CAR Online

Help Documentation

Florida Department of Transportation
State Safety Office

Contents

1.0 Introduction

CAR Online is a web-based interface that allows users to generate reports using crash data stored on Florida Department of Transportation (FDOT) databases. Users may access data for crashes located on state roads or on local roads and users may access subsets of crash data using either standard system subsets or user-specified subsets. Crash data from 2011 onward are available.

2.0 Getting Started

To access CAR Online, a user must provide valid RACF credentials (user ID and password), accept the disclaimer, and click the "Log In" button or press the ENTER key. Users may change their RACF password using the "Change Password" link. If a user does not have a user ID, they may contact the FDOT Service Desk (FDOT.ServiceDesk@dot.state.fl.us).

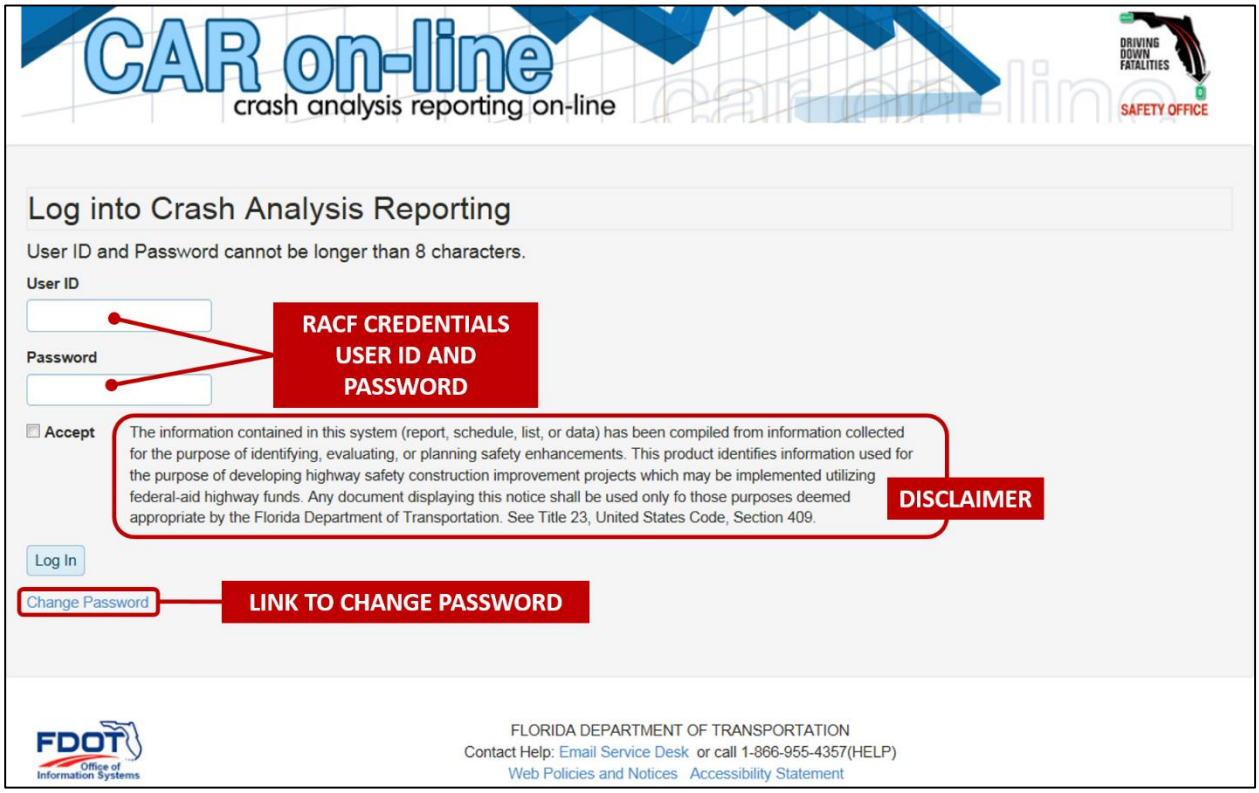

Figure 2.1 Access to CAR Online requires RACF credentials.

After a successful login CAR Online displays the disclaimer which users accept during login. A navigation bar is near the top of the screen and a link describing keyboard shortcuts is shown. Short descriptions may appear if the cursor hovers above different items.

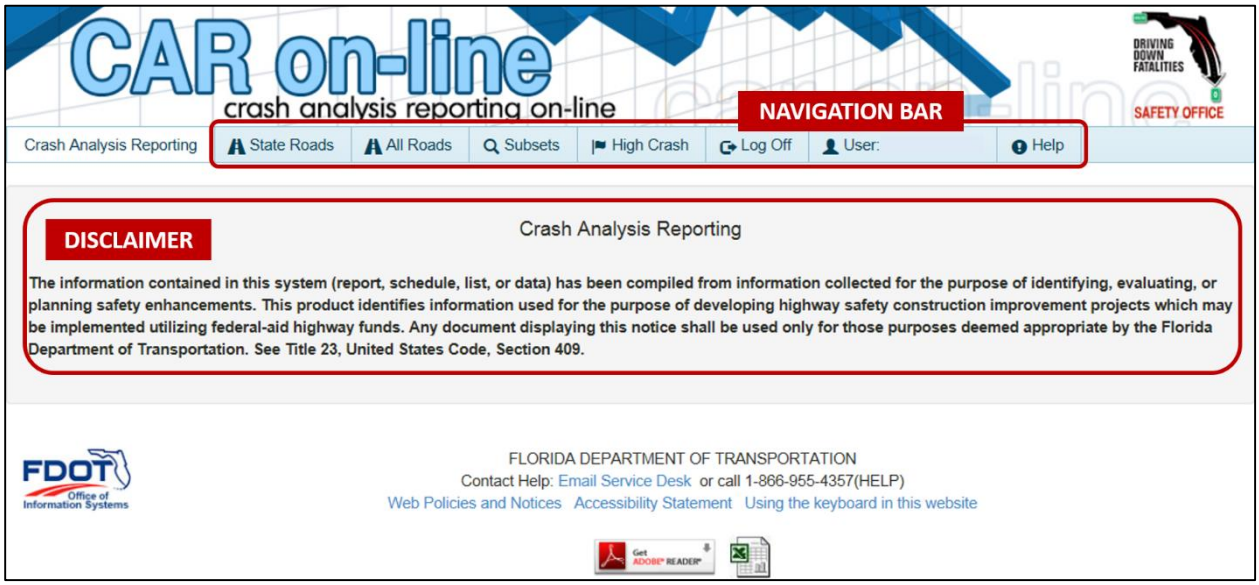

Figure 2.2 CAR Online home screen allows access to reports and other functions.

3.0 General Features

CAR Online has several features to help users. Users who are familiar with window-based programs will find some similar features in CAR Online. Search, filter, and menu features are available to help users find items.

3.1 Dialog Windows

CAR Online often uses dialog windows. Generally, CAR Online helps a user make selections through these windows which close once the selection is made. A user has several options to exit a dialog window without making a selection. Clicking the “X” icon in the upper left corner of the dialog window will close the window. When available a cancel, close, or reset button will also close the window.

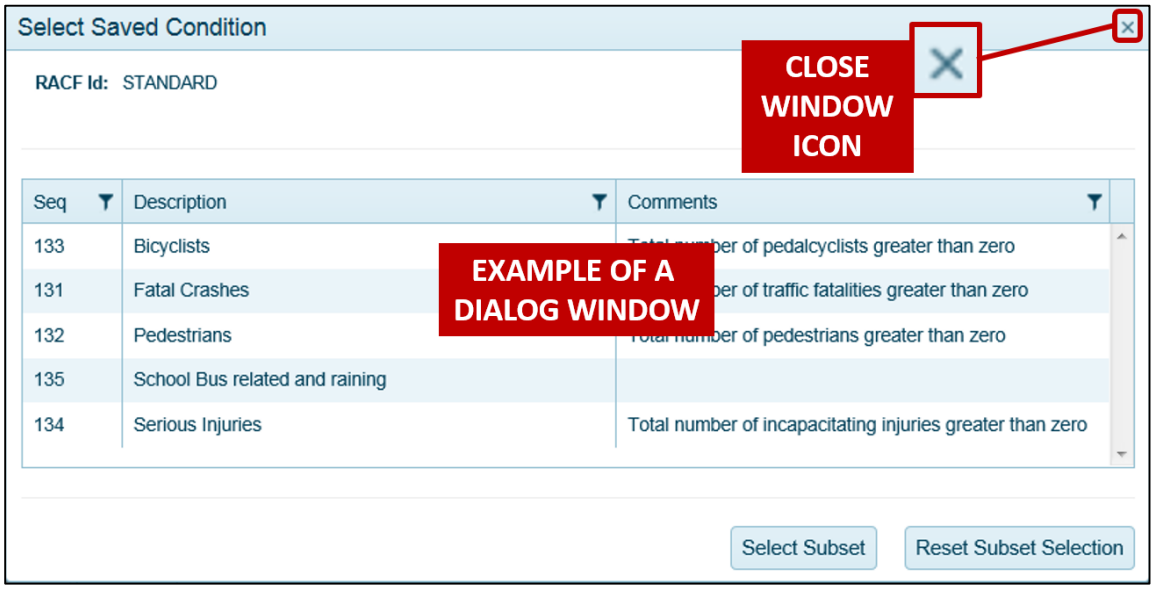

Figure 3.1 Users can close dialog windows without making a selection.

3.2 Search, Filters, and Drop-Down Menus

For many selections CAR Online has search and filter features that allow users to browse, filter, search and select items. District, county, route, and other selections often use drop-down menus. Roadway names, roadway IDs, nodes, and other selections commonly involves search and filter features. Users may also use search and filter features to select items like batched location lists and data subset criteria.

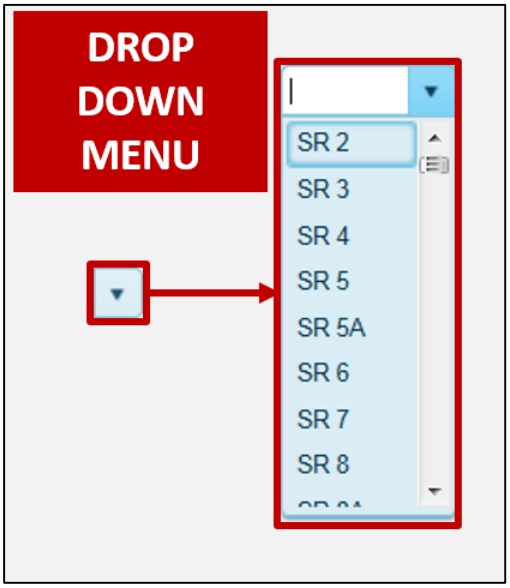

Figure 3.2 Drop down menus help users make selections.

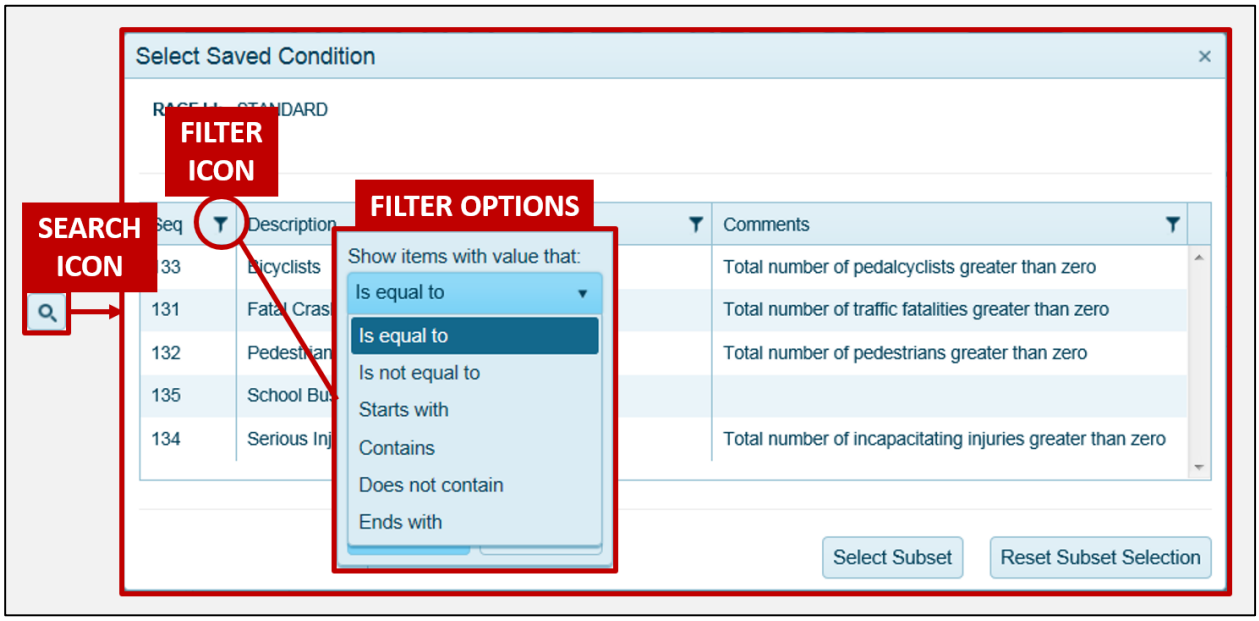

Figure 3.3 Search and filter features help users make selections.

3.3 Calendar Features

CAR Online has calendar features to help users select dates when needed. Users may enter dates using the text fields. By clicking the calendar icon, users can access other calendar features. From the calendar window users can select a date by clicking on a date shown on the calendar. Users can also select the current date by clicking the date displayed at the bottom of the calendar. To change the time factor, users can click on the calendar title. Available time factors are months, years, and decades. Users can also move up and down by using the arrows in the calendar.

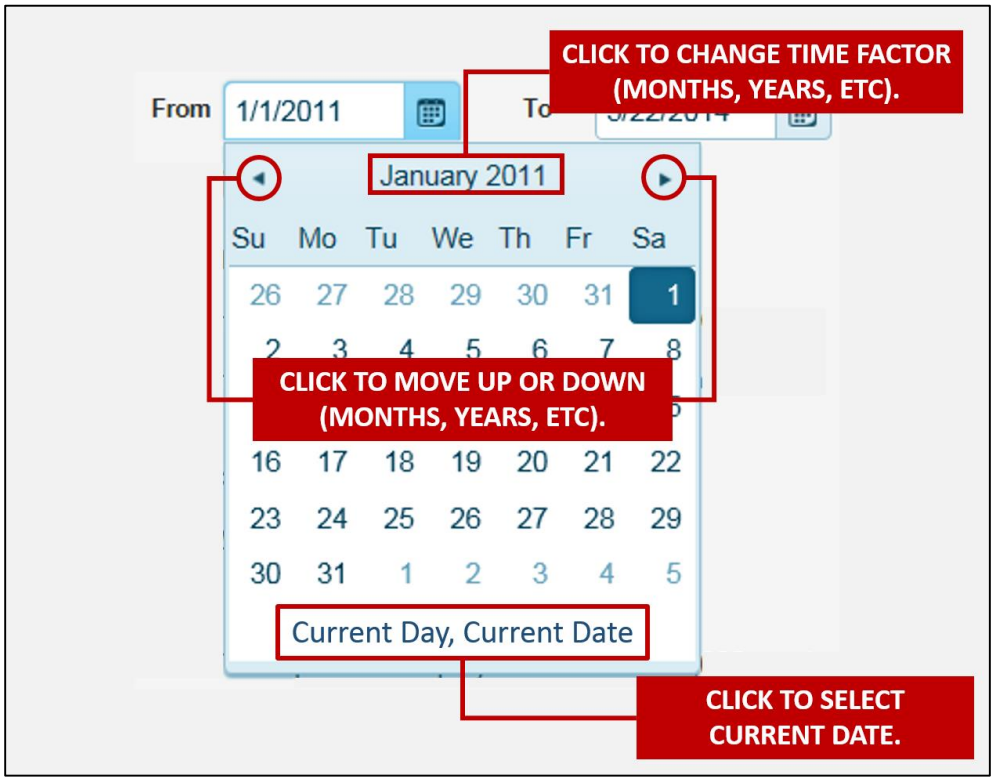

Figure 3.4 Several calendar features are available to help users select dates.

3.4 Online Results

Users can view output online in the browser window by clicking the "On-Line Results" button. Different reports have different restrictions limiting the maximum number of displayed records. CAR Online will always provide crash totals. If the output limit is exceeded, CAR Online may also display data to the browser up to the maximum crash limit. For online reports, the maximum crash limit of for "State Roads" reports and "All Roads" reports is 1,000.

3.5 Exporting Results in Excel Format

If preferred, users may output results to the computer as an Excel file by clicking the "Export to Excel" button. CAR Online limits the maximum number of crashes that is output to an Excel file depending on the report being run. CAR Online always provides crash totals. If the output limit is exceeded, it may also provide an Excel file with crashes up to the maximum limit. For exports to Excel, the maximum crash limit for "State Roads" reports is 8,000 and the maximum crash limit for "All Roads" reports is 10,000.

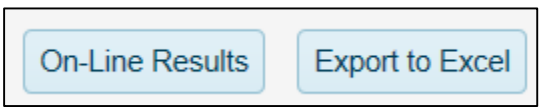

Figure 3.5 Buttons for online results and exporting results to excel are located near the bottom of pages.

4.0 State Roads

Users can access data for crashes located on state roads through State Roads reports. If a user selects "State Roads" from the top navigation bar, CAR Online shows a screen for entering report parameters. There are several options for defining locations and it is possible for different options to produce identical results.

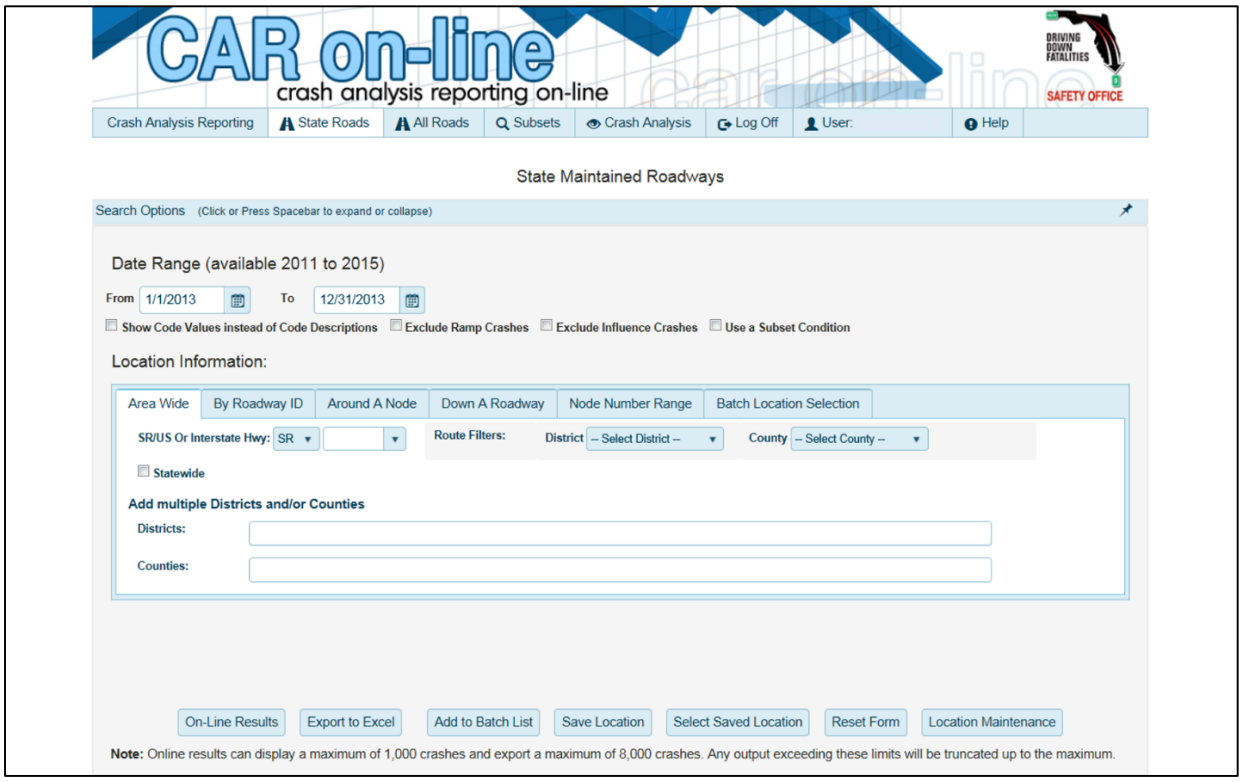

Figure 4.1 State Roads reports gives crash data for state-maintained roads.

4.1 Area Wide for State Roads

Users may select the "Area Wide" option if they are interested in crashes that are located on a state road for an area. The area may be (1) a county, (2) a district, (3) any combination of one or more districts or counties, or (4) statewide. A user may need CAR Online to email the results if the area chosen is statewide.

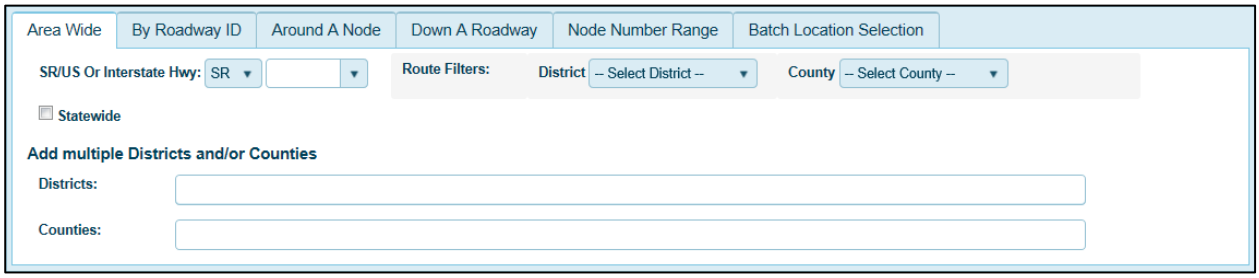

Figure 4.2 Use the "Area Wide" location option for state road crashes on a road in an area.

4.2 By Roadway ID

Users may select the "By Roadway ID" option if they are interested in crashes that are located on a state road and they know the roadway ID. Users must select at least one route, district, or county before they select a roadway ID. By default the results contain crashes for the entire roadway ID. Users also have the option of choosing a milepoint range for the roadway ID.

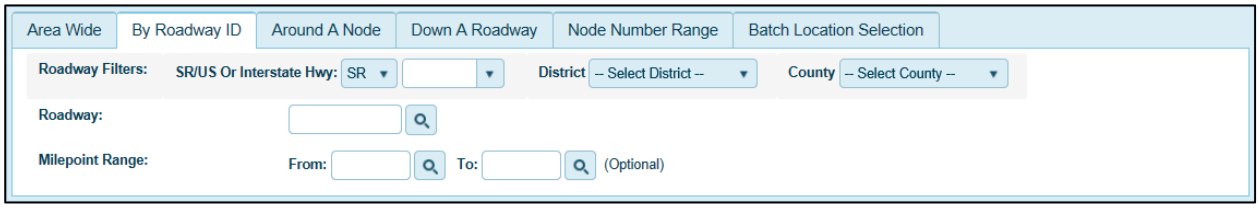

Figure 4.3 For state road crashes associated with a roadway ID use the "By Roadway ID" location option.

4.3 Around a Node

Users may select the "Around A Node" option if they are interested in crashes on a state road within a specific radius from a node. Users must select a county before they can select a node. The radius can be set in mile (MI) or feet (FT), and the maximum radius that the user may choose is one mile or 5,280 feet.

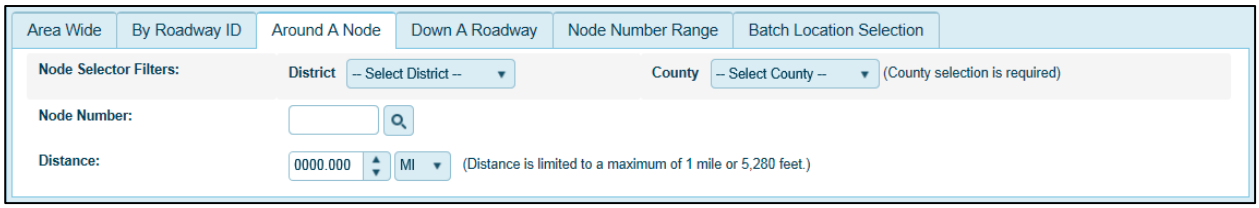

Figure 4.4 Use the "Around A Node" option for state road crashes in an area near a node.

4.4 Down a Roadway

Users may select the "Down A Roadway" option if they are interested in crashes on a state road between two milepoints. First, a user must select a route (e.g. SR 5, US 1, or I 95). Second, a user must select a "From" roadway ID and milepoint and a "To" roadway ID and milepoint. This is a good option if a user is interested in a road segment that crosses county boundaries.

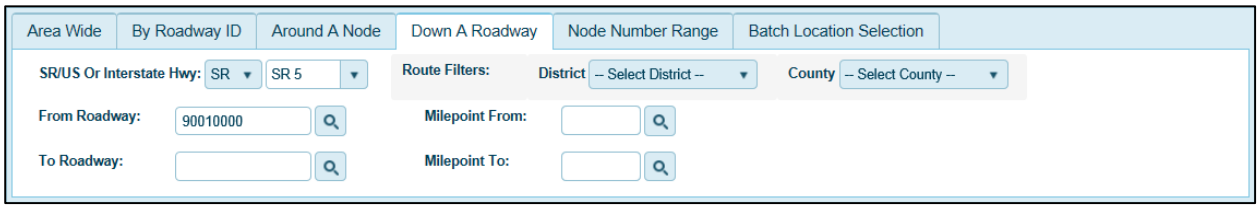

Figure 4.5 Use the "Down A Roadway" option for state road crashes on a route like SR 5 or US 1.

4.5 Node Number Range

Users may select the "Node Number Range" option if they are interested in crashes on a state road between two nodes. First, a user must select a route (e.g. SR 5, US 1, or I 95). Second, a user must select a "From" node and a "To" node. Users must choose a county before selecting a node. If a user selects "Specify Distances", they can define offset distances from each node. This is a good option if a user is interested in a road segment that crosses county boundaries.

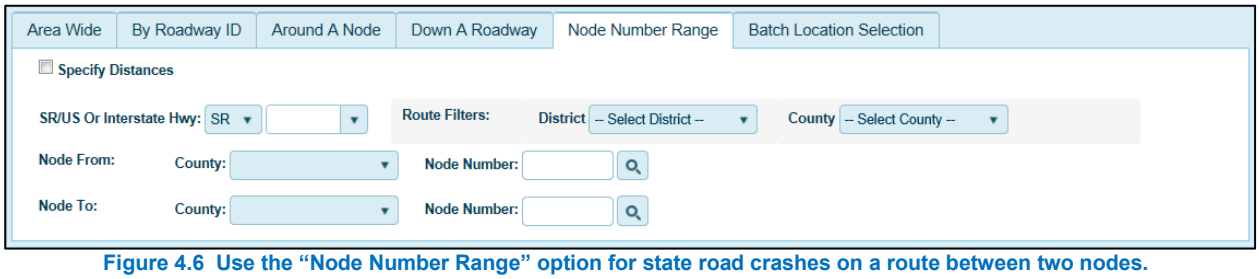

Figure 4.6 Use the "Node Number Range" option for state road crashes on a route between two nodes.

4.6 Batch Location Selection for State Roads

If a user is interested in crashes on state roads at several locations, CAR Online allows users to select a batch of one or more locations. Users can store one or more locations in temporary memory or under their user ID. Users can also load one or more locations stored in temporary memory, saved to their user ID, or saved to another user ID. Each location may have a different date range or a user can use the same date range for all loaded locations by synchronizing the dates. Users may also edit locations and report locations.

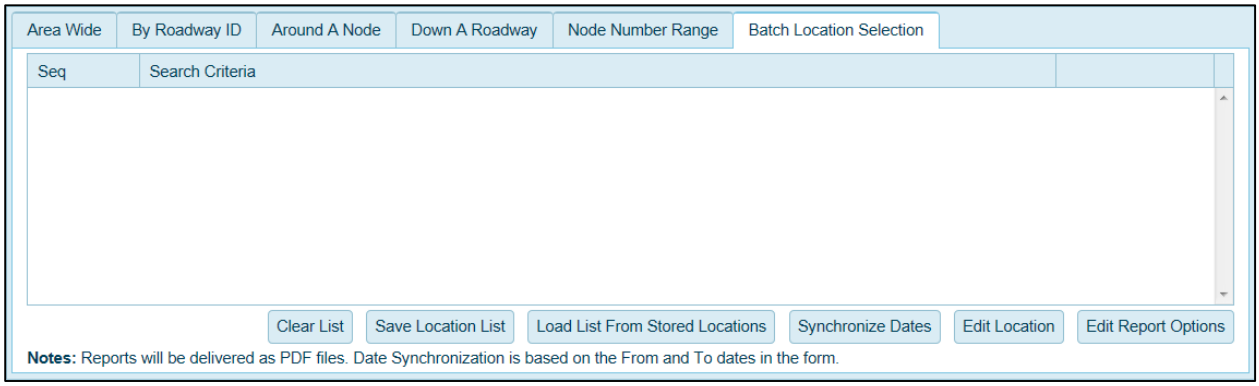

Figure 4.7 Users can get state road crashes for a batch of locations.

4.6.1 Adding Locations to a Batch List

After setting a location (see Sections 4.1 through 4.5), users can add that location to a batch list by clicking the "Add to Batch List" button near the bottom. A user may add several locations to a batch list. The date range is also stored with each location so a batch list may have several different locations with several different date ranges.

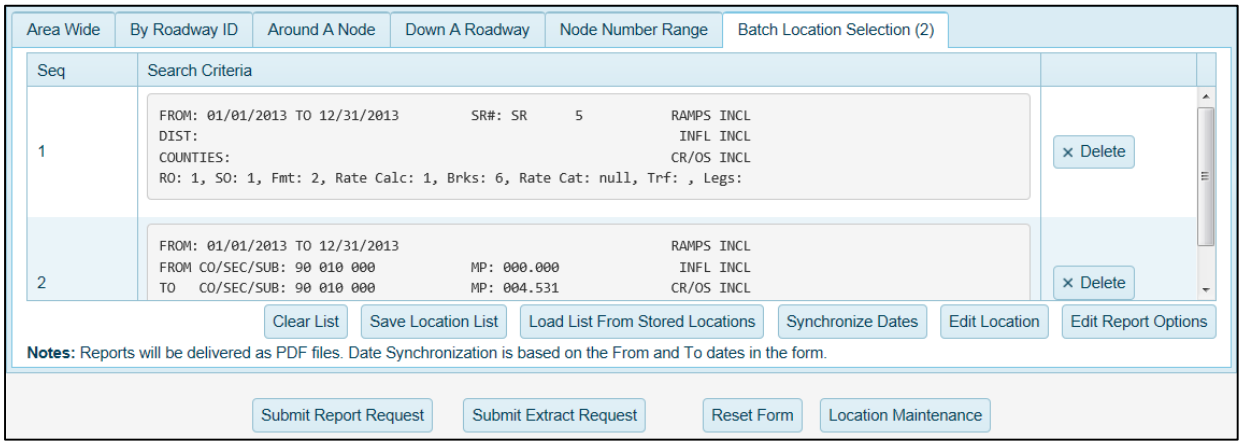

Figure 4.8 Users can review, edit, and delete any locations in the batch list.

A batch location list shows a sequence number in the "Seq" column for each location. Location settings for each location is shown in the "Search Criteria" column. A user may edit a location by selecting the location and clicking the "Edit Location" button. Clicking the "Delete" button will remove a location from the list. A user may add more locations to a batch list by defining a location (see Sections 4.1 through 4.5) and adding locations to the batch list as mentioned earlier in this section.

4.6.2 Storing Locations

After reviewing the batch list, users my save the list by clicking the "Save Location List" button below the list. Using the "Location Set Selector (Save)" dialog window, users may save the batch location list under an existing name by selecting the name of an existing location list. User may also save the batch location list under a new name by clicking the "Select New Location Set" button. A user may return to the existing location lists by clicking the "Select Existing Location Set" button.

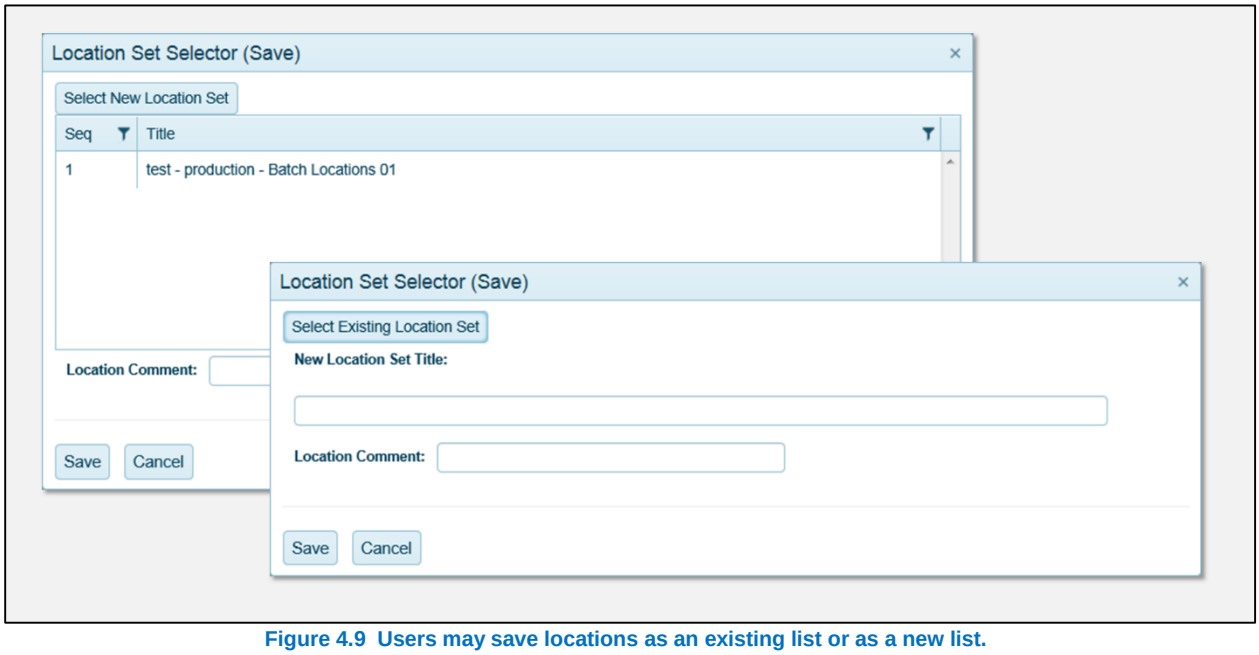

Figure 4.9 Users may save locations as an existing list or as a new list.

Users may save a single location if they select the “Save Location” button which is near the bottom of the area wide, by roadway ID, around a node, down a roadway, and node number range location options next to the “Add to Batch List” button. If a user saves a location using the “Save Location” button, the “Location Set Selector (Save)” dialog window appears. A user may then save a location under an existing name or under a new name as mentioned earlier in this section.

4.6.3 Loading Stored Locations

Users may load previously saved locations by clicking the “Load List From Stored Locations” button and users may load locations saved under any user ID. Using the “Location Set Selector (Load)” dialog window, users can select a user ID and get locations saved by that user ID. A user may click the “Reset Location Selection” button to restart the process.

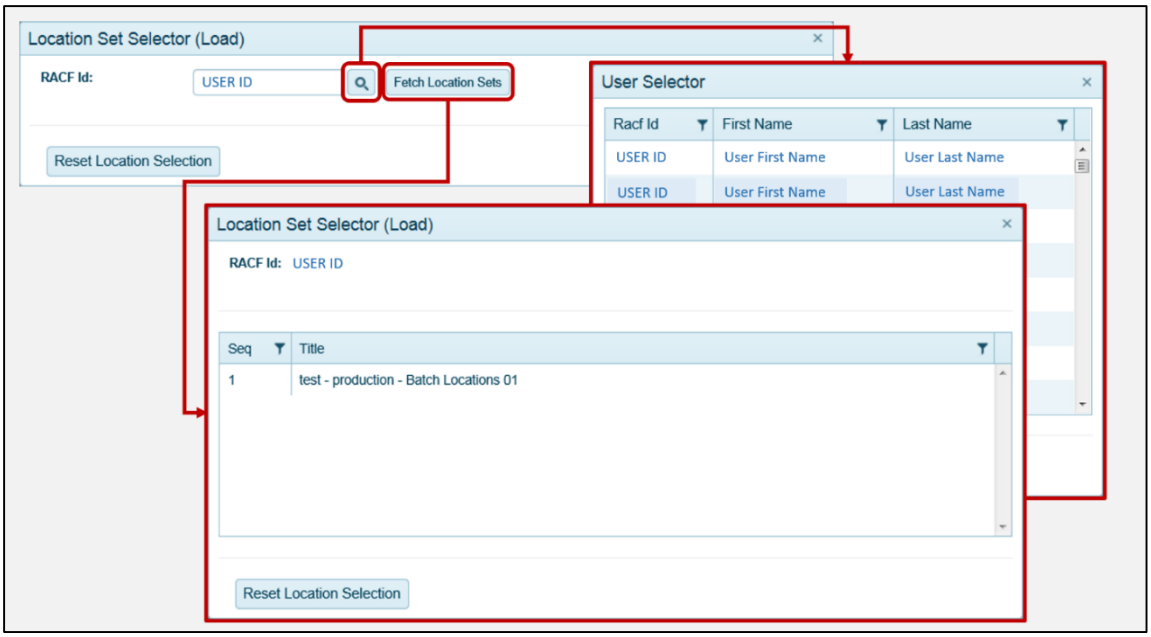

Figure 4.10 Users can load batched location lists from any user.

4.6.4 Setting Batch Report Options

CAR Online emails crash data to a user if a batch location list is used. A user may click the “Edit Report Options” button to set up or change report options. This action opens the “Detail/Summary Sort and Format Selection, State-maintained Roads” dialog window. The dialog window shows default settings. Users may change report options, sort order, report format, crash rate calculation method, the number of breaks, and override options.

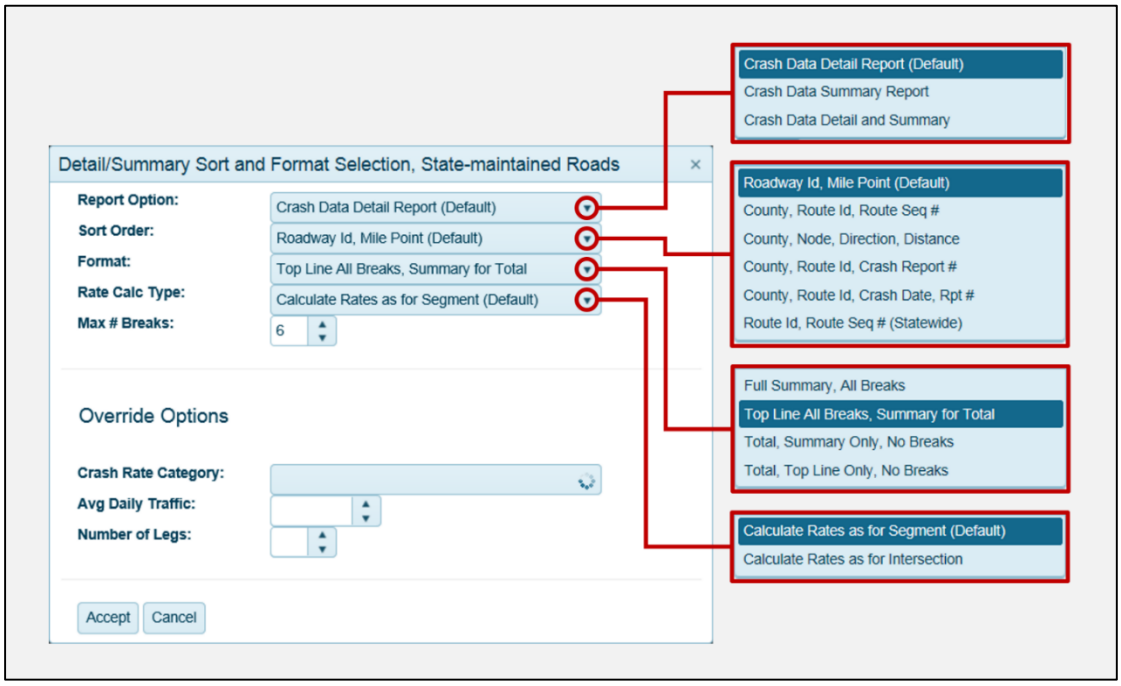

Figure 4.11 CAR Online allows users to change batch report options.

4.6.4 Requesting PDF or Excel Results

Users may choose to receive batch reports as PDF files by clicking the "Submit Report Request" button or users may choose to receive batch reports as Excel files by clicking the "Submit Extract Request" button (see Figure 4.8). Users will receive an email with links to the files.

If users click the "Submit Extract Request" button, they have three options. The may choose a crash level extract, a vehicle/driver/passenger extract, or a non-motorist extract.

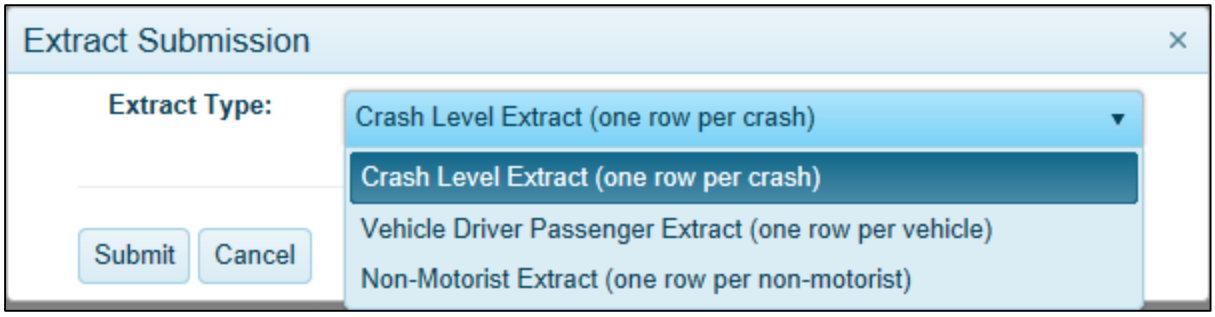

Figure 4.12. Users can select different levels for extract requests.

4.7 Location Maintenance for State Roads

Users can access the "Location Maintenance" dialog window by clicking the "Location Maintenance" button. Through the "Location Maintenance" dialog window users can review, edit, and delete batch location lists.

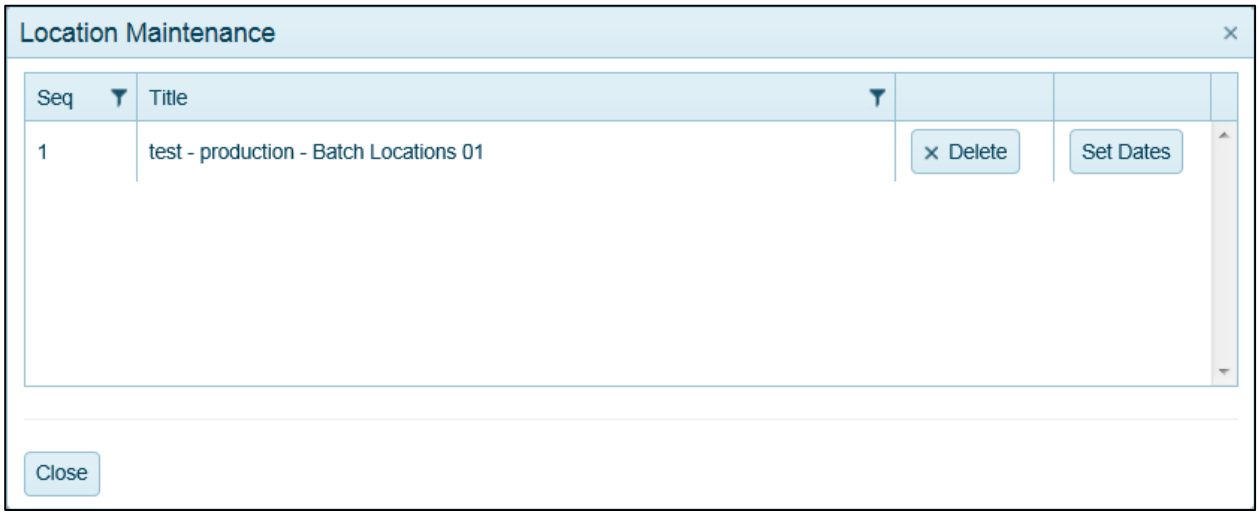

Figure 4.12 Users can review, edit, and delete batch location lists.

5.0 All Roads

Users may access data for crashes located on local roads or both local and state roads through All Roads reports. If a user selects "All Roads" from the top navigation bar, CAR Online shows a screen for entering report parameters. There are several options for defining locations and it is possible for different options to produce identical results. If users are mainly interested in crashes on state roads, they should use State Road reports (see Section 4.0).

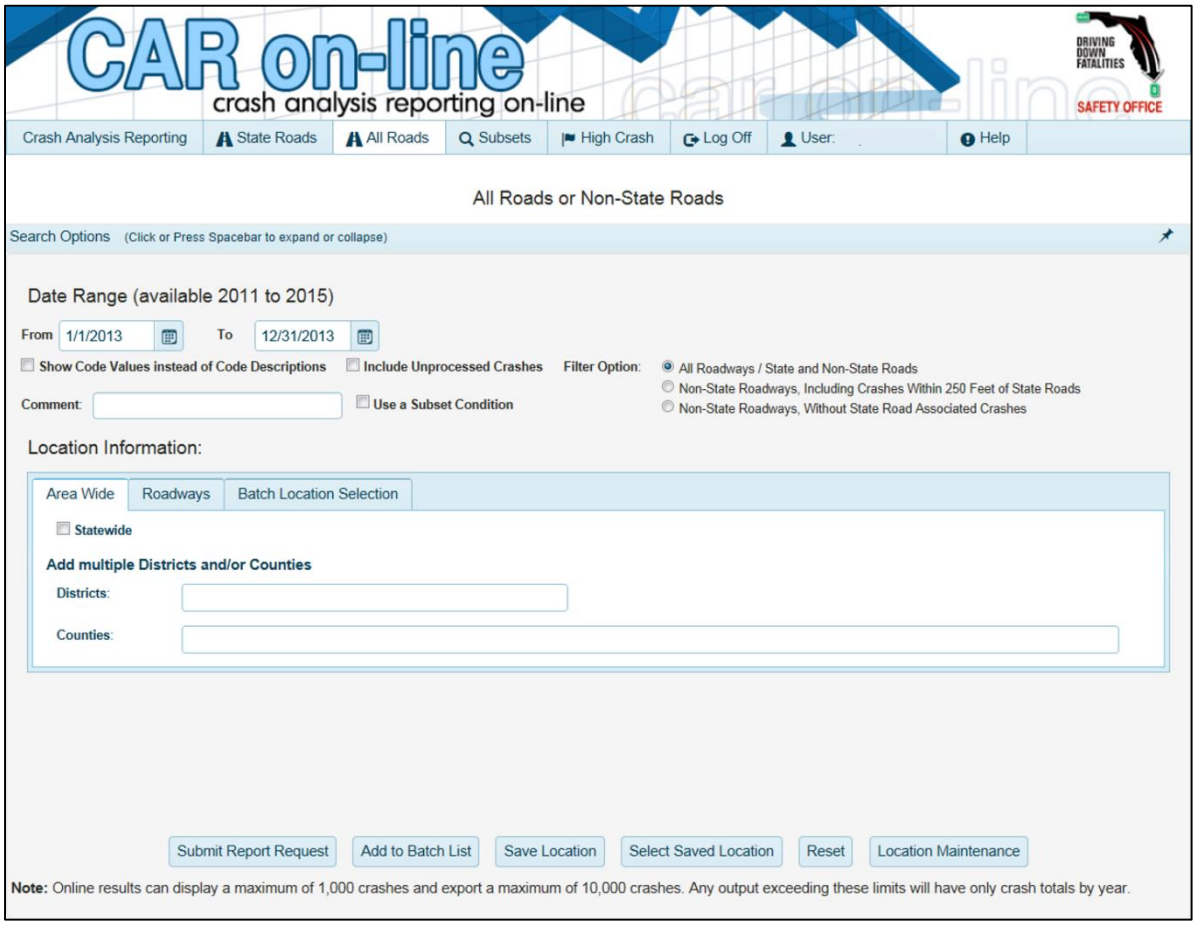

Figure 5.1 All Roads reports give crash data for local and state-maintained roads.

5.1 Area Wide for All Roads

Users may select the "Area Wide" option if they are interested in crashes that are located on any road for an area. The area may be (1) a county, (2) a district, (3) any combination of one or more districts or counties, or (4) statewide. CAR Online emails the results after the user clicks the "Submit Report Request" button at the bottom of the All Roads screen.

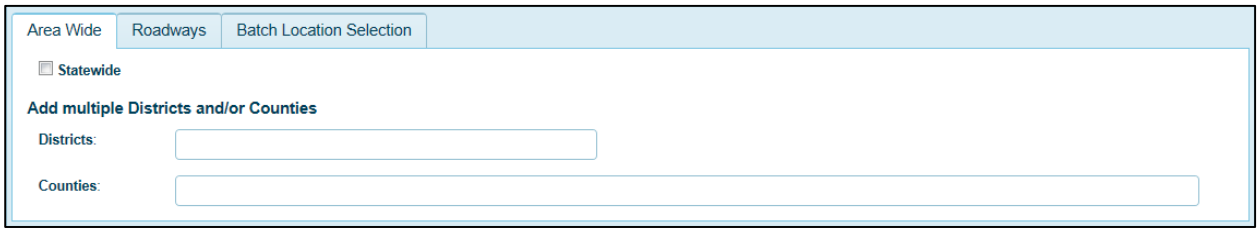

Figure 5.2 Area wide reports give crash data for any local and state roads in an area.

5.2 Roadways

Users may select the "Roadways" option if they are interested in crashes on (1) an intersection of roadways or (2) on a roadway. If a user is interested in crashes on an intersection of roadways, the text boxes for

"Roadway Name" and "Intersecting Roadway Name" must be filled. If a user is interested in crashes on a roadway, only the text box for "Roadway Name" must be filled.

Figure 5.2 Roadways reports give crash data for any intersection of local or state roads.

Users have multiple options for filling in these text boxes. Users can type all or part of a roadway name in the text box. Users can also search for a roadway name by clicking the search icon. Once a text box is filled in, users choose a "Text Location" option. Text location options are (1) exact match, (2) begins with, and (3) contains.

5.3 Batch Location Selection for All Roads

If a user is interested in crashes on all roads at several locations, CAR Online allows users to select a batch of one or more locations. Users can store one or more locations in temporary memory or under their user ID. Users can also load one or more locations stored in temporary memory, saved to their user ID, or saved to another user ID. Each location may have a different date range or a user can use the same date range for all loaded locations by synchronizing the dates. Users may also edit locations and report locations. Batch location selection for All Roads reports is the same as batch location selection for State Roads reports. See Section 4.6 for details.

6.0 Subsets

Generally CAR Online gives a user all crash data for any location chosen. However a user interested in a portion of that data can receive a data subset. For example instead of receiving data on crashes on a state road in a county, a user can choose to receive data on pedestrian-related crashes on that state road in that county. In this example pedestrian-related crashes are a subset.

The subset option is available for State Roads reports and All Roads reports. Users may select "Use a Subset Condition" (see Figures 4.1 and 5.1) to get crash data subsets for a location. Through the "Subsets Management" page users can define, save, and load subset conditions.

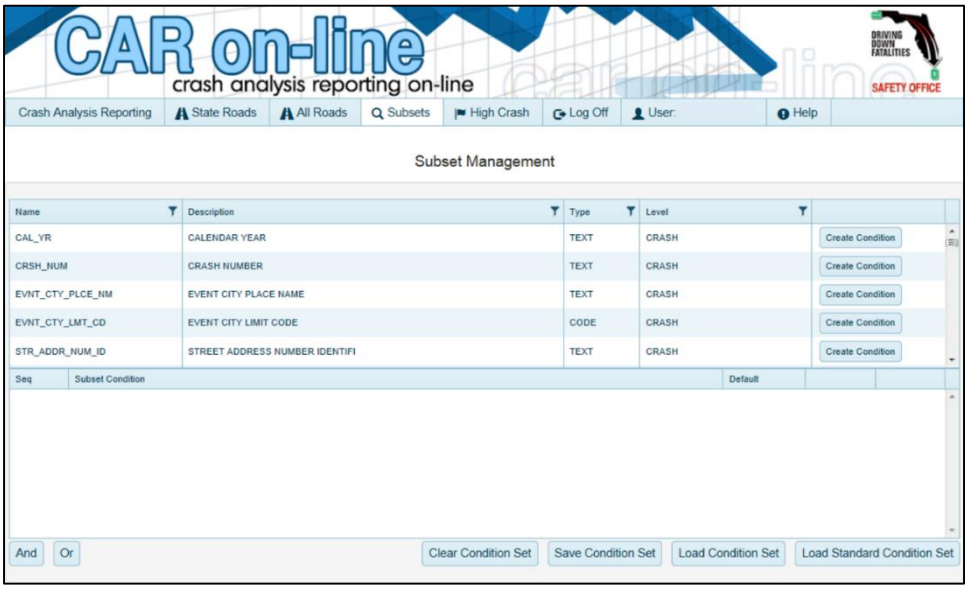

Figure 6.1 Users can create, save, or load subset conditions to be used with State Roads or All Roads reports.

6.1 Defining Subset Conditions

Users benefit from being familiar data fields before defining subset conditions. The traffic crash form is a good resource. Users can use filter features to find data fields that interest them. The "Subset Management" screen (see Figure 6.1) also allows users to sort data fields by name, description, type, and level. There are four types of data fields – text, code, number, and date. There are also four levels of data fields – crash level, vehicle level, non-motorist level, and driver or passenger level.

Users begin defining subset conditions by clicking the "Create Condition" button in the "Subset Management screen. Through the "Create Condition" window, users can define a condition. The type of data field determines the type of "Create Condition" window shown. Users accept a condition by clicking the "Accept Condition" button. Users may create several conditions. The "And" and "Or" buttons on the "Subset Management" screen help users define more complex data subsets.

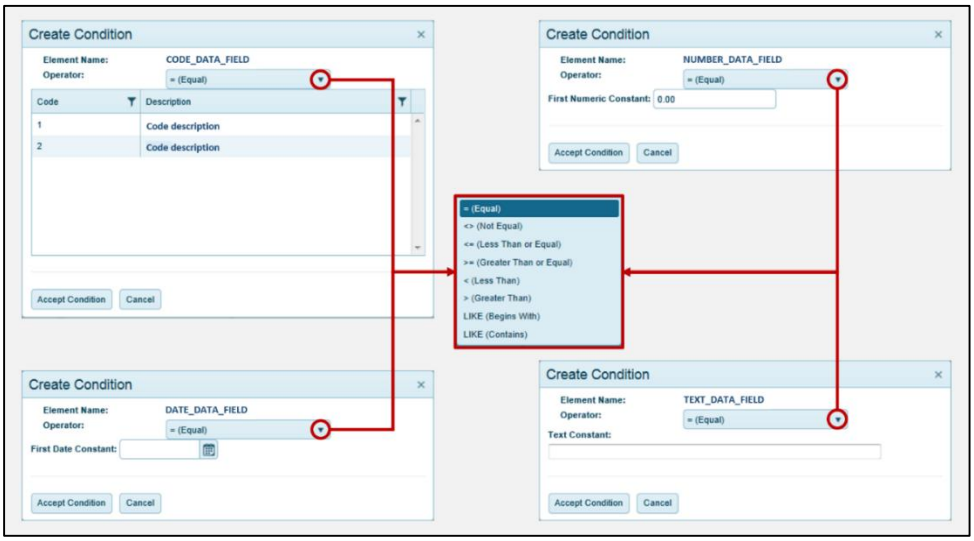

Figure 6.2 CAR Online shows a different "Create Condition" dialog window depending on the type of data field.

6.1.1 Simple Example

Suppose a user wants to define a subset for pedestrian crashes. First, the user searches for pedestrian-related data fields. In this case, the user finds the "TOT_OF_PEDST_NUM" data field for the total number of pedestrians. Second, the user defines the condition. Here, the user defines a condition where the total number of pedestrians is greater than zero. Finally, the user accepts the condition and it is added to the list of conditions.

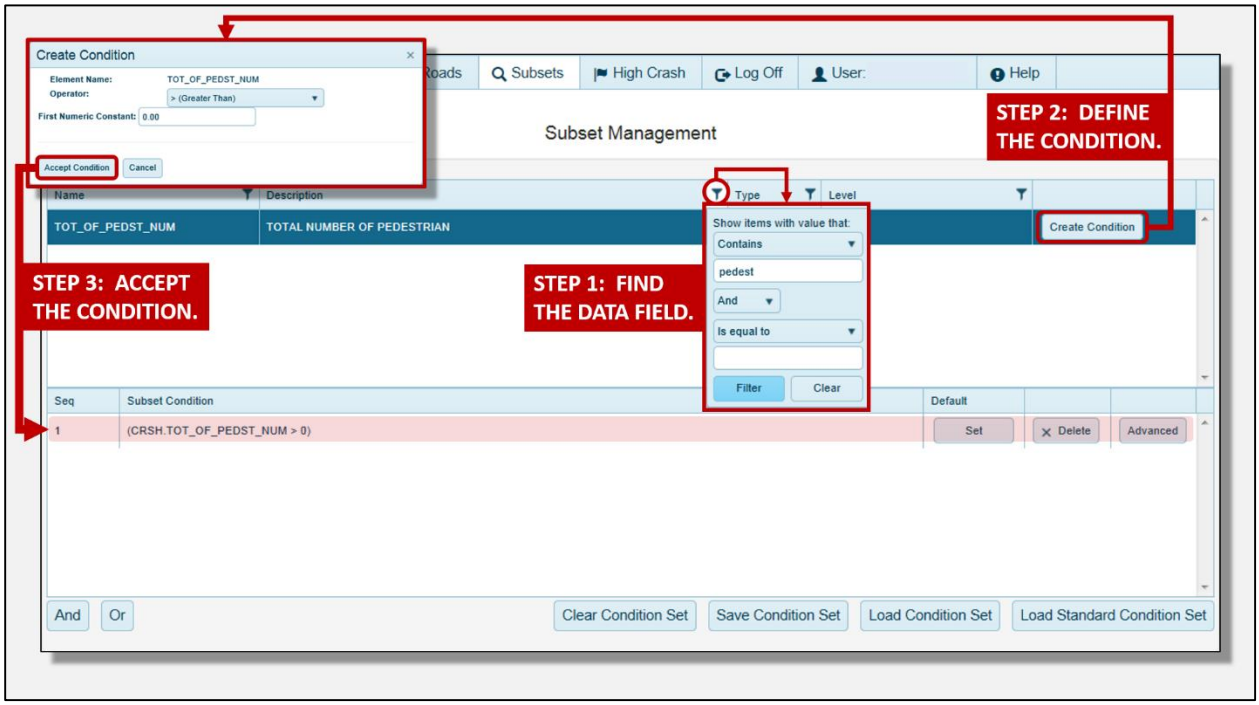

Figure 6.3 A user can define a condition in three basic steps.

6.1.2 More Complex Example

Suppose a user wants to define a subset for pedestrian crashes and bicyclist crashes. First, the user searches for pedestrian-related data fields. In this case, the user finds the "TOT_OF_PEDST_NUM" data field for the total number of pedestrians and "TOTOF_PEDLCYCL_NUM" data field for the total number of cyclists. Second, the user defines the conditions. Here, the user defines a condition where the total number of pedestrians is greater than zero and another condition where the total number of cyclists is greater than zero. Third, the user accepts the conditions and they are added to the list of conditions. Finally, the user creates a condition for pedestrians greater than zero "AND" cyclists greater than zero. The user may also create a condition for pedestrians greater than zero "OR" cyclists greater than zero.

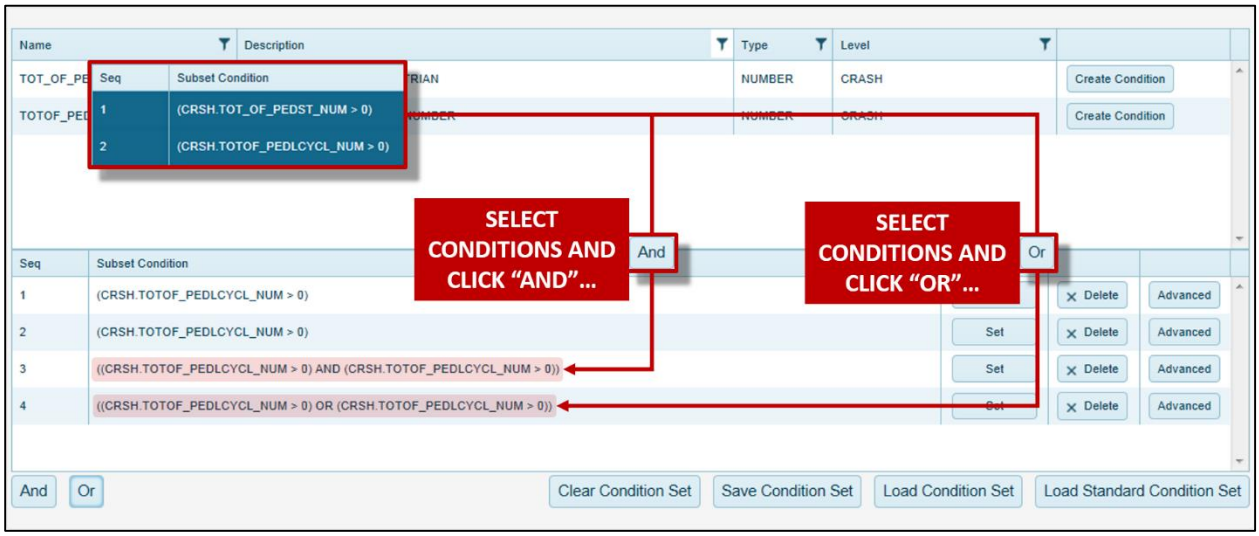

Figure 6.4 A user can define complex conditions using AND and OR operators.

6.1.3 Advanced Options

Users may define advanced options for any condition by clicking the "Advanced" button. Users may then use the "Advanced options" window to define advanced options. Different settings are available to users depending on which option type is selected.

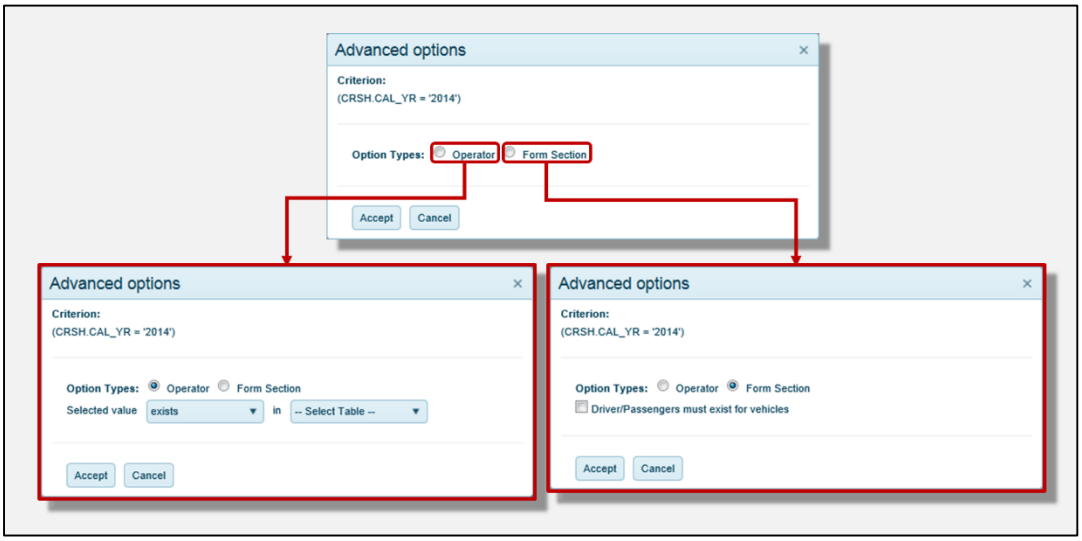

Figure 6.5 Users may define advanced options for any condition.

6.2 Loading Standard Subset Conditions

Users may load standard condition sets by clicking the "Load Standard Condition Set" button. Through a dialog window users may choose a standard condition set and click the "Select Subset" button. Clicking the "Reset Subset Selection" button will cancel the process.

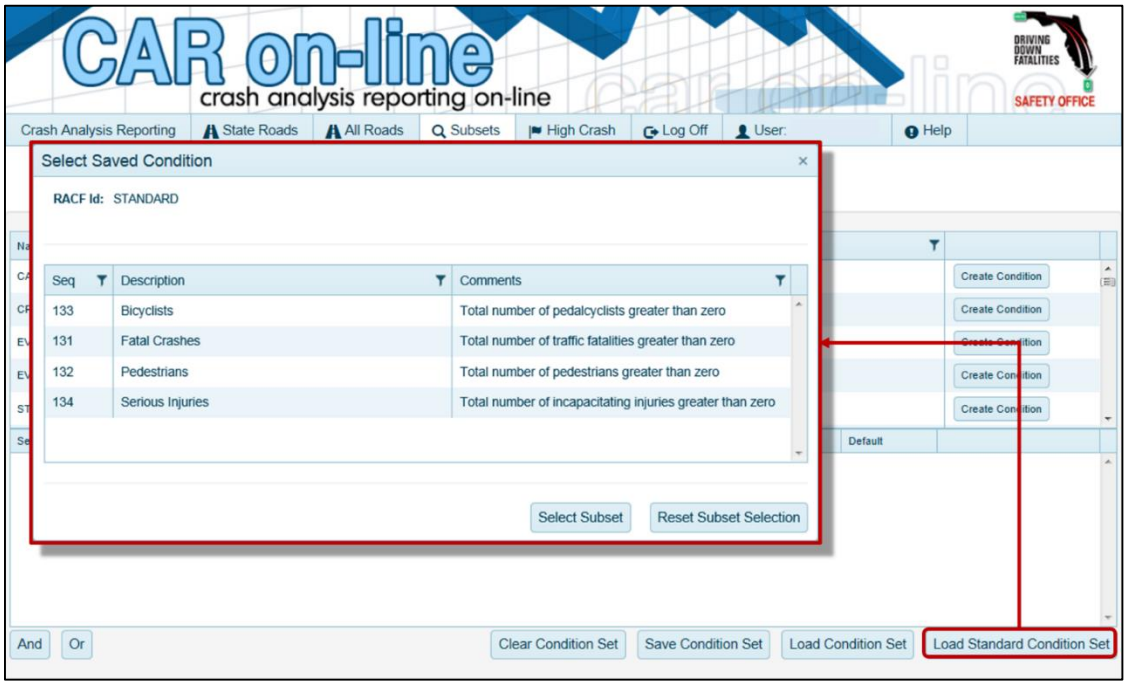

Figure 6.5 Users can load standard conditions.

6.3 Loading User Subset Conditions

Users may load condition sets stored under any user ID by first clicking the "Load Condition Set" button. In the "Select Saved Condition" dialog window users either enter a user ID into the text or search for a user ID. Finally, users click the "Fetch Subsets" button and may select a condition set in the "Select Saved Condition" dialog window. Clicking the "Reset Subset Selection" button will cancel the process.

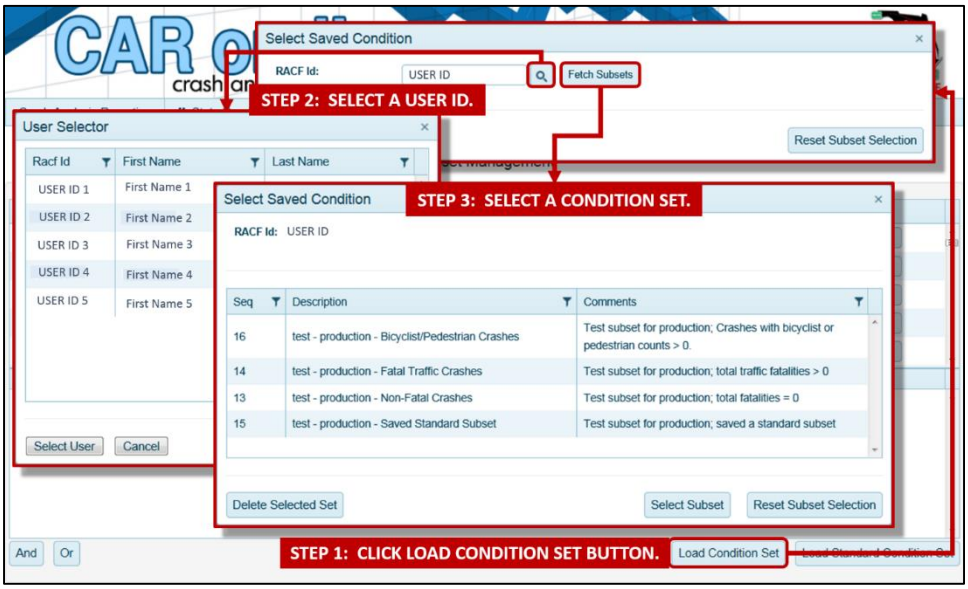

Figure 6.6 A user may load condition sets saved by any user.

6.4 Saving User Subset Conditions

If users click the “Save Condition Set” button, they can save a condition set to their user ID. Users may save a condition set to an existing subset or they may save a condition set as a new subset.

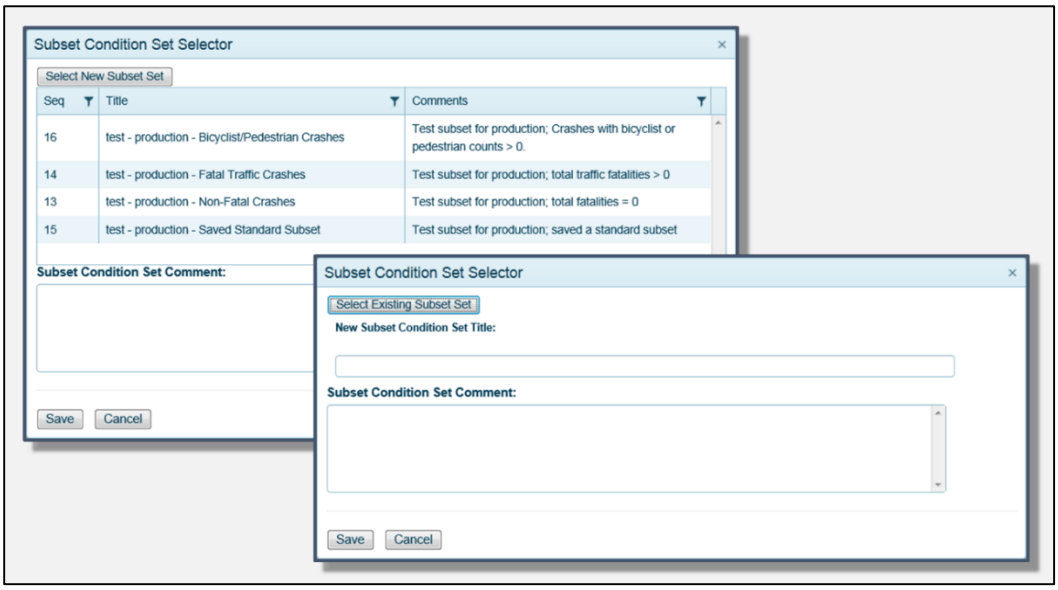

Figure 6.7 Users can save condition sets to an existing name or a new name.

7.0 High Crash

Users may access High Crash Analysis Reports if they select “High Crash” from the navigation bar. High Crash Analysis Reports include average crash rate reports, high crash rate reports, and reference rate reports for intersections and road segments on the Florida state road system. For each type of report a user may extract crash rate data by county, district, or statewide. All reports are exported to an Excel format.

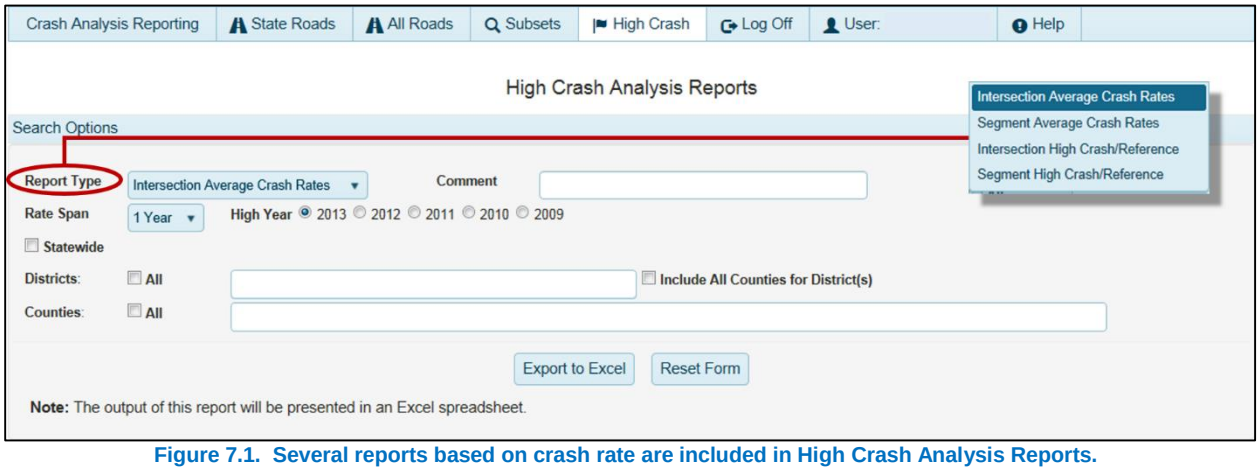

Figure 7.1. Several reports based on crash rate are included in High Crash Analysis Reports.

7.1 Intersection Average Crash Rates

Users may go to "Report Type" and select "Intersection Average Crash Rates" if they are interested in the average crash rates of intersections. Average rates for intersections are grouped by the crash rate class category and the number legs. Users may choose from 1-year to 5-year rate spans. A rate span is the number of years used to compute average crash rates. For example, a user may select a 3-year rate span if they want the average crash rates for 2011 through 2013. Similarly, a user may select a 2-year rate span for the average crash rates from 2011 through 2012.

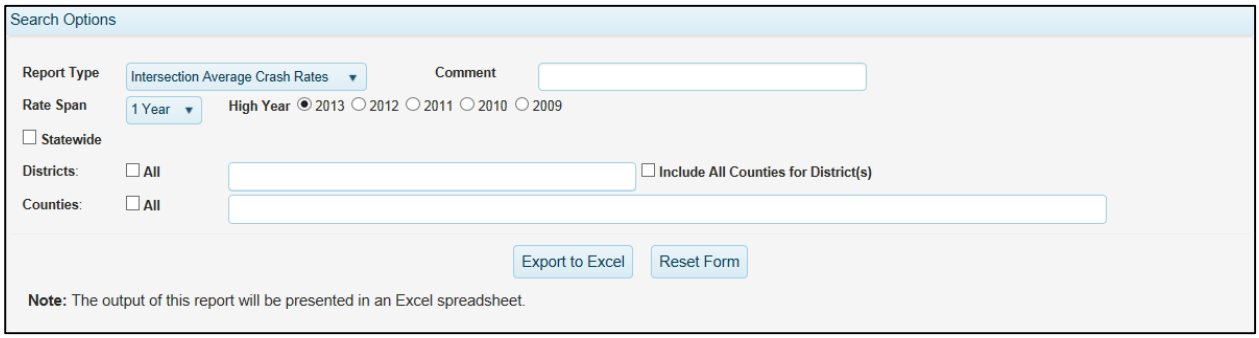

Figure 7.2. By choosing "Intersection Average Crash Rates" as the report type, a user may export a list of average crash rates for all types of intersections in an area.

To choose the highest or most recent year to be included in the report, a user selects a "High Year" from the available years. Users also choose the areas for which average crash rates are calculated. Choices range from county, district, and state levels.

7.2 Segment Average Crash Rates

If interested in the average crash rates of state road segments, users may select "Segment Average Crash Rates" from the report type section. Users may choose from 1-year to 5-year rate spans, which are the number of years used to compute average crash rates. User also select the "High Year", which is the highest or most recent year to be in the report. Users also choose any counties or districts for which average crash rates are calculated (statewide is also available). Average rates for road segments are groups by the crash rate category and are output to Excel.

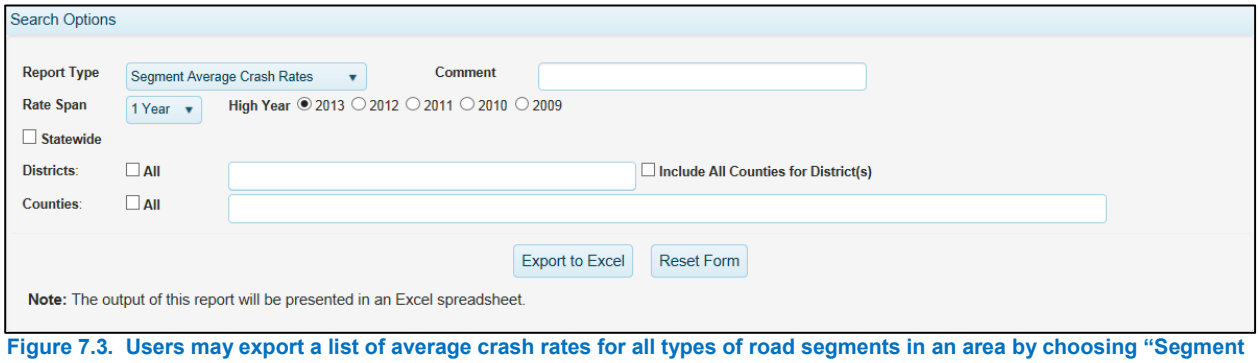

Figure 7.3. Users may export a list of average crash rates for all types of road segments in an area by choosing "Segment Average Crash Rate" as the report type.

7.3 Intersection High Crash/Reference

By choosing "Intersection High Crash/Reference" as the report type, users may generate two kinds of reports – (1) a report listing intersections with the highest crash rates when compared to an average crash

rate, or (2) a report listing the crash rates of intersections within a chosen area. Users may choose from 1-year to 5-year rate spans, which are the number of years used to compute average crash rates. The "High Year" is the highest or most recent year to be included in the report. User may also choose the areas for which the crash rates of intersections are listed.

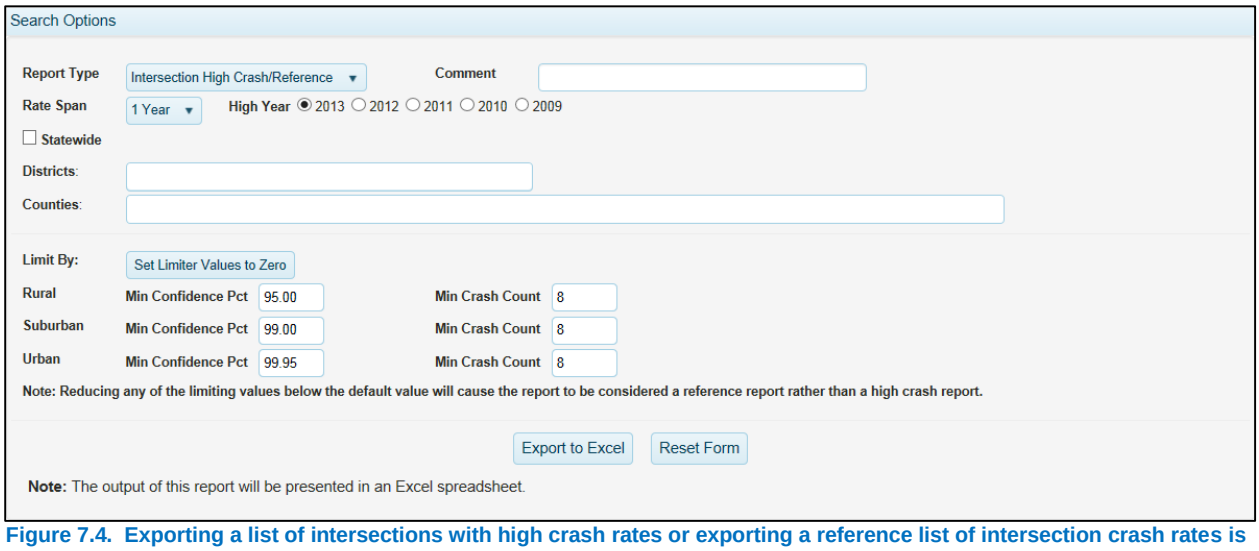

Figure 7.4. Exporting a list of intersections with high crash rates or exporting a reference list of intersection crash rates is possible through the "Intersection High Crash/Reference" report type.

Users can control the number of intersections included on the reports by adjusting the limits. Users decrease the list of intersections by selecting higher minimum confidence percentage limits ("Min Confidence Pct") and higher minimum crash counts ("Min Crash Count"). Users may also increase the list of intersections by selecting lower values for "Min Confidence Pct" and lower values for "Min Crash Count". Using limits that are at or above the default values will result in a high crash report. Choosing limits that are below the default values will generate a reference list of intersections.

7.4 Segment High Crash/Reference

Users may generate a report listing road segments with the highest crash rates when compared to an average rate. Users may also generate a reference list of segments and their crash rates. Both options are available through the "Segment High Crash/Reference" option for the report type. Users choose a 1-year to 5-year rate span, which is the number of years used to calculate average crash rates. Users select the "High Year" as the highest or most recent year to be included in the report. Users also select the areas for which rates are calculated and listed.

Users also choose limits for the reports. If a user selects limits that are equal to or greater than the default values, a high crash report is created. If a user selects limits that are less than the default values, a reference report is generated. Segment lists get smaller by selecting smaller limits, but lists get larger by selecting larger limits.

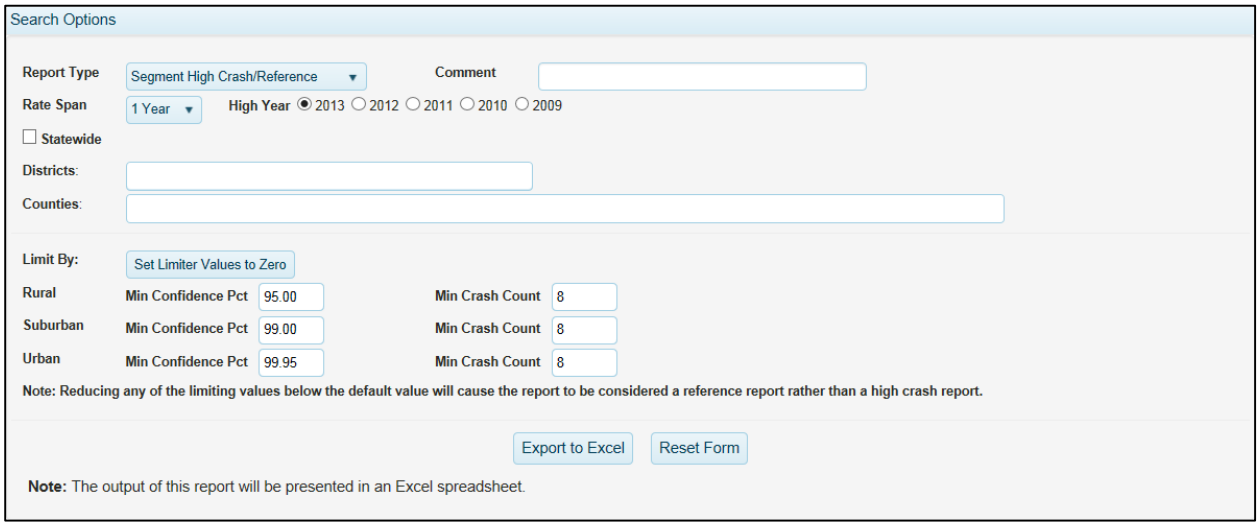

Figure 7.5. Using the "Segment High Crash/Reference" report type, users may export a list of road segments with high crash rates or users may export a reference list of segment crash rates.

8.0 Tables

Users interested in a drill-down analysis of crash data may select "Tables" from the navigation bar. We recommend that users have locations saved beforehand. If a user wants to drill down in "State Roads", then they must have a "State Roads" location saved (see section 4.6 for details). If users want to drill down in "All Roadways", they must have an "All Roads" location saved (see section 5.3 for details). We also recommend that users have subset conditions saved prior to starting if needed (see section 6.0 for details).

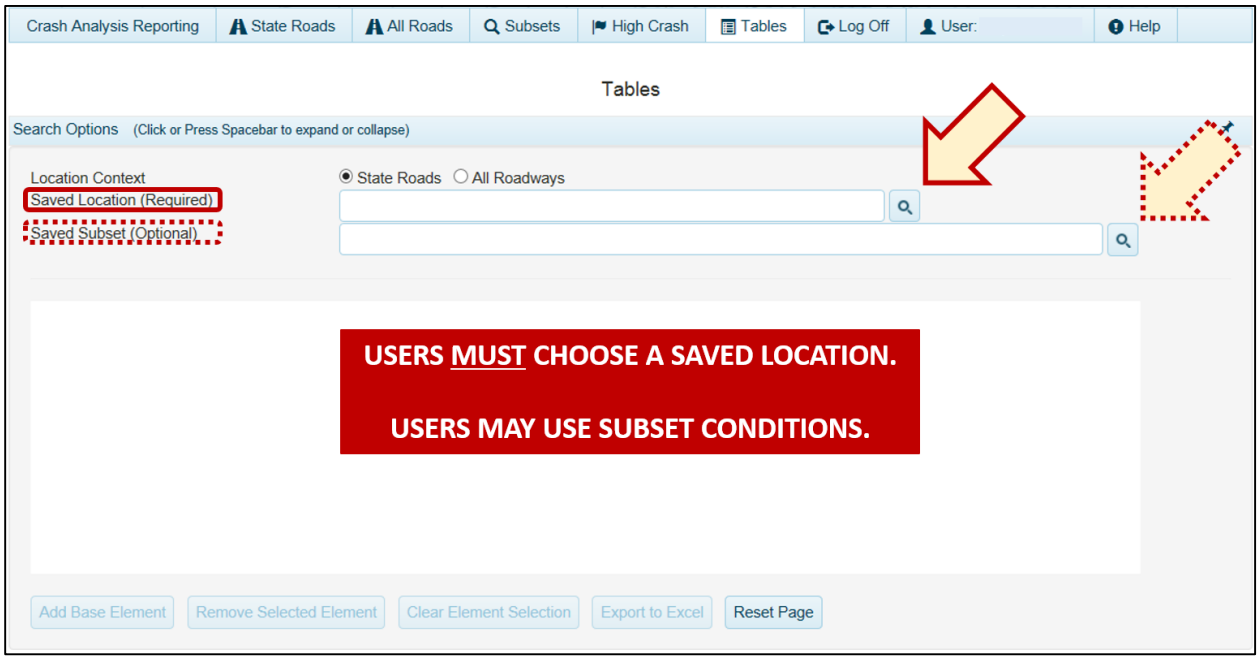

Figure 8.1. A drill-down analysis is possible using the "Tables" option.

8.1 Selecting a Location

After selecting a location context (either “State Roads” or “All Roadways”), users click the search icon to select a location set. Location sets may contain one or more specified locations and each location may have a different date ranges (review sections 4.6.3 and 5.3 for details regarding loading locations). However, only one location may be selected for a drill-down analysis using Tables.

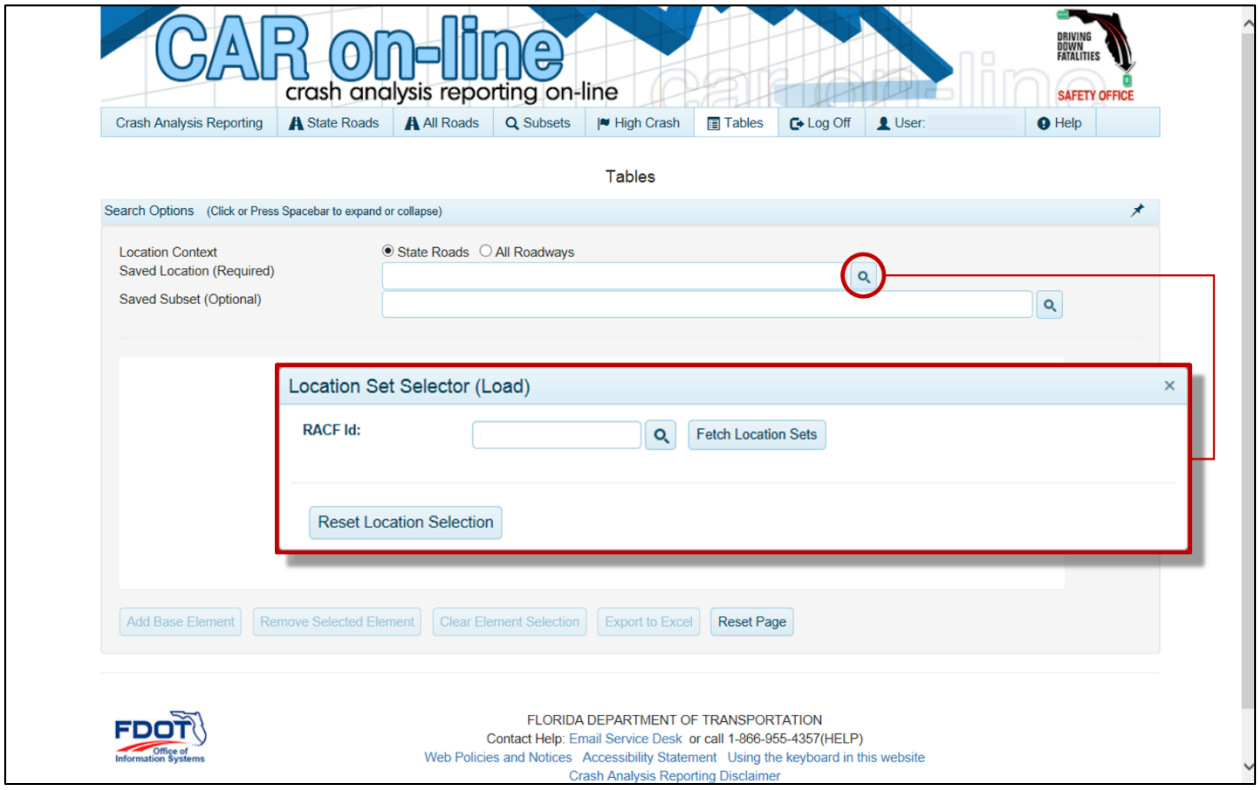

Figure 8.2. Users must select locations that are either state roads or all roadways.

8.2 Table Elements

Users control a drill-down analysis by adding or removing table elements. Table elements are traffic crash characteristics like the date, vehicle details, person details, and so on. Users click buttons near the bottom to add, remove, and clear table elements. These buttons activate after users select a location.

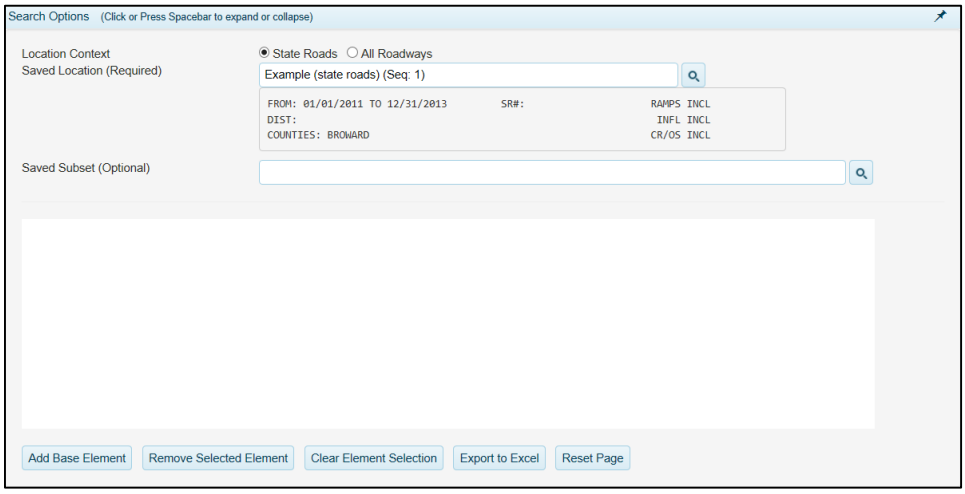

Figure 8.3. After selecting a state road location, a user may add or remove elements.

To add an element, user click the “Add Base Element” button. Now users must select a table level and a table element. Table levels refer to the different levels of traffic crash reports. Table levels are crash level, vehicle level, driver or passenger level, and non-motorist level. Users can use filter features to look for table elements (see section 3.2 for details on search and filter features). After choosing a table element, users click the “Add” button. Users select the “Close” button to cancel the process. When CAR Online finishes pulling the data, it will be visible at the bottom of the page.

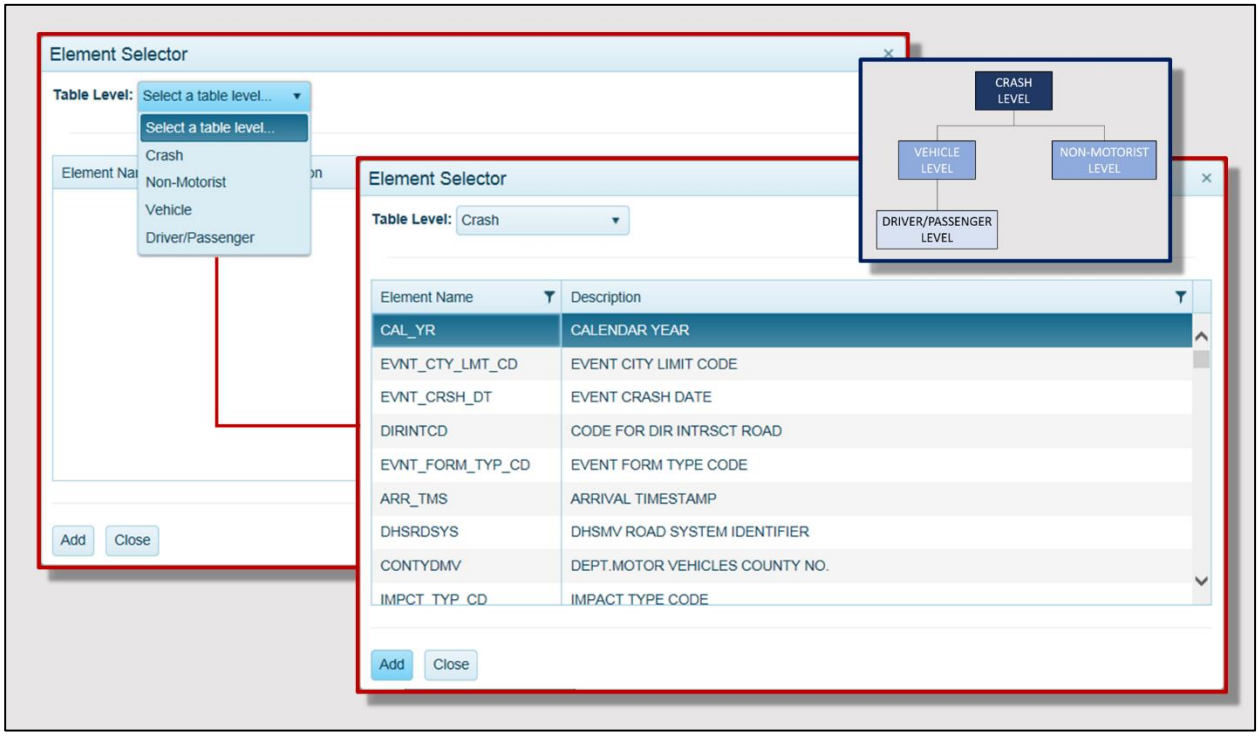

Figure 8.4. Users select table level and table elements using the “Element Selector” window.

If a user wants to drill down further, they click on a table element value and that begins the process of selecting another table element. If a user wants to remove a table element, they click on the name and use the “Remove Element Selection” button.

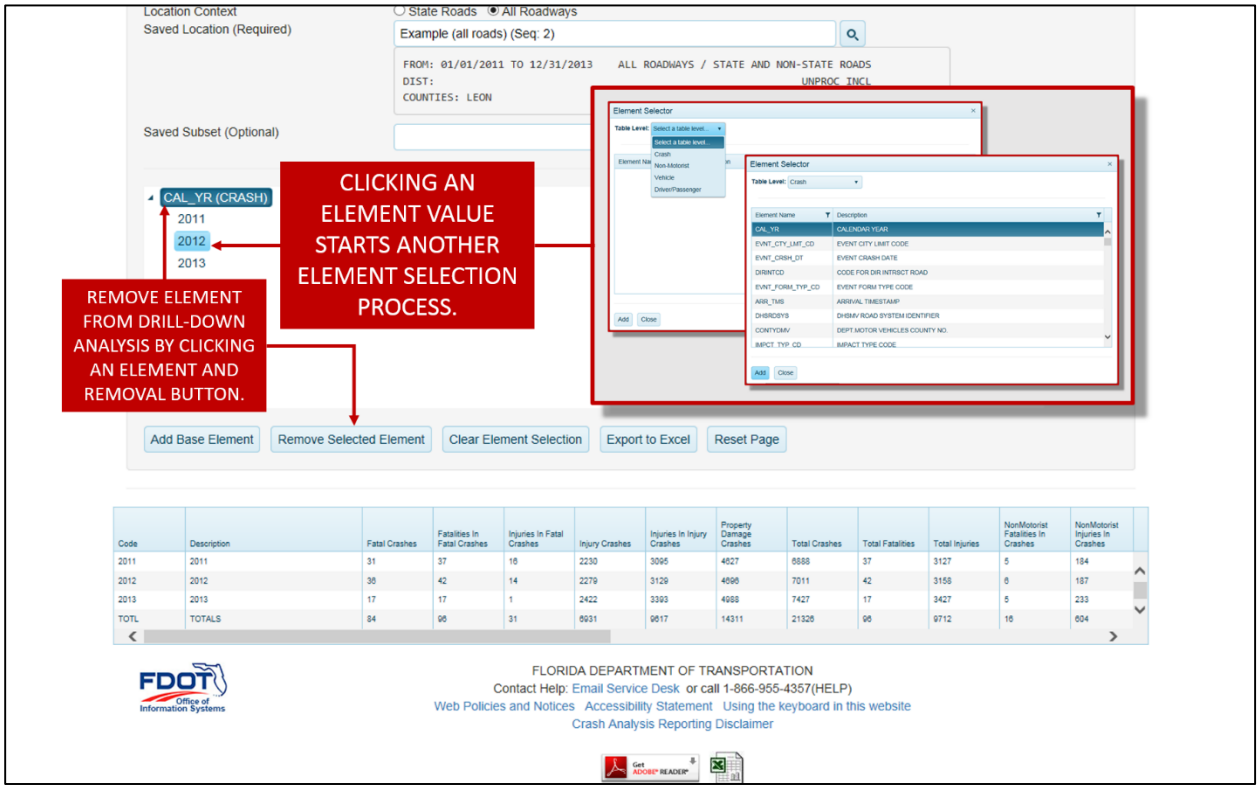

Figure 8.5. Clicking element values starts another level of drilling down. Selecting element names and the removal button deletes a level of the drill-down analysis.

9.0 Glossary of Terms

CAR: Crash Analysis Reporting.

High Year: The highest or most recent year included in a high crash/reference report.

Intersection: A location at which one or more roadways intersect.

Leg: A roadway entering an intersection.

Min Confidence Pct: The minimum confidence level percentage is the degree of certainty to which CAR Online calculates a crash rate that is higher than the average rate by crash rate category.

Min Crash Count: The minimum crash count is the minimum number of crashes needed for an intersection or segment to be included in a high crash/reference report.

Node: An intersection or other landmark feature located on the state road system.

RACF: Resource Access Control Facility. A security system by IBM that controls access.

Rate Span: The number of years for which a crash rate is calculated. The years are consecutive.

Rural: An area with open drainage that is outside of a city or urban area.

Segment: A length of roadway on the state road system.

Subset: One or more conditions that define a group or subset of crashes.

Suburban: An area with open drainage that is inside of a city or urban area.

Urban: An area with curbs and gutters.