

The user should contact NCSA using the email link provided on the homepage. Using the standard template provided on the website in **Area 14: Contact NCSA Link** ensures quick delivery of the email to our team to respond to your inquiry.

## Table of Content

<b>1. Introduction .....</b>	<b>4</b>
1.1 Purpose and Scope .....	4
1.2 Organization .....	4
1.3 What is FIRST? .....	4
<b>2. How to Use FIRST .....</b>	<b>4</b>
2.1 System Requirements .....	4
2.2 Building Your Query .....	4
<b>FIRST Homepage</b> .....	4
<b>Area 1: FIRST Query Tool Description</b> .....	7
<b>Area 2: Home</b> .....	8
<b>Area 3: Help</b> .....	8
<b>Area 4: Select a Topic</b> .....	8
<b>Area 5: Sample Queries Section</b> .....	9
<b>Area 6: Topic Related Publications Section</b> .....	10
<b>Area 7: Select Fatality and/or Injury Panel</b> .....	10
<b>Area 8: Select Time Frame Panel</b> .....	10
<b>Area 9: Select State or Region Panel</b> .....	11
<b>Area 10: Filter Your Selection (FYS) Panel</b> .....	12
<b>Area 11: Select Vehicle Make and Model Panel</b> .....	18
2.3 Building Your Reports .....	19
<b>Area 12: Build Your Report (BYR) Panel</b> .....	19
2.3.1 Build a Table Report .....	19
<b>Area 13: Query Criteria Selected Section</b> .....	22
2.3.1.1 Mapping the Data in a Table Report .....	25
2.3.1.2 Exporting Data in a Table Report .....	29
2.3.1.3 Download Case Listing of Crash Records .....	30
2.3.2 Build a Univariate Graph .....	30
2.3.3 Build a Panel Graph .....	31
2.4 Contact Us, Website Compatibility Message, Version, and Download Your Data Links .....	33
<b>Area 14: Contact NCSA Link</b> .....	33
<b>Area 15: Website Compatibility Message</b> .....	34
<b>Area 16: Version and Release Date</b> .....	34
<b>Area 17: Download Your Data Links</b> .....	34

<b>3. FIRST Error Messages .....</b>	<b>35</b>
3.1 SAS System Process Error Message.....	35
3.2 SAS System Down for Maintenance .....	36
3.3 FIRST Query Tool Website Down for Maintenance .....	36
3.4 FIRST Query Tool Application Error Message .....	36
3.5 Website Hangs or Becomes Unresponsive.....	37
<b>4. Acronyms.....</b>	<b>37</b>
<b>5. Terms .....</b>	<b>38</b>

## List of Figures

Figure 1 – FIRST Header Search and NCSA Problem Reporting .....	5
Figure 2 – FIRST Splash/Welcome Screen Information .....	5
Figure 3 – Screenshot of FIRST Screen Showing Vehicles Topic.....	5
Figure 4 – FIRST Query Tool Description.....	7
Figure 5 – List of Data Elements Used on FIRST Site.....	8
Figure 6 – Home Link Icon.....	8
Figure 7 – Help Link Icon .....	8
Figure 8 – Select a Topic .....	9
Figure 9 – Sample Queries Section .....	9
Figure 10 – Topic Related Publications Section .....	10
Figure 11 – Select Fatality and/or Injury .....	10
Figure 12 – Additional Select Fatality and/or Injury for Some Topics .....	10
Figure 13 – Select Time Frame – Time Frame Tab .....	11
Figure 14 – Select Time Frame – Years Tab .....	11
Figure 15 – Select State or Region .....	11
Figure 16 – Select State or Region – State & County.....	11
Figure 17 – Select State or Region – State & City .....	12
Figure 18 – Select State or Region – NHTSA Region .....	12
Figure 19 – Filter Your Selection (FYS)– Opening/Closing Tables with Data Elements.....	13
Figure 20 – Filter Your Selection (FYS)– Search Data Elements for People Topic.....	14
Figure 21 – Filter Your Selection (FYS)– Selecting Data Elements and Data Attributes .....	17
Figure 22 – Filter Your Selection: Expanding/Collapsing a Data Attribute Group.....	18
Figure 23 - Select Vehicle Make, Model, and Body Class .....	18
Figure 24 – Select Striking Vehicle Make and Model Panel – Pedestrians & Pedalcyclists .....	18
Figure 25 – Build Your Report (BYR)Selections .....	19
Figure 26 – Build Your Report (BYR)Panel with Data Element Search and Row and Column Percentage.....	19
Figure 27 – Alert Message for No Elements in Rows and Columns .....	20
Figure 28 – Message for Using both Highest BAC and Person BAC to Build Your Reports .....	21
Figure 29 – Message for Using Vehicle Model and Striking Vehicle Model in Build Your Reports .....	22
Figure 30 – Query Criteria Selected and Submit, Save, Retrieve, and Reset Query Buttons .....	22
Figure 31 – Warning Message for Query Length Limit .....	23
Figure 32 – Confirm Save Criteria Dialog Popup.....	23
Figure 33 – Confirm Retrieve Saved Criteria Popup.....	24
Figure 34– Retrieve Query Criteria Selected Incorrect File Type Selected Message.....	24

Figure 35 – Retrieve Query Criteria Selected Corrupted JSON Text File Message .....	24
Figure 36 – Hyperlinked Data on a Table Report to a Map .....	25
Figure 37 – Queried Data Map Initial Instruction Page .....	25
Figure 38 – Menu Icons on the Map .....	26
Figure 39 – Printing the Map in Different Formats .....	26
Figure 40 – Open and Close Map Instructions Icon.....	27
Figure 41 – Select the Year to Map and/or Different Boundaries in the Map .....	27
Figure 42 – Data Points shown on the Map .....	28
Figure 43 – Visible and Invisible Data Points Counts Display .....	28
Figure 44 – Accident Details for a Crash on the Map (1 of 2).....	29
Figure 45 – Accident Details for a Crash on the Map (2 of 2).....	29
Figure 46 – Exporting Data to PDF, RTF, or Excel (CSV) .....	30
Figure 47 – Download Case Listing of Crash Records .....	30
Figure 48 – Univariate Graph Under Build Your Report (BYR)Panel .....	31
Figure 49 – Univariate Graph Report Example.....	31
Figure 50 – Building Panel Graph Under Build Your Reports Panel.....	32
Figure 51 – Panel Graph Report Example.....	32
Figure 52 – Contact Us, Website Compatibility Message, Version, and Download Your Data Links.....	33
Figure 53 – Email to Send Feedback and Comments to NCSA .....	34
Figure 54 – NCSA FTP Directory for FARS Data .....	35
Figure 55 – SAS System Error Message Page.....	35
Figure 56 – Error Caused by SAS Query String Construct Failure (Query Criteria Selected) .....	36
Figure 57 – SAS Reporting System is Down for Maintenance .....	36
Figure 58 – FIRST Query Tool Website is Down for Maintenance Page.....	36
Figure 59 – FIRST Query Tool Application Error Message Page .....	36
Figure 60 – FIRST Query Tool Application Error Alert.....	37

### List of Tables

Table 1 – Panels, Sections, and Links Displayed on the FIRST Website.....	7
Table 2 – Acronyms Used on this Website .....	38
Table 3 – Terms Used on this Website .....	38

## 1. Introduction

This User Manual contains all the essential information for the user to be able to use Fatality and Injury Reporting System Tool (FIRST). This manual includes a description of the system functions and capabilities and step-by-step procedures for building your query and generating a SAS report or graph.

### 1.1 Purpose and Scope

The document will provide the user with the ability to maximize the use of the system. It explains in general terms the system and the purpose for which it is intended such as running data queries and generating reports from the SAS data tables.

### 1.2 Organization

NHTSA is comprised of a diverse staff of professionals who develop, promote and implement effective educational, engineering and enforcement programs. A large part of the National Center for Statistics and Analysis (NCSA) mission is to provide statistics and data to hundreds of internal and external requestors. Given the complexity of the data and the ever-evolving needs of NCSA's customers, NCSA developed this new web-based application, which is an easy-to-use, topic-and menu-driven system that makes the information resources of NCSA available to research institutes, the US Congress, government agencies and the public at large. It provides a wide array of information ranging from traffic fatalities to injury estimates and generating trends over multiple years of data as well as the capability to tabulate, chart and map the requested data.

### 1.3 What is FIRST?

Fatality and Injury Reporting System Tool (FIRST) is a data query tool that provides data on traffic fatalities in the United States. The tool also assists with generating trends over multiple years of data as well as using other data systems to provide injury estimates. The new query tool allows users to make topic-specific data queries. The order in which the Topics appear is determined by [NCSA](#). Moreover, the tool enables a unified query system from the SAS data sources which allows users to tabulate query results and save them in different file formats such as excel, PDF, Excel, and Word. The system also allows users to chart and map the data query result.

## 2. How to Use FIRST

### 2.1 System Requirements

FIRST can be accessed from a variety of PC browsers such as Chrome, Firefox, and Edge. To access the system from chrome, it has to be version **67** or later. For Firefox, the version requirement is **52**. Additionally, the system can be accessed from iPhone, Android, and iPad.

### 2.2 Building Your Query

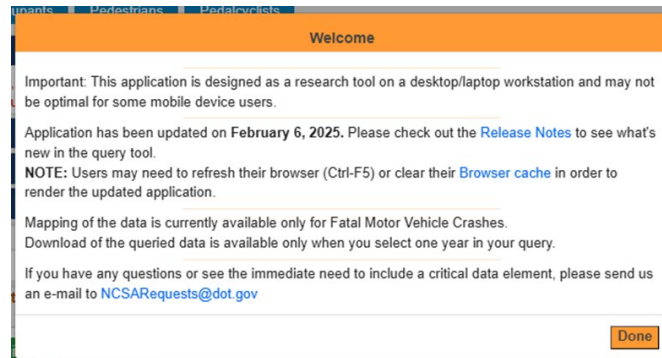
#### FIRST Homepage

The Header of the FIRST homepage has been modified to include searching within the CDAN webserver instead of the NHTSA site search. The link for reporting problem has been customized so that that clicking "NCSA PROBLEM REPORTING" in the figure below will allow users to contact NCSA directly as well.



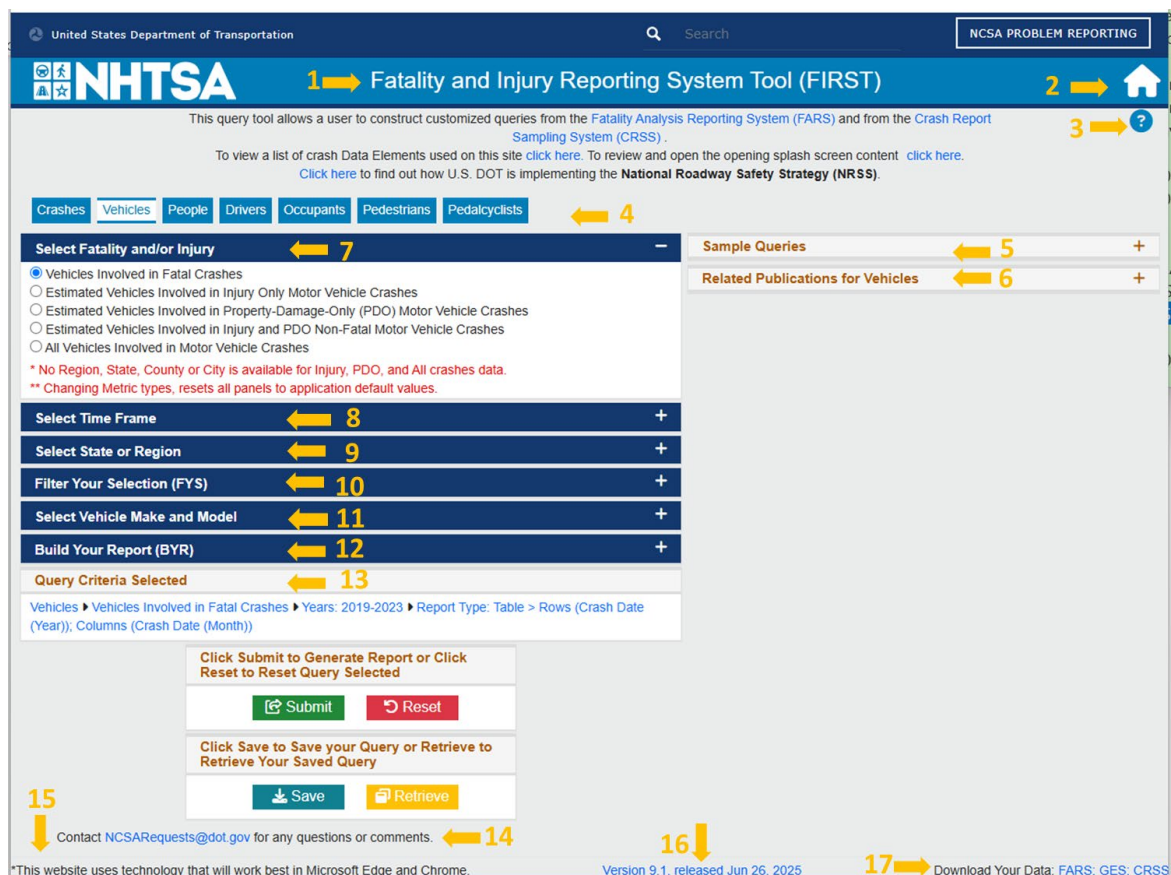
**Figure 1 – FIRST Header Search and NCSA Problem Reporting**

When the FIRST application loads the following splash screen is displayed. Here NCSA communicates anything new and important that needs to be communicated. The User will not be able to proceed to the site without clicking on the “Done”.



**Figure 2 – FIRST Splash/Welcome Screen Information**

Figure 3 is a screenshot of the FIRST homepage without the NHTSA header & footer information. The different areas on the page have been numbered and the explanations are provided in the table that follows.



**Figure 3 – Screenshot of FIRST Screen Showing Vehicles Topic**

The first panel (*Select Fatality and/or Injury - Area 8*) under Topics tabs and *Topics* information section (Topic's name – *Area 5: Interactive Data Visualization* section) will be open by default for each Topic. The other panels or sections can be opened or closed by clicking the plus/minus sign on panel or section headers.

The table below explains the above screenshot in greater detail and the steps the user needs to take to customize their query. Each section refers back to the arrow number in Figure 3.

Area	Step	Feature	Description
1	N/A	FIRST Query Tool Description	This section has the application name and a brief description of the tool.
2	N/A	Home	These icon link to the CDAN homepage.
3	N/A	Help	These icon link to the Help file.
4	1	Select a Topic (Topics row)	This row lists all the available Topics based on which users can query the data.
5	N/A	Sample Queries	Sample queries can be used to build a query. Selecting any query will populate the selections needed to build that query on the site. The user will need to click the Submit button to execute the sample query.
6	N/A	Topic Related Publication for {Topic}	This section has a brief description of the topic along with the subject-specific link(s) to Crash Stats site <a href="https://crashstats.nhtsa.dot.gov/#/">https://crashstats.nhtsa.dot.gov/#/</a> for relevant publications to the Topic selected.
7	2	Select Fatality and/or Injury	This section allows the user to pick either fatality, injury, property damage or all crashes.
8	3	Select Time Frame	This panel allows the user to set a year range or select specific years for the query.
9	4	Select State or Region	This panel allows the user to make a data query for a specific State, County, City, or NHTSA Region.
10	5	Filter Your Selection (FYS)	This panel allows the user to select specific Data Element(s) or Data Attribute(s) filters for the query.
11		Select Vehicle Make and Model	This panel appears only for Vehicles, Drivers, and Occupants to filter the data by Make and Model information that is available in FARS.
12	6	Build Your Report (BYR)	This panel allows the users to build a Table, Univariate Graph, or Panel Graph of their choice by selecting the Data Elements they desire to put in columns and rows.
13	7	Query Criteria Selected (Submit, Save, Retrieve, Reset)	This section is the last step in the development of the query process, where users can Submit, Save, Retrieve, or Reset their query. This section also keeps

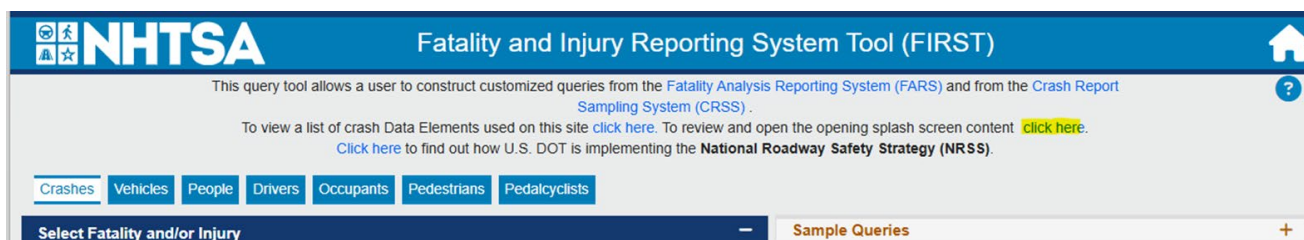
Area	Step	Feature	Description
			track of what has been selected thus far, i.e., the content of the query that will be submitted to SAS.
14	N/A	Contact NCSA	Users can use this link to send an email to NCSA to provide feedback to NCSA or request additional information.
15	N/A	Site Compatibility	This website works best in Microsoft Edge and Google Chrome web browser message.
16	N/A	Version and Release date	This link opens a page that provide updates and upgrades that have been made to the site since going live publicly.
17	N/A	Download Your Data	Provides links to the FARS, GES, and CRSS data sets to download as needed for your use.

**Table 1 – Panels, Sections, and Links Displayed on the FIRST Website**

The areas listed in Table 1 are described in more details in the following pages.

### Area 1: FIRST Query Tool Description

This area (shown in Figure 4), before the Topics tabs, has a general description of the FIRST query tool website.

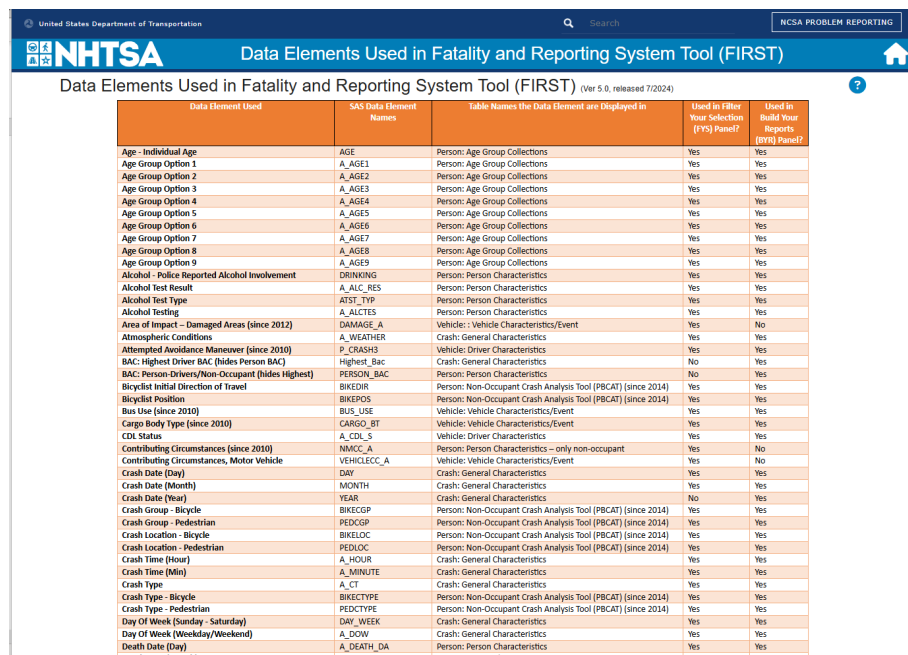


**Figure 4 – FIRST Query Tool Description**

Users can click the “click here” link at any time to review the splash screen information without reloading the application.

In this area, a new link has been added to view the list of all Data Elements used in the FIRST site, clicking this link will open up a new page displaying the screen below:





Data Element Used	SAS Data Element Names	Table Names the Data Element are Displayed in	Used in Filter Your Selection (FYS) Panel?	Used in Build Your Reports (BYR) Panel?
Age - Individual Age	AGE	Person: Age Group Collections	Yes	Yes
Age Group Option 1	A_AGE1	Person: Age Group Collections	Yes	Yes
Age Group Option 2	A_AGE2	Person: Age Group Collections	Yes	Yes
Age Group Option 3	A_AGE3	Person: Age Group Collections	Yes	Yes
Age Group Option 4	A_AGE4	Person: Age Group Collections	Yes	Yes
Age Group Option 5	A_AGE5	Person: Age Group Collections	Yes	Yes
Age Group Option 6	A_AGE6	Person: Age Group Collections	Yes	Yes
Age Group Option 7	A_AGE7	Person: Age Group Collections	Yes	Yes
Age Group Option 8	A_AGE8	Person: Age Group Collections	Yes	Yes
Age Group Option 9	A_AGE9	Person: Age Group Collections	Yes	Yes
Alcohol - Police Reported Alcohol Involvement	ALC_RES	Person: Person Characteristics	Yes	Yes
Alcohol Test Result	ATST_TYP	Person: Person Characteristics	Yes	Yes
Alcohol Test Type	A_ALCTES	Person: Person Characteristics	Yes	Yes
Area of Impact - Damaged Areas (since 2012)	DAMAGE_A	Vehicle: Vehicle Characteristics/Event	Yes	No
Atmospheric Conditions	A_WEATHER	Crash: General Characteristics	Yes	Yes
Attempted Avoidance Maneuver (since 2010)	P_CRASH3	Vehicle: Driver Characteristics	Yes	Yes
BAC: Highest Driver BAC (hides Person BAC)	Highest_Bac	Crash: General Characteristics	No	Yes
BAC: Person-Drivers/Non-Occupant (hides Highest)	PERSON_BAC	Person: Person Characteristics	No	Yes
Bicyclist Initial Direction of Travel	BIKEIDR	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Bicyclist Position	BIKEPOS	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Bus Use (since 2010)	BUS_USE	Vehicle: Vehicle Characteristics/Event	Yes	Yes
Cargo Body Type (since 2010)	CARGO_BT	Vehicle: Vehicle Characteristics/Event	Yes	Yes
CDL Status	A_CDL_5	Vehicle: Driver Characteristics	Yes	Yes
Contributing Circumstances (since 2010)	NMCC_A	Person: Person Characteristics - only non-occupant	Yes	No
Contributing Circumstances, Motor Vehicle	VEHICLECC_A	Vehicle: Vehicle Characteristics/Event	Yes	No
Crash Date (Day)	DAY	Crash: General Characteristics	Yes	Yes
Crash Date (Month)	MONTH	Crash: General Characteristics	Yes	Yes
Crash Date (Year)	YEAR	Crash: General Characteristics	Yes	No
Crash Group - Bicycle	BIKEGCP	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Crash Group - Pedestrian	PEDGCP	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Crash Location - Bicycle	BIKELOC	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Crash Location - Pedestrian	PEDLOC	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Crash Time (Hour)	A_HOUR	Crash: General Characteristics	Yes	Yes
Crash Time (Min)	A_MINUTE	Crash: General Characteristics	Yes	Yes
Crash Type	A_CT	Crash: General Characteristics	Yes	Yes
Crash Type - Bicycle	BIKECTYPE	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Crash Type - Pedestrian	PEDCTYPE	Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014)	Yes	Yes
Day Of Week (Sunday - Saturday)	DAY_WEEK	Crash: General Characteristics	Yes	Yes
Day Of Week (Weekday/Weekend)	A_DOW	Crash: General Characteristics	Yes	Yes
Death Date (Day)	A_DEATH_DA	Person: Person Characteristics	Yes	Yes
Death Date (Month)	A_DEATH_M	Person: Person Characteristics	Yes	Yes

Figure 5 – List of Data Elements Used on FIRST Site

The table displays the Data Elements, SAS Data Element names, which tables they are located. And whether they show up in FYS, or BY or both panels.

## Area 2: Home

Clicking the Home icon (Figure 6) will return the user to CDAN home page where links to NCSA tools, publications and data are provided.

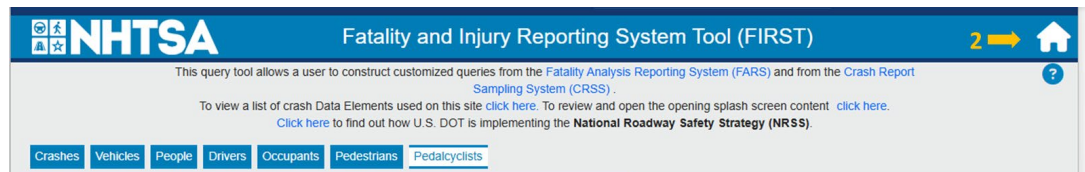


Figure 6 – Home Link Icon

## Area 3: Help

Clicking the help icon (Figure 7) will open this user manual that provides instructions on how to use FIRST.

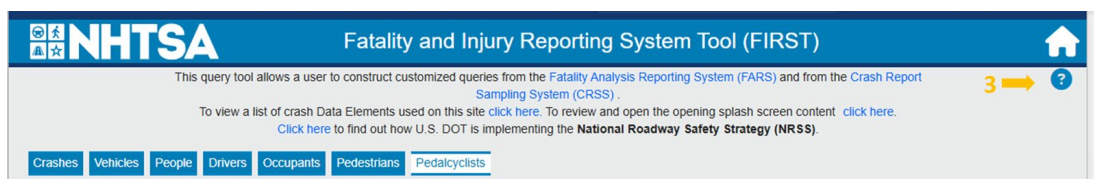


Figure 7 – Help Link Icon

## Area 4: Select a Topic

Since the new query tool is Topic-driven, you can make your own queries based on a specific Topic. The first step to building a Topic-specific query is to click one of the Topics in the top row, as shown in the image below (Figure 7), we chose the People topic. Person Type Data Element is also selected as default and cannot be changed under People topic.





**Figure 8 – Select a Topic**

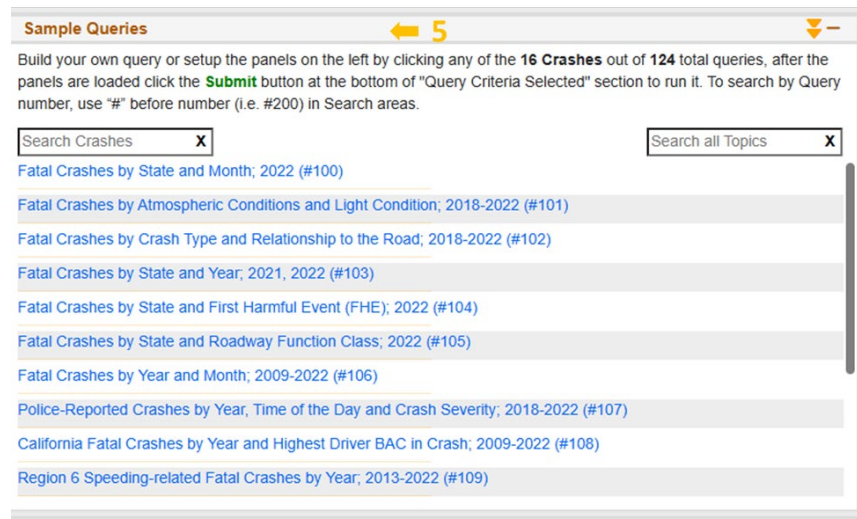
After clicking a Topic, the user will be provided with choices such as fatality/injury type, selecting year, geography, and other elements that help narrow down the query or build the query the way the user wants.

**Note:** A number of default settings have been set up in the application. This allows the user to click “Submit” at any time in Step 7, **Area 12: Query Criteria Selected Section**. To see the list of these values that have been setup as default please see the Query Criteria Selected section once you click a Topic.

The query tool allows you to click “Submit” at any time in Step 7, **Area 12: Query Criteria Selected Section**.

### Area 5: Sample Queries Section

Under the Sample Queries section, queries are provided as shown in Figure 8. The queries shown are for the Vehicles topics.



**Figure 9 – Sample Queries Section**

User can search a sample query using the Query Number or Query Title. There are two search boxes available in Sample Queries section. The one in the left side is for searching the queries within the Topic and the other one in the right side is for searching the queries across all Topics. User can click Show All button on the panel header to view all sample queries at one glance.

The queries are designed to assist the user with building a sample query within the FIRST tool. Once the user clicks any query on the list, the query will be built, and the panels will open to display the values that were used to build that query. The user will then need to click the Submit button or can modify the query before submitting to generate the report. Sample queries under this section can be changed based on user needs.

## Area 6: Topic Related Publications Section

The Related Publication for a Topic provides a brief description of the Topic with a list of Topic-specific links. Clicking the link(s) will take the user to the Crash Stats website (<https://crashstats.nhtsa.dot.gov/#/>) for any recent and other publications related to that Topic (Figure 9 shows People topic related publications links).

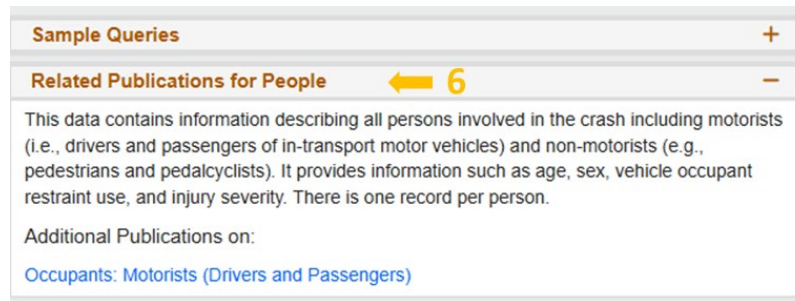


Figure 10 – Topic Related Publications Section

## Area 7: Select Fatality and/or Injury Panel

Once the user selects a Topic, the user can then select whether they are counting fatalities, injuries, property damage only (PDO), injury and PDO, or all motor vehicle crashes. Figure 10 show the selections available for Vehicles.



Figure 11 – Select Fatality and/or Injury

Under People, Drivers, Occupants, Pedestrians, and Pedalcyclists tabs there are additional metrics for generating reports based on # of Killed in Fatal Crashes and Injured in All Vehicle Crashes (see Figure 11).

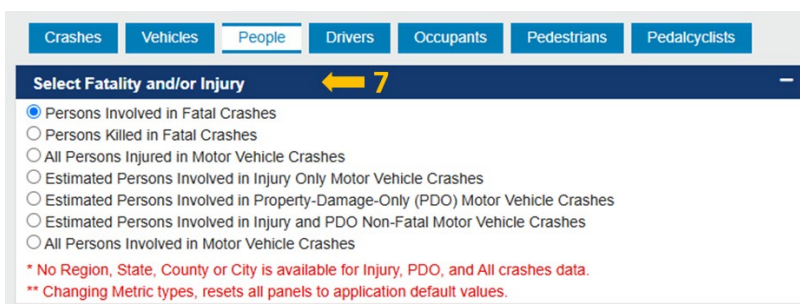


Figure 12 – Additional Select Fatality and/or Injury for Some Topics

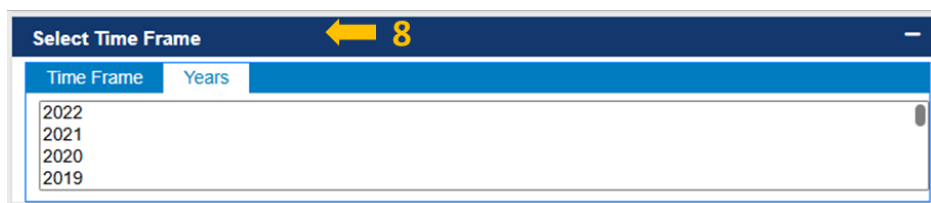
## Area 8: Select Time Frame Panel

The timeframe tab allows the user to determine the year range for the query. Users can simply drag the pins along the bar to select the year range of their choice. Timeframe tab under Select Time Frame is set to the latest five years of available data. Currently, only 15 years of data is available by default.



**Figure 13 – Select Time Frame – Time Frame Tab**

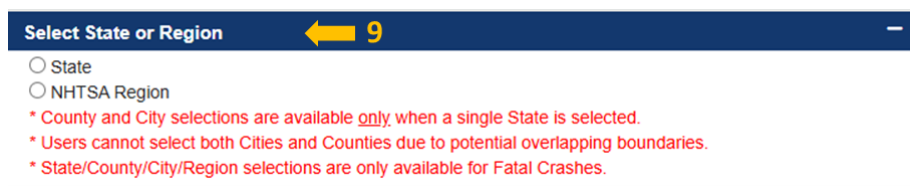
Users can also click “Years” tab, where they can select a single year or multiple years by pressing the Ctrl key and clicking to select more than one year. Using the “Years” tab (Figure 13) might be useful in building a comparative query such as comparing the data from 2012 and 2014.



**Figure 14 – Select Time Frame – Years Tab**

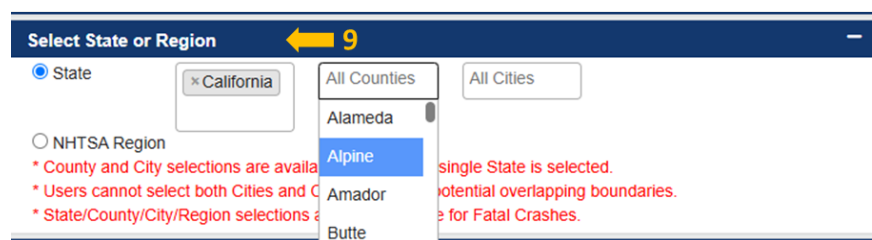
### Area 9: Select State or Region Panel

This panel as shown in Figure 14 allows user to select State or NHTSA Region for which the user is interested to run a query for. Users cannot select both State and Region simultaneously.



**Figure 15 – Select State or Region**

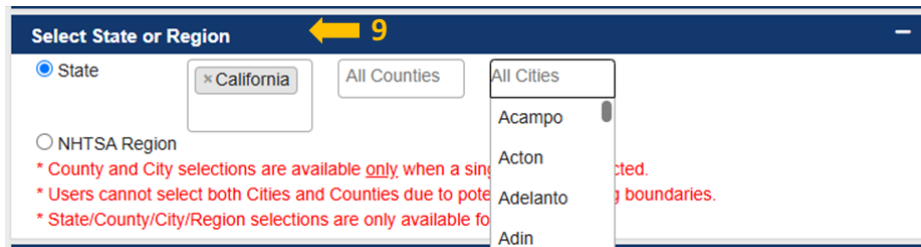
Selecting State will open a dropdown for States. Selecting a State from the dropdown will open the dropdowns for County and City.



**Figure 16 – Select State or Region – State & County**

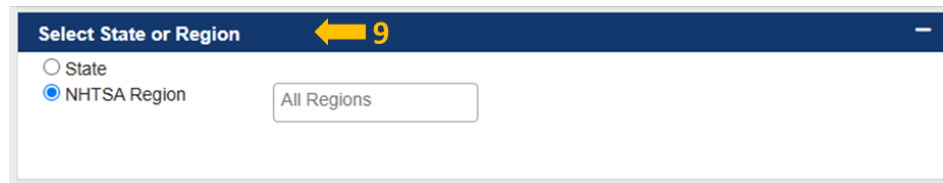
**Note:** Selecting either County or the City will disable the other one.

Clicking on City drop down list as shown in Figure 16 will display cities within that State. Selecting multiple States will not display County or City drop downs.

The screenshot shows a panel titled "Select State or Region" with a yellow arrow and the number "9" pointing to it. The "State" radio button is selected. Below it, there are three buttons: "California" (with an 'x' icon), "All Counties", and "All Cities". A dropdown menu is open under "All Cities", showing a list of cities: Acampo, Acton, Adelanto, and Adin. Red text at the bottom of the panel states: "\* County and City selections are available only when a single state is selected.", "\* Users cannot select both Cities and Counties due to potential overlapping boundaries.", and "\* State/County/City/Region selections are only available for the current query." The "NHTSA Region" radio button is unselected.

**Figure 17 – Select State or Region – State & City**

Users can also select a Region which will open a dropdown for selecting a specific Region. Selecting a Region will close the State dropdowns. The Region dropdown will open by clicking the NHTSA Region again.

The screenshot shows the same "Select State or Region" panel. The "NHTSA Region" radio button is now selected. The "All Regions" button is visible. The "State" radio button is unselected. The dropdown menu is closed.

**Figure 18 – Select State or Region – NHTSA Region**

States within a specific region will be displayed in front of the region(s) selected. The user can select one or more items from all drop downs and remove them from the list by clicking the "x".

**Notes:**

- The State/Region panel will show for a query that involves only fatalities (e.g., *Fatal Crashes*); this panel will not be displayed for queries involving injuries, property damage or both fatality and injury.
- If no State is specified, the tool will provide data on all States excluding Puerto Rico.
- Selecting NHTSA Region will disable the informative messages.

**Area 10: Filter Your Selection (FYS) Panel**

This panel contains different filters for building a more specific query. These filters are based on the count the user is interested in. The counts can be based on data elements and attributes within each table (Crash, Vehicle, and Person). The data elements for each table have been grouped under a specific characteristic for that table. Currently, the system contains the following tables:

- Crash: General Characteristics, Crash: Crash and Roadway Characteristics, Crash: Specific Scenario/Event, Crash: EMS Times
- Vehicle: Driver Characteristics, Vehicle: Roadway Characteristics (Specific to Vehicle), Vehicle: Vehicle Characteristics/Event, Vehicle: Hazardous Materials (HAZMAT) (since 2007)
- Person: Person Characteristics, Person: Non-Occupant Crash Analysis Tool (PBCAT) (since 2014), Person: Non-Occupant Crash Safety Equipment (since 2017); Person: Age Group Collections.

**Filter Your Selection (FYS)** Search Data Elements X Q ← **10** ↑ ↓

Crash: General Characteristics		+
Crash: Crash and Roadway Characteristics		+
Crash: Specific Scenario/Event		↓ -
Involving A Distracted Driver	+	
Involving A Drowsy Driver	+	
Involving A Hit And Run	+	
Involving A Large Truck	+	
Involving A Motorcycle	+	
Involving A Pedalcyclist	+	
Involving A Pedestrian	+	
Involving A Police Pursuit	-	
<input checked="" type="radio"/> Yes <input type="radio"/> No		
Involving A Roadway Departure	+	
Involving A Rollover	+	
Involving A Young Driver (Aged 15-20)	+	
Involving An Older Driver (Aged 65+)	+	
Involving Speeding	+	
Crash: EMS Times		+
Vehicle: Driver Characteristics		+
Vehicle: Roadway Characteristics (Specific to Vehicle)		+
Vehicle: Vehicle Characteristics/Event		+
Vehicle: Hazardous Materials (HAZMAT) (since 2007)		+

**Figure 19 – Filter Your Selection (FYS)– Opening/Closing Tables with Data Elements**

Not all Tables are displayed. Tables are displayed based on the metric type (FARS and GES) selected under “Select Fatality and/or Injury” panel.

For instance, if the user is counting only crashes, then only the Crash level data elements will be showing in this panel. If the user is interested in the count of vehicles, then both the Vehicle and the Crash level data elements will be displaying in two different tables in the panel. The purpose of these filters is to basically narrow down your query. In Figure 18, “Involving A Police Pursuit” Crash has been checked, which means the user is interested in the count of those crashes that had a police pursuit. Based on what user wants to count, default values have already been set up for different attributes/data elements. The selected values will be highlighted in blue.

Moreover, the plus/minus sign at the end of the dark blue bar is for opening/closing the Filter Your Selection (FYS) panel. On this panel clicking the double arrow will either “Close All Tables” or “Open All Tables”.

Clicking the minus sign at the end of the light blue bar will close the filters in a specific table such as Crash, Vehicle, and Person. Clicking the double arrowhead once the table is expanded will expand/collapse all the filters in a table.

### Search Data Elements

On the FYS panel, there is an area for searching the data elements by typing any word in the search area and pressing the Enter key or the search icon to find the list of the data items that exist in that Topic and for that metric.

See example below when searching for “hour” for People topic under the FYS panel. User can select any values by selecting the data element and continue searching for additional data element to build their query.

The screenshot shows the 'Filter Your Selection (FYS)' window. At the top, there is a search bar with the text 'hour' and a magnifying glass icon. To the right of the search bar is a red circular button with a white 'G' icon. Below the search bar, the window is divided into two main sections: 'Crash: General Characteristics' and 'Crash: EMS Times'. Each section contains a time range filter with a slider and a checkbox. The 'Crash: General Characteristics' section has a 'Crash Time (Hour)' filter with a slider from 0 to 23 and a checkbox. The 'Crash: EMS Times' section has three filters: 'EMS Arrival Time at Hospital (Hour)', 'EMS Arrival Time on Scene (Hour)', and 'EMS Notification Time (Hour)', each with a slider from 0 to 23 and a checkbox. A red text label 'Check or un-check the checkbox to select or deselect values.' is present below each filter.

**Figure 20 – Filter Your Selection (FYS)– Search Data Elements for People Topic**

Clicking the Reset button will reset all values selected except for the default value for the Topic.

### Data Attribute Filter Displays

There are 7 different types of data attribute filter displays. The types for the majority of the filters are presented as either radio button or checkbox selections. There is a fundamental difference between them. In a checkbox, user can select more than one option. Radio buttons, however, provide mutually exclusive selection values.

#### Radio Button

The screenshot shows the 'Filter Your Selection (FYS)' window. At the top, there is a search bar with the text 'Search Data Elements' and a magnifying glass icon. To the right of the search bar is a red circular button with a white 'G' icon. Below the search bar, the window is divided into two main sections: 'Crash: General Characteristics' and 'Crash: Crash and Roadway Characteristics'. The 'Crash: Crash and Roadway Characteristics' section contains a list of filters with radio button selections. The filters are: 'Intersection' (with options: At Intersection, Not At Intersection, Other/Unknown), 'Interstate', 'National Highway System', 'Related Factors - Crash Level', 'Relation To Junction', 'Relation to Junction-Specific Location(since 2010)', 'Relationship To The Road', 'Roadway Function Class', 'Trafficway Identifier', 'Trafficway Ownership (since 2010)', 'Trafficway Route Signing', 'Type of Intersection (since 2010)', and 'Work Zone'. Each filter has a '+' or '-' icon to its right.



**Intersection** is a filter, and user can only select one of the selection values. However, if user clicks **Crash Type**, the selection values are going to be presented differently. as seen in the image below, more than one selection can be selected.

### Check Box

### Toggle Button

Currently, there are no filters whose selection values are not **Radio Buttons** or **Check Boxes**. in the example above, a user can toggle the selection value as either “Yes” or “No”.

**Note:** “Involving a Rollover” is used as an example, but the data element is represented as a Radio Button in the tool.

### Textbox-Alphanumeric

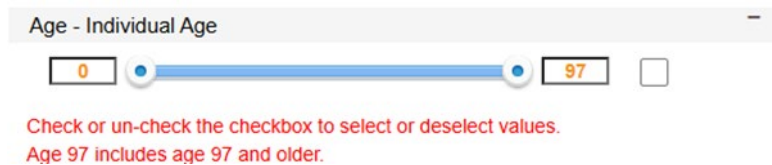
There are two types of textboxes. The first one is Alpha Numeric, meaning it can accept both numbers and letters. Clicking this kind of filter will open a textbox as shown in the image. User will be able to type in numbers or letters.

### Textbox-Integer

in this type of filter, user can only type a valid 5-digit US zip code. Invalid entry will return an error message. This is a numeric only textbox.

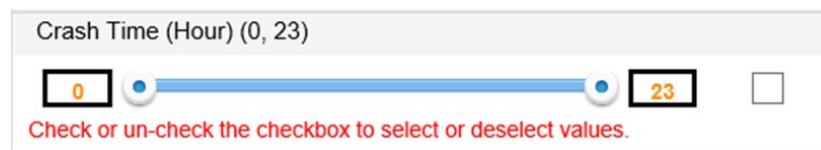
### Range

User will be prompted to enter information in the “**From**” and “**To**” fields and error messages will be returned for invalid entries. Currently, there are no filters with Range selection. This option has been replaced with Slider option.



### **Slider**

Clicking this kind of filter will open a slider as shown in the image. User can see the Minimum and Maximum Range values for that Data Element next to the Data Element Name. As a default, begin bar will be set to minimum range value and end bar will be set to maximum range value in the slider.



There are two ways to select a desired range:

Method 1: User will be able to drag begin and end bars and then select checkbox next to the slider to select desired range.

Method 2: User will be able to type in numbers in the begin textbox and end textbox and then select checkbox next to the slider to select desired range. If the user enters any values outside the minimum and maximum range, entries will not be accepted.

By unselecting the checkbox, the slider will set to default and will unselect the selection.

### **Selecting a Data Element**

As shown in Figure 20, clicking a data element name will open up and close the data attributes for filtering your data. Clicking or selecting a data element attribute value once will select the data attribute and clicking it a second time after selected will unselect the attribute selected.

Filter Your Selection (FYS)		Search Data Elements	X	Q	← 10	▲ -
Crash: General Characteristics						+
Crash: Crash and Roadway Characteristics						+
Crash: Specific Scenario/Event						+
Crash: EMS Times						+
Vehicle: Driver Characteristics						▼ -
Condition (Impair) at Time of Crash (since 2010)						+
Distracted Driver						+
Driver Distracted By (since 2010)						+
Driver Travel Speed						+
Drivers Zip Code - Valid zip code required.						+
Hit and Run						+
License: CDL Status						-
<input type="checkbox"/> No Commercial Driver's License (CDL) <input type="checkbox"/> Suspended <input type="checkbox"/> Revoked <input type="checkbox"/> Expired <input type="checkbox"/> Cancelled or Denied <input type="checkbox"/> Disqualified <input checked="" type="checkbox"/> Valid <input type="checkbox"/> Commercial Learner's Permit (CLP) <input type="checkbox"/> Other – Not Valid <input type="checkbox"/> No Driver Present/Unknown if Driver Present (since 2011) <input type="checkbox"/> Unknown License Status						
License: Compliance with CDL Endorsements						+
License: Compliance with Class of Vehicle						+
License: Non-CDL Status						+
License: Non-CDL Type						+
Pre-Crash Critical Event (since 2010)						+
Pre-Event Movement (since 2010)						+
Pre-Impact Location (since 2010)						+
Pre-Impact Stability (since 2010)						+
Speeding						-
<input checked="" type="radio"/> Speed Involved <input type="radio"/> No Speed Involved						
Violations Charged (since 2010)						+
Vehicle: Roadway Characteristics (Specific to Vehicle)						+
Vehicle: Vehicle Characteristics/Event						+
Vehicle: Hazardous Materials (HAZMAT) (since 2007)						+

**Figure 21 – Filter Your Selection (FYS)– Selecting Data Elements and Data Attributes**

Once a data attribute is selected, the data element filter heading will turn blue.

### **Data Attribute Grouping**

Data Attributes have been grouped together under a category. Clicking the category selects all attributes under the group. Clicking the plus sign will expand the Data Attribute and allow user to select one or more data attributes. Once a Data Attribute is expanded, it can be collapsed by clicking the minus sign in front of the Data Attributes as shown in

The screenshot shows the 'Filter Your Selection (FYS)' panel with a search bar and a list of expandable categories. The 'Crash' and 'Vehicle' categories are expanded, showing sub-panels for 'Area of Impact - Damaged Areas (since 2012)', 'Bus Use (since 2010)', 'Cargo Body Type (since 2010)', 'Contributing Circumstances, Motor Vehicle', 'Emergency Use (since 2014)', 'Extent of Damage (since 2010)', 'Fire Occurrence', 'Gross Vehicle Weight Rating', 'Initial Impact Point', 'Jackknife', 'Most Harmful Event (MHE)', and 'Rollover/School Bus'.

**Figure 22 – Filter Your Selection: Expanding/Collapsing a Data Attribute Group**

### Area 11: Select Vehicle Make and Model Panel

In this panel (Figure 22) that is currently available for only FARS data for Fatal and Killed metrics under Vehicles, Drivers, and Occupant topics, the user can select Vehicle Model Year, Vehicle Make, Vehicle Model, and Vehicle Body Class to filter their reports.

The screenshot shows the 'Select Vehicle Make and Model' panel. It includes a text box explaining that the list is not comprehensive and is derived from FARS data. Below the text are four input fields: 'Model Years', 'All Makes', 'All Models', and 'Body Class'.

**Figure 23 – Select Vehicle Make, Model, and Body Class**

For Pedestrians and Pedalcyclists panels, Area 10 is changed to the “Select Striking Vehicle Make and Model” as shown in and selecting the Model Year, Make, Model and Body Class will provide the striking vehicle information.

The screenshot shows the 'Select Striking Vehicle Make and Model' panel for Pedestrians & Pedalcyclists. It includes a text box explaining that the list is not comprehensive and is derived from FARS data. Below the text are four input fields: 'Model Years', 'All Makes', 'All Models', and 'Body Class'.

**Figure 24 – Select Striking Vehicle Make and Model Panel – Pedestrians & Pedalcyclists**

**Notes:**

The vehicle information includes what is available in the FARS data sets.

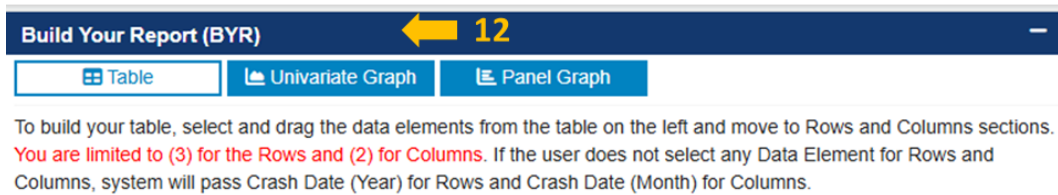
Selecting Model Year will not display all models available for that year. It displays the data that is available in FARS only.

## 2.3 Building Your Reports

Different reporting capabilities are available under Build Your Report (BYR) panel.

### Area 12: Build Your Report (BYR) Panel

In addition to building Tables, you can build Univariate Graph and Panel Graph (Figure 24).

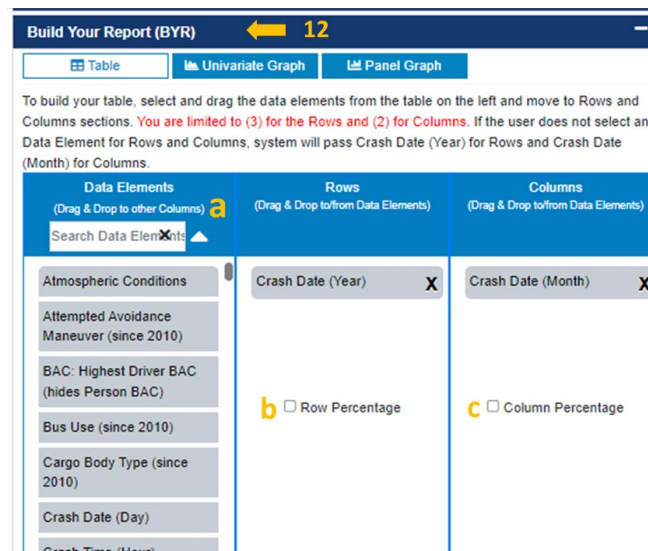


**Figure 25 – Build Your Report (BYR) Selections**

#### 2.3.1 Build a Table Report

In the “Build Your Reports” panel, the user can build a table of their choice in terms of what they want in Rows and Columns. Users are limited to selecting two (2) data elements filters for the Column of the Table and up to three (3) data element filters for the Rows of the Table.

Users can simply drag a filter from the left and drop it either in the Rows section or Columns section. The data element filtered will disappear from the left menu once it is dragged to either Rows or Columns. Similarly, User can remove a data element filter from Rows or Columns section by dragging it back to Data Elements section or by clicking Cancel (X) symbol next to the filter. If a search has been performed, dragging or clicking (X) the data element back to the Data Elements column will refresh the column to its original state.

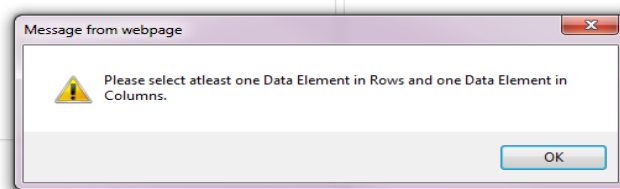


**Figure 26 – Build Your Report (BYR) Panel with Data Element Search and Row and Column Percentage**

Areas marked as “a”, “b” and “c” are used as follows:

- a. There are two functionalities in this area:
  - The arrow is used to sort the data elements on the left-hand side alphabetically.
  - The “Search Data Elements” box is used to search the data elements listed. Typing any text will display the data elements found in this column.
- b. Row Percentage: If the user is interested in knowing about the percentages for the Data Elements in Rows, the user can simply check mark the “Row Percentage” before hitting “Submit”.
- c. Column Percentage: If the user is interested in knowing about the percentages for the Data Elements in columns, the user can simply check mark the “Column Percentage” before hitting “Submit”.

If the user clicks “Submit” without any element in Rows or Columns, the system will display an alert message prompting the user to drag at least one element to Rows and one to Columns.



**Figure 27 – Alert Message for No Elements in Rows and Columns**

Person BAC and Highest BAC Usage Limitation in Build Your Report (BYR)panel:

For Drivers, Pedestrians, and Pedacyclist where alcohol level is tested and avaiable, Highest BAC and Person BAC cannot be used together to build tables. If the user selects eithe data element under Filter Your Table panel then the other one will be hidden in the Data Element box to select from. However, if the user does filter on any of these values and attempts to filter on both of these data elements in either Rows or Columns then the following message (shown in Figure 27) is displayed under Rows and Columns of the Build Your Report (BYR)section.



**Build Your Report (BYR)** ← 12

Table Univariate Graph Panel Graph

To build your table, select and drag the data elements from the table on the left and move to Rows and Columns sections. **You are limited to (3) for the Rows and (2) for Columns.** If the user does not select any Data Element for Rows and Columns, system will pass Crash Date (Year) for Rows and Crash Date (Month) for Columns.

Data Elements (Drag & Drop to other Columns)	Rows (Drag & Drop to/from Data Elements)	Columns (Drag & Drop to/from Data Elements)
<input type="text" value="Search Data Elements"/> <ul style="list-style-type: none"> <li>Atmospheric Conditions</li> <li>Attempted Avoidance Maneuver (since 2010)</li> <li>Bus Use (since 2010)</li> <li>Cargo Body Type (since 2010)</li> <li>Crash Date (Day)</li> <li>Crash Time (Hour)</li> <li>Crash Time (Min)</li> </ul>	<ul style="list-style-type: none"> <li>Crash Date (Year) X</li> <li>BAC: Highest Driver BAC (hides Person BAC) X</li> <li><input type="checkbox"/> Row Percentage</li> </ul>	<ul style="list-style-type: none"> <li>Crash Date (Month) X</li> <li><input type="checkbox"/> Column Percentage</li> </ul>

Dragging Highest BAC into Rows or Columns hides Person BAC for selection.  
Currently BAC does not allow the selection of percentages.

**Figure 28 – Message for Using both Highest BAC and Person BAC to Build Your Reports**

By dragging either Person BAC or Highest BAC from the Rows or Columns back to Data Element box. The message disappears, and the user can build their table using only one or the other.

**Note:** Row Percentage and Column Percentage are deactivated and cannot be selected for Person BAC and Highest BAC.

#### **Use of Striking Vehicle Model or Vehicle Model Information/Warning Message in Build Your Report (BYR)panel:**

Vehicles, People, and Drivers contain Vehicle Make and Vehicle Model where as for Pedestrians and Pedalcyclists contain Striking Vehicle Make and Striking Vehicle Model. In order to prevent users getting incorrect data counts If Vehicle Model/Striking Vehicle Model is dragged to Columns or Rows an information message is displayed as shown in the Figure 28. This message is removed when user drags Vehicle Make/Striking Vehicle Make to Rows and Columns.

When user selects Vehicle Makes from the 'Selected Vehicle Make and Model' drop down, If Vehicle Model dragged to Rows or Columns in Build Your Report (BYR)panel information message will not be displayed.

By dragging Vehicle Model from Rows or Columns back to Data Element box. The message disappears, and the user can build their table using only one or the other.

Build Your Report

Table

Univariate Graph

Panel Graph

To build your table, select and drag the data elements from the table on the left and move to Rows and Columns sections. **You are limited to (3) for the Rows and (2) for Columns.** If the user does not select any Data Element for Rows and Columns, system will pass Crash Date (Year) for Rows and Crash Date (Month) for Columns.

Data Elements (Drag & Drop to other Columns)	Rows (Drag & Drop to/from Data Elements)	Columns (Drag & Drop to/from Data Elements)
<div>Search Data Elements</div> <div> <div>Atmospheric Conditions</div> <div>Attempted Avoidance Maneuver (since 2010)</div> <div>BAC: Highest Driver BAC (hides Person BAC)</div> <div>Bus Use (since 2010)</div> <div>Cargo Body Type (since 2010)</div> <div>Crash Date (Day)</div> <div>Crash Time (Hour)</div> <div>Crash Time (Min)</div> </div>	<div>Crash Date (Year) X</div> <div>vPic: Vehicle Model X</div> <div> <input type="checkbox"/> Row Percentage </div>	<div>Crash Date (Month) X</div> <div> <input type="checkbox"/> Column Percentage </div>

**\*\* Due to "Vehicle Model" not being unique it is advised that you (a) Add a vehicle "Make" under "Filter Your Selection" panel, OR (b) Add "Vehicle Make" to Rows or Columns to your reports. \*\***

**Figure 29 – Message for Using Vehicle Model and Striking Vehicle Model in Build Your Reports**

### Area 13: Query Criteria Selected Section

The Query Criteria Selected section is used to Submit, Save, Retrieve and Reset the query that you created to build a report or build a graph.

#### Submit Button

The last step in the query process is the Query Criteria Selected section. This section keeps track of the user's query selections made in Steps 2 through Steps 8. For instance, Figure 30 shows that the user has selected **Pedestrians** (Topic), **Estimated Pedestrians Involved in Property-Damage-Only (PDO) Motor Vehicle Crashes** (Property Damage), **2017-2021** (Timeframe), report type (**Table**), **Rows** (Crash Date-Year), **Columns** (Crash Date-Month), and **Person Type** (Pedestrians).

Build Your Report (BYR) 13

Query Criteria Selected

Pedestrians

Pedestrians Involved in Fatal Crashes

Years: 2018-2022

Report Type: Table

Rows (Crash Date (Year));

Columns (Crash Date (Month));

Person Type (NHTSA Groups) (Pedestrian);

Click Submit to Generate Report or Click Reset to Reset Query Selected

Submit

Reset

Click Save to Save your Query or Retrieve to Retrieve Your Saved Query

Save

Retrieve

Contact [NCSARequests@dot.gov](mailto:NCSARequests@dot.gov) for any questions or comments.

**Figure 30 – Query Criteria Selected and Submit, Save, Retrieve, and Reset Query Buttons**

Clicking Submit will take all the selections made by the user and generate a SAS report accordingly.

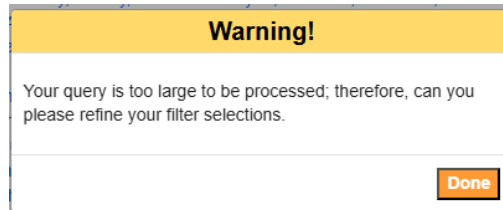
**Note:** When you start the application, the following defaults have been setup in the tool for Pedestrians:

- Topics: **Pedestrians**
- Select Fatality and/or Injury: **Pedestrians Killed in Fatal Crashes**

Page 22

- Time Frame: the latest five years such as **2017-2021**
- State: None, USA
- Regions: None, all regions
- Data Elements: **Person Type (Pedestrians)**
- Build Your Reports: Report Type (**Table**), **Crash Date (Year)** set for Rows and **Crash Date (Month)** set for Columns.

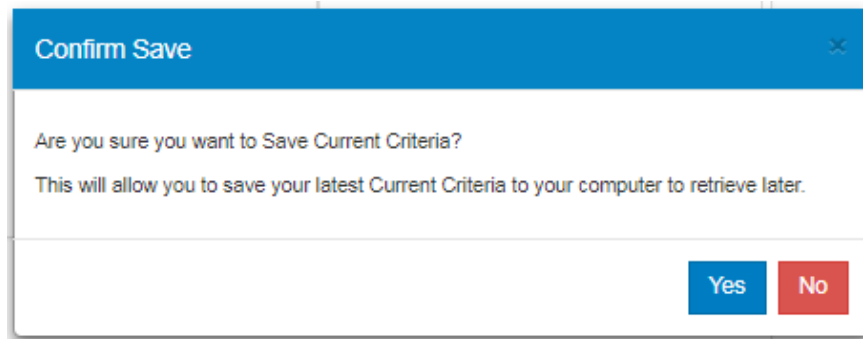
**Warning:** When submitting a query, the system checks character count and displays the warning message below if it is more than 1,000 characters.



**Figure 31 – Warning Message for Query Length Limit**

#### **Save Button**

The user will be able to save their criteria on their PC for future retrieval. Clicking the Save button will prompt the user with the dialog box shown in Figure 30. Clicking No or click the X on the pop-up will cancel the Save request.

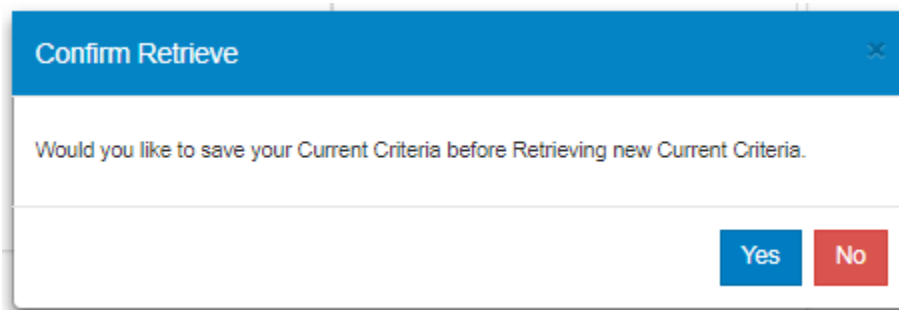


**Figure 32 – Confirm Save Criteria Dialog Popup**

By clicking Yes, the user acknowledges and gives permission for the Query Criteria Selected file to be saved in their PC as a JSON formatted text file. The file is saved to the Download directory by default as FIRSTCriteria.txt. The user can select any other names but must ensure the file extension is not changed from .txt for future retrieval.

#### **Retrieve Button**

Clicking the Retrieve button will allow user to retrieve a previously saved Query Criteria Selected and will display the dialog popup shown in Figure 31.

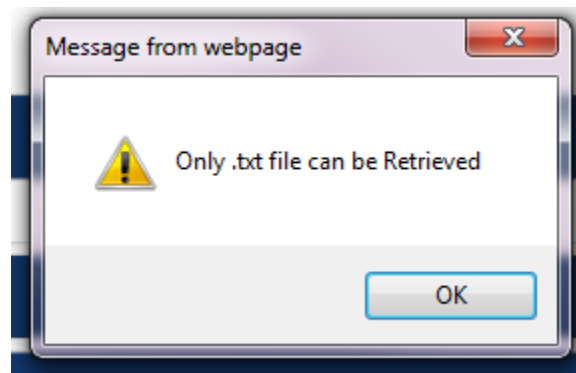


**Figure 33 – Confirm Retrieve Saved Criteria Popup**

By clicking Yes, the user will be able to save their Query Criteria Selected before loading criteria that was previously saved before.

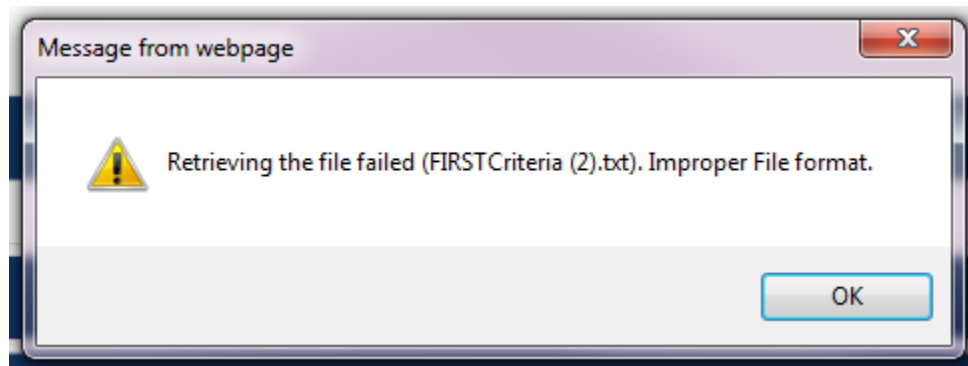
By clicking No or the X on the pop-up, the user will be able to select the previously saved criteria file from their PC. The system will open their local file system and the user can navigate to the directory that they saved their criteria before. Selecting a JSON file with a .txt extension will import the criteria and reset the values accordingly to restore the user selections.

If the user selects any other file type except for .txt file that the system does not recognize the message in is displayed in Figure 32.



**Figure 34– Retrieve Query Criteria Selected Incorrect File Type Selected Message**

However, if the user selects a file with .txt extension that is not a JSON file or the content of the file has been changed or corrupted, the Figure 33 will be displayed.



**Figure 35 – Retrieve Query Criteria Selected Corrupted JSON Text File Message**

In addition, additional validations have been created to ensure the saved queries are correctly formatted otherwise, the user will be presented a validation message and requested to create and save a new

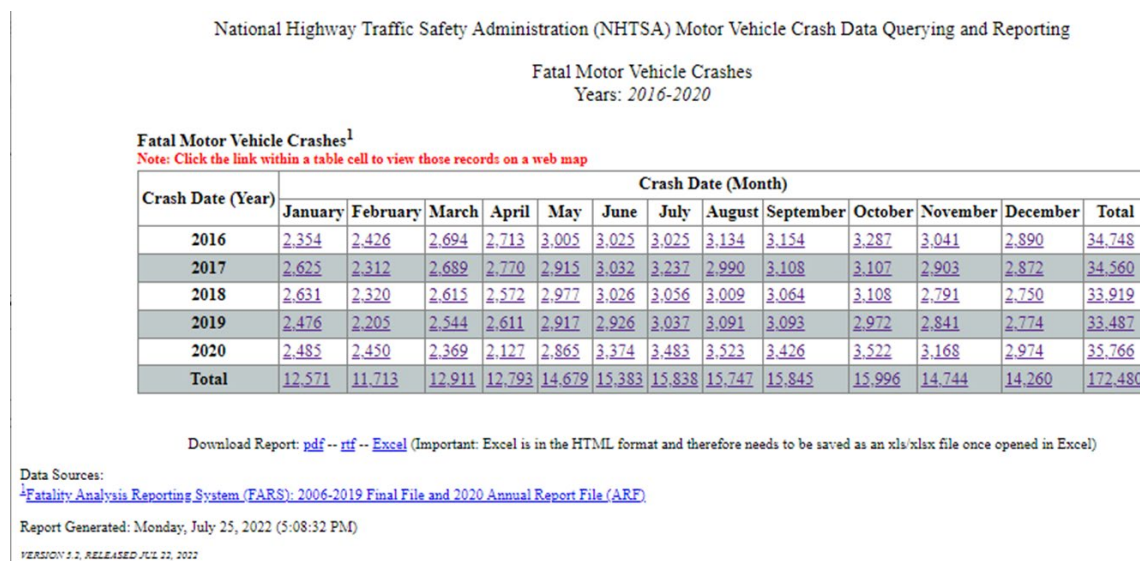
query. One of the validations is based on created date of the saved query. If a query has been saved more than a year ago, the user will receive a validation to create a new query since there could have been Data Elements and Data Attributes during the year.

### Reset Button

Clicking the Reset button under Query Criteria Selected will cancel any selections made by the user and change the status of the query to the default setting for Crashes topic.

#### 2.3.1.1 Mapping the Data in a Table Report

The site provides map data once a Table report is constructed. Once the user is able to refine their selection criteria and after clicking the Submit button under Query Criteria Selected section, the table data report is displayed in the new tab will have a hyperlink (see Figure 34).



**Figure 36 – Hyperlinked Data on a Table Report to a Map**

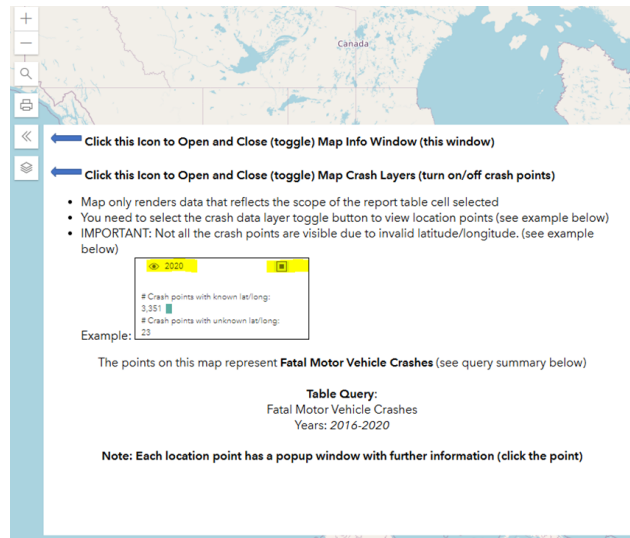
Clicking on any of the hyperlinked numeric data shown in **Error! Reference source not found.**<sup>3</sup> will display the initial instructions that explains the function of the major icons (see Figure 37) as an example.





**Figure 37 – Queried Data Map Initial Instruction Page**

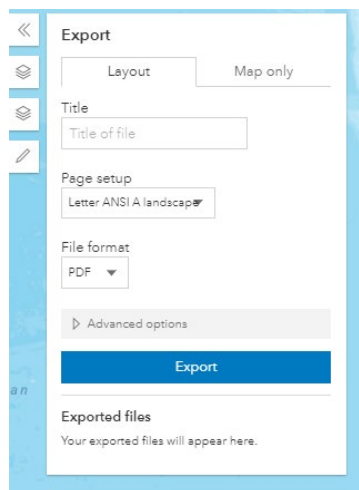
FIRST data mapping that was available in Crashes topic reports only has been expanded to include the following features:

- Mapping of the data has been added to all other topics except for: People, Drivers, and Occupants.
- Here is a brief overview of the each of the icon on the left-hand side of the map:




**Figure 38 – Menu Icons on the Map**

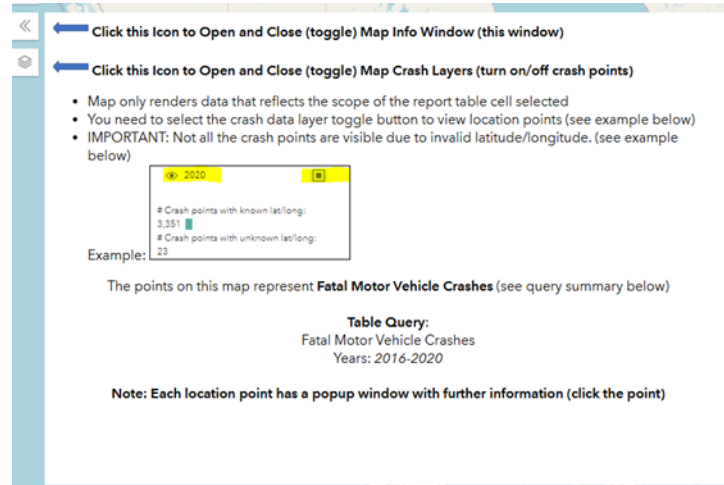
- The first two icons for the zooming in and out can be performed by clicking the + or – icon on the map view.
- The third icon  allows the user to enter and search for a mailing address to pinpoint the areas interested.
- The fourth icon  is printing the map in different formats (PDF, PNG, GIF, SVG, or others).




**Figure 39 – Printing the Map in Different Formats**

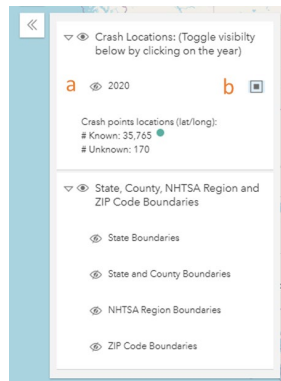
- The fifth icon  is used to display the instruction for the last three icons and how to use the map's features:





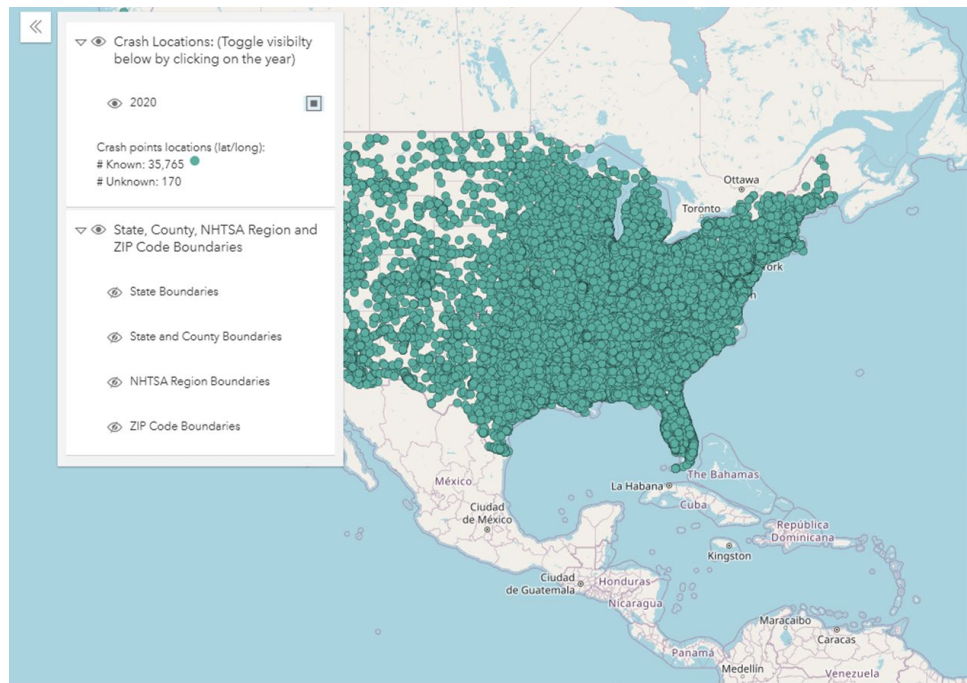
**Figure 40 – Open and Close Map Instructions Icon**

- The sixth icon  is to view which year of data you want mapped and the different boundaries that are currently available (State, State and County, NHTSA Region, and Zip Code) to be added to the map.



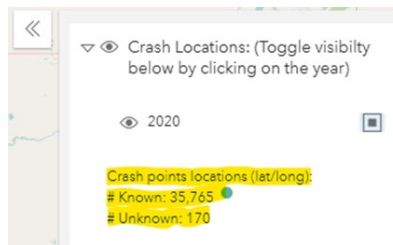
**Figure 41 – Select the Year to Map and/or Different Boundaries in the Map**

- a** Clicking the eye in front of the year shows or hides the data point mapped. The Figure 40 below the mapped points for the year 2020 once clicked:



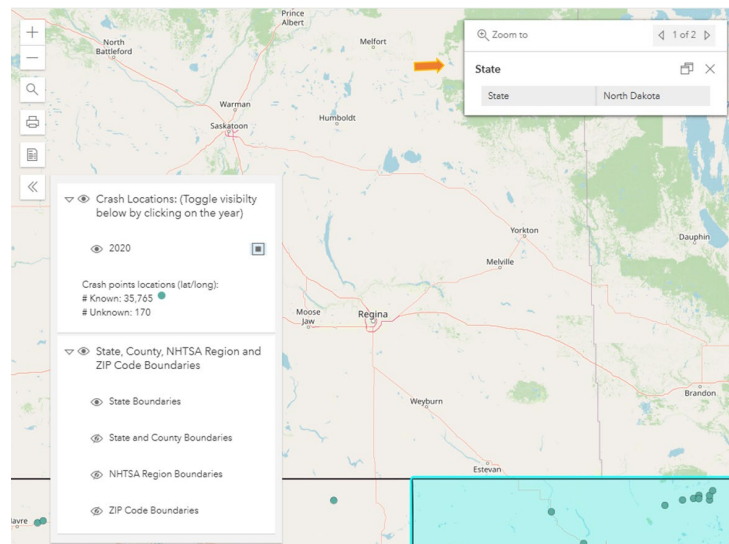
**Figure 42 – Data Points shown on the Map**

**b** Clicking this toggle shows the data points on the map.



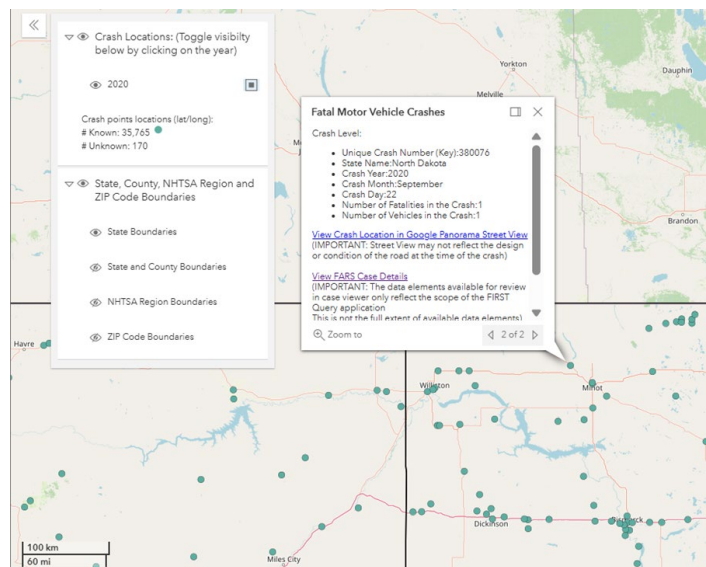
**Figure 43 – Visible and Invisible Data Points Counts Display**

- In addition, by clicking on any data point on the map, the user will be able to view specific accident data for the point selected.



**Figure 44 – Accident Details for a Crash on the Map (1 of 2)**

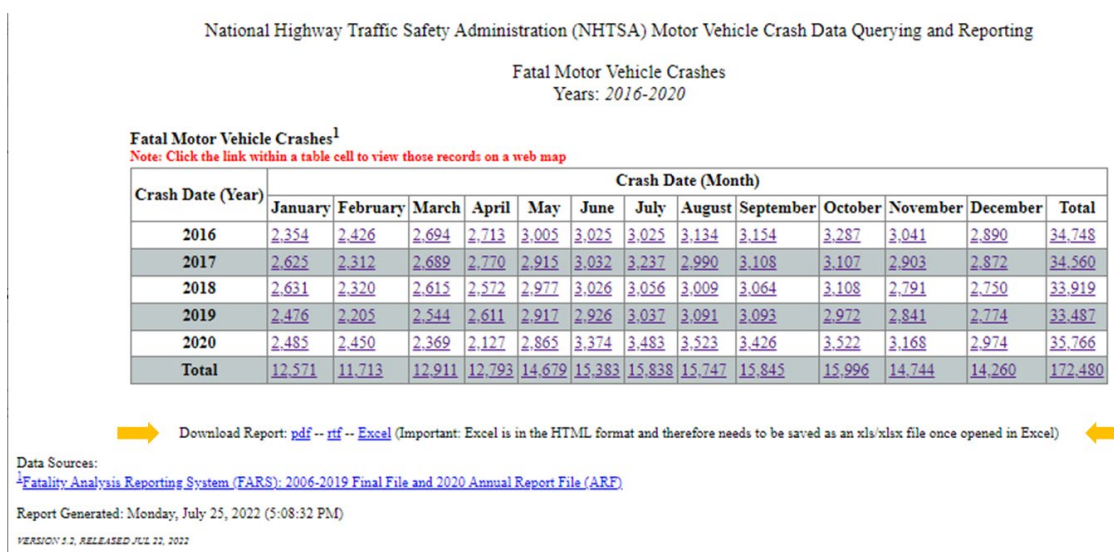
In this window (Figure 44), the user will be able to view the Region information on the first page and clicking on the next will provide (**Error! Reference source not found.**) the number of vehicles involved and make and model of each vehicle as well. User will be able to a panorama view of the current location of the accident not how the location may have looked like when the accident occurred.



**Figure 45 – Accident Details for a Crash on the Map (2 of 2)**

### 2.3.1.2 Exporting Data in a Table Report

Once a SAS table report is generated by clicking the Submit button, a new browser windows opens up with the requested SAS crash report. At the bottom of the report, as shown in **Error! Reference source not found.**, the user will be able to export the queried data.

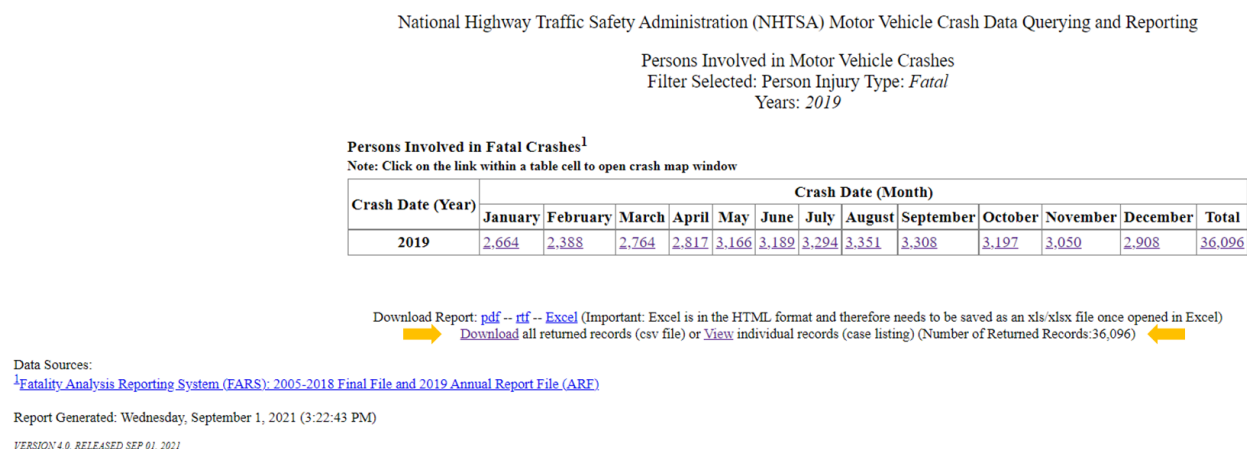


**Figure 46 – Exporting Data to PDF, RTF, or Excel (CSV)**

Users can save the data in different file formats such as PDF, RTF, or Excel (CSV).

### 2.3.1.3 Download Case Listing of Crash Records

Once a SAS table report is generated for one-year FARS data by clicking the Submit button, a new browser windows opens up with the requested SAS crash report. At the bottom of the report, as shown in Figure 45, the user will be able to download the one-year FARS queried data.



**Figure 47 – Download Case Listing of Crash Records**

### 2.3.2 Build a Univariate Graph

Clicking the Univariate Graph button under the Build Your Report (BYR) panel, will display Figure 46. You can drag any value from the Data Elements section to Univariate Graph value column to construct a Univariate Graph. Similarly, User can remove a data element filter from Univariate Graph value column by dragging it back to Data Elements section or by clicking Cancel (X) symbol next to the filter.

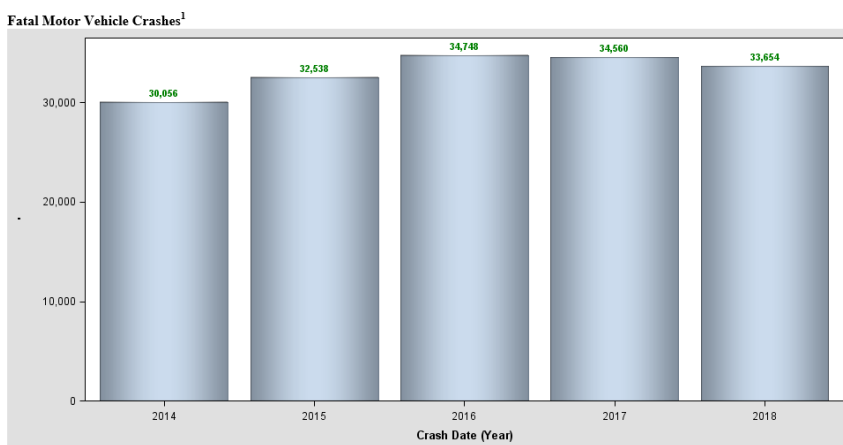
**Figure 48 – Univariate Graph Under Build Your Report (BYR)Panel**

The user will be able to use the other panels to filter their selections for the Univariate Graph similar to building a Table report as described above.

By clicking the Submit button under the Query Criteria Selected section, the Univariate Graph shown in Figure 47 is displayed in a new tab.

National Highway Traffic Safety Administration (NHTSA) Motor Vehicle Crash Data Querying and Reporting  
Motor Vehicle Crashes  
Years: 2014-2018

Univariate Graph - Analysis Variable: *Crash Date (Year)*



Data Sources:  
<sup>1</sup>Fatality Analysis Reporting System (FARS): 2004-2017 Final File and 2018 Annual Report File (ARF) ([See Details Here](#))  
 Report Generated: Tuesday, December 31, 2019 (3:34:28 PM)  
 RELEASEDATE IN VERSION 2.0, RELEASED DECEMBER 21, 2019

**Figure 49 – Univariate Graph Report Example**

### 2.3.3 Build a Panel Graph

Selecting the Panel Graph button will display the content in **Error! Reference source not found..**

**Build Your Report (BYR)** 12

Table Univariate Graph **Panel Graph**

To build your Panel Graph, select and drag the data elements from the Data Elements table on the left and move to Classification Value Selection and Analysis Value Selection. **You are limited to (1) for the Classification Value Selection and (1) for the Analysis Value Selection.** If the user does not select any Data Element for Classification Value Selection and Analysis Value Selection, system will pass Crash Date (Year) for Classification Value Selection and Crash Date (Month) for Analysis Value Selection.

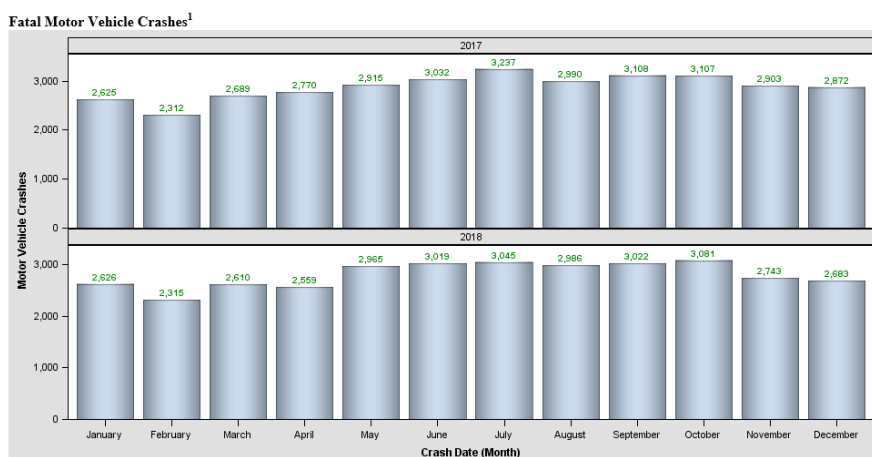
Data Elements (Drag & Drop to other Columns)	Classification Value Selection (Drag & Drop to/from Data Elements)	Analysis Value Selection (Drag & Drop to/from Data Elements)
<input type="text" value="Search Data Elements"/> <ul style="list-style-type: none"> <li>Crash Date (Day)</li> <li>Crash Time (Hour)</li> <li>Crash Time (Min)</li> <li>Crash Type</li> <li>Day Of Week (Sunday - Saturday)</li> <li>Day Of Week (Weekday/Weekend)</li> <li>Driver Travel Speed</li> <li>Emergency Use (since 2014)</li> </ul>	Crash Date (Year) X	Crash Date (Month) X

**Figure 50 – Building Panel Graph Under Build Your Reports Panel**

You can drag any values from the Data Elements section to Classification Value Selection and Analysis Value Selection columns to construct a Panel Graph. Similarly, User can remove a data element filter from Classification Value Selection or Analysis Value Selection columns by dragging it back to Data Elements section or by clicking Cancel (X) symbol next to the filter. Then you can click the Submit button under the Query Criteria Selected section to create the Graph in a new tab. Figure 49 shows an example of a Panel Graph.

National Highway Traffic Safety Administration (NHTSA) Motor Vehicle Crash Data Querying and Reporting  
Motor Vehicle Crashes  
Years: 2017-2018

Panel Graph - Classification Variable: *Crash Date (Year)* and Analysis Variable: *Crash Date (Month)*



Data Sources:

<sup>1</sup>Fatality Analysis Reporting System (FARS): 2004-2017 Final File and 2018 Annual Report File (ARF) ([See Details Here](#))

Report Generated: Tuesday, December 31, 2019 (3:38:14 PM)

RELEASEDATE IN (VERSION 2.0, RELEASED DECEMBER 21, 2019)

**Figure 51 – Panel Graph Report Example**



The user will be able to use the other panels to filter their selections for the Panel Graph similar to building a Table report as described under the Build Your Report for creating a Table report.

## 2.4 Contact Us, Website Compatibility Message, Version, and Download Your Data Links

The user should contact NCSA using the email link provided on the homepage using the standard template provided on the website ensures quick delivery of the email to NCSA team to respond to your inquiry.

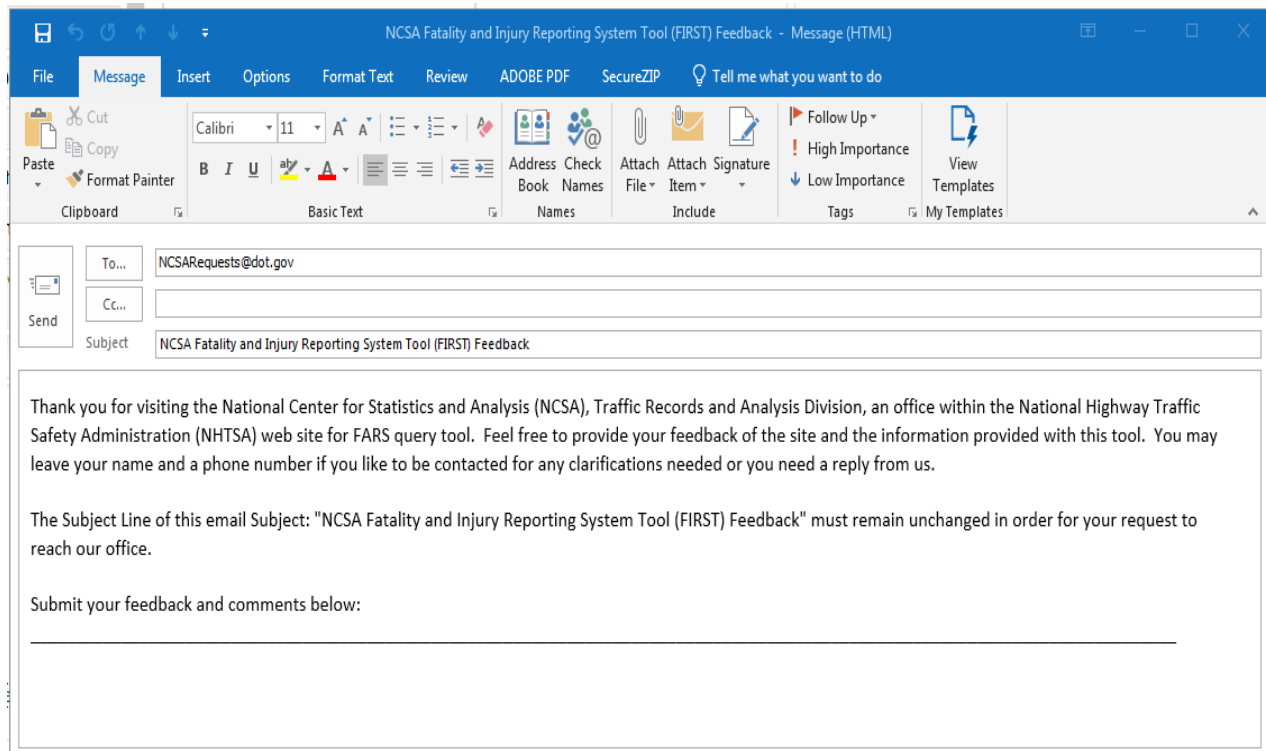
### Area 14: Contact NCSA Link

At the bottom of the website before the NHTSA footer (shown in Figure 50), there is an email ([NCSARequests@dot.gov](mailto:NCSARequests@dot.gov)) for the user to provide feedback and request any additional information that they may need.



**Figure 52 – Contact Us, Website Compatibility Message, Version, and Download Your Data Links**

By clicking the [NCSARequests@dot.gov](mailto:NCSARequests@dot.gov) email link the following email message (Figure 51) is displayed. The user can send their request or comments to the email address per the instructions provided in the email.



**Figure 53 – Email to Send Feedback and Comments to NCSA**

### **Arear 15: Website Compatibility Message**

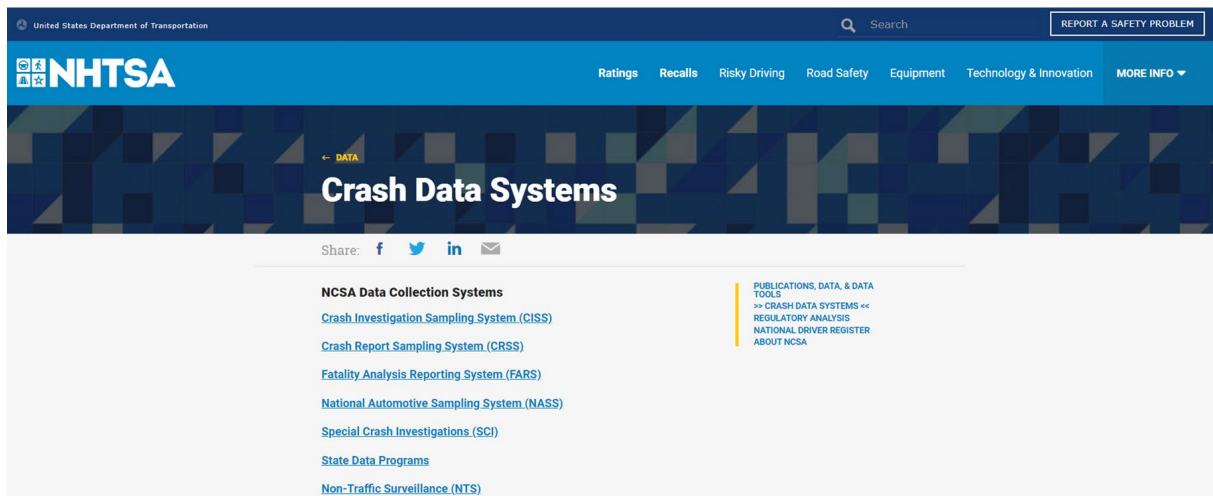
This area includes a message for site compatibility and best viewed in Microsoft Edge and Google Chrome.

### **Arear 16: Version and Release Date**

Software version number and Release date link in this area (Figure 50Figure 3) will open up a new page. On this page, all enhancement and fixes to the site since the website has been deployed publicly are listed.

### **Area 17: Download Your Data Links**

In this area, see Figure 52, the user can download FARS, GES, and CRSS data for any year they desire by clicking the data source they need.



**Figure 54 – NCSA FTP Directory for FARS Data**

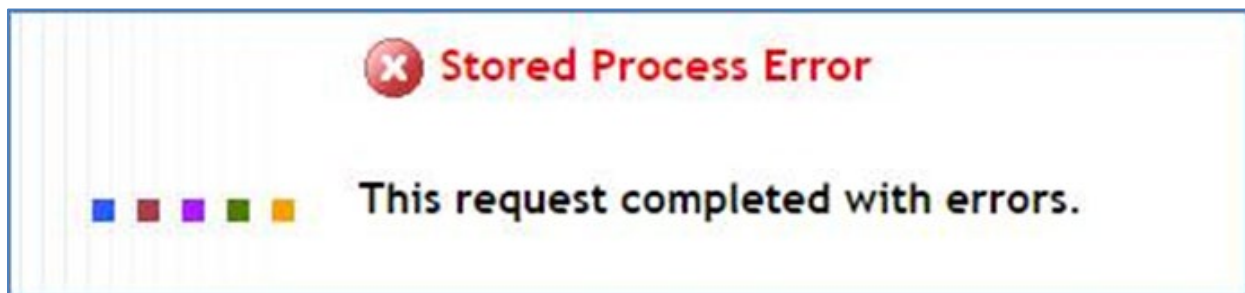
Once the user gets to the download site, they can download any file from the NCSA FTP site by clicking the year the data is needed for.

### 3. FIRST Error Messages

The user may encounter the following error messages when using the FIRST query tool:

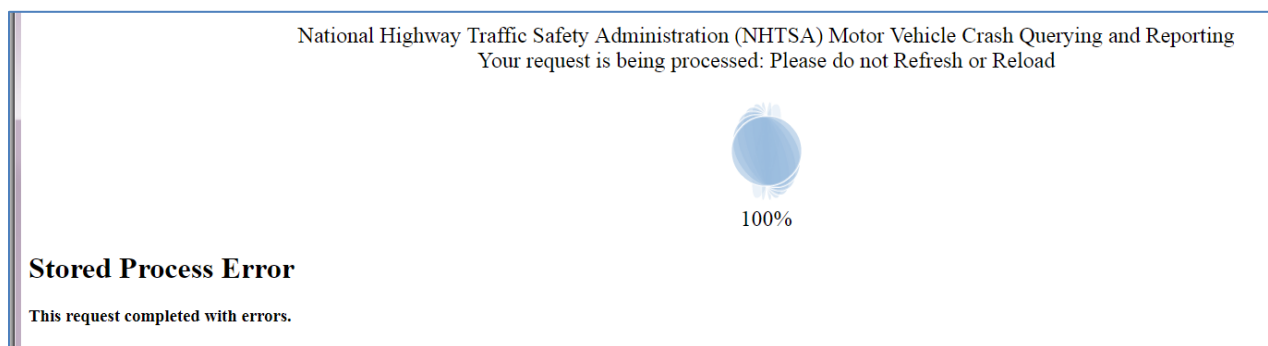
#### 3.1 SAS System Process Error Message

The following error message (**Error! Reference source not found.**) appears when an error occurs with the SAS system.



**Figure 55 – SAS System Error Message Page**

However, if there any issues with the query string that was built for generating the SAS report, the following message in Figure 54 is displayed.



### Figure 56 – Error Caused by SAS Query String Construct Failure (Query Criteria Selected)

Please report these errors by sending an email to [NCSARequests@dot.gov](mailto:NCSARequests@dot.gov).

### 3.2 SAS System Down for Maintenance

When regularly scheduled maintenance in addition to query updates are performed on the SAS server, the page shown in Figure 55 is displayed.

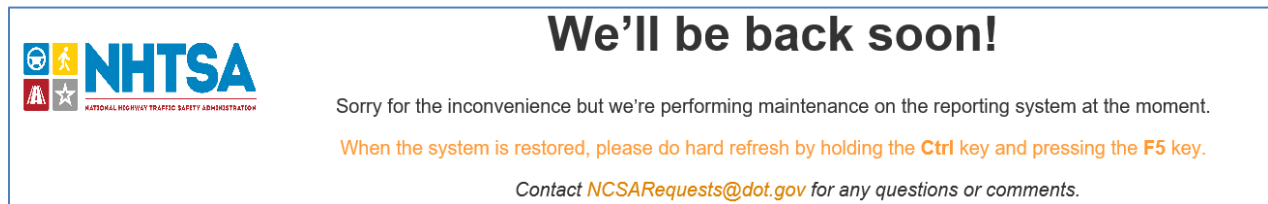


Figure 57 – SAS Reporting System is Down for Maintenance

These maintenances should last from half hour to an hour for updates. Major system (hardware or software) upgrade may take longer to complete. The user can revisit the site when the site maintenance is completed.

### 3.3 FIRST Query Tool Website Down for Maintenance

The following page in Figure 56 will be displayed to deploy enhancement or resolve issues with existing functionality of the site. Major system (hardware or software) upgrade may take longer to complete. The user can revisit the site when the site maintenance is completed.

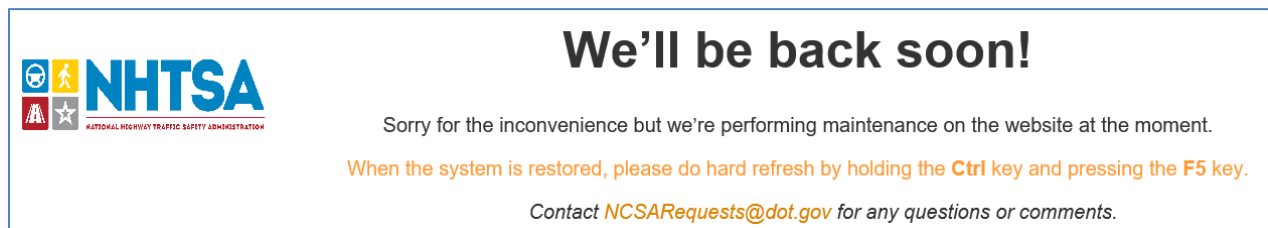


Figure 58 – FIRST Query Tool Website is Down for Maintenance Page

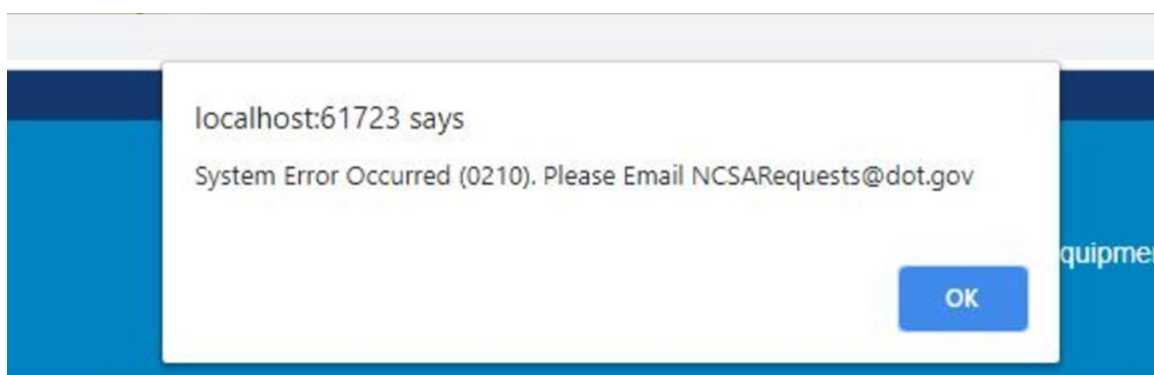
These maintenances should last from half hour to an hour for updates. Major upgrade may take longer to complete. The user can revisit the site when the site maintenance is completed.

### 3.4 FIRST Query Tool Application Error Message

For any reason the query tool encounters an issue while retrieving the home page or clicking on a functionality, the following page in Figure 57 or Figure 58 is displayed.



Figure 59 – FIRST Query Tool Application Error Message Page



**Figure 60 – FIRST Query Tool Application Error Alert**

Please report these errors by sending an email to [NCSARequests@dot.gov](mailto:NCSARequests@dot.gov).

### 3.5 Website Hangs or Becomes Unresponsive

In case, the website becomes unresponsive and appears to be hung, click on the Reset button under Query Criteria Selected section or refresh the browser page.

## 4. Acronyms

This table contains commonly used DOT and FARS acronyms used on this website.

ACRONYM	DESCRIPTION
BAC	Blood Alcohol Concentration
BTS	Bureau of Transportation Statistics
CDL	Commercial Driver's License
CDS	Crashworthiness Data System
CODES	Crash Outcome Data Evaluation System
CRSS	Crash Reporting Sampling System
DOT	Department of Transportation
EMS	Emergency Medical Service
FARS	Fatality Analysis Reporting System
FHWA	Federal Highway Administration
FIRST	Fatality and Injury Reporting System Tool
GES	General Estimates System
GVWR	Gross Vehicle Weight Rating
ITS	Intelligent Transportation System
LTVs	Light Trucks and Vans
MUTCD	Manual of Uniform Traffic Control Devices
N/A	Not Applicable
NASS	National Automotive Sampling System
NCSA	National Center for Statistics and Analysis
NHTSA	National Highway Traffic Safety Administration
PAR	Police Accident Report
PCR	Police Crash Report
PCs	Passenger Cars
PSAs	Public Service Announcements

ACRONYM	DESCRIPTION
PSUs	Primary Sampling Units
VIN	Vehicle Identification Number

**Table 2 – Acronyms Used on this Website**

## 5. Terms

This table below contains commonly used terms and their descriptions.

**Table 3 – Terms Used on this Website**

Term	Description
Age - Individual Age (AGE)	This element identifies the person's age in years on the date of the crash
Age Group Option 1 (A_AGE1)	A selection of predefined age group option 1
Age Group Option 2 (A_AGE2)	A selection of predefined age group option 2
Age Group Option 3 (A_AGE3)	A selection of predefined age group option 3
Age Group Option 4 (A_AGE4)	A selection of predefined age group option 4
Age Group Option 5 (A_AGE5)	A selection of predefined age group option 5
Age Group Option 6 (A_AGE6)	A selection of predefined age group option 6
Age Group Option 7 (A_AGE7)	A selection of predefined age group option 7
Age Group Option 8 (A_AGE8)	A selection of predefined age group option 8
Age Group Option 9 (A_AGE9)	A selection of predefined age group option 9
Alcohol - Police Reported Alcohol Involvement (DRINKING)	NHTSA Defines A Fatal Crash as Alcohol-related or Alcohol-involved If Either A Driver or A Nonmotorist (usually A Pedestrian) Had A Measurable or Estimated Blood Alcohol Concentration (BAC) of 0.01 Grams Per Deciliter (g/dl) or Above. NHTSA Defines A Nonfatal Crash as Alcoholrelated or Alcohol-involved If Police Indicate on The Police Accident Report That There Is Evidence of Alcohol Present. the Code Does Not Necessarily Mean That A Driver or Nonoccupant Was Tested for Alcohol.This data element reflects only



Term	Description
	the judgment of law enforcement as to whether alcohol was involved or not for this person.
Alcohol-Impaired Driving Crashes	Crashes That Involve At Least One Driver or Motorcycle Rider (operator) with A Blood Alcohol Concentration (BAC) of .08 Grams Per Deciliter (g/dL) or Higher. Thus, Any Fatality Occurring in A Crash Involving A Driver or Motorcycle Rider with A BAC of .08 or Higher Is Considered to Be an Alcohol-impaired-driving Fatality.
Alcohol-Impaired Driving Fatalities	All Fatalities in Crashes Involving A Driver or Motorcycle Rider (operator) with A Blood Alcohol Concentration (BAC) of .08 Grams Per Deciliter (g/dL) or Higher.
Alcohol Test Result (A_ALC_RES)	This element identifies the alcohol (ethanol) test result for this person
Alcohol Test Type (ATST_TYP)	This element identifies the type of the alcohol (ethanol) test that was used for this person.
Alcohol Testing (A_ALCTES)	Determines whether there has been an alcohol test performed and there was a positive BAC or not.
Angled Collision	Collisions Which Are Not Head-on, Rear-end, Rear-to-rear, or Sideswipe.
Area of Impact – Damaged Areas (DAMAGE_A)	This subfield identifies the area on this vehicle that produced the first instance of injury to non-motorists or occupants of this vehicle, or that resulted in the first instance of damage to other property or to this vehicle.
Atmospheric Conditions (A_WEATHER)	This element identifies the prevailing atmospheric conditions that existed at the time of the crash as recorded on the police crash report
Attempted Avoidance Maneuver (P_CRASH3)	This element identifies movements/actions taken by the driver within a critical crash envelope in response to a CRITICAL PRECRASH EVENT.
BAC: Highest Driver BAC (hides Person BAC) (Highest_Bac)	The estimated highest Blood Alcohol Concentration (BAC) of all drivers involved in a fatal crash.
BAC: Person-Drivers/Non-Occupant (hides Highest) (PERSON_BAC)	The estimated Blood Alcohol Concentration (BAC) of each driver and non-occupant involved in fatal crash.
Bicyclist Initial Direction of Travel (BIKEDIR)	This data element identifies the initial travel direction of the bicyclist with respect to the flow of traffic prior to being contacted in the crash.
Bicyclist Position (BIKEPOS)	This data element identifies the position/location of the bicyclist with respect to the trafficway when contacted.

Term	Description
Blood Alcohol Concentration	the BAC Is Measured as A Percentage by Weight of Alcohol in the Blood (grams/deciliter). A Positive BAC Level (0.01 G/dl And Higher) Indicates That Alcohol Was Consumed by the Person Tested. A BAC Level of 0.10 G/dl or More Indicates That the Person Was Intoxicated.
Body Type	Detailed Type of Motor Vehicle Within A Vehicle Type.
Bus	Large Motor Vehicles Used to Carry More Than Ten Passengers, Including School Buses, Inter-city Buses, And Transit Buses.
Bus Use (BUS_USE)	This data element describes the common type of bus service this vehicle was being used for at the time of the crash or the primary use for the bus if not in service at the time of the crash
Cargo Body Type (CARGO_BT)	This element identifies the primary cargo-carrying capability of this vehicle when applicable
CDL Status (A_CD_L_S)	This element indicates the status for a driver's Commercial Driver's License (CDL) if applicable
Collectors	in Rural Areas, Routes Serving Intra-county, Rather Than Statewide Travel. in Urban Areas, Streets Providing Direct Access to Neighborhoods as Well as Direct Access to Arterials.
Combination Truck	A Truck Tractor Not Pulling A Trailer; A Tractor Pulling At Least One Full or Semi-trailer; or A Single-unit Truck Pulling At Least One Trailer.
Construction/Maintenance Zone	an Area, Usually Marked by Signs, Barricades, or Other Devices Indicating That Highway Construction or Highway Maintenance Activities Are Ongoing
Condition (Impair) at Time of Crash	This element identifies physical impairments to this driver or non-motorist that may have contributed to the cause of the crash as identified by law enforcement
Condition (Impair) at Time of Crash	This element attempts to identify any physical impairment to this non-motorist who may have contributed to the cause of the crash.
Contributing Circumstances (NMCC_A)	This element describes the action(s) and/or circumstances of the non-motorist that law enforcement indicated may have contributed to the crash.
Contributing Circumstances, Motor Vehicle (VEHICLECC_A)	This element describes the possible pre-existing motor vehicle defects or maintenance conditions that may have contributed to the occurrence or severity of the crash.
Crash	an Event That Produces Injury And/or Property Damage, Involves A Motor Vehicle in Transport, And Occurs on A Trafficway or While the Vehicle Is Still in Motion After Running off the Trafficway.

Term	Description
Crash Date (Day) (DAY)	This element identifies the date (Day) on which the crash occurred.
Crash Date (Month) (MONTH)	This element identifies the date (Month) on which the crash occurred.
Crash Date (Year) (YEAR)	This element identifies the date (Year) on which the crash occurred.
Crash Group – Bicycle (BIKECGP)	This data element provides general groupings of the more specific individual Bicyclist Crash Types.
Crash Group – Pedestrian (PEDCGP)	This data element provides general groupings of the more specific individual Pedestrian Crash Types.
Crash Location – Bicycle (BIKELOC)	This data element identifies where the bicyclist crash occurred with respect to an intersection.
Crash Location – Pedestrian (PEDLOC)	This data element identifies where the pedestrian crash occurred with respect to an intersection.
Crash Time (Hour) (A_HOUR)	This element identifies the date (Hour) on which the crash occurred.
Crash Time (Min) (A_MINUTE)	This element identifies the date (Minute) on which the crash occurred.
Crash Type (A_CT)	Single-vehicle or Multiple-vehicle Crash.
Crash Type – Bicycle (BIKECTYPE)	This data element summarizes the circumstances of the crash for this bicyclist.
Crash Type – Pedestrian (PEDCTYPE)	This data element summarizes the circumstances of the crash for this pedestrian.
Day	From 6 A.m. to 5:59 P.m.
Day Of Week (Sunday - Saturday) (DAY_WEEK)	This element identifies the day of the week on which the crash occurred.
Day Of Week (Weekday/Weekend) (A_DOW)	This element identifies whether the crash occurred during weekday or weekend
Death Date (Day) (A_DEATH_DA)	This data element records the day of this person's death.
Death Date (Month) (A_DEATH_MO)	This data element records the month of this person's death.

Term	Description
Death Date (Year) (A_DEATH_YR)	This data element records the year of this person's death.
Death Time (Hour) (A_DEATH_HR)	This data element records the time of this person's death.
Death Time (Min) (A_DEATH_MN)	This data element records the minutes of this person's death.
Died at Scene/En Route (A_DOA)	This data element identifies if this person died at the scene of the crash or en route to a hospital/medical facility.
Distracted Driver (A_DRDIS)	Values for Distracted Driver (Yes/No) are derived from Driver Distracted By data element (DRDISTRACT).
Driver	An Occupant of a Vehicle Who Is in Physical Control of a Motor Vehicle in Transport, or for an Out-of-control Vehicle, an Occupant Who Was in Control Until Control Was Lost.
Driver Distracted By (DRDISTRACT_A)	This element identifies the attribute(s) that best describes this driver's attention to driving prior to the driver's realization of an impending critical event or just prior to impact if realization of an impending critical event does not occur. This element reports on the presence of any distractions that may or may not have contributed to the crash. Distraction from the primary task of driving occurs when drivers divert their attention from the driving task to some other activity. Also, driving while daydreaming or lost in thought is identified as distracted driving by NHTSA. Physical conditions/impairments (fatigue, alcohol, medical condition, etc.) or psychological states (anger, emotional, depressed, etc.) are not identified as distractions by NHTSA.
Driver Maneuvered to Avoid (MANEUVER_A)	This data element identifies the thing(s) the driver attempted to avoid while the vehicle was on the road portion of the trafficway just prior to the first harmful event for this vehicle.
Driver Travel Speed (TRAV_SP)	This element records the speed the vehicle was traveling prior to the occurrence of the crash as reported by the investigating officer.
Driver's Vision Obscured By (VISION_A)	This data element records impediments to a driver's visual field that were noted in the case materials.
Drivers Zip Code - Valid zip code required (DR_ZIP)	This element identifies the ZIP Code of this driver's area of residence.
Drowsy Driver (A_DRDRO)	Asleep or Fatigued (Drowsy) derived from the Condition (Impairment) at Time of Crash data element (D23).

Term	Description
Ejection (A_EJECT)	Refers to Occupants Being Totally or Partially Thrown from the Vehicle as A Result of an Impact or Rollover.
Emergency Use (EMER_USE)	Emergency Motor Vehicle Use indicates operation of any motor vehicle that is legally authorized by a government authority to respond to emergencies with or without the use of emergency warning equipment, such as a police vehicle, fire truck, or ambulance while actually engaged in such response.
EMS Arrival Time at Hospital (Hour) (A_HOSP_HR)	This data element records the hour that emergency medical service arrived at the treatment facility to which it was transporting victims of the crash.
EMS Arrival Time at Hospital (Min) (A_HOSP_MN)	This data element records the minutes after the hour that emergency medical service arrived at the treatment facility to which it was transporting victims of the crash.
EMS Arrival Time on Scene (Hour) (A_ARR_HOUR)	This data element records the hour that emergency medical service arrived on the crash scene.
EMS Arrival Time on Scene (Min) (A_ARR_MIN)	This data element records the minutes after the hour that emergency medical service arrived on the crash scene.
EMS Notification Time (Hour) (A_NOT_HOUR)	This data element records the hour that emergency medical service was notified.
EMS Notification Time (Min) (A_NOT_MIN)	This data element records the minutes after the hour that emergency medical service was notified.
Extent of Damage (DEFORMED)	This element indicates the amount of damage sustained by this vehicle in this crash as indicated in the case materials based on an operational damage scale.
Fatal Crash	A Police-reported Crash Involving A Motor Vehicle in Transport on A Trafficway in Which At Least One Person Dies Within 30 Days of the Crash.
Fire Occurrence (A_FIRE_EXP)	This data element identifies whether a fire in any way related to the crash occurred in this vehicle.
First Harmful Event (FHE) (A_HARM_EV)	the First Event During A Crash That Caused Injury or Property Damage.
Fixed Object	Stationary Structures or Substantial Vegetation Attached to the Terrain.

Term	Description
Gross Vehicle Weight Rating (GVWR)	This element identifies the range of Gross Vehicle Weight Rating (GVWR) of the power unit as identified by the manufacturer through the vehicle's VIN submission.
Hazardous Material Class Number (HAZ_CNO)	This element identifies the presence of hazardous cargo for this vehicle and records information about the hazardous cargo when present.
HAZMAT Identification Number (HAZ_ID)	This element identifies the presence of hazardous cargo for this vehicle and records information about the hazardous cargo when present.
HAZMAT Involvement (HAZ_INV)	This element identifies the presence of hazardous cargo for this vehicle and records information about the hazardous cargo when present.
HAZMAT Placard (HAZ_PLAC)	This element identifies the presence of hazardous cargo for this vehicle and records information about the hazardous cargo when present.
HAZMAT Release from the Cargo Compartment (HAZ_REL)	This element identifies the presence of hazardous cargo for this vehicle and records information about the hazardous cargo when present.
Head-on Collision	Refers to a Collision Where the Front End of One Vehicle Collides with the Front End of Another Vehicle While the Two Vehicles Are Traveling in Opposite Directions.
Hispanic Origin (A_HISP)	This element indicates the Race and Hispanic origin of this person from the death certificate
Hit and Run (HIT_RUN)	This element refers to cases where a vehicle is a contact vehicle in the crash and does not stop to render aid (this can include drivers who flee the scene on foot).
Holiday Periods (HOLIDAY)	A detailed description of the time periods included within the following major holidays: New Year's, Memorial Day, Fourth of July, Labor Day, Thanksgiving, and Christmas.
Initial Impact Point (A_IMP1)	the First Impact Point That Produced Personal Injury or Property Damage, Regardless of First or Most Harmful Event.
Injury Crash	A Police-reported Crash That Involves a Motor Vehicle in Transport on a Trafficway in Which No One Died But At least One Person Was Reported to Have: (1) an Incapacitating Injury; (2) a Visible but Not Incapacitating Injury; (3) a Possible, Not Visible Injury; or (4) an Injury of Unknown Severity.
Injury Severity	the Police-reported Injury Severity of the Person (i.e., Occupant, Pedestrian, or Pedalcyclist).



Term	Description
Intersection (A_INTSEC)	Values for Intersection (Yes/No) are derived from Relation to Junction—Specific Location (RELJCT2).
Intersection Leg (PEDLEG)	The data element identifies the leg of the intersection where the pedestrian crash occurred.
Interstate (A_INTER)	Limited Access Divided Facilities of at Least Four Lanes Designated by the Federal Highway Administration as Part of the Interstate System.
Involving A Distracted Driver (A_DIST)	Values for Involving A Distracted Driver (Yes/No) are derived from Driver Distracted By data element (DRDISTRACT).
Involving A Drowsy Driver (A_DROWSY)	Asleep or Fatigued (Drowsy) derived from the Condition (Impairment) at Time of Crash data element (D23).
Involving A Hit And Run (A_HR)	This data element identifies whether this vehicle was a contact vehicle in the crash that did not stop to render aid (this can include drivers who flee the scene on foot). Values for Involving A Hit And Run (Yes/No) are derived from Hit-and-Run data element (HIT_RUN).
Involving A Large Truck (A_LT)	Values for Involving A Large Truck (Yes/No) are derived from vPIC Body Class data element (VPICBODYCLASS).
Involving A Motorcycle (A_MC)	Values for Involving A Motorcycle (Yes/No) are derived from vPIC Body Class data element (VPICBODYCLASS).
Involving A Pedalcyclist (A_PEDAL)	Values for Involving A Pedalcyclist (Yes/No) are derived from Person Type data element (PER_TYP).
Involving A Pedestrian (A_PED)	Values for Involving A Pedestrian (Yes/No) are derived from Person Type data element (PER_TYP).
Involving A Police Pursuit (A_POLPUR)	A pursuit is an event that is initiated when a law enforcement officer, operating an authorized emergency vehicle, gives notice to stop (either through the use of visual or audible emergency signals or a combination of emergency devices) to a motorist who the officer is attempting to apprehend and that motorist fails to comply with the signal by either maintaining his/her speed, increasing speed or taking other evasive action to allude the officer's continued attempts to stop the motorist. Values for Involving A Police Pursuit (Yes/No) are derived from the data in Crash Related Factors and Driver Related Factors files (Crashrf.CRASHRF, Driverrf.DRIVERRF).
Involving A Roadway Departure (A_RD)	Values for Involving A Roadway Departure (Yes/No) are derived from the Sequence of Events (SOE) data element in Vehicle Sequence of Events (VSOE) Data File.

Term	Description
Involving A Rollover (A_ROLL)	This data element identifies this vehicle's involvement in a rollover or overturn during the crash. Rollover is defined as any vehicle rotation of 90° or more about any true longitudinal or lateral axis. Rollover can occur at any time during the crash. Values for Involving A Rollover (Yes/No) are derived from the Rollover (ROLLOVER) data element.
Involving A Young Driver (Aged 15-20) (A_D15_20)	Values for Involving A Young Driver (Yes/No) are derived from the Age (AGE) and Person Type (PER_TYP) data element.
Involving An Older Driver (Aged 65+) (A_D65PLS)	Values for Involving A Older Driver (Yes/No) are derived from the Age (AGE) and Person Type (PER_TYP) data element.
Involving Speeding (A_SPCRA)	This data element identifies if the driver was speeding and it was related to the crash as identified by law enforcement. Values for Involving Speeding (Yes/No) are derived from the Speeding Related (SPEEDREL) data element.
Jackknife (J_KNIFE)	Jackknife Can Occur at Any Time During the Crash Sequence. In This Report, Jackknifing Is Restricted to Truck Tractors Pulling a Trailing Unit in Which the Trailing Unit and the Pulling Vehicle Rotate with Respect to Each Other.  <b>From the Manual:</b> This element identifies if this vehicle experienced a "jackknife" any time during the unstabilized situation.
Junction	Area Formed by the Connection of Two Roadways, Including Intersections, Interchange Areas, and Entrance/exit Ramps.
Land Use	the Crash Location (urban or Rural).
Large Trucks	Trucks Over 10,000 Pounds Gross Vehicle Weight Rating, Including Single Unit Trucks and Truck Tractors.
License Compliance (A_LIC_C)	This data element identifies the type of license possessed or not possessed by this driver for the class of vehicle being driven at the time of the crash.
License Status (A_LIC_S)	This data element identifies the status of the driver's license at the time of the crash.
License: CDL Status (CDL_STAT)	This element indicates the status for a driver's Commercial Driver's License (CDL) if applicable.
License: Compliance with CDL Endorsements (L_ENDORS)	This element indicates whether the vehicle driven at the time of the crash requires endorsement(s) on a CDL and whether this driver is complying with the CDL endorsements.
License: Compliance with Class of Vehicle (L_COMPL)	This element refers to the type of license possessed or not possessed by the driver for the class of vehicle being driven at the time of the crash.

Term	Description
License: Non-CDL Status (L_STATUS)	This element identifies in two subfields the type of license held by this driver and the status of the license at the time of the crash.
License: Non-CDL Type (L_TYPE)	This element identifies in two subfields the type of license held by this driver and the status of the license at the time of the crash.
Light Condition (LGT_COND)	This element records the type/level of light that existed at the time of the crash as reported in the case materials.
Light Trucks	Trucks of 10,000 Pounds Gross Vehicle Weight Rating or Less, Including Pickups, Vans, Truck-based Station Wagons, and Utility Vehicles.
Local Streets and Roads	Streets Whose Primary Purpose Is Feeding Higher Order Systems, Providing Direct Access with Little or No Through Traffic.
Manner Of Collision (A_MANCOL)	A Classification for Crashes in Which the First Harmful Event Was a Collision Between Two Motor Vehicles in Transport.
Marked Crosswalk Present (PBCWALK)	This data element indicates if a marked crosswalk was present at the crash site.
Milepoint (MILEPT)	Refer to the remarks section under LAND USE AND FUNCTIONAL SYSTEM for the hierarchy of selecting the trafficway to be coded.
Minor Arterials	Streets and Highways Linking Cities and Larger Towns in Rural Areas in Distributing Trips to Small Geographic Areas in Urban Areas (not Penetrating Identifiable Neighborhoods).
Most Harmful Event (MHE) (A_M_HARM)	the Event During a Crash for a Particular Vehicle That Is Judged to Have Produced the Greatest Personal Injury or Property Damage.
Motor Vehicle in Transport	A Motor Vehicle in Motion on the Trafficway or Any Other Motor Vehicle on the Roadway, Including Stalled, Disabled, or Abandoned Vehicles.
Motorcycle	A Two- or Three-wheeled Motor Vehicle Designed to Transport One or Two People, Including Motor scooters, Minibikes, and Mopeds.
Motorcycle Rider	Operator of a Motorcycle.
Motorcyclists	Any Combined Reference to the "motorcycle Rider" as Well as the "passenger". Passenger is Any Person Who Is Not in Control of the Motorcycle.
Motorcycle License Status (A_MC_L_S)	This data element identifies the type of license possessed or not possessed by this driver for the class of vehicle being driven at the time of the crash. Values

Term	Description
	for Motorcycle License Status (Yes/No) are derived from the License Compliance With Class of Vehicle (L_COMPL) data element.
Motorist Initial Direction of Travel (MOTDIR)	This data element identifies the initial direction of travel of the motorist prior to being involved in a pedestrian crash.
Motorist Maneuver (MOTMAN)	This data element identifies if the motorist was engaged in a turning maneuver at an intersection prior to being involved in a pedestrian crash. The data element indicates the maneuver being made by the motorist at the time of a pedestrian collision.
N/A	Not Applicable.
National Highway System (NHS)	This element identifies whether or not this crash occurred on a trafficway that is part of the National
Native American Reservations (INDIAN_RES)	Highway System.
NHTSA Region (A_Region)	Values for NHTSA Region are derived from the State (STATE) data element.
Night	From 6 P.m. to 5:59 A.m.
Noncollision	A Class of Crash in Which the First Harmful Event Does Not Involve a Collision with a Fixed Object, Nonfixed Object, or a Motor Vehicle. This Includes Overturn, Fire/explosion, Falls from a Vehicle, and Injuries in a Vehicle.
Nonmotorist	Any Person Who Is Not an Occupant of a Motor Vehicle in Transport and Includes the Following: 1. Pedestrians 2. Pedalcyclists 3. Occupants of Parked Motor Vehicles 4. Others Such as Skateboard Riders, People Riding on Animals, and Persons Riding in Animal-drawn Conveyances.
Non- Motorist Action/Circumstances (NMACTION_A)	This data element describes the actions of the non-motorist immediately prior to their involvement in the crash.
Non-Motorist Distracted By (NMDISTRACT_A)	This data element identifies the attributes that best describe this non-motorist's attention prior to the non-motorist's involvement in this crash. This element reports on the presence of any distractions that may or may not have contributed to the crash.
Non-Motorist Helmet Use (NMHELMET)	This data element indicates if the non-motorist was wearing a safety helmet.
Non-Motorist Location (A_LOC)	the Location of Nonmotorists at Time of Impact. Intersection Locations Are Coded Only If Nonmotorists Were Struck in the Area Formed by a Junction of Two or More Trafficways. Non-intersection Location May Include

Term	Description
	Nonmotorists Struck on a Junction of a Driveway/alley Access and a Named Trafficway. Nonmotorists Who Are Occupants of Motor Vehicles Not in Transport Are Coded with Respect to the Location of the Vehicle.
Non-Motorist Use of Lighting (NMLIGHT)	This element identifies the safety equipment that was used and not used by this non-motorist as reflected in the case materials.
Non-Motorist Use of Protective Pads (NMPROPAD)	This element identifies the safety equipment that was used and not used by this non-motorist as reflected in the case materials.
Number of Fatalities in Vehicle (DEATHS)	This data element records the number of fatalities that occurred in this vehicle.
Objects Not Fixed	Objects That Are Movable or Moving but Are Not Motor Vehicles. Includes Pedestrians, Pedalcyclists, Animals, or Trains (e.g., Spilled Cargo in Roadway).
Occupant	Any Person Who Is in or Upon a Motor Vehicle in Transport. Includes the Driver, Passengers, and Persons Riding on the Exterior of a Motor Vehicle.
Other Freeways and Expressways	All Urban Principal Arterial with Limited Control of Access Not on the Interstate System.
Other Principal Arterials	Major Streets or Highways, Many with Multi-lane or Freeway Design, Serving High-volume Traffic Corridor Movements That Connect Major Generators of Travel.
Other Vehicle	Consists of the Following Types of Vehicles: 1. Large Limousine (more Than Four Side Doors or Stretched Chassis) 2. Three-wheel Automobile or Automobile Derivative 3. Van-based Motorhome 4. Light-truck-based Motorhome (chassis Mounted) 5. Large-truck-based Motorhome 6. ATV (all Terrain Vehicle, Including Dune/swamp Buggy) and ATC (all Terrain Cycle) 7. Snowmobile 8. Farm Equipment Other Than Trucks 9. Construction Equipment Other Than Trucks (includes Graders) 10. Other Type Vehicle (includes Go-cart, Fork Lift, City Streetsweeper).
Passenger	Any Occupant of a Motor Vehicle Who Is Not a Driver.
Passenger Car	Motor Vehicles Used Primarily for Carrying Passengers, Including Convertibles, Sedans, and Station Wagons.
Pedalcyclist	A Person on a Vehicle That Is Powered Solely by Pedals.
Pedestrian	Any Person Not in or Upon a Motor Vehicle or Other Vehicle.
Pedestrian Initial Direction of Travel (PEDDIR)	This data element identifies the initial direction of travel of the pedestrian prior to being contacted in the crash.

Term	Description
Pedestrian Position (PEDPOS)	This data element identifies the position/location of the pedestrian with respect to the trafficway when contacted.
Person Fatal/Injury Type (A_PERINJ)	Values for Person Fatal/Injury Type are derived from the Injury Severity (INJ_SEV) data element.
Person Injury Type (A_PERINJ_GESINJ)	Values for Person Injury Type are derived from the Injury Severity (INJ_SEV) data element.
Person Type (PER_TYP)	This element describes the non-motorist at the time they became involved in the crash.
Person Type (NHTSA Groups) (A_PTYPE)	This data element describes the role of this person involved in the crash.
Pre-Crash Critical Event (P_CRASH2)	This element identifies the critical event that made the crash imminent (i.e., something occurred that made the collision possible).
Pre-Event Movement (P_CRASH1)	This element identifies the attribute that best describes this vehicle's activity prior to the driver's realization of an impending critical event or just prior to impact if the driver took no action or had no time to attempt any evasive maneuvers.
Pre-Impact Location (PCRASH5)	This element assesses the location of the vehicle after the critical event and immediately before the First Harmful Event for this vehicle.
Pre-Impact Stability (PCRASH4)	This element assesses the stability of the vehicle after the critical event but before the impact.
Principal Impact Point (A_IMP2)	Values for Principal Impact Point are derived from the Area of Impact – Damaged Areas (DAMAGE) data element.
Property-Damage-Only Crash	A Police-reported Crash Involving a Motor Vehicle in Transport on a Trafficway in Which No One Involved in the Crash Suffered Any Injuries.
Race (OMB Guidelines) (A_RCAT)	This data element records the race of this person from the death certificate.
Race and Hispanic (OMB Guidelines) (A_HRACE)	Values for Race and Hispanic are derived from the Race and Hispanic Origin (RACE, HISPANIC) data element.
Rear-end Collision	A Collision in Which One Vehicle Collides with the Rear of Another Vehicle.
Related Factors - Crash Level (CRASHRF_A)	This element identifies factors related to the crash expressed in the case materials.
Related Factors - Driver Level (DRIVERRF_A)	This element identifies factors related to this driver expressed in the case materials.



Term	Description
Related Factors - Person Level (PERSONRF_A)	This element identifies factors related to motor vehicle occupants (other than drivers) expressed in the case materials.
Relation To Junction (A_JUNC)	The coding of this data element is done in two subfields and based on the location of the FIRST HARMFUL EVENT of the crash. It identifies the crash's location with respect to presence in an interchange area and the crash's location with respect to presence in or proximity to components typically in junction or interchange areas.
Relation to Junction-Specific Location (RELJCT2)	The coding of this data element is done in two subfields and based on the location of the FIRST HARMFUL EVENT of the crash. It identifies the crash's location with respect to presence in an interchange area and the crash's location with respect to presence in or proximity to components typically in junction or interchange areas.
Relationship To The Road (A_RELRD)	Values for Relationship To The Road are derived from the Relation to Trafficway (REL_ROAD) data element.
Restraint/Helmet Use (A_REST)	the Occupant's Use of Available Vehicle Restraints Including Lap Belt, Shoulder Belt, or Automatic Belt.
Roadway	That Part of a Trafficway Designed, Improved, and ordinarily Used for Motor Vehicle Travel.
Roadway Alignment (VALIGN)	This element identifies the value indicated in the case materials that best represents the roadway alignment prior to this vehicle's CRITICAL PRECRASH EVENT.
Roadway Function Class (A_ROADFC)	the Classification Describing the Character of Service the Street or Highway Is Intended to Provide.
Roadway Grade (VPROFILE)	This element identifies the value indicated in the case materials that best represents the roadway grade prior to this vehicle's CRITICAL PRECRASH EVENT.
Roadway Surface Conditions (VSURCOND)	This element identifies the value indicated in the case materials that best represents the roadway surface condition prior to this vehicle's CRITICAL PRECRASH EVENT.
Roadway Surface Type (VPAVETYP)	This element identifies the value indicated in the case materials that best represents the roadway surface type prior to this vehicle's CRITICAL PRECRASH EVENT.
Rollover (A_VROLL)	Rollover Is Defined as Any Vehicle Rotation of 90 Degrees or More About Any True Longitudinal or Lateral Axis. Includes Rollovers Occurring as a First

Term	Description
	Harmful Event or Subsequent Event. This element identifies whether a rollover or overturn occurred during the crash involving this vehicle.
Rural/Urban (A_RU)	This data element identifies the classification of the segment of the trafficway on which the crash occurred based on FHWA-approved adjusted Census boundaries of small urban and urbanized areas. Values for Rural/Urban are derived from the Land Use (RUR_URB) data element.
School Bus (A_SBUS)	A school bus is a motor vehicle used for the transportation of any school pupil at or below the 12th-grade level to or from a public or private school or school-related activity.
School Bus-Related Crash	Any Crash in Which a Vehicle, Regardless of Body Design, Used as a School Bus Is Directly or Indirectly Involved, such as a Crash Involving School Children Alighting from a Vehicle.
School Zone (PBSZONE)	This data element indicates if the crash occurred in a school zone.
Seating Position (SEAT_POS)	the Location of the Occupants in the Vehicle. More Than One Can Be Assigned the Same Seat Position; However, This Is Allowed Only When a Person Is Sitting on Someone's Lap. This element identifies the location of this person in or on the vehicle.
Sex (SEX)	This element identifies the sex or gender of the person involved in the crash.
Sideswipe	A Collision in Which the Sides of Both Vehicles Sustain Minimal Engagements.
Sidewalk Present (PBSWALK)	This data element indicates if a sidewalk was present at the crash site.
Single-Unit Truck	A Medium or Heavy Truck in Which the Engine, Cab, Drive Train, and Cargo Area Are All on One Chassis.
Special Jurisdiction (SP_JUR)	This element identifies if the location on the trafficway where the crash occurred qualifies as a Special Jurisdiction even though it may be patrolled by State, county, or local police (e.g., all State highways running through Indian reservations are under the jurisdiction of the Indian reservation).
Special Use (SPEC_USE)	This data element identifies if a special use is applicable to this vehicle at the time it was involved in the crash.
Speed Limit (VSPD_LIM)	This element identifies the value indicated in the case materials that best represents the speed limit just prior to this vehicle's CRITICAL PRECRASH EVENT.

Term	Description
Speeding (A_SPVEH)	This data element identifies if the driver was speeding and it was related to the crash as identified by law enforcement.
State (STATE)	This element identifies the State in which the crash occurred.
State and City (CITY_UNI)	Values for State and City are derived from the State and City (STATE, CITY) data elements.
State and County (COUNTY_UNI)	Values for State and County are derived from the State and County (STATE, COUNTY) data elements.
Striking Driver Travel Speed (STR_TRAV_SP)	This data element identifies the travel speed of the Striking Driver and it is derived from the Speeding Related (SPEEDREL) data element.
Striking Vehicle Body Type (STR_A_BODY)	This data element identifies the Striking Vehicle Body Type is derived from vPIC Body Class data element (VPICBODYCLASS).
Striking Vehicle Driver Age (STR_AGE)	Values for Striking Vehicle Driver Age are derived from the Age (AGE) and Person Type (PER_TYP) data element.
Striking Vehicle Driver Hispanic Origin (STR_A_HISP)	Striking Vehicle Driver Hispanic Origin (Yes/No) derived from the Hispanic (HISPANIC) data element.
Striking Vehicle Driver Race (STR_A_RCAT)	Striking Vehicle Driver Race is derived from Race (RACE) data element.
Striking Vehicle Driver Race and Hispanic (STR_A_HRACE)	Striking Vehicle Driver Race and Hispanic is derived from Race and Hispanic (RACE, HISPANIC) data elements.
Striking Vehicle Driver Sex (STR_SEX)	Striking Vehicle Driver Sex is derived from Sex (SEX) data element.
Striking Vehicle Driver Speed Limit (STR_VSPD_LIM)	This data element identifies the attribute that best represents the speed limit just prior to this vehicle's critical precrash event. Values for Striking Vehicle Driver Speed Limit are derived from Speed Limit (VSPD_LIM) data element.
Striking Vehicle Hit and Run (STR_HIT_RUN)	This data element identifies whether this vehicle was a contact vehicle in the crash that did not stop to render aid (this can include drivers who flee the scene on foot). Values for Striking Vehicle Hit-and-Run are derived from Hit-and-Run (HIT_RUN) data element.
Striking Vehicle Model Year (STR_A_MOD_YR)	Striking Vehicle Model Year is derived from Vehicle Model Year (MOD_YEAR) data element.

Term	Description
Time Of Day (Daytime/Nighttime) (A_TOD)	Time Of Day is derived from hour (HOUR) data element.
Total Lanes in Roadway (VNUM_LAN)	This element identifies the value indicated in the case materials that best describes the number of roadway lanes just prior to this vehicle's CRITICAL PRECRASH EVENT.
Trafficway	Any Road, Street, or Highway Open to the Public as a Matter of Right or Custom for Moving Persons or Property from One Place to Another.
Traffic Control Device (VTRAFCON)	This element identifies the sign or signal indicated in the case materials that best describes the traffic controls in the vehicle's environment just prior to this vehicle's CRITICAL PRECRASH EVENT.
Traffic Control Device Functioning (VTCONT_F)	This element identifies the functionality of the traffic control device recorded for this vehicle in the element TRAFFIC CONTROL DEVICE. As a default rule, if the device is listed as present, code 3 (Device Functioning Properly) unless otherwise specified. For example, the police crash report indicates a stop sign is applicable to a vehicle at an intersection crash and there is no mention of it functioning improperly, it is assumed the stop sign was functional.
Trafficway Description (VTRAFWAY)	This element identifies the value indicated in the case materials that best describes the trafficway flow just prior to this vehicle's CRITICAL PRECRASH EVENT.
Trafficway Identifier (TWAY_ID)	This element captures the identity (name) of the trafficway on which the crash occurred.
Trafficway Ownership (RD_OWNER)	This element identifies the entity that has legal ownership of the segment of the trafficway on which the crash occurred.
Trafficway Route Signing (ROUTE)	This element identifies the route signing of the trafficway on which the crash occurred. Code the value that represents the FHWA approved Land Use and Functional System. FHWA classification obtainable from the State Highway Department must be used. No other classification source is acceptable. Refer problems in obtaining the FHWA classification to the State DOT planning office.
Type of Intersection (TYP_INT)	This element identifies and allows separation of various intersection types.
Underride/Override (UNDERIDE)	This data element identifies this vehicle's involvement in an underride or override during the crash.
Unknown	Data Either Not Available or Not Known.

Term	Description
Use of Other Preventive Safety Equipment (NMOTHPRE)	This element identifies the safety equipment that was used and not used by this non-motorist as reflected in the case materials.
Use of Other Protective Safety Equipment (NMOTHPRO)	This element identifies the safety equipment that was used and not used by this non-motorist as reflected in the case materials.
Use of Reflective Clothing/Carried Item (NMREFCLO)	This element identifies the safety equipment that was used and not used by this non-motorist as reflected in the case materials.
Vehicle Body Type (A_BODY)	This data element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc.
Vehicle Configuration (V_CONFIG)	This element identifies the general configuration of this vehicle when applicable.
Vehicle Model Year (A_MOD_YR)	This data element identifies the manufacturer's model year of this vehicle.
Vehicle Removal (TOWED)	This data element identifies whether the vehicle was towed from the scene of the crash.
Vehicle Trailing (TOW_VEH)	This element identifies whether this vehicle had any attached trailing units or was towing another motor vehicle.
Vehicle Type	A Series of Motor Vehicle Body Types That Have Been Grouped Together Because of Their Design Similarities. the Principal Vehicle Types Used in This Report Are Passenger Car, Light Truck, Large Truck, Motorcycle, Bus, and Other Vehicle.
Violations Charged (VIOLATION_A)	This element identifies all violations, citations, and infractions noted as charged to this driver in this crash, regardless of whether the driver survived the crash.
vPic: Striking Vehicle Body Class (STR_VPICBODYCLASSID)	Striking Vehicle Body Class is derived from VPIC Body Class (VPICBODYCLASSID) data element.
vPic: Striking Vehicle Make (STR_VPICMAKEID)	Striking Vehicle Make Class is derived from VPIC Vehicle Make (VPICMAKEID) data element.
vPic: Striking Vehicle Model (STR_VPICMODELID)	Striking Vehicle Make Model is derived from VPIC Vehicle Model (VPICMODELID) data element.

Term	Description
vPic: Vehicle Body Class (VPICBODYCLASSID)	This element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc. as defined by the manufacturer.
vPic: Vehicle Make (VPICMAKEID)	This element identifies the Make (manufacturer brand name) of this vehicle as per NHTSA vPIC submissions.
vPic: Vehicle Model (VPICMODELID)	This element identifies the Model of this vehicle using NHTSA's VIN decoder application, vPIC.
Weekday	From 6 AM Monday to 5:59 PM Friday
Weekend	From 6 PM Friday to 5:59 AM Monday.
Work Zone (WRK_ZONE)	This data element captures that this was a "Work Zone Crash" as defined in ANSI D16.1, 8th Edition. If the crash qualifies as a "Work Zone Crash" then the type of work activity is identified.

**Table 3 – Terms Used on this Website**