

Route Optimization Setup

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The following article details how to use Route Optimization in Dispatch. Route optimization is an added feature in Navusoft that balances and reorganizes stops among routes to enhance operational efficiency.



IMPORTANT - Submit a Ticket Request to Navusoft for further information on Route Optimization setup and licensing.

FROM	TO	DIVISION	LINE OF BUSINESS
02/17/23	02/17/23	CORPUS, DAYTON, HEARNE, HILLSBORO, HOUSTON, QAWASTE	Commercial

ROUTE	TRUCK	DRIVER	PRE TRIP	POST TRIP	OPTIMIZED	SCHEDULED	SERVICED
Friday Feb 17, 2023 (0 of 15 Completed)							
COR 201	951	Moses Espinoza - Driver				125	0
COR 202	952	Rudy Espinoza - Driver				91	0
COR 203	953	Marco Hurtado - Driver				132	0
COR DUMPSTER DELUREM							
						1	0
DAY 201	971	Perry Evans - Driver				102	0
DAY 202	972	Curtis Thulin - Driver				73	0
DAY 203	905	Albert Taylor - Driver				92	0
DAY 204						4	0
DAY 205						2	0
DAY CO SUB OUT							
						14	0
HOU 201	2003	William Trejo - Driver				122	0
HOU 202	2001	Ismael Fuentes - Driver				122	0
HOU 203	2002	David Vasquez - Driver		6:00 am - 7:39 pm		114	0
HOU 204	2000	Gyasi Edmond - Driver		6:00 am - 9:30 pm		105	0
HOU 206	2004	Michael Burrell - Driver		6:00 am - 6:55 pm		102	0

Permissions

The following permissions are required for route optimization setup:

Permission ID	Permission Name
5	View Account
6	View Site
24	Setup / Operations
87	Route Management

Setup: Facility

Pathway: Setup > Operations > Facility

When adding a facility, the address MUST BE geocoded to ensure route optimization uses the closest facility to the truck at the point on the route the truck is expected to be full. When entering an address, the system will begin to recommend addresses that match the current entry. Continue with the address entry until the correct address is populated in the results and select it from the list. Upon selection, any remaining address fields will be auto-populated and the disposal location geocoded.

FACILITY SETUP SETUP > OPERATIONS > FACILITY

TYPE: All DIVISION: All Search

ID	NAME	ABBREV	DIVISION	TYPE	ACTIVE	ADDRESS LINE	CITY	STATE	POSTAL CODE	SCALE UOM	WEIGHT UOM	VOLUME UOM	OWNERSHIP	SIGNATURE BY	SIGN	ICON
1001	CITY OF ALICE LF	AL														
1002	CEFE LF	CE														
1003	GULLEY HURST LF	GL														
1004	RSG-MAT & RECYCLING MA	MA														
1005	WM-BAYTOWN LF	WM														
1006	WM-ATASCOCITA LF	WM														
1007	RSG-EL CENTRO LF	EL														
1008	WM-SECURITY LF	WM														
1009	WCA-RALSTON ROAD...	WCA														
1010	CITY OF KINGSVILLE LF	KIN														
1011	WCN-HARDY ROAD TS	WCN														
1012	CHAMBERS COUNTY LF	CH														
1013	DOLPHIN RECYCLING DC	DC														
1014	RSG-McCARTY ROAD LF	MC														

UPDATE FACILITY

Basic Settings | **Label Scale Settings**

NAME: RSG-EL CENTRO LF ACTIVE: Active

ABBREVIATION: ELCNT ENABLE INBOUND ORDER: No

TYPE: Landfill ENABLE OUTBOUND ORDER: No

OWNERSHIP: DEFAULT SCALE UOM: ton

DIVISION: CORPUS WEIGHT UOM: ton

ADDRESS LINE 1: 69 VOLUME UOM: cubic yard

ADDRESS LINE 2: DEFAULT TRANSPORTATION METHOD: Truck

CITY: Robstown DEFAULT SCALE TICKET FORMAT:

STATE: TX ONLINE ICON: BROWSE...

POSTAL CODE: 78380 SIGNATURE: BROWSE...

PHONE: (361) 698-5000 MANIFEST SIGNATURE NAME:

CONTACT NAME:

EPA ID:

STATE ID:

GEOFENCE RADIUS (METERS): 100

AVERAGE DURATION (MINS): 0

Automatic Transfer Work Order

SITE ID:

SITE NAME:

SERVICE CODE:

EVENT TYPE:

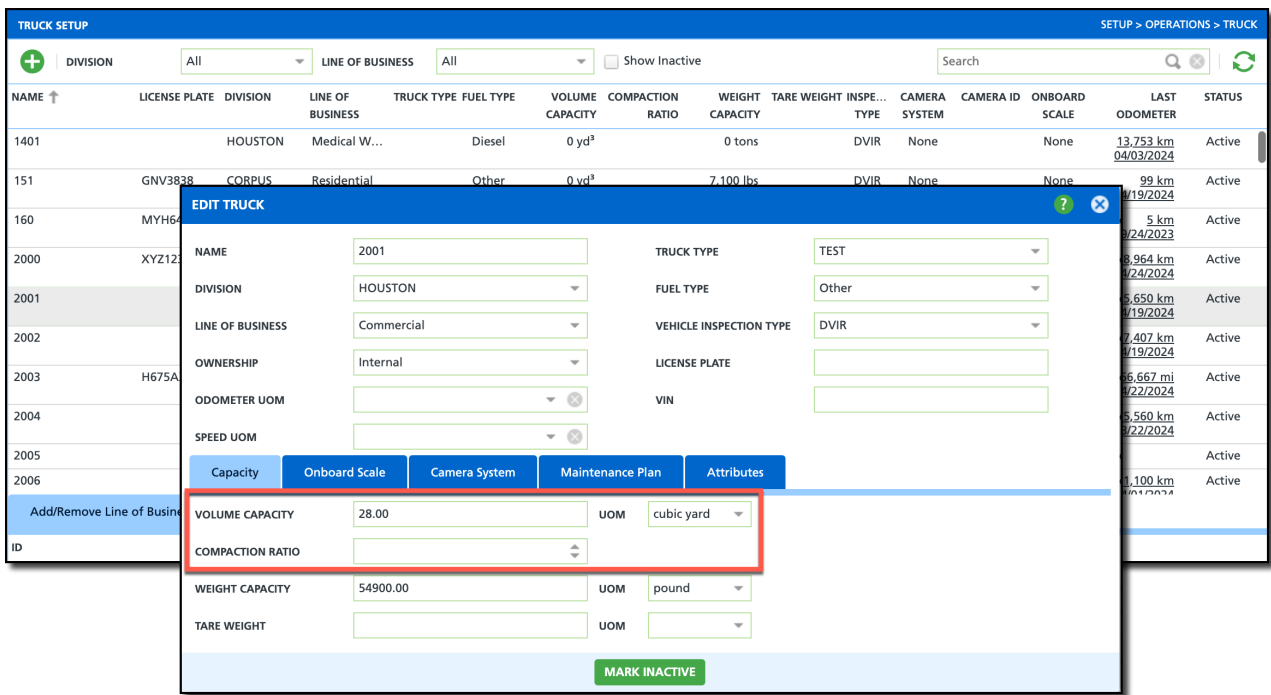
Field Setup

Field	Description
Address Fields	Select the Geocoded address that displays when entering the address for the facility.

Setup: Truck

Pathway: Setup > Operations > Truck

Truck Setup helps route optimization determine where on the route to place a disposal trip based on where the truck is calculated to be full.



Field Setup

Field	Description
Volume Capacity	Indicates how much waste the truck can hold before needing to be emptied. This helps route optimization plan the placement of a disposal trip on the route.
Compaction Ratio	Numeric value that represents the ratio of how much one load of waste is reduced by because of a compactor. Example: If the Compaction Ratio to Volume Capacity is 4, it would mean that for every 4 truckloads of loose waste taken to the landfill, the same quantity of compacted waste would only require 1 trip.
UOM	The Unit of Measure to measure the waste and calculate capacity.

Setup: Equipment Type

Pathway: Setup > Services > Equipment Type

To improve route optimization accuracy, the Service Seconds Per Unit field in Equipment Type setup is important for charge code based equipment (i.e. Medical Waste Containers) estimated service duration. Fields here help specifically in calculating stop duration based on average charge code collected quantities.

EQUIPMENT TYPE SETUP

LOB: All

ID	NAME	ABBREV.	LOB
10YD-FL	10 Yard FL	10FL	Commercial
10YDRO	10 Yard Roll Off		
15YD	15 Yard Roll Off		
18GAL-REC	18 Gallon Recycle		
18GLB	18 Gal Box		
18GLS	18 Gal Sharp		
200GLC	200 Gal Cart		
20YD	20 Yard Roll Off		
20YD-CP	20 Yard Compactor		
25YD	25 Yard Roll Off		
25YD-CP	25 Yard Compactor		
2QTS	2 Quart Sharps		
2YD	2 Yard FL		
2YD-RL	2 Yard RL		
2YD-VIP	2 Yard FL VIP		
30GLB	30 Gal Box		
30YD	30 Yard Roll Off		
30YD-CP	30 Yard Compactor		
32YD-CP	32 Yard Compactor		
35YD-CP	35 Yard Compactor		
3YD	3 Yard FL		
3YD-RL	3 Yard RL		
3YD-VIP	3 Yard FL VIP		

ADD EQUIPMENT TYPE

EQUIPMENT ID:

NAME:

ABBREVIATION:

LOB:

VOLUME:

VOLUME UOM:

CAPACITY PLANNING VOLUME:

CAPACITY PLANNING VOLUME UOM:

EQUIPMENT CLASS:

DISPLAY ON SCAN MANIFEST:

MAX WEIGHT:

TARE WEIGHT:

TARE WEIGHT UOM:

IS SERIALIZED:

EXTERNAL ID:

SERVICE SECONDS PER UNIT:

ENABLE AS GROUP LABEL:

Field Setup

Field	Description
Service Seconds Per Unit	Enter the average amount of time (in seconds) it takes to collect one unit of equipment.
Capacity Planning Volume	Indicates how much loose waste the equipment can hold before needing to be emptied. This helps route optimization plan the placement of a disposal trip on the route.
Capacity Planning Volume UOM	The Unit of Measure used to measure capacity volume.

Setup: Yard

Pathway: Setup > Operations > Yard

Yards are used for inventory management and are available to be assigned as the default route start and end location in the route setup. Yards are used by Route Optimization to sequence stops based on the truck's start location and end location.

After a yard is created, it will populate as a selection option in the 'Start Yard' and 'End Yard' drop down fields located in the Route Setup screen.

The screenshot shows a 'YARD SETUP' window with a table containing one entry: ID 1002, NAME HOMEBASE. An 'ADD YARD' modal is open, featuring the following fields: NAME (text input), ABBREVIATION (text input), ADDRESS LINE 1 (text input with placeholder 'Enter a location'), ADDRESS LINE 2 (text input), CITY/STATE/POSTAL CODE (text input with a dropdown arrow), GEOFENCE RADIUS (METERS) (text input), and AVERAGE DURATION (MINS) (text input with a spinner). A 'SAVE' button is located at the bottom of the modal.

Field Setup

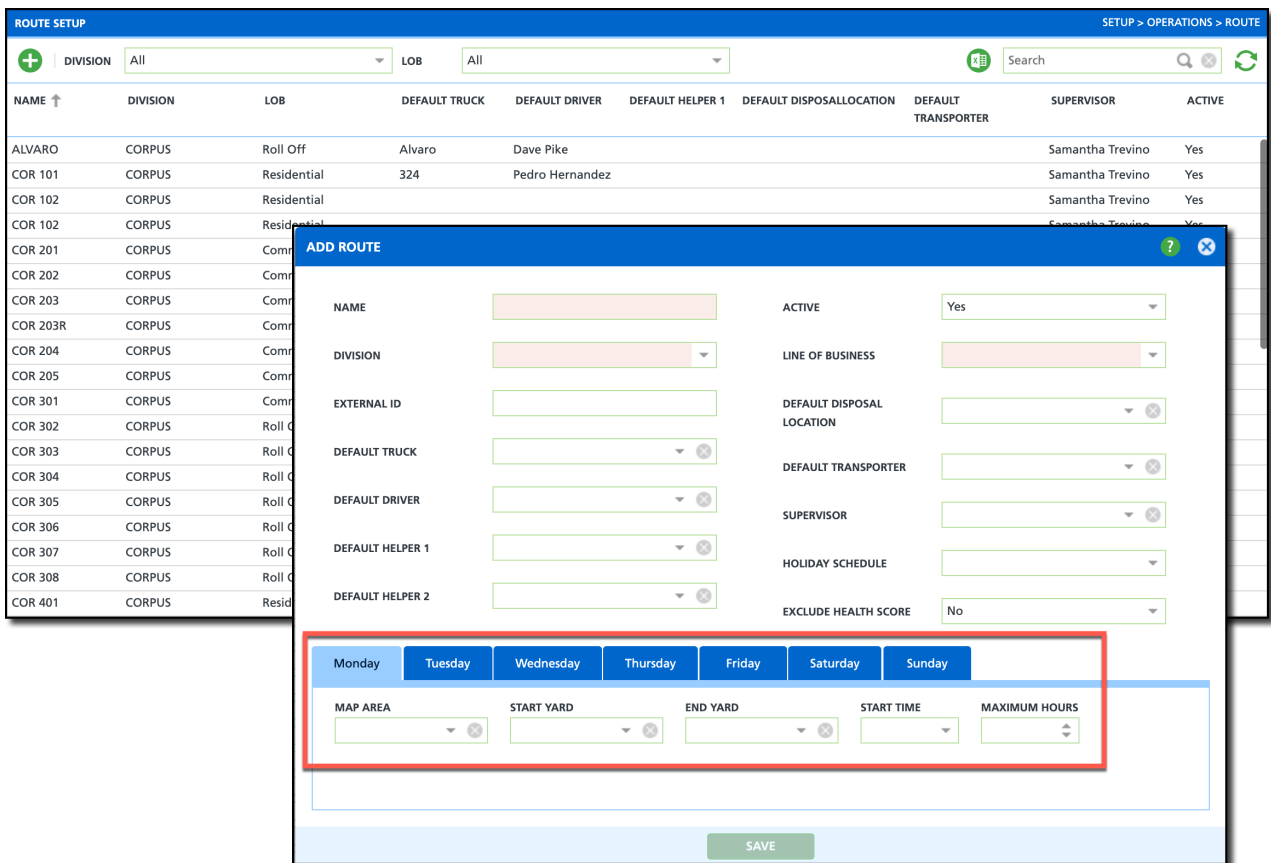
Field	Description
Name	Identifies the Name of the Yard.
Abbreviation	Displays the abbreviated name of the yard.
Address Information	Enter the address of where the yard is located. This is required for geocoding, route optimization and affects the Geofence Radius.
Geofence Radius	Creates a virtual perimeter around the yard to more accurately track a trucks arrival and departure. Enter (in meters) the radius that should be used.
Average Duration (MINS)	Enter the average amount of time a truck will spend at a yard for disposal/yard time. This is used in optimization calculations if disposal trips are tracked.

Setup: Route

Pathway: *Setup > Operations > Route*

In most cases, trucks begin and end each day at a yard. Yards are used in Route Optimization to sequence stops based on the truck's start location and end location for a route. Assign a daily default Start Yard and End Yard for a route using the days of the week tabs.

Yards previously created in *Yard Setup* populate the list of options for the Start Yard and End Yard fields.



Field Setup

This section applies to the Monday-Sunday tab set displayed on the Add Route popup editor.

Field	Description
NOTE: Setup is specific to the day of the week selected from the tab sets above.	
Map Area	
Start Yard	Select a default Start Yard the truck will leave from at the start of the selected day.
End Yard	Select a default End Yard the truck will return to at the end of the selected day.
Start Time	Set a default Start Time for the route for the selected day.
Maximum Hours	Indicates the maximum amount of hours a route is allowed to run for that day. Used in optimization calculations if a value is entered.

Setup: Line of Business

Pathway: Setup > Services > Line Of Business

The Mobile/Optimization/Online Order tab for a Line of Business allows configuration setup for optimization type based on the Route Smart license setup.

The screenshot shows the 'LINE OF BUSINESS SETUP' interface. On the left, a table lists various line of business types. The 'UPDATE LINE OF BUSINESS' window is open, displaying the 'Optimization' tab. The 'ROUTE OPTIMIZATION TYPE' is set to 'Standard' and 'ROUTE OPTIMIZATION OVERRIDES' is set to 'Side Loader'. The 'Health Score Weights' section shows values for 'BALANCING' (34), 'COMPACTNESS' (33), and 'INTERLACING' (33).

ID	NAME	SCREEN TYPE	ENABLE MANIFEST PROCESSING	GL SEGMENT	WORK ORDER MINIMUM CHARGE CODE	OVER MAX-WEIGHT CHARGE CODE	UNEARNED REVENUE GL ACCOUNT	ENABLE USED OIL COLLECTION	AUTO COMPLETE SECONDS	DAYS AVAILABLE TO DRIVER	RECEIPT HEADER TEXT	ACKNOWLEDG... TEXT	ACTIVE
DOCDEST	Document Destruc...	1	No	DOC			Unearned Rev...	No	5	Today Only			Yes
FEL	Commercial	1											
HAZ	Hazardous Material	1											
INACTIVE	INACTIVE LOB	1											
LF	Inbound and Out...	1											
MEDICAL	Medical Waste	1											
MISC	Miscellaneous	1											
RESI	Residential	1											
RO	Roll Off	1											
SCALE	Scale	1											
UO	Used Oil Collection	1											

Field Setup

Field	Description
Route Optimization Type	Standard - optimization is processed through the Dispatch screen. Roll Off - optimization is processed through Active Dispatch, dependent on license setup. Geared towards active dispatching.
Route Optimization Overrides	Overrides the default settings configured at Route Smart and indicates how the route will be serviced (right/left side of street, etc.) Leave blank and route optimization will use your Route Smart's unique account settings.

Setup: Work Type

Pathway: Setup > Operations > Work Type

To improve route optimization accuracy, the 'Order Baseline Seconds' and 'Default Seconds Per Unit' fields in Work Type setup are important for Route Optimization calculations for service-based estimated service duration. -

WORK TYPE SETUP SETUP > OPERATIONS > WORK TYPE

LINE OF BUSINESS: All

ID	NAME	LOB	ACTION CATEGORY	INVENTORY MOVE TYPE	MANIFEST NOTIFICATION TEMPLATE	ORDER BASELINE SECONDS	DEFAULT SECONDS PER UNIT	CREATE ONE SERVICE RECORD PER QUANTITY	ENABLE DISPOSAL ENTRY	ENABLE DRIVER ENTERED LABEL WEIGHTS	ENABLE DRIVER PHOTO PROMPT	PRODUCTIVITY UNITS	ENABLE DRIVER TO SET IN PROGRESS
DDSV	Document Destruct...	Document ...	Swap	None			0	No	No	No	Yes	1	No
DEL_HAZ	Deliver HAZ	Hazardous ...	Delivery	N								1	No
DUMPONLY	Dump Only	Roll Off		N								1	No
FL_DELIVER	FL Delivery	Commercial	Delivery	D								1	No
FL_EXCHANGE	FL Exchange	Commercial	Swap	E								1	No
FL_EXTRAPU	FL Extra Pick Up	Commercial	Pick Up	N								1	No
FL_MISSED	FL Missed Pick Up	Commercial		N								1	No
FL_MOVE	FL Move	Commercial		N								1	No
FL_RELOCAT	FL Relocate	Commercial		N								1	No
FL_REMOVE	FL Removal	Commercial	Removal	R								1	No
FL_REPAIR	FL Repair	Commercial	Repair	N								1	No
FL_SERVICE	FL Service	Commercial		N								1	No
INBOUNDLD	Inbound Load	Inbound an...	Inbound / R...	N								1	No

UPDATE WORK TYPE

Details | NavuNav Settings | Add/Remove Default Charge Code

ID: FL_MISSED

NAME: FL Missed Pick Up

SELF-SERVICE LABEL:

LINE OF BUSINESS: Commercial

INVENTORY MOVE TYPE: None

ACTION CATEGORY:

MANIFEST NOTIFICATION TEMPLATE:

CREATE ONE SERVICE RECORD PER QUANTITY: No

ENABLE DISPOSAL ENTRY: No

ENABLE CONSOLIDATION BATCH LINK: No

PRODUCTIVITY UNITS: 1.00

DESTRUCTION DATE TRACKING: Disabled

Route Optimization

ORDER BASELINE SECONDS:

DEFAULT SECONDS PER UNIT: 0

SAVE

Field Setup

Field	Description
Order Baseline Seconds	Enter the average amount of time (in seconds) to service the location of the specific work type.
Default Seconds Per Unit	Enter the average amount of time (in seconds) it takes to service one unit of the work type. This multiplies against the scheduled service quantity on the work order for route optimization to more accurately calculate service duration.

Setup: Site Details (Customer Service)

Pathway: Accounts > Customer Service Screen

For sites that are expected to require longer servicing times, enter the estimated time in the the Additional Service Minutes field of Edit Site. When Route Optimization is run, minutes added here are included in calculations.



Additional Service Minutes is useful for gated communities, security checkpoints, locked enclosures and etc.

41898001 | Navusoft - Demo

1 of 3

MGR HOUSTON
Aliena Somers
COMMERCIAL
HOU-COMMERCIAL ARREARS
MONTHLY Billed Thru Date Dec 19, 2023
DUE DATE Jan 31, 2024 BATCH-25689 (in progress) - Not included on...
Cold Call
PAYMENT Not Applicable

ACCESS Gate Code 1234
NOTE Site Notes

INACTIVE

DIVISION CORPUS
SERVICE REGION CORPUS OPEN MARKET
SALES REP House Acct non System
SOURCE Cold Call
GENERATOR Not Applicable
SURCHARGE GRP Fuel Surcharge - Commercial
TAX REGION CC CITY-NUECES COU-CC MTA-CC
CRIME CON
TAX EXEMPT No
LEED REPORTABLE No

91-120 120+ TOTAL
0.00 0.00 0.00
Auto Pay Not Enabled

ENDING

1298	test	Isabel
1299	test	Isabel

EDIT SITE

Basic Settings | Billing Settings | BIC Profile | Required Capabilities

NAME Navusoft - Demo **DIVISION** CORPUS

NAME 2 **SERVICE REGION** CORPUS OPEN MARKET

ADDRESS LINE 1 Post Oak Blvd **TAX REGION** CC CITY-NUECES COU-CC MTA-CC

ADDRESS LINE 2 **ORIGIN**

CITY/STATE/POSTAL CODE Houston TX 77057 **SOURCE** Cold Call

PHONE 1 (626) 777-7777 Office **SALES REP** House Acct non System

PHONE 2 (999) 999-9999 **SITE CLASS**

OLD ID **GENERATOR** Not Applicable

PO# **EPA**

SIGNATURE REQUIRED **LEED REPORTABLE** **STATE ID**

ADDITIONAL SERVICE MINUTES

NOTE Site Notes

WARNING ON OPEN Site warning

ACCESS INFORMATION Gate Code 1234

BUSINESS HOURS / SERVICE WINDOW

SAVE

Field Setup

The following field setup is optional and only required if a site is known to have a longer servicing time.

Field	Description
Additional Service Minutes	Enter the additional amount of time to be expected to service the site.
Business Hours/Service Window	Times entered here are hard limits and help determine best placement on the route.

Related Articles:

[Route Optimization](#) - Learn how Route Optimization is used in Dispatch.