing the stops from the conflicting routes.

To do so:

1. Select the **Search Routes and Stops** option from the **Routes** menu, then click the **Show Conflicts** button on the displayed page. The page is refreshed and a new **Conflicts** column is displayed on the list of results.

2. Find the desired route on the list and then click the link in the **Conflicts** column of the corresponding row. A pop-up is displayed that lists all the routes with which your route of interest has conflicts.

3. Take a note of the route numbers and then click **OK** to close the pop-up.

4. To remove the conflicting stops:

   i.   Click the link for the route of interest in the **Route Name** column. The **Edit Route** page is displayed.

   ii. Click the **Show/Hide Stops** button, then find the conflicting stops on the displayed list.

   iii. Click the cross icon beside the stops you want to remove from this route.

   NOTE: If you would rather remove the stops from other routes that are part of the same conflict, go back to the **Search Routes and Stops** page, then repeat steps **i** - **iii**.

Managing Holiday Schedules

This section describes how to temporarily reschedule routes that fall on holidays or other days when regular service cannot be delivered, such as snow days.
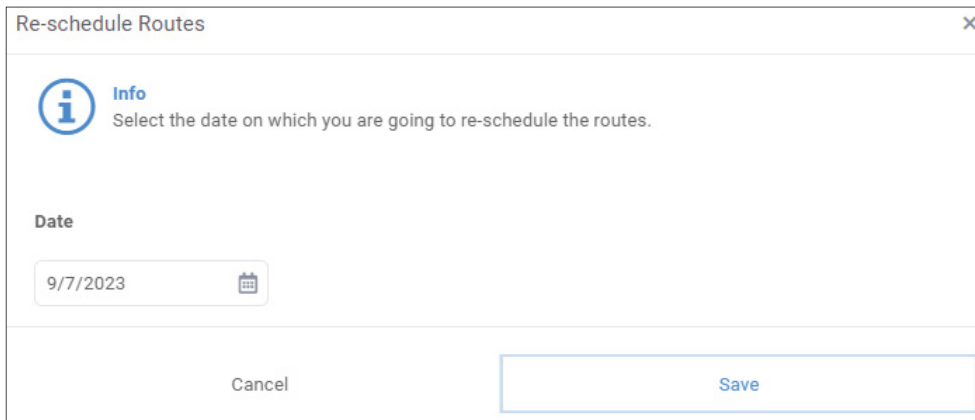
To reschedule one or more routes:

1. Go to the **Routes** menu and select the **Holiday Schedule** option. The **Holiday Schedule** page is displayed.

2. To view a route schedule for a certain date, supervisor and dispatch type, select the appropriate criteria, then click **Get Schedule**. The list of matching routes is displayed.

3. Select the checkboxes for routes that you want to reschedule, or select the topmost checkbox to select all routes, then click **Re-schedule**. The **Re-schedule Routes** form is displayed.

4. Enter the new service date for the selected routes in the **Date** field or click the calendar icon and select the date.
   NOTE: You cannot select the date for which the route is currently scheduled or the dates in the past relative to today's date.

5. Click **Save**. The list of routes is updated, with the new service date displayed in the **RE-SHEDULE DATE** column.

Working with Stops
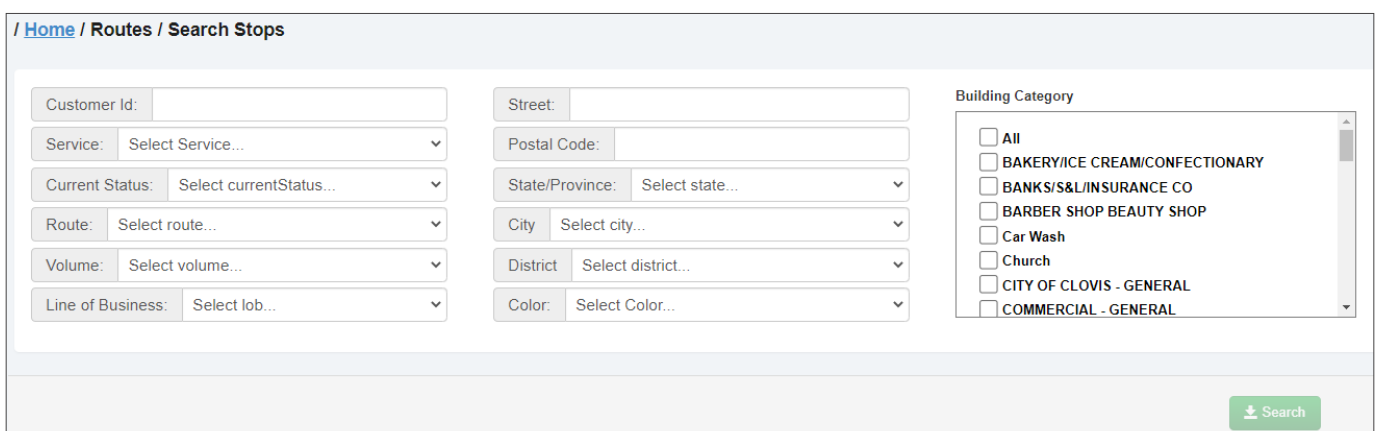
This section describes how you can search, view, add, remove, or edit stops. Typically, a stop is a customer location subscribed to a service, associated with a container, and assigned to a route.

Searching and Viewing Stops

This section describes how to view the list of stops assigned to routes and explains which tasks you can perform from this list.

To view the list of such stops:

1. Select the **Search Stops** option from the **Routes** menu. The **Search Stops** page is displayed.

2. Enter/select at least one search criterion, then click the **Search** button. The list in the lower portion of the page is populated with all the matching stops that are assigned to routes in the system. For more information about stop confirmation statuses, refer to the **Stops Service Subscription Statuses** table in **Appendix 3**.

    If needed, you can refine the list as follows:
    *   To sort the list in the ascending or descending order, click the desired column heading once or twice, respectively.
    *   To filter the list, start typing in the column of interest. As you type, the list is updated with matching results.

Status	Route	Civic Number ...	Street	District	City	SerialNumber ...	Volume	Type	Color	Action
RD	105	2095	MESA			FRSa16689b21bdc	96	Cart	Gray	✖
RD	21	2095	MESA			FRSa16689b21bdc	96	Cart	Gray	✖
RD	105	42	MCKELVY			FRSe776e5b914c1	96	Cart	Gray	✖
PN	NO ROUTE	1417	PLYMOUTH ROCK			FRS27e5c9ecb87d4	96	Cart	Gray	✖
PN	104	1032	N BURL			FRS9ff59fd64b9340	96	Cart	Gray	✖
PN	506	175	FAIRMONT			FRS0e3af1e241e54	96	Cart	Gray	✖

You can perform the following task directly on the **Search Stops** page:

*   **Remove stops of interest from routes they are assigned to**. To do so, find the stop of interest on the list, click the cross icon ✖ in the **Action** column of the corresponding row.

Pages You Can Access from the Search Stops Page

| To access the...	Do this...
Edit Route page where you can edit a route of interest	Click the desired route name in the **Route** column, then follow the relevant steps described in the **Editing Routes** procedure
Edit Location page where you can edit the stop (location) of interest	Find the stop of interest, then click the link in any of the following columns: **Civic Number**, **Street**, **District**, or **City**. Follow the relevant steps of the **Editing Locations** procedure.
Edit Container page where you can edit the container for a stop of interest	Find the stop of interest, then click the link in any of the following columns: **SerialNumber**, **Volume**, **Type**, or **Color**. Follow the relevant steps of the **Editing Containers** procedure.

Adding Stops to Routes

Customer locations already subscribed to services can be added to routes as stops. To manually add stops to a route, refer to the **Adding stops to routes** procedure in the **Adding Routes and Stops** section.

Transferring Select Stops to a Different Route

This section describes how you can transfer select stops from one regular route to another. This procedure is recommended for small changes to the permanent or temporary routes. If the changes are extensive, it is recommended that you export the route data, make your changes and then import the modified data back into the system. If the container locations are geocoded, you can use the relevant procedures described in **Chapter 5. Managing Geozones** to adjust route boundaries and transfer stops from one route to another in this way.

To transfer the stops:

1. Optionally, to verify the customer route assignments, export the route data before proceeding. See **Exporting Routes and Stops Data**.

2. Go to the list of today's routes to find the unfinished route whose stops you want to transfer to a different route, and then click the link in the **Incomplete** column. The **Transfer Stops** page is displayed.
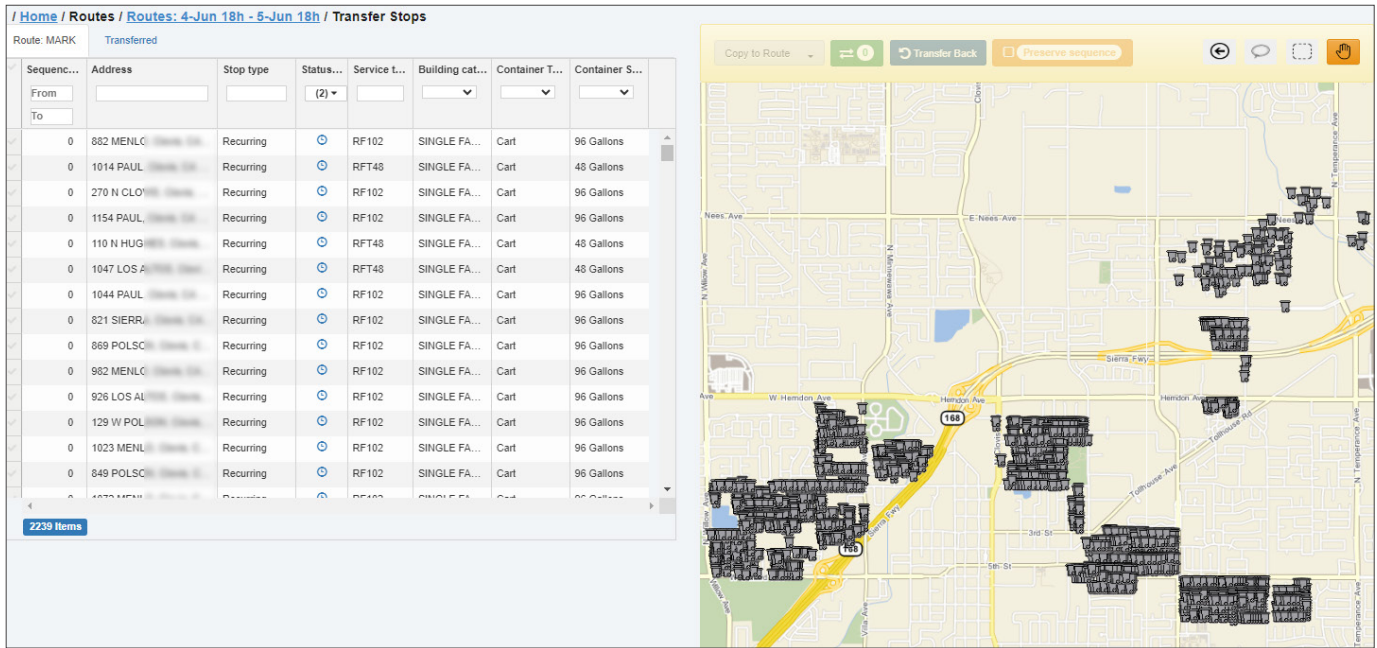
3. Select the stops you want to transfer either on the list or on the map as described below.

> **💡 TIP: Stop selection results**
>
> As you select the stops, observe the following changes:
> - The color of the container icons on the map for each selected stop is changed.
> - The **Container Quantities** table displayed below the list of stops is updated with a summary of container information.

- Selecting/deselecting stops on the list:

To select/deselect...	Do this...
Individual stops	• Find the desired stops, then click the checkmark(s) in the leftmost column of the corresponding rows.
All stops	• Click the checkmark in the header of the leftmost column.
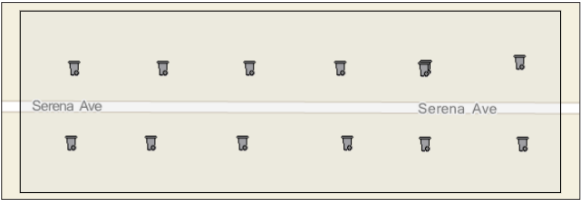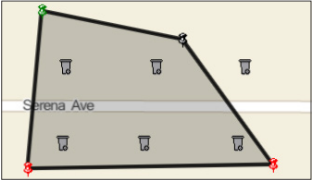
- Selecting/deselecting stops on the map, use the methods and tools described in the table that follows.

> **💡 TIP: Manipulating the map**
>
> To assist you in selecting stops on the map:
> - Use your mouse's scroll wheel to zoom in on the area of interest
> - Click the pan tool 🖐 so it turns orange 🖐, then click on the map and drag it in the desired direction to display the area of interest.

To...	Do this...
Select individual stops on the map	• Click the individual container icons on the map.

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To...	Do this...
Select stops within a rectangular area	1. Click the rectangular marquee tool ⬚, then left-click on the map and draw a rectangular marquee around the area with containers/stops you want to select. **NOTE**: Left-click on the map again to deselect. 2. Click the **Select/Unselect** tool ⬅ to confirm this selection.
Select stops within a freeform area	1. Click the freeform selection tool 🗨, then right-click to place the markers around the area with containers/stops you want to select. **NOTE**: Right-click the unneeded pins to remove them. Remove all the pins to deselect the area. 2. Click the **Select/Unselect** tool ⬅ to confirm this selection.
Deselect the selected stops	• Use the rectangular marquee or freeform tool to draw an area on the map around the stops already selected, then click the **Select/Unselect** tool ⬅.

4. Click the **Preserve sequence** button to ensure that the transferred stops will be added to the destination route in the same sequence as in the original route.

5. Click **Copy to Route**, and then select the route to which you want to transfer the stops from the displayed list of compatible routes. **NOTE**: If the list is not populated, check the filters applied to the list and clear or adjust them as needed.

6. Click the button beside the selected route number ⇄ 5 . The selected incomplete stops are transferred to the selected route.

7. To view the list of stops that have been transferred, click the **Transferred** tab.

8. To transfer some or all of the transferred stops back to the original route, select the desired stops and click the **Transfer Back** button.

Removing Stops from Routes

This section describes how you can remove stops from the routes they are assigned to. You can remove stops from any route using the **Search Stops** page, or you can remove stops from a specific route using the **Edit Route** page. Once the stops are no longer assigned to a route, they appear on the list of unscheduled stops and can be added to routes as needed.

Removing Stops from Any Route

To remove the stops using the **Search Stops** page:

1. Select the **Search Stops** option from the **Routes** menu. The **Search Stops** page is displayed.

2. Enter/select at least one search criterion, and then click **Search**. The list of matching stops is displayed.

3. Find the stop(s) you want to remove, and click the cross icon ❌ in the **Action** column of the corresponding row(s). The stop(s) are no longer assigned to the route(s).

Removing Stops from a Specific Route

To remove the stops using the **Edit Route** page:

1. Access the **Edit Route** page for a route of interest. For more information, see *Editing Routes*.

2. Click the **Show/Hide Stops** button to display the list of stops, and then perform one of the following tasks:

To...	Do this...
Remove an individual stop	1. Find the stop you want to remove, then click the cross icon ❌ in the corresponding row. 2. Click **Yes** in the displayed confirmation dialog.
Remove several stops at once	1. Click the checkmarks in the leftmost column of the rows with the stops you want to remove. 2. Click the cross icon ❌ in the second from the left column's header to delete the selected stops. 3. Click **Yes** in the displayed confirmation dialog.
Remove all stops	1. Click the checkmark in the header of the leftmost column to select all stops. 2. Click the cross icon ❌ in the second from the left column's header to delete all selected stops. 3. Click **Yes** in the displayed confirmation dialog.

Editing Stops

This section describes how you can change certain attributes of stops assigned to routes. You can edit a stop on the **Edit Assignment** page.

To access this page, click the desired link that appears in any of the following locations throughout the app:

- The **Status** column on the **Add Stops** page
- The **Service**, **Status**, **Status Date**, or **Start Date** columns on the **Edit Route** page under the **Recurring Assignments** tab or **On Demand/Extra** tab found on the list of stops
- The **Material** or **Start Date** columns in the lower portion of the **Edit Container** page under the **Link to customer location** tab
- The **Code**, **Service Description**, **Service Cycle**, or **Prospect** columns on the **Edit Location** page under the **Services** tab.
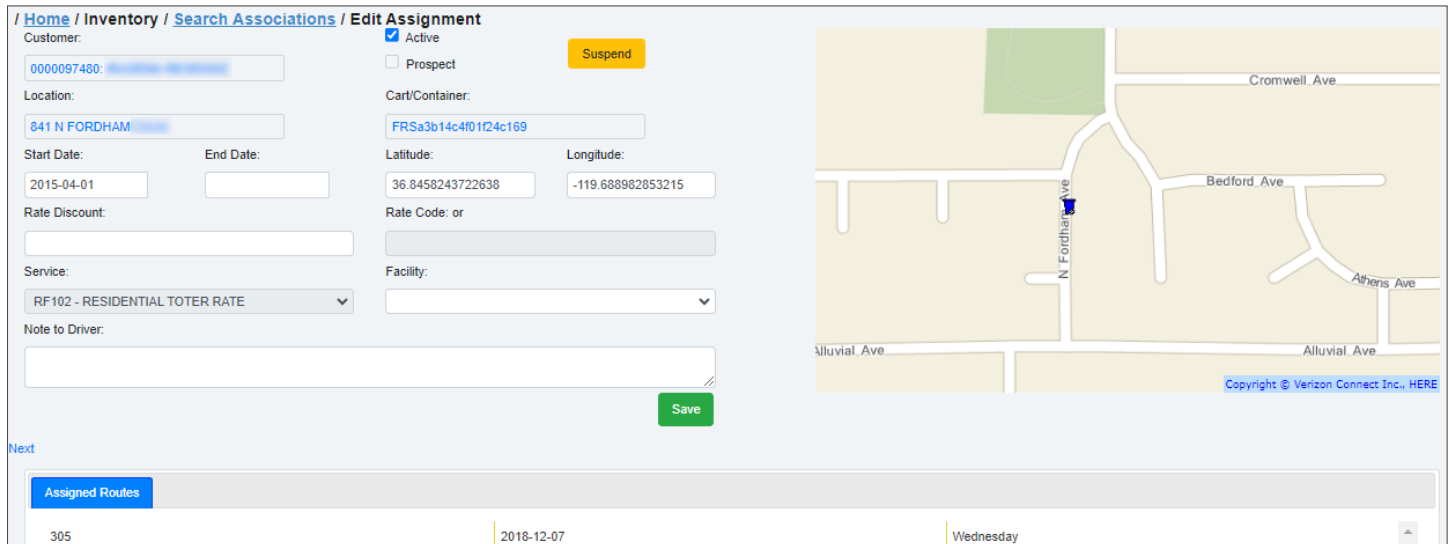
To edit a stop:

1. To activate or deactivate the service for this stop, select or deselect the **Active** checkbox as needed.
2. To suspend or reinstate the service subscription for this stop, click the **Suspend** button (or **Release** button, accordingly), review the status of this subscription on the displayed **Edit Location** page (**Services** tab > **Suspended** column), then click back to return to the **Edit Assignment** page.
3. Update the start and end service dates for this stop in the corresponding fields.
4. Change the physical location of this stop's container by updating the geographical coordinates of this stop in the **Latitude** and **Longitude** fields, or by repositioning the container icon on the map.
5. Enter the discount percentage that will apply to the service rate for this stop in the **Rate Discount** field.
6. Select a facility with which this stop will be associated from the **Facility** drop-down list.
7. Enter a note to the driver servicing this stop in the **Note to Driver** text box.
8. Click **Save** to save your changes. The stop information is updated.

> **ⓘ NOTE: Editing other stops for the same location**
>
> If you need to edit other stops for the same location, click the **Next** link located above the **Assigned Routes** list to go to the **Edit Assignment** for the next stop for this location.

Pages You Can Access from the Edit Assignment Page

To access the...	Do this...
Edit Customer page where you can update customer information	Click the link in the **Customer** field, then follow the relevant steps of the *Searching, Viewing, and Editing Customers* procedure.

To access the...	Do this...
Edit Location page where you can edit the stop (location) of interest	Click the link in the **Location** field, then follow the relevant steps of the ***Editing Locations*** procedure.
Edit Container page where you can edit the container associated with this stop	Click the link in the **Cart/Container** field, then follow the relevant steps of the ***Editing Containers*** procedure.

Adding Unscheduled Stops to Routes

This section describes how to add stops that are not assigned to any routes to the routes of your choice.

To add unscheduled stops to a route:

1. Select the **Unscheduled Stops** option from the **Routes** menu. The **Unscheduled Stops** page is displayed. The list of residential recurring stops for all operating departments is displayed by default.

2. Make the following selections:
   - Operating department from the **Operating Department** drop-down list.
   - The type of service, using the available tabs at the top of the list. Notice how the columns on each list change as you select a different tab.
   - The stop type radio button: **Recurring** for regular stops, or **On-Demand** for stops serviced on demand, for example for cart delivery.

3. Sort and filter the list as needed using the column headers.

4. If you selected the **On-Demand** radio button in step **2**, you can perform the following housekeeping tasks, if needed, and then proceed to the next step:

To...	Do this...
Add, review and/or update messages for dispatchers	1. To read a message, hover over the "populated" blue speech bubble 💬 displayed in the **Notes** column for the desired stop. 2. To edit the message, click the speech bubble. The **Notes for Dispatcher** pop-up is displayed. **Notes for Dispatcher** Notes: assigned to c-3, on 10/18/19 996 character(s) left 💾 Save Close 3. Type a new message or make the necessary changes to the existing message, and then click **Save**, or click **Close** to exit without changes.
Add, review and/or update messages for drivers	1. To read a message, hover over the "populated" green speech bubble 💬 displayed in the **Notes** column for the desired stop. 2. To edit the message, click the speech bubble. The **Notes for Driver** pop-up is displayed. **Notes for Driver** Notes: empty bin rental 1008 character(s) left 💾 Save Close 3. Type a new message or make the necessary changes to the existing message, and then click **Save**, or click **Close** to exit without changes.
Delete a stop from the system	• Find the stop you want to delete on the list, and then click the cross icon ✖ in the rightmost column of the corresponding row.

5. Select the stops you want to add to a route using one of the following methods:

To add stops using the...	Do this...
List of stops	• Find the stop(s) on the list, and then select the checkmark(s) in the leftmost column of the corresponding row(s). Observe the following changes: • As you select the checkmarks, the corresponding container icons are displayed on the map below the list. • The buttons in the **Route** column of the list of routes are activated.

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To add stops using the...	Do this...
Map **NOTE**: This method is available only if you selected an **On-Demand** radio button in step 2.	1. Click the **Select Stop on Map** button. 2. Right-click on the map to start creating a polygon around the stops that you want to assign to a route. 3. Once the polygon is created, click the green arrow icon in the top right corner of the map to return to the list of stops. Notice that the stops within the borders of the polygon are selected and brought to the top of the list. 4. Repeat steps **1**−**4** as needed to add more stops.

6. Go to the list of routes in the lower portion of the page and find a route to which you want to add the selected stop(s).

To assist you with this task, use the following tools:

- To zoom in on the desired area type the first few characters of the location's name in the search field below the map and click the search icon.
- To display the geozone boundaries of the route of interest as well as the icon that represents the current location of the truck on the route, select the checkmark in the leftmost column of the corresponding row

---

ⓘ NOTE: Compatibility of route material and frequency

Before selecting a route, keep in mind the material to be handled and the route frequency.

- If the stop to be added and the destination route involve different materials (e.g., recycling vs. garbage), you will be prompted to confirm your action in the following dialog:
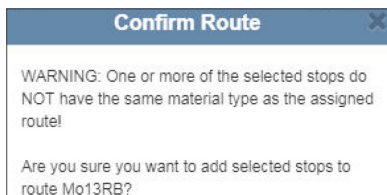
- If the stop to be added and the destination route have incompatible service frequencies, you will be prompted to confirm your action in the following warning dialog:

---
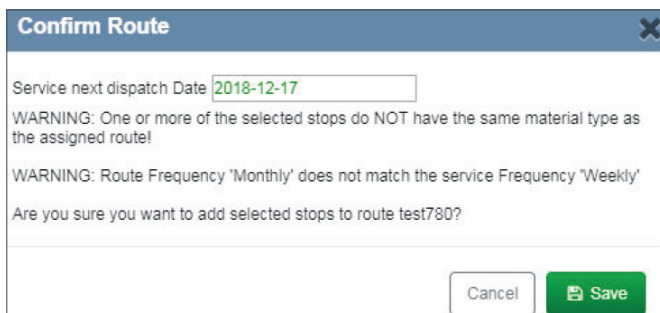
7. Once you have decided to which route you want to add the stop(s), click the button with the route number in the **Route** column. A **Confirm Route** dialog box is displayed.

8. Select the date on which this route should start servicing the selected stop(s), then click **Save**. The stops are added to the route and removed from the list of unscheduled stops.

9. Repeat steps **6** - **8** to add the selected stops to another route if needed.

ⓘ NOTE: Exporting the unscheduled stops data

If you see the **Export** button in the top right corner above the list of stops, you can export the current data for all unscheduled stops.
To do so, click the button, then follow the system prompts to save the CSV file in the preferred location on your PC.

Resequencing and Optimizing Routes

This section describes how you can change the sequence of stops on a route and/or optimize a route.

ⓘ NOTE: Waste collection routes only

This section applies to waste collection routes only as the street sweeping routes do not typically contain stops.

The goal of route resequencing and optimizing is to improve efficiency. Resequencing adjusts the sequence of stops to help the driver spend less time working the route.

There are two approaches to improving the efficiency of any given route:

- Adjusting the sequence based on the historical data that exists in the system:
  - By timestamps for the most recent execution of the route (**By timestamp** mode).
  - Relative to another route's sequence (**Like another route** mode)
  - By stops actually covered on a given date (**Breadcrumb trail** mode).

  This approach to route resequencing is useful for any route that doesn't change often.

  -OR-

- Optimizing a new or existing route.

ⓘ NOTE: Subscription is required

To use the route optimization feature, a separate subscription to a route optimizing service, such as C2Logix or RouteSmart, is required.

This feature relies on software logic that takes into account many variables affecting the way the route can be serviced. The software analyzes route attributes and creates an optimized sequence of stops that lets the driver complete the route in the most efficient manner.

Route optimization feature is designed for low density commercial and roll-off routes.

- Commercial routes are typically optimized when they are first created, and then re-optimized when the route is changed, for example, when recurring or on-demand stops are added or removed.
- Roll-off routes are typically optimized on a daily basis, due to their constantly changing nature.

Resequencing Routes

To resequence or optimize a route:

1. Navigate to the **Edit Route** page for the route of interest.
2. Click the **Edit Sequence** button. The **Edit Route Sequence** page is displayed. The top map displays the current sequence of stops, and the bottom map - the resequenced route.

3. To select the resequencing mode, click inside the **Resequencing Mode** field, and then select the desired option from the drop-down list. **NOTE**: For route optimization, select the **By route attributes** option.

The screen is refreshed to display the corresponding route attributes, and the **Re-sequence** button is displayed.

4. To proceed with resequencing or optimizing this route, follow the relevant steps in one of the following procedures:
   - *Resequencing in the "By timestamp" mode*
   - *Resequencing in the "Like another route" mode*
   - *Resequencing in the "Breadcrumb trail" mode*
   - *Optimizing Routes*

Once the procedure is completed, observe the following results:

   - The bottom map is refreshed to display the resequenced/optimized route.
   - The time and distance attributes of the resequenced route are displayed above the bottom map.

- The list of stops is refreshed to reflect the new stop sequence.

Making adjustments on the Edit Route Sequencing page

- If necessary, adjust the map and list views as follows:
    - To sort the list in the ascending or descending alphabetical/numerical order, click the desired column header(s).
    - To filter the list, type a string of text in any of the text fields under column headers. The list will display the results with matching text.
    - To center the map view on a stop of interest, click its corresponding row.
- To manually adjust the stop sequence values for a resequenced route, perform the following tasks:
    - To change the new sequence value for a stop of interest, double-click it in the **New Sequence** column, and then enter a new value or use up/down arrows to change the value.
    - To assign the new sequence values to stops in increments of 10, click the **Space New Sequence values by 10** button.

> **ⓘ NOTE: Default new sequence**
>
> If you are resequencing a brand new route, the values in the **New Sequence** column will default to increments of 10.

This operation may help you add stops in the future without disturbing the order of stops that follow the newly added stop.

Resequencing in the "By timestamp" mode

Using this mode, you can resequence a route based on the confirmation timestamps for the most recent execution of the route. Follow this procedure if you have selected the **By timestamp** option in step **3** of the *Resequencing Routes* procedure.
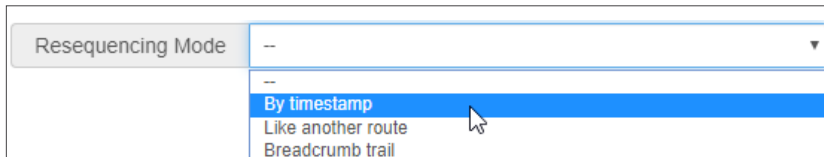

1. Select the truck that executed this route most recently from the **Truck** drop-down list.
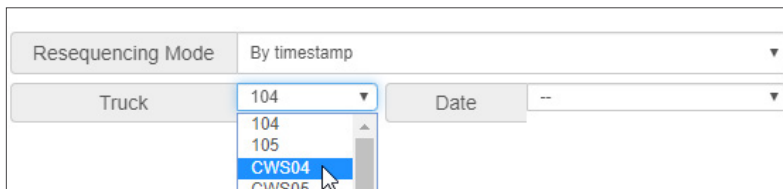
2. Select the most recent date on which the route was executed from the **Date** drop-down list.
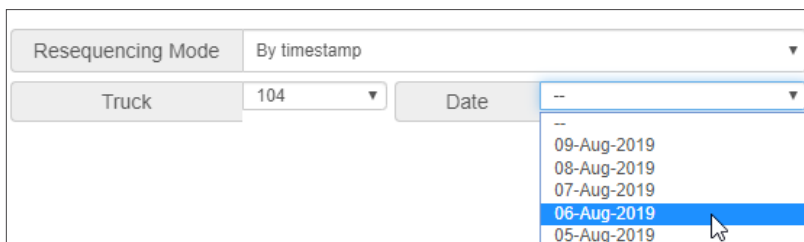
3. Click the resequence button to initiate the resequencing process. The page is refreshed, displaying the changes in the bottom map panel.

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> **ⓘ NOTE: Can't resequence**
>
> If the system is unable to find the information to resequence a route by timestamp, the following message is displayed at the bottom of the screen:
>
> Can't sequence! Did not find any confirmations by vehicle ER17 on 2019-06-05
>
> If this happens, try selecting a different truck and/or a different date from the corresponding drop-down lists.

4. Complete the resequencing procedure by doing one of the following:

    •   To discard your resequencing changes, click the **Undo** button ⟲ . The route sequence is reversed to the original.

    -OR-

    •   To save changes, click the **Save** button 💾 . The new route sequence is saved.

Resequencing in the "Like another route" mode

Using this mode, you can resequence a route based on the **sequence of another route.** Follow this procedure if you have selected the **Like another route** option in step **2** of the *Resequencing Routes* procedure.
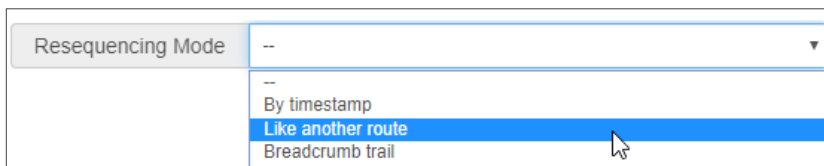
1. Select the route whose sequence you want to emulate from the **Similar to** drop-down list.
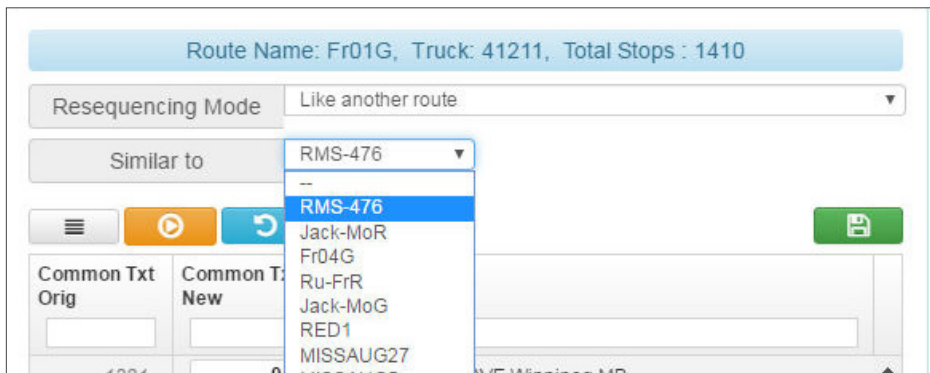
2. Click the resequence button ▶ to initiate the resequencing process. The page is refreshed, displaying the changes in the bottom map panel.

3. Complete the resequencing procedure by doing one of the following:

    •   To discard your resequencing changes, click the **Undo** button ⟲ . The route sequence is reversed to the original.

    -OR-

    •   To save changes, click the **Save** button 💾 . The new route sequence is saved.

Resequencing in the "Breadcrumb trail" mode

Using this mode, you can resequence a route based on a breadcrumb trail of a vehicle that was working in the route area during the specified date. Follow this procedure if you have selected the **Breadcrumb trail** option in step **2** of the *Resequencing Routes* procedure.
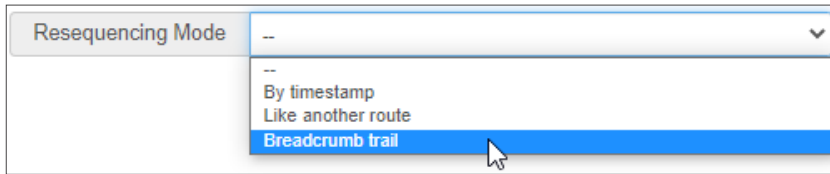
> **ⓘ NOTE: Troubleshooting breadcrumb resequencing**
>
> When resequencing in the breadcrumb trail mode, the matching is done based on the location coordinates located closest to the breadcrumb. The breadcrumb sequence is used to assign a sequence number to every stop in the route. Stops that cannot be matched remain unsequenced, are given a sequence number of **0** or **1**, and thus flagged for review. If the results of resequencing are not satisfactory (i.e. there is a significant number of stops with a value of **0** in the **New Sequence** column), refer to the ***Troubleshooting resequencing in the breadcrumb trail mode*** section.

1. Select the truck whose breadcrumb trail you want to use to resequence this route from the **Truck** drop-down list.
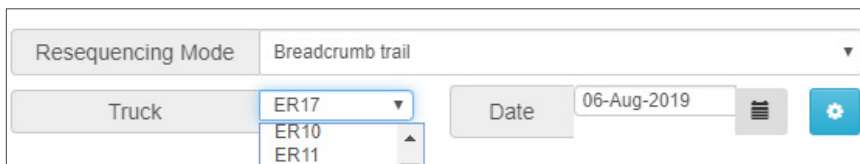
2. Enter/select the date on which the previously selected truck serviced this route in the **Date** field.
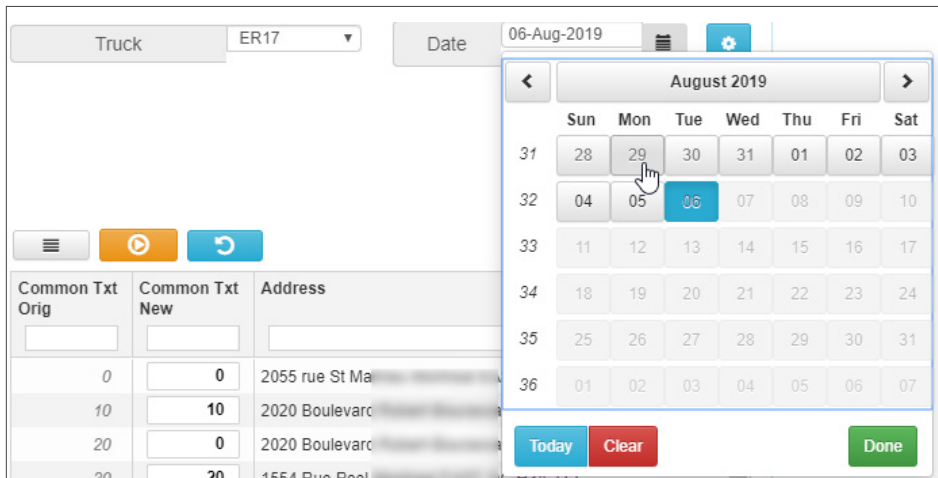
3. Click the advanced options button , and then make your selections in the displayed **Advanced Options** dialog box.
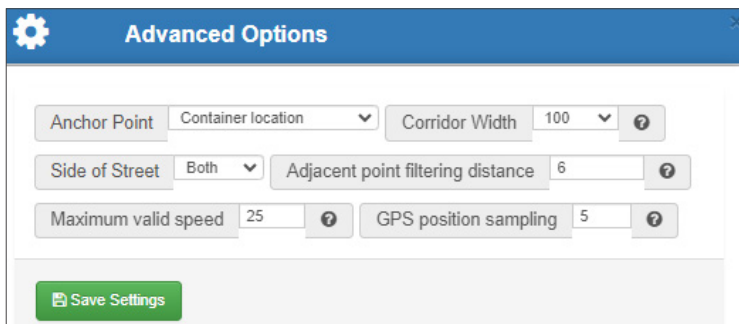
Refer to the following table for descriptions of available parameters:

Parameter	Description	Default Value
Anchor point (container or customer)	The point of reference for measuring the distance from the GPS trail: container assumes curbside anchor, customer assumes property centroid anchor.	N/A
Corridor width* See *Troubleshooting resequencing in the breadcrumb trail mode*.	Centered on the GPS trail, this value is used for gauging the distance to collection anchor points on either side of the truck. A corridor value of 50 meters suggests a lane of 25 meters on either side of the truck.	50 meters
Side of Street	Select an option which will define which side of the street is going to be considered when applying the selected corridor width.	Right
Adjacent point filtering distance	Used to eliminate excessive redundant GPS points on the map to create a smoother GPS trail.	6 meters
Maximum valid speed* See *Troubleshooting resequencing in the breadcrumb trail mode*.	Criterion used to determine when a vehicle is simply driving down a road, as opposed to performing collection services.	25 km/h
GPS position sampling	Used to determine 'Maximum valid speed' between 2 GPS points if speed value is not available in Vehicular Data.	15 s

4. Click the resequence button [▶] to initiate the resequencing process. The page is refreshed, displaying the changes in the bottom map panel.

> **ⓘ NOTE: Unsatisfactory results**
>
> If the results of resequencing are not satisfactory (i.e. there is a significant number of stops with a value of **0** in the **New Sequence** column), refer to the *Troubleshooting resequencing in the breadcrumb trail mode* section.

> **ⓘ NOTE: Resequencing error**
>
> If the system was unsuccessful gathering data for resequencing in the breadcrumb trail mode, the following message may be displayed at the bottom of the screen.
>
> Error! The request is rejected because of An unexpected error.
>
> If this happens, try selecting a different vehicle, or a different date, and then repeat step **5**.

5. Complete the resequencing procedure by doing one of the following:

   • To discard your resequencing changes, click the **Undo** button [↺] . The route sequence is reversed to the original.

   -OR-

   • To save changes, click the **Save** button [💾] . The new route sequence is saved.

Troubleshooting resequencing in the breadcrumb trail mode

In this section you will find some tips for using FleetLink Map and advanced options to help you resequence a route in the breadcrumb trail mode.

When resequencing in the breadcrumb trail mode, the matching is done based on the location coordinates located closest to the breadcrumb. The breadcrumb sequence is used to assign a sequence number to every stop in the route. Stops that cannot be matched remain unsequenced, are given a sequence number of **0** or **1**, and thus flagged for review.

If the result of resequencing is unsatisfactory, you can use FleetLink Map to find a route that may suit better for this task. You can then use this route's information, as well as advanced options, to help you resequence the route of interest.

To resequence a route in the breadcrumb trail mode with the help of FleetLink Map and advanced options:

1. Log in to FleetLink Map and navigate to the **Route View** screen for the route of interest. For details, refer to the **FleetLink Map User Guide**.
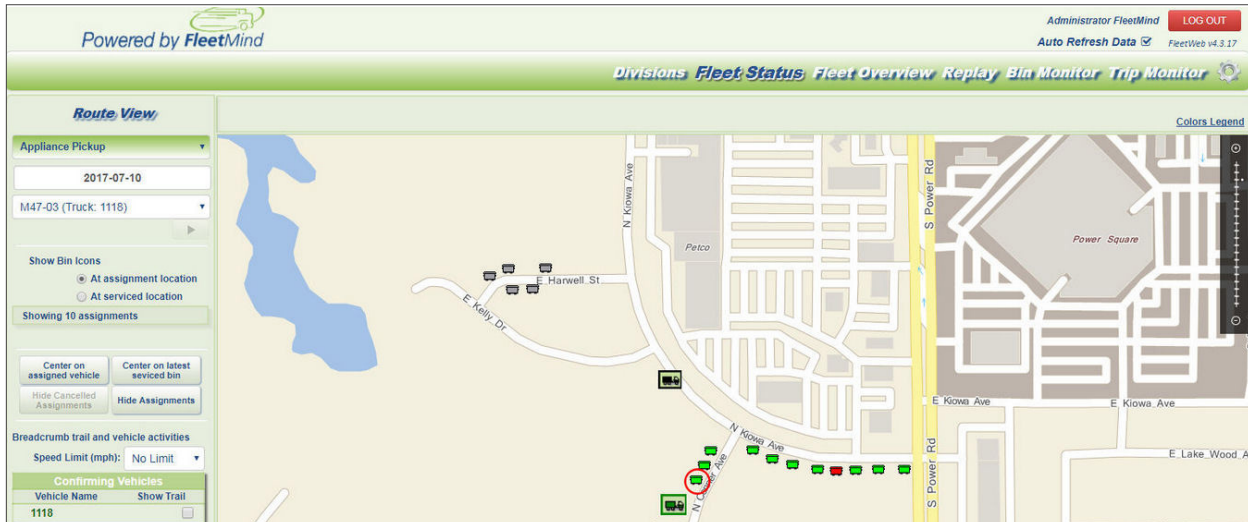
2. Verify that the breadcrumb trail used by the driver has actually covered all the stops assigned to the route (i.e., the driver ran a complete route) for a given date. If you see multiple trucks in the **Confirming Vehicles** list, then it is likely that another truck helped and you do not have a complete breadcrumb trail for sequencing. If you determine that the route has been serviced by more than one vehicle, try switching to prior weeks to find one when the entire route was completed by only one truck.
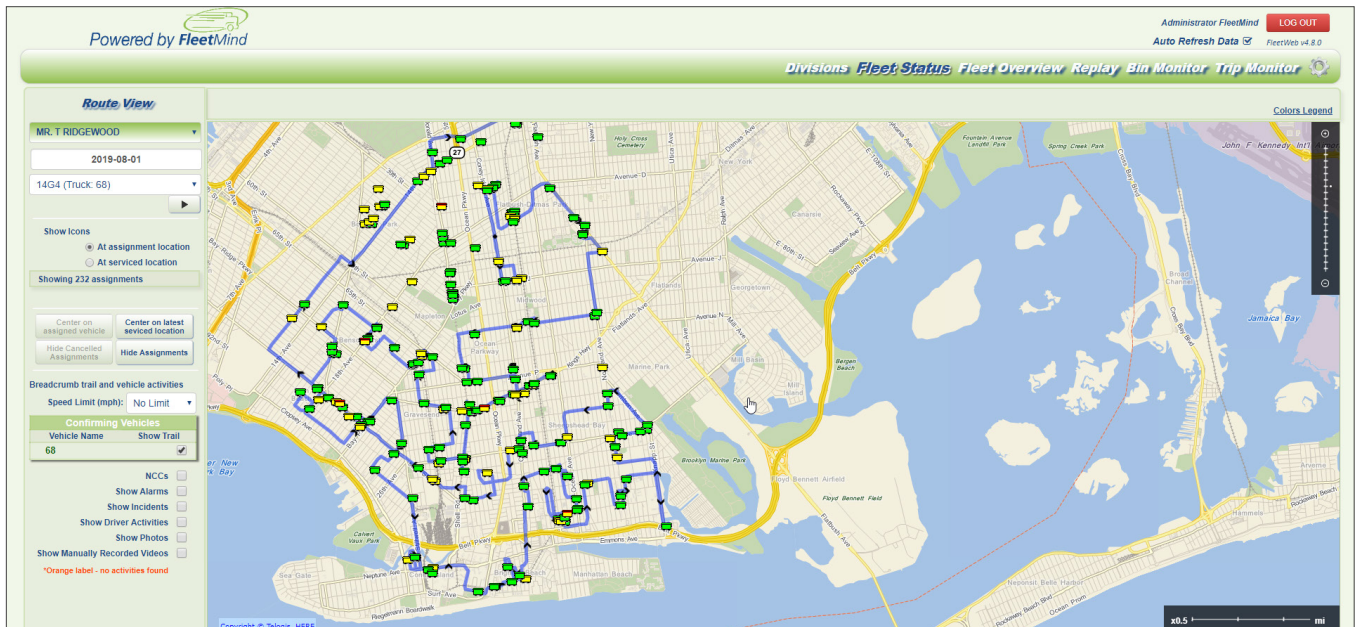
3. Once you have located a suitable route, make a note of the name and date, and proceed to Route Management for route resequencing.

4. In Route Management, return to the **Edit Route Sequence** screen for the route of interest (see steps **1**-**3** of the *Resequencing Routes* section) and select the **Breadcrumb trail** option from the **Resequencing Mode** drop-down list.

5. From the corresponding menus, select the truck and date of the route you made a note of in step **3**.

6. Click the resequence button ⏺ to initiate the resequencing process and then review the results.

Common Txt Orig	Common Txt New	Address
0	0	1365 Lydia Ave W Roseville MN 55113
0	0	1666 Ridgewood Ln N Roseville MN 55113
0	0	1746 Skillman Ave W Roseville MN 55113
2	10	1733 Eldridge Ave W Roseville MN 55113
4	20	2206 Midlothian Rd Roseville MN 55113
6	30	1637 Ridgewood Ln N Roseville MN 55113
8	40	1617 Ridgewood Ln S Roseville MN 55113
10	50	1629 Ridgewood Ln S Roseville MN 55113

7. Depending on the outcome, perform one of the following steps:

   - If the results are satisfactory, proceed with saving the changes. See step **5** of the ***Resequencing in the "Breadcrumb trail" mode*** section. **End of procedure**

   -OR-

   - If there is a significant number of stops with a value of **0** in the **New Sequence** column, do not save the resequencing changes, and proceed to the next step.

8. Click the advanced options button [⚙] to access the **Advanced Options** form, and then perform one or more of the following steps:

   - Try increasing corridor width gradually from the default value of **50** all the way to **80**.
   - Try increasing maximum valid speed from **25** to **50**.

9. Click **Save Settings** to close the **Advanced Options** form, and then click the resequence button to re-initiate the resequencing process.

10. Repeat steps **8** - **9** until you have achieved improved resequencing results.

11. Review the results and then perform one of the following steps:

    - If the results are satisfactory, save your work. **End of procedure**.

    -OR-

    - If there is still a significant number of unsequenced stops, proceed to the next step.

12. Return to the **Edit Route** page, and then click the **Edit Positions** button. The **Edit position of containers** window is displayed. Perform the following steps:

    i. Find one of the stops that received a value of 0 after previous resequencing attempts on the list, and then click the eye icon [👁] beside it.
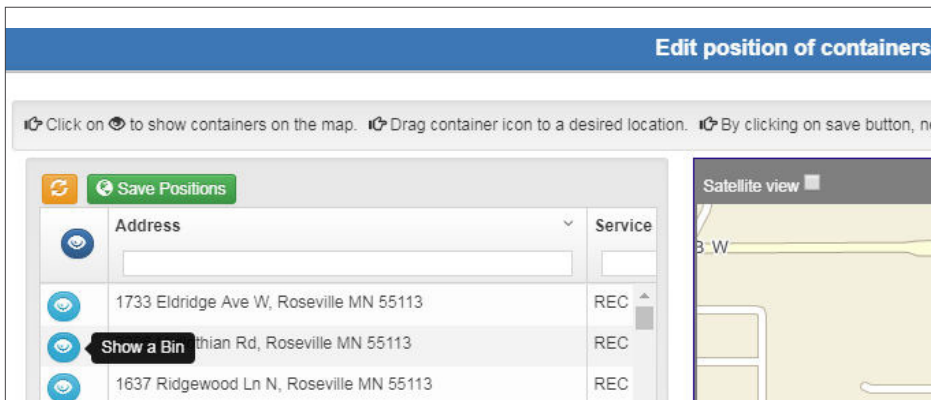
The location coordinates marker and container icon are displayed on the map.
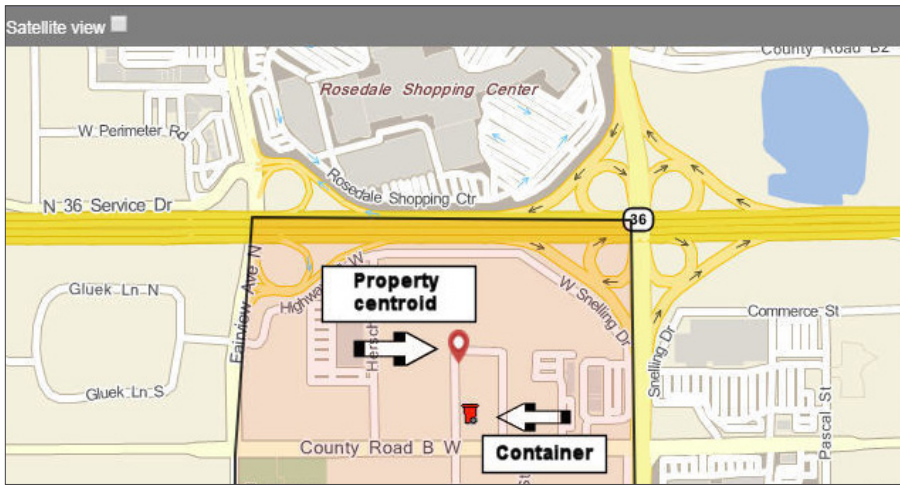
ii.   Click the container icon and drag it toward the location coordinates marker.
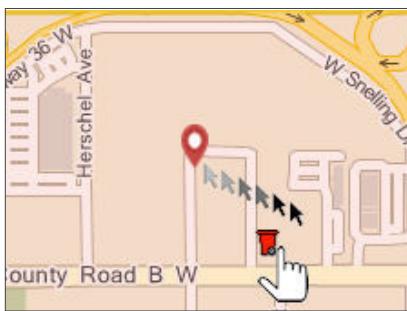
iii. Repeat steps **i** - **ii** for all stops with the value of **0**.

iv.   Click the **Save Positions** button. The message is displayed at the bottom of the screen confirming that the new positions were saved.

v.   Click the cross at the top right corner of the window to close it.

13. Try resequencing the route again in the breadcrumb trail mode.

Optimizing Routes

With route optimization, you can re-arrange the sequence of stops in any low-density route to make it more efficient. Route optimization relies on the analysis provided by the third-party software. This is a feature that is sold separately.

Follow this procedure if you have selected the **By route attributes** option in step **3** of the *Resequencing Routes* procedure.
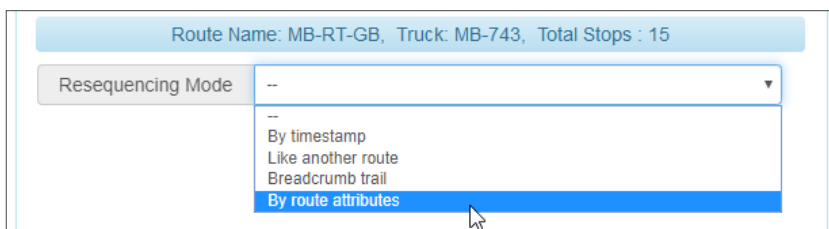
> **ⓘ NOTE: Subscription is required**
>
> To use the route optimization feature, a separate subscription to a route optimizing service, such as C2Logix or RouteSmart, is required.

To optimize a route:

1.   Define the following attributes by making selections from the corresponding drop-down lists:

   •   **Start time** - the time when the driver should start working on the route

   •   **Start at** - the location where the route should start

   •   **Max Duration** - maximum time you want to allocate to servicing the route

   •   **End at** - the location where the route should end

- **Truck's Capacity** - the load capacity of the truck in cubic meters. **NOTE**: This is an information field prepopulated based on the configured hopper capacity of the truck. To configure the truck capacity, go to **Reference Data > Vehicles/Drivers > Trucks**, and then edit the desired truck as needed.
- **Accuracy -** the selection you make determines how many times the app will try to arrive at the most economical route. The highest value may cause increased processing time.
- **Convergence** - the selection you make determines how quickly the optimization process will stop if the cost remains unaffected.

2. To start the route optimization process, click the resequence button .
While the process is running, the **Route optimization is in progress.** message is displayed in the route attributes section:

Once the process is finished, the **Route optimization completed.** message is displayed and the bottom map is updated with the new route sequence.

3. Review the optimized route, and then do one of the following:

- If the results are not satisfactory, you can try repeating step **2**.

-OR-
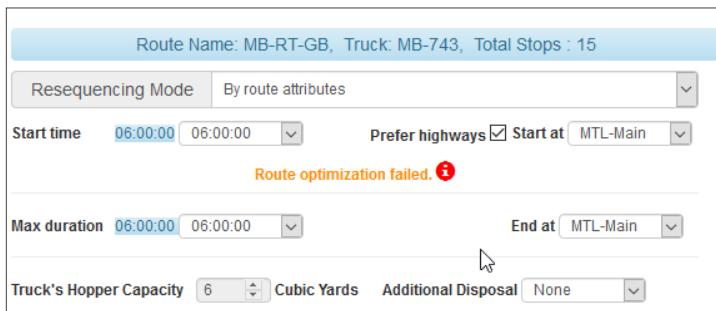
- To save changes, click the **Save** button 💾 . The new route sequence is saved.

4. Optionally, once you saved the changes, you can download the optimization report in PDF format which is saved in a zipped folder. To do so, click the download button ⬇ , then follow system prompts to save the report to a preferred location on your PC.

Understanding and troubleshooting route optimization messages

Optimization failed

When the system is unable to complete route optimization, the following message may be displayed:
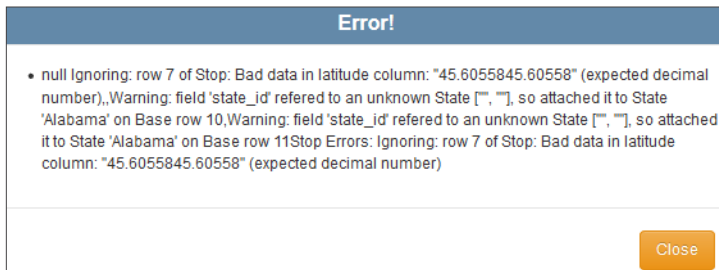
To troubleshoot this message:

1. Click the information icon 🛈. A detailed error message is displayed with information on what went wrong.
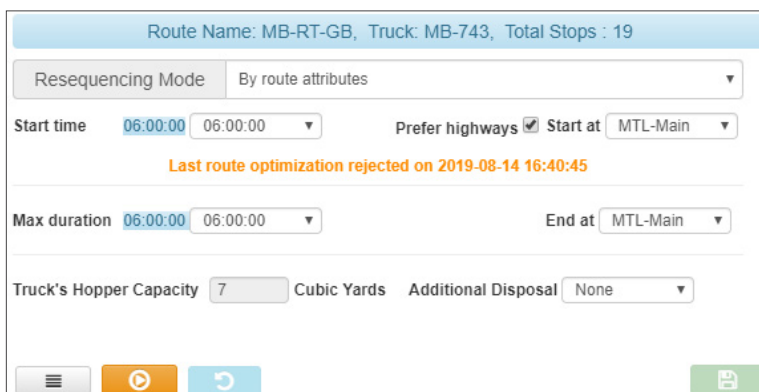
2. Correct the issues that caused the error, and then try optimizing again. If you are not sure how to correct the issues, contact your system administrator.

Optimization rejected

The following message may be displayed, when you click the **Undo** button 🔄 after route optimization is completed:

Notice that the **Save** button 🖫 becomes disabled.

- In order to save the optimized route sequence, run the optimization again.

Route contents changed

The following message may be displayed when you click the resequence button ⏵ :

It means that the route has been edited after it was last optimized, for example, stops may have been added or removed.

- Click **OK** to close the message and proceed with your next step.

Closing Routes and Stops

This section describes how to close routes and stops that have been left open at the end of the day.

You can close either the entire route or individual recurring or on-demand stops. The ability to close individual stops is useful in a scenario where a driver who was using manual confirmation mode and forgot to confirm the serviced stops has already checked out. Closing such stops manually will ensure that they are not marked as missed and their completion status is accurately reflected in other FleetMind apps.

Closing Routes

> ℹ **NOTE: Closing routes**
>
> Approach the task of closing routes with care: once you close a route, no one will be able to modify it.

To close a route:

1. Select the **Close Routes** option from the **Routes** menu. The **Close Routes** page is displayed.
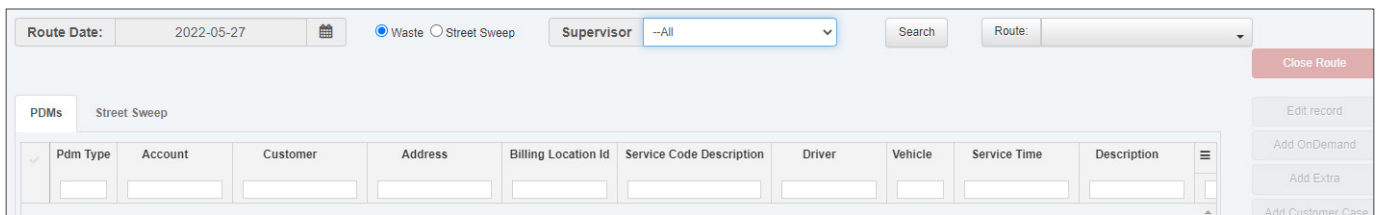
2. Enter/select the date of the route in the **Route Date** field.
3. Select the **Waste** radio button for a waste collection route or the **Street Sweep** radio button for a street sweeping route.
4. Click inside the **Supervisor** field and select the name of a supervisor to filter the list.
5. Click inside the **Route** field. A list of routes matching the criteria you selected in steps **2** - **4** is displayed.

6. Select the checkbox beside a route of interest, then perform one of the following tasks:

If you selected a route that is...	Then...
Done	The list of route stops is displayed and the **Close Route** button is activated. • Proceed to step **7**.
Not started (the driver hasn't yet selected this route)	A new dialog box is displayed. **Set Driver working hours for route: 45** Vehicle: 40132 Driver: Select Driver Log On Timestamp: : 2021-10-22 01:00:00 Log Off Timestamp: : 2021-10-22 11:00:00 Cancel Save • Select the driver and logon/logoff timestamps, then click **Save**. The screen is refreshed and the list of stops on this route is displayed. The **Close Route** button is activated. / Home / Routes / Close Routes Route Date: 2021-10-22 Route: 45 Close Route |	Pdm Type	Account	Customer	A...	Billing Location Id	Service Code Description	Driver	Vehicle	Service Time	Description	Ticket Id	
✓	ASN	0000087846	101 BARSTOW	1...	159498782	2 - 3 YD 1 TIME PER WE...		40...	2021-10-21 21:00:28	MISSED	
✓	ASN	0000106941	841 CLOVIS	8...	151035416	1 - 2 YD 1 TIME PER WE...		40...	2021-10-21 21:00:28	MISSED	
✓	ASN	0000092494	1136 SYLMAR	1...	172138118	1 - 1 YD 1 TIME WEEK		40...	2021-10-21 21:00:28	MISSED	
✓	ASN	0000087846	101 BARSTOW	1...	159498782	2 - 3 YD 1 TIME PER WE...		40...	2021-10-21 21:00:28	MISSED		 Edit record / Add OnDemand / Add Extra / Add Customer Case / Add Disposal
In progress (the driver hasn't yet ended this route, so it can be done by a dispatcher)	A warning message is displayed. **Warning! Route: OF1 still In Progress!** "Route done" not received by mobile unit. Do you want to force route done? Yes No 1. Click **Yes** in the displayed dialog box. A new dialog box is displayed. **Set "Route Done" for Route: 14** Vehicle: 31009 Driver: Select Driver Odometer: : Route Done Timestamp: : 2022-06-29 23:59:50 Cancel Save 2. Select the driver, enter the odometer reading, and select the time in the **Route Done Timestamp** calendar field, then click **Save**. The screen is refreshed and the list of stops on this route is displayed.

7. To close this route, click **Close Route**, then click **Yes** in the displayed message. The route status is updated.
    -OR-
    To perform other tasks, go to one of the following sections as needed and follow the relevant steps:
    • *Closing Stops* to close individual stops.
    • *Creating Street Sweeping Records* to manually create a record for a street sweeping route.

- *Scheduling On-Demand Stops* to schedule an on-demand stop for a specific stop.
- *Adding and Editing Extra Services* to add new or edit existing service for extra containers.
- *Adding New Customer Cases* to create a customer case when there is a complaint
- *Creating Disposal Records* to manually create a disposal record.

Closing Stops

> **ⓘ NOTE: About PDM types**
>
> PDM stands for "Pick-up and Deliver Message". PDMs are exchanged between various components of the FleetMind solution, such as on-board computers and back-office software. Typically, each stop has a PDM type that refers to the current status of this stop which depends on the action the driver takes while servicing the route. For more information about PDM types, refer to the **PDM Message Types** table in **Appendix 3**.

To close (confirm) individual stops:

1. Follow steps **1** - **6** of the *Closing Routes* procedure for waste collection routes.
2. Make sure the **PDMs** tab is selected, then perform one of the following tasks:

To close...	Do this...
Multiple stops **NOTE**: Multiple stops can be selected only for stops with PDM type **ASN** (Assign Call).	1. Select the checkmarks for the desired stops, and then click the **Edit Record** button to the right of the list of stops. The new dialog box is displayed. **Manually confirming multiple stops** Vehicle: 40112 Driver: [____] Date: 2021-10-26 Completion Code: DONE - COMPLETED Notes: [____] Cancel Save 2. Select the desired completion code, enter the notes as needed, and then click **Save**. The status of the selected stops is updated in the **Description** column.
A single stop	1. Select the checkmark for the desired stop, and then click the **Edit Record** button to the right of the list of stops. The new dialog box is displayed. **NOTE**: Depending on the service type, this dialog box may have different fields. **Editing Stop at 1055 BUNDY** Vehicle: 40112 Driver: [____] Date: 2021-10-26 Completion Code: DONE - COMPLETED Notes: [____] Time: 21:01:04 Weight: 0 Weight Unit: Select Unit Cancel Save 2. Select/enter the values as needed. 3. Click **Save**. The stop information is updated.

Creating Street Sweeping Records

For street sweeping routes, you can manually create a record that includes various route data. To do so:

1. Follow steps **1** - **6** of the **Closing Routes** procedure for street sweeping routes, then click the **Add Record** button. A blank record is added to the list.

2. Select the created record, then click the **Edit Record** button. The **Edit Street Sweeping Record** form is displayed.

3. Enter the route data in the available fields and click **Save**. The record is updated.

Scheduling On-Demand Stops

You can schedule an on-demand stop for a stop of interest. To do so:

1. Follow steps **1** - **6** of the **Closing Routes** procedure.

2. Select the desired stop, then click the **Add OnDemand** button. The **Schedule on-demand stop** form is displayed.

3. Follow the relevant steps described in the **Managing On-Demand Services and Stops** section.

Adding and Editing Extra Services

You can schedule a new extra service or edit the existing extra service for stops that have been confirmed (PDM type **CON**).

To add and/or edit an extra service:

1. Follow steps **1** - **6** of the **Closing Routes** procedure.

2. Select the desired stop, then click the **Add Extra** button. The **Adding Extra Service** form is displayed.

3. Fill out the form and click **Save**. The new entry is added to the list with a PDM type **CAL** (Call-In).

4. To edit the extra service, select a stop with the PDM type **CAL**, then click the **Edit Extra** button. The **Edit Extra Service** form is displayed.

5. Make the changes as needed, then click **Save**.

Adding New Customer Cases

You can add a new customer case for a stop of interest. To do so:

1. Follow steps **1** - **6** of the *Closing Routes* procedure.

2. Select the desired stop, then click the **Add Customer Case** button that is activated. The **Add New Case** form is displayed.

3. Follow the relevant steps of the *Creating Customer Cases* procedure.

Creating Disposal Records

You can add a route disposal record for routes that are done but not yet closed. To do so:

1. Follow steps **1** - **6** of the *Closing Routes* procedure, if you haven't already.

2. Click the **Add Route Disposal** button. The **Add Route Disposal** form is displayed.

3. Fill out the form and click **Save**. The record with PDM type **DSP** is added to the list.

Adding Routes and Stops

This section describes how to add routes and stops to Route Management.

There are three main ways to add routes to the system:

- Import route and stop data; this is typically done at the time of deployment.
- Manually add routes and stops later, when the system is already running.

Additionally, you can generate routes from geozones. For more information, see *Generating Routes from Geozones*.

You can also add stops to an existing route by linking it to a geozone whose boundaries encompass the stops you want to be included in that route. For more information, see *Creating New Route Geozones*.

To add temporary routes, see the *Creating a temporary route* procedure in the *Transferring Routes to Temporary Routes* section.

Importing Routes and Stops

Most often routes are added to the system at the time of deployment. The quickest and most commonly used method is to import route data collected from, or exported by, your back-office (dispatch) system.

In order to use this method, you must first prepare a properly formatted comma-separated-value (CSV) file using Microsoft Excel or other spreadsheet app. The formatting of the file must strictly adhere to a set of rules, which are defined on the **Import Routes & Stops** page.

When you use this method, location data for each route is imported along with all other route details.

For detailed overview of the information that may be added to the CSV file, refer to the *Routes and Stops Data* section.

To import route data:

1. Go to the **Routes** menu and select the **Import Routes & Stops** option. The **Import Routes & Stops** page is displayed.

2. If you haven't yet prepared the route data file, review the CSV file formatting rules at the top of the page and download, if desired, the most current file template by clicking the **Download Sample** button. Refer to the table in the lower portion of the page to gain insight into each entry as you prepare your file. Otherwise, proceed to the next step.

3. Go to the **Advanced Options** section and make the following selections:
   - To remove all the existing route data before importing the new data, select **Yes** using the **Clear Routes** toggle switch. **NOTE**: The route placeholders remain in place, only the stops and related data will be cleared.
   - If you are importing street sweeping routes, select **Sections** using the **Containers/Streets** toggle switch.

4. Go to the **Importing** section, then, to instruct the system how customers will be identified, make a selection using the toggle **CustomerId as UID** switch:
   - Select **Yes** to use your own customer IDs entered in your spreadsheet as unique customer identifiers (recommended option)
   - Select **No** to have the system create unique customer identifiers.

5. Click the **Browse** button, and then navigate to the location of your route data file.

6. Double-click your file, or select it and click **Open**.

7. Click the **Validate and Import** button that appears. The system evaluates your file. Upon successful validation, a message is displayed.

> ℹ **NOTE: Validation error**
>
> If the system cannot validate the file, an error message will be displayed. Review your file, correct any errors and repeat steps **5** to **7** until the file is successfully validated.

8. Click **Import Data**. The system processes and imports the file, and then a confirmation message is displayed.

9. Close the confirmation message and, if desired, review the imported data by going to **Routes** > **Search Routes and Stops**, and entering your search criteria.

Adding Routes and Stops Manually

You can add a new route directly in the app by entering its data manually.

Adding a new route is a two-step procedure:

Step 1: Entering the route information.

Step 2: Adding stops to the route.

Step 1. Entering the route information

1. Go to the **Routes** menu and select the **Add Route** option. The **Add Route** page is displayed.

2. Make a selection from the drop-down list above the form: **Single Day Route** or **Multi Day Route**.
   NOTE: When you select the **Multi Day Route** option, the **Work zone** toggle switch becomes disabled and the **Route Expiration Days** field is enabled.

3. Enter/select the following values on the form as needed. **NOTE**: Mandatory fields are marked with a red vertical bar.
   - Route name by which this route will be identified in the system
   - Route start date (optional)
   - The frequency with which this route will run
   - A truck that this route will be assigned to OR a work group composed of trucks that will service this route
   - The type of material associated with this route
   - Operating department and line of business, with which this route will be associated
   - Type of containers that will be serviced on this route.

4. Make the following selections using the available toggle switches:

- **Disable Automatic Dispatch.** Select **Yes** if you don't want the system to dispatch this route automatically.
- **Temporary**. Select **Yes** if you are creating a temporary route. **NOTE**: Temporary routes are automatically deleted on the day following their creation.
- **Work Zone**. This toggle switch is disabled for multi-day routes. For single day routes, select **Yes** if you are creating a street sweeping route. **NOTE**: If you select **Yes**, the **Expected route distance** field is activated. Enter the distance and select the preferred measurement unit (miles or kilometers).
- **Update Geolocation**, **Update Rfid**, **Update #Serial**. Select **Yes** to have the corresponding container information updated in the system once the lift is performed and a confirmation of the lift is received by the system.

5. If you are creating a multi-day route, enter the number of days this route will remain in effect in the **Route Expiration Days** field.

6. Optionally, enter a message for the driver(s) working on this route in the **Message** text box.

7. Click **Save**. The route is added to the system. The page is switched to the **Edit Route** page for the newly created route.
   - Notice that the **Next Scheduled Dispatch** field is now populated, based on the date you have entered in the **Start Date** field.
   - Additionally, the edit icons [✎] beside the **GeoZone** and **Route Path** fields are activated. By clicking these icons, you can add a new geozone or route path to this route. See *Creating New Route Geozones* and *Adding Route Paths Manually*.

8. To add stops to this route, proceed to **Step 2. Adding stops to the route**.

Step 2. Adding stops to routes

1. On the **Edit Route** page click **Show/Hide Stops**. The lower portion of the **Edit Route** page is displayed.

2. To add new stops, make sure the **Recurring Associations** tab is selected, and then click the plus icon [+]. The **Add Stops** page is displayed, with the list available stops.

3. To search for stops that match the specific criteria, go to the top of the page, and then make selections from the available drop-down lists, and/or enter information in the desired fields.

4.   Click **Search**. The list of stops is updated. You can further sort and filter it using the column headers.

5.   Find the desired stop(s) on the list, and then click the checkmark(s) in the leftmost column of the corresponding row(s) to select them.

6.   Click **Add to route**. A confirmation dialog is displayed.

7.   Click **Yes** to confirm. The stops are added to the route and a confirmation message is displayed. **NOTE**: The stops that have been added to this route are removed from the list of available stops.

8.   Click **OK** to close the message.

9.   To add more stops, repeat steps **3** - **8**.

Pages You Can Access from the Add Stops Page

To access the...	Do this...
Edit Assignment page where you can change various attributes for this stop	Find the stop of interest, then click the link in the **Status** column. Follow the relevant steps of the *Editing Stops* procedure.
Edit Route page where you can edit a route of interest	Click the desired route name in the **Route Name** column, then follow the relevant steps described in the *Editing Routes* procedure
Edit Location page where you can edit the stop (location) of interest	Find the stop of interest, then click the link in the **Street** column. Follow the relevant steps of the *Editing Locations* procedure.
Edit Container page where you can edit the container for a stop of interest	Find the stop of interest, then click the link in the **Volume** column. Follow the relevant steps of the *Editing Containers* procedure.

Exporting Routes and Stops Data

This section describes how to export comprehensive routes and stops data.

You can export the combined data for routes, stops, and container inventory in the CSV format. This data can later be verified before making changes directly in the system, or modified offline and imported back into the system.

To export route data:

1.   Go to the **Routes** menu and select the **Export Routes & Stops** option. The **Export Routes & Stops** page is displayed.


2.   Depending on the type of route data that you want to be included in the CSV file, you need to adjust the displayed form accordingly before selecting your criteria. To do so, make a selection by clicking the toggle switch in the bottom left corner of the form as follows:

- To include the waste collection route data, make sure the switch is in the **Containers** position.

  Containers
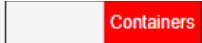
- To include the street sweeping route data, make sure the switch is in the **Sections** position.

  Sections

The fields displayed on the form are adjusted accordingly.

3. Enter/select the desired search criteria in the available fields, then click **Export** and follow system prompts to save the file in a preferred location on your PC. **NOTE**: You can select more than one route by holding down the Ctrl key on your keyboard.

> ℹ **NOTE: Manipulating data**
>
> Once you have exported the route data, you can make modifications, such as deleting stops and adding new ones. Whenever you are manipulating the data manually using a spreadsheet editor such as Microsoft Excel, or other third-party software, it is important to respect the format of the file in order to import it back into the system successfully.
>
> A set of unique values must not be changed in order to avoid the creation of duplicate routes/stops. These values are: customer ID, location ID, serial number, subscription code.

Downloading and Printing Route Lists

This section describes how you can download route information for printing purposes in case the mobile units in the trucks or WasteApp are malfunctioning.

You can download a list of select routes for a selected date in HTML format. The list contains basic information about the routes and stops, and is printable from your browser. To do so:

1. Go to the **Routes** menu and select the **Print Routes** option. The **Print Routes** page is displayed.

/ **Home** / **Routes** / **Print Routes**

Route List for :   2021-10-18   📅

Select row(s) to print route's information. Supported print formats: Roll-Off, Front Load and Residential stops

	Route ID	IsTemporary	Vehicle	# Stops
✓	102		40047	1
✓	104		40119	784
✓	105		40112	731
✓	106		40116	850
✓	107		40113	738
✓	11		40047	123
✓	13		40132	127
✓	21		40044	124
✓	31		40038	116
✓	41		40132	134
✓	51		40131	116
✓	61		40045	92
✓	s10-28		40114	6
✓	S1-1		40114	0
✓	Jairowz123		40021	0
✓	CLOVIS		40021	5

2. Enter/select the desired date in the **Route List for** field. **NOTE**: You can enter/select only today's date or a future date.

3. Select the checkboxes beside the routes you want to be included in the downloaded list, or click the topmost check mark in the header row to select all routes.

 -OR-

4. Click **Download**, then follow system prompts to save the file in a preferred location on your PC.

5. To print the downloaded list, navigate to the location of the saved file, double-click it to open, and then follow the printing procedure appropriate for your browser.

Chapter 3. Managing Customers

In this chapter

About this chapter

This chapter describes how to manage your customers. All the tasks in this chapter are performed from the **Customers** menu.

Adding Customers, Locations, and Subscriptions

This section describes how to add customers and their locations to Route Management, and how to subscribe customer locations to services..

There are two ways to add customers and their locations to the system:

- · Import customer data; this is typically done at the time of deployment. For details, refer to the *Importing Customer Data* section.
- · Manually add customers when the system is already running.

Adding Customers and Locations

You can add new customers directly in the app by entering their data manually.

Adding a new customer is a two-step procedure:

> **Step 1**: Creating a customer profile.

> **Step 2**: Adding customer locations.

Step 1. Creating a customer profile

1. Go to the **Customers** menu and select the **Add Customer & Location** option. The **Add Customer & Location** page is displayed.

2. Enter/select the following values on the form as needed. **NOTE**: Required fields are marked with a colored vertical bar.
   - · Customer ID by which the new customer will be identified in the system**. NOTE**: If you leave this field blank, a customer ID will be generated by the system.
   - · Checkboxes as follows:
     - · **Active**: select if this is an active account.

- **Prospect**: select if this is a prospective customer.
- **Billable**: select if this customer's address needs to be used for billing purposes due to their locations not being billable. **NOTE**: If this checkbox is selected, enter the address in the **Billing Address** section.
- **Suspend**: select if this customer's services are currently suspended. **NOTE**: If this checkbox is selected, enter the date range of the suspension in the **Customer Suspension Duration** section.
- **WOID Required**: select to make the work order ID a required entry when scheduling an on-demand stop.

- Customer's first and last name, business name, and contact information in the corresponding fields. **NOTE**: Last name is required for residential customers, and business name is required for commercial customers.
- A prefix from the **Customer Prefix** drop-down list to have the system automatically generate the Customer ID, which will contain the selected prefix as its first characters.
- A predefined customer class from the **Customer Class** drop-down list
- Comments for the driver about this customer in the **Driver Comments** field
- SA_ID and SP_ID fields (used only by certain customers).

3. Click **Save Customer**. The customer is added to the system and a confirmation message is displayed. The lower portion of the page appears for you to add locations for this customer. Proceed to *Step 2. Adding customer locations*.
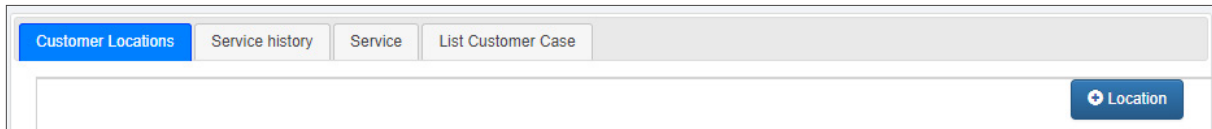
Step 2. Adding customer locations

Customers may have multiple locations and/or multiple containers at a single location, for example, one for garbage and one for recycling. Each container is treated as a separate stop on a potentially different route.

To add a customer location:

1. Click the **Location** button. The **Add Location** page is displayed.

2. Enter/select the following information on the form:
- The name of this location in the **Location Name** field
- Contact information in the appropriate fields

- Checkboxes as follows:
  - **Same as billing address**: select if the address of this location is the same as the billing address you entered when adding this customer. **NOTE**: If this checkbox is selected, the address-related fields on this form are populated automatically.
  - **Active**: select if this is an active location.
  - **Prospect**: select if this is a prospective location.
- The address of this location in the appropriate fields (if different from the billing address)
- A predefined building category, from the **Building Category** drop-down list
- A predefined district this location belongs to, from the **District** drop-down list.

ⓘ NOTE: System-generated values

The values in the following fields are generated by the system automatically once the customer location is geocoded based on the address you have entered:

- Lat   • Lon   • Location Code

If automatic geocoding fails, you can geocode customer locations manually. See *Geocoding Customer Locations.*

---

3. Click **Save**. The following updates take place:
   - The location is added to the system.
   - The page changes to the **Edit Location** page.
   - New tabs become available beside the **Location** tab.
   - A building icon representing the location you have added is displayed on the map beside the form. **NOTE**: You can click and drag the building icon directly on the map to adjust the coordinates for this location.
   - The lower portion of the page is displayed for you to subscribe this location to a service. If you want to proceed with this task, follow the relevant procedure described in the *Adding New Service Subscriptions* section. Otherwise, proceed to the next step.

4. To add documents stored online for this location:
   i. Click the **Documents** tab. A document table is displayed.
   ii. Select the **Add new Document** option, accessible from the drop-down side menu in the top right corner of the table.
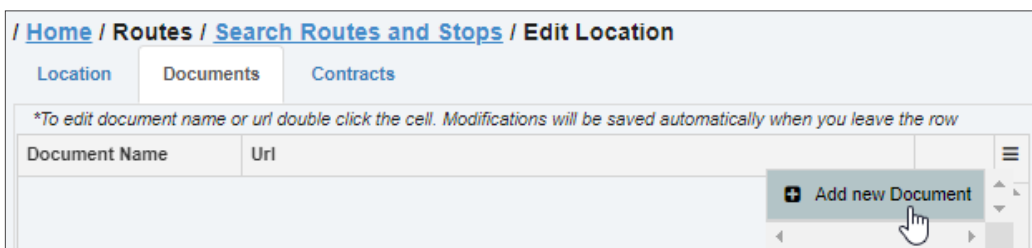
   iii. Double-click the new table cell in the **Document Name** column, and then enter the name of the document.
   iv. Double-click the table cell in the **Url** column, and then enter the web address of this document.
   v. Repeat steps **ii** - **iv** to add more documents.
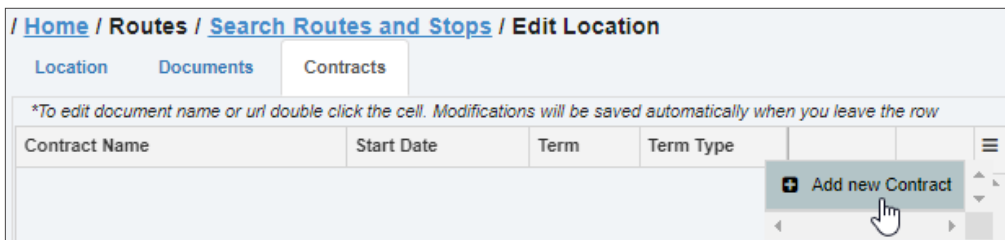
> **ⓘ NOTE: Viewing and deleting documents**
> - To view the document, click the link in the Url column to navigate to the URL location of this document.
> - To remove unwanted documents, click the cross icon in the appropriate row and then click **Delete** in the displayed confirmation message.
>
> **/ Home / Routes / Search Routes and Stops / Edit Location**
>
> | Location | Documents | Contracts |
>
> *To edit document name or url double click the cell. Modifications will be saved automatically when you leave the row*
>
> | Document Name | Url | | ≡ |
> | --- | --- | --- | --- |
> | Route List | http://cityofclovis.com | ❌ | ▲ |
>
> Remove Document
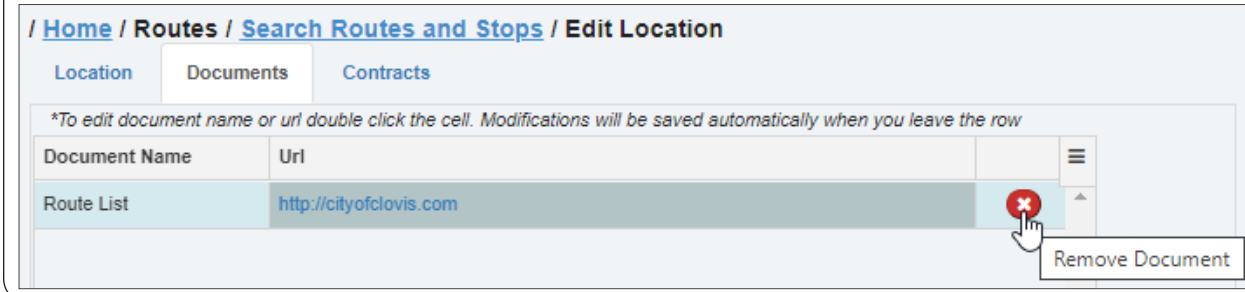
5. To add contracts for this location:

   i. Click the **Contracts** tab. A contract table is displayed.

   ii. Click **Add new Contract**, accessible from the drop-down side menu in the top right corner of the table.

/ Home / Routes / Search Routes and Stops / Edit Location

| Location | Documents | Contracts |

To edit document name or url double click the cell. Modifications will be saved automatically when you leave the row

Contract Name	Start Date	Term	Term Type		≡
				⊞ Add new Contract	

The **Add Contract** form is displayed.

Add Contract ✖

Name:

Location:
2095 WEST COURTYARD

Url:

Start Date: 📅

End Date: 📅

Term:

Months or Years: ⌄

Automatically Renew: ☐

Comment:

✖ Cancel   🛒 Complete

iii.   Enter the following information in the corresponding fields: name of this contract; a URL if applicable (this is the URL of the contract that is stored on the web); start and end dates as needed; length of the term of this contract (in months or years).

iv.   Select the **Automatically Renew** checkbox to ensure this contract is renewed in the system automatically at the end of each term.

v.   Optionally, enter the comments for this contract.

vi.   Click **Complete** to save this contract and close the form.

> **ⓘ NOTE: Viewing, editing, and deleting contracts**
>
> - To view a contract, click the link in the **Contract Name** column to open the URL location of this contract.
> - To edit a contract, click the edit icon ⌧ , then make the desired changes in the displayed **Modify Contract** form.
> - To delete a contract, click the cross icon, then click **Delete** in the confirmation message.
>
> **/ Home / Routes / Search Routes and Stops / Edit Location**
>
> | Location | Documents | Contracts |
> | --- | --- | --- |
>
> *To edit document name or url double click the cell. Modifications will be saved automatically when you leave the row*
>
> | Contract Name ▾ | Start Date | Term | Term Type | | | ☰ |
> | --- | --- | --- | --- | --- | --- | --- |
> | Contract 1 | 2023-07-01 | 48 | Months | ⌧ | ✕ | ▲ |

6.   To add another location, find this customer (follow steps **1** - **3** of the *Searching, Viewing, and Editing Customers* procedure), and then return to step **1** of this procedure,

-OR-

To add service subscriptions for this location, proceed to the relevant procedure described in the *Adding New Service Subscriptions* section.

Adding New Service Subscriptions

Once your customers and locations are entered into the system, you must subscribe them to services.

There are three subscription options available in Route Management:

- **Regular service**. This is the most often used option for single family dwellings and commercial customers.
- **Shared service**. This option can be used for multi-family dwellings where several subscribers share a single container.

Refer to the sections that follow for a each new service subscription procedure.

To modify existing subscriptions, refer to the relevant procedures of the *Managing Subscriptions* section.

Subscribing to a Regular Service

To subscribe a location to a regular service:

1.   Open the **Edit Location** page for the location that you want to subscribe to services. To do so, search for the customer of interest using the *Searching, Viewing, and Editing Customers* procedure, and then click the desired location in the **Customer Locations** column. **NOTE**: For alternate ways of accessing the **Edit Location** page, see *Editing Locations*. The **Edit Location** page is displayed.

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2. Click the **Subscribe** button in the lower portion of the page, and then select the **New Service** option from the displayed list.

The **Subscribe To New Service** window is displayed.

3. If more than one option is available in the **Line of Business** filter section, select the desired radio button. The table of matching services is updated accordingly, and more filter sections may be displayed, such as **Container Type**, **Container Size**, **Material**, **Limit**, and **Frequency**.
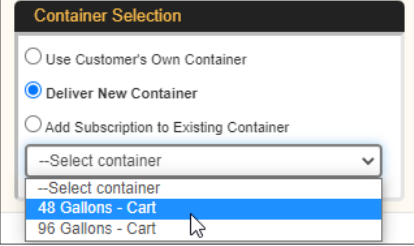
4. If you see more filter sections on the screen, make your selections from each section, as needed. The table of matching services is updated.

5. Go to the table of matching services, find the service to which you want to subscribe this location, and then click the check mark beside it to select it. New sections are displayed. **NOTE**: A table of available workflow options and rates is displayed and updated to the right of the services table, depending on the service you select.

6. Select the desired option in the **Container Selection** section as follows:

To...	Do this...
Allow the use of the customer's own container	• Select **Use Customer's Own Container**.

Provide the customer with your container
 	
NOTE: The service will remain suspended until the container is delivered.
	1. Select **Deliver New Container**. (selected by default)
	2. Select the desired container type from the **Select container** drop-down list.
	
	  ⓘ NOTE: Container inventory The options on the **Select container** drop-down list appear only if the container inventory has already been set up.
	
	3. Go to the **Container Delivery Option** section and enter/select the following information:
	  • The delivery date in the **Target Date** field.
	  • The workflow that is to be used for this delivery from the **Workflow** drop-down list. See the *Work Flows* section for more information.
	  • Optionally, notes for the driver and dispatcher in the corresponding fields.

Subscribe an existing container to this service	1. Select **Add Subscription to Existing Container**. 2. Select the existing container type from the **Select container** drop-down list.

7. Enter/select the start date of this subscription in the **Activation Date** section.

8. Enter the percentage discount that will apply to this subscription in the **Rate discount %** section.

9. Select the desired checkbox in the **Subscription Type** section.

10.　Optionally, to add a stop for this location to a route, select the **Put Stop On Route** checkbox.

11.　Click **Complete** to finalize this subscription.

If you...	Then...
Selected the **Put Stop On Route** checkbox in step **10**	The **Unscheduled Stops** page is displayed. • 　Follow the relevant steps of the ***Adding Unscheduled Stops to Routes*** procedure.
Did not select the **Put Stop On Route** checkbox in step **10**	The subscription you created is added to the list of services on the **Edit Location** page.

Subscribing to a Shared Service

To subscribe a location to a shared service:

1.　Follow step **1** of the ***Subscribing to a Regular Service*** procedure. The **Edit Location** page is displayed.

2.　Click the **Subscribe** button in the lower portion of the page and select the **New Shared** option from the displayed list.
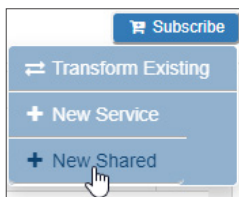
The **Subscribe to Service for Shared Container** window is displayed.

3. To search for a shareable container within close proximity of the current location, perform one of the following tasks:

To...	Do this...
Search by address	• Enter additional address information in the **Search Locations by Address** section, as needed, and then click **Search**.
Search by proximity	• Select a value from the **Max distance from location** drop-down list in the **Search Locations by proximity** section, and then click Search.

The list of locations that fall within your search criteria is displayed in the **Matching locations** section of the screen.

4. Click the desired location. The list of containers associated with this location is displayed in the **Existing Associations** section of the screen.

5. Click the container you want to associate with this shared service. The list of services available for this container is displayed in the **Available Services** section of the screen.

6. Select the desired service and review the details displayed in the **New Shared Subscription Details** section of the screen. Optionally, you can specify the start date, a discount if applicable, and whether this is an active or prospective subscription.

7. Click **Complete** to finalize this subscription. The subscription you created is added to the list of services on the **Edit Location** page.

Searching, Viewing, and Editing Customers

> ⓘ **NOTE: Accessing the Edit Customer page**
>
> This procedure describes how you can access the **Edit Customer** page through search but you can also access it by clicking the link in the **Customer ID** field in the following locations:
>
> - **Edit Location** page
> - **Add New Case** or **Add new Customer Case** windows.
>
> Alternatively, you can click the link in the **Customer Name** column on the **Edit Route** page on the list of stops under the **Current** tab found under the **On Demand/Extra** tab.

You can search, view, and edit the customers entered into your system. To do so:

1. Go to the **Customers** menu and select the **Search Customers** option. The **Search Customers** page is displayed.

2. Enter/select the desired search criteria as needed, and then click **Search**.

> 💡 **TIP: Searching customers**
>
> - For a quick search, specify the starting characters for street, city or district names, or postal code.
> - You can also specify a range of civic numbers, or a specific number, entered in the **From Street Civic #** field.
> - To access the specific customer page directly, search by **Customer ID** using their complete ID number.

The list of matching customers is displayed.

Notice that each customer record is expanded by default.

- To collapse all records, click the minus icon ▬ in the topmost row.
- To collapse a single record, click the same icon in the desired row.

3. Perform one of the following tasks:

- **To view a customer**, click the eye icon 👁 in the desired row. The **View Customer** page is displayed. Notice that the customer information on this page is not editable, but you can perform other tasks in the lower portion of the page.

- **To edit a customer**, click the edit icon 🖊 in the desired row. The **Edit Customer** page is displayed. You can update the customer information and then click **Save Customer** to save the changes. For more information, refer to the relevant steps of the *Creating a customer profile* procedure.

Tasks You Can Perform Directly on the View Customer/Edit Customer Pages

To...	Do this...
Update this customer's information (**Edit Customer** page only)	Make the desired changes in the editable fields, then click **Save Customer**. For more information, refer to the relevant steps of the *Creating a customer profile* procedure.
View the list of customer locations	Select the **Customer Locations** tab.
Search and review the monthly service history	Select the **Service History** tab, then select the year and month to display the list of services that have been delivered during that period.
View the list of services to which this customer is currently subscribed	Select the **Service** tab. **NOTE**: Terminated service subscriptions retained in the system are displayed as crossed out entries.
View the list of existing customer cases	Select the **List Customer Case** tab.

To...	Do this...
Add a new customer case	Go to the **Customer Locations** tab or the **Service history** tab, click the folder icon for the location or service of interest respectfully, then follow the relevant steps of the ***Creating Customer Cases*** procedure.
Edit an existing customer case	Go to the **List Customer Case** tab click the desired link in the **Case ID** column, then follow the relevant steps of the ***Viewing, Editing, and Exporting Existing Customer Cases*** procedure.

Pages You Can Access from the View Customer/Edit Customer Pages

To access the...	Do this...
Edit Location page where you can change the location's attributes and manage subscriptions	Go to the **Customer Locations** tab, click the link in any of the address-related columns (**Civic #**, **Street**, **City**, **State/Province**), then follow the relevant steps of the ***Editing Locations*** procedure.
Add Location page where you can add more locations to this customer	Click the **Location** button in the lower portion of the page, then follow the relevant steps of the ***Adding customer locations*** procedure.

Editing Locations

This section describes how to make changes to an existing customer location on the **Edit Location** page.

On this page you can:

- Update this location's information
- Update the status of containers associated with service subscriptions
- Subscribe this location to new services and manage the existing service subscriptions
- Schedule on-demand stops
- Review, add, edit, or remove documents, and contracts
- Open customer cases for specific subscriptions
- Review this location's service history
- View this location's container associations
- Navigate to other pages where you can edit a customer, container or a stop.

To access this page, click the desired link that appears in any of the following locations throughout the app:

- The **Customer Locations** column on the **Search Customers** page
- The **Civic #**, **Street**, **City**, or **State/Province** columns on the **Edit Customer** or **View Customer** pages under the **Customer Locations** tab
- The **Street** column on the **Add Stops** page
- The **Address** column on the **Edit Route** page's list of stops under the **Recurring Assignments** tab
- The **Civic Number, Street, District, or City** columns on the **Search Stops** page

To edit a location:

1. Open the **Edit Location** page for the desired location using one of the access methods described above.
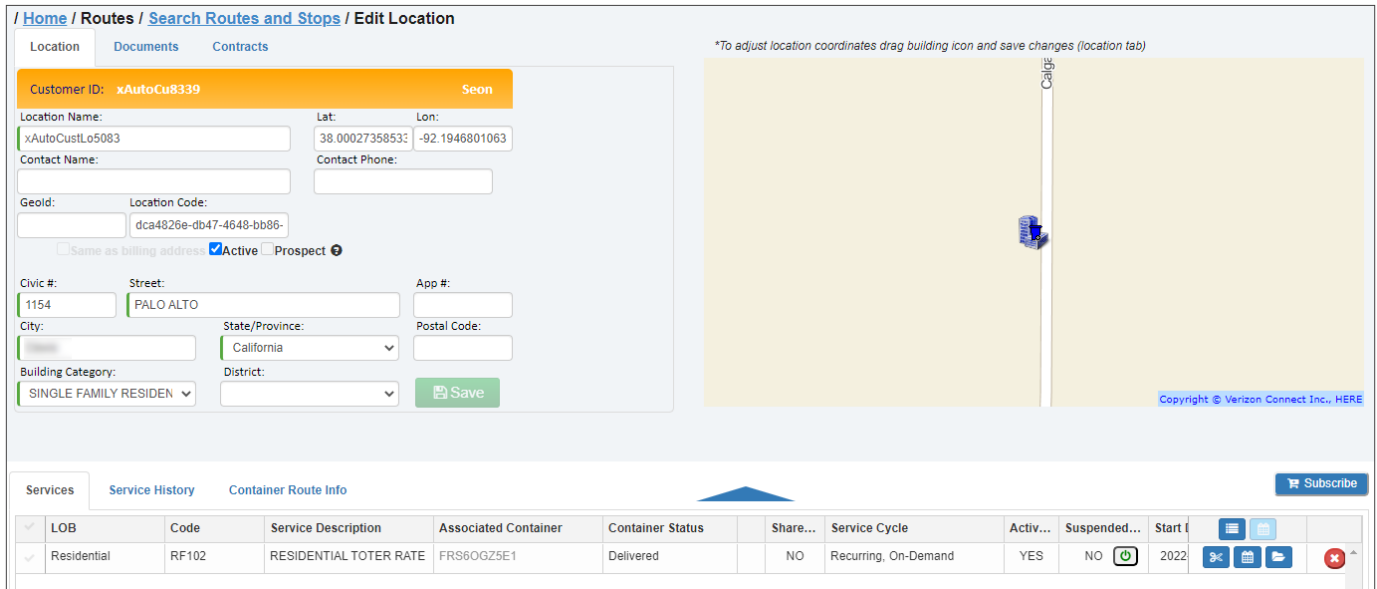
2. Proceed to the sections that follow to edit this location as needed.

Tasks You Can Perform Directly on the Edit Location Page

To...	Do this...
Update this location's information	Make the desired changes in the editable fields, then click **Save**. For more information, refer to the relevant steps of the **Adding customer locations** procedure.
Update the container's position for this location	Either change the values in the **Lat** and **Lon** fields, or reposition the icon that represents this location on the map.
Add, change, or remove documents or contracts	Follow the relevant steps of the **Adding customer locations** procedure.
Subscribe this location to services	Click the **Subscribe** button, and then follow the relevant steps of the **Adding New Service Subscriptions** procedure.
Search and review the monthly service history for this location	Select the **Service History** tab, then select the year and month to display the list of services that have been delivered during that period.
Review the information about routes and containers for this location	Select the **Container Route Info** tab and review the displayed information.
Services tab	
View the list of service subscriptions for this location	Select the **Services** tab and review the displayed information.
Change the suspension status of service subscriptions	Find the subscription whose status you want to change, then: • Click ⏻ to reinstate the service. -OR- • Click ⏻ to temporarily suspend the service, for example, when customer is on vacation.

To...	Do this...
Update the status of a container associated with a service subscription	1. Find the subscription of interest, then click the link in the **Container Status** column. The **Edit Container Status** form is displayed. 2. Update the container information, then click **Save**. The status is updated.
Schedule an on-demand stop for a subscription	• Find the desired subscription, then click the 📅 icon, and follow the relevant steps of the *Scheduling on-demand stops* procedure.
Schedule multiple on-demand stops for the same type of service	1. Go to the leftmost column and select two or more subscriptions for the same type of service. 2. Click the 📅 icon which is activated, then follow the relevant steps of the *Schedule on-demand stops* procedure.
View and update the scheduled on-demand stops	1. Click the ▤ icon. The **On Demand Stops** window is displayed with a list of scheduled on-demand stops. 2. To modify the scheduled date for the desired on-demand stop, find it on the list, double-click the date in the **Planned** column, then change the date as needed. 3. To add a note for the dispatcher or driver, double-click in the corresponding column (**Notes for Dispatcher** or **Notes for Driver**) for the desired stop, then enter your notes. 4. To mark a desired stop as dispatched, find it on the list, then select the checkbox in the **Dispatched** column. 5. To mark the desired stop as missed, find it on the list, then select the checkbox in the **Missed** column. 6. Click **Save** to save the changes, then click **Close** to close the window. The stop is updated.

To...	Do this...
Terminate this service subscription **ⓘ NOTE: When to use this icon** You can use this icon when the container at this location will no longer be part of your container inventory, for example, when it reached the end of its useful life and needs to be replaced.	Find the desired subscription, click the scissors icon ✂ , then click **Terminate** in the displayed dialog box. The service subscription is terminated and its entry on the list is crossed out. The information about this subscription is retained in the system. **Terminate Service Association** Warning !!! You're about to terminate service **RESIDENTIAL TOTER RATE**. Do you want to proceed ? *This action can't be undone.* [Terminate] [Cancel]
Delete this service subscription **ⓘ NOTE: When to use this icon** You cannot delete subscriptions that have customer cases attached to them. For such subscription use the termination option described above.	Find the desired subscription, click the cross icon ❌ , then click **Delete** in the displayed dialog box. The service subscription is removed from this location. **Delete Service & Container Association** Warning !!! You're about to delete association of service **ADDITIONAL TOTER CHARGE 96 GAL** to container **FRS5SIBYU1**. Do you want to proceed ? *This action can't be undone.* [Delete] [Cancel]
Create a new customer case for a subscription	Find the desired subscription, then click the folder icon 📁 , and follow the relevant steps of the **Creating Customer Cases** procedure.

Pages You Can Access from the Edit Location Page

To access the...	Do this...
Edit Customer page where you can update customer information	Click the links displayed in the **Customer ID** area at the top of the page, then follow the relevant steps of the **Searching, Viewing, and Editing Customers** procedure.
Edit Container page where you can edit the container for the subscription of interest	Go to the **Services** tab, find the subscription of interest, then click the link in the **Associated Container** column. Follow the relevant steps of the **Editing Containers** procedure.
Edit Assignment page where you can change various attributes for a stop associated with a service subscription	Go to the **Services** tab, find the subscription of interest, then click the link in any of the following columns: **Code**, **Service Description**, **Service Cycle**, or **Prospect**. Follow the relevant steps of the **Editing Stops** procedure.

Managing On-Demand Services and Stops

This section describes how you can create on-demand services and then schedule on-demand stops. An on-demand service is a billable, preconfigured service, purchased by customers via a request to your organization. Scheduling on-demand stops involves the following steps:

Step 1. Creating on-demand services.

Step 2. Scheduling on-demand stops.

Step 1. Creating on-demand services

Before on-demand stops can be scheduled, an on-demand service must be created in Reference Data. Refer to the following sections for more information on the reference data required for this step:

1. Define an on-demand service frequency. To do so, follow the relevant steps in the **Service Frequency** section.

2. Define a billing rate that will apply to this on-demand service. To do so, follow the relevant steps in the **Rates** section.

3. Create an on-demand service. To do so, follow the relevant steps in the **Services** section.

Step 2. Scheduling on-demand stops
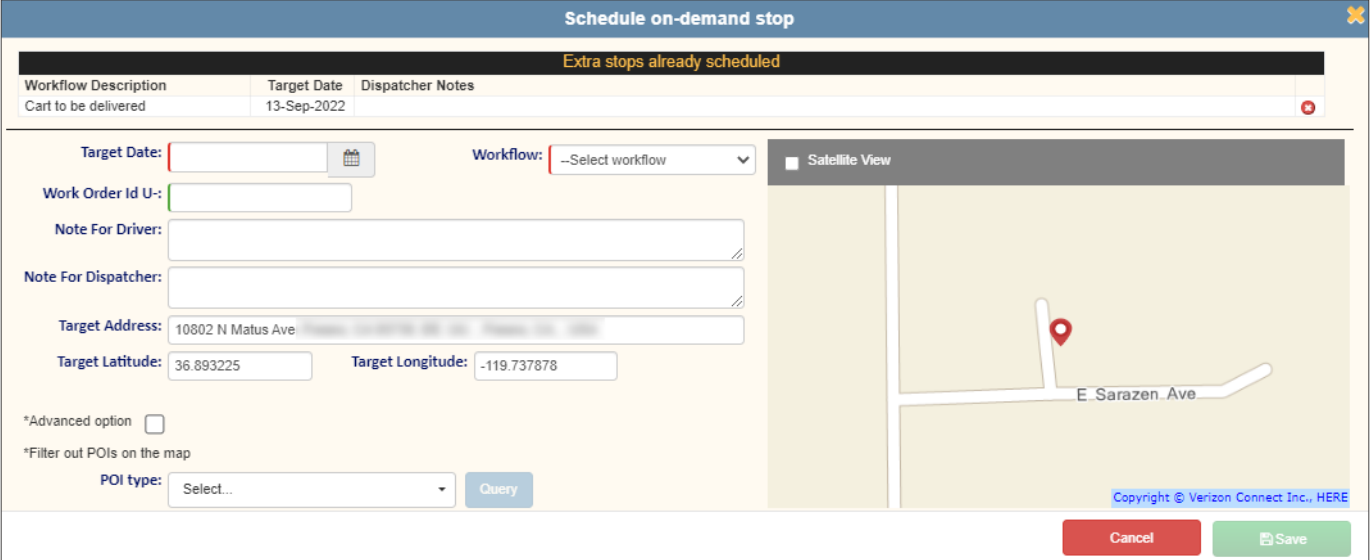
Scheduling On-Demand Stops from the Edit Location Page

You can schedule on-demand stop directly from the **Edit Location** page for both waste collection and street sweeping routes. You can also schedule it from the **Close Routes** page. See *Scheduling On-Demand Stops* in *Chapter 2. Managing Routes*.
For an alternative method of scheduling on-demand stops for street sweeping routes, see the *Scheduling On-Demand Stops for Street Sweeping Routes from the Today's Workzones Page* procedure.

To schedule an on-demand stop:

1. Before you can schedule an on-demand stop for a customer location, you need to subscribe this location to the on-demand service you have created in *Step 1. Creating on-demand services*. To do so, follow the *Subscribing to a Regular Service* procedure and, in step **5**, select the on-demand service you have created.

2. Open the **Edit Location** page for the location of interest. For methods of accessing this page, see *Editing Locations*.

3. Go to the **Services** tab, find the subscription for which you want to schedule an on-demand stop, then click the 🗓 icon in the corresponding row. The **Schedule on-demand stop** window is displayed.

4. Enter/select the following values:
   - The date when you want this stop serviced in the **Target Date** field
   - The workflow that will be used for this service from the **Workflow** drop-down list
   - The work order ID in the **Work Order ID U-** field, if required.

> **ⓘ NOTE: About work order ID**
>
> In some cases, if the **Save** button on this form is greyed out after you entered the target date and workflow, it means that you are required to enter a work order ID when scheduling an on-demand stop because the **WOID Required** checkbox is selected on this customer's profile. See step **2** of the *Adding Customers and Locations* procedure for more information.

5. Optionally, enter the notes for the driver and dispatcher in the corresponding text boxes.

6. Confirm and make corrections if necessary to the address and geographical coordinates.

7. If you don't want to add this stop to a route just yet, click **Save** to save this on-demand stop. The stop will be added to the list of unscheduled stops. **End of procedure**. Otherwise, proceed to the next step.

> **ⓘ NOTE: Assigning a route at a later time**
>
> If you choose not to assign a route to the on-demand stop right away, you can do it later using the *Adding Unscheduled Stops to Routes* procedure.

8. To add this on-demand stop to a route, select the **Advanced option** checkbox. The **Route** field is displayed.

9. Click the **Route** field, and then select the desired route from the displayed **Select Route** pop-up list. Your on-demand stop is added to the selected route.

10. Optionally, to display points of interest on the map, click the **POI type** field, select the desired points of interest from the displayed list, and then click **Query**. The selected points of interest are displayed on the map.

11. Click **Save** to schedule this on-demand stop.

> **ⓘ NOTE: Removing on-demand stops**
>
> Previously scheduled on-demand stops for this subscription are displayed at the top of the **Schedule on-demand stop** window in the **Extra stops already scheduled** section. If desired, you can remove them directly in this window. To do so, click the cross icon for the stop you want to remove.

Scheduling On-Demand Stops for Street Sweeping Routes from the Today's Workzones Page

1. Go to the **Routes** menu and select the **WorkZones: D-Mon-XXh - D-Mon-XXh** option where the date/month/hour information is that of your current date and timeframe. The list of today's routes is displayed.

2. Use the address fields to enter the address of the location for which you want to schedule the stop, then press **Enter** on your keyboard or click the magnifying glass icon 🔍 . The **Schedule On-Demand Stop** icon 📅 is activated.

3. Click the icon. The **Schedule On-Demand stop** form is displayed, with the address and its coordinates prepopulated.
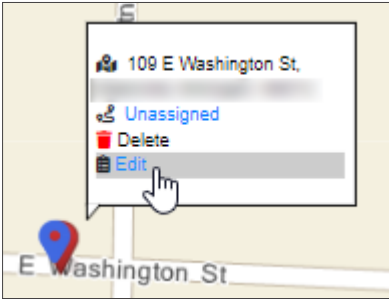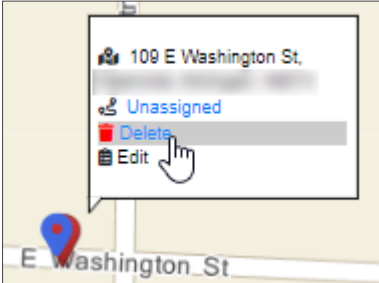

4. Enter/select the following values:
    • The date when you want this stop serviced in the date field
    • The truck to which this stop will be assigned from the **Truck** drop-down list
    • The route to which this stop will belong from the **Route** drop-down list
    • The service that will be performed from the **Services** drop-down list
    • The workflow that will be used for this service from the **Workflow** drop-down list.

5. Confirm the address and geographical coordinates and make corrections (if necessary).

6. Optionally, enter the notes for the driver in the **Driver Notes** text box.

7. Click **Save**. The stop is added and a confirmation message is displayed. A marker pin is added to the map if the stop is scheduled for the current day.

Performing Other On-Demand Tasks on the Today's Workzones Page

To...	Do this...
Edit a scheduled on-demand stop	• Hover the mouse cursor over the marker pin on the map, select the **Edit** option, then make and save the changes on the displayed **Schedule On-Demand stop** form.
Delete a scheduled on-demand stop	• Hover the mouse cursor over the marker pin on the map, then select the **Delete** option.

Managing Subscriptions

This section describes how you can perform tasks related to existing service subscriptions.
For information on how to add new subscriptions, see *Adding New Service Subscriptions*.

Transforming Existing Subscriptions

You can switch the existing subscriptions from one type of service to another. To do so:

1. Search for the customer of interest using the *Searching, Viewing, and Editing Customers* procedure, and then click the desired location in the **Customer Locations** column. The **Edit Location** page is displayed.

2. Click the **Subscribe** button, hover over the **Transform Existing** option on the displayed drop-down list, and then select the **Service to Service** option.
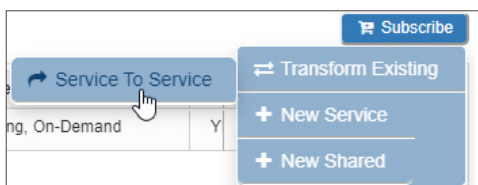
The **Transform Service on Existing Container** window is displayed.

3. Select the checkbox for the desired service. A list of services is displayed in the **Available Services** section.

4. Select the checkbox for the desired replacement service.

5. Optionally, enter your notes in the **Assignment Note** text box.

6. Enter/select the date on which you want this change to take effect, and then click **Convert**. The subscription is updated in the list of services.

Canceling, Suspending, and Reinstating Customer Subscriptions

This section describes how to:

- Deactivate a customer in case their subscriptions have to be canceled (for example, if the resident has moved out of the premises)
- Suspend the existing subscriptions (for example, if the customer will be absent from the premises for a long time)
- Reinstate a subscription for specific locations.

To deactivate a customer and suspend or reinstate their subscriptions to services:

1. Search for the customer of interest using the *Searching, Viewing, and Editing Customers* procedure, and then click the edit icon ✏️ . The **Edit Customer** page is displayed.

/ **Home** / **Customers** / **Search Customers** / **Edit Customer**

Customer Id ❓:

0000112233	Active ☑	❓ Prospect ☐	Billable ☑	Suspend ☐	WOID Required ☐

Last Name: **First Name:**   **Business Name:**

Customer Prefix: **Customer Class:**   **Office Phone:**   **Home Phone:**   **Email:**   **Fax:**

Select...   RESI   5592893504

Driver Comments ❓:   **SA_ID:**   **SP_ID:**

Billing Address ❓:

Civic #	Street	Apt/Suite	City	District	State/Province	Postal Code
2153	WINDSOR				California	

Customer Suspension Duration ❓:

From: **To:**

⬇ **Save Customer**

Customer Locations	Service history	Service	List Customer Case

Civic # ...	Street	Contact Name	Contact Phone	District	City	State/Province	⊕ **Location**
2153	WINDSOR	SINGLE FAMILY RESI...				CA	📁

2. Perform one of the following tasks:

To...	Do this...
Deactivate this customer	• Deselect the **Active** checkbox. When you click **Save Customer, t**he system deactivates all customer locations and transfers subscriptions to a default location, e.g. the municipality.
Suspend this customer's subscriptions for all locations	• Go to the **Customer Suspension Duration** section, and then enter/select the desired date range in the **To** and **From** fields. When you click **Save Customer,** the subscriptions to services at all of this customer's locations are suspended for the duration of the selected date range.

Suspend or reinstate this customer's subscriptions for specific locations	1. Go to the **Customer Locations** tab and click the desired link in any column. The **Edit Location** page is displayed.
	
	2. Go to the **Services** tab and then:
	
	   • Click the icon in the **Suspended** column of the subscription you want to suspend.
	
	  -OR-
	
	   • Click the icon in the **Suspended** column of the subscription you want to reinstate.

Retrieving and Exporting Data on Unsubscribed Customers

This section describes how to search, view, and export data on customers who have been unsubscribed from services within a certain time frame. To do so:

1. Go to the **Customers** menu and select the **Unsubscribed Customers** option. The **Unsubscribed Customers** page is displayed.

2. Select the desired service from the **Services** drop-down list.

3. Select the time frame from the **Subscription Ended in** drop-down list.

4. Click **Search**. The list of matching unsubscribed customers is displayed.

5. Click **Export Data** to generate a CSV data file, and then follow system prompts to save it to your PC

Geocoding Customer Locations

This section describes how to view the list of non-geocoded customer locations and how to manually geocode them. .

Geocode Management is a service included for all FleetMind users. Geocoding helps generate a location on the map based on its textual description, such as an address. Normally, each new location that also contains geographical coordinates (latitude and longitude) is geocoded automatically at the time it is added to the system. Locations that do not contain geographical coordinates appear on the **Customer Locations Non GeoCoded** page and can be geocoded manually. Geocoded locations are displayed on the route-related maps and help you with using other features of Route Management, such as geozones. For more information about geozones, see *Chapter 5. Managing Geozones*.

Typically, geocoding issues arise if the maps that feed the data into Route Management are out of date. Contact FleetMind support to troubleshoot the issues and use this procedure if automatic geocoding has failed.

Pages You Can Access from the Customer Locations Not GeoCoded Page

To access the...	Do this...
Edit Location page where you can change the location's attributes and manage subscriptions	Click the links displayed in the **Civic Number** or **Street** columns, then follow the relevant steps of the *Editing Locations* procedure.

To access the...	Do this...
Edit Customer page where you can update customer information	Click the links displayed in the **Customer ID**, **Business Name**, or **Customer Name** columns, then follow the relevant steps of the *Searching, Viewing, and Editing Customers* procedure.

To geocode customer locations:

1. Go to the **Customers** menu and select the **Customer Locations Not GeoCoded** option. The **Customer Locations Not GeoCoded** page is displayed. By default all non-geocoded locations are included in the displayed list.

2. To refine the displayed list, enter/select the desired search criteria as needed, and then click **Search**. The matching results are displayed.

3. Perform one of the following tasks:

To...	Do this...
Geocode a single location	Click the balloon icon 📍 in the row of interest. One of the following outcomes takes place: • If the system successfully geocodes this location, a confirmation message is displayed, and the location is removed from the list of non-geocoded locations. -OR- • If the system is unable to geocode this location, the **Invalid address** message is displayed. • Click **Yes** to be taken to the **Edit Location** page where you can change this location's address. When you save the changes, the system will attempt to geocode this location automatically and if successful, it will no longer appear on the non-geocoded locations list. -OR- • Click **Cancel** to close the message. The location will remain non-geocoded.

To...	Do this...
Geocode all locations	1. Click the **GeoCode All** button. The system processes your request and displays the **Locations geocoded** message with the results of the geocoding process. **Locations geocoded** The locations were geocoded successfully **Total Rows: 39** - # Locations geocoded: 1 - # Invalid location addresses: 38 Cancel 2. Click **Cancel** to close the message and review the list. The locations that have been successfully geocoded are removed. 3. To change the addresses of the remaining locations, click the link in the **Street** column of the desired location. The **Edit Location** page is displayed. 4. Make and save the changes. The system will attempt to geocode this location automatically and if successful, it will no longer appear on the non-geocoded locations list.

Importing and Exporting Customer Documents and Contracts

This section describes how you can import or export document URLs or customer contracts for multiple customers. A document URL is a link that points to the location of the document on the web. **NOTE**: For importing, you must first prepare a properly formatted comma-separated-value (CSV) file using Microsoft Excel or other spreadsheet app.

Importing or Exporting Documents

To import or export documents:

1. Go to the **Customers** menu and select the **Import/Export Customer Documents** option. The **Import/Export Customer Documents** page is displayed.

   / **Home** / **Customers** / **Import/Export Customer Documents**

   - The document file must contain the 11 columns defined below.
   - Document import will not create a new customer or location. It will add the document name and URL to existing customers or locations in the system.
   - The top 2 lines of CSV headers are ignored by the importing process.
   - Customer ID is mandatory and should refer to an existing customer in RMS.
   - Values within column numbers 2-8 should match the location information within the RMS.
   - If more than 10 columns are present in the CSV import file, the subsequent columns will be ignored.
   - To define multiple contracts for the same customer location, the data must be repeated for each additional contract.

   CSV file   Browse ⊕   ⬇ CSV Sample   ⊕ Export Documents   ⊕ Import Documents

2. To export the documents, click **Export Documents**, and then follow system prompts to save the CSV file on your PC. -OR-
   To import the documents, perform the following steps:

   i. If you haven't yet prepared the customer document file, review the CSV file formatting rules at the top of the page and download, if desired, the most current file template by clicking the **CSV Sample** button. Refer to the table

at the bottom of the page to gain insight into each entry as you prepare your file. Otherwise, proceed to the next step.

ii.   Click the **Browse** button, and then navigate to the location of your customer document file.

iii. Select your file, and then click **Open**.

iv.   Click **Import Documents**. The information contained in the file is imported and a confirmation message is displayed.
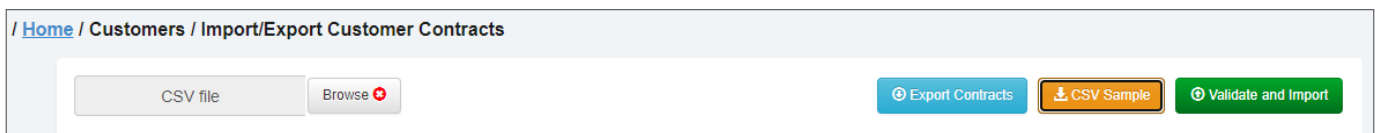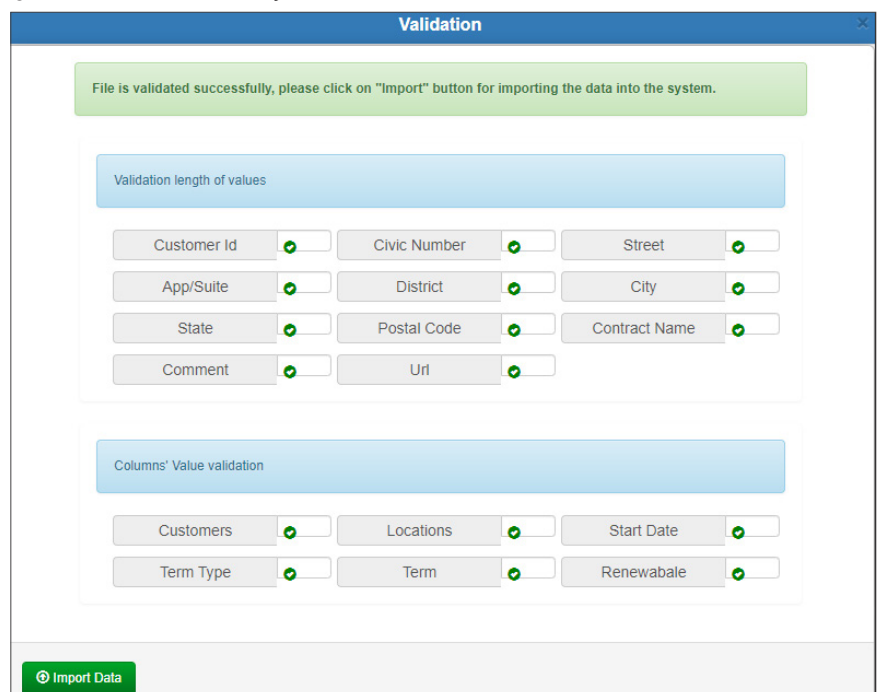
> **ⓘ NOTE: Errors in the file**
>
> If the file contains errors, not all information may be imported. Review your file, correct any errors, and then repeat steps **ii** - **iv**.

v.   Close the confirmation message and, if desired, review the imported data by clicking the **Documents** tab on the desired **View Customer** or **Edit Customer** page.

Importing or Exporting Contracts

To import or export contracts:

1.   Go to the **Customers** menu and select the **Import/Export Customer Contracts** option. The **Import/Export Customer Contracts** page is displayed.

2.   To export the contracts, click **Export Contracts**, and then follow system prompts to save the CSV file on your PC.
     -OR-
     To import the contracts, perform the following steps:

     i.   If you haven't yet prepared the customer contracts file, download, if desired, the most current file template by clicking the **CSV Sample** button. Refer to the table at the bottom of the page to gain insight into each entry as you prepare your file. Otherwise, proceed to the next step.

     ii.   Click the **Browse** button, and then navigate to the location of your customer document file.

     iii. Select your file, and then click **Open**.

     iv.   Click the **Validate and Import** button. The system evaluates your file. Upon successful validation, a message is displayed.

     v.   Click **Import Data**. The system processes and imports the file, and then a confirmation message is displayed.

     vi.   Close the confirmation message and, if desired, review the imported data by clicking the **Contracts** tab on the desired **View Customer** or **Edit Customer** page.

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Importing Customer Data

Most often customers are added to the system at the time of deployment. The quickest and most commonly used method is to import customer data collected from, or exported by, your back-office (dispatch) system.

In order to use this method, you must first prepare a properly formatted comma-separated-value (CSV) file using Microsoft Excel or other spreadsheet app. The formatting of the file must strictly adhere to a set of rules, which are defined on the **Import Customer/Location** page.

When you use this method, location data for each customer is imported along with all other customer details.

To import customer data:

1. Go to the **Customers** menu and select the **Import Customer/Location** option. The **Import Customer/Location** page is displayed.

2. If you haven't yet prepared the customer data file, review the CSV file formatting rules at the top of the page and download, if desired, the most current file template by clicking the **Download Sample** button. Refer to the table in the lower portion of the page to gain insight into each entry as you prepare your file. Otherwise, proceed to the next step.

3. Once your file is ready, go to the **Importing** section of the page, then, to instruct the system how each imported customer ID is going to be entered in the database, make a selection using the toggle **CustomerId as UID** switch:

   • Select **Yes**, to use your own customer IDs entered in your spreadsheet as unique customer identifiers (recommended option)

   • Select **No** to have the system create unique customer identifiers.

4. Click the **Browse** button, and then navigate to the location of your customer data file.

5. Double-click your file, or select it and click **Open**.

6. Click the **Validate and Import** button that appears. The system evaluates your file. Upon successful validation, a message is displayed.

> **ⓘ NOTE: Validation error**
>
> If the system cannot validate the file, an error message will be displayed. Review your file, correct any errors and repeat steps **4** to **6** until the file is successfully validated.

7. Click **Import Data**. The system processes and imports the file, and then a confirmation message is displayed.

8. Close the confirmation message and, if desired, review the imported data by going to **Customers** > **Search Customers**, and entering your search criteria.

Working with Customer Cases

This section describes how you can create, search, view, and edit customer cases.

> **ⓘ NOTE: Reference data**
>
> Relevant reference data must be defined in your system in order to perform the tasks related to customer cases. For more information, see *Appendix 1. Reference Data*.

Creating Customer Cases

This section describes how you can create a customer case when there is a complaint. Customer cases are usually initiated by the customer in order to register a complaint or request a service. Customer cases may also, on occasion, originate with a driver. For example, a driver may notice that a customer's container is missing a wheel or is damaged to the point that it cannot be lifted with a side-loader. The driver may then relay this information to the back office so that a customer case may be created.

Depending on your needs, you can create a customer case from any of the following pages:

- A general case for a customer from the **Edit Customer** and **View Customer** (or **Edit last viewed customer** and **View last viewed customer**) pages
- A case for a specific subscription or a previously delivered service from the **Edit Location** (or **Edit last viewed location**) page

To create a customer case:

1. Search for a customer of interest using the *Searching, Viewing, and Editing Customers* procedure.

2. Perform one of the following tasks:

To open the...	Do this...
View Customer page	1. Click the view icon ☁ . 2. Go to the **Customer Locations** tab and find the location for which you want to open a case.
Edit Customer page	1. Click the edit icon ✏ . 2. Go to the **Customer Locations** tab and find the location for which you want to open a case.
Edit Location page	1. Click the desired location in the **Customer Locations** column. 2. Go to the **Services or Service History** tab and find the subscription or previous service for which you want to open a case.

3. Click the folder icon 📂 . The **Add New Case** or **Add new Customer Case** window is displayed.

Note that some information is already prepopulated, e.g. customer ID and address. Additionally, if you have arrived at this form from the **Edit Location** page, the container information is also prepopulated.

4. Select the **Is Multi-family** checkbox if this case refers to a container that is shared by multiple parties (e.g., residents of an apartment or townhouse complex).

5. Enter/select the following values, as needed:
   - Any comments relevant to this case in the **Comments** text box
   - Contact name and phone number in the corresponding fields
   - Information on the person who requested to create this case in the **Requestor #** field
   - The service date, route number, driver, and service area name to which this case pertains in the corresponding fields.

6. Select the following values from the corresponding drop-down lists, predefined in your organization's Customer Cases reference data:
   - **Source**: The source from which the complaint or request originated.
   - **Case Type**: The type that applies to this case.
   - **Status**: The current status of this case.
   - **Case Action**: The action required to be taken for this case.
   - **Case Reason**: The reason for creating this case. If you select **Other**, enter a description in the corresponding text box.

7. Select a user to whom you want to assign this case from the **Assigned To** drop-down list. **NOTE**: This drop-down list becomes accessible only after you select a value other than **Open - Unassigned** from the **Status** drop-down list.

8. Select the **Send email** checkbox to initiate email notifications to assignees. If you select this checkbox, new radio buttons become available. Select the **As html** or **As text**, as desired.

9. To attach a file to this case, click **Choose file**, navigate to the location of the file on your PC, then double-click it to add it to the case.

10. Click **Save** to create this case. The case is saved in the system. The lower portion of the window displays the case history and the list of attachments.

Viewing, Editing, and Exporting Existing Customer Cases

This section describes how to view, edit, or export customer cases that already exist in the system.

> **ⓘ NOTE: Accessing the Edit Customer Case window**
>
> This procedure describes how you can access the **Edit Customer Case** window through search but you can also access it by clicking the link in the **Case ID** field on the **Edit Customer** and **View Customer** (or **Edit last viewed customer** and **View last viewed customer**) pages under the **List Customer Case** tab.

To view customer cases:

1. Go to the **Customers** menu and select the **Customer Cases** option. The **Customer Cases** page is displayed.

2. Enter/select the desired search criteria as needed, and then click **Search**. The list is populated with matching customer cases. Both open and closed cases are included in the list.

3. Adjust the displayed list by using the sort and filter functions, as needed. Optionally, perform the following tasks from the drop-down side menu, accessible from the top right corner of the list.

To...	Do this...
Display more (or less) information	• Select or deselect the desired column names.
Reset the filters you may have used	• Click **Clear all filters**.

4. To export the list of cases, select one of the following options from the side menu:
   - **Export all data as csv** / **Export all data as excel** - to export the entire list of customer cases in either the CSV or XLS format respectively
   - **Export visible data as csv** / **Export visible data as excel** - to export only the cases currently visible on the screen in either the CSV or XLS format respectively.

5. To view a specific case, click any of the links displayed in the row of interest. The **Edit Customer Case** window is displayed.

Notice the prepopulated customer ID link. You can click it to go to the **Edit Customer** page, if needed.

6. To edit this case, make the necessary changes, and then click **Save**. The case is updated.

Chapter 4. Managing Containers

In this chapter

About this chapter

This chapter describes how to manage your container inventory. All the tasks in this chapter are performed from the **Inventory** menu.

Adding Containers

This section describes how to add containers to Route Management.

There are three ways to add containers to the system:

- Import container data.
- Manually add containers one by one
- Generate containers en masse.

Adding Containers Manually

You can add a new container directly in the app by entering its data manually.

To add a new container:

1. Go to the **Inventory** menu and select the **Add Container** option. The **Add Container** page is displayed.

2. Enter/select the following values on the form, as needed:
   - The new container's RFID, serial number, and label in the corresponding fields. **NOTE**: If you do not enter RFID and serial number, the system will generate these values for this container.
   - Container attributes as follows:
     - Volume and volume measurement units
     - Material this container is intended for
     - A brief description
     - Color, manufacturer and type of this container
     - The yard this container will be associated with
     - The start and end dates of this container's warranty
     - The icon used for displaying this container on the maps
     - The measurement unit for this container's dimensions
     - This container's width, height, and length.

- Toggle the following buttons as needed:
  - **Active** to indicate the status of this container in the system.
  - **Damage** to indicate whether this container is damaged
  - **Compactor** to indicate this container's compactor capability (usually applies to roll-off containers).
- Comments or notes related to this container and intended for the office personnel, not the driver.

3. Click **Save Container**. The container is added to your inventory and a confirmation message is displayed. The lower portion of the page appears, to display the information about this container's association with customer locations and the history of its associations with yards.
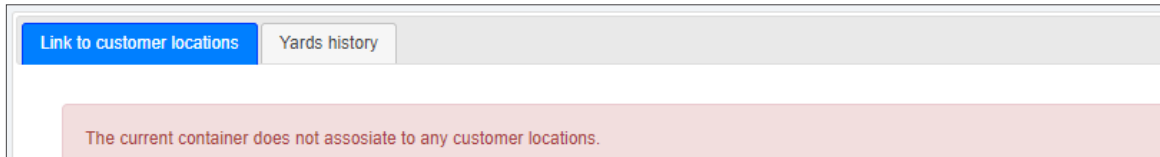
Importing Container Data

Most often containers are added to the system at the time of deployment. The quickest and most commonly used method is to import your existing container data or the data that came with your shipment of containers.

In order to use this method, you must first prepare a properly formatted comma-separated-value (CSV) file using Microsoft Excel or other spreadsheet app. When you use this method, location data for each container is imported along with all other container details.

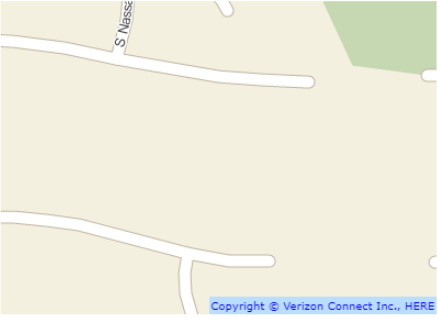To import container data:

1. Go to the **Inventory** menu and select the **Import Containers** option. The **Import Containers** page is displayed.
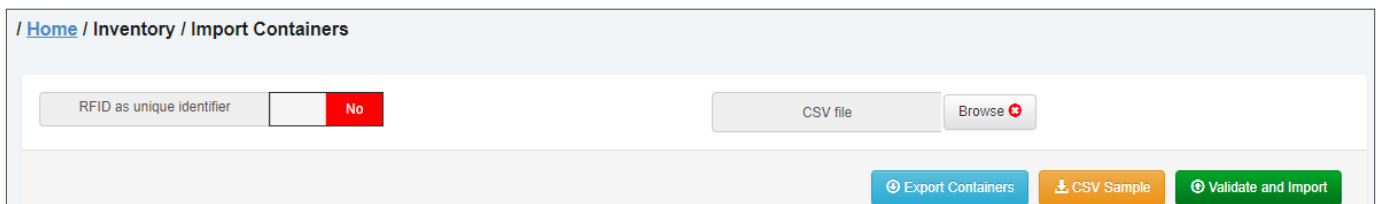
2. If you haven't yet prepared the container data file, download, if desired, the most current file template by clicking the **Download Sample** button. Refer to the table at the bottom of the page to gain insight into each entry as you prepare your file. Otherwise, proceed to the next step.

3. Once your file is ready, click the **RFID as unique identifier** toggle switch, to instruct the system how each of the imported container's ID is going to be entered in the database**:**
   - Select **Yes** to use your own container RFIDs entered in your spreadsheet as unique container identifiers. **NOTE**: If your file contains duplicate RFID numbers, the system will reject the file.
   - Select **No** to have the system create RFIDs for your containers.

4. Click the **Browse** button, and then navigate to the location of your container data file.

5. Double-click your file, or select it and click **Open**.

   Click the **Validate and Import** button that appears. The system evaluates your file. Upon successful validation, a message is displayed.
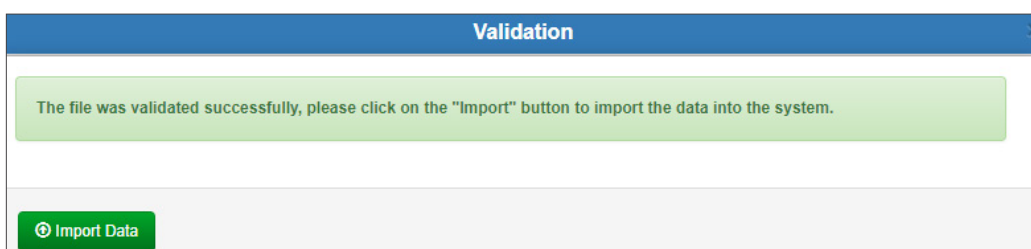
> **ⓘ NOTE: Validation error**
>
> If the system cannot validate the file, an error message will be displayed. Review your file, correct any errors and repeat steps **4** - **5** until the file is successfully validated.

6. Click **Import Data**. The system processes and imports the file, and then a confirmation message is displayed.

7. Close the confirmation message and, if desired, review the imported data by going to **Inventory** > **Search Containers**, and entering your search criteria.

Generating Containers

On occasion, you may have to deal with containers that have neither an RFID nor a serial number, for example, garbage bags. To schedule services that involve such containers, you have to add them to the system by generating them. You can generate up to 5000 containers with sequential serial numbers.

In order to generate containers, make sure you have the following information already in the system:

- Container type
- Container manufacturer

Refer to the corresponding sections in *Appendix 1. Reference Data* for details on how to add this information.

> **💡 TIP: Generating containers**
>
> The following tips will help you avoid errors and future problems when generating containers:
>
> - Generate a small number of containers at first (2 to 5). Their attributes can be easily updated in case of an error.
> - Serial numbers are an exception: once generated, they cannot be changed.
> - Once containers are generated, there is no easy way to delete them.

To generate containers:

1. Go to the **Inventory** menu and select the **Generate Containers** option. The **Generate Containers** page is displayed.

2. Enter the serial number prefix and start and end numbers in the corresponding fields, following the example below:

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> 💡 **EXAMPLE:**
>
> To generate 1000 containers numbered 96G008001 to 96G009000, with RFIDs 00A1B2C3D4E5F60000008001 through 00A1B2C3D4E5F60000009000:
>
> | Serial number prefix may be set to: | Start and end numbers must be set to: |
> |---|---|
> | • 96G, or
• 96G0,or
• 96G00
but NOT
• 96G008. | • 008001-009000, or
• 08001 -09000 or,
• 8001-9000,
but NOT
• 1 - 1000. |
>
> ⚠️ **CAUTION: Entering numbers**
>
> • Be careful when entering the start and end numbers. It's an easy mistake to enter 8000-8999 instead of 8001 -9000; or to enter 8000-9000 and generate 1001 containers instead of 1000.
>
> • Always double-check the number of zeros to prevent ending up with missing or extra zeros in serial numbers or RFIDs.

3. Enter a special prefix for RFIDs in the **RFID Prefix** field. The RFID prefix must be set to match the start and end numbers (RFIDs are optional). RFIDs can be generated only if their sequence is identical lo the sequence of serial numbers.

4. Enter/select the values in the corresponding fields as follows:
   • A brief description of this series of containers
   • Manufacturer, type, color, volume, and volume's measurement unit applicable to this series of containers.

5. Select the **Active** checkbox to indicate the status of the newly generated containers.

6. Select the yard these containers will be associated with.

7. Select the icon used for displaying this container on the maps.

8. Click **Generate**. The new containers are generated and are now available for scheduling.

Searching, Viewing, Editing, and Deleting Containers

This section describes how to search, view, edit, and delete the containers that exist in your system.

Searching Containers

To search containers:

1. Go to the **Inventory** menu and select the **Search Containers** option. The **Search Containers** page is displayed.

2. To display all containers, simply click **Search**, or enter/select the desired search criteria as needed, and then click **Search**.

> 💡 **TIP: Searching containers**
>
> •   To access the specific container's page directly, search by **Serial Number** using the complete serial number.

The list of matching containers is displayed.

3. Sort and filter the list as desired, and then follow one of the procedures that follow to view, edit, or delete containers of interest.

Viewing and Deleting Containers

To view a container on the map:

•   Search for a container of interest as described in the **Searching Containers** procedure, then click the eye icon in the desired row. The map in the upper portion of this page is updated, and the icon representing this container's location is displayed. **NOTE**: Only containers with existing associations can be viewed on the map.
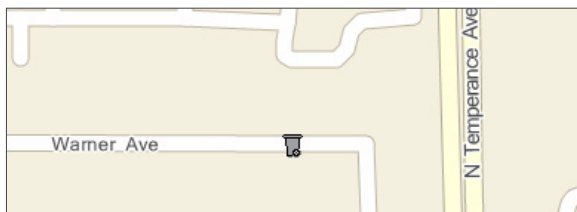
To delete a container:

•   Click the trash bin icon in the leftmost column of the desired row. **NOTE**: If this container is associated with a customer location, its icon will be greyed out, and it cannot be deleted until the association is broken. For more information, see **Editing Locations**.

Editing Containers
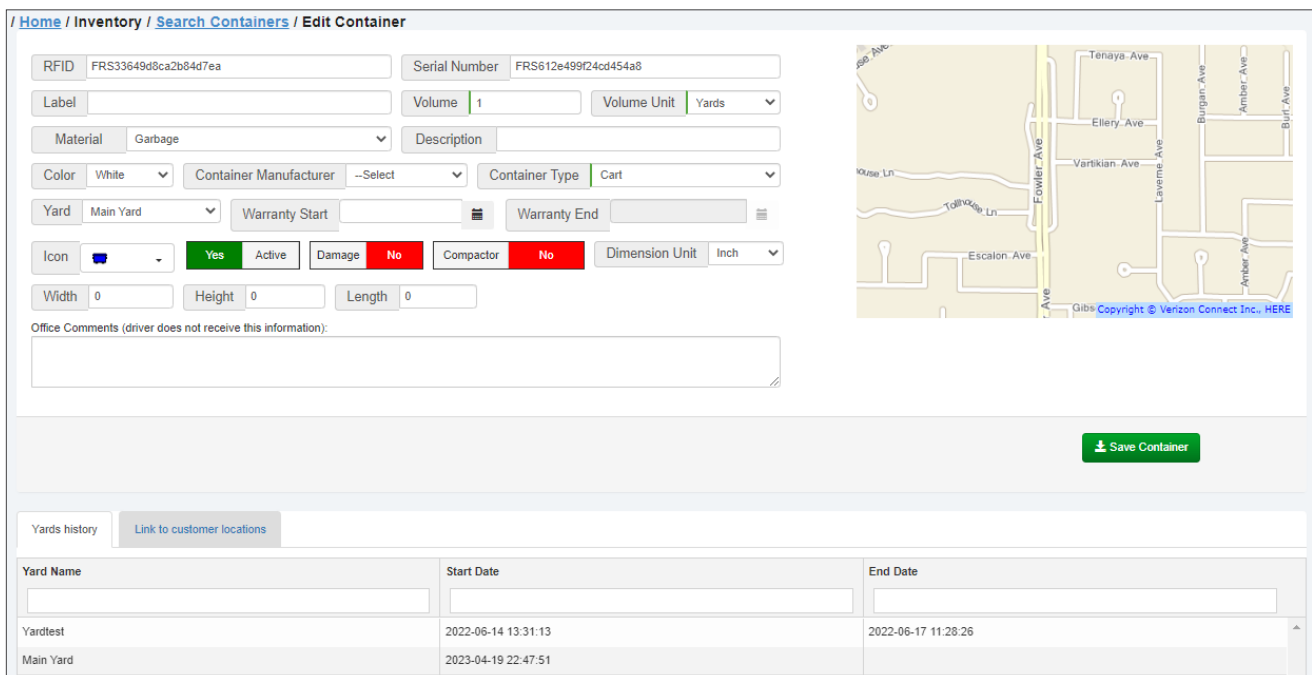
You can edit a container's information on the **Edit Container** page.

This procedure describes how you can access the **Edit Container** page through search but you can also access it by clicking the desired link in any of the following locations:

- The **Associated Container** column displayed on the **Edit Location** page under the **Services** tab
- The **Container** column displayed on the **Edit Route** page under the **Recurring Assignments** tab on the list of stop
- Any of the following columns displayed on the **Search Stops** page: **SerialNumber**, **Volume**, **Type**, or **Color**
- The **Volume** column displayed on the **Add Stops** page.

To edit a container:

1. Search for a container of interest as described in the **Searching Containers** procedure, then click the edit icon [✏] in the desired row. The **Edit Container** page is displayed.

2. To edit this container's details, follow the relevant steps of the **Adding Containers Manually** procedure, then click **Save Container**.

Performing Tasks Directly on the Edit Container Page

To...	Do this...
View the history of this container's association with yards	Select the **Yards history** tab and review the displayed information.
View the list of stops with which this container is associated	Select the **Link to customer locations** tab.

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Accessing Other Pages from the Edit Container Page

To access the...	Do this...
Edit Assignment page where you can change various attributes for the stop with which this container is associated	Go to the **Link to customer locations** tab, then find the location of interest, and click the link in the **Material** column or the **Start Date** column. Follow the relevant steps of the ***Editing Stops*** procedure.

Searching Container Associations

Typically, each active container in your inventory is associated with a customer location. You can search the associations of containers with customer locations, then access the related pages to make changes either to the location or to the container. To do so:

1. Go to the **Inventory** menu and select the **Search Associations** option. The **Search Associations** page is displayed.

2. To display all container associations, simply click **Search**, or enter/select the desired search criteria as needed, and then click **Search**.

> 💡 **TIP: Searching container associations**
> - For a quick search, specify the starting characters for street, city or district names, or postal code.
> - You can also specify a range of civic numbers, or a specific number, entered in the **From Street Civic #** field.
> - To find associations of containers with locations of a specific customer, search by **Customer ID** using their complete ID number.

The list of matching containers is displayed.

	Civic #	Street	City	State/Province	District	Serial Number	Material	Start Date
➖	351	MINNEWAWA		CA				
						FRS4ead3111f0...	MSW	1984-07-05
➖	362	CHERRY LN		CA				
						FRSd4622223f9...	MSW	2017-11-01
➖	371	MINNEWAWA		CA				

3. Sort and filter the list as desired using the table headers. Click the minus icon ➖ in desired rows to collapse them.

Accessing Other Pages from the Search Associations Page

To access the...	Do this...
Edit Container page where you can edit a container of interest	Click the desired link in any of the following columns: **Serial Number**, **Material**, **Start Date**, then follow the relevant steps of the ***Editing Containers*** procedure.

To access the...	Do this...
Edit Location page where you can change the location's attributes and manage subscriptions	Click the desired link in any of the following columns: **Civic #**, **Street**, **City**, **State/Province**, **District**, then follow the relevant steps of the ***Editing Locations*** procedure.

Associating Containers with Customer Locations

This section describes how you can associate containers with customer locations. You may have to create associations for two different kinds of containers:

- **Containers with RFID and serial numbers**
  Containers with RFIDs and serial numbers are typically associated with customer locations when you subscribe that customer to a service. For more information, see the ***Adding New Service Subscriptions*** procedure.

- **Containers without RFID or serial numbers**
  To create associations for containers without RFID or serial numbers (e.g. garbage bags) you must first generate them so they are added to the system. To do so:

    i. Create a new container type. To do so, follow the relevant steps in the ***Cart/Container Types*** section.

    ii. Generate generic container serial numbers for the container type you have created. To do so, follow the relevant steps in the ***Generating Containers*** procedure and select your newly created container type from the **Type** drop-down list in step **4**.

    iii. Ensure that a service type that can be used with the container type you have created already exists in the system. If this service type doesn't yet exist, follow the relevant steps in the ***Adding Services*** procedure to create it.

  Finally, to subscribe a customer location to this service and consequently associate the container with it, follow the relevant steps in the ***Adding New Service Subscriptions*** procedure.

Chapter 5. Managing Geozones

November 2023 | Part #: 700-5004 R2

In this chapter

About Geozones and Route Paths

This chapter describes the tasks you can perform in Route Management related to geozones and route paths. All the tasks in this chapter are performed from the **GeoZones** menu.

Geozones are user-defined geographical areas that can be used for reference and classification purposes by various apps. In Route Management, geozones can be associated with routes, yards, and disposal facilities, and can be used to generate routes automatically. In addition, they can be used by FleetMind software for purposes of generating alarms.

Route paths are used for routes other than waste collection, for example, street sweeping routes. A route path is a path the driver should take while working on the route. A route path consists of a set of WKT line strings which, if defined, will display arrows on the map.

Working with Geozones

This section describes how you can view, add, edit, delete, and export geozones. It also describes how to generate and edit routes based on geozones.

Viewing Geozones

There are two types of geozones in Route Management:

- **Generic geozones**. Generic geozones are typically associated with yards, facilities, refueling areas, etc.
- **Route geozones**. Route geozones are always associated with routes.

Viewing Generic Geozones
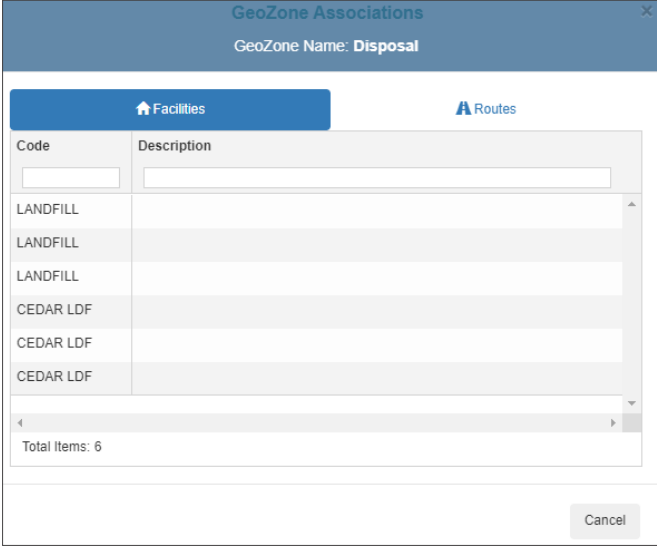
To view the list of generic geozones, go to the **GeoZones** menu and select the **List GeoZones** option. The **List GeoZones** page is displayed, with the **Generic GeoZones** tab selected by default.

Tasks You Can Perform Directly on the List GeoZones Page (Generic Geozones)

To...	Do this...
Filter the list by geozones' association with routes or facilities	Click the **Associations** button, and then select the desired filter. The list is updated accordingly.
View a specific geozone's associations (if any)	Click the link icon 🔗 for the geozone of interest, and then select either the **Routes** or **Facilities** tab in the displayed **GeoZone Associations** window. **GeoZone Associations** GeoZone Name: **Disposal** 🏠 Facilities 🛣 Routes Code Description LANDFILL LANDFILL LANDFILL CEDAR LDF CEDAR LDF CEDAR LDF Total Items: 6 Cancel
Zoom in on a specific geozone	Go to the **Geo Zone Name** column, then click the magnifying glass icon 🔍 for the geozone of interest. The map is zoomed in and centered on the corresponding geozone.
Display the boundaries of all generic geozones on the map	Click **Render Generic Geozones**. The map is updated to display all existing generic geozones. **NOTE**: To clear the map, refresh the page.
Display the map in satellite view	Select the **Satellite view** checkbox.
Delete a geozone	Follow the relevant steps of the **Deleting Geozones** procedure.

Pages You Can Access from the List GeoZones Page (Generic Geozones)

To access the...	Do this...
Add Generic Geozone page where you can create a new generic geozone	Click the **Add New** button, then follow the relevant steps of the **Creating New Generic Geozones** procedure.
Edit Generic Geozone page where you can make changes to an existing generic geozone	Click the edit icon 📝 for the geozone of interest, then follow the relevant steps of the **Editing Generic Geozones** procedure.
Import Generic Geozone page where you can import the geozone data from a CSV file	Click the **Import Generic GeoZones** button, then follow the relevant steps of the **Importing Generic Geozones** procedure.

Viewing Route Geozones

To view the list of route geozones, go to the **GeoZones** menu, select the **List GeoZones** option, and then click the **Route GeoZones** tab on the displayed **List GeoZones** page.

Tasks You Can Perform Directly on the List GeoZones Page (Route Geozones)

To...	Do this...
Zoom in on a specific geozone	Go to the **Geo Zone Name** column, then click the magnifying glass icon 🔍 for the geozone of interest. The map is zoomed in and centered on the corresponding geozone.
Display the map in satellite view	Select the **Satellite view** checkbox.
Delete a geozone	Follow the relevant steps of the **Deleting Geozones** procedure.
Generate routes from a geozones	Follow the **Generating Routes from Geozones** procedure.

Pages You Can Access from the List GeoZones Page (Route Geozones)

To access the...	Do this...
Add Geozone page where you can create a new route geozone	Click the **Add New** button, then follow the relevant steps of the **Creating New Route Geozones** procedure.
Edit Geozone page where you can make changes to an existing route geozone	Click the edit icon for the geozone of interest, then follow the relevant steps of the **Editing Route Geozones** procedure.

Adding Geozones

This section describes how to add geozones to Route Management.

There are three ways to add geozones to the system:

- Import geozone information from a CSV file.
- Import geozone information from a shape (SHP) file.
- Manually add geozones.

Importing Geozone Data from CSV Files

You can import generic geozones and route geozones separately. Both of these options require that you first prepare a properly formatted comma-separated-value (CSV) file using Microsoft Excel or other spreadsheet app. The formatting of the file must strictly adhere to a set of rules, which are defined on the respective import pages.

Refer to the relevant tables describing the details of geozone data in *Appendix 2*.

Importing Generic Geozones

To import generic geozones:

1. Go to the **GeoZones** menu and select the **List GeoZones** option. The **List GeoZones** page is displayed, with the **Generic GeoZones** tab selected by default.

2. Click the **Import Generic GeoZones** button above the list. The **Import Generic Geozone** page is displayed.

3. If you haven't yet prepared the geozone data file, review the CSV file formatting rules at the top of the page and download, if desired, the most current file template by clicking the **Download Sample** button. Refer to the table in the lower portion of the page to gain insight into each entry as you prepare your file. Otherwise, proceed to the next step.

4. Click the **Browse** button, and then navigate to the location of your geozone data file.

5. Double-click your file, or select it and click **Open**.

6. Click the **Validate and Import** button that appears. The system evaluates your file. Upon successful validation, a message is displayed.
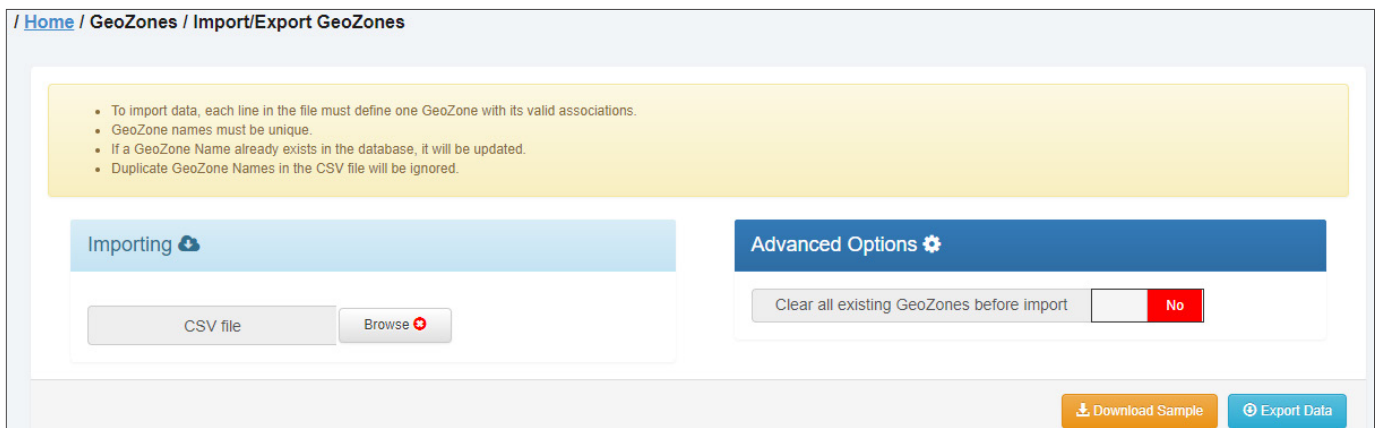
Evaluation Result - geoZones_sample (1).csv

The file was validated successfully, please click on the "Import" button to import the data into the system.

Total Rows: 0

- # GeoZones to insert: 0
- # GeoZones to update: 0
- # Duplicate GeoZones in CSV file: 0

⊕ Import Data   Cancel

> **ⓘ NOTE: Validation error**
>
> If the system cannot validate the file, an error message will be displayed. Review your file, correct any errors and repeat steps **4** to **6** until the file is successfully validated.

7. Click **Import Data**. The system processes and imports the file, and then a confirmation message is displayed.

8. Close the confirmation message and, if desired, review the imported data by going to **GeoZones** > **List GeoZones**, and entering your search criteria.

Importing Route Geozones

To import the route geozone data from a CSV file:

1. Go to the **GeoZones** menu and select the **Import/Export GeoZones** option. The **Import/Export GeoZones** page is displayed.

/ **Home** / GeoZones / Import/Export GeoZones

- To import data, each line in the file must define one GeoZone with its valid associations.
- GeoZone names must be unique.
- If a GeoZone Name already exists in the database, it will be updated.
- Duplicate GeoZone Names in the CSV file will be ignored.

Importing ☁

CSV file   Browse ⊕

Advanced Options ⚙

Clear all existing GeoZones before import   **No**

⬇ Download Sample   ⊕ Export Data

2. If you haven't yet prepared the geozone data file, review the CSV file formatting rules at the top of the page and download, if desired, the most current file template by clicking the **Download Sample** button. Refer to the table in the lower portion of the page to gain insight into each entry as you prepare your file. Otherwise, proceed to the next step.

3. Once your file is ready, click the toggle **Clear all existing GeoZones before import** button, to instruct the system on what should be done with geozone data currently in the database:

    • Select **Yes**, if you want the existing geozone data to be deleted.

    • Select **No**, if you want the existing geozone data to remain in the database. Follow steps **4** - **8** of the *Importing Generic Geozones* procedure.

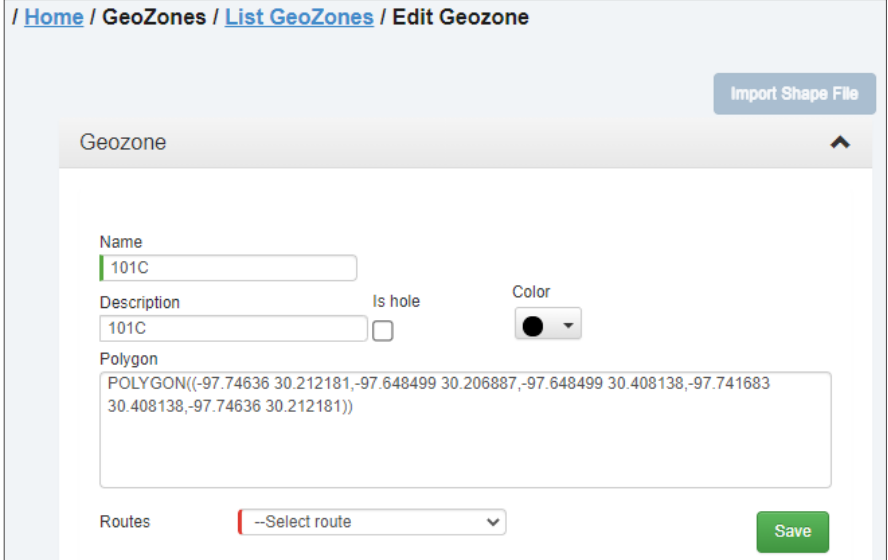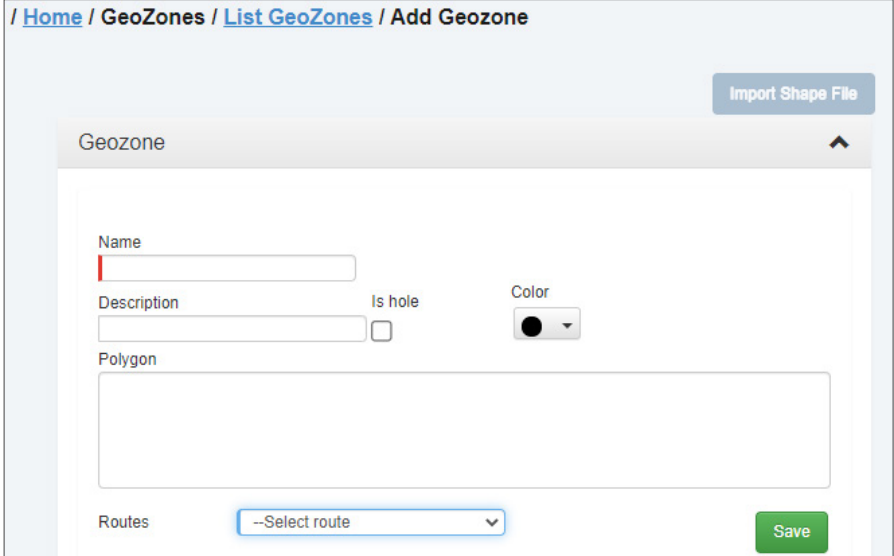## Importing Geozone and Route Path Data from SHP Files

This feature is useful if you have existing databases of defined geozones and route paths in SHP file format. You can import geozone and route path data from SHP files for a single route or for multiple routes.

Importing Geozone and Route Path Data for a Single Route

To import geozone and route path data for a single route:

1. Go to **GeoZones** > **List GeoZones** > **Route GeoZones**, and then perform one of the following tasks:

If you are importing a shape file for...	Then...
An existing geozone	• Click the edit icon ✎ for a desired geozone. The **Edit Geozone** page is displayed.
A new geozone	• Click the **Add new** button. The **Add Geozone** page is displayed.

2. Make sure the **Geozone** panel is expanded, and then select a desired route from the **Routes** drop-down list. The **Import Shape File** button is activated.

3. Click the **Import Shape File** button, and then navigate to the folder that contains your desired shape files.

4. Select the shape file you want to import as well as all of its associated files, and then click **Open**. The files are imported into the system, and a confirmation message is displayed.

> **♀ TIP: Identifying associated files**
>
> Once you have navigated to the folder that contains shape files, you can easily find all the files associated with your desired shape file. To do so, sort the files inside the folder by name and select all files with the same file name (excluding extensions) as your desired shape file.

5. Close the confirmation message, and then click **Save** to save your changes. **NOTE**: If you have imported the shape files for a new geozone, make sure to enter its name in the **Name** field before saving.

Importing Geozone and Route Path Data for Multiple Routes

To import geozone and route path data for multiple routes:

1. Go to the **GeoZones** menu and select the **Import Shape GeoZones** option. The **Import Shape GeoZones** page is displayed.

2. To instruct the system on how to read the measurement unit values in the files, select either the **Imperial** or **Metric** radio button.

3. Click the **Select files...** link, then navigate to the location of the firmware file on your PC and select the desired SHP file and all its associated files, then click **Open** to initiate the upload. Alternatively, you may navigate to the location of the firmware file on your PC, then drag and drop the files into the **Drop files here to upload** box. The system validates the files, and then displays the preview list. **NOTE**: You must select the shape file and all of its associated files for the system to recognize them.

> **♀ TIP: Identifying associated files**
>
> Once you have navigated to the folder that contains shape files, you can easily find all the files associated with your desired shape file. To do so, sort the files inside the folder by name and select all files with the same file name (excluding extensions) as your desired shape file.

4. To change the appearance of the list, perform one or more of the following tasks:
   - To sort the displayed list in ascending or descending order, click the desired column header.
   - To filter the displayed list, start typing in the text field in the column header. The list will automatically adjust to display only items that match the text you enter.
   - To remove all files from the list, click the **Clear** button in the top right corner.

5. Review the displayed list and select the checkboxes beside all the files you want to import.

6. Click the **Import Selected** button in the top right corner. The system imports the selected files, and a confirmation message is displayed.

7. Review the results, then click **Close** to exit the message. The uploaded file is removed from the list.

Adding Geozones Manually

This section describes how you can add geozones by creating their polygons on the map. Refer to the following tables for a description of the geozone elements and instructions on how to draw polygons.

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Geozone Elements

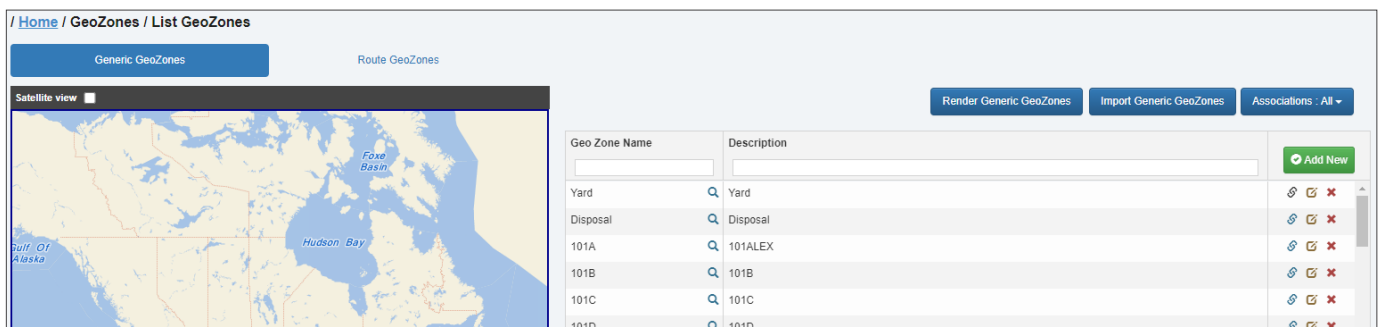| Element		Function or meaning
Generic	Route	
		Green push pin is the first point of the geozone.
		Blue or red push pins are intermediary points of the geozone.
		Red or black push pin is the last point of the geozone.

How to Draw Polygons

Mouse button	Function
	To add a new point after the last point of the geozone, right-click on the map.
	To delete a point from the map, right-click the push pin.
	To modify the polygon's shape, left-click a push pin, drag it to the new position, and then click it.
	To zoom in or out, use the mouse's scroll wheel.
	To reposition (pan) the entire map, left-click and drag it.

Creating New Generic Geozones

To create a generic geozone:

1. Go to the **GeoZones** menu and select the **List GeoZones** option. The **List GeoZones** page is displayed, with the **Generic GeoZones** tab selected by default.
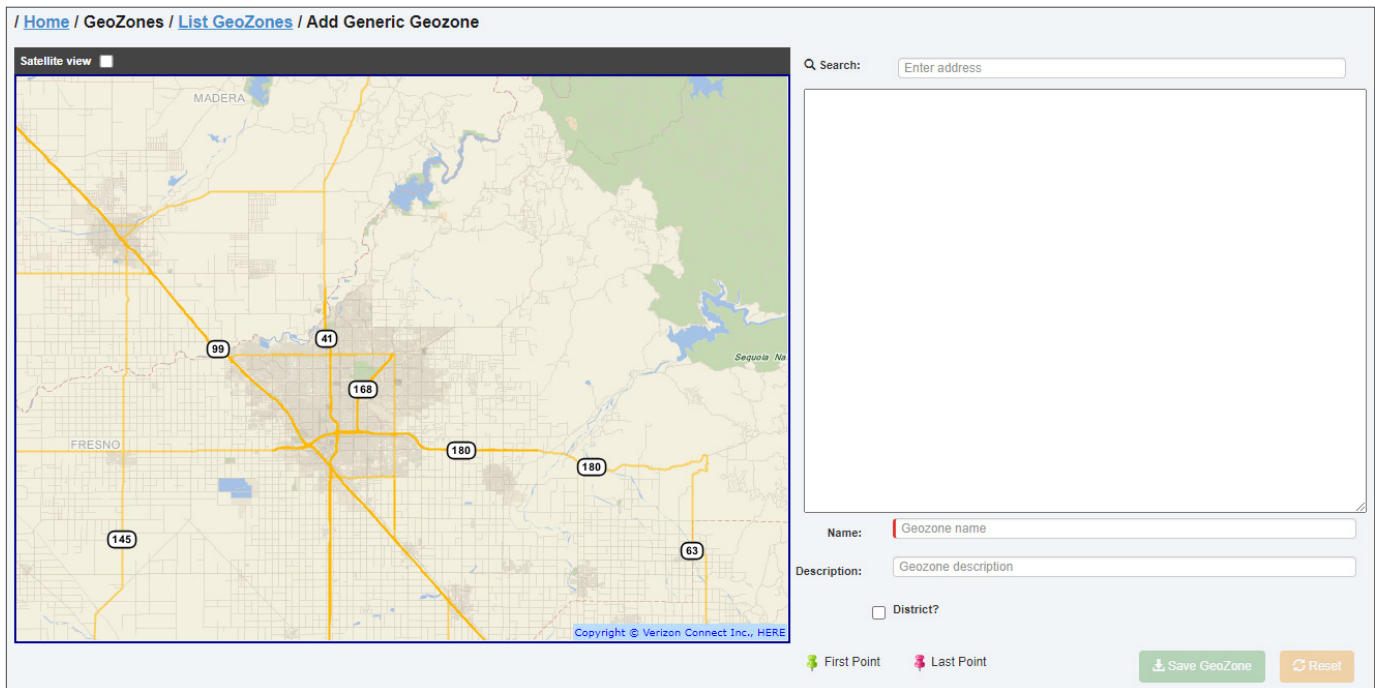

2. Click the **Add New** button. The **Add Generic GeoZone** page is displayed, providing a blank slate for drawing a new geozone.

3. Use the map tools to display the desired area, or, to help you zoom in on a specific area:

    i.   Start typing an address (street address, street/city name, zip/postal code) in the **Enter address** field. As you type, a list of matching locations is displayed.

    ii. Select the desired location from the list. The map is zoomed in on the selected location.

4. Draw the geozone with your mouse, using the instructions described at the beginning of the *Adding Geozones Manually* section. As you draw, the polygon coordinates are updated in the text box beside the map.

5. Enter a name and an optional description for this geozone in the corresponding fields.

6. To create an association of this geozone with a district, select the **District?** checkbox, and then select the desired district from the displayed drop-down list.
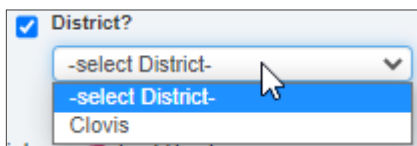
7. Click **Save GeoZone**. A message pops up to inform you that the new geozone and its associations (if any) have been successfully saved. Click **Close** to exit the message.

8. To associate a generic geozone with a yard or facility, follow the *Linking/Unlinking Generic Geozones to/from a Facility* or *Linking Generic Geozones to a Yard* procedures as needed.

Creating New Route Geozones

You can create new geozones on the **Add Geozone** page. This procedure describes how you can access this page from the **List GeoZones** page but you can also access it from the **Edit Route** page for existing routes. For instructions, refer to the relevant steps of the *Editing Routes* procedure.
**NOTE**: Any time you create a route geozone, a duplicate generic geozone associated with this route is created by the system.

To create a route geozone:

1. Go to the **GeoZones** menu and select the **List GeoZones** option. The **List GeoZones** page is displayed, with the **Generic GeoZones** tab selected by default.

2. Click the **Route GeoZones** tab. The page is updated to display the list of existing route geozones.
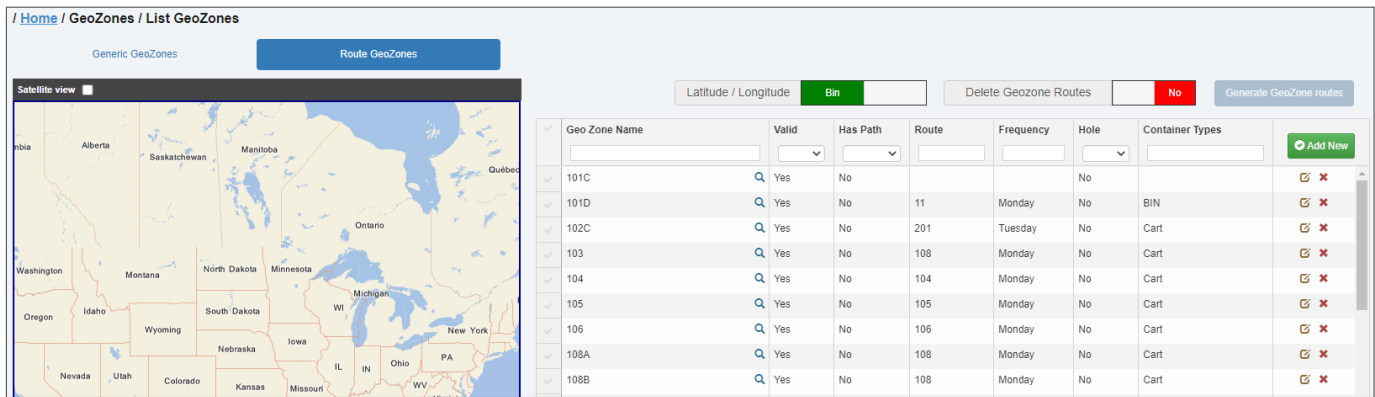
3. Click the **Add New** button. The **Add Geozone** page is displayed, with the **Geozone** panel expanded.
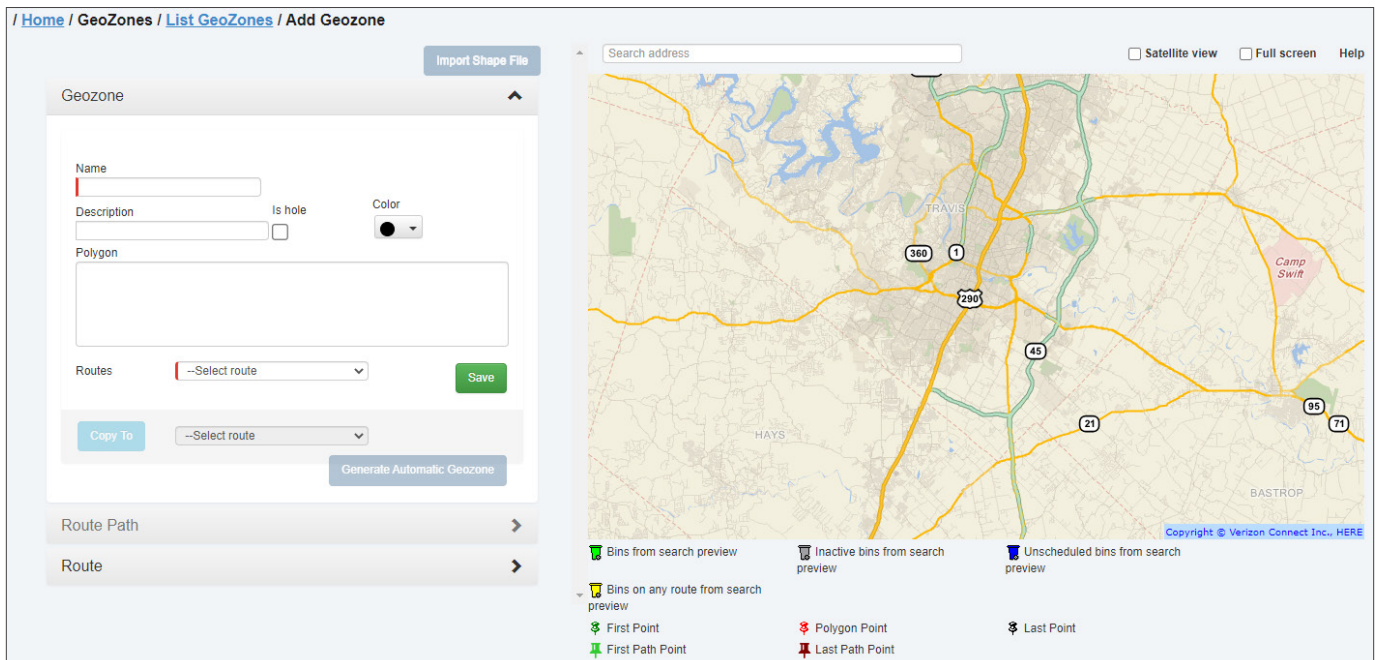
4. Use the map tools to display the desired area, or, to help you zoom in on a specific area:

    i.   Start typing an address (street address, street/city name, zip/postal code) in the **Search address** field. As you type, a list of matching locations is displayed.

    ii. Select the desired location from the list. The map is zoomed in and centered on the selected location.

    iii. Optionally, you can enhance the displayed view by selecting one or more of the following check boxes:
         • **Satellite view**
         • **Full screen**

5. Draw the geozone with your mouse, using the instructions described at the beginning of the *Adding Geozones Manually* section. As you draw, the polygon coordinates are updated in the text box beside the map.

6. Enter a name and an optional description for this geozone in the corresponding fields.

7. Select the **Is Hole** checkbox if the polygon is an area to be excluded from the existing route geozone.

8. To change the color of the polygon, select the desired color from the **Color** drop-down list.

9. To create an association of the new geozone with a route, select the desired route from the **Routes** drop-down list. The **Copy To** button is activated.

10. To copy this geozone to another route, select the desired route from the drop-down list beside the **Copy To** button, and then click the button. A confirmation message is displayed.

11.   Click **Save**. The new route geozone is added to the system and a confirmation message is displayed.

12.   Click **OK** to close the message. The **Edit Geozone** page is displayed for the geozone you have created.

Editing Geozones

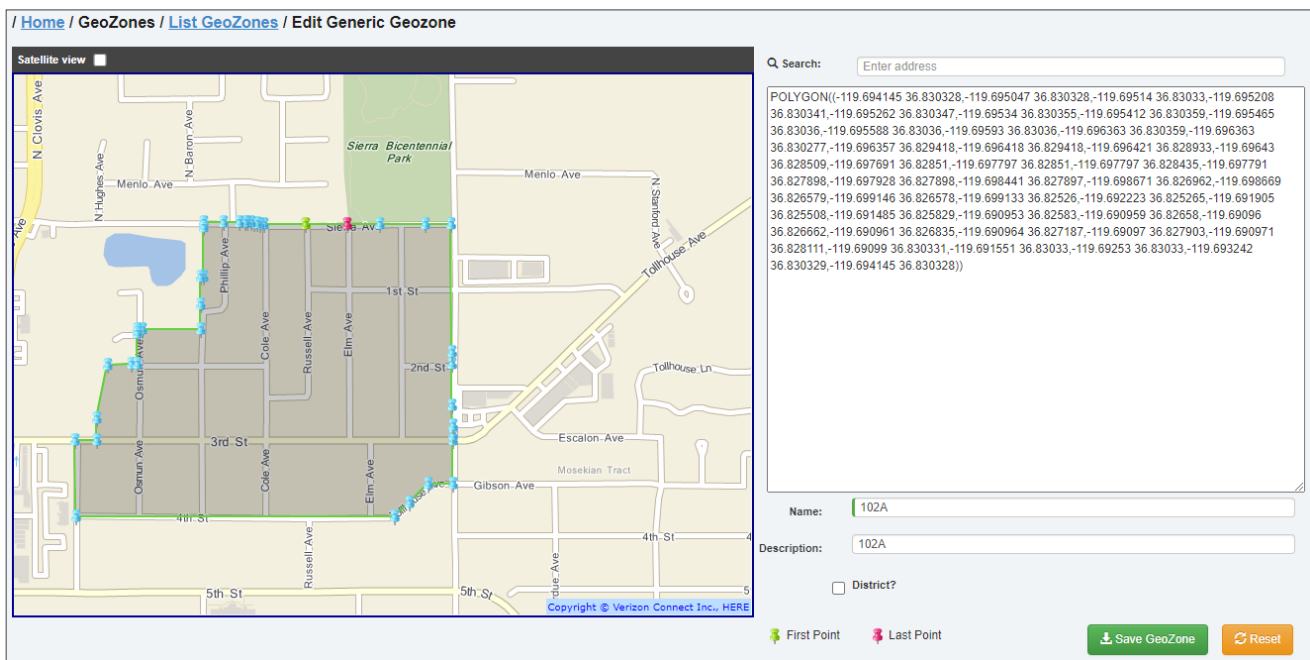This section describes how to edit existing geozones.

> **ⓘ NOTE: Editing geozones**
>
> Editing a generic geozone changes only that geozone. The changes you make to a generic geozone do not affect the corresponding route geozone.
>
> Similarly, editing a route geozone changes only that geozone. The changes you make to a route geozone do not affect the corresponding generic geozone.

Editing Generic Geozones

To edit a generic geozone:

1.   Go to the **GeoZones** menu and select the **List GeoZones** option. The **List GeoZones** page is displayed, with the **Generic GeoZones** tab selected by default.

2.   Find a geozone you want to edit, and then click the edit icon 📝 in the corresponding row. The **Edit Generic Geozone** page is displayed.

3.   Using the tools described in the table at the beginning of the *Adding Geozones Manually* section, edit the polygon.

4.   Update the name and description of this geozone in the corresponding fields.

5.   Create or break the association of this geozone with a district, by selecting or deselecting the **District?** checkbox.

6.   For existing or new association with a district, select the desired district in the displayed drop-down list.

7.   Click **Save GeoZone**. The generic geozone is updated and a confirmation message is displayed.

8.   To update an association of this geozone with a yard or facility, follow the *Linking/Unlinking Generic Geozones to/from a Facility* or *Linking Generic Geozones to a Yard* procedures as needed.

Editing Route Geozones

You can edit a route geozone on the **Edit Geozone** page. This procedure describes how you can access it from the **List GeoZones** page but you can also access it from the **Edit Route** page. For instructions, refer to the relevant steps of the *Editing Routes* procedure.

> ### ⓘ NOTE: When to use this procedure
>
> This procedure is used to change the route geozone attributes and its boundaries without affecting the associated route.
>
> If you want the changes to the geozone boundaries to carry to the associated route, i.e. affect the stops on this route, use the *Editing Routes Based on Geozones* procedure instead.

To edit a route geozone:

1. Go to the **GeoZones** menu and select the **List GeoZones** option. The **List GeoZones** page is displayed, with the **Generic GeoZones** tab selected by default.

2. Click the **Route GeoZones** tab, then, in the displayed list, find a geozone you want to edit, and click the edit icon in the corresponding row. The **Edit Geozone** page is displayed.
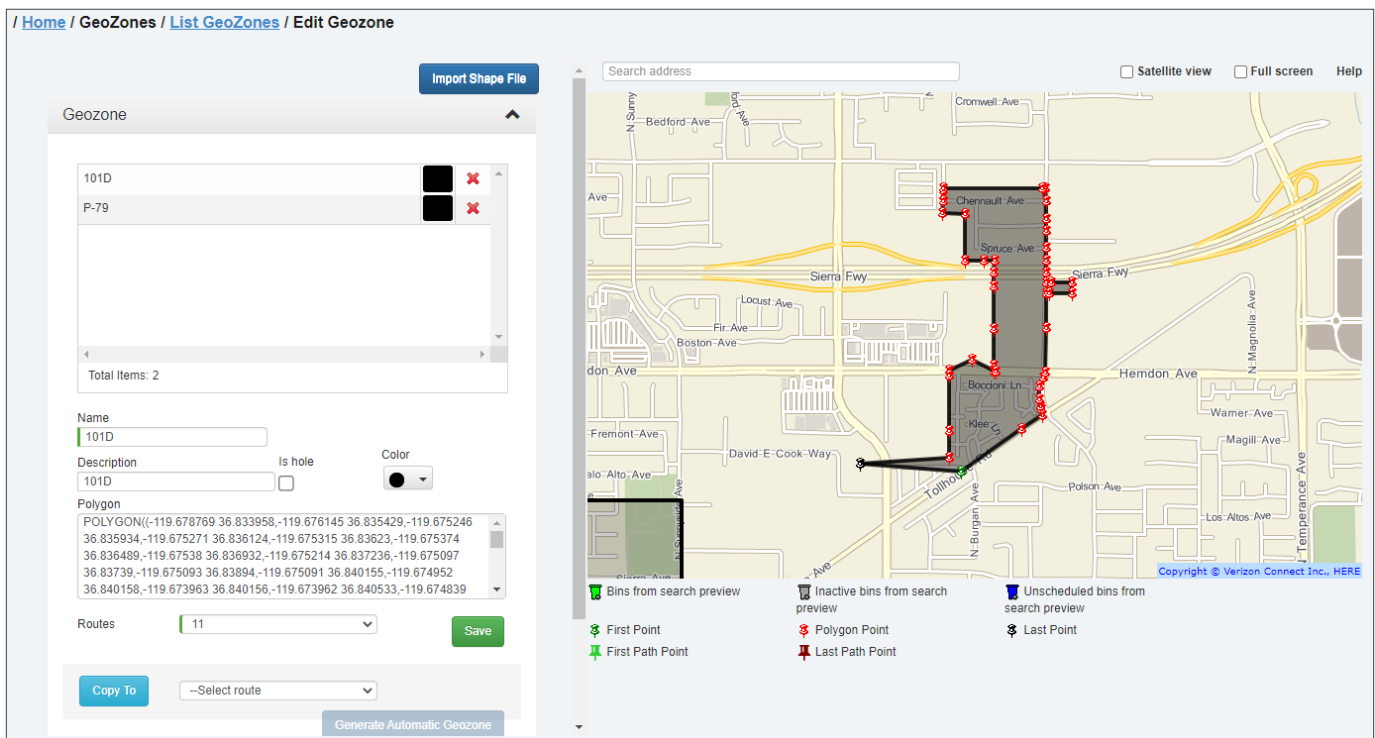
3. On the **Geozones** panel, select the geozone you want to edit.

4. Using the tools described in the table at the beginning of the *Adding Geozones Manually* section, edit the polygon as needed.

5. Update the name and description of this geozone in the corresponding fields.

6. Follow steps **7** - **11** of the *Creating New Route Geozones* procedure, and then click **Save**. The route geozone is updated and a confirmation message is displayed.

Deleting Geozones

You can delete existing geozones. To do so:

1. Go to the **GeoZones** menu and select the **List GeoZones** option. The **List GeoZones** page is displayed, with the **Generic GeoZones** tab selected by default.

2. Perform one of the following tasks:

To delete...	Do this...
A generic geozone	• Find a geozone you want to delete and click the cross icon ✖ in the corresponding row, then click **Delete** in the displayed message.
A route geozone	• Click the **Route GeoZones** tab, find a geozone you want to delete and click the cross icon ✖ in the corresponding row, then click **Delete** in the displayed message. -OR- • If you are on the **Edit Geozone** page, you can go to the **Geozone** panel and then click the cross icon ✖ beside the geozone you want to delete, then click **Yes** in the displayed message.

3. If a geozone cannot be deleted, an information message is displayed. Click **Cancel** to close the message. Otherwise, click **Delete** in the displayed confirmation message.

> ℹ **NOTE: Geozones that cannot be deleted**
>
> A generic geozone associated with routes or facilities cannot be deleted until the association is removed.

Exporting Geozones

You can export all the geozone data that currently exists in the system in the CSV format. To do so:

1. Go to the **GeoZones** menu and select the **Import/Export GeoZones** option. The **Import/Export GeoZones** page is displayed.

2. Click **Export Data**, then follow the system prompts to save the CSV file to a desired location on your PC.

Working with Geozones and Routes

You can perform various tasks that involve both the geozones and routes. For example, you can generate routes from existing geozones, or edit existing routes based on geozones.

Generating Routes from Geozones

You can populate an existing route with stops located within an existing geozone. This task is also known as generating routes from geozones. You can either add geozone stops to a new route that does not yet contain any assigned stops, or update an existing route to which stops have been added previously.

> **ℹ NOTE: Before generating routes from geozones**
>
> Before attempting to generate routes from geozones, make sure to edit the geozones of interest according to your goals. See *Editing Geozones* and *Editing Routes Based on Geozones*.

To generate routes from geozones:

1. Go to the **GeoZones** menu, select the **List GeoZones** option, and then click the **Route GeoZones** tab on the displayed **List GeoZones** page.

2. Select the checkmark for a geozone of interest in the leftmost column of the list. The **Generate GeoZone routes** button is activated.

3. Go to the **Latitude/Longitude** toggle switch and click it to select the desired option as follows:
    *   **Bin** - to instruct the system to use the container coordinates when a route is generated
    *   **Location** - to instruct the system to use the location coordinates when a route is generated.

> **ℹ NOTE: Bin vs. Location**
>
> It is recommended that you use the location's coordinates (property centroid) when generating a route to ensure that the stops are placed in the correct route, otherwise, if the container location is used instead, those containers located near route boundaries may end up on the wrong routes.

4. Go to the **Delete Geozone Routes** toggle switch and click it to select the desired option as follows:
    *   **Yes** to instruct the system to delete the existing route data associated with the selected geozone before adding geozone stops to this route. In this scenario, the existing assigned stops will be replaced by the geozone stops on this route.
    *   **No** to instruct the system to retain the existing route data associated with the selected geozone. In this scenario the geozone stops will append the existing assigned stops on this route.

5. Click **Generate GeoZone routes**. The new route is successfully generated and a confirmation message is displayed.

6. Click **Close** to exit the message.

Editing Routes Based on Geozones

This section describes how to edit routes by adjusting the boundaries of a route geozone on the **Edit Geozone** page.

Whenever you want to make quick adjustments to a route without having to export, amend, and re-import route data, you can do it by making adjustments to the associated route geozone(s). This feature is useful when you want to distribute stops among routes more evenly, to avoid having a large number of stops on some routes compared to others.

Using this procedure, you can make adjustments to the associated route geozone boundaries to change the geographical area covered by the route. For example:

- You can combine multiple geozones into a single one for a route that has more than one geozone associated with it.
- You can change the existing boundaries to include or exclude stops from the area covered by the geozone.

This procedure describes how you can access the **Edit Geozone** page from the **List GeoZones** page but you can also access it from the **Edit Route** page. For instructions, refer to the relevant steps of the ***Editing Routes*** procedure.

To adjust the route geozone's boundaries:

1. Go to **GeoZones** > **List GeoZones** > **Route GeoZones**, find a geozone of interest on the list, and then click the edit icon ▣ in the corresponding row. The **Edit Geozone** page is displayed. The **Geozone** panel is expanded by default. It displays the list of all geozones that are associated with the route number appearing in the **Routes** field.

2. Click the route geozone whose boundaries you would like to change to edit the route. The desired geozone's polygon is displayed on the map, marked with push pins.

3. Click the drop-down arrow ❯ on the **Route** tab. The **Route** panel is displayed.

4. Optionally, to explore how other route geozones fit around the geozone you are about to change, select the checkboxes beside the desired route geozones. The geographical areas covered by the selected route geozones are displayed on the map as polygons.

> **ⓘ NOTE: Editing related geozones**
>
> If you need to make changes to any of the other route geozones before proceeding with editing this route, click the edit icon 📝 beside a geozone of interest on the list displayed on the **Route** panel. When you do so, the **Edit Geozone** page is displayed for that route.

5. To filter the information to be displayed on the map:

   • Make selections from each of the following drop-down lists:
     • **Container Type**
     • **Container Size**
     • **Service Type**
     • **Line of Business**
     • **Building Category**
     • **Material**

   • To display the unscheduled stops, select the **Show unscheduled stops** check box.

   • To ensure that the stops on this route that do not fall within any of its geozone boundaries are not removed from this route when you update it, select the **Keep existing stops on route** checkbox.

   • To define which stops are to be displayed on the map, select the desired radio button as follows:
     • **Stops on this route** - to display the stops that belong to the route appearing in the **Routes** field on the **Geozone** panel
     • **Stops on any route** - to display stops on any route within the map area currently displayed on the screen.

   • To define which coordinates are to be displayed when you hover over a container on the map, select either **Bin's lat/lon coordinates** or **Location's lat/lon coordinates** radio button.

6. To display the filtered results on the map, click **Preview**. Observe the following changes:
   - The map view is updated
   - The **Update Route** button is activated
   - The **Generate Automatic Geozone** button is activated in the **Geozone** panel

> **ℹ NOTE: About generating automatic geozones**
>
> Use the **Generate Automatic Geozone** button to generate a rough outline of a geozone that would result if you were to combine all of the route's geozones into one. You can then save this automatic geozone by clicking the **Save** button on the **Geozone** panel.
> The saved geozone assumes the name of the geozone that was selected on the map before you clicked **Generate Automatic Geozone**. If desired, you can then delete the remaining geozones outlining the separate areas within the new automatic geozone.
>
> **NOTE**: Keep in mind that the automatically generated geozone's boundaries may overlap with geozones belonging to other routes. Take this into consideration when making a decision to combine geozones in this manner.

   - The **Preview** information message is displayed. It contains information about bins and locations for all geozones of this route.

> **ℹ NOTE: Preview information message**
>
> If there was nothing found for the selected criteria, the displayed message will inform you accordingly, and no containers will be displayed on the map. Click **OK** to close the message, adjust the filter criteria and click **Preview** again.

7. Adjust the geozone boundaries on the map as needed, and then click **Save** on the **Geozone** panel.

8. Go to the **Route** panel and click the **Update Route** button. A confirmation message is displayed, outlining the changes related to stops on this route.

Update Route

WARNING: Based on your current search criteria, pressing 'Update Route' will add/remove recurring associations to this route that are found within the boundaries of the GeoZone, potentially affecting other routes as well. Are you sure?

Route 107 info:
- Current stop count: 739
- New stop count: 735
- # Stops added: 0
- # Stops removed: 4

Additional info:
- # Stops removed from other routes: 0
- # Stops returning to unscheduled stops: 4

Yes   Cancel

9. If you agree with the outlined changes and want to proceed, click **OK**. The route is updated and a confirmation message is displayed.

10. Click **OK**. Observe the new updated boundaries of the route geozone.

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Working with Route Paths

Route paths are used for routes other than waste collection, for example, street sweeping routes. They can be added to existing route geozones to help the driver navigate the route. They can also be edited as needed.

You can add route paths either manually, as described in this section, or by importing them from an SHP file. See **Importing Geozone and Route Path Data from SHP Files**.

Adding Route Paths Manually

This section describes how you can create route paths inside the existing route geozones by drawing them on the map on the **Edit Geozone** page. There are two ways to access this page:

- From the **List GeoZones** page, described in this procedure
- From the **Edit Route** page, described in the **Editing Routes** procedure

Refer to the following tables for a description of route path elements.

Route Path Elements

Element	Function or meaning
📌	Green push pin is the first point of the route path.
📌	Red push pin is the last point of the route path.

To add a route path:

1. Go to the **GeoZones** menu, select the **List GeoZones** option, and then click the **Route GeoZones** tab on the displayed **List GeoZones** page. The list of route geozones is displayed.

2. Find a route other than waste collection on the list, and then click the edit icon 📝 in the corresponding row. The **Edit Geozone** page is displayed. The **Geozone** panel is expanded by default.

3. Click the drop-down arrow 〉 on the **Route Path** tab. The **Route Path** panel is displayed. If the route you selected already has an existing route path, both the **Add New** and **Edit** toggle switches are available.

4. You can now add a path in one of the two ways:
    - Type or paste the strings into the **Linestring** text field, then click the **Add New** toggle switch, and proceed to step **6**.

    -OR-

    - Draw the path on the map. To do so, proceed to the next step.

5. To draw the route path on the map:

   i.   Click the **Add New** toggle switch. The **Save** button is activated and the ability to create a path on the map is activated.

   ii. Draw the path with your mouse by right-clicking on the map along the streets covered by this route. As you draw, the strings are updated in the **Linestring** text box.

> 💡 **TIP: Drawing route paths**
>
>   •   If the route covers both sides of any given street, make sure you draw the path on both sides.
>   •   You can remove the points from the path by right-clicking them.
>   •   You cannot reposition route points until after you save the new path.

6. Click **Save**. The path is saved to the route.

Editing Route Paths

This section describes how you can edit existing route paths on the **Edit Geozone** page. There are two ways to access this page:

- From the **List GeoZones** page, described in this procedure
- From the **Edit Route** page, described in the *Editing Routes* procedure

Refer to the following tables for a description of route path elements.

To edit an existing route path:

1. Follow steps **1** - **2** of the *Adding Route Paths Manually* procedure.

2. Click the drop-down arrow ❯ on the **Route Path** tab. The **Route Path** panel is displayed.

3. Click the **Edit** toggle switch. The ability to edit route paths is activated.

4. Zoom in on the path as needed, then left-click the section of the path you want to edit. The section is highlighted and the points are displayed.

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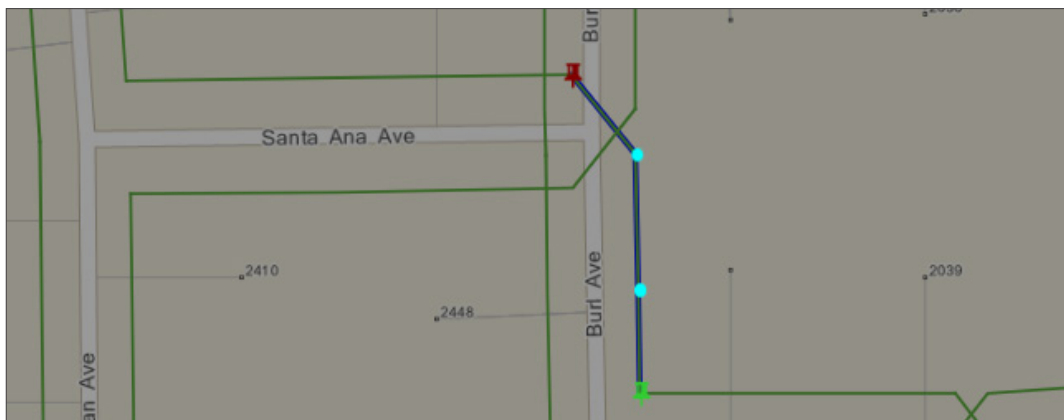
5. Left-click and drag the points as needed to adjust the highlighted section. As you do this, the strings are updated in the **Linestring** text box.

6. Click **Save**. The path and its strings are updated.

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Appendix 1. Reference Data

In This Chapter

About Reference Data

Reference data is specific to your organization. It defines the properties for your business and represents information that is available for use by all routes in your system.

Defining reference data is the starting point for your project. The most efficient way to define reference data is to import a comma-separated-values (CSV) file that you have prepared off-line (or have generated using your back-office system or other software) and formatted according to the criteria defined for each type of data. You can later update and customize the data according to your needs.

Preparing data from your existing dispatch system is the first step in getting started with the Route Management. Once prepared, the data can be entered manually or stored in a comma-separated-value (CSV) file so that you can import large amounts of data in a single operation.

> **ⓘ NOTE: CSV file format**
>
> - The first two rows of your CSV files should be ignored! Do not enter valid data here!
> - Field format and sequence are critical to successful import. Use the CSV samples in each section as a reference.

Sections that follow describe the information you will need to define reference data.

Reference Data Overview

Menu Option	Description
Area Notes	Notes associated with a map area that is independent from any route.
Activity Codes	Codes that indicate the completion status for stops on your routes; these completion codes are included in the activity master list that is sent to the mobile. Examples include **Completed** (normal completion), **UTS** (unable to service)—bin not out, **Access Blocked**, **Cart Misplaced**, and so on.
Material Types	Types of disposal material for your business. Examples include recyclable materials, compostable yard waste, organics, garbage, and so on.
Note Types	Codes defined in the Note Type Codes (NTC) master list that is sent to the mobile units. These codes are used to define lists of recipients for messages sent between the mobiles and the server.
Graffiti	
• Structure Color	Colors of the structure where graffiti is placed.
• Structure Type	Types of structure where graffiti is placed. For example, door, sidewalk, and so on.
• Surface Material	Types of surface where graffiti is placed. For example, wood, concrete, and so on.
• Artist Tag	Signatures of artists who placed the graffiti.
Organization	
• Lines of Business	Types of waste management services for your business, and hence, the functionalities offered on the FleetLink Mobile WasteApp user interface. The standard FleetMind LOBs are Commercial, Industrial, Residential, and Cart Delivery.
• Work Flow Group	Codes used for operating departments in charge of various work flows.

Menu Option	Description
Address/Location	
• Building Categories	Types of buildings found at customer locations serviced by routes. For example, hotel, apartment building, and so on.
• Districts	Geographic areas serviced by your business.
• Facilities/Yards	Disposal facilities and truck yards used by your business. Facility/yard information includes contact information and location, which the app can translate into geographic coordinates for use by the FleetLink Mobile WasteApp.
• States/Provinces	Specifies the U.S. states and/or Canadian provinces serviced by your business.
Carts/Containers	
• Cart/Container Type	Types of waste receptacles used by your business, and hence, the cart/container types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface.
• Volume/Weight Units	Types of weight and volume measurement units used by your business.
Customers	
• Customer Classes	Optional customer data element for integration with a company's billing system. Examples include school, business, government, residential. You associate a customer class with a customer via the Edit Customer screen.
• Customer Prefixes	Any alphanumeric string that is meaningful to your business for purposes of sorting or categorization of customers. Customer prefixes are used to make customers linkable/groupable, and may be used in the future for billing purposes
Customer Cases	
• Case Actions	Actions that can be taken to process or resolve a customer case.
• Case Reasons	Predefined descriptions of the case that the Customer Service Representative (CSR) will be able to select from a pull-down menu when entering or editing a case.
• Case Source Types	Sources of customer cases. Examples may include email, telephone, web interface, driver.
• Case Statuses	Current state of a customer case within the CSR's work flow. Three statuses are predefined in the CSR Dashboard: • Open - Unassigned • Open - Assigned • Closed
• Case Types	The nature of the customer case, as different types will determine the course(s) of action and may be accorded different priorities. Examples include complaint, work order, information request.
Routes, Services, Work Flows	
• Rates	Rates charged to customers for subscribed services.
• Services	Types of waste management services provided by your company and, hence, the service types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface.
• Service Frequency	Frequency with which services are rendered at a customer location, for example, daily, twice a week, on-demand.
• Work Flows	The sequence of actions performed in order to render a service.

Menu Option	Description
• General Ledger Accounts	Specific customer accounts.
Routes	
• Route Frequencies	Frequency with which your routes are run. For example, weekly, bi-weekly, and so on.
• Route Supervisors	Route supervisors and lists of routes associated with them.
Vehicles/Drivers	
• Drivers	Personnel authorized to drive the vehicles in your fleet.
• Trucks	Vehicles used on your routes.
• Truck Types	Purposes of the vehicles used on your routes.
• Work Group	Group of vehicles working as a team to complete work assigned to them.
Import/Export Reference Data	Import or export reference data in CSV format.

Importing and Exporting Reference Data

Route Management's import capabilities make it possible for you to import large amounts of reference data in a single operation, saving time and minimizing the potential errors of manual entry. In order to import the data, you must have the properly formatted CSV file ready. You can import data for each individual reference data category. When you export reference data, ALL reference data files are packed into a ZIP file from which you can extract individual files.

Importing Reference Data

1. Go to the **Reference Data** menu and select the **Import/Export Reference Data** option. The **Import/Export Reference Data** page is displayed.

2. Find the reference data category of interest, and then click the **Browse** button beside it.

3. Navigate to the location of the corresponding CSV reference data file on your PC, select the file, and then click **Open**. Your file is added to the list of files to be imported. The **Browse** button's status indicator changes to a check mark to indicate that a file has been selected.
NOTE: If you realize that you have selected the wrong file, simply click the **Browse** button again to replace the currently selected file. To clear (delete) the selection altogether, refresh your browser window. Doing so clears all selections.

4. To add files for additional categories, repeat steps **2** and **3**.

5. When done, click **Import Data**. The system validates and imports the file(s). Upon completion, an information message is displayed that lists the results of the procedure.

6. To review the results, click the available icon in the **Details** column. If errors occurred during import, review your CSV files to ensure that they comply with the data formats specified in sections that describe each reference data category, correct the errors, then try importing again.

> **💡 TIP! Reviewing import results**
>
> If you close the information message, you can click the **Show Last Result** button to display it again. This applies only to the most recent import operation.

Exporting Reference Data

You can export all available reference data that exists in the system; selection of individual categories is not supported.

To export reference data:

1. Make sure you are on the **Import/Export Reference Data** page, then click **Export Data**. The system processes the request, and then downloads the ZIP file with all reference data to the default download location on your PC.

2. Navigate to the file location, then extract it using your preferred archive manager app to the desired location on your PC.

Managing Reference Data

This section describes how to work with reference data set up for you or imported into your system.

You can perform many common reference data tasks directly in Route Management, without having to alter your CSV data files:

- View and search your reference data
- Edit existing data records
- Add new data records manually
- Delete unwanted data records.

Additional tasks are available for some types of data, each of which is described in the corresponding section of this guide.

Viewing Reference Data

To view reference data:

1. Go to the side bar and select the desired option from the **Reference Data** menu. The corresponding data is displayed on the page that opens.

2. If necessary, change the appearance of the displayed list by performing the following tasks:

To...	Do this...
Sort the list in ascending or descending order	• Click the desired column header once or twice respectively.

To...	Do this...
Filter the list	• Start typing in the text field of the desired column header. The list is filtered to include only the words you typed.

Adding, Editing and Deleting Data Records

Most of the displayed data pages have similar controls and procedures for adding, editing, and deleting records. For pages that do not have the controls described in this section, refer to each of the specific data category's section in this chapter. To add, edit, or delete data records, perform one of the following tasks on the data page of choice:

To...	Do this...
Add a new data record	1. Click the **Add** or **Add New** button, whichever is available. The corresponding **Add [data]** form is displayed. 2. Enter the information in the text fields, and then click the available **Save** button.
Edit the existing data record	1. Click the edit icon (, , ,) beside the data record of interest. The corresponding **Edit** window or page is displayed. 2. Make the desired changes, and then click the available **Save** button.
Delete the unwanted data record	• Click the cross (,) or trash bin (,) icon beside the record you want to delete. The record is removed from the list and a confirmation message is displayed.

Resequencing Data Records

A data record's value in the **Sequence** column defines the order in which that record (in the form of a button or menu option) appears on the FleetLink Mobile WasteApp user interface.

You can customize this order to suit your requirements or preferences by editing the value in the **Sequence** column.

To resequence data records:

• From a screen where you can add or edit data, type the desired value into the **Sequence** text field, or use the increment/ decrement controls to change the value. The maximum allowed number of digits is 5.

The following records can be sequenced and resequenced:

• Activity codes
• Material types
• Note types
• All graffiti data records
• Facilities/yards.

Area Notes

You can create notes associated with a map area that is independent from any route. New area notes are communicated across FleetMind apps.
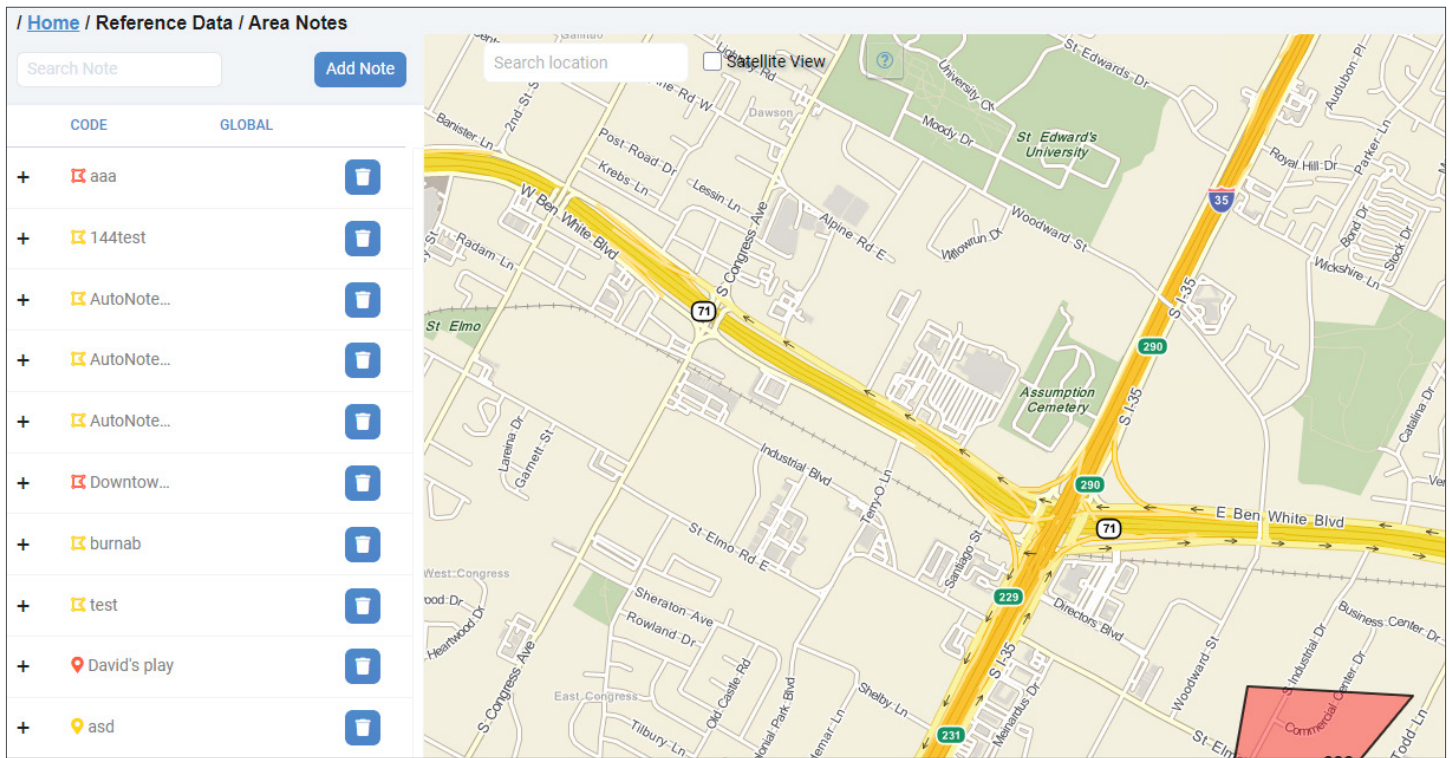
Adding Area Notes

To add a new area note:

1. Click the **Add Note** button on the left-hand side panel or the note toggle button in the top right corner of the map.

2. Define the point or area on the map which will be affected by this note:
    - To define a single-point location, select the **Point** checkbox, then left-click on the map to place a marker.
    - To define an area, right-click on the map to start creating the polygon. Continue right-clicking to complete the outline of the area.

3. Select the **Global** checkbox to make this note visible to all fleet vehicles.

4. Click the **Schedules** tab, enter/select the information about the period of time this note will be in effect, then click **Add Schedule**. You can add several schedules.

5. Click **Save**. The note is added to the list of area notes.

Editing Area Notes

To edit an existing area note:

1. Find the note you want to edit and click its name in the **CODE** column.

2. Make the desired changes in the displayed **Edit Note** panel, then click **Save**.

Area Notes Data

General tab				
Data Item	**Data Type**	**Field size**	**Mandatory**	**Notes**
Code	alphanumeric	30	Yes	A unique identifier that this note will have in the system.

Data Item	Data Type	Field size	Mandatory	Notes
Type	alphanumeric	select a value	Yes	The type of note: **Info** or **Warning**.
Note	alphanumeric	256	Yes	The text of this area note.
Point	boolean			A single point on the map that this area note relates to.
Global	boolean			An area (polygon) on the map that this area note relates to.
Schedules tab				
Data Item	Description			
Start Date/End Date	Select start and end dates of the period of time when this note will be in effect.			
Days of the week	Select the checkboxes for all days of the week when this note will be in effect.			
From/To	Select the time of day that defines the period of time when this note will be in effect.			

Activity Codes

Activity codes reference data defines the codes that indicate the completion status for stops on your routes; they are completion codes that are included in the activity master list sent to FleetLink Mobile. Examples include **Completed** (normal completion), **UTS** (unable to service)—bin not out, **Access Blocked**, **Cart Misplaced**, and so on.

Activity codes reference data defines the buttons or menu options available on the FleetLink Mobile WasteApp user interface, their captions, and the order in which they are presented to the user. They are limited to the Waste API fields.

FleetMind standard activity codes are available for your reference in the *Standard Activity Codes* table in *Appendix 3*.

About Reroutable Activity Codes

All activity codes have an associated **Reroutable** flag. Used primarily for exceptions, when this check box is selected, the driver will have the option of making the unserviceable stop reroutable, which means that it will be removed from their assignment list and made available for rescheduling by dispatch on another route.

A typical example would be the **BLOCKED REROUTE** button when logging an exception status.

About Reroutable Stops

The Route Management app provides dispatch personnel the facility to ensure that stops that have not been serviced will be rerouted.

Whether a stop is reroutable is determined by a configurable parameter in the Activity Codes Master List of the FleetLink Mobile WasteApp.

Activity codes represent the actions a driver can take when servicing a call. The completion codes associated with these activities are customer-specific and fully customizable. They must be configured using your back-office system.

Some activities represent intermediate steps (completion code = No) and the stops are not removed from the calls list, such as **Blocked Retry**, where the driver indicates that he intends to return to complete the call. When this flag is set to TRUE, the following behavior occurs in Route Management:

- When a route is closed:
    - ALL on-demand stops of type residential, front-load, and roll-off that are still of status **Pending** or of activity code with attribute **Reroutable** become available on the **Unscheduled Stops** screen, and can be scheduled to another route.
    - ALL recurring stops of type front-load and roll-off (not residential) that are still pending or of activity code with attribute **Reroutable** are converted to on-demand stops and become available on the **Unscheduled Stops** screen, again to be scheduled to another route .
- When viewing the **Unscheduled Stops** page, you can distinguish easily between stops that are there because of **ReRoute**, **Missed**, or **First Time**, and reschedule them accordingly.

Activity Codes Data

Data Item	Data Type	Field size	Mandatory	Notes
Code	alphanumeric	4	Yes	A unique identifier that denotes the completion status for stops on your routes. Examples may include **C** for completed, **B** for blocked access.
Description	alphanumeric	20	Yes	Descriptions are used as labels for the buttons in the WasteApp, which can accommodate maximum of 2 lines of 10 characters.
Completion	boolean		Yes	Completion status of the route stop for the activity code used. Completed means that the route stop executed with the user code will be removed from the driver's call list.
Reroutable	boolean			Select this checkbox if the route stop can be reassigned to another route. Used primarily for exceptions, when this checkbox is selected, the driver will have the option of making the unserviceable stop reroutable, which means that it will be removed from his assignment list and made available for rescheduling by dispatch on another route.
Successful	boolean			The status of service delivery. An assignment may have a completion status of **False** and a success status of **True**.
Exception	boolean			Select this checkbox if the route stop is considered an exception.
Excluded	boolean			Select this checkbox if this activity type will be excluded from the cart maintenance list of activities.

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Data Item	Data Type	Field size	Mandatory	Notes
Dispatch Type	alphanumeric	select from list	Yes	Line of business affected by this activity code.
Sequence	numeric	5	Yes	The order in which the list is presented to the driver.

Material Types

Material types reference data specifies the types of disposal material for your business. Examples include recyclable materials, compostable yard waste, organics, garbage, and so on.

This data defines the menu options available on the FleetLink Mobile WasteApp user interface, their captions, and the order in which they are presented to the user.

Material types are used in defining the service types as well as filling out the material master list for disposals or call-ins. It follows the FleetMind standard API message compliance.

Material Types Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	10 Must not contain spaces.	Yes	A unique identifier indicating the type of waste material collected at a route stop, for example, garbage, recycling.
Description	alphanumeric	20	Yes	A meaningful description for the material type. Do not include commas.
Disposal Rate	numeric		Yes	Cost per unit for disposal of material.
Unit of Measurement	alphanumeric	select from list	Yes	A unit of weight or volume.
Dispatch Type	alphanumeric	select from list	Yes	Line of business where this material type is used.
Sequence	numeric	5	Yes	The order in which the list is presented to the driver.

Note Types

Note types refer to the codes defined in the Note Type Codes (NTC) master list that is sent to the mobile units. These codes are used to define lists of recipients for messages sent between the mobiles and the server.

/ **Home** / **Reference Data** / **Note Types**			
+ Add	Code	Description	Dispatch Type-Sequence
✖ ✎	General	Note to dispatcher	RESI-1
✖ ✎	Message	message from car	COMM-1, GF-4
✖ ✎	alert	test1code	COMM-1
✖ ✎	Industrial	Test	ROLF-1

Note Types Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	10 Must not contain spaces.	Yes	A unique identifier indicating the recipient group for notes from mobile.
Description	alphanumeric	20	Yes	A meaningful description for the note type.
Dispatch Type	alphanumeric	20	Yes	Line of business where this note type is used.
Sequence	numeric	5	Yes	The order in which the list is presented to the driver.

Graffiti

Graffiti reference data specifies the color, type and surface material of the structures where graffiti is placed. This data also defines the order in which they are presented to the user. Additionally, this data may contain snapshots of graffiti artist's signature.

Structure Color/Structure Type/Surface Material Data

Data Item	Data Type	Field size	Mandatory	Notes
Code	alphanumeric	10 Must not contain spaces.	Yes	A unique identifier indicating the color, the type, or surface material of the structure where graffiti is placed.
Description	alphanumeric	30		A meaningful description for the color, the type, or surface material.
Sequence	numeric	5	Yes	The order in which the list is presented to the driver.

Artist Tag Data

| Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	50 Must not contain spaces.	Yes	A unique identifier indicating the signature of the artist who placed the graffiti.
Description	alphanumeric	256		A meaningful description for the artist's signature.
Note	alphanumeric	1048		A note relevant to the artist's signature.

Data Item	Data Type	Field size	Mandatory	Notes
Sequence	numeric	5	Yes	The order in which the list is presented to the driver.
Image	file			The image file that identifies the artist's signature.

Organization

Lines of Business

Line of business (LOB) reference data specifies the types of waste management services for your business, and hence, the functionalities offered on the FleetLink Mobile WasteApp user interface.

- The standard FleetMind LOBs are Commercial, Industrial, Residential, and Cart Delivery.
- The LOBs are associated to the ASN stop type. You can technically add different LOBs to the system and have them associated all to the same stop type.
- Any new LOBs that you define must be added to the FleetLink Connector database using the PuTTy tool.

Line of Business Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier indicating the type of waste collection, for example, **CDLV** for cart delivery, **FL** for commercial front-load.
Description	alphanumeric	128	Yes	A meaningful description for the line of business, for example, Commercial, Industrial, Residential, Cart Delivery.

Work Flow Group

Work flow groups are also known as operating departments. This reference data specifies the cost centers responsible for the various types of waste management services provided by your business.

Each operating department may be associated with different work flows, lines of business, and dispatch types.

Work Flow Group Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	15		An identifier indicating the operating department.
Description	alphanumeric	256		A meaningful description for the operating department.

Address/Location

Building Categories

Building categories reference data specifies the types of buildings serviced by your business. Examples include apartments, office, single-family dwelling, and banquet hall. This data has no impact on the FleetLink Mobile WasteApp user interface, but may be of use for route planning or statistical analysis by your operations department.

A building category is a grouping available to the customer location that describes the building location. The customer location will have a building category. Each customer can have multiple locations and each location can have multiple containers. The building category is associated with the customer location level.

In Route Management, the person in charge of creating the routes can use the building category field to omit a certain building type from the route generation process.

Building categories are not transferred to any other level of FleetMind apps.

Building Categories Data

Data Item	Data Type	Field size	Mandatory	Notes
Category Name	alphanumeric	40 Must not contain spaces.	Yes	A unique code identifying the type of building serviced, for example, Bank, Condo, Apartments.
Description	alphanumeric	128		A meaningful description for the building category identifier.

Districts

Districts reference data specifies the geographic areas serviced by your business.

Districts Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	40	Yes	A unique code identifying the district serviced.
Description	alphanumeric	128		The name of the district, for example, South Side.

Facilities/Yards

Disposal facilities reference data specifies the disposal facilities and truck yards used by your business. The related information includes contact information and facility location, which the app can translate into geographic coordinates for use by the FleetLink Mobile WasteApp .

Route Management does not provide the ability to add/remove facilities based on LOB or division. This means that all trucks will receive all entries in this list (unless modified through FleetLink Connector). Disposal messages coming from the mobile are not inserted into the Route Management database.

Only the code and description are passed to FleetLink Connector; the column length is respected from the waste API.
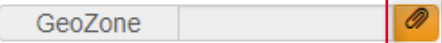
Adding Facilities and Yards

1. Open the list of facilities (**Reference Data** > **Facilities/Yards**), and select either the **Facility** or the **Yard** tab as needed.

2. Click the **Add** button, fill out the displayed form, then click the corresponding **Save** button. The facility or yard is created and added to the corresponding list.
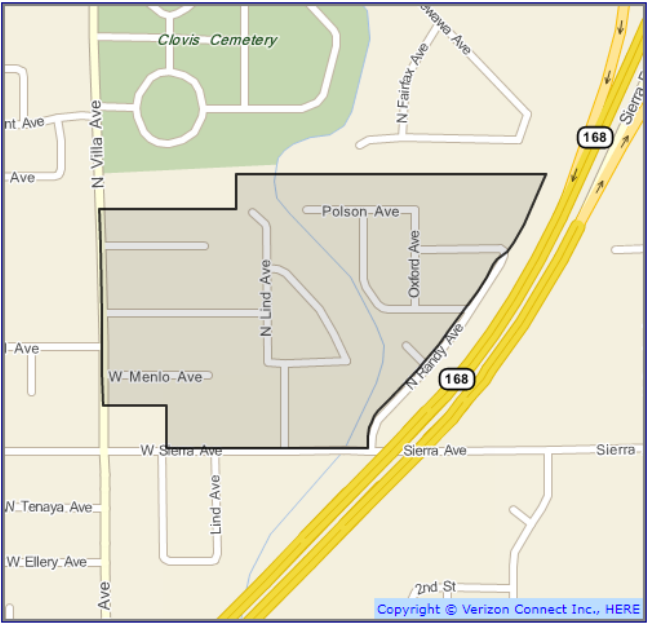
Linking/Unlinking Generic Geozones to/from a Facility

Once a new facility is added, you can link new or existing generic geozones to it. To do so:

1. Make sure the **Facility** tab is selected.

2. Click the edit icon beside the facility of interest. The **Edit Facility** page is displayed.
   NOTE: If a geozone is already linked to the facility, the geozone name is displayed in the **GeoZone** field.

3. To link a geozone to this facility:

   i. Click the paperclip icon [GeoZone _____ 📎] beside the **GeoZone** field. The **Linked to GeoZone** window is displayed.
      NOTE: If the facility is already linked to a geozone, the paperclip icon is not available. You can break the current link by clicking the cross icon beside the field.
      - You can display all geozones on the map by clicking the **Display All GeoZones** button and to filter the list according to the facility's coordinates by clicking the filter icon 🔛 .
      - You can also display a geozone's polygon on the map by hovering your mouse over the geozone's name.

> **ⓘ NOTE: No suitable geozones**
>
> If there are no geozones on the displayed list that are suitable for this facility, you can create your own generic geozone, return to this edit page, and assign the new geozone to the facility. See ***Creating New Generic Geozones***.

    ii.   Find the desired geozone on the list, then click the plus icon beside the geozone name to link that geozone to the facility. The geozone is assigned to the facility and you are returned to the **Edit Facility** page.

4. Click **Save Facility**.

Linking Generic Geozones to a Yard

Once a new yard is added, the system will try to locate generic geozones containing the yard's coordinates. All located generic geozones are listed in the **GeoZone Details** area, and their polygons are displayed on the map.

> 💡 **TIP: Identifying geozones on the map**
>
> Hover your mouse over a geozone name on the list to highlight that polygon on the map.

To add or update the yard's geozone:

1. Start on either the **Add Yard** or **Edit Yard** page.
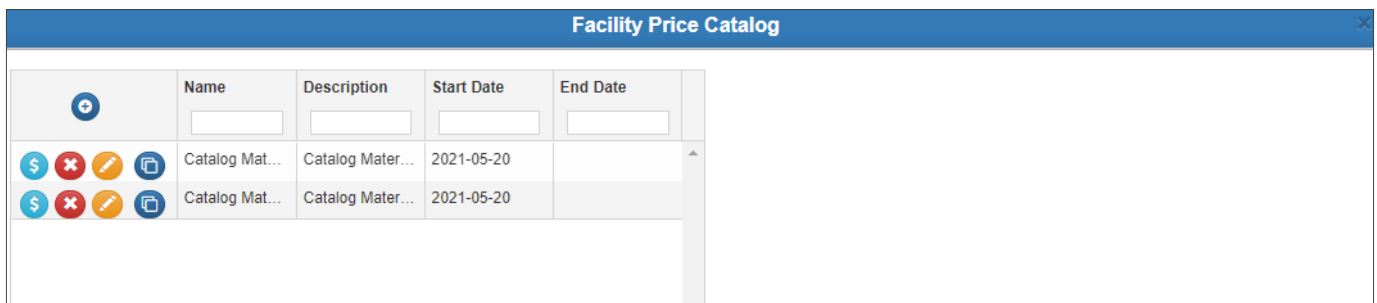2. Perform one of the following tasks:

To...	Do this...
Link a geozone that is listed in the **GeoZone Details** area	• Click the desired geozone name on the list to select it, then click the **Associate Selected Geozone** button in the **Associated Geozone Info** area.
Unlink the geozone from the yard	• Click the **Disassociate Geozone** button in the **Associated Geozone Info** area.
Link a geozone that is NOT listed in the **GeoZone Details** area	1. Click the **Create Geozone** button, then, on the displayed **Add Generic Geozone** page, create a new generic geozone in the area where the yard is located. See *Creating New Generic Geozones*. 2. Click the back button on your browser. Observe that the new generic geozone is now linked to the yard and listed in the **Associated Geozone Info** area.

Managing Costs for a Facility

Route Management provides the capability to manage a catalog of costs per material at disposal facilities.

To manage the costs:

1. Open the list of facilities (**Reference Data** > **Facilities/Yards**) and make sure the **Facility** tab is selected.
2. Click the edit icon beside the facility of interest. The **Edit Facility** page is displayed.
3. Click the **Show Catalog** button. The **Facility Price Catalog** window is displayed, showing the name, description, and a date range for which the catalog is valid.

4. Perform the following tasks as needed:
   - **To add a catalog item**:
     a.   Click the plus icon in the table header. The **Facility Price Catalog** form is displayed.

    b.   Enter a name, description, and start date. End date is optional.

    c.   Click **Save**. The material is added to the catalog.

- **To edit a catalog item**:

    a.   Click the edit icon 🖊 . The **Facility Price Catalog** form is displayed.

    b.   Make modifications as required.

    c.   Click **Save**. The material is modified.

- **To delete a catalog item**, click the cross icon ❌ . The item is removed from the catalog.
- **To manage material costs** of a catalog item:

    a.   Click the dollar sign icon 💲 . If no costs have been assigned, a message is displayed. Otherwise, the list of costs is displayed on the right-hand side panel.

	Material	Measurement	Cost	
➕				
❌ 🖊	Garbage	Gallons	0	▲

    b.   To add or edit a cost:

       i.   Click the plus icon ➕ or the edit icon 🖊 in the right-hand side panel. The **Cost of Disposal Material** form is displayed.

      ii.   Select material and measurement unit from the corresponding drop-down lists.

     iii.   Enter a cost in the **Cost** text field.

     iv.   Click **Save**. The cost is added to the list.

- **To clone a catalog item**, click the copy icon 🗐 . The catalog item and all its associated costs are added to the list.

Facilities Data

Data Item	Data Type	Field size	Mandatory	Notes
Code	alphanumeric	10	Yes	A unique code identifying the waste disposal facility, for example, WPGWaste.
Sequence	numeric	5	Yes	Order in which option is presented to driver. The order in which the facility is displayed among the controls or menu options on the FleetLink Mobile WasteApp user interface. You may leave this value at **0** for the time being and edit later.
Description	alphanumeric	100	Yes	The name of the facility, for example, Winnipeg Waste.
Address fields (Civic #, Street, Suite, City, Postal Code, State/ Province)	alphanumeric	512 (street name)	Yes	The full address and postal code/zip code of the facility. This information enables the app to determine the latitude and longitude of the facility.
Phone #	numeric	25		Phone number of the facility, no impact on the functionality of FleetLink Mobile WasteApp.

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Data Item	Data Type	Field size	Mandatory	Notes
Fax	numeric	25		Fax number of the facility, no impact on the functionality of FleetLink Mobile WasteApp.
Latitude	numeric	10		Geographic coordinates of the facility in degrees, for example 45.483985. You may enter these manually or omit them altogether. If you have specified a full and valid address in the address fields, the app may calculate the coordinates and copy them to these fields automatically.
Longitude	numeric	10		
GeoZone	alphanumeric			Well-known text (WKT) file representing the facility's geozone. A unique identifier for the geozone.
Integrated	boolean			Select this checkbox if this facility has integrated weigh scales.
Allowed materials	boolean			Checkboxes with data items that originate from the material types reference data.

Map Controls - Facilities

- Right-click on the map to pin the facility to a specific location. The coordinates are updated in the **Latitude** and **Longitude** fields accordingly.
- Left-click and drag the pin icon to reposition the facility and update its coordinates.
- Scroll the mouse wheel up/down to control the zoom level.
- Select the **Satellite view** checkbox to display the satellite view on the map.

Yards Data

Data Item	Data Type	Field size	Mandatory	Notes
Site	alphanumeric	select a value		The name of the site to which this yard belongs.
Yard Name	alphanumeric	50	Yes	A unique name identifying the yard.
Description	alphanumeric	256	Yes	The description of the yard.
Address fields (Street/ Civic #, Street, Suite, City, Postal Code, State/Province)	alphanumeric	40 (street)	Yes	The full address and postal code/zip code of the yard. This information enables the app to determine the latitude and longitude of the facility.
District	alphanumeric	select a value		Name of the district, to which this yard belongs.
Latitude	numeric	10		Geographic coordinates of the yard in degrees, for example 45.483985. You may enter these manually or omit them altogether. If you have specified a full and valid address in the address fields, the app may calculate the coordinates and copy them to these fields automatically.
Longitude	numeric	10		
Contact Name	alphanumeric	40		Name of the contact person at the yard.

Data Item	Data Type	Field size	Mandatory	Notes
Phone	numeric	25		Phone number of the yard, no impact on the functionality of FleetLink Mobile WasteApp.
Email	alphanumeric	50		Email address of the yard, no impact on the functionality of FleetLink Mobile WasteApp.

Map Controls - Yards

- Left-click and drag the yard icon to reposition it and update the yard's coordinates.
- Scroll the mouse wheel up/down to control the zoom level.
- Select the **Satellite view** checkbox to display the satellite view on the map.

States/Provinces

States and provinces reference data specifies the U.S. states and/or Canadian provinces serviced by your business.

State/Provinces Data

Data Item	Data Type	Field size	Mandatory	Notes
Code	alphabetic	2 Must not contain spaces.	Yes	The official abbreviation for the state or province, for example, OH, or ON. These values are already hard-coded in the app.
Name	alphanumeric	40	Yes	The name of the state or province, for example, Ohio, or Ontario.

Carts/Containers

Cart/Container Types

Cart and container reference data specifies the types of waste receptacles used by your business, and hence, the cart/container types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface. Common examples include blue boxes, totes, yard bins, and compactors. Additionally, the cart and container reference data specifies container colors and manufacturers. All this data is displayed under the respective tabs on the **Cart/Container Types** page.

Cart/Container Types Tab

Container types are descriptive categories that can be associated with containers, you can enter a code and description when adding a new container. The programmed container types can be associated with service types. The association of container type with container enables the system to group containers together, mostly for service type reasons and, ultimately, billing reasons.

Adding Cart/Container Types

To manually create a new container type:

1. From the main menu go to **Reference Data** > **Carts/Containers** > **Cart/Container Types**. The **Cart/Container Types** page is displayed.

2. Click **Add**, and then enter the name and description in the displayed **Add Container Type** form. For example, you can enter **GBAG** for a name, and **Garbage Bag** for description of a plastic garbage bag.

3. Click **Save**. The new container type is added to the system and a confirmation message is displayed.

Cart/Container Types Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	20 Must not contain spaces	Yes	A unique identifier indicating the type of container.
Description	alphanumeric	128	Yes	A meaningful description for the container.

Cart/Container Colors Tab

Container colors enable you to associate a color to the container to be more descriptive. The color is pushed through the assignment message to provide a more descriptive indication to the driver about the container being serviced.

Cart/Container Colors Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	40	Yes	A unique identifier for the container color.
Description	alphanumeric	128		A meaningful description for the container color.

Cart/Container Manufacturers Tab

The manufacturer label is simply an identification field. It's not pushed to other apps. There is no functionality tied to the manufacturer; it is simply a field that contains a manufacturer code and description for a specific container.

Cart/Container Manufacturers Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	30	Yes	A unique identifier for the manufacturer.
Description	alphanumeric	128		Full manufacturing company name or description.

Volume/Weight Units

Route Management has the following pre-programmed metric unit types:

- Cubic Meters
- Kilogram
- Kilometer
- Liter
- Meter
- Ton.

The app uses the metric system as its base; non-metric units are converted to metric. This page enables you to add a different unit of measurement corresponding to its equivalent metric unit type.

Volume/Weight Units Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	25 Must not contain spaces.	Yes	A unique identifier for the unit of measurement, for example, US-Ton.
Equivalent Metric Value	numeric	10	Yes	A numeric value, which, when multiplied by metric unit type, yields the equivalent weight/volume in the metric system.
Metric Unit Type	alphanumeric	select from list	Yes	Metric unit used to specify the equivalent weight/volume using the metric system.
Measurement type	alphanumeric	select from list	Yes	Specifies whether units are imperial or metric.

Customers

Customer Classes

Customer classes reference data is provided as an optional data element for integration with a company's billing system.

You can associate a customer class with a customer via the **Edit Customer** screen.

Customer Classes Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	4 Must not contain spaces.	Yes	A unique identifier for the customer class.
Description	alphanumeric	50	Yes	A meaningful description of the customer class, for example, municipal government.

Customer Prefixes

When adding new customers to Route Management, a unique ID is generated for each new customer. A customer prefix is any alphanumeric string that is meaningful to your business for purposes of sorting or categorization of customers.

For example, when you add a new customer to a division of your business named *Beacon Hill*, you may want to add a customer prefix called *BH*. This will enable you to generate a unique system ID resembling *BHnnnnnnnnn*, where *nnnnnnnnnn* is the numeric part of the unique customer ID.

Customer prefixes are used to make customers linkable/groupable, and may be used in the future for billing purposes.

Customer Prefixes Data

Data Item	Data Type	Field size	Mandatory	Notes
Customer Prefix	alphanumeric	4 Must not contain spaces.	Yes	A unique identifier for the customer prefix.
Description	alphanumeric	128		A meaningful description for the customer prefix.

Customer Cases

Case Actions

This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation. Case actions are the actions that can be taken to process or resolve a customer case.

These actions represent the available menu options you will see on the **Action** drop-down list when editing or adding a customer case.

Case Actions Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the case action.
Description	alphanumeric	128		A meaningful description for the case action.

Case Reasons

This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation.

Case reasons represent predefined descriptions of the case that the Customer Service Representative will be able to select from a drop-down menu when entering or editing a case.

Case Reasons Data

Data Item	Data Type	Field size	Mandatory	Notes
Description	alphanumeric	128 Must not contain spaces.	Yes	A meaningful description for the case reason. Must be a unique identifier.

Case Source Types

This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation. Customer cases will usually be initiated by a communication from the customer—via various means, such as email, telephone, web interface, and so on—to register a complaint or request a service customer cases may also, on occasion, originate with a driver. For example, a driver may notice that a customer's bin is missing a wheel or is damaged to the point that it cannot be lifted with a side-loader. The driver may then relay this information to the back office so that a customer case may be created.

Case Source Types Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the case source type.
Description	alphanumeric	128		A meaningful description for the case source type.

Case Statuses

This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation. Case status indicates the current state of a customer case within the CSR's work flow.

Three statuses are predefined in the CSR Dashboard:

- Open - Unassigned
- Open - Assigned
- Closed

Case Statuses Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	10 Must not contain spaces.	Yes	A a unique identifier for the case status.
Description	alphanumeric	50		A meaningful description for the case status.
Resolved	boolean			Select this checkbox if the case has been resolved.

Case Types

This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation.

Case types indicate the nature of the customer case, as different types will determine the course(s) of action and may be accorded different priorities.

Case Types Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the case type.
Description	alphanumeric	128		A meaningful description for the case type.

Rates, Services, Work Flows

Rates

Rates define the billing rates associated with different types of services, for example, regular service, extras, extra weight, and no service. After you have defined rate types, you can apply them when defining services. You can view, add, edit and delete both the rates in effect (displayed under the **Active** tab) and the expired rates (displayed under the **Expired** tab).

Adding Rates

To create a new rate:

1. From the main menu, go to **Reference Data** > **Rates, Services, Workflows** > **Rates**. The **Rates** page is displayed.

2. If you don't see an existing rate that fits the service you are creating, click **Add**. The **Add Rate** form is displayed.

3. Enter/select the following values to define the rate:

   - Rate code and a brief description
   - Line of business (LOB) and district, if applicable.

4. Enter/select the following values to define this rate's pricing options:

   - To limit this rate's applicability to a certain container selection, select the **Container Dependency** checkbox, and then select the type and size of containers. Otherwise, leave this checkbox deselected.
   - To limit the time frame to which this rate will apply, select the desired start and end date.
   - Enter the costs that will be associated with this rate in the **Rates** section, as needed.

> ℹ **NOTE: Rate attributes**
>
> If you are creating a rate for an on-demand service, make sure that line of business, district, container type and size correspond to those used for the new on-demand service.

5. Click **Save Rate**. A confirmation message is displayed, and the new rate entry is added to the list.

Rates Data

Data Item	Data Type	Field size	Mandatory	Notes
Rate Code	alphanumeric	20	Yes	A unique identifier of the rate type.
Description	alphanumeric	128	Yes	A meaningful description for the rate type.
LOB	alphanumeric	select from list		The line of business to which this rate applies.
District	alphanumeric	select from list		The district where this rate will be used.
Basic Rate	double		Yes	Regular service rate.
Extra Pickup	double		Yes	Rate for servicing an extra.
Extra Weight	double		Yes	Rate for extra weight picked up.
Refused Service	double		Yes	Rate charged when unable to service the location.
Rate/Weight Unit	double			Rate per unit of weight.

Data Item	Data Type	Field size	Mandatory	Notes
Cancel Cost	double			Rate for customer cancellation of service request.
Container Dependency	boolean			Select this checkbox if this rate is associated with a specific container type.
Type	alphanumeric	select from list	Yes	
Size	numeric		Yes	The size of container in specified units.
	alphanumeric	select from list	Yes	The measurement unit for container size.
Start Date	numeric			The date this rate takes effect in the yyyy-mm-dd format.
End Date	numeric			The date this rate expires in the yyyy-mm-dd format.

Services

> **ℹ NOTE: When to define the services reference data**
>
> Services have dependencies on several other reference data categories. Therefore, adding a service is a step that is best left until after you have defined all other reference data.

Services reference data specifies the types of waste management services provided by your company and, hence, the service types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface.

Adding Services

To create a new service:

1. From the main menu, go to **Reference Data** > **Rates, Services, Workflows** > **Services**. The **Services** page is displayed.

2. Click **Add**. The **Add Service Type** form is displayed.

3. Enter/select the following values in the corresponding fields to define this service:
   - Service code and description

- Sequence, if necessary
- Line of business, material, and dispatch type
- Container attributes: minimum weight and weight limit, as well as the weight measurement unit for both
- Service frequency appropriate for the type of service you are creating. If the desired service frequency is not on the list, create it by following the ***Adding Service Frequencies*** procedure.

4. Select the following checkboxes under **Service Cycles** as needed.
    - **On-Demand**, if you are creating an on-demand service.
    - **Extra**, if you are creating a service for extras. **NOTE**: If you are creating an Extra service, select only this checkbox and not any others.
    - **Recurring**, if you are creating a recurring service. If you selected this checkbox, select the default workflow from the list.

5. Click **Save Changes**. New sections are displayed in the **Supported Containers & Rates** portion of the page.

6. Go to the **Supported Containers** section and click **Add Container**. The **Add Container Type** window is displayed.

7. Select the checkbox for the desired container type and size, then click **Save**. The container is added to the list. **NOTE**: You can select as many container checkboxes as needed.

8. Go to the **Workflows & Rates** section and click **Add Work Flow & Rate**. The **Add Workflows and Rates** window is displayed.

9. Find the desired workflow on the left-hand side section and click to select it. **NOTE**: You can select as many workflows as needed.

10. Find the desired rate on the right-hand side rates table and click it to associate this rate with the workflow(s) you selected. If you don't see the rate you need, you can create a new one. To do so, click the **Create New Rate** button, then follow the relevant steps in the ***Adding Rates*** procedure.

11. Click **Save**. The new service is created.

Services Data

Data Item	Data Type	Field size	Mandatory	Notes
Service Code	alphanumeric	10	Yes	A unique identifier of the service type.
Description	alphanumeric	50	Yes	A meaningful description for the service.
Dispatch type	alphanumeric	Residential, Front-load, Roll-off		Determines the stop type (and, hence, workflow and truck type) for the assignment.

Data Item	Data Type	Field size	Mandatory	Notes
Sequence	numeric	5 digits		The order in which the service appears in the FleetLink Mobile WasteApp user interface.
LOB	alphanumeric	select from list	Yes	The line of business being serviced as defined for the line of business reference data.
Material	alphanumeric	select from list	Yes	The waste material to be collected as defined for the material types reference data.
Minimum weight	numeric			The minimum lift weight in specified measurement units; it is used for calculation of billing charges for roll-off service.
	alphanumeric	select from list		The measurement unit for minimum weight.
Weight limit	numeric		Yes	Weight capacity of the container in specified measurement units.
	alphanumeric	select from list	Yes	The measurement unit for weight limit.
frequency	alphanumeric	select from list	Yes	The regularity with which the service is provided, e.g., weekly.
Service Cycles				
On-demand	boolean		Yes	This service type can be provisioned by the driver as an on-demand.
Extra	boolean		Yes	This service type can be provisioned by the driver as an extra.
Recurring	boolean		Yes	This service type is a recurring, regularly scheduled service, for example, weekly or bi-weekly. If this checkbox is selected, you must select the default recurring workflow.
Default recurring workflow	alphanumeric		Yes	A default work flow that will be used with this recurring service, as defined for the work flows reference data.

Service Frequency

Service frequency reference data specifies the frequency with which services are rendered at a customer location, for example, daily, twice a week, on-demand.

Adding Service Frequencies

To add a new service frequency:

1. From the main menu, go to **Reference Data** > **Rates, Services, Work Flows** > **Service Frequency**. The **Service Frequency** page is displayed.

2. Click **Add**. The **Add Service Frequency** form is displayed.

3. Enter/select the following values to define this service frequency:

   • The name and brief description

   > **♡ TIP: Name and description**
   >
   > If you are creating a service frequency for an on-demand service, make sure to use **on-demand** in both the name and description of this frequency. This will help you identify this service in later steps.

   • Select the **On-Demand Capable** checkbox if you are creating a service frequency for an on-demand service.
   • Select the desired frequency, and then select the interval and week of the month values, as applicable.

4. Click **Save**. A confirmation message is displayed, and the new service frequency is added to the list.

Service Frequency Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier indicating the frequency with which the service is performed.
Description	alphanumeric	120	Yes	A meaningful description for the frequency.

Data Item	Data Type	Field size	Mandatory	Notes
On-Demand	boolean		Yes	Select this checkbox if this is on-demand service.
frequency				
Daily				Daily service.
Weekly	alphanumeric	select a value	Yes	Weekly service.
Monthly				Monthly service.
Interval (Every)	alphanumeric	select a value	Yes	Displayed if the **Weekly** or **Monthly** service frequency is selected. Select the number of weeks (from1 to 52) or months (from 1 to 12) to define an interval for this service.
Occurrence (Times per)	alphanumeric	select a value	Yes	Displayed if the **Weekly** service frequency is selected. Select the number of times per week (from1 to 7) this service will be delivered.
Week of the Month	alphanumeric	select a value	Yes	Displayed if the **Monthly** service frequency is selected. Select the number (from1st to Last) to define during which week of the month this service will be delivered.

Work Flows

Work flows reference data refers to the sequence of actions performed in order to render a service.

Rather than creating work flows from scratch, Route Management allows you to clone the existing work flow and save it with the new selected data and unique identifier in the system. To do so, click the clone icon 🔲 beside the work flow that has the desired value in the **Workflow** column, then fill out the displayed form.

When editing an existing work flow, the only editable values are: **Customer Description** and **Material**.

Work Flows Data

Data Item	Data Type	Field size	Mandatory	Notes
Workflow	alphanumeric	20	Yes	An identifier for the work flow type in the database. **NOTE**: This is a non-editable value.

Data Item	Data Type	Field size	Mandatory	Notes
Operating Department	alphanumeric	select from list		Operating department as defined for the work flow group reference data.
Dispatch type	alphanumeric	select from list	Yes	Dispatch type as defined for the line of business reference data.
Description	alphanumeric	256		Description for this work flow.
Customer Description	alphanumeric	256	Yes	Description of the work flow used by customer.
Material	alphanumeric	select from list		Material as defined for the material types reference data.
Unique Id	alphanumeric	5	Yes	A unique identifier of this workflow in the system.

General Ledger Accounts

General ledger account reference data corresponds to customer accounts added to the system for the purpose of assigning customer-specific rates when subscribing customer locations to services.

General Ledger Accounts Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	40	Yes	A unique identifier for the general ledger account.
Description	alphanumeric	128	Yes	Description for the general ledger account.

Routes

Route Frequencies

Route frequencies reference data defines the attributes of different frequencies with which your routes are run. You associate a frequency with a route via the **Edit Route** screen.

Route Frequencies Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	40 Must not contain spaces.	Yes	Defines when a route is run. Choose a meaningful (unique) identifier, for example, EveryFriday, or DailyWeekDay.
Description	alphanumeric	128	Yes	A meaningful description for the route frequency.
frequency	alphanumeric	select a value	Yes	Select the desired value from available options: **Monthly**, **Weekly**, **Even**, **Odd**, **Daily**. • If you select **Monthly** or **Weekly**, the corresponding **Interval (Every)** drop-down list becomes available. • If you select **Weekly**, the **Day Of Week** options become available.
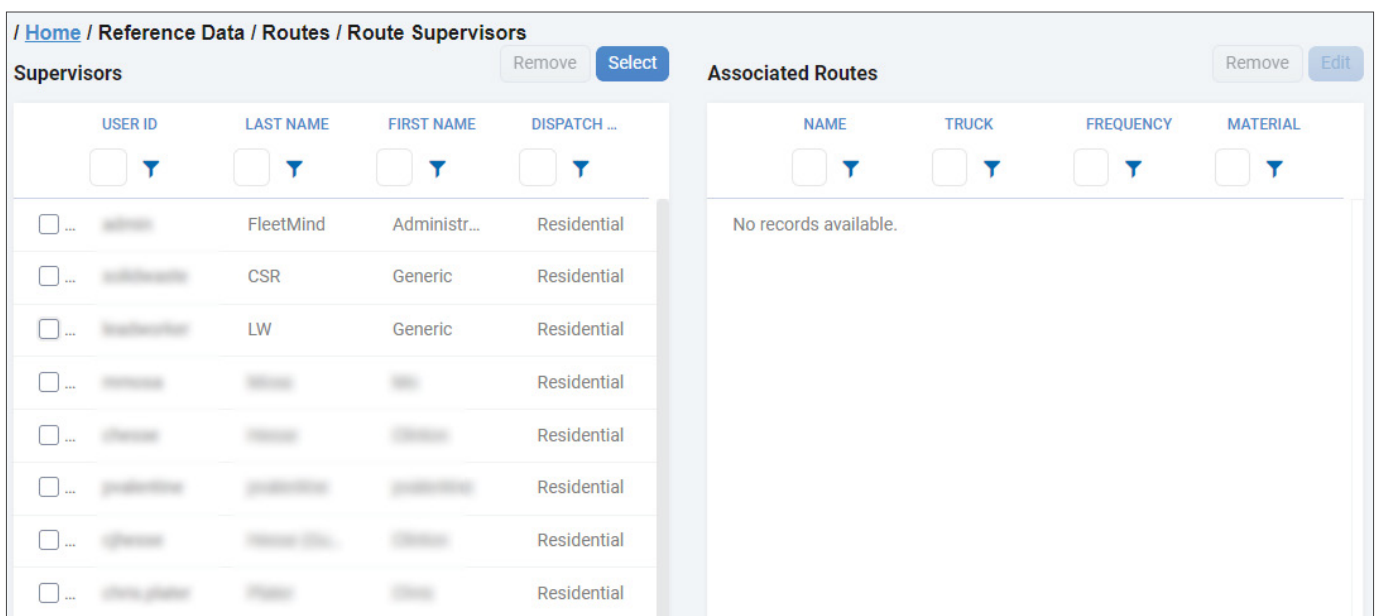
Data Item	Data Type	Field size	Mandatory	Notes
Interval (Every)	alphanumeric	select from list	Yes	Select the number of months or weeks from the list. The selected value represents the interval with which the route will run. For example, if for a weekly frequency you select an 8 weeks interval, then the route will run once every 8 weeks.
Day Of Week	alphanumeric	select a value	Yes	Select the day of the week for weekly route frequency to define on which day of the week the route will run.

Route Supervisors

Route supervisors reference data identifies users tasked with supervising routes and defines which routes are assigned to each supervisor.

Adding Route Supervisors

1. Go to the side bar and select the **Route Supervisors** option from the **Routes** menu under **Reference Data**. The **Route Supervisors** page is displayed. The list of users tasked with supervising routes is displayed in the **Supervisors** panel.

2. Click the **Select** button above the **Supervisors** panel. The **Select Supervisors** window is displayed.

3. Select the checkboxes beside names of users that you want to add to the list of supervisors, then click **Add**. The selected users are added to the list.

Assigning Routes to Supervisors

1. Make sure you are on the **Route Supervisors** page, then select the checkbox beside the name of the supervisor to whom you want to assign routes. The list of routes already assigned to this supervisor is displayed on the right-hand side panel.

2. Click the **Edit** button above the **Associated Routes** panel. The **Edit Supervisor** window is displayed.

3. Select the desired radio button for the service type this supervisor will be dispatching most often.

4. Select the checkboxes beside all routes you want to assign to this supervisor.

5. Click **Save**. The routes are added to the list on the right-hand side panel.

Removing Supervisors or Routes

Make sure you are on the **Route Supervisors** page, then perform one of the following tasks:

To remove...	Do this...
Supervisors	• Select the checkboxes beside names of users on the **Supervisors** panel, then click **Remove** above that panel. The supervisors are removed.

To remove...	Do this...
Routes	1. Select the user name of interest on the **Supervisors** panel. The list of routes assigned to the user is displayed.
	2. Select the checkboxes beside the routes on the **Associated Routes** panel, then click **Remove** above that panel. The routes are removed.

Vehicles/Drivers

Drivers

Drivers reference data defines the personnel authorized to drive the vehicles in your fleet. Changes to drivers in this page are reflected in the drivers master list, and must conform to the waste messaging API.

You can add, edit, and delete any of the drivers displayed under the **Active** tab. You can edit or delete the drivers displayed under the **Inactive** tab.

Changing Driver Status

To change a driver's status:

1. Select the **Active** or **Inactive** tab as needed.
2. Click the edit icon [🖊] beside the driver whose status you want to change.
3. Select or deselect the **Active** checkbox.
4. Click **Save**. The driver's name is moved from the **Active** to **Inactive** tab or vice versa.

Drivers Data

Data Item	Data Type	Field size	Mandatory	Notes
Code	alphanumeric	20	Yes	The driver's employee number. In the unlikely event that your organization does not assign employee numbers, you must create and assign one for each driver for purposes of the app.
License Id	alphanumeric	30		The unique identification number for the driver's permit.

Data Item	Data Type	Field size	Mandatory	Notes
License Class	alphanumeric	30		The code indicating the type(s) of vehicles the driver is permitted to operate, for example, Class 3 With Air.
First Name	alphanumeric	30	Yes	Driver's first name.
Last Name	alphanumeric	30		Driver's last name.
Title	alphanumeric	30		Driver title, e.g., Senior Driver.
Driver's Email	alphanumeric	60		Email address associated with the driver's code or employee number.
Hourly Cost	numeric	8		Driver's rate.
Notes	alphanumeric	256		Optional notes field.
Active	boolean		Yes	Select or deselect this checkbox to change this driver's status.
Crew member	boolean			Select or deselect this checkbox to indicate whether driver is a regular crew member.

Trucks

Trucks reference data defines the vehicles used on your routes. Trucks in Route Management and Command Center are created independently; they need to be created in both apps.

Residential routes are server-resource intensive. If the system has been set up to send 20 residential routes every morning to trucks that don't exist, valuable route generation time will be wasted.

The only data that is functionally important to the system is the name of the truck. All other fields are just descriptive.

Trucks Data

Data Item	Data Type	Field size	Mandatory	Notes
Truck	alphanumeric	10	Yes	Each of the vehicles in your fleet must be assigned a unique identifier. This identifier can consist of numbers, letters, or a combination of the two.
Truck Type	alphanumeric	select from list		Must correspond to a truck type reference data element.
Container Limit	alphanumeric	N/A		The maximum number of containers a truck can accommodate when delivering containers to customers. **NOTE**: This field is activate only when truck type is set to cart delivery.
Volume Capacity (Cubic Meters)	numeric	4		The capacity of the truck's collection container in cubic meters.
Tonnage Capacity (Tons)	numeric	4		The capacity of the truck's collection container in tons.
Description	alphanumeric	40		Enter a description for the vehicle. Doing so will make it more readily identifiable and meaningful to users.

Data Item	Data Type	Field size	Mandatory	Notes
Comments	alphanumeric	256		Additional comments regarding the vehicle
Container Type 1	alphanumeric	select from list		First type of container this truck is able to service.
Container Type 2	alphanumeric	select from list		Second type of container this truck is able to service.
Container Type 3	alphanumeric	select from list		Third type of container this truck is able to service.
Unit of Measurement	alphanumeric	select from list		The system of measurement (metric or imperial) used in your organization.

Truck Types

Trucks reference data defines the purposes of the vehicles used on your routes. Truck types are hard-coded in the Route Management. They can be added, deleted, and edited only by authorized users.

Truck Types Data

Data Item	Data Type	Field size	Mandatory	Notes
Name	alphanumeric	4 Must not contain spaces.	Yes	A unique identifier for the truck type.
Description	alphanumeric	50	Yes	A meaningful description for the truck type.

Work Group

A work group is a collection of vehicles working as a team to complete work assigned to them. From the perspective of Route Management, a work group can be thought of as an identifier that can be set as a destination of a route.

Work Group Concepts

- Operations or dispatch personnel create a work group as a reference data entity. They can then populate that work group by selecting trucks already defined in Route Management and assigning them to the work group.
- A work group mimics the behavior of a truck with respect to confirmations, alarms and disposals. It is a "Virtual Truck".

- As stops get confirmed (or driven-by, or stopped-by), the messages are communicated and the status of the routes is updated, specifying which truck communicated the information. The status of the Super Route is a "view" of the status of each route comprising it.

- The dispatcher may need to reconfigure the work group if a truck fails to start in the morning or breaks down during the day. At that point, the dispatcher must add one or more trucks to the work group. This addition will prompt the system to immediately dispatch the Super Route associated with the work group to the newly added truck(s).

- At the end of the day, the dispatcher may need to reassign work that has not been completed. In this case, the dispatcher may create a temporary route.

- A temporary route can be dispatched to a work group. In this case, confirmations from all trucks in the work group will update the same route. If more than one confirmation, driven-by or stopped-by is received, the first one will count, and all others will be ignored.

- A regular route can also be dispatched to a work group. The behavior will be the same as that described for a temporary route.

- When work groups are viewed in the FleetLink Reports app, each truck will appear within the work group route.

- In FleetLink Map, both the individual trucks and the work groups can be viewed and tracked. Clicking on the stops will display the usual information, including the truck that performed the work.

Rules

- The work group name must be unique.
- A vehicle can be a member of no more than one work group at a time.
- If a vehicle has been added to a work group, this vehicle cannot be the single destination of a route. All existing routes associated with this vehicle will be removed once it is added to a work group.
- Cancels or RTCs will not be sent to vehicles for routes that have a work group as a destination
- If a vehicle has been added to a work group after the route has been dispatched, when you manually re-dispatch the route, it will be sent only to the newly added vehicle, in order to minimize unnecessary traffic on the system.

Adding a Work Group

1. Go to the sidebar and select the **Work Group** option from the **Vehicles/Drivers** menu under **Reference Data**.
2. Click **Add**.
3. Enter a name and description in their respective text fields. **Name** is a mandatory field, and must be a unique identifier.
4. Click **Save Work Group**. The page is refreshed, and the **List of Vehicle** and **Assigned Routes** panels are displayed.
5. To add trucks to the work group, click the **Assign Vehicle** button. The **Assigning New Truck** pop-up is displayed.
6. Click the plus sign icons beside the trucks that you want to add to the group, then click the cross icon to close the pop-up. The selected trucks are added to the **List of Vehicle** panel.
7. Click **Save Work Group** again when done. The new work group is added to the list of work groups.

Associating a Work Group with a Route

You can either create a new route for your work group, or associate the work group with an existing route. To do so, follow the relevant steps for adding new/editing existing route but select a work group instead of truck. See **Adding Routes and Stops Manually** or **Editing Routes** procedures.

Work Group Data

Data Item	Data Type	Max. Field size	Mandatory	Notes
Name	alphanumeric	12	Yes	A unique identifier for the work group.
Description	alphanumeric	128		A meaningful description for the work group.

Data Item	Data Type	Max. Field size	Mandatory	Notes
Truck Type	alphanumeric	select from list	Yes	Truck type as defined for the truck type reference data.

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Appendix 2. Combined and Geozone Data

In this chapter

Importing Combined Data

About Combined Data

The Route Management app provides tools for importing and exporting combined data.

Combined data is a database of records, where each record combines all data for one container: the container itself, the customer location with which the container is associated, and details about that association.

There are two different sets of combined data that can be imported into Route Management:

- Routes and stops data(**Routes** menu)
- Container data (**Inventory** menu)

File content and format for these two sets of data are nearly identical; what differentiates them is that for route stops, each record has additional fields appended to the end to accommodate route data for up to 20 routes.

> ⓘ **NOTE: Before importing combined data**
>
> Any data item in the combined data that corresponds to a reference data item must first be defined in the Route Management's reference data prior to import, or errors will be generated stating what is missing and needs to be added.
>
> Any missing reference data will result in entries being rejected and gaps in routes.
>
> For more information about reference data, see ***Appendix 1. Reference Data***.

File Formats

When importing combined data, you must ensure that the format of your CSV file adheres to specific criteria as follows:

- The spelling must be an exact match.
- The maximum field size must not be exceeded.
- No entry may include commas. **NOTE**: Commas are accepted in **Notes** fields, but could lead to errors when editing the export file in Excel.

To minimize the potential for error when importing combined data, you can go to the **Routes** > **Import Routes & Stops** page or **Inventory** > **Import Containers** page and do the following:

- Consult the tables available on these pages to determine the maximum length and acceptable content for the individual fields of your imported file
- Download a blank sample of the CSV file and populate it with your data. To do so, click either the **Download Sample** button or the **CSV Sample** button respectively, then follow system prompts to save the file in the preferred location on your PC.

Routes and Stops Data

For instructions on how to import the route data, refer to the ***Importing Routes and Stops*** procedure. For detailed information on routes and stops data, refer to the following table.

NOTE: The 📊 icon denotes that the data item is reference data.

No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
1	A	Customer Code	numeric	60	Yes	0 through 9. No special characters, e.g., /, *, #, etc.

No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
2	B	Line of Business	alphanumeric	20	Yes	Case-sensitive; must match a corresponding Reference Data element. Valid values for this field: • CDLV • COMM • IND • RESI • STRS
3	C	Business Name	alphanumeric	512		Name of business, where applicable.
4	D	Customer Last Name	alphanumeric	512		Last name of customer
5	E	Customer First name	alphanumeric	512		First name of customer.
6	F	Office Phone	alphanumeric	24		Customer's office telephone number.
7	G	Home Phone	alphanumeric	24		Customer's home telephone number.
8	H	Fax	alphanumeric	24		Customer's fax number.
9	I	Email	alphanumeric	60		• a - z • A - Z • 0 - 9 • @ ("at" character) • . (period)
10	J	Customer Active/Inactive	Flag/ alphanumeric	8		Valid values for this field: • Active/Inactive • Y/N • 1/0 • true/false
11	K	Customer Comments	alphanumeric	256		Comments for customer data.
12	L	Customer Class	alphanumeric	4	Yes	Valid values for this field: • 1ddd • BSNS • COMM • FGOV • MGOV • RESI • SCHL • SGOV
13	M	Billable	alphanumeric (Y or N)	8		Determines whether customer address is billing address.

No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
14	N	Customer Civic Number	alphanumeric	12	Yes	Civic number part of address.
15	O	Customer Street	alphanumeric	512		Street name part of address.
16	P	Customer Suite	alphanumeric	13		Apartment/suite part of address.
17	Q	Customer District	alphanumeric	40		District part of address.
18	R	Customer City	alphanumeric	64		City part of address.
19 📊	S	Customer State	alphanumeric	2		Case-sensitive; must match a corresponding Reference Data element.
20	T	Customer Postal Code	alphanumeric	12		Postal/ZIP code part of address.
21	U	Customer SA_ID	alphanumeric	32		
22	V	Customer SP_ID	alphanumeric	32		
23	W	Location Postal Code	alphanumeric	12		Postal/ZIP code part of location address.
24	X	Location Street	alphanumeric	512		Street name part of location address.
25	Y	Location Suite	alphanumeric	13		Apartment/suite part of location address.
26	Z	Location District	alphanumeric	40		District part of location address.
27	AA	Location City	alphanumeric	64		City part of location address.
28	AB	Location State	alphanumeric	2		State part of location address. Case-sensitive; must match a corresponding State Reference Data element.
29	AC	Location Civic Number	alphanumeric	12		Civic number part of location address.
30	AD	Location Name		512		Optional description for the location.
31 📊	AE	Building Categories	alphanumeric	40	Yes	Case-sensitive.
32	AF	Contact Name	alphanumeric	512		Customer contact name.
33	AG	Contact Phone	alphanumeric	25		Customer contact phone number.
34	AH	Location Latitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)
35	AI	Location Longitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)

No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
36	AJ	Location Code	alphanumeric	64		Unique identifier for a location. **NOTE**: If no value is provided, the system will generate a unique code during the loading process. Valid values for this field: • 0-9 • No special characters.
37	AK	GeoID	alphanumeric	36		Location GeoId
38	AL	Location Active	alphanumeric	8	Yes	Location activation status. Valid values for this field: • Active/Inactive • Y/N • 1/0 • true/false
39	AM	Serial number	alphanumeric	20	Yes	Container serial number.
40	AN	RFID	alphanumeric	64		Container RFID.
41	AO	Capacity	numeric	50	Yes	Used in conjunction with Volume/Weight units.
42	AP	Capacity Units	alphanumeric	25	Yes	Case-sensitive.
43	AQ	Color	alphanumeric	40	Yes	Case-sensitive.
44	AR	Container Type	alphanumeric	20	Yes	Case-sensitive.
45	AS	Container Active/Inactive	Flag/ alphanumeric	8		Valid values for this field: • Active/Inactive • Y/N • 1/0 • true/false
46	AT	Container Comments	alphanumeric	256		Notes added by dispatch or back-office.
47	AU	Manufacturer	alphanumeric	30		Case-sensitive.
48	AV	Warranty Start Date	numeric	30		Valid value format for this field: • mm-dd-yyyy (05-26-2000) • yyyy/mm/dd (2000/05/26) • mm/dd/yy (05/26/00) • mm-dd-yy (05-26-00) • mm/dd/yyyy (05/26/2000)

No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
49	AW	Warranty End Date	numeric	30		Valid value format for this field: • mm-dd-yyyy (05-26-2000) • yyyy/mm/dd (2000/05/26) • mm/dd/yy (05/26/00) • mm-dd-yy (05-26-00) • mm/dd/yyyy (05/26/2000)
50	AX	Label	alphanumeric	30		Container label.
51	AY	Container Material	alphanumeric	40		Material handled by container.
52	AZ	Dimension unit	alphanumeric	10		Container dimension units. Valid values for this field: • Gallons • Inch • Kg • Mile • Pound • Yards
53	BA	Is compactor	alphanumeric	8		Specifies whether the container to be serviced is a compactor
54	BB	Width	numeric	11		Container width
55	BC	Height	numeric	11		Container height
56	BD	Length	numeric	11		Container length
57	BE	Latitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)
58	BF	Longitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)
59	BG	Subscription Material	alphanumeric	40	Yes	Case-sensitive; must match a corresponding Reference Data element.
60	BH	Subscription Start date	numeric	30	Yes	Valid value format for this field: • mm-dd-yyyy (05-26-2000) • yyyy/mm/dd (2000/05/26) • mm/dd/yy (05/26/00) • mm-dd-yy (05-26-00) • mm/dd/yyyy (05/26/2000)

No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
61	BI	Subscription End date	numeric	30		Valid value format for this field: • mm-dd-yyyy (05-26-2000) • yyyy/mm/dd (2000/05/26) • mm/dd/yy (05/26/00) • mm-dd-yy (05-26-00) • mm/dd/yyyy (05/26/2000)
62	BJ	Subscription Active/Inactive	Flag/ alphanumeric	8		Valid value format for this field: • Active/Inactive • Y/N • 1/0 • true/false
63	BK	Subscription Comments	alphanumeric	256		Notes for driver.
64	BL	Service Code	alphanumeric	10	Yes	Case-sensitive; must match a corresponding Service Reference Data element.
65	BM	Facility Code	alphanumeric	40		Waste disposal facilities; must match a corresponding Facility Reference Data element.
66	BN	Rate Discount	Decimal (multiplier)	7		Discount field of the Edit Container Association screen.
67	BO	Subscription Code	alphanumeric	60		For integration with company's billing system. Not modifiable on Route Management user interface.
68	BP	Bundle Rate Code	alphanumeric	20		Rate code for use with bundled services.
69	BQ	Assignment Status Code	alphanumeric	4	Yes	Assignment status code. Default value is RD. • RM • TBRM • C • OHLD • PN • RD
70	BR	Shared Association	alphanumeric	10		Specifies whether the container is associated with multiple subscriptions (i.e., shared container).

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No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
71	BS	Is Primary	alphanumeric (Yes/No)	8		In a shared association, this field is mandatory. One subscription must be the primary one. The first subscriber to the service is the primary in the association. Should that subscription be canceled for any reason, the next subscriber in the succession becomes primary.
72	BT	WorkfFow	alphanumeric	280		Workflow for the service provided at location.
73	BU	Target Date	numeric	10		Target date for on-demand stop. Valid value format for this field: • mm-dd-yyyy (05-26-2000) • yyyy/mm/dd (2000/05/26) • mm/dd/yy (05/26/00) • mm-dd-yy (05-26-00) • mm/dd/yyyy (05/26/2000)
74	BV	Driver Note	alphanumeric	1024		Note to driver.
75	BW	Dispatcher Note	alphanumeric	120		Note to dispatcher; not seen by driver.
76	BX	Route name 1 *Route will be created if it does not exist.	alphanumeric	10	Yes	• a - z • A - Z • 0 - 9 To minimize the potential for conflicts in interaction between FleetLink Mobile and back-office systems, special characters such as @, *, #, $, %, &, /, \, ? are not permitted.
77	BY	Sequence for Stop in Route name 1	numeric	5	Yes	0 - 9.
78-113		Route Name 2-20 and Sequence for Stop in Route Name 2-20				Refer to notes in rows 76 and 77.
114	DJ	Route name 20	alphanumeric	10		Refer to notes in row 76
115	DK	Sequence for Stop in Route name 20	numeric	5		Refer to notes in row 77.
116	DL	Route On Demand		10		Route that will service on-demand stops.

No.	Excel Column	Data Item	Data Type	Field Size	Mandatory	Notes
117	DM	Work Order ID	alphanumeric	36		• a - z • A - Z • 0 - 9 To minimize the potential for conflicts in interaction between FleetLink Mobile and back-office systems, special characters such as @, *, #, $, %, &, /, \, ? are not permitted.
118	DN	Target Address	alphanumeric	24		Target address of on-demand stop.
119	DO	Target Longitude	numeric	24		Target longitude of on-demand stop.
120	DP	Target Latitude	numeric	24		Target latitude of on-demand stop.

Container Data

For instructions on how to import the container data, refer to the **_Importing Container Data_** procedure. For detailed information on container data, refer to the following table. **NOTE**: The icon denotes that the data item is reference data.

No.	Excel Column	Data Item	Data Type	Max. Field Size	Mandatory	Notes
1	A	Serial Number	alphanumeric	20		Container serial number.
2	B	RFID	alphanumeric	24		Container RFID.
3	C	Capacity	numeric	8	Yes	Used in conjunction with Volume/Weight units.
4	D	Unit	alphanumeric	10	Yes	Case-sensitive; must match a corresponding reference data element.
5	E	Color	alphanumeric	40	Yes	Case-sensitive; must match a corresponding reference data element.
6	F	Container Type	alphanumeric	20	Yes	Case-sensitive; must match a corresponding reference data element.
7	G	Active	Flag/alphanumeric	8	Yes	Possible values are "Active", "Inactive", "Empty". If omitted, value defaults to "Active".
8	H	Description	alphanumeric	60		Comment; a meaningful description.
9	I	Manufacturer	alphanumeric	30	Yes	Case-sensitive; must match a corresponding reference data element.
10	J	Label	alphanumeric	30		Container label.
11	K	Material	alphanumeric	40		Material handled by container. Must match a Material reference data element.

No.	Excel Column	Data Item	Data Type	Max. Field Size	Mandatory	Notes
12	L	Dimension Unit	alphanumeric	10		Container dimension units. Must match a Units reference data element.
13	M	Is compactor	alphanumeric	8		Specifies whether the container to be serviced is a compactor.
14	N	Width	numeric	8		Container width.
15	O	Height	numeric	8		Container height.
16	P	Length	numeric	8		Container length.
17	Q	Warranty Date	numeric	10		Container warranty date in the YYYY-MM-DD format.

Importing Geozone Data

This section provides details about the geozone data that is to be included in the CSV file that you want to use to import geozones into the system.

For instructions on how to import the geozone data, refer to the **Adding Geozones** procedure.

Important notes about geozone data:

- To import data, each line in the file must define one geozone with its valid associations.
- Geozone names must be unique.
- If a geozone name already exists in the database, it will be updated.
- Duplicate geozone names in the CSV file will be ignored.

Generic Geozone Data

NOTE: The icon denotes that the data item is reference data.

No.	Excel Column	Data Item	Data Type	Max. Field Size	Mandatory	Notes
1	A	WKT Format String	alphanumeric	N/A	Yes	A string of geographical coordinates that defines the boundaries of the geozone's polygon.
2	B	GeoZone name	alphanumeric	10	Yes	The name of this geozone..

Route Geozone Data

NOTE: The icon denotes that the data item is reference data.

No.	Excel Column	Data Item	Data Type	Max. Field Size	Mandatory	Notes
1	A	WKT Format String	alphanumeric	N/A	Yes	A string of geographical coordinates that defines the boundaries of the geozone's polygon.
2	B	GeoZone name	alphanumeric	10	Yes	The name of this geozone..

No.	Excel Column	Data Item	Data Type	Max. Field Size	Mandatory	Notes
3	C	Is hole	Flag/ alphanumeric	8		Valid values for this field: • true/false
4	D	Description	alphanumeric	256		Description of the geozone.
5	E	Color	alphanumeric	10		The color used to highlight the area covered by this geozone.
6	F	Container Type	alphanumeric	20		The type of containers that can be serviced inside this geozone.
7	G	Route	alphanumeric	10		The route the geozone is associated with.
8	H	Truck	alphanumeric	12		The truck that will service the geozone.
9	I	Work Group	alphanumeric	12		The work group associated with servicing the geozone if truck data cannot be used.
10	J	Frequency	alphanumeric	40		Route frequency that will apply to the geozone.

Appendix 3. Miscellaneous

In this chapter

App Settings

You can view and modify various settings that control how the application is displayed and which defaults are being used.

To modify the applications settings:

1. Go to the main menu and select the **Application Settings** option from the **Help** drop-down list. The page with available settings is displayed. For descriptions of each setting, refer to the table that follows.

2. Makes the desired changes, and then perform one of the following tasks:

To...	Do this...
Save the changes you made	• Click **Save**.
Reset the changes to previously entered values	• Click **Reset**.
Reset all values to defaults	• Click **Reset to default**.

Setting Descriptions

Setting	Description	
pictureUrlBase	The URL for images used in the app. Must be the same as the images.url setting in the VDI. The images folder where the image files are archived should be accessible via a URL.	
telogisGeobaseUrl	The URL for the geostream server. This IP address should be used as opposed to 127.0.0.1 or local host in the url. Telogis 3.9.1 is the minimum required version to run Service Centric routesystem (2013-09-23). This minimum requirement may change as Telogis releases fixes.	
mailServer	Mail server address.	
country	Country used in Telogis app.	
city	City used in Telogis app.	
defaultCaseManagementFromAddr	Email address used to send an email in case management.	
defaultMapLatLon	The coordinates for the default location the map will open whenever a map that has no geo-located content is opened.	
defaultCustomerId	Default customer ID.	
defaultSessionDuration	Default session duration in minutes	
showContractInfo	A checkbox used to enable or disable the display of contract information.	
billingType	Billing integration type.	
bundledRateSupport	A checkbox used to enable or disable the support for bundled rates.	
unitOfMeasure	Specifies the default unit of measurement for distances traveled.	
showGraffiti	A checkbox used to enable or disable the display of graffiti-related user interface elements.	
rmsUrl	Route Management URL.	
rmsWebServicesUrl	Route Management web services URL.	
PlatformWebServices	pwsBaseUrl	Location of platform web services (PWS).
addressVerificationUrl	• A checkbox used to enable or disable the address verification web service. • A text field that contains the address of verification web service.	
disable.automatic.dispatch	A checkbox used to disable the automatic dispatch functionality. When checked, the routes will not be automatically dispatched.	

Setting	Description	
Route generator scheduled time	route.generator.schedule.time	Time to run the route generator (in military time).
	route.generator.next.day.start.time	Time that the next day starts for the Route Generator (in military time).
showWorkZone	A checkbox used to enable or disable the display of user interface elements related to street sweeper routes (Work Zones).	

PDM Message Types

PDM messages are exchanged between the FleetLink back-office software and on-board computers installed on trucks. These messages may be displayed on some pages in Route Management, for example, on the **Close Route** page.

PDM Type	Description
LON	Log on
UML	Update master lists
RTS	Route select
LOF	Log off
ASN	Assign call
TXA	"Assign call" transport acknowledgment
CAN	Cancel call
RTE	Route file (downstream)
RTC	Route cancellation (downstream)
RTD	Route completed
PRN	Progress notification
CON	Confirm call
CAL	Call-in
NCC	Non-customer correlated
DSP	Disposal
DAC	Driver activity
MDN	Test message (downstream)
MUP	Text message (upstream)
RVP	Request vehicle position
CVP	Current vehicle position
RTA	Real-time alarm
MRV	Maintenance reports per vehicle
MRR	Maintenance reports per route

Standard Activity Codes

Activity codes represent the actions a driver can take when servicing a call. The completion codes associated with these activities are customer-specific and fully customizable. They must be configured using your back-office system.

Prefix meanings: R=Residential, C=Commercial, I=Industrial.

Activity Code	Description
RCOM	Completed
RNOT	Not Out
RMIS	Misplaced
RCTM	Contaminated
RDMG	Damaged
RUSS	Unsafe Site
RNOA	No Access
RNSV	No Service
CCOM	Completed
CBRT	Blocked Retry
CBRR	Blocked Reroute
CCTM	Contaminated
CORT	Overloaded Retry
CORR	Overloaded Reroute
CCOV	Carried Over
CUSS	Unsafe Site
CNAS	No Access to Site
CNSV	No Service
CTIM	Waiting at Site
ICOM	Completed
IBRR	Blocked Reroute
IEMP	Empty
ISND	Suspended No Disp
ISWD	Suspended with Disp
ISWP	Swapped
IDRC	Dump Return Cont
INAS	No Access to Site
INSV	No Service
ITIM	Waiting at Site

Stops Service Subscription Statuses

Stops service subscription status information may appear on various pages in Route Management as well as other back office apps and reflects the most recent status of each stop.

Confirmation status	Description
C	Executed
PN	Pending (already sent to mobile)
RD	Ready to be sent to mobile
MISS	Missed
OHLD	On hold
SWCH	Service switched
WTNG	Waiting on bundle rate transformation to be confirmed
SEC	Secondary
YRD	Back in yard

Generating Reports

While the majority of reports are normally generated in the FleetLink Reports app, you can use Route Management for generating the following route-specific reports as well:

- Roll-off revenue and disposal charges
- Billing charges
- Prospects

Generating and Exporting the Roll-Off Revenue and Disposal Charges Reports

The roll-off revenue and disposal charges reports track the history of roll-off revenue and disposal costs per material for each disposal facility.

To generate a roll-off revenue and disposal charges reports:

1. Go to the **Reports** menu and select the **Rolloff Revenue/Disposal Charges** option. The report page is displayed.

2. Enter/select a date range using the **From** and **To** calendar menus, and then click **Generate**. The screen is refreshed, displaying revenue data in the left panel and charges data in the right panel.

3. Optionally, to filter the results in the **Landfill Charges** panel by facility, enter the name of the facility—in whole or in part—in the **Facility** text field. To reset the filter, select **Clear all filters** from the drop-down side menu, accessible from the top right corner of the panel.


4. To export the reports for review and analysis off-line, click **Export all data as csv** or **Export all data as excel** from their respective side menus, then follow system prompts to save the reports to your PC.

## Generating and Exporting the Billing Charges Report

The billing charges report tracks the history of billing charges for services provided.

To generate a billing charges report:

1. Go to the **Reports** menu and select the **Billing Charges** option. The report page is displayed.
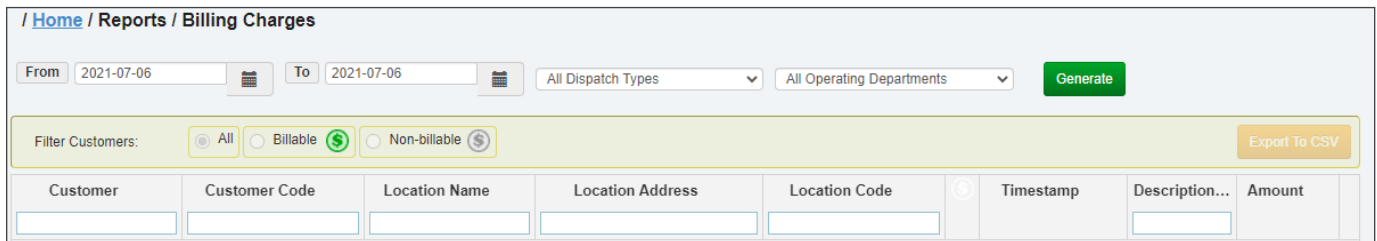
2. Enter/select the following information:
   - A date range using the **From** and **To** calendar menus
   - The type of dispatch and operating department from the corresponding drop-down lists.

3. Click **Generate**. The results matching your criteria are displayed.

4. Optionally, sort and filter the results using the column headers, and/or as follows:
   - Select one of the available radio buttons to display all customers, or billable or non-billable customers only.
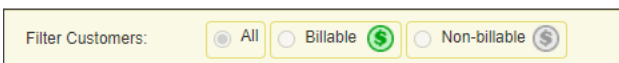

5. To export the report for review and analysis off-line, click **Export to CSV**, then follow system prompts to save the reports to your PC.

Generating the Prospects Reports

The prospects reports contain information about all prospective (non-active) customers and services.

To generate a prospects report:

1. Go to the **Reports** menu and select the **Prospects** option. The report page is displayed.
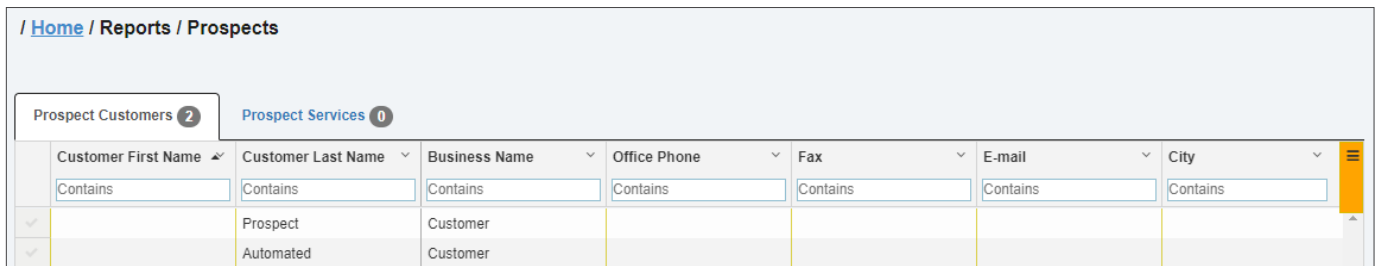
2. Review the prospect customers report displayed by default.
   -OR-
   Click the **Prospect Services** tab to display the list of prospect services available to customers.

3. Optionally, perform the following tasks from the drop-down side menu, accessible from the top right corner of the panel on each of the report tabs.

To...	Do this...
Display more (or less) information	• Select or deselect the desired column names.
Reset the filters you may have used	• Click **Clear all filters**.
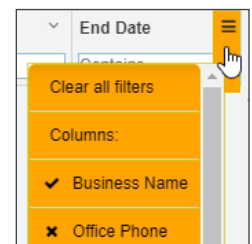
4. To delete customers or services from the reports, select them from the list, and then click **Delete Selected**.

/ **Home** / **Reports** / **Prospects**

Prospect Customers 2	Prospect Services 0						
Customer First Name ⌃	Customer Last Name ⌄	Business Name ⌄	Office Phone ⌄	Fax ⌄	E-mail ⌄	City ⌄	
Contains	Contains	Contains	Contains	Contains	Contains	Contains	
✓	Prospect	Customer					
	Automated	Customer					

Total Items: 2 (Selected Items: 1)

🗑 Delete Selected

Service & Support

Documentation and Warranty

Additional copies of this guide along with other documentation and product warranty can be found on the Safe Fleet Community website: https://community.safefleet.net/

Please contact technical support if you do not have credentials to log in.

Technical Support

Phone: 1.888.514.7443 opt. 3

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November 2023 | Part #: 700-5004 R2