Introduction to PtMS IS - the Interactive Scheduler

The PTMS Interactive Scheduler is an automated schedule tool for PtMS for Windows that allows users to perform automated scheduling, trip editing, client lookups in a Windows based interface.

An online video with sound that demonstrates the basic features of the PTMS Interactive Scheduler can be viewed by click on this link: www.tsa-fl.com/ISDemo.html

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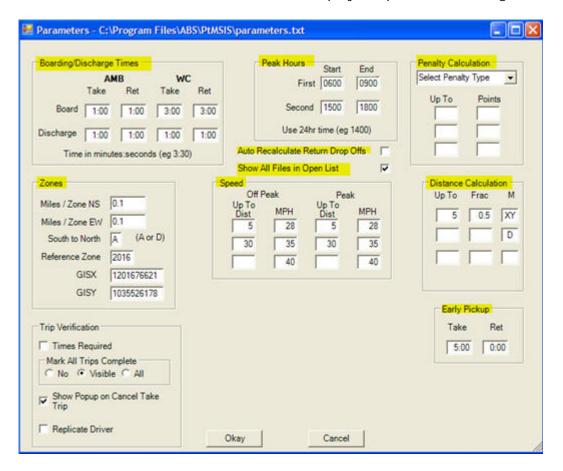
Setup and Configuration

Setup and Configuration operations prepare PtMS IS for live operation.

Scheduling Parameters and color codes for trip record conditions can be adjusted for schedule operation. Database setup tasks needed to support schedule operation can also be completed.

Parameters

From the View Menu, select Parameters to display the parameter settings:



Parameters allow users to customize the scheduling solutions provided by the Interactive Scheduler to insure they meet local needs.

Travel Time Parameters

- Boarding/Disharge Times
- Speeds
- Peak Hours
- Early Pickup

Distance Parameters

These parameters impact the estimated time of travel between stops in any schedule.

- Distance Calculation
- Zones

These parameters impact the estimated travel distance between stops in any schedule.

Any adjustments to these parameters is instantly reflected in all schedules in the Interactive Scheduler.

Penalty Calculation - How to define a "Good" vehicle schedule selection

The Penalty Calculation parameters are used to rank the best to worst vehicle selections by inserting the trip into each vehicle schedule, then evaluating how well the trip "fits" and how it impacts the other trips in the schedule.

A new trip "fits" well into an existing schedule if the trip is on-time for pickup and drop-off times, and it adds a minimum of travel time and distance to the vehicle's existing schedule.

A new trips "impact" on the existing schedule is measured by whether the existing trips on-time performance is compromised and whether the existing trips travel time is unreasonably extended.

The Penalty Calculation parameters measure the "fit" and "impact" characteristics of the trip on each schedule then combine them into a single Penalty Score. The lower the score the better the trip fits into that vehicle's schedule.

Here is a list of the Penalty Calculation parameters:

- Add Miles
- Pickup Before Shift
- Drop After Shift
- Pickup Late on Take
- Drop Late on Take
- Pickup Late on Return
- Drop Late on Return
- Over Capacity Ambulatory
- Over Capacity Wheel Chair
- Over Capacity Wheel Chair (if WC=0)
- Long Trip (Trip Exceeds established limit of minutes per trip)

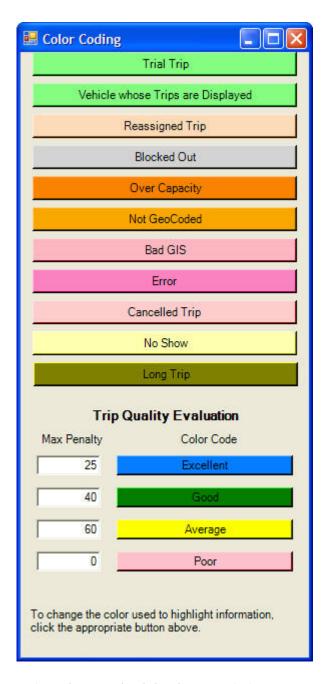
Penalty scores are grouped into categories - Excellent, Good, Average, and Poor. These 4 categories are Color Coded for easy recognition (see <u>Color Codes</u>).

For additional help on adjusting parameters refer to the on-line video at www.abs-pa.com/demos/online/ptmsis/ptmsis_parameters.html.

Color Codes

Color codes provide a mean for the scheduler to identify specific schedule characteristics or events rapidly and intuitively.

To adjust color codes or view the existing color code settings, select Help on the menu bar then select Color Codes to display the following screen:



You can adjust the color code assigned to a schedule characteristic or event by double clicking on it to display the color chart. Click on a color to select and change it.

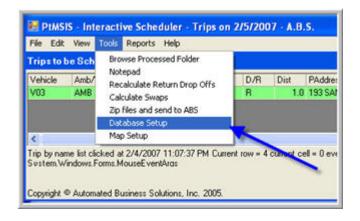


Database Setup

Once the SQL Express database is installed on the file server or workstation, the SQL database must be setup for the Interactive Scheduler. This setup step just connects the PtMSIS Interactive Scheduler to the PtMS for Windows SQL database

To setup the database for PtMS IS operations follow these steps:

1. Go to the Tools/Database Setup screen in PtMS IS:



- 2. Enter the username and password for the PtMS for Windows SQL Server Express. The username is "ptms" and the password is "abs". Enter both in lower case.
- 3. In the Step 2 selection box enter the name of your SQL Server Express server. This should be the computer name or server followed by a "\" then "ABS":
- 4. Next select the name of the database. Enter "PTMS" in the Step 3 selection box.
- 5. Select OK to complete the Database Setup and close the setup window.

Selecting the Schedule Date for Editing Schedules

Currently users must select a schedule day/date from PtMS and export or send the schedule to the PtMS IS Interactive Scheduler. This operation only takes 10-30 seconds to complete. When scheduling tasks are completed in PtMS IS, the PtMS schedule database must be updated with the schedule results. This operation only takes a few seconds to complete.

Both of these tasks are accomplished using the PtMS IS Data Exchange. A soon to be released SQL version of PtMS will no longer require this step since the entire database will be in SQL in this version and transport of schedule results between the 2 databases will no longer be necessary.

Loading a Schedule Date

A Schedule date must first be loaded into the Interactive Scheduler before the user can edit the schedule. Click on the down arrow in the Select Schedule Date box to display the calendar. Select the schedule date then click on the button "Load Schedule Date" to display the schedule data in the Interactive Scheduler.

Updating a Schedule Date

All changes to vehicle schedules are saved automatically on the Interactive Scheduler screen. If the user closes the Interactive Scheduler and re-opens it, or opens another schedule date and returns to a schedule in progress, the changes will be saved and displayed on the screen.

However, schedule changes made in the Interactive Scheduler must be sent to the PtMS SQL data base so the PtMS data base schedule reflects all the changes made in the Interactive Scheduler. This update should be performed periodically throughout the day if you are working with the scheduler regularly or when you have completed a schedule session with a specific schedule date.

Updating PtMS SQL database with the Interactive Scheduler results does not require the user to close the Interactive Scheduler, simply select the button "Update Schedule" in the top right corner of the Trips to Be Schedule window and the update is complete.

We recommend you reload the schedule date using the "Load Schedule" button after performing an update. This will insure that any new trip requests that have been added since the schedule date was last loaded are displayed on the screen.

Scheduling Basics

Included in this section:

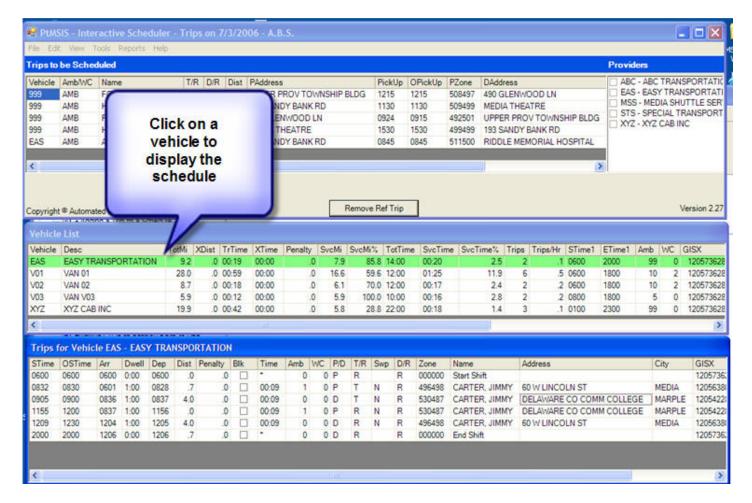
- · How to edit a vehicle's schedule times
- How to remove a trip from an existing schedule for rescheduling
- How to add a trip to a vehicle's schedule

The last item involves the mechanics of selecting a vehicle option for an unscheduled trip and adding it to the vehicles schedule.

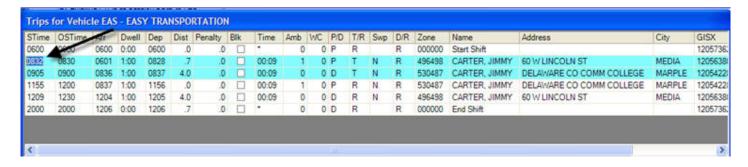
For a more detailed explanation of how to evaluate vehicle rankings (excellent, good, average, poor) refer to the web tutorial <u>Selecting the Best Vehicle and Adding an Unscheduled Trip to a Vehicle's</u> Schedule

Editing Schedule Times

Click on a Vehicle in the Vehicle List window to display the schedule for the Vehicle.



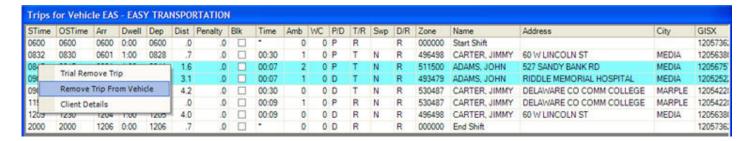
Click in any Scheduled Times field value (STime column) to edit the time. The OSTime column is the Original Scheduled (aka Default Time or Appointment Time) and is available as a reference. Once the time is edited click outside the field to save the time change.



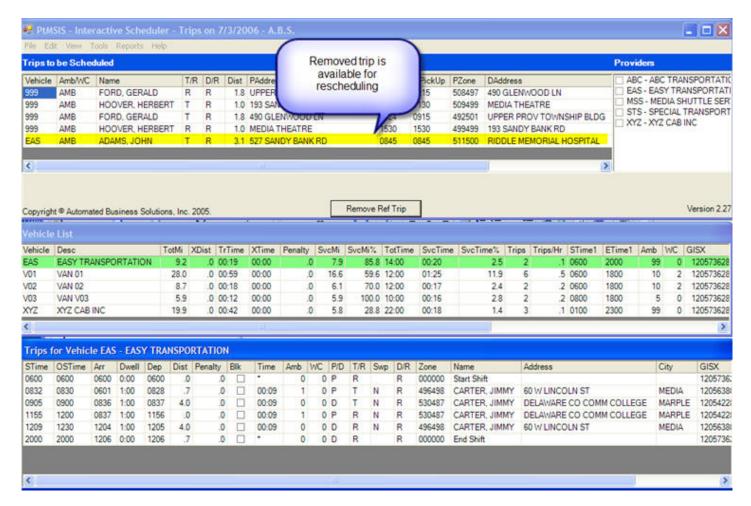
Removing a Trip from a Schedule

To remove a trip from a vehicle's schedule:

Highlight the trip by right clicking on the trip in the "Trips for Vehicle" window.

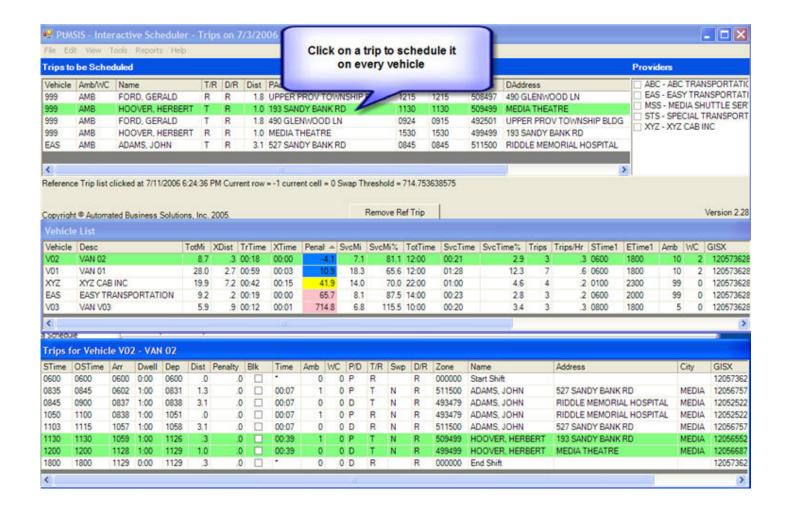


Left click on the "Remove Trip from Vehicle" option and the trip will be removed from the schedule and displayed in the "Trips to be Scheduled" window where it can now be rescheduled.



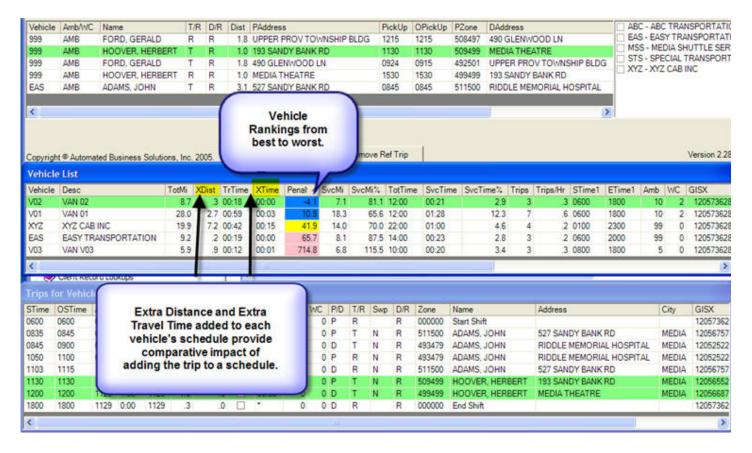
Adding a Trip to a Schedule

Step 1. Click on an unscheduled trip in the "Trips to Be Scheduled" Window.

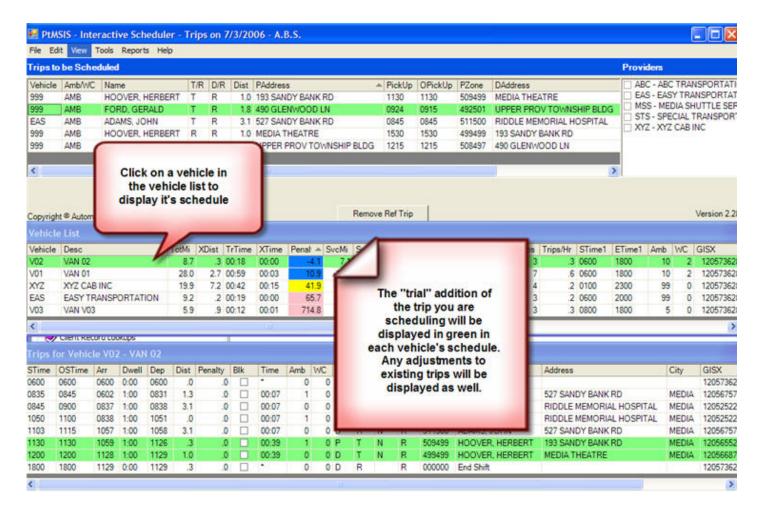


Step 2. Review how PtMS IS has scheduled the trip and ranked the best to worst vehicle options.

Color Codes provide schedulers with a means for instantly identifying the best vehicle options.



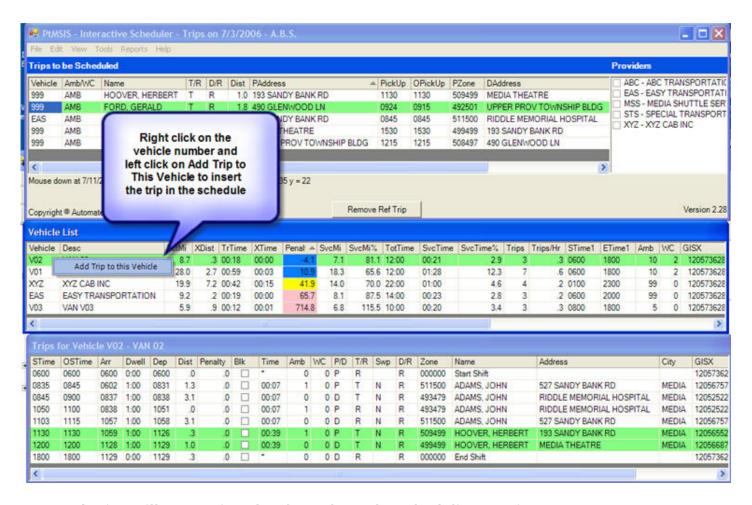
Step 3. Inspect the trip inserted in a vehicle's schedule by clicking on the vehicle in the Vehicle List and review the "trial" addition of the trip in each vehicle's schedule.



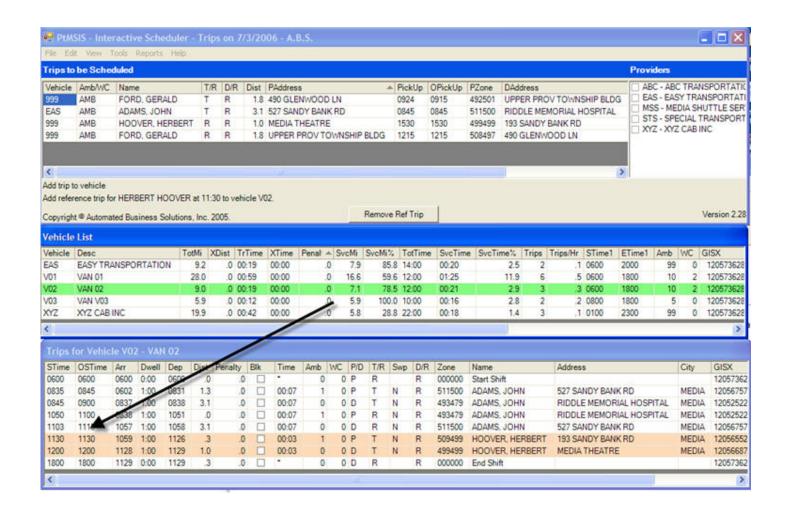
Step 4. Adjust Pickup and Drop-Times if needed and return to Step 2

Pickup Times can be adjusted by using the **Editing Schedule Times** feature.

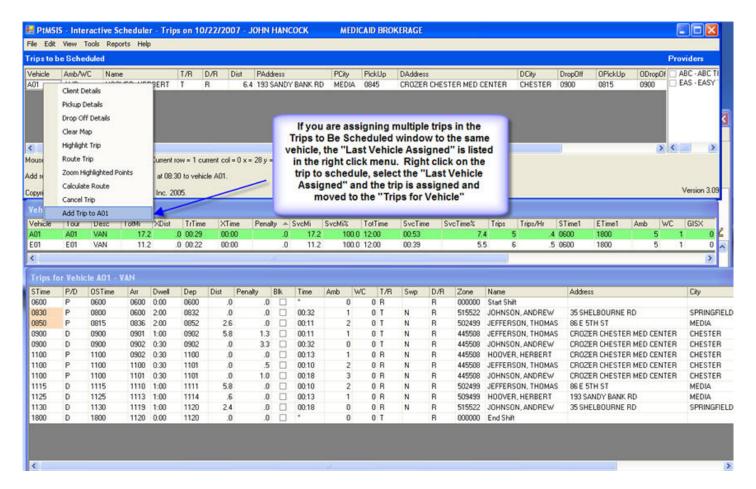
Step 5. Select your vehicle choice and add the trip to the vehicle's schedule



Inserted Trips will appear in color throughout the scheduling session.



Last Vehicle

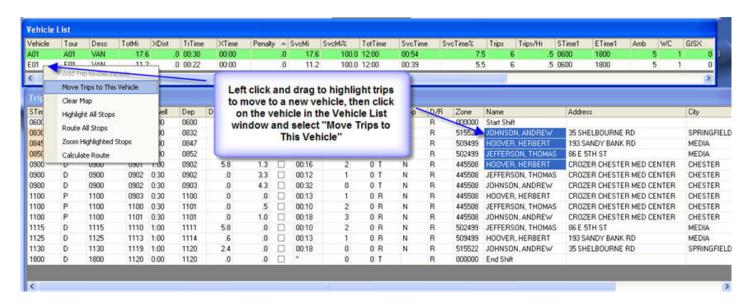


Moving Trips from Vehicle To Vehicle

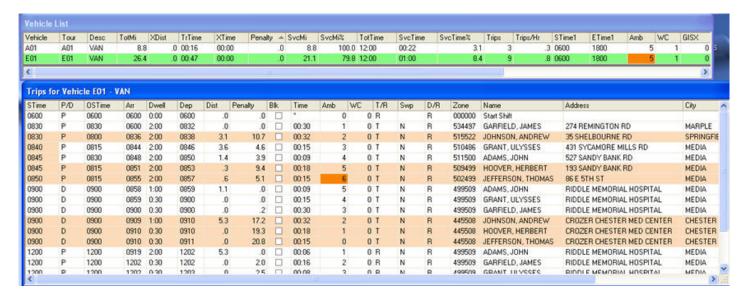
One or more trips can be moved directly from one vehicle to a second vehicle. You can only move contigous trips in a schedule, that is, trips that follow one after another. If there are multiple sets of contiguous trips to move, the moves will have to performed several times moving each contiguous set of trips with each move.

To Move a set of contiguous trips from one vehicle to another vehicle:

- 1. Display the trips to move in the Trips for Vehicle window.
- 2. Left click and drag your mouse down to highlight the trips to move.
- 3. Right click on the vehicle in the Vehicle List and select "Move Trips to This Vehicle" to complete the move.



The moved trips will be highlighted and displayed on the new vehicle in the Trips for Vehicle window.

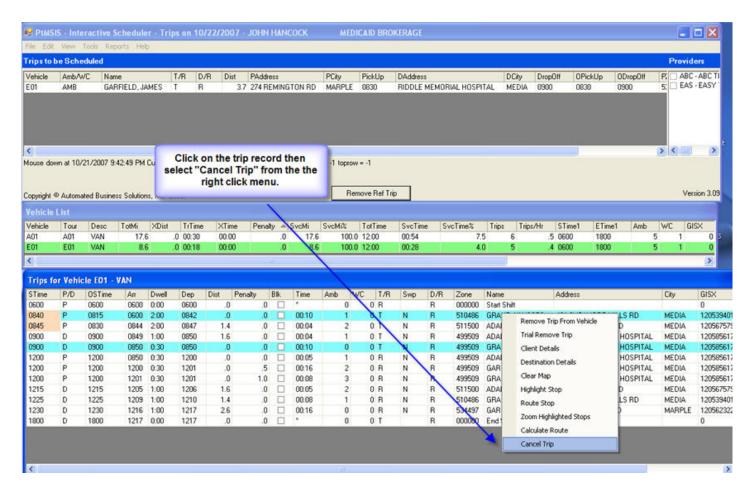


Cancelling Trips

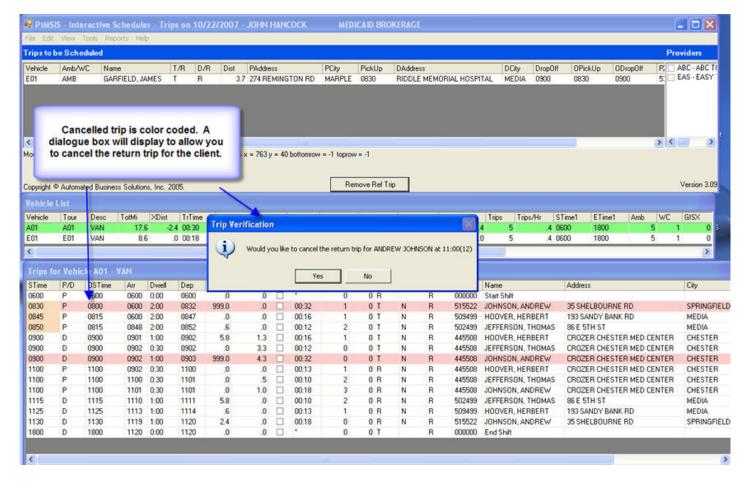
Trips may be cancelled from the Trips for Vehicle window.

To Cancel a Trip:

- 1. Right click on the trip
- 2. Select "Cancel Trip" from the right click menu.



The trip will be color coded to identify it as cancelled. If there is a return trip for this client a dialogue box will display and provide an opportunity to cancel the return trip.



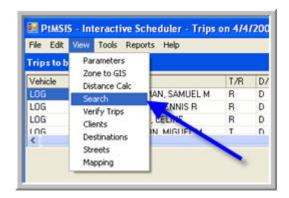
Cancelled trips are removed from the scheduling process and are not included schedule calculations of distance and time for a vehicle.

To UnCancel a Trip.

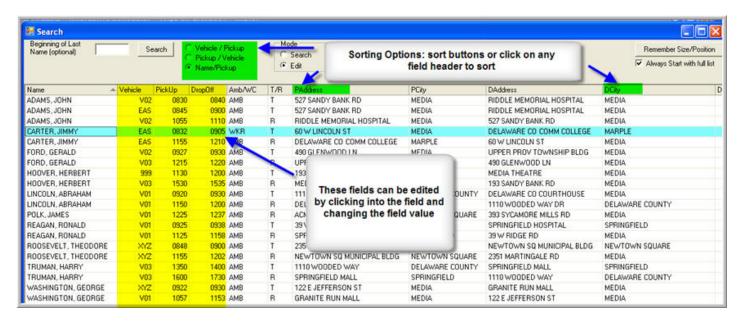
- 1. Right click on the trip
- 2. Select "Uncancel Trip" from the right click menu.

Search-Edit Screen - Browsing All Trip Records

The Search-Edit screen is accessed from the View menu.



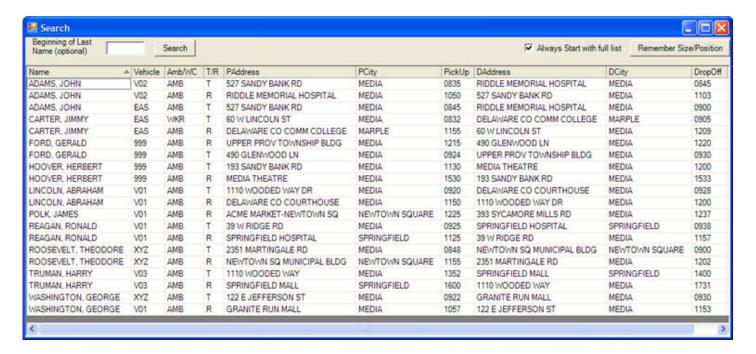
This screen provides a means for browsing the entire schedule day. Records can be instantly sorted using the 3 sort buttons at the top, or sorted by click on the field headers. Pickup Time, drop-off time, and scheduled vehicle can be edited directly on this screen.



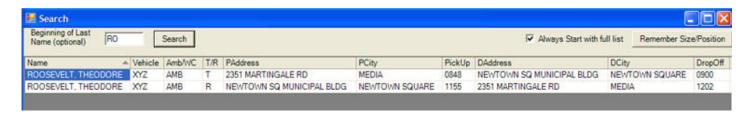
Searching for a Trip Record

A Search screen is available for rapidly locating a client trip records. This screen can also be used for rapidly locating all trips arriving at a specific location, etc, by resorting all trip records by clicking on one of the field headers.

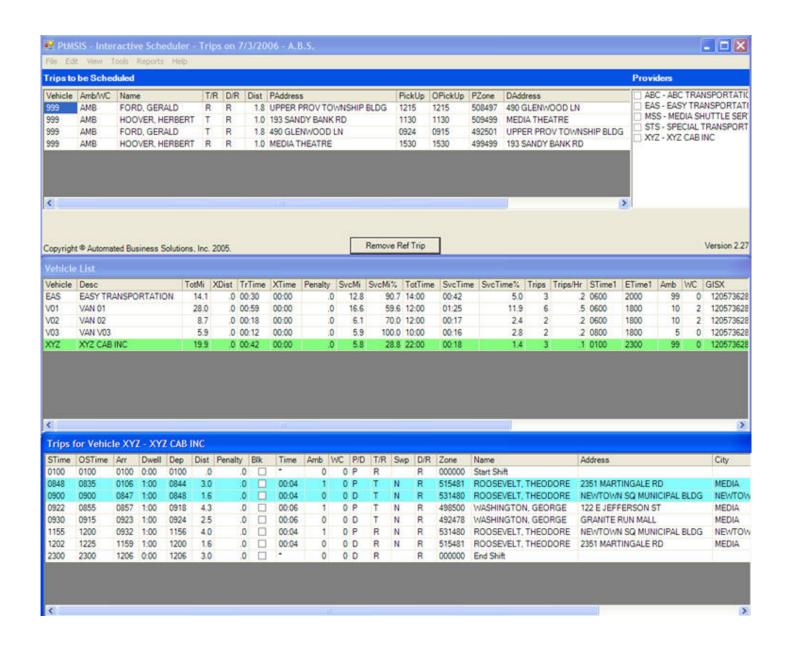
From the Interactive Scheduler menu bar select View, then Search:



Enter part of the name in the Search field box, then click on Search to display the trip records that match.



Click on any trip record and this will display the trip record in the "Trips for Vehicle" window.



Database Operations

Database operations allow users to lookup data records for tables that support the scheduling functions. Look tables include:

- 1. Client Records
- 2. Destination Records

Client Records

The Interactive Scheduler can display selected client records or all PtMS client using a Client Records Browse window.

Included in this section:

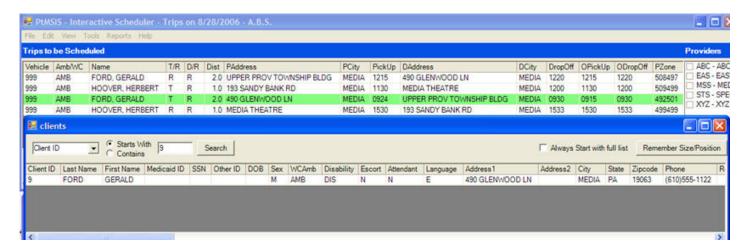
- How to display a client record for a selected trip
- · How to browse and sort all client records
- How to search client records for matches on selected fields

Displaying Client Record for a Selected Trip

The client record information for a selected trip record in the Trips to Be Scheduled window or the Trips for Vehicle window can be displayed by right clicking on the trip record and selecting Client Detail.



The record will be displayed and can be viewed by scrolling right to display all the record information.



Browsing All Client Records

From the Interactive Scheduler menu bar select View, Clients.



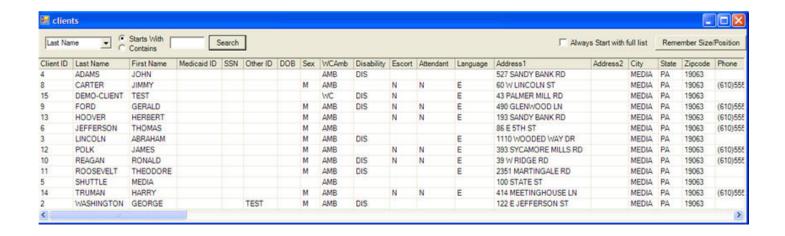
This will display the Client Records browse window. Note, some fields are off the screen to the right and require the user to scroll right to see the display.



To search for specific record in the Client Browse screen:

- Click on the fields list drop down and select a field to search
- Select the search criteria either "Starts with" or "Contains"
- Enter all or part of the field value in the search box then click the Search button*

^{*}Note: If you leave the search box blank and click on Search, all Client records will be displayed sorted by the search field.

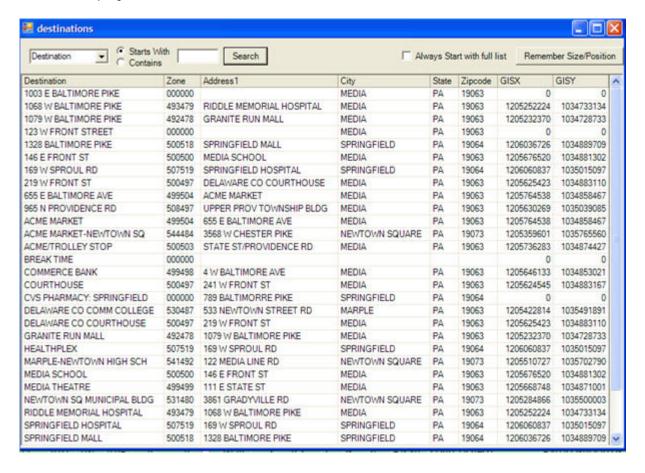


Destinations

From the Interactive Scheduler menu bar select View, Destinations.



This will display the Destination Records browse window.



Mapping

Mapping operations allow users to place selected trips or entire vehicle routes on the map. Once a vehicle route, or part of a vehicle route(s) are displayed on the map, the route can be manipulated by the users, pickup and dropoff order can be adjusted, trips added, etc.

Mapping operations also allow users to geocode - assign map coordinates - to new unmapped addresses.

Mapping Trip Records and Vehicle Routes

This section outlines how to use the Interactive Scheduler to map individual trip records, select trips within a vehicle schedule, entire vehicle schedules, and trips combined across vehicle schedules. Once mapped the street route and travel time and distance can be calculated and displayed on the map.

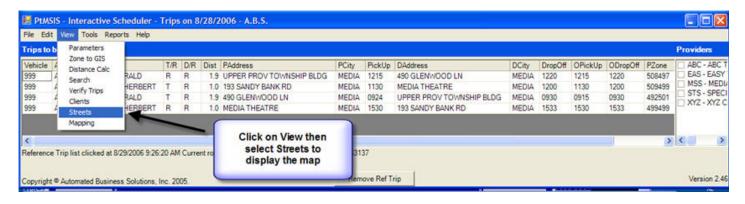
Included in this section:

- Overview of the Streets 2006 Map Software
- How to access the map commands
- Map commands summary
- · How to highlight trips on the map
- How to add trips to the route list and produce the route
- How to produce the route report

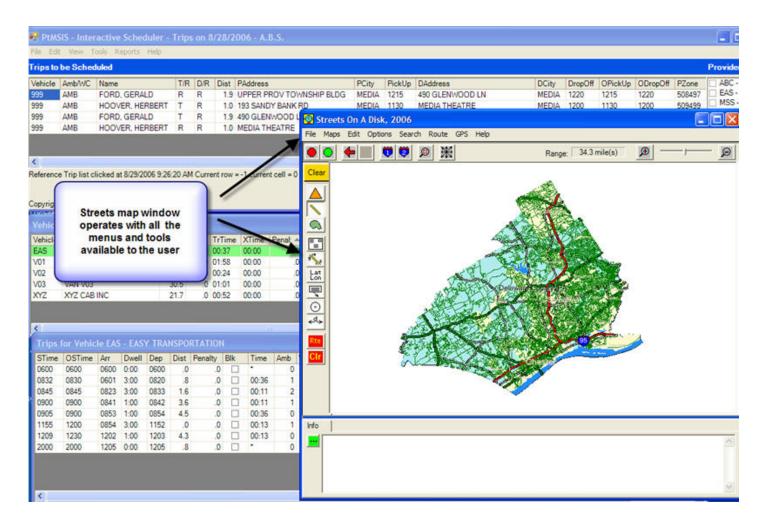
Streets 2006 Map Software

Opening the Map Window

From the menu bar at the top select View, the Streets to open the Map window.



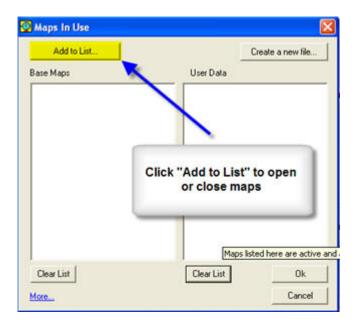
Once the map window is open, the user has all the map menus and tools available. You must open the Maps menu and select your maps the first time the Map window is opened. Once installed, they do not have to be opened again even after closing and reopening the Interactive Scheduler. Just open the Map window before display trips records or entire routes on the map.



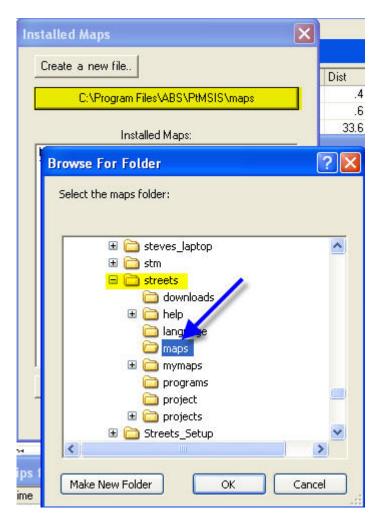
Select Maps to Open in Streets

First Open the Streets Map from the PtMSIS View menu on the Tool Bar.

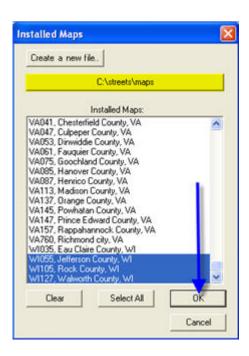
Next, click on the Streets/Maps menu on the Streets Toolbar and you will open this window and click on 'Add to List':



Next, browse to the C:\Streets\Map folder and click on this to select it.



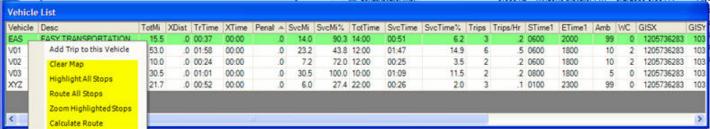
Browse and find your maps in the list, click on the maps (CTRL+left click to select more than one) then click OK to open the maps.

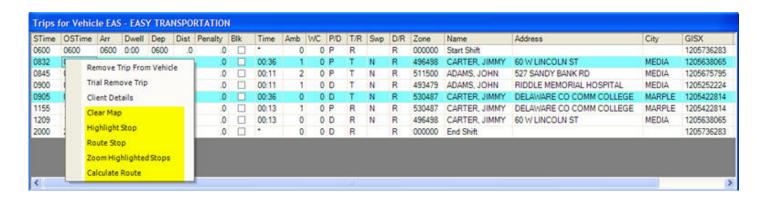


Accessing the Map Commands

In each of the three scheduling windows right click on a trip or line to display the commands menu. Map commands are listed in each menu.







Map Commands Summary

Here is a list of the mapping commands available on the menus and a brief description of their function. Are more detailed description of the command is included in a separate help section below.

Clear Map

This selection clears the map display of all highlights and route stops. The Route list is completely cleared. Select this command when preparing to add stops or trips to a "clean map" that does not contain any previous routing information.

Highlight Trip(s) or Stop(s)

A trip represents the pickup and dropoff address. A stop can be either the pickup or the dropoff address of a specific trip.

Highlighting a trip or stop simply attaches a label to that point(s) on the map. This option does not call the Map window to the top of the display. Popping up the map each time you selected a stop or trip record to highlight on the map would slow down mapping operations since the map would redraw and display with each highlight.

Zoom Highlighted Trip(s) or Stops(s)

Select the Zoom Highlighted Trips or Stops command to popup the Map window and resize the display to include all the highlighted points.

Route Trip(s) or Stop(s)

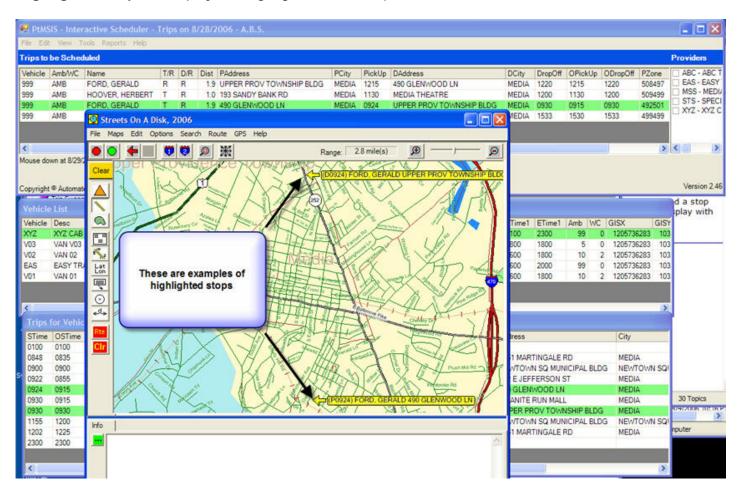
This command places the stop(s) in the Route list. They are appended to the end of the list. An icon is placed on the map at the stop location with a number representing the order in the Route list.

Calculate Route

This command calculates the street path route from the stops in the route list. The route is displayed on the map.

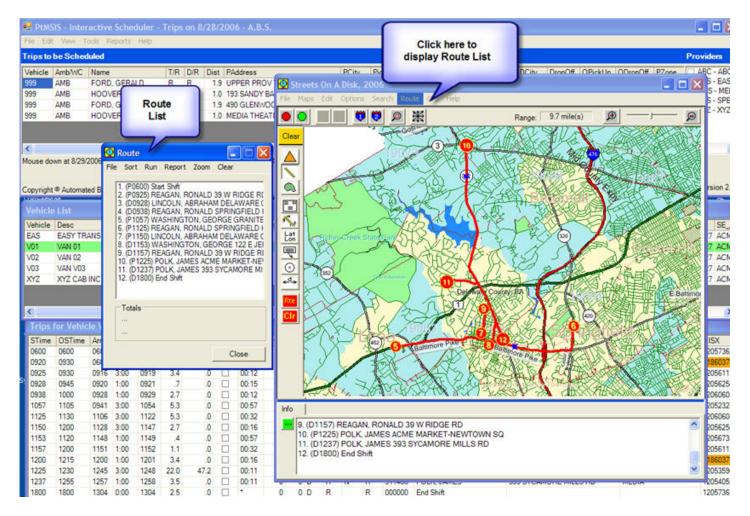
Highlighting Trips

Highlighting a trip or stop attaches a label to that point(s) on the map. Here is an example of a Trip to Be Scheduled displayed on the map as highlights. After highlighting the trip, the user selects **Zoom to Highlighted Trips** to display the highlights on the map.



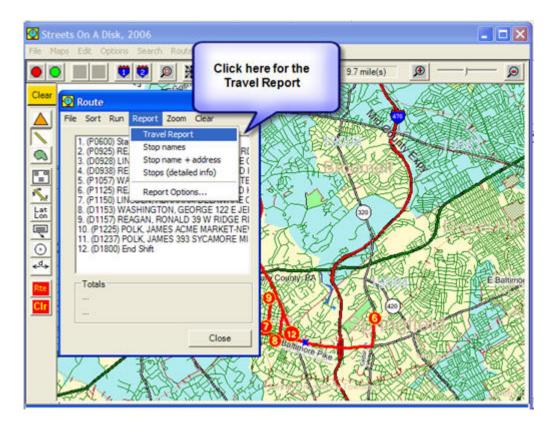
Routing Trips

Route Trip or Route All Stops places the selected stop(s) in the Route list. They are appended to the end of the list. In addition an icon is placed on the map at each stop location with a number representing the order in the Route list. The **Calculate Route** command calculates the street path route from the stops in the route list. The route is displayed on the map.



Route Reports

Once the **Calculate Route** command is executed, the user can request a detailed **Travel Report** for the route. The Travel Report lists the drive directions to each stop on the route. Travel time and mileage between stops is listed as well. The Travel Report can be edited or printed.



A sample Travel Report is displayed below:

```
Starting Clock: 06:00 AM
Visit Time: 0 hr(s), 3.00 min. (= 0.050 hrs)
Fuel: 20 mi/gal
Cost: $0.25 per mile(s)
     Start: 1. (P0600) Start Shift
                       Go northwest, 0.9 mile(s), on ST-252.
Turn left, go southwest, 0.2 mile(s), on Ridge Rd.
     Stop: 2. (P0925) REAGAN, RONALD 39 W RIDGE RD
Clock (arrival): 06:01 AM
Time (from start): 0 hr(s), 1.50 min. (= 0.025 hrs)
Distance(from start): 1.0 mile(s)
Clock (depart): 06:04 AM
                      Go east, 489 ft, on Ridge Rd.
Turn right, go south, 0.6 mile(s), on Olive St.
Turn right, go west, 151 ft, on Front St.
  Stop: 3. (D0928) LINCOLN, ABRAHAM DELAWARE CO COURTHOUSE Clock (arrival): 06:06 AM Time (from last stop): 0 hr(s), 1.50 min. (= 0.025 hrs) Time (from start): 0 hr(s), 6.00 min. (= 0.100 hrs) Distance(from last stop): 0.8 mile(s) Distance(from start): 1.8 mile(s) Clock (depart): 06:09 AM
                      Go east, 151 ft, on Front St.
Turn right, go south, 181 ft, on Olive St.
Turn left, go east, 171 ft. on Jasper St.
Turn right, go south, 514 ft, on Plum St.
Turn left, go east, 514 ft, on Plum St.
Turn left, go east, 514 ft, on Baltimore Pike.
Turn left, go north, 0.6 mile(s), on ST-320.
  Stop: 4. (D0938) REAGAN, RONALD SPRINGFIELD HOSPITAL Clock (arrival): 06:13 AM Time (from last stop): 0 hr(s), 4.11 min. (= 0.068 hrs) Time (from start): 0 hr(s), 13.10 min. (= 0.218 hrs) Distance(from start): 3.0 mile(s) Distance(from start): 4.8 mile(s) Clock (depart): 06:18 AM
                       Go south, 0.6 mile(s), on ST-320.
Turn right, go west, 4.4 mile(s), on Baltimore Pike.
  Stop: 5. (P1057) WASHINGTON, GEORGE GRANITE RUN MALL
Clock (arrival): 06:23 AM
Time (from last stop): 0 hr(s), 6.45 min. (= 0.107 hrs)
Time (from start): 0 hr(s), 22.55 min. (= 0.376 hrs)
Distance(from start): 5.0 mile(s)
Distance(from start): 9.7 mile(s)
Clock (depart): 06:26 AM
                       Go northeast, 0.5 mile(s), on US-1.
Slight turn left, go northeast, 3.9 mile(s), on Baltimore Pike.
Turn left, go north, 0.6 mile(s), on ST-320.
   Stop: 6. (P1125) REAGAN, RONALD SPRINGFIELD HOSPITAL
Clock (arrival): 06:32 AM
Time (from last stop): 0 hr(s), 6.45 min. (= 0.107 hrs)
Time (from start): 0 hr(s), 32.00 min. (= 0.533 hrs)
Distance(from start): 5.0 mile(s)
Distance(from start): 14.7 mile(s)
Clock (depart): 06:33 AM
                       Go south, 0.6 mile(s), on ST-320.
Turn right, go west, 2.2 mile(s), on Baltimore Pike.
Turn right, go north, 514 ft, on Plum St.
Turn left, go west, 171 ft, on Jasper St.
Turn right, go north, 181 ft, on Olive St.
Turn left, go west, 151 ft, on Front St.
     Stop: 7. (P1150) LINCOLN, ABRAHAM DELAWARE CO COURTHOUSE Clock (arrival): 06:39 AM
Time (from last stop): 0 hr(s), 4.11 min. (= 0.068 hrs)
Time (from start): 0 hr(s), 39.11 min. (= 0.652 hrs)
Distance(from stat stop): 3.0 mile(s)
Distance(from start): 17.7 mile(s)
                       Go east, 151 ft, on Front St.
Turn right, go south, 181 ft, on Olive St.
Turn left, go east, 171 ft, on Jasper St.
Turn right, go south, 514 ft, on Plum St.
Turn right, go east, 0.1 mile(s), on Baltimor
Turn right, go south, 512 ft, on Monroe St.
Turn left, go east, 87 ft, on Jefferson St.
  Stop: 8. (D1153) WASHINGTON, GEORGE 122 E JEFFERSON ST

Clock (arrival): 06:43 AM

Time (from last stop): 0 hr(s), 0.80 min. (= 0.013 hrs)

Time (from start): 0 hr(s), 42.91 min. (= 0.715 hrs)

Distance(from start): 0.4 mile(s)

Distance(from start): 18.1 mile(s)
                       Go east, 85 ft, on Jefferson St.
Turn left, go north, 492 ft, on Gayley St.
Turn right, go east, 281 ft, on Baltimore Pike.
Turn left, go north, 0.5 mile(s), on Edgemont St.
Slight turn left, go northwest, 0.4 mile(s), on ST-252.
Turn left, go southwest, 0.2 mile(s), on Ridge Rd.
   | Stop: 9. (D1157) REAGAN, RONALD 39 W RIDGE RD | Clock (arrival): 06:48 AM | Time (from last stop): 0 hr(s), 2.15 min. (= 0.036 hrs) | Time (from start): 0 hr(s), 48.06 min. (= 0.801 hrs) | Distance(from start): 1.2 mile(s) | Distance(from start): 19.3 mile(s) | Clock (depart): 06:51 AM | Clock (depart): 06:52 AM | Clock (depart): 06:52 AM | Clock (depart): 06:53 AM | 
                       Go east, 0.2 mile(s), on Ridge Rd.
Turn left, go northwest, 4.3 mile(s), on ST-252.
Hard turn right, go east, 0.2 mile(s), on ST-3.
  Stop: 10. (P1225) POLK, JAMES ACME MARKET-NEWTOWN SQ
Clock (arrival): 06:57 AM
Time (from last stop): 0 hr(s), 6.25 min. (= 0.104 hrs)
Time (from start): 0 hr(s), 57.30 min. (= 0.955 hrs)
Distance(from last stop): 4.6 mile(s)
Distance(from start): 23.9 mile(s)
Clock (depart): 07:00 AM
                       Go west, 0.2 mile(s), on ST-3.
Hard turn left, go southeast, 3.6 mile(s), on ST-252.
Turn right, go southwest, 357 ft, on Rose Tree Rd.
Slight turn right, go west, 0.7 mile(s), on Sycamore
   Stop: 11. (D1237) POLK, JAMES 393 SYCAMORE MILLS RD Clock (arrival): 07:07 AM Time (from last stop): 0 hr(s), 6.55 min. (= 0.109 hrs) Time (from start): 1 hr(s), 6.86 min. (= 1.114 hrs) Distance(from start): 4.5 mile(s) Distance(from start): 28.5 mile(s) Clock (depart): 07:10 AM
                      Go northeast, 0.7 mile(s), on Sycamore Mills Rd.
Slight turn left, go northeast, 357 ft, on Rose Tree Rd.
Turn right, go southeast, 1.6 mile(s), on ST-252.
  Stop: 12. (01800) End Shift

Clock (arrival): 07:14 AM

Time (from last stop): 0 hr(s), 3.68 min. (= 0.061 hrs)

Time (from start): 1 hr(s), 13.53 min. (= 1.226 hrs)

Distance(from last stop): 2.4 mile(s)

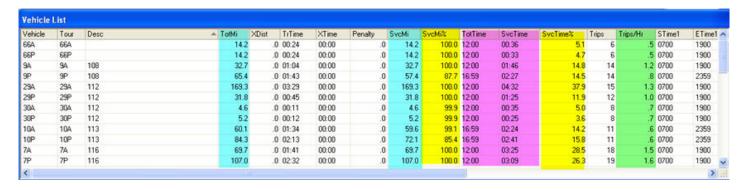
Distance(from start): 30.8 mile(s)
   Clock (final): 07:14 AM
Total Distance: 30.8 mile(s)
```

Optimizing Schedules

Optimizing Schedules involves taking existing schedules designed by the user and the Interactive Scheduler and determining if further improvedments are possible:

- 1. Improve route efficiency by lowering travel miles and hours for a vehicle route(s)
- 2. Improve on-time performance
- 3. Increasie trips per hour
- 4. Increase percentage of service miles and service hours per vehicle
- 5. Lower average travel time per client

Route Optimization and Trip Swapping are schedules tools designed to assist the user with achieving these results. The Vehicle List display and the Vehicle Productivity Report can assist the user with monitoring the schedule improvements.



Route Optimization

PtMS IS Route Optimization will assist users with reducing vehicle drive time and mileage in selected sections of vehicle schedules.

Briefly stated, Route Optimization will take a set of pickups and dropoffs and determine the shortest pickup sequence (for a group of pickups going to a common location) or the shortest drop-off sequence (for a group of trips picked up at a common location at the same time and being taken home).

When can you apply Route Optimization?

- Consecutive pickups going to a common drop-off location.
- Multiple pickups at a common pickup location being dropped off at home.

Requirements for Multiple Pickups going to a Common Destinations

- Pickup times must be flexible so that PtMS IS is allowed to change the pickup time sequence.
- Pickups going to a common site must be consecutive.

A common drop-off time for all clients will satisfy their scheduling requirements.

Examples of Multiple Pickups Going to a Common Destination

Example 1:

Client A pickup

Client B pickup

Client C pickup

Client D pickup

Client E pickup

Drop-off at Common Destination 1 for Clients A, B, C, D, E

Example 2:

Client A pickup

Client B pickup

Client C pickup

Client D pickup

Client E pickup

Drop-off at Common Destination 1 for Clients A, B, E

Drop-off at Common Destination 2 for Clients C, D

Requirements for Multiple Drop-offs from a Common Pickup Location

- Common pickup time for all clients at the common pickup location.
- Flexible drop-off times.

Examples of Multiple Drop-offs from a common Pickup location

Example 1:

Pickup Client A, B, C at Pickup Location 1 at the same Pickup Time

Drop-off Client B

Drop-off Client A

Drop-off Client C

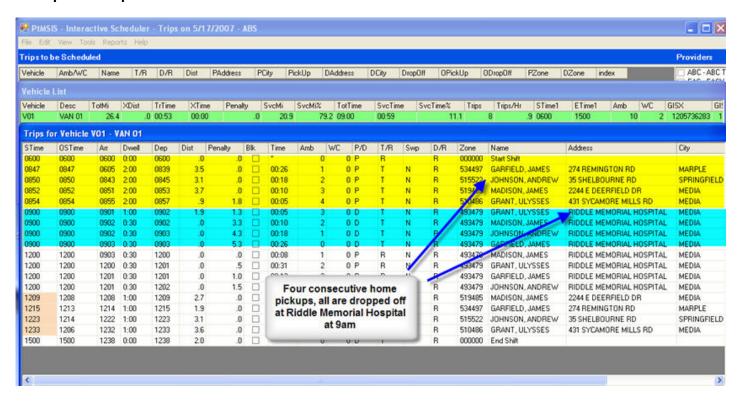
Example 2:

Pickup Client A, B, C at Pickup Location 1 at the same Pickup Time Pickup Client D, E at Pickup Location 2 at the same Pickup Time

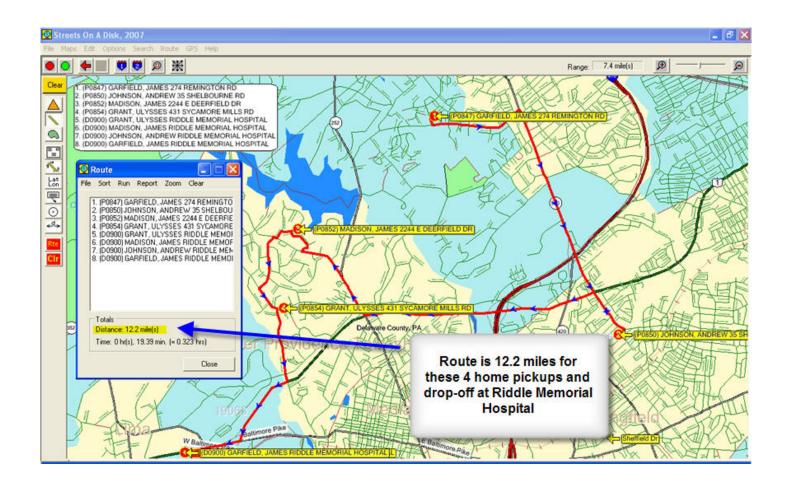
Drop-off Client A Drop-off Client D Drop-off Client C Drop-off Client B Drop-off Client E

Route Optimization Example

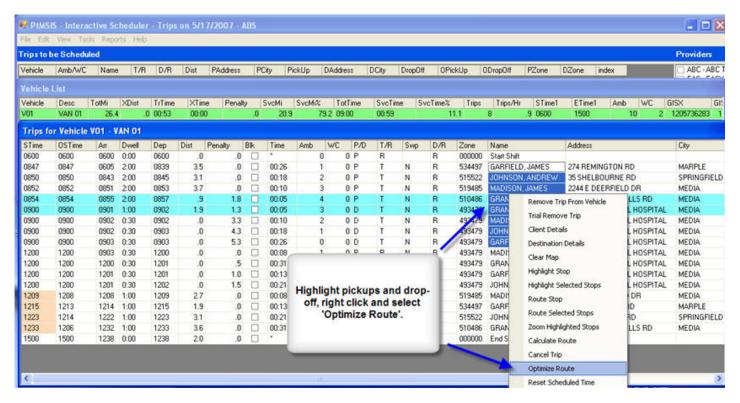
Multiple Pickups to Common Destination Schedule



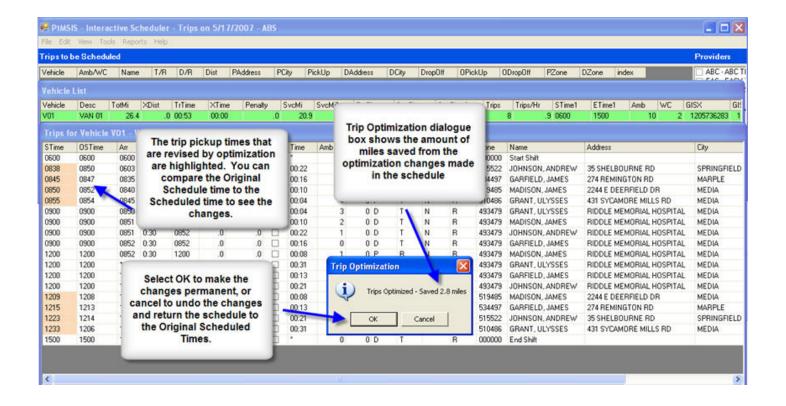
Multiple Pickups to Common Destination Route Map

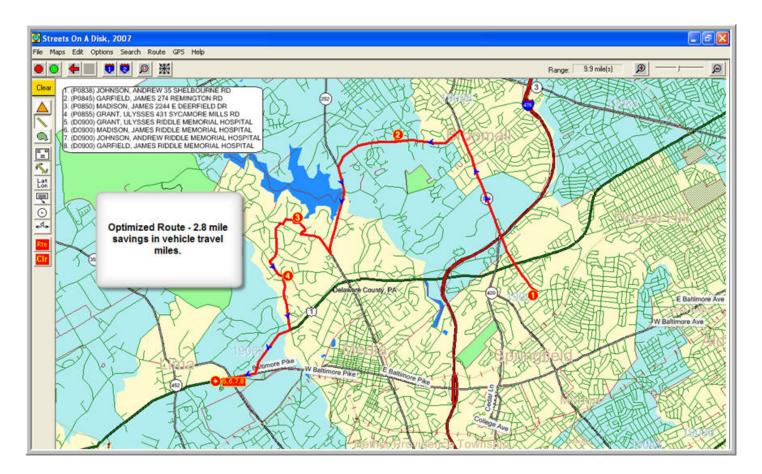


Apply Route Optimization



Route Optimization Schedule Savings





Trip Swapping

What is Trip Swapping?

Trip Swapping means to move an existing scheduled trip to a new vehicle in order to find better vehicle options for a trip you are trying to schedule

The "swap" creates a space for the new trip to be added to an existing Vehicle's schedule. The moved or swapped trip must also be scheduled on a different vehicle.

The net effect of the swap should be:

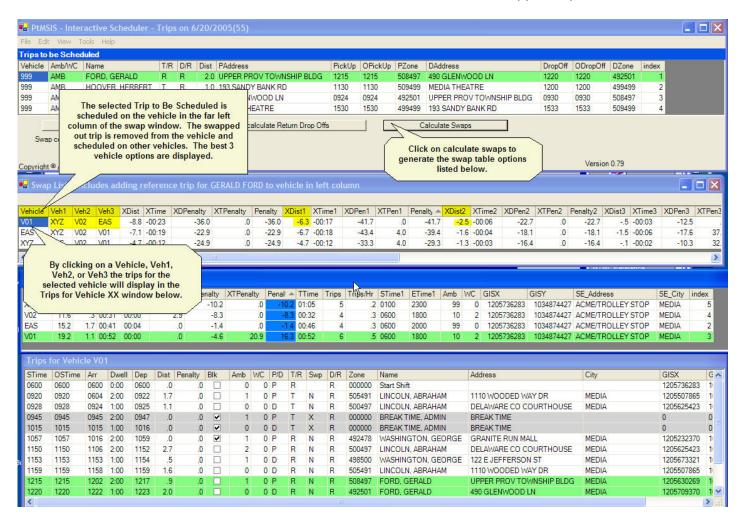
- On-Time Performance is maintained or improved for both trips
- Total vehicles miles added to both vehicle schedules is reduced

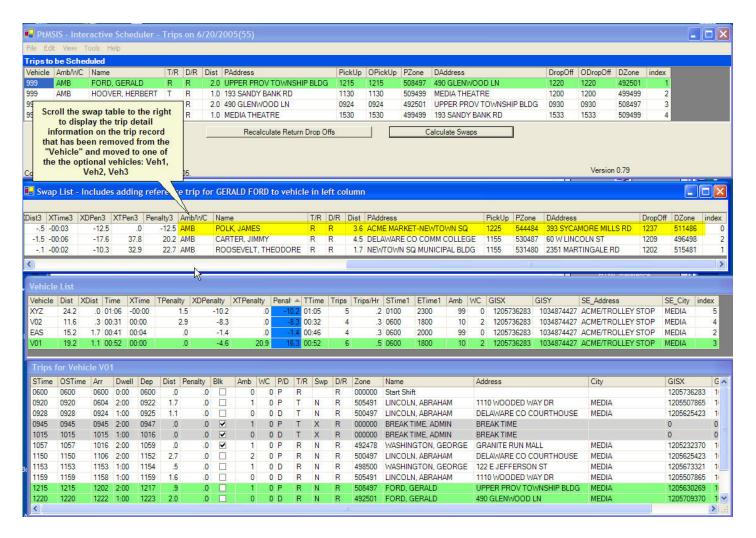
For a more detailed description of trip swapping procedures, refer to the help article on Trip Swapping.

Trip Swapping Procedures

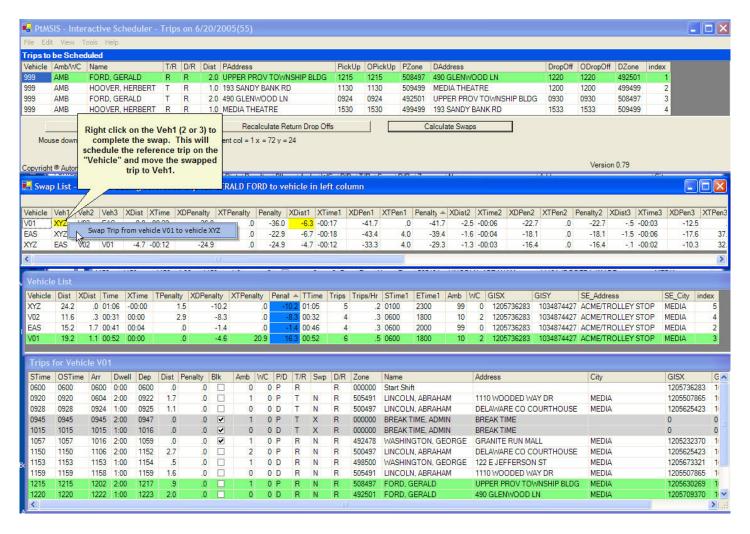
How to Review Swap Options

- 1. Select a reference trip to schedule in the "Trips to Be Scheduled Window"
- 2. Click on the "Calculate Swaps" button
- 3. Click on the "Vehicle Column" to review where the reference trip is being scheduled after the swap
- 4. Click on the "Veh1, Veh2, or Veh2" columns to view where the swapped trip will be scheduled

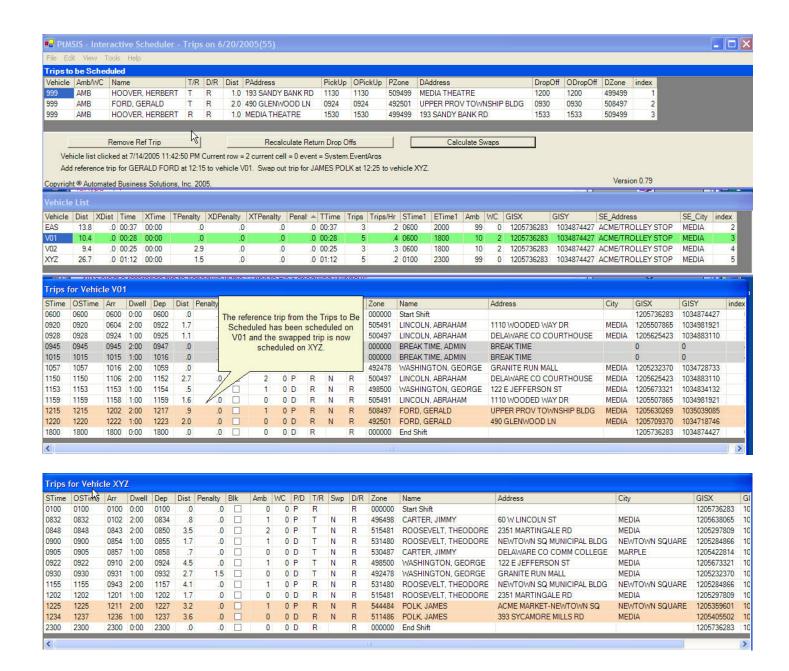




How to Make the Swap

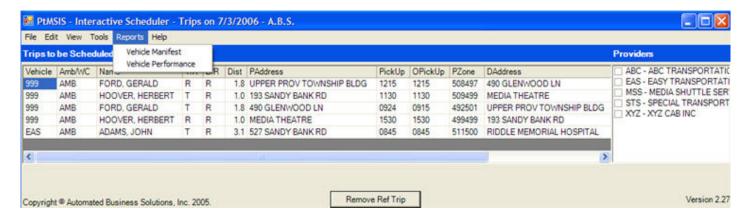


Reviewing Both Trips Scheduled



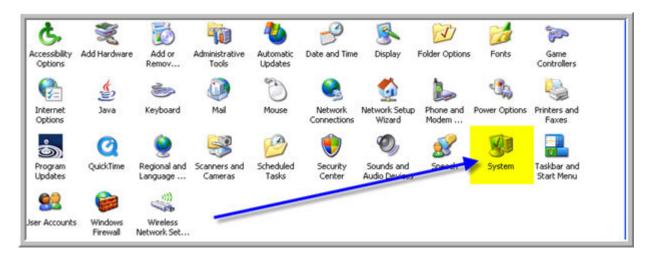
Reports

The Report Menu can be accessed from the menu bar of the Interactive Scheduler:

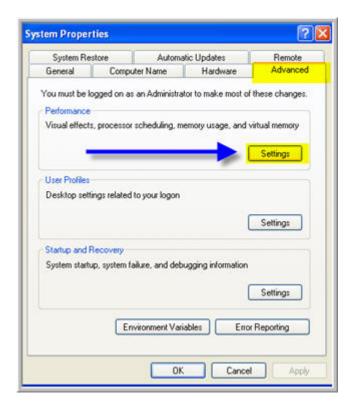


Increasing Windows Virtual Memory to Improve Reporting

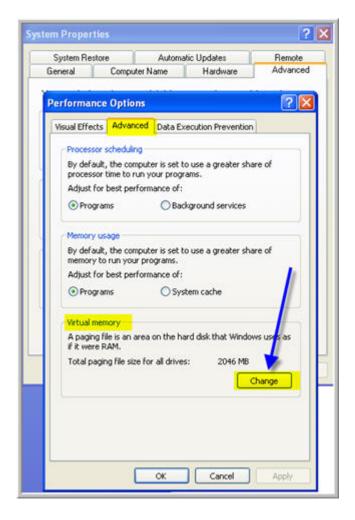
Go to your Windows Control Panel and Select the "System" option:



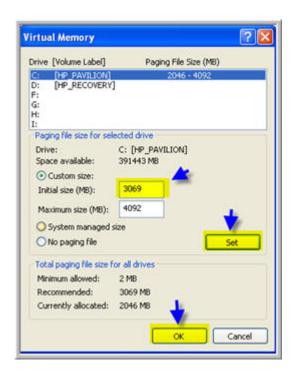
Click on the Advanced Tab and the select Performance Settings:



On the Performance Options window select the Advanced Tab and then select "Change" Virtual Memory.



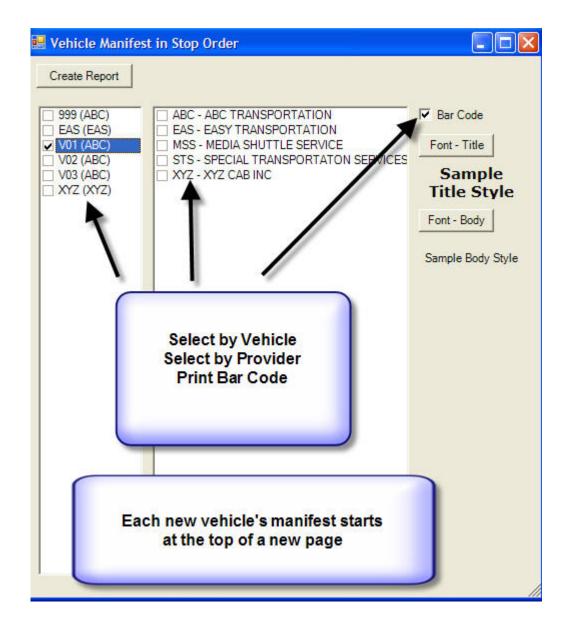
Increase your virtual memory, select Set, then select OK.



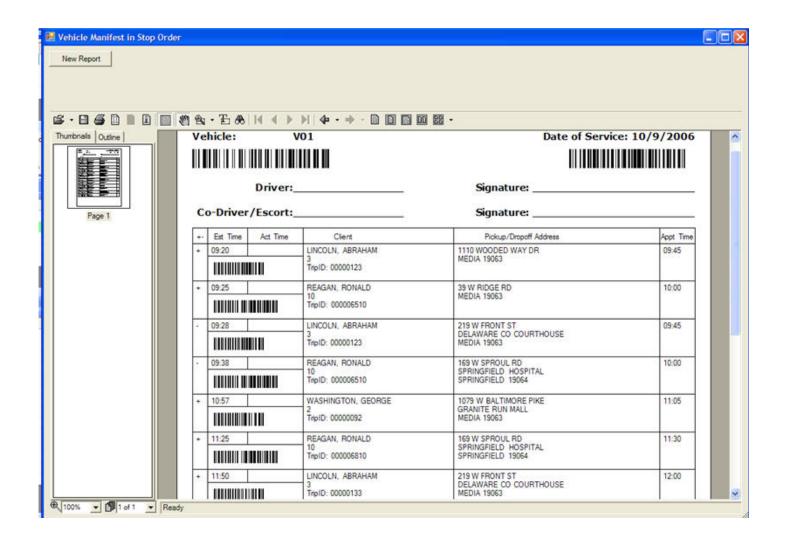
Vehicle Manifest in Stop Order

Select Vehicle Manifest in Stop Order from the Report Menu.

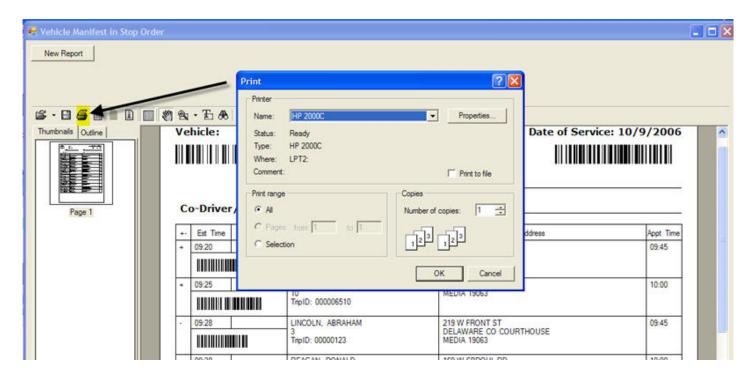
Choose the report options.



Click on Create Report to preview the report.



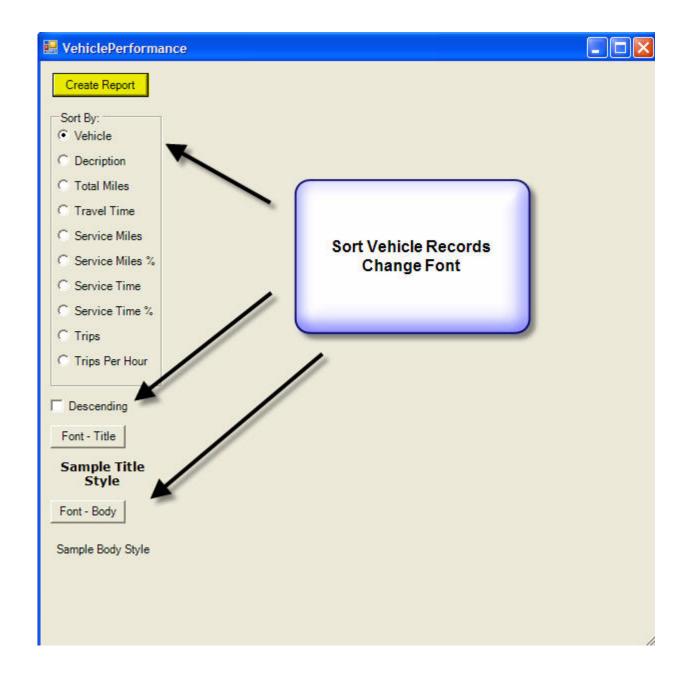
Select the print option from the tool bar to send the report to the printer.



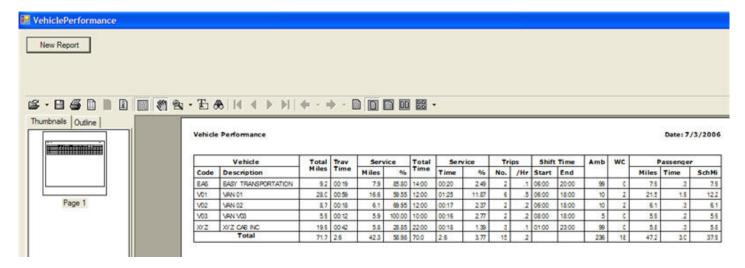
Vehicle Performance

Select Vehicle Performance from the Report Menu.

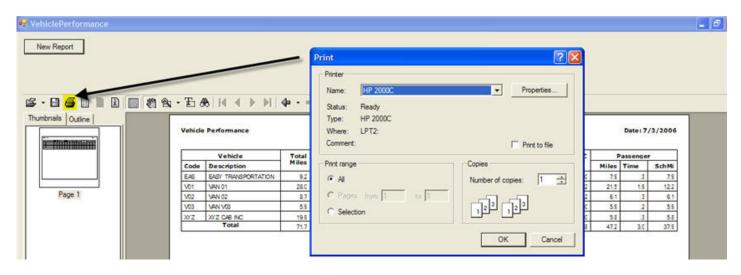
Choose the report options.



Click on Create Report to preview the report.



Select the print option from the tool bar to send the report to the printer.



Vehicle Manifest

The Vehicle Manifest report is a highly customizable report. Users can select fields to include, display regions to include or exclude, and font types and size for each of 3 different report regions. There is even an option to select and display a company logo in the top left corner of the report.

Users selections can be saved to a customization report file allowing the option of developing multiple display formats for this report.

Sample Report

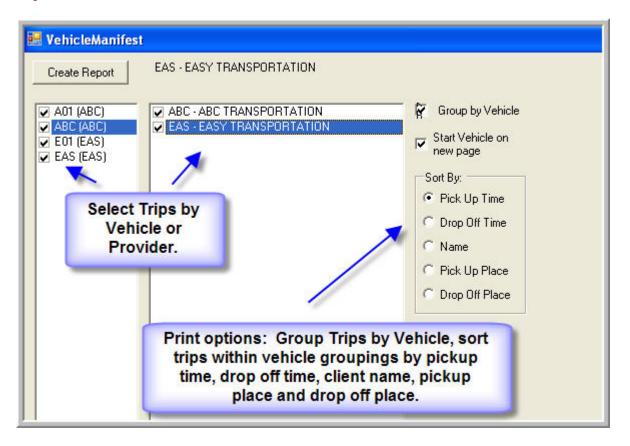
PtMSIS Interactive 8cheduler	Vehicle A01	Vehicle Manifest Report	Trip Date: 10/22/2007
	Ve <i>hicl</i> e A01	Start Time:	Stop Time:
20 2020		Start Miles:	Stop Miles:
Actual Vehicle		De adhe ad Hours:	Deadhead Miles:
	Driver ID:	G ls Gas Purchased:	Purchase Price:

Status	Trip	Name		Pick Up	Drop Off			
\$	Турс		Time	Place	Time	Place		
	T AMB ID#:11 RV:	JOHNSON, ANDREW	08:30	25 SHELBOURNE RD, SPRINGFIELD, 19064 Phone:	09:00	2600 W9TH ST, CROZER CHESTER MED CENTER, CHESTER 19013		
	A01	Sign:		Odometer ON:		Odometer OFF:		
	T AMB ID#:7 RV:	HOOVER, HERBERT	08:45	93 SAND YBANK RD, MEDIA, 19063 Phone: (610)555-9999	09:00	2600 W9TH ST, CROZER CHESTER MED CENTER, CHESTER 19013		
	A01	Sign:		Odometer ON:		Odometer OFF:		
	T AMB ID#:9 RV:	JEFFERSON, THOMAS	08:50	86 E 5TH ST, MEDIA, 19063 Prore: (610)555-2221	09:00	2600 W9TH ST, CROZER CHESTER MED CENTER, CHESTER 19013		
	A01	Sign:	102	Odometer ON:	× <u> </u>	Odometer OFF:		
	RAMB ID#:10 Ag	JEFFERSON, THOMAS	11:00	2600 W9THST, CROZER CHESTER MED CENTER, CHESTER, 19013 Phone: (610)494-0700	11:15	86 E5TH ST, MEDIA, 19063 Phore:(610)555-2221		
	MED	Sign:	100	Odometer ON:	-	Odometer OFF:		
	RAMB ID#:8 \$.00	HOOVER, HERBERT	11:00	2600 W9THST, CROZER CHESTER MED CENTER, CHESTER, 19013 Prone: (610)494-0700	11 25	193 SANDY BANK RD, MEDIA, 19063 Phore: (610)555-9999		
	Ag	Sign:		Odometer ON:		Odometer OFF:		

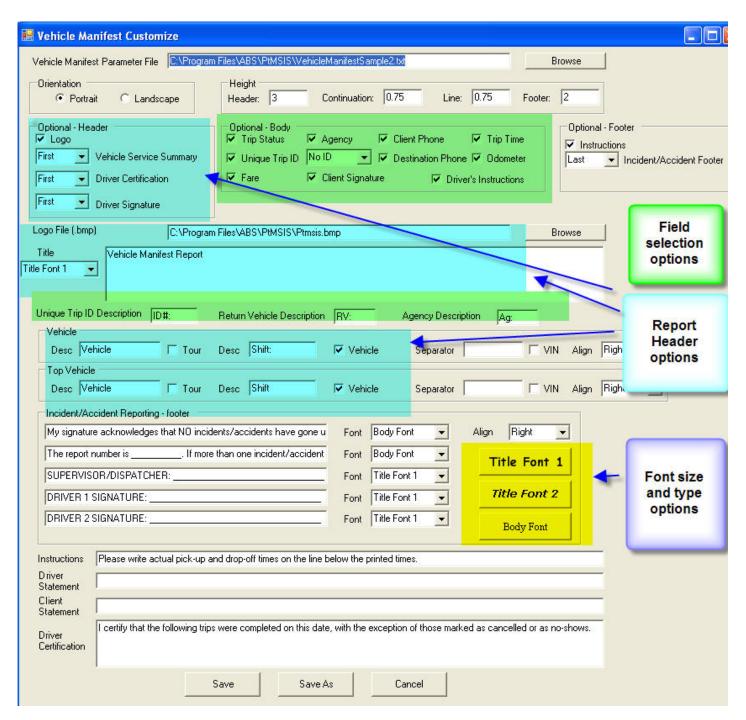
Page 1 of 6

rip Name ype AMB JOHN:ON, ANDI #:12 # ################################		Pick Up Place 100 WPIHSI, CROZER CHESTER. MED CHITER, CHESTER, 19013 Phone: (410 \$94-0700 Olometer ON: all-up and drop-off times on the line below the	Time	Drop Off Place MINIBOURNERD, SPRINGFIELD 1904 Place: Olomo to OFF:
AMB JOHN:ON, ANDR	11 00	2600 W91H ST, CROCKER CHEST HR. MED C ENTHE, CHEST HR, 19013 Phone: (410 994-0700 Olomete COT:	11:30	35 SHELBOURNERD, SPRINGFIELD, 1904+ Phone: Olome to OFF:
0#:12 -€		MED C ENTER, CHESTER, 19013 Phone: (410 #94-0700 Olometer ON:		1904 Photo: Olometr OFF:
ED Sign:	Please unite actual p	T	.	<u> </u>
	Passe unite actual p	ach-mp and drop-offtimes on the line bake with	s pindel tin	
no educabel se flut 1870 in in	ilando karillando lesso	gue une portel duringue; chift. If en inciden	t (secolose la	a commed the emergically net leads

Options



Customization



Dispatcher's Report

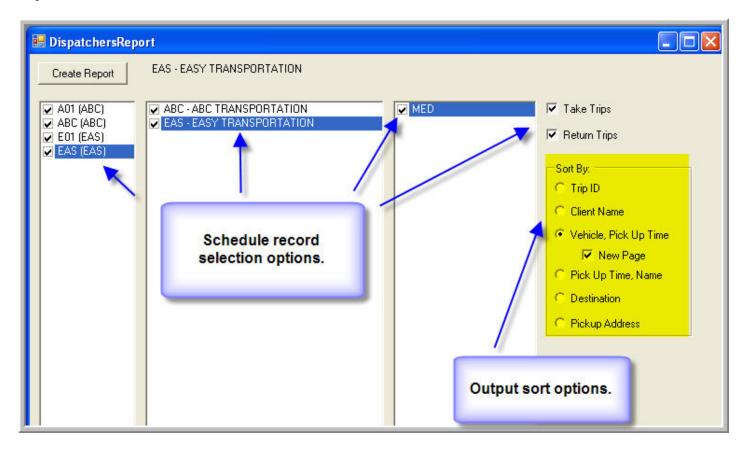
The Dispatcher's Report is a highly customizable report. Users can select fields to include, and font types and size for each of 3 the report regions. There is even an option to select and display a company logo in the top left corner of the report.

Users selections can be saved to a customization report file allowing the option of developing multiple display formats for this report.

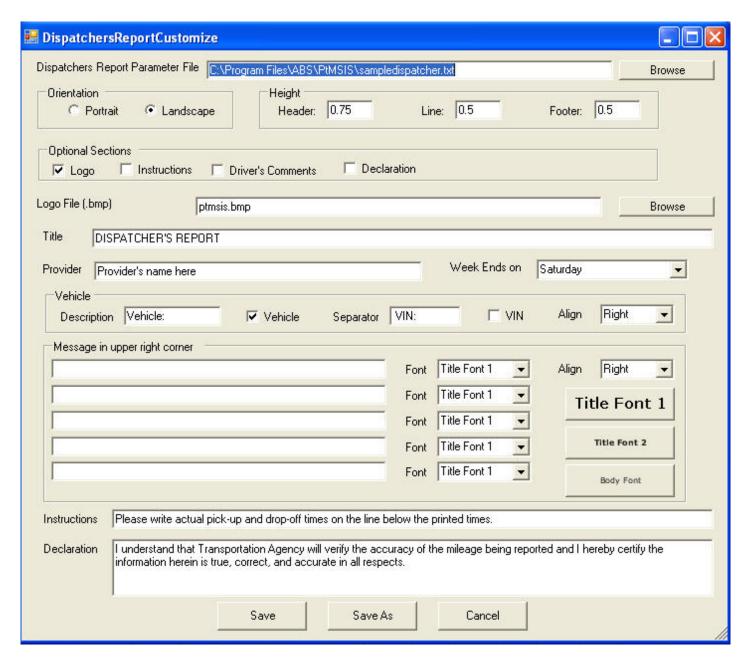
Sample Report

PtMSIS Interactive Scheduler						Vehicle: A01						
Line # Trip ID	Veh Agy	CITID wc-amb	LName D-R	FName Take-Return	P Time D Time	Pick Up	Drop Off	PZone DZone	Trip # Fare/Miles	Med ID Tripcode		
1	A01 MED	28 AMB	1 OHNSON R	ANDREW T	08:30 09:00	35 SHELBOURNE RD SPRINGFIELD 19064	CROZER CHESTER MED CENTER 2600 W 9TH ST CHESTER 19013	522515 508445	000047128 .00 / 0	MED		
2	A01 MED	13 AMB	HOOVER R	HERBERT T	08:45 09:00	193 SANDY BANK RD MEDIA 19063	CROZER CHESTER MED CENTER 2600 W 9TH ST CHESTER 19013	499509 508445	000044913 .00 / 0	MED		
3	A01 MED	6 AMB	JEFFERSON R	THOMAS T	08:50 09:00	86 E 5TH ST MEDIA 19063	CROZER CHESTER MED CENTER 2600 W 9TH ST CHESTER 19013	499502 508445	00004606 .00 / 0	MED		
4	A01 MED	13 AMB	HOOVER R	HERBERT R	11:00 11:25	CROZER CHESTER MED CENTER 2600 W 9TH ST CHESTER 19013	193 SANDY BANK RD MEDIA 19063	508445 499509	000045413 .00 / 0	MED		
5	A01 MED	6 AMB	JEFFERSON R	THOMAS R	11:00 11:15	CROZER CHESTER MED CENTER 2600 W 9TH ST CHESTER 19013	86 E 5TH ST MEDIA 19063	508445 499502	00004656 / 0	MED		
12	A01 MED	28 AMB	JOHNSON R	ANDREW R	11:00 11:30	CROZER CHESTER MED CENTER 2600 W 9TH ST CHESTER 19013	35 SHELBÖURNE RD SPRINGFIELD 19054	508445 522515	000047628 / 0	MED		

Options



Customization



ABS Support

ABS Support Options

- On-line Help
- Remote Desktop Support

On-Line Help

From the Help Menu select On-line Help.

The On-line Help link (<u>PTMS IS Help Page</u>) will connect you with the PTMSIS Help page where you can select help topic articles, or on-line help videos.

The ABS Support page that links to ABS on-line support services is available at www.abs-pa.com/Support/Support.htm

Remote Desktop Support

From the Help Menu select Remote Support.

You will need to contact ABS in advance to arrange for a Remote Desktop Support session.

Once the Remote Support selection is made a popup will appear on the screen. Highlight the ABS consultant's phone number and click connect. This will connect your workstation to an ABS support consultant where they will be able to view and run applications on your workstation.

