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EDULOG

ATHENA ROUTING & PLANNING

Routes Training Resource Guide



Routes

Training Resource Guide

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ROUTES TRAINING RESOURCE GUIDE










PURPOSE OF THIS GUIDE

The Routes Resource Guide will provide you with explanations of the basic tools within Athena, walk you through the procedure of assigning runs to established routes within the software, as well as provide you with specific scenarios you may encounter as you begin to independently navigate the system within the User Stories section of this guide.

ATHENA ROUTES INTRODUCTION

Routes refer to the activities a single bus executes within a day—essentially what a bus does from the time it leaves its depot to the time it returns. Within the Routes Module, “Bell Times” and other process windows are visible in the module to optimize the user experience. Unassigned runs will additionally appear in the Routes Module; the user will have the opportunity to identify runs that need to be assigned to a route, and can do so by clicking and dragging the unassigned runs to the appropriate route.

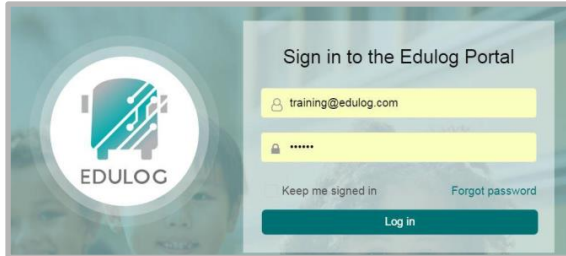
ATHENA MAP ASSET KEY

Symbol	Explanation	Symbol	Explanation
	Zoom to Extents		Satellite
	Zoom all		Map Overlays
	Zoom Selected		Pre-Selected Map Overlays
	Road Map View		Street View
	Hybrid View		

NAVIGATING ROUTES MODULE

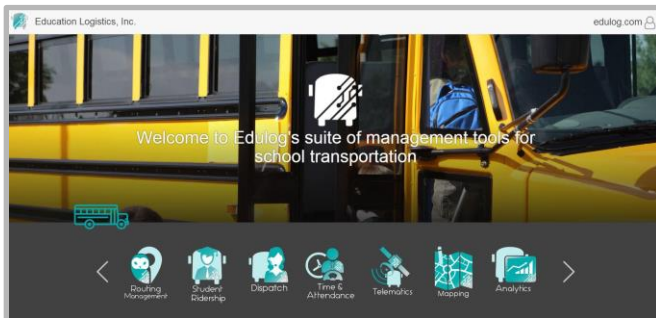
1. Sign In:

You will first come to the Sign In page where you will enter your Username (email) and Password.



2. Athena Portal Home Page:

You will be brought to the Athena Portal Home Page; at the bottom of this screen are the Athena applications.



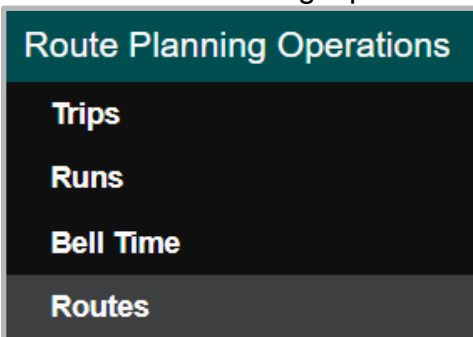
3. Routing Management:

Select the owl icon to enter the Routing Management application.



4. Routes:

Under Route Planning Operations select Routes.



5. Create Task:

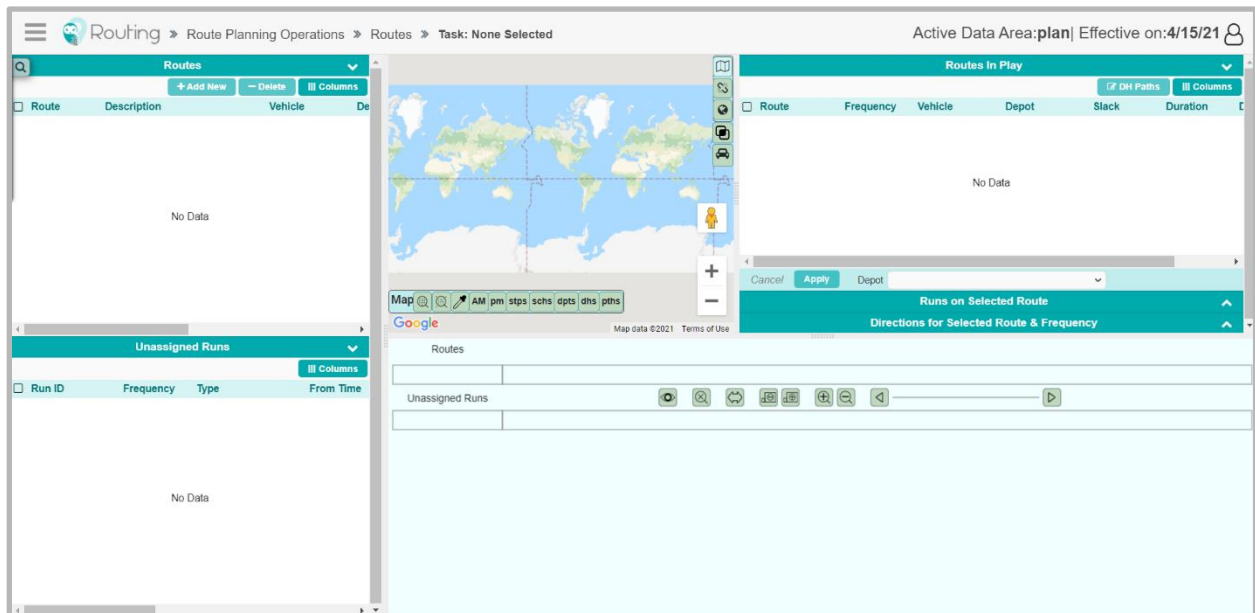
Before you can start working within the Routes module, you will first need to create a task by clicking on the plus icon at the bottom left corner of the screen.



6. Panes:

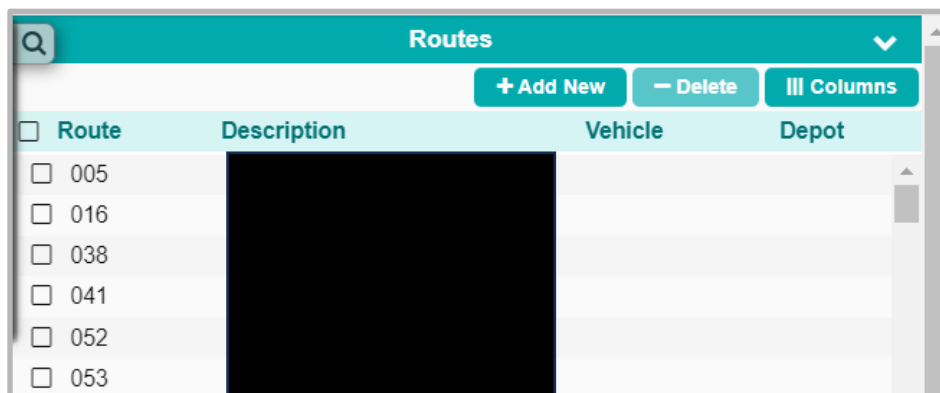
Within the Route Management module, you will encounter several panels:

- Routes and Unassigned Runs
- The Map Panel
- Routes in Play
- Runs on Selected Route
- Directions for Selected Route & Frequency



7. Data Panel:

Once you create your task and complete your search, Routes and Unassigned Runs will be listed in the Data Panel.



Unassigned Runs					
Run ID	Frequency	Type	From Time	To Time	
<input type="checkbox"/> 005.100	MTWUF	TO_SCHOOL	8:26:29 AM	9:15	▲
<input type="checkbox"/> 005.350-C	MTWUF	TO_SCHOOL	9:15:00 AM	9:15	
<input type="checkbox"/> 005.350-C-C	MTWUF	TO_SCHOOL	9:15:00 AM	9:15	
<input type="checkbox"/> 005.351	MTWUF	FROM_SCHOOL	4:05:00 PM	4:12	
<input type="checkbox"/> 083.100	MTWUF	TO_SCHOOL	8:25:00 AM	8:25	
<input type="checkbox"/> 083.101	MTWUF	FROM_SCHOOL	3:15:00 PM	3:15	
<input type="checkbox"/> 083.140	MTWUF	TO_SCHOOL	8:25:00 AM	8:25	

7.1 Routes:

Select the routes you want to work with by clicking on the box to the left of the route number.

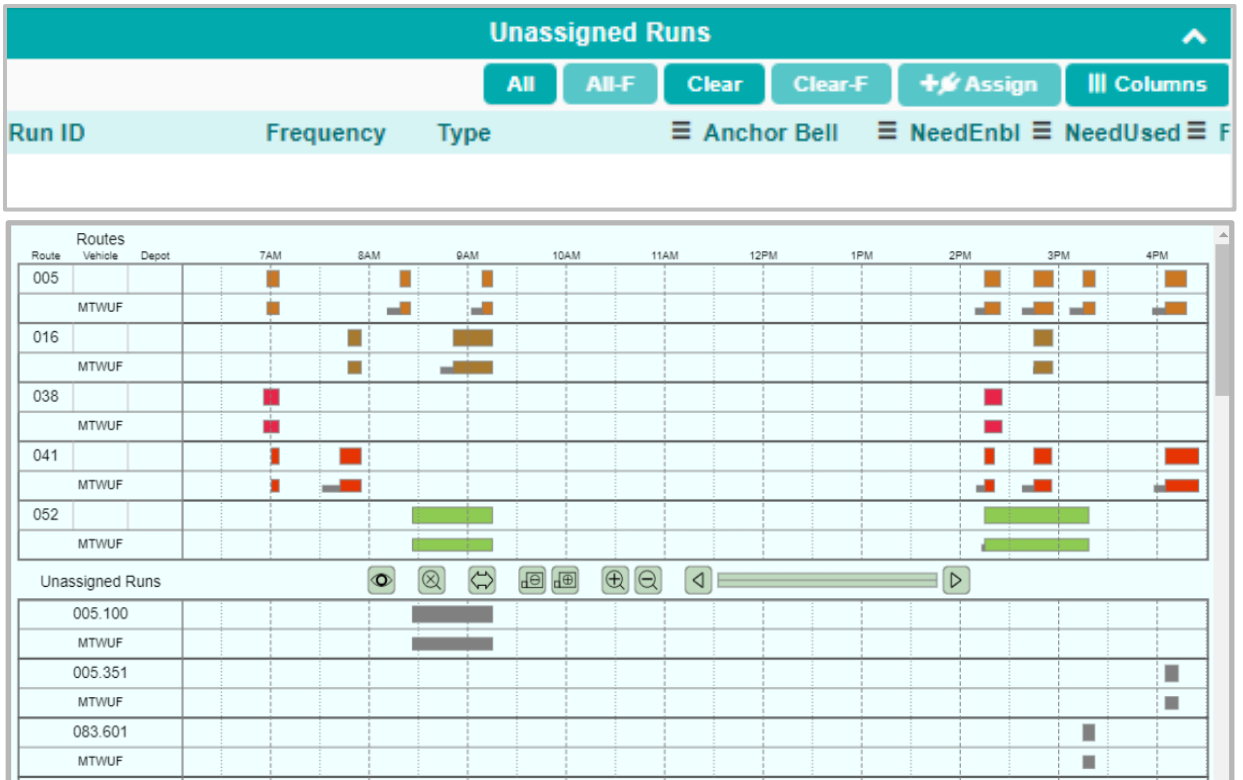
Routes			
Route	Description	Vehicle	Depot
<input checked="" type="checkbox"/> 005			
<input checked="" type="checkbox"/> 016			
<input checked="" type="checkbox"/> 038			
<input checked="" type="checkbox"/> 041			
<input checked="" type="checkbox"/> 052			
<input type="checkbox"/> 053			

Routes will show graphically on the map, and they will additionally be listed in the “Routes in Play” panel, as well as show in the “Timeline”.

The screenshot displays a comprehensive view of the routing software interface. On the left, a list of routes is shown with checkboxes for selection. The central map area visualizes these routes as colored lines connecting various locations. On the right, the 'Routes in Play' panel provides a detailed list of active routes, including their frequency, vehicle type, depot, and duration. Below the map, the 'Timeline' view shows a grid of route activity over time, with colored bars indicating the duration of each run. The interface also includes search bars, navigation controls, and a 'Columns' menu for customizing the data displayed in the panels.

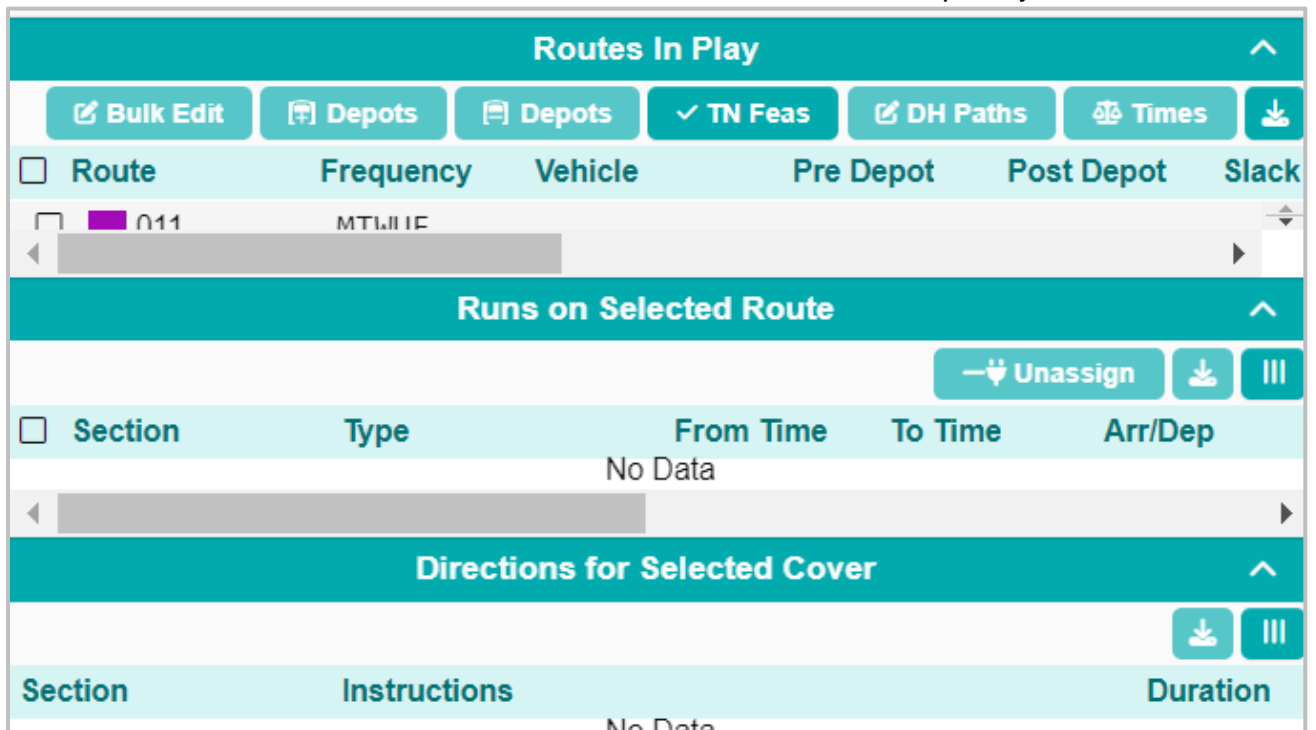
7.2 Unassigned Runs:

Select unassigned runs in the “Data Panel” and they will show up in the lower portion of the timeline.



8. Workspace Panel:

Within the Workspace Panel the user will find the following card to work in: Routes in Play, Runs on Selected Route, and Directions for selected Route & Frequency.



8.1 Routes in Play:

When the user selects one or more routes within the Data Panel, those routes will additionally populate within the Routes in Play card. Within this card the user is able to perform multiple functions: Bulk Edit the name and description, assign and unassign depots, and compare run durations based on time of day.

Route	Frequency	Vehicle	Pre Depot	Post Depot	Slack	Duration	Distance
<input checked="" type="checkbox"/> 61	MTWUF						
<input checked="" type="checkbox"/> 61	MTWUF				1h 20m 56s	1h 24m 14s	29.07 m
<input checked="" type="checkbox"/> 65	MTWUF						

a.) Bulk Edit:

Bulk Edit 2 Routes

Naming sequence:

Prefix:

Start at:

b.) Assign Depot:

Assign Depot to Route

Select a Depot to Assign:

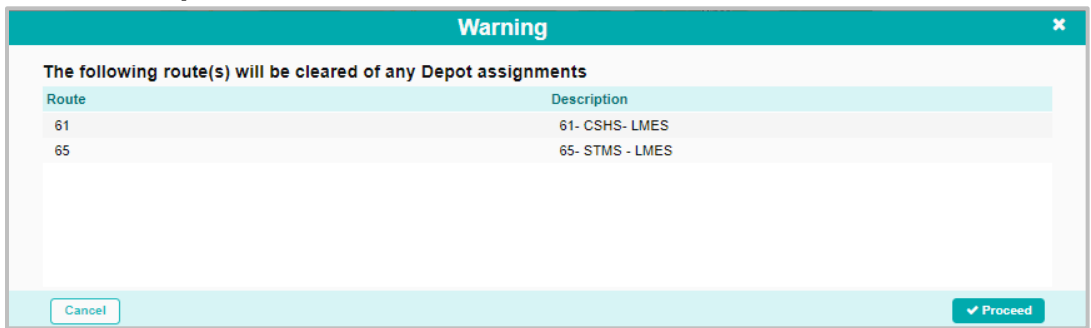
Assign as: Pre Depot Post Depot

Frequency: MON TUE WED THU FRI SAT SUN

Route	Frequency	Pre Depot	Post Depot
61	MTWUF		
65	MTWUF		

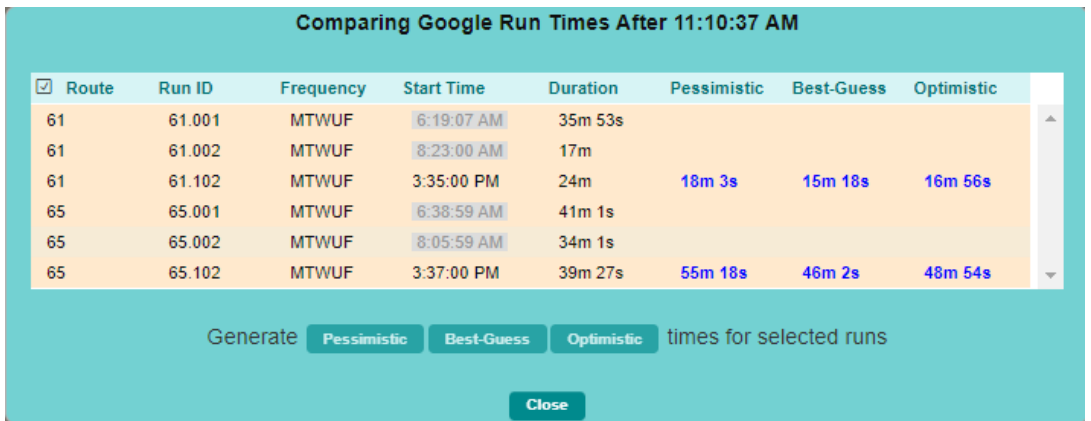
Route	Frequency	Pre Depot	Post Depot
61	MTWUF		
65	MTWUF		

c.) Remove Depot:



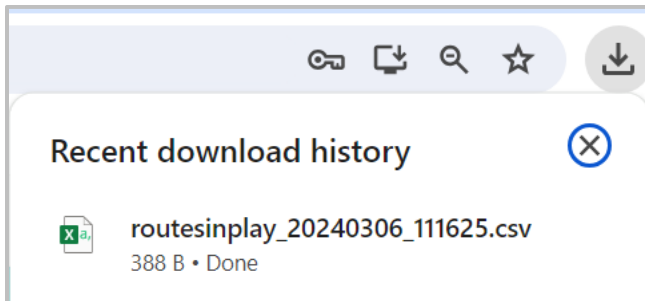
d.) Times:

Toggle between the “Pessimistic”, “Best-Guess”, and “Optimistic” times for the selected runs.



e.) Export:

Export route data found within the Routes in Play card as a CSV file.



8.2 Runs on Selected Route:

The Runs on Selected Route card will populate all runs presently associated with the route the user has selected within the Routes in Play card. Additionally, within this card, the user can unassign runs from the selected route either individually or in bulk.

- Users can additionally export information found in this card as a CSV file using the export tool located next to the Unassign tool.

Runs on Route 011		
		- Unassign ↓ ☰
<input type="checkbox"/> Section	Type	Load
<input checked="" type="checkbox"/> Run 12.011	TO_SCHOOL	3
<input type="checkbox"/> Run 17.011	TO_SCHOOL	18
<input type="checkbox"/> Run 09.111	FROM_SCHOOL	5
<input type="checkbox"/> Run 13.111	FROM_SCHOOL	11

Selecting the “Unassign” button will populate a warning message that will require users to verify whether they would like to unassign the selected runs.

Confirm the Unassign
✕

About to unassign runs 61.002, 61.001, 61.102.
Continue?

Cancel

✔ Proceed

8.3 Directions for Selected Route & Frequency:

The user can view the run direction play out in real time by selecting a direction directly within the card, see the run direction displayed on the map, as well as export the run directions as a CSV file using the Export tool.

Directions for Route 011, MTWUF		
		↓ ☰
Section	Instructions	Duration
<input type="checkbox"/> Run 12.011	At stop 05.120 , Pick-Up 1 at 7:53:12 AM at [REDACTED]	
<input type="checkbox"/> Run 12.011	Head west on [REDACTED] toward [REDACTED]	44s
<input type="checkbox"/> Run 12.011	Turn left onto [REDACTED]	43s
<input type="checkbox"/> Run 12.011	Turn left onto [REDACTED]	58s

ATHENA USER STORIES

The User Stories section of this guide will offer you scenarios that are applicable to some of the workflows you might encounter in your day-to-day tasks within Athena. Some scenarios that will be discussed include:

- Create New Route
 - Assign a Run to a Route
 - Assign a Depot to a Route
 - Change Route ID
-

1. Create New Route

You work with the school district to help design and update routes; you noticed there were multiple runs that remained unassigned, and were tasked with creating a new route.

Here's How:

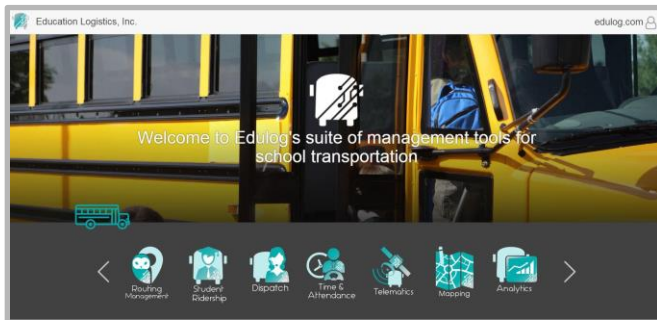
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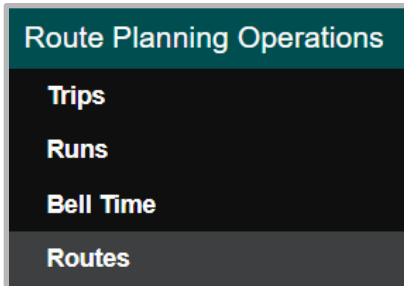
3. Routing Management:

Select the owl icon to enter the Routing Management application.



4. Routes:

Under Route Planning Operations select Routes.



5. Create Task:

Before you can start working within the Routes module, you will first need to create a task by clicking on the plus icon at the bottom left corner of the screen.



6. Add New:

Navigate to the “Add New” button at the top of the Data Pane. When selected, a “Create New Route” window will pop-out; fill out the form in its entirety, and select save.

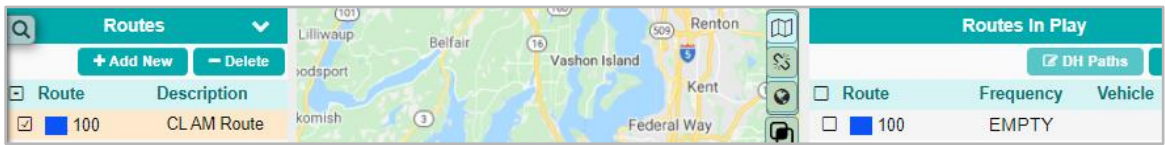
- **Note:** Depot's must first be created in the Depot module before being able to query for them in the “Create New Route” window.



6.1 New Route:

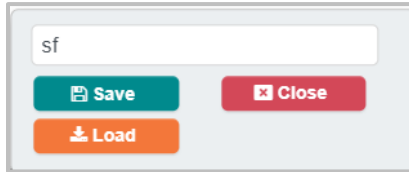
The new route will be listed in the Data Panel, and when selected, will show in the

“Routes in Play” card.



7. Save:

To finalize your task, navigate to the lower left of the screen and hover over your created task, and select “Save”.



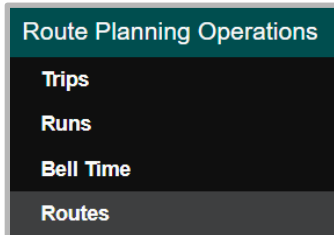
2. Assign a Run to a Route

You have created the new route, and now need to assign the appropriate runs; you will do so by working within the “Unassigned Runs” and “Timeline” cards in the Routes Module.

Here’s How

1. Routes:

Under Route Planning Operations select Routes.



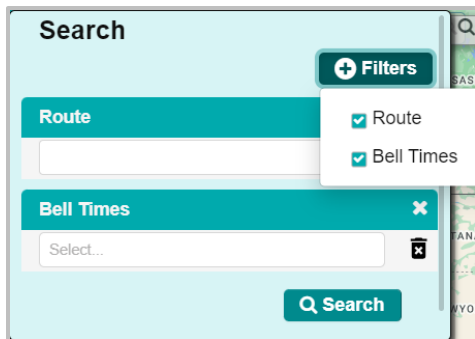
2. Create Task:

Before you can start working within the Routes module, you will first need to create a task by clicking on the plus icon at the bottom left corner of the screen.



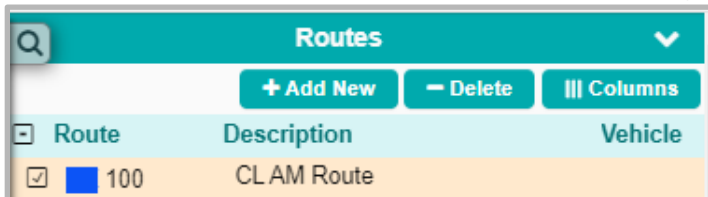
3. Search:

Select the Route ID filter in the “Search” window, and query for your route(s).

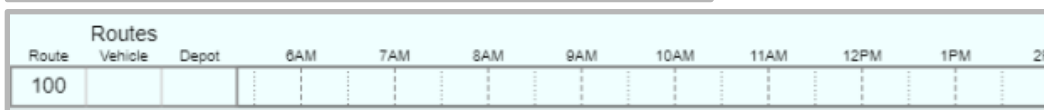
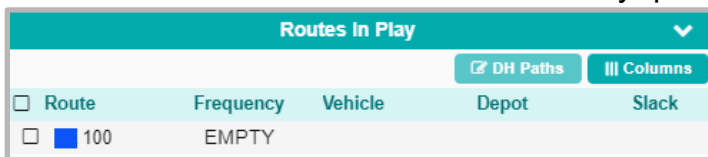


4. Routes:

Select the route you want to work with by clicking on the box to the left of the route number.

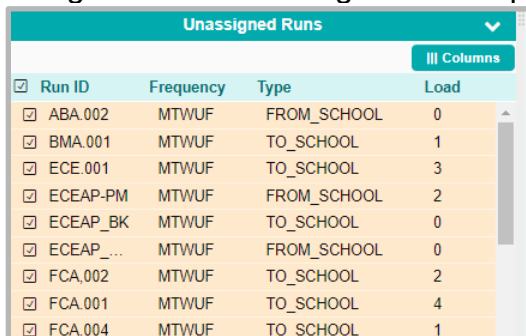


The route will be listed in the “Routes in Play” panel, and within the “Timeline”.

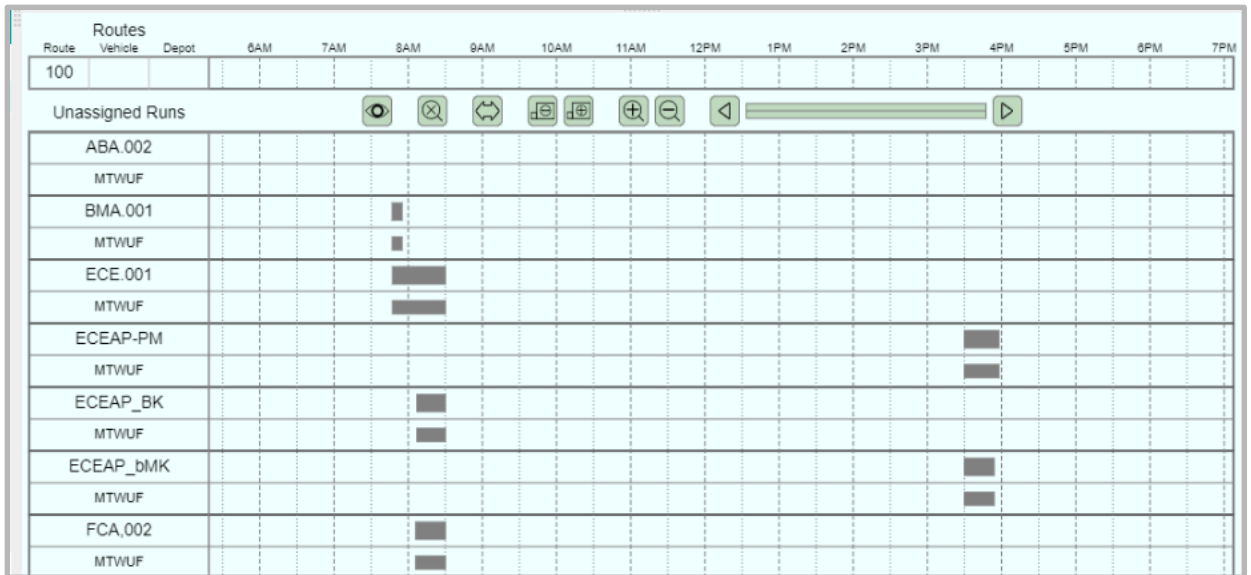


4.1 Unassigned Runs:

Navigate to the “Unassigned Runs” panel, and select the runs you will be working with.

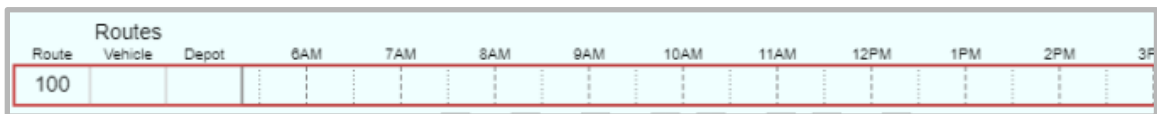


Runs will additionally populate on the “Timeline”.

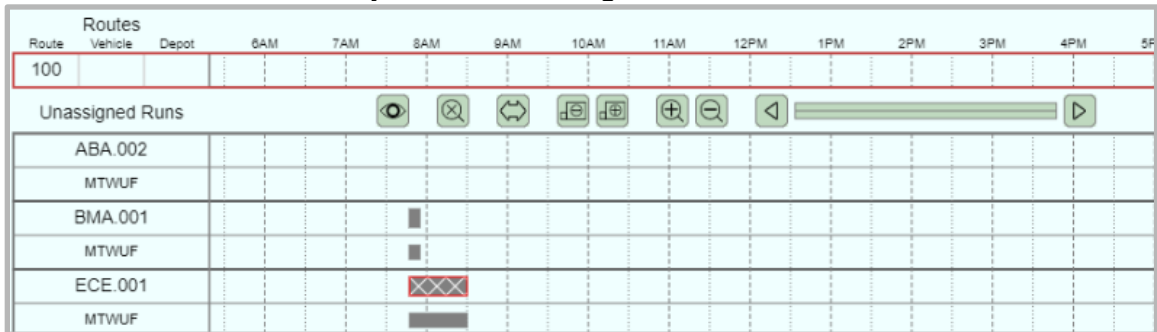


4.2 Assign:

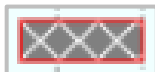
To assign an “Unassigned Run” to a route, first select a route directly in the “Timeline”—once selected, the route will be outlined in red.



Locate and select the run you want to assign to the route within the “Timeline”.



The selected run will be outlined in red, and filled with “X’s”.

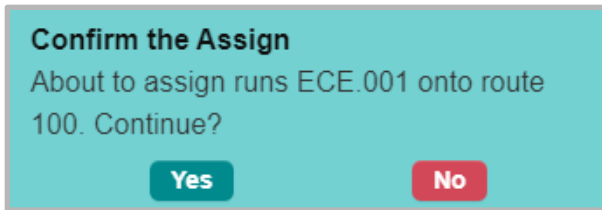


Select the “Assign Runs” tool.

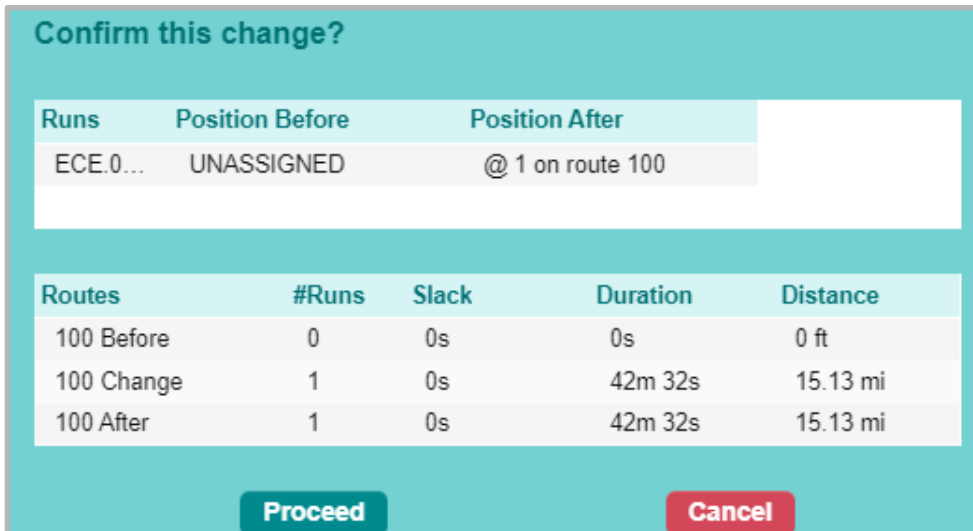


4.3 Confirm:

Following assigning the run to a route, a confirmation window will appear—click “yes” to confirm the assignment.



Another confirmation window will appear to finalize the change; select “proceed” to accept the changes. You will follow this process to add any additional runs to the route.

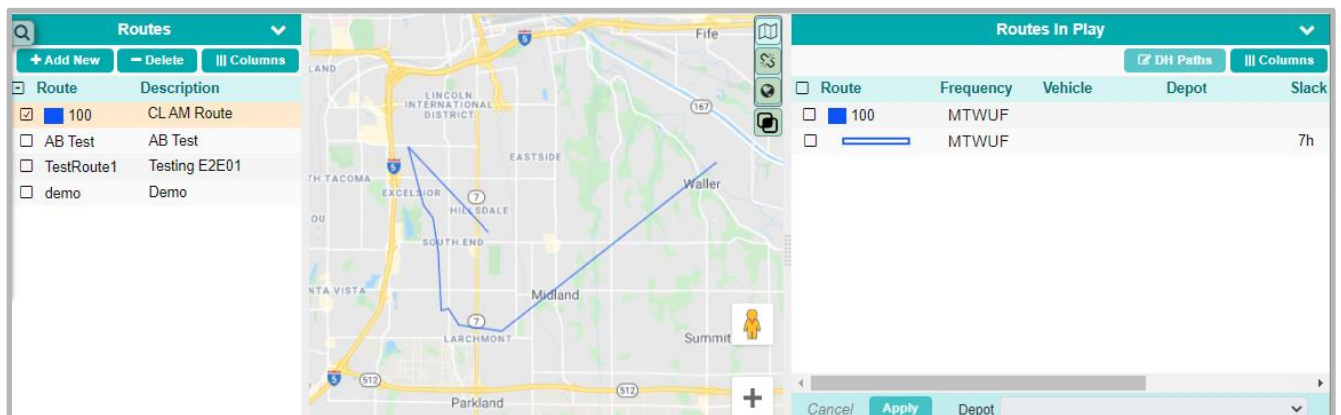


4.3.1 Slack:

Slack is the extra time a bus driver could potentially have within the run or route. Negative slack is when a route does not have the amount of time necessary to fulfill the task within bell times.

5. New Route:

Once your new route has been confirmed, you will be able to select it in the Data Panel, and it will show graphically on the map and the “Routes in Play” pane.



5.1 Routes in Play:


The route will have a master and cover assigned to it.

- The master is the foundation of this run.
- The cover(s) are any differentiation from the Master.

<input type="checkbox"/>	Route	Frequency
<input type="checkbox"/>	100	MTWUF
<input type="checkbox"/>		MTWUF

5.2 Runs on Route:

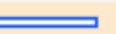
When selecting the master in “Routes in Play” your runs will be listed in the “Runs on Route” panel.

Routes In Play					
<input type="checkbox"/>	Route	Frequency	Vehicle	Depot	Slack
<input checked="" type="checkbox"/>	100	MTWUF			
<input type="checkbox"/>		MTWUF			7h

Runs on Route 100			
<input type="checkbox"/>	Section	Type	Description
<input type="checkbox"/>	Run ECE.001	TO_SCHOOL	
<input type="checkbox"/>	Run ECEAP-...	FROM_SCHOOL	

5.3 Directions for Selected Route:

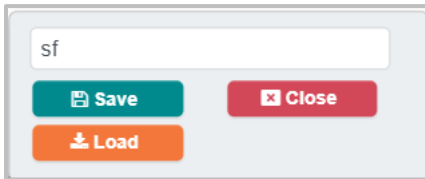
When selecting just the cover in “Routes in Play”, open the “Directions for Selected Route” card, and you can see the turn-by-turn directions for your route.

Routes In Play					
<input type="checkbox"/>	Route	Frequency	Vehicle	Depot	Slack
<input type="checkbox"/>	100	MTWUF			
<input checked="" type="checkbox"/>		MTWUF			7h

Directions for Route 100, Frequency MTWUF	
Section	Instructions
Run ECE.001	At stop STOP(30): Pick-Up 1 at 7:47:28 AM at 145..
Run ECE.001	↑ Head west on E 70th St toward A St
Run ECE.001	↪ Turn right after AutoZone Auto Parts (on the left)
Run ECE.001	↶ Turn left onto S 48th St
Run ECE.001	↶ Turn left onto S Alaska St
Run ECE.001	↶ Turn left at the 1st cross street onto S 49th St
Run ECE.001	↶ Turn left onto S Asotin St

6. Save:

To finalize your task, you must go down to the lower left of the screen and hover over the task—select “Save”.



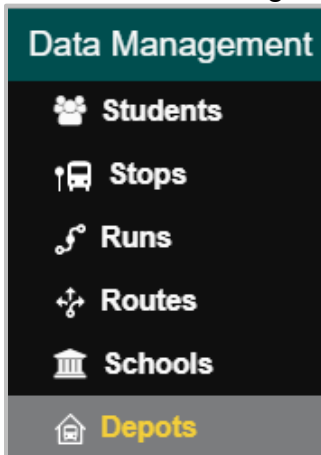
3. Assign a Depot to a Route

Once you have created the new route, and assigned the appropriate runs to it, the user will need to create and assign the pre and post depot locations to the route in order to factor the deadhead time into the route details.

Here’s How

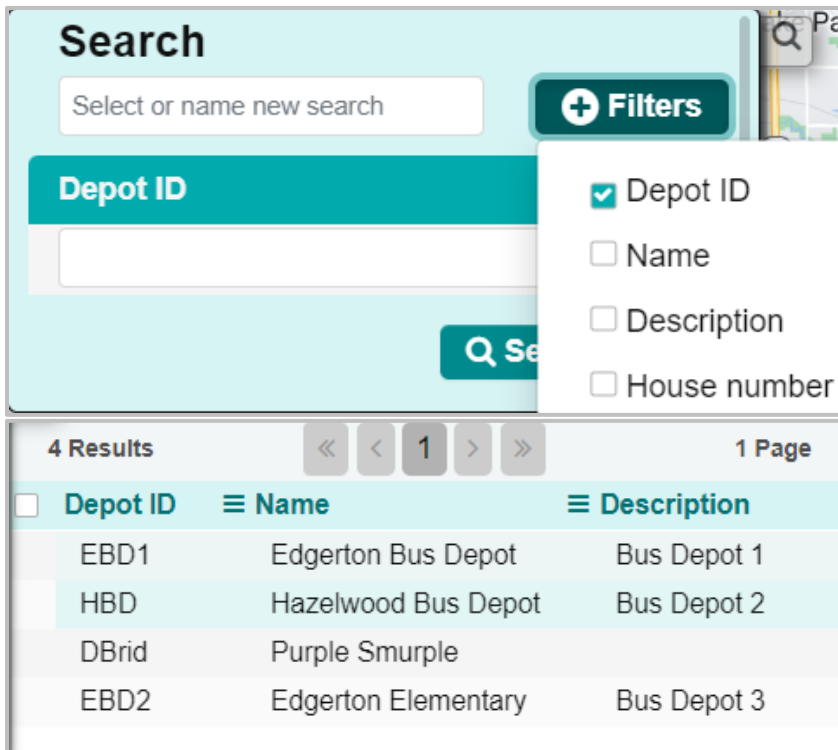
1. Depots:

Under “Data Management” navigate to Depots.



1.1 Search:

In the search bar select the “Depot ID” filter; leave the search field blank and select “Search” to view all depot locations saved in the system.



The screenshot shows a search interface with a search bar containing the text "Select or name new search". To the right of the search bar is a "+ Filters" button. A dropdown menu is open, showing the following options: Depot ID, Name, Description, and House number. Below the search bar is a "Q Search" button. The results section shows "4 Results" and "1 Page". The table below has the following data:

<input type="checkbox"/>	Depot ID	Name	Description
<input type="checkbox"/>	EBD1	Edgerton Bus Depot	Bus Depot 1
<input type="checkbox"/>	HBD	Hazelwood Bus Depot	Bus Depot 2
<input type="checkbox"/>	DBrid	Purple Smurple	
<input type="checkbox"/>	EBD2	Edgerton Elementary	Bus Depot 3

1.2 If you do not see the depot location for your route, you will need to add a new depot location to the system by selecting “+Add New”.



Once selected a form will populate in the Workspace Panel with the following fields to complete:

Depot
🔗 ⬆

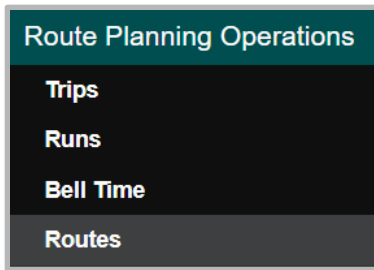
Cancel - Delete Save

Depot ID *	Name	Description
<input type="text" value="HBD"/>	<input type="text" value="Hazelwood Bus Depot"/>	<input type="text" value="Bus Depot 2"/>
Address *		Capacity
<input style="background-color: black; color: black;" type="text" value="REDACTED"/>		<input type="text" value="40"/>
Contractor		
<input type="text" value="Select..."/>		
Secondary Depots		+ Add New
Depot ID	Name	
No Data		

- **Depot ID:** When creating a Depot ID, you can assign it a number, location, or any other identifiable name.
- **Name:** Traditionally this field is for inputting the school the school/district the buses will be servicing.
- **Description:** This field can be used to keep track of the number of depots associated with a single school/district.
- **Address:** In this field you can either manually type in the address of the depot, or you can select the map query button within the field to locate the depot in the map view.
- **Capacity:** The number of buses the depot houses.
- **Contractor:** If the district is using a contractor to supply the buses, you would plug in the name of that company in this field.
- **Secondary Depots:** If there is a secondary depot that is associated with the serviced school, you would associate them here.

2. Routes:

Once you have added the depot location to the system, navigate to “Route Planning Operations” and select Routes.



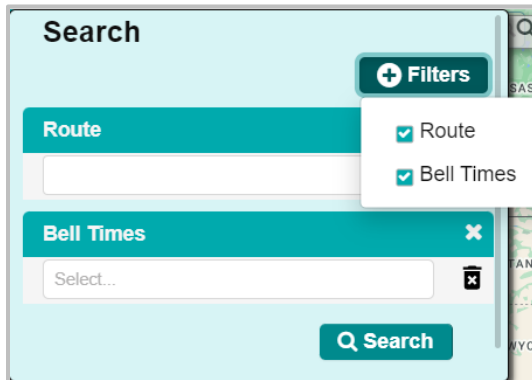
3. Create Task:

Before you can start working within the Routes module, you will first need to create a task by clicking on the plus icon at the bottom left corner of the screen.



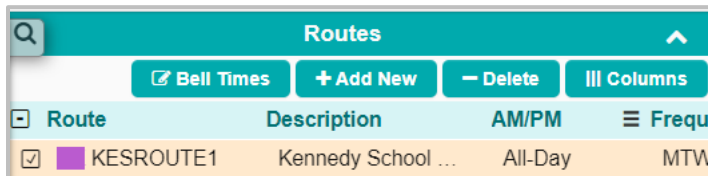
4. Search:

Select the Route ID filter in the "Search" window, and query for your route(s).



5. Routes:

Select the route you want to work with by clicking on the box to the left of the Rout number; the route will be listed in the "Routes in Play" panel, as well as populate in the "Timeline".



6. Assign Pre-Depot to Route:

In the "Routes in Play" panel within the Workspace Panel, you will find the "Assign Depot" button. Before you can assign a depot to the route, you must select the route in the "Routes in Play" card.

Routes In Play			
Route	Frequency	Vehicle	Pre De
<input checked="" type="checkbox"/> KESROUTE1	MTWUF		
<input type="checkbox"/> 	MTWUF		EBD1

Once selected, the “Assign Depot to Route” window will populate on the screen. Select the “Assign” button in the window, and locate the appropriate depot location in the “Select a Depot to Assign” drop-down field.

Assign Depot to Route

Type of assign:
 Replace Assign

Select a Depot to Assign:

Assign as:
 Pre Depot Post Depot

Frequency:
 MON TUE WED THU FRI SAT SUN

Route	Frequency	Pre Depot	Post Depot	Valid
KESR...	MTWUF	EBD1	EBD1	
KESR...	MTWUF	HBD	HBD	✓

Some additional fields of note in this window are described as such:

- **Frequency:** The user has the ability to assign the frequency of this depot location; should the bus be come from a different location on a few of the days.

- Pre/Post Depot:** If the pre and post depot locations are different, you can deselect the Post Depot field, and assign it as a secondary depot location.

- **Replace:** To replace an already assigned depot location, select the “Replace” button in the window and the window will update as below:

Assign Depot to Route

Type of assign:
 Replace Assign

Select a Depot to Replace:

Select a Depot to Assign:

Route	Frequency	Pre Depot	Post Depot
KESR...	MTWUF	EBD1	EBD1

Route	Frequency	Pre Depot	Post Depot	Valid
KESR...	MTWUF	HBD	HBD	✓

- In this window you will select the current depot location in the “Select a Depot to Replace” drop-down, and add the new location to the “Select a Depot to Assign” field. The changes will be shown in the lower right window.
- The depot location will show these updates in the “Routes in Play” card as well as in the “Timeline”.

<input checked="" type="checkbox"/>	Route	Frequency	Vehicle	Pre Depot	Post Depot
<input checked="" type="checkbox"/>	KESROUTE1	MTWUF			
<input checked="" type="checkbox"/>		MTWUF		HBD	HBD

Routes			
Route	Vehicle	8:30AM	9A
ESROUTE1	(none)		
MTWUF, Dep: HBD			

4. Change Route ID

While working to build new routes within the system, you notice some of the established Route ID/Description information is outdated and needs to be updated in the system.

Here's How

1. Search Route ID:

Click on the “Search Tab” and the Search Tray will appear; search your “Route ID”.



Search

Select or name new search + Filters

Route ✕

1 ✕

Q Search ▼

2. Routes Selected:

Routes will be listed in the Data Panel—select your Route.

Route	Description	Contractor
105		
116		
122		
124		

Selected Routes will be listed in the Workspace Panel.

Selected Routes ▼

✕ Clear 📄 Export ☰ Columns

Route	Description	Contractor	Comments
<input type="checkbox"/> 105			

Route ▼

Cancel 📄 Save

Route * Description * Comments

105 [Redacted] Comments

3. Change Route ID:

In the Route panel, under “Route” enter the new name; add a new “Description” and any comments if needed, and “Save”.

Route ▼

Cancel 📄 Save

Route * Description * Comments

100 Add Description Add Comments