

# **User Manual**

4800185 rev A

1/25/2016

### **All Traffic Solutions**

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### Welcome to TraffiCloud!

TrafficIoud is All Traffic Solutions' secure, web-based ecosystem for managing ALL your traffic safety equipment. While our best-in-class hardware helps improve your traffic flows, complimenting this equipment with our TrafficIoud helps improve your workflows. Leveraging a consistent interface across all your traffic management equipment, TrafficIoud provides a new level of awareness while reducing the amount of time needed to manage your equipment and information.

Collect data automatically from all your equipment on the TraffiCloud, then access it when and where you need it. Use the data to dynamically manage your equipment and enhance its ongoing value.

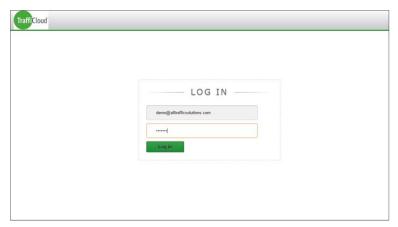
Achieve a new level of awareness and Total Traffic Safety Management.

# Logging in

Navigate to https://trafficloud.alltrafficsolutions.com to find the TraffiCloud log in page.

Registered users should have received their username and password via an automated email. Otherwise please contact your account administrator(s) or request assistance from All Traffic Solutions at <a href="http://alltrafficsolutions.com/support">http://alltrafficsolutions.com/support</a>.

Once logged in for the first time, please change your password by clicking your name in the upper-right corner of the site.

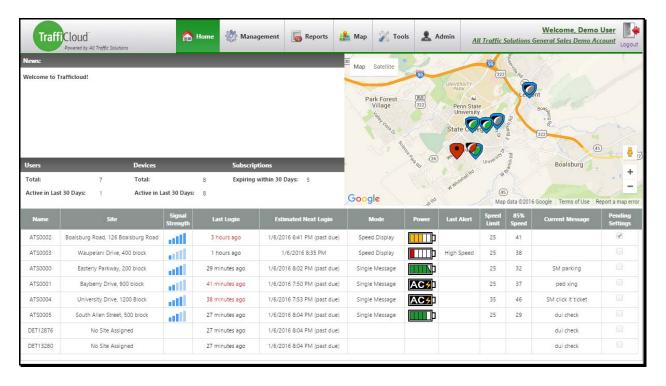






# Home page - your Dashboard

The home page shows a summary of equipment status an locations as well as relevant news account information.



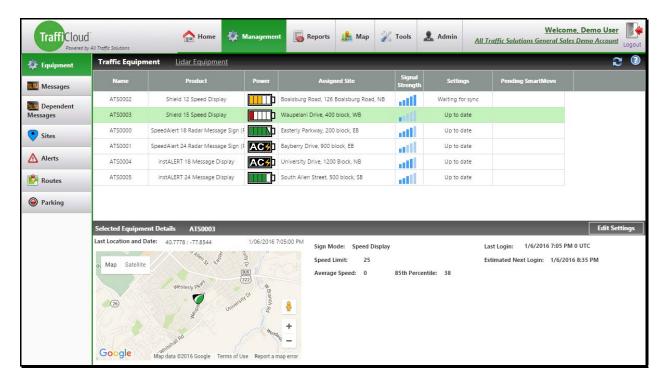


# **Equipment Management**

Equipment subscribed to the Remote Equipment Management app will appear on this screen.

Select the type of equipment from the available options along the top row and then the specific device to manage in the table.

- Summary information for the selected device is shown below the table.
- Click "Edit Settings" or double-click the equipment in the list to make changes.

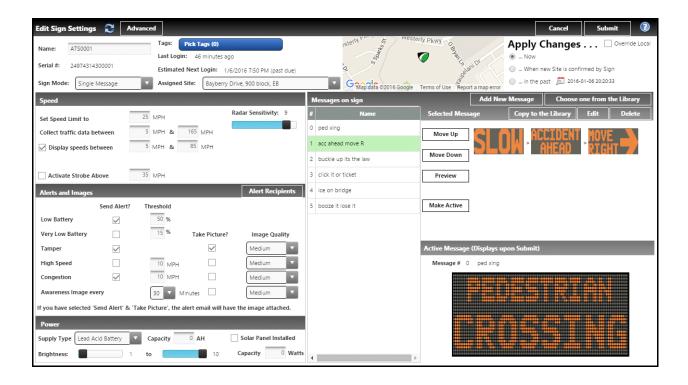




# **Equipment Settings**

This page allows you to change how your sign operates.

- The "Sign Mode" will change the available options based on the mode selected.
- Select the "Site" where the sign is being used so data collected will be assigned there.
- Before clicking "Submit" review the "Apply changes..." options:
  - o "Now" will take effect as soon as the sign contacts the TraffiCloud and retrieves them.
  - o "When Confirmed" requires an operator at the sign to trigger a "Move" event
  - o "In the Past" will take effect like "Now" but also assigns data collected since the selected date/time to the selected site.





# **Message Library**

This is an area where messages are stored and are available to any equipment of relevant type.

A *Message* is a sequence of text and/or graphic *Screens* that are displayed on a sign and looped through continuously.

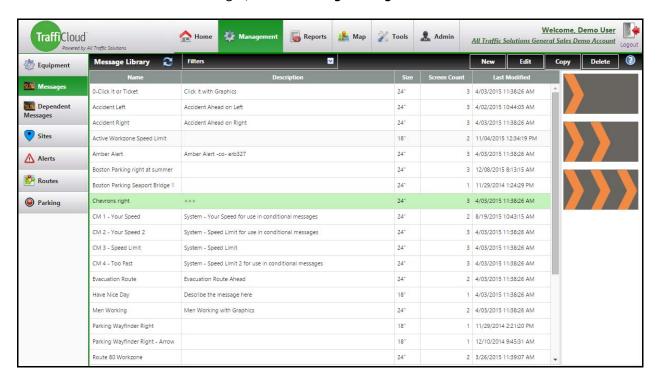
Messages may be created, edited, copied, or deleted from this library.

A quick preview of the selected message is shown in the right-hand side column.

Use the filter at the top of the table to limit the view of messages to a particular compatible equipment size if both sizes are available.

Messages may be selected from or added to this library directly in the Equipment -> Edit Equipment Settings area as well.

For more information about Messages, see the *Editing Messages* section below.





## **Editing Messages**

#### **Messages**

A *Message* is a sequence of text and/or graphic *Screens* that are displayed on a sign and looped through continuously.

- Messages are referenced by a "Name" but a more detailed *Description* can be included
- Choose the number of screens included immediately or add/remove them as needed
- The Size of the Message must match the type of equipment on which it will be displayed.

#### **Screens**

To edit a Screen, select a tab with the screen number on it.

### **Screen Types**

Screens have a selectable Type which dictates part of the format and information displayed

- Large / Medium / Small Lines are text only. The length of text will be limited by the screen size.
- Graphics allows individual control of each LED pixel on the screen
- Speed Limit displays the value of the speed limit setting stored in the sign
- Your Speed displays the speed of an approaching vehicle (radar required)
  - Recommended for use as part of a Dependent Message only, otherwise the speed of 0
     will be displayed when no vehicles are present.
  - Note: this uses the speed detected at the beginning of the message only and is not updated again until the message loops. Therefore it is best to place it as the first screen in the message and keep the message short.
- Clock screens show the current time as shown in the preview

#### **Screen Properties**

- Duration is the number of seconds the screen will be displayed until going to the next screen.
- Blink Types are blinking, inverting, or none.
  - o Inverting blink is where illuminated parts of the screen go dark and non-illuminated parts light up for a time then revert back to normal repeatedly.
- Blink Rate is only relevant when the screen is set to blink or invert.
  - Slow is timed as 1 sec on / 1 sec off
  - Medium is timed as 0.75 sec on / 0.75 sec off
  - o Fast is timed as 0.5 sec on / 0.5 sec off
- Screen Power Usage indicates how much of the display is illuminated. It is a tool to help with battery conservation. Low power usage will translate to longer battery life.
  - Note blinking a screen effectively halves its power usage
  - o Inverting a screen uses 50% power.

### Variable Text {x} Feature

At certain times it may be desirable for a text screen to include a value that changes, such as the current day of the week. This is possible by using the {x} button to insert a placeholder for the variable text. When displayed, the sign will translate the placeholder into the actual value.

For more information on this feature or custom applications please contact ATS at <a href="mailto:support@alltrafficsolutions.com">support@alltrafficsolutions.com</a>







# **Dependent Message Library**

This is an area where Dependent Message Groups are stored and are available to any equipment of a relevant type.

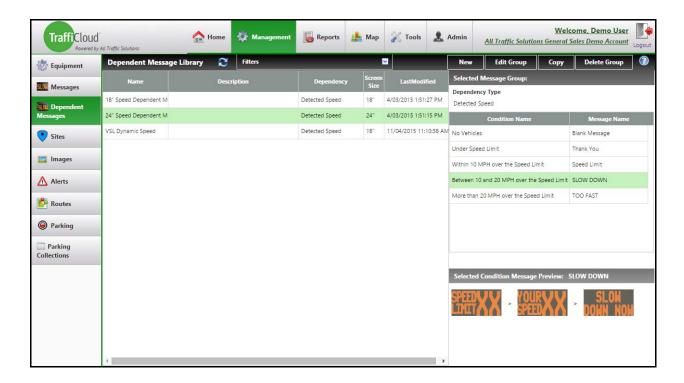
Dependent Message Groups allow a variable message sign to show different messages depending on the value of a variable input. The Dependent Message Group provides a convenient way of grouping together related messages along with the conditions under which they should be displayed all in one place. Dependent Message Groups can be dependent on various input conditions and variables, the most common of which is detected vehicle speed (radar speed sensor required).

Dependent Message Groups may be created, edited, copied, or deleted from this library. A quick preview of the selected dependent message is shown in the right-hand side column where each message and its dependency can be viewed.

Use the filter at the top of the table to limit the view of dependent message groups to a particular compatible equipment size if both sizes are available.

Dependent Message Groups may be selected from or added to this library directly in the Equipment -> Edit Equipment Settings area as well.

For more information about Dependent Message Groups, see the *Editing Dependent Messages* section below





## **Editing Dependent Messages**

The different types of Dependent Message Groups are shown below.

### **Detected Speed**

A group that displays an appropriate message based on the detected speed of an approaching vehicle. Often used for traffic calming. Radar speed sensor required.

#### **Timer Value**

Displays different messages based on the value of the internal timer. Often used for New Year's countdowns or casual race information. Manual timer start / stop control is usually required. (Timer should not be used as an official timekeeping device)

### **Digital Inputs**

Different messages can be displayed based on digital input values. Custom firmware and wiring is required. Contact <a href="mailto:support@alltrafficsolutions.com">support@alltrafficsolutions.com</a> or your regional sales rep if you are interested in using this feature.

### **String Value**

A string of text characters can be sent to the sign and compared with a predetermined value. If the strings match, the corresponding message will display. Text strings can be sent to the sign manually using the "Live Values" area of the PC software. Use the 'string 1' value. For more information contact <a href="mailto:support@alltrafficsolutions.com">support@alltrafficsolutions.com</a> or your regional sales rep.

#### **Analog Input**

Displays different messages based on the value of an analog input. Custom firmware and wiring is required to use this type of Dependent Message Group. Contact <a href="mailto:support@alltrafficsolutions.com">support@alltrafficsolutions.com</a> or your regional sales rep if you are interested in using this feature.

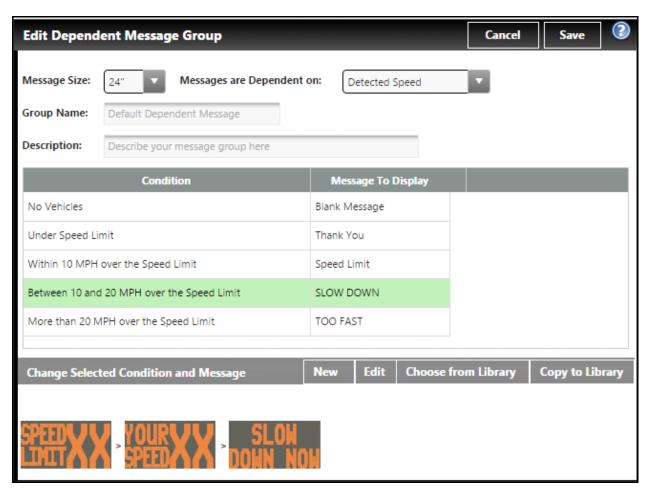
#### **Best Route**

Travel Times feature required. If there are multiple routes to a given destination, each route may be assigned to a message. The message assigned to the route with the fastest overall travel time will be displayed.

# **Route Info Dependent**

Travel Times feature required. A travel route may be assigned to this group. Different messages can be displayed depending on the travel time, average speed, or overall delay for the route.







### **Sites**

Sites provide an organized way to store traffic data collected at a specific location. When equipment is assigned to a Site, the traffic data collected will be assigned to this Site. If the equipment is moved, a new Site should be assigned and new traffic data collected will be assigned to the new Site from that point forward.

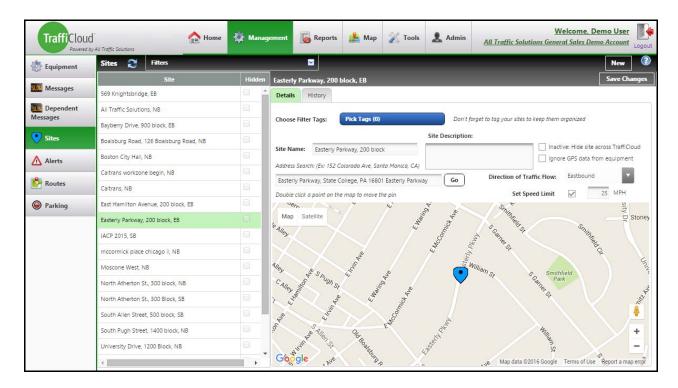
Sites are used in Reports to generate meaningful reports of traffic at a specific location. Sites are also used as the starting point for Routes in the Travel Times feature.

This area is where Sites are created and managed.

Click on 'New' to create a new Site.

Sites that have been created are shown in a list on the left-hand side. Click a site in the list and its 'Details' will display in the panel to the right. The details can be edited and saved as desired. Click the 'History' tab to show what equipment has been deployed to this location as well as a graphical representation of the continuity of traffic data collected at the sign for the past month.

Sites can be tagged to help in organization. For instance, there may be multiple Sites along a certain road. These Sites can all be tagged with the road name, say "Road / Main St". Now these Sites can be found quickly by using the "Filters" drop-down at the top of the page. The same filters are available in Reports for convenience.





# **Creating New Sites**

Enter a name for the site that is specific to this location, ie "Main St, 400 block".

Tags can be added to a Site and used to categorize a Site with others, such as all the sites on a given street, campus, or geographic region.

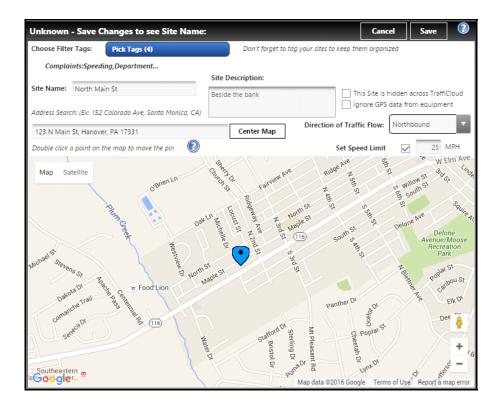
A Site's location can be set using a postal address, GPS coordinates, or by double-clicking a point on the map. Try to get as close to the actual deployment location as possible.

The 'Site Description' can be used for notes about this Site such as "telephone pole, beware of resident's dog!"

'Set Speed Limit' option allows equipment assigned to this Site to be automatically assigned the proper speed limit for this location.

Hiding a Site is a way to remove unused sites from lists in the TraffiCloud website without losing any traffic data stored there.

The 'Ignore GPS' option prevents equipment assigned to this site from raising a 'Site Conflict' if its detected GPS coordinates do not match the Site's coordinates on the Map.





# **Tagging Sites**

Tags are labels that can be assigned to Sites, Equipment, and Users to assist in organization.

# **Tags and Terms**

Tags can be thought of as a category, use the tag Roads for example.

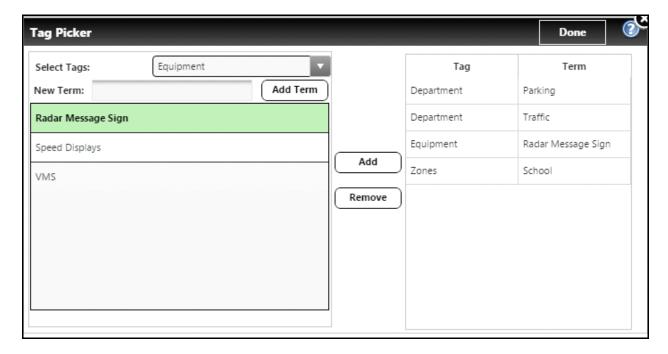
Terms are like a sub-category. Under the tag Roads there may be the terms Main St, High St, Maple Ave, etc...

The example tag and term set [Roads | Main St] could be applied to multiple Sites that have addresses along Main St.

Once many Sites have been created it can be helpful to use the applied tags for filtering sites when reporting on data collected.

Tags must be created under Tools -> Tags for use elsewhere in TraffiCloud.

Terms may be created under Tools as well or on-the-fly when applying tags to an item.





# **Images**

Here images taken by equipment are stored by the SIte.

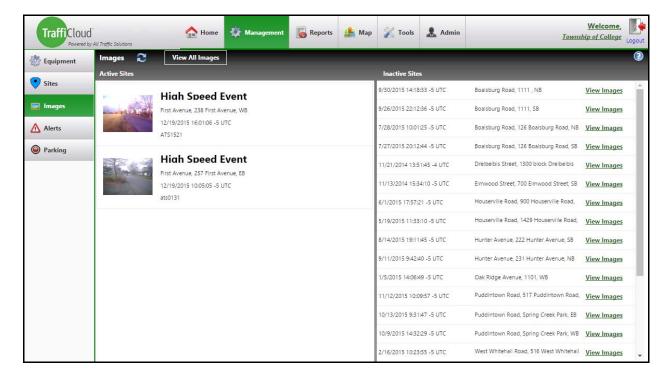
Only Sites that have images will appear.

Active Sites are sites with equipment assigned to them that have pictures.

Inactive Sites are sites without equipment currently assigned to them.

The thumbnail shows the most recent image taken at the Site. The event that triggered the image, the date / time it was taken, the Site name, and equipment name are also shown. Click the thumbnail to bring up a list of images at the SIte.

To show all images, regardless of site, click the 'View All Images' button at the top of the page.





## **Image Review**

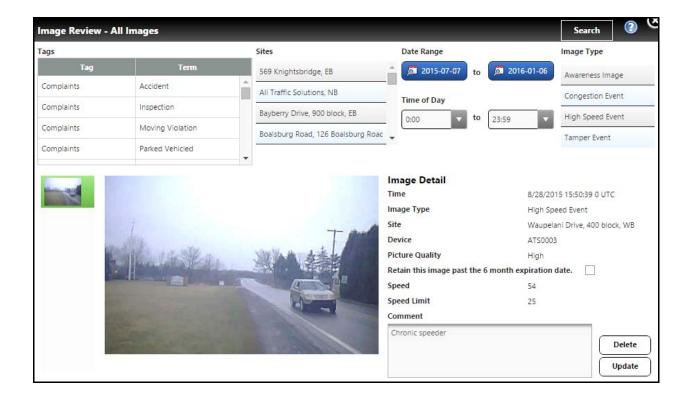
Here all images taken at a Site can be reviewed.

The list of images can be filtered down by date / time range and image trigger type. In 'View All Images' filters for the Site and Tags are also available.

Click a thumbnail image on the list to the left to see a full-size version along with the details associated with the image. Comments can be added to an image by typing in the Comment box and clicking 'Update'.

Images may be purged from the system after 6 months. However, if an image is of particular interest and should be retained, click the 'Retain this image past the 6 month expiration date' box.

The date filter defaults to a preset range. Adjust the filter to see images outside of this range.

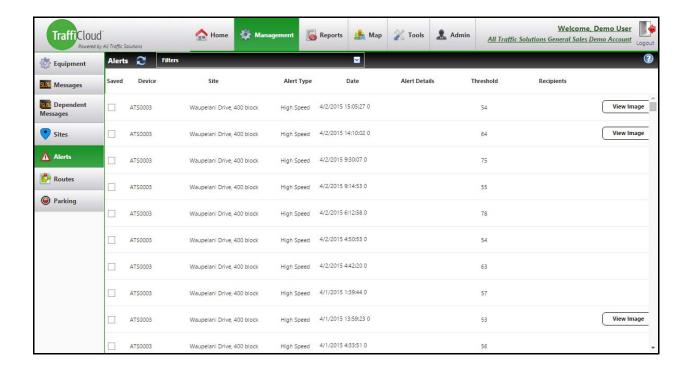




# **Alerts**

This is a log of a Alerts received from equipment that have the Alerts feature enabled.

Alerts that have images associated with them may be viewed by clicking the 'View Image' button.





### **Routes - Premium Travel Times Feature**

Routes are used with the premium Travel Times feature.

A route starts at a Site. To create a route, select a Site and click the 'New' button.

The Destination Address is the end point for the Route. Enter an address or GPS coordinates and click the 'Set' button to place a red pin on the map. In cases where more than one location is found, the entry must be refined to be more specific.

Click on the 'Generate Route' button to automatically create a route between the Site and the destination. Details for the generated route will be displayed.

If the route is desired to go in a specific or different path, enter one or more intermediate points and click 'Generate Route' again. Continue this process until the route goes in the desired path.

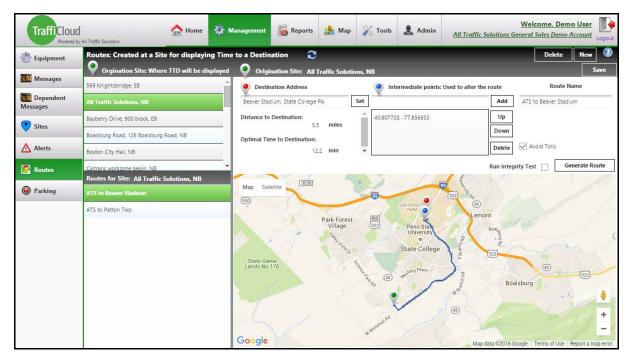
Enter a 'Route Name' and click 'Save'.

Multiple Routes may be created for a Site.

Apply a Route to a Message by clicking the box 'Include Travel Times' and chose the Route name. Show travel times in a Message by clicking the {x} beside the line of text and inserting the 'Time to Destination', 'Delay to Destination', or 'Average Speed to Destination'.

For more information concerning this premium feature contact support@alltrafficsolutions.com.





# Reporting

Reports can be generated based on traffic data stored in a Site.

Select the type of report to run in the 'Report Name' drop-down list. A description of each type of report is included at the end of this section.

Next select the Site that contains the traffic data for the report.

\*\*\* Note: The 'Enforcement Priorities' report allows multiple sites to be selected. To select more than one Site or to deselect a Site, use ctrl-Click.

Use the 'Data History' chart at the bottom right along with adjusting the 'Date Range', 'Time of Day' and 'Days of the Week' filters to assure a quality set of data is available.

Next choose the way the report should process the data by selecting the 'Time View'.

- 'By Hour' shows average volumes for each hour of the day across all days in the range.
- 'By Day of Week' shows average volumes for each day of the week across the date range...
- 'By Date' shows total vehicles per day for each date in the range.
- 'By Week' shows total vehicles per week for each week (Sun-Sat) in the date range.

Minimum and Maximum speed filters can be used to eliminate outlying speed ranges from the reports.



## **Report Types**

Reporting is provided in two levels, Premium and Standard.

Standard reports are Speed Summary, Volume by Speed, and Volume by Time.

Premium reports are Compliance and Risk, Enforcement Priorities, Speed Effectiveness, and Enhanced Speed Summary.

### **Compliance and Risk - Premium**

This report breaks down the number of vehicles into risk categories based on their speed in reference to the speed limit.

Risk Categories are 'High, 'Medium', 'Low', and 'Compliant' using a red, orange, yellow, and green color legend for quick comprehension.

Can be generated 'by Hour', 'by Day of Week', 'by Date', or 'by Week'.

Numeric tables are provided as well as graphical charts showing percent and total vehicles in each risk category.

A graph showing the speed limit, mean speed, 50% speed, and 85% speed is also displayed.

#### **Enforcement Priorities - Premium**

This report analyses and compares traffic data to list the locations and times with the worst violation numbers.

Violations can be compared by 85% speed or a sliding scale between speed and volume.

Filters are provided to limit analysis to only serious violators and reasonable volumes.

Multiple Sites can be compared in this report. Select more than one in the list by using 'ctrl-Click'.

#### **Speed Effectiveness - Premium**

This report can help determine if traffic calming signs are effective. Radar signs that are compatible with this report log the change between a vehicle's initial speed and its final speed. The average reduction in speed of vehicles in separate risk categories are displayed. A graph is provided along with a chart of vehicle volumes for reference.

It is recommended to compare an initial week of data where the speed feedback is turned off (for a baseline) to a second week of data with speed feedback being displayed for best results

#### **Enhanced Speed Summary - Premium**

This report provides a summary of volumes and speeds at the selected Site.

Overall summary numbers are given for 'Average Speed', '50th Percentile Speed', 85th Percentile Speed', 'Pace Speed Range', 'Minimum Speed', 'Maximum Speed', 'Average Volume per Day', and 'Total Volume'.

A colorized chart of Volumes by Compliance for each hour of the day is shown, along with a pie chart of Sign Effectiveness and a line graph of the key speed numbers per hour.

The second page is a table displaying all summary values per hour.



### **Speed Summary - Standard**

This report provides a summary of volumes and speeds at the selected Site.

Overall summary numbers are given for 'Average Speed', '50th Percentile Speed', 85th Percentile Speed', 'Pace Speed Range', 'Minimum Speed', 'Maximum Speed', 'Average Volume per Day', and 'Total Volume'.

### Volume by Speed Analysis - Standard

This report is a table of speed bins (ranges) showing the number of vehicles in each bin over the selected time view.

Time views are 'By Hour (Average Volumes)', 'By Hour (Total Volumes)', 'By Day of Week (Average Volumes)', 'By Date (Total Volumes)', and 'by Week (Total Volumes)'.

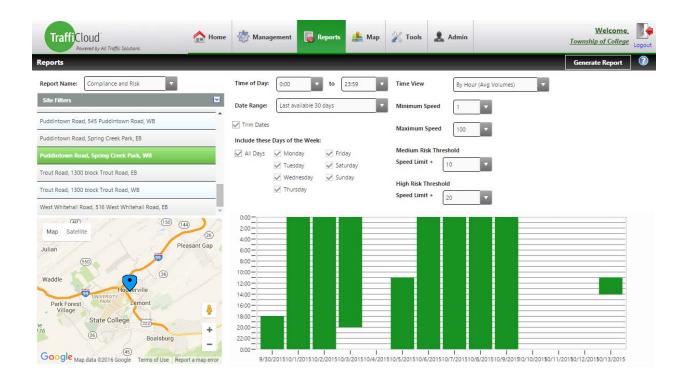
Graphical charts are also displayed on the last page.

### **Volume by Time Analysis - Standard**

This report is a table of hours showing the number of vehicles counted each hour over the selected time view.

Available time views are 'By Day of Week (Average Volumes)', 'By Date (Total Volumes)', and 'By Week (Total Volumes)'.

A chart visually displaying the information is on the last page.





# **Mapping**

Here Equipment and Sites are shown on a map. By default, only Sites that have Equipment currently assigned to them are shown. All sites can be shown by checking the box in the map key at the bottom right of the map.

Clicking on the Equipment icon or Site will show details in the left sidebar. Convenient links are provided to other areas of the site within the details.

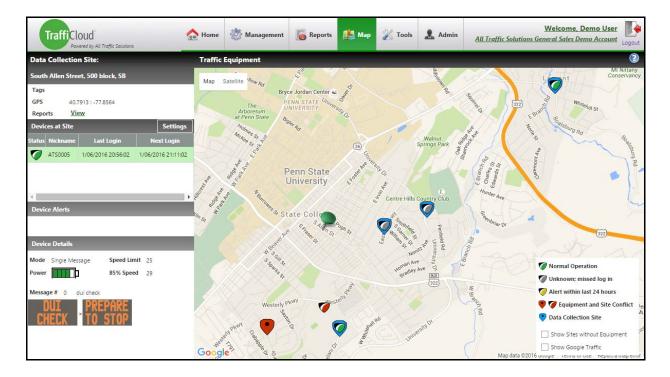
Equipment Icon Color Key explanation:

**Green** - Equipment at this site is operating properly and no alerts have been received in the past 24 hours.

**Gray** - Equipment here has not contacted TraffiCloud within the expected time. Some possible causes are loss of power, dead battery, poor cellular reception, or vandalism.

Yellow - Equipment here has notified TraffiCloud of an Alert condition within the past 24 hours.

**Red** - The Equipment has reported GPS coordinates that do not closely match the Site to which it is assigned. Some possible causes include the Site's location needs adjusted in TraffiCloud, the sign is at another location, the sign's GPS coordinates are being read incorrectly due to interference in its environment, or inconsistencies in the map GPS alignment.





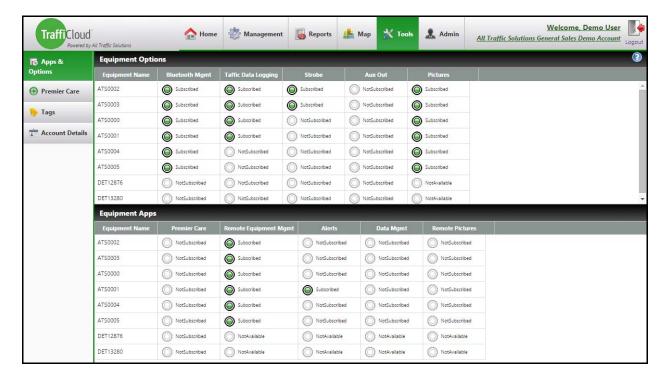
### **Tools**

# **Equipment Applications and Options**

Here all equipment belonging to this account is shown The options purchased for each device and any additional services (apps) to which the device is subscribed are shown in the table.

### Legend:

Green icon -> option has been purchased or application is actively subscribed Red icon -> option or application is set to expire soon
White icon -> option available to purchase or application has expired
Faded White icon -> option or application is not available.

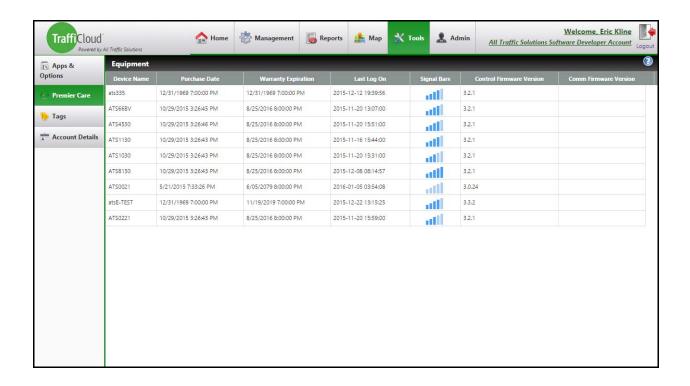




### **Premier Care**

Premier Care is a perpetual warranty for the equipment. If anything goes wrong with the equipment while covered by Premier Care, ATS will repair the product free of charge. Other discounts may also apply.

This page shows equipment currently covered by Premier Care.





# **Tag Management**

Tags are labels that can be assigned to Sites, Equipment, and Users to assist in organization.

### **Tags and Terms**

Tags can be thought of as a category, use the tag Roads for example.

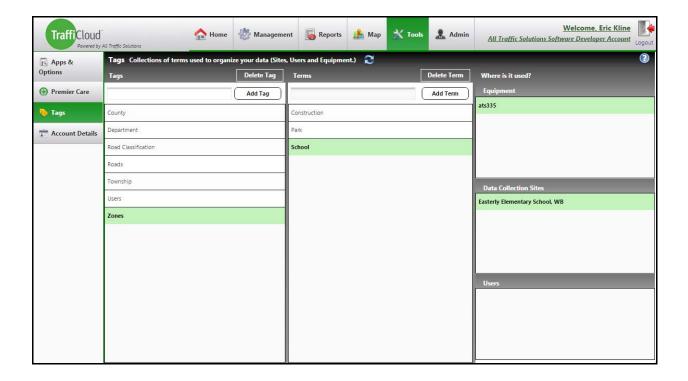
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Once many Sites have been created it can be helpful to use the applied tags for filtering sites when reporting on data collected.

Tags must be created under Tools -> Tags for use elsewhere in TraffiCloud.

Terms may be created under Tools as well or on-the-fly when applying tags to an item.

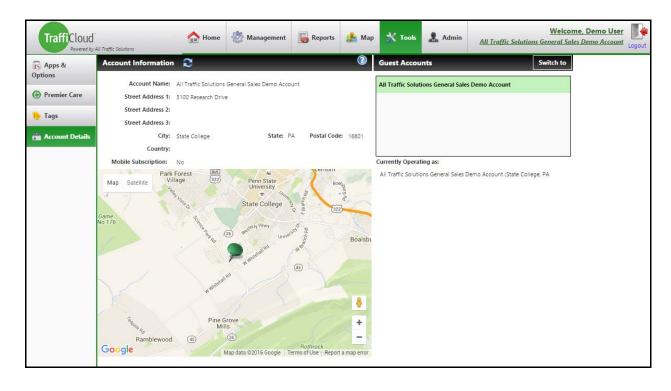




### **Account Details**

This page displays the account information.

If the information is out of date, please contact ATS to update it.
866-366-6602





### Administration

## **User Management**

This area allows Administrators to create, edit, and remove users in TraffiCloud.

All Users are assigned a permission Role and can be tagged with a group label if desired.

The User list can be filtered by Role and / or tag for convenience.

### **User Role Levels**

### **Reporting Only Users**

These users can run reports on traffic data collected. This includes access to the 'Reports' and 'Map' tabs and 'Images' and 'Alerts' under the 'Management' tab.

### **Read Only Users**

This role allows users to view everything in Management, run Reports, view the 'Map' and 'Tools' tabs. These users cannot, however, create, delete, or change anything.

#### **Limited Users**

Limited users can do everything Read Only users can but additionally can create, edit, and delete 'Messages', 'Message Groups', 'Sties', 'Routes', and 'Tags'.

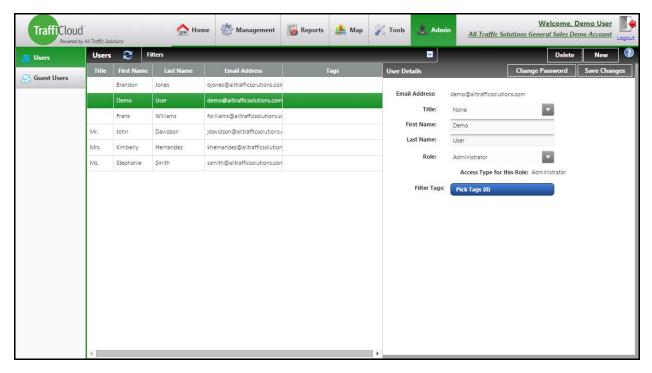
#### **Standard Users**

This role includes all the abilities of the Limited role, but can also make changes to 'Equipment' under 'Management'. These users can also view 'Users' and 'Guest Users' under the 'Admin' but cannot make changes.

### **Administrators**

The Administrator role has access to all features of TraffiCloud. Most importantly, Administrators are the only role that can create, edit, or delete Users from the system. This role is also able to grant 'Guest Users' access to your account.







### **Guest Users**

Guest Users are users of TraffiCloud on another account that have access to your account.

Administrators may grant access to their account by entering the username of the desired guest and clicking 'Add Guest User'.

Guest Users may be removed by selecting their name in the table of current guest users and clicking 'Remove Guest User'.

Guest Users can access your account by going to 'Tools' -> 'Account Details', selecting your account from the list of Guest Accounts, and clicking 'Switch to'.

### \*\*\*\* Important Note \*\*\*\*

Guest Users will retain the same permission role on your account that they have on their own account. Only give guest access to those you trust!

